

SECTION **LAN**  
LAN SYSTEM

A  
B  
C

CONTENTS

D  
E

**CAN**

**PRECAUTIONS** ..... 10

Precautions for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER" ..... 10

Precautions When Using CONSULT-II ..... 10

CHECK POINTS FOR USING CONSULT-II ..... 10

Precautions For Trouble Diagnosis ..... 10

CAN SYSTEM ..... 10

Precautions For Harness Repair ..... 11

CAN SYSTEM ..... 11

**CAN COMMUNICATION** ..... 12

System Description ..... 12

CAN Communication Unit For 2WD Models ..... 12

TYPE 1/TYPE 2/TYPE 3/TYPE 4/TYPE 5/TYPE 6/TYPE 7/TYPE 8 ..... 12

TYPE 9/TYPE 10/TYPE 11/TYPE 12/TYPE 13/TYPE 14/TYPE 15/TYPE 16 ..... 18

CAN Communication Unit For AWD Models ..... 23

TYPE 17/TYPE 18/TYPE 19/TYPE 20/TYPE 21/TYPE 22/TYPE 23/TYPE 24 ..... 23

TYPE 25/TYPE 26/TYPE 27/TYPE 28/TYPE 29/TYPE 30/TYPE 31/TYPE 32 ..... 29

**CAN SYSTEM (TYPE 1)** ..... 34

System Description ..... 34

Component Parts and Harness Connector Location. 34

Schematic ..... 35

Wiring Diagram - CAN - ..... 36

Work Flow ..... 39

CHECK SHEET ..... 41

CHECK SHEET RESULTS (EXAMPLE) ..... 43

Circuit Check Between TCM and Data Link Connector ..... 54

Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit) ..... 54

ECM Circuit Check ..... 55

TCM Circuit Check ..... 56

Display Unit Circuit Check ..... 56

Data Link Connector Circuit Check ..... 57

BCM Circuit Check ..... 57

Unified Meter and A/C Amp. Circuit Check ..... 58

ABS Actuator and Electric Unit (Control Unit) Circuit Check ..... 58

IPDM E/R Circuit Check ..... 59

CAN Communication Circuit Check ..... 59

IPDM E/R Ignition Relay Circuit Check ..... 62

Component Inspection ..... 62

ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION ..... 62

**CAN SYSTEM (TYPE 2)** ..... 63

System Description ..... 63

Component Parts and Harness Connector Location. 63

Schematic ..... 64

Wiring Diagram - CAN - ..... 65

Work Flow ..... 68

CHECK SHEET ..... 70

CHECK SHEET RESULTS (EXAMPLE) ..... 72

Circuit Check Between TCM and Data Link Connector ..... 84

Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit) ..... 84

ECM Circuit Check ..... 85

TCM Circuit Check ..... 86

Low Tire Pressure Warning Control Unit Circuit Check ..... 86

Display Unit Circuit Check ..... 87

Data Link Connector Circuit Check ..... 87

BCM Circuit Check ..... 88

Unified Meter and A/C Amp. Circuit Check ..... 88

ABS Actuator and Electric Unit (Control Unit) Circuit Check ..... 89

IPDM E/R Circuit Check ..... 89

CAN Communication Circuit Check ..... 90

IPDM E/R Ignition Relay Circuit Check ..... 93

Component Inspection ..... 93

ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION ..... 93

**CAN SYSTEM (TYPE 3)** ..... 94

System Description ..... 94

Component Parts and Harness Connector Location. 94

F  
G  
H  
I  
J  
LAN

L  
M

Schematic .....	95	CHECK SHEET RESULTS (EXAMPLE) .....	166
Wiring Diagram - CAN - .....	96	Circuit Check Between TCM and Data Link Connector .....	178
Work Flow .....	99	Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit) .....	178
CHECK SHEET .....	101	ECM Circuit Check .....	179
CHECK SHEET RESULTS (EXAMPLE) .....	103	TCM Circuit Check .....	180
Circuit Check Between TCM and Data Link Connector .....	114	Low Tire Pressure Warning Control Unit Circuit Check .....	180
Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit) .....	114	Display Control Unit Circuit Check .....	181
ECM Circuit Check .....	115	Data Link Connector Circuit Check .....	181
TCM Circuit Check .....	116	BCM Circuit Check .....	182
Display Control Unit Circuit Check .....	116	Unified Meter and A/C Amp. Circuit Check .....	182
Data Link Connector Circuit Check .....	117	ABS Actuator and Electric Unit (Control Unit) Circuit Check .....	183
BCM Circuit Check .....	117	IPDM E/R Circuit Check .....	183
Unified Meter and A/C Amp. Circuit Check .....	118	CAN Communication Circuit Check .....	184
ABS Actuator and Electric Unit (Control Unit) Circuit Check .....	118	IPDM E/R Ignition Relay Circuit Check .....	187
IPDM E/R Circuit Check .....	119	Component Inspection .....	187
CAN Communication Circuit Check .....	119	ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION .....	187
IPDM E/R Ignition Relay Circuit Check .....	122	<b>CAN SYSTEM (TYPE 6) .....</b>	<b>188</b>
Component Inspection .....	122	System Description .....	188
ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION .....	122	Component Parts and Harness Connector Location .....	188
<b>CAN SYSTEM (TYPE 4) .....</b>	<b>123</b>	Schematic .....	189
System Description .....	123	Wiring Diagram - CAN - .....	190
Component Parts and Harness Connector Location .....	123	Work Flow .....	193
Schematic .....	124	CHECK SHEET .....	195
Wiring Diagram - CAN - .....	125	CHECK SHEET RESULTS (EXAMPLE) .....	197
Work Flow .....	128	Circuit Check Between TCM and Data Link Connector .....	211
CHECK SHEET .....	130	Circuit Check Between Data Link Connector and Driver Seat Control Unit .....	211
CHECK SHEET RESULTS (EXAMPLE) .....	132	Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit) .....	212
Circuit Check Between TCM and Data Link Connector .....	145	ECM Circuit Check .....	213
Circuit Check Between Data Link Connector and Driver Seat Control Unit .....	145	TCM Circuit Check .....	213
Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit) .....	146	Low Tire Pressure Warning Control Unit Circuit Check .....	214
ECM Circuit Check .....	147	Display Unit Circuit Check .....	214
TCM Circuit Check .....	147	Data Link Connector Circuit Check .....	215
Display Unit Circuit Check .....	148	BCM Circuit Check .....	215
Data Link Connector Circuit Check .....	148	Unified Meter and A/C Amp. Circuit Check .....	216
BCM Circuit Check .....	149	Driver Seat Control Unit Circuit Check .....	216
Unified Meter and A/C Amp. Circuit Check .....	149	ABS Actuator and Electric Unit (Control Unit) Circuit Check .....	217
Driver Seat Control Unit Circuit Check .....	150	IPDM E/R Circuit Check .....	217
ABS Actuator and Electric Unit (Control Unit) Circuit Check .....	150	CAN Communication Circuit Check .....	218
IPDM E/R Circuit Check .....	151	IPDM E/R Ignition Relay Circuit Check .....	223
CAN Communication Circuit Check .....	152	Component Inspection .....	223
IPDM E/R Ignition Relay Circuit Check .....	156	ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION .....	223
Component Inspection .....	156	<b>CAN SYSTEM (TYPE 7) .....</b>	<b>224</b>
ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION .....	156	System Description .....	224
<b>CAN SYSTEM (TYPE 5) .....</b>	<b>157</b>	Component Parts and Harness Connector Location .....	224
System Description .....	157	Schematic .....	225
Component Parts and Harness Connector Location .....	157	Wiring Diagram - CAN - .....	226
Schematic .....	158	Work Flow .....	229
Wiring Diagram - CAN - .....	159	CHECK SHEET .....	231
Work Flow .....	162		
CHECK SHEET .....	164		

CHECK SHEET RESULTS (EXAMPLE) .....	233	CHECK SHEET .....	300
Circuit Check Between TCM and Data Link Connector .....	246	CHECK SHEET RESULTS (EXAMPLE) .....	302
Circuit Check Between Data Link Connector and Driver Seat Control Unit .....	246	Circuit Check Between TCM and Data Link Connector .....	314
Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit) .....	247	Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit) .....	314
ECM Circuit Check .....	248	ECM Circuit Check .....	315
TCM Circuit Check .....	248	TCM Circuit Check .....	316
Display Control Unit Circuit Check .....	249	Display Unit Circuit Check .....	316
Data Link Connector Circuit Check .....	249	Data Link Connector Circuit Check .....	317
BCM Circuit Check .....	250	BCM Circuit Check .....	317
Unified Meter and A/C Amp. Circuit Check .....	250	Unified Meter and A/C Amp. Circuit Check .....	318
Driver Seat Control Unit Circuit Check .....	251	Steering Angle Sensor Circuit Check .....	318
ABS Actuator and Electric Unit (Control Unit) Circuit Check .....	251	ABS Actuator and Electric Unit (Control Unit) Circuit Check .....	319
IPDM E/R Circuit Check .....	252	IPDM E/R Circuit Check .....	319
CAN Communication Circuit Check .....	253	CAN Communication Circuit Check .....	320
IPDM E/R Ignition Relay Circuit Check .....	256	IPDM E/R Ignition Relay Circuit Check .....	323
Component Inspection .....	257	Component Inspection .....	323
ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION .....	257	ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION .....	323
<b>CAN SYSTEM (TYPE 8) .....</b>	<b>258</b>	<b>CAN SYSTEM (TYPE 10) .....</b>	<b>324</b>
System Description .....	258	System Description .....	324
Component Parts and Harness Connector Location .....	258	Component Parts and Harness Connector Location .....	324
Schematic .....	259	Schematic .....	325
Wiring Diagram - CAN - .....	260	Wiring Diagram - CAN - .....	326
Work Flow .....	263	Work Flow .....	329
CHECK SHEET .....	265	CHECK SHEET .....	331
CHECK SHEET RESULTS (EXAMPLE) .....	267	CHECK SHEET RESULTS (EXAMPLE) .....	333
Circuit Check Between TCM and Data Link Connector .....	281	Circuit Check Between TCM and Data Link Connector .....	346
Circuit Check Between Data Link Connector and Driver Seat Control Unit .....	281	Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit) .....	346
Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit) .....	282	ECM Circuit Check .....	347
ECM Circuit Check .....	283	TCM Circuit Check .....	348
TCM Circuit Check .....	283	Low Tire Pressure Warning Control Unit Circuit Check .....	348
Low Tire Pressure Warning Control Unit Circuit Check .....	284	Display Unit Circuit Check .....	349
Display Control Unit Circuit Check .....	284	Data Link Connector Circuit Check .....	349
Data Link Connector Circuit Check .....	285	BCM Circuit Check .....	350
BCM Circuit Check .....	285	Unified Meter and A/C Amp. Circuit Check .....	350
Unified Meter and A/C Amp. Circuit Check .....	286	Steering Angle Sensor Circuit Check .....	351
Driver Seat Control Unit Circuit Check .....	286	ABS Actuator and Electric Unit (Control Unit) Circuit Check .....	351
ABS Actuator and Electric Unit (Control Unit) Circuit Check .....	287	IPDM E/R Circuit Check .....	352
IPDM E/R Circuit Check .....	287	CAN Communication Circuit Check .....	352
CAN Communication Circuit Check .....	288	IPDM E/R Ignition Relay Circuit Check .....	355
IPDM E/R Ignition Relay Circuit Check .....	292	Component Inspection .....	355
Component Inspection .....	292	ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION .....	355
ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION .....	292	<b>CAN SYSTEM (TYPE 11) .....</b>	<b>356</b>
<b>CAN SYSTEM (TYPE 9) .....</b>	<b>293</b>	System Description .....	356
System Description .....	293	Component Parts and Harness Connector Location .....	356
Component Parts and Harness Connector Location .....	293	Schematic .....	357
Schematic .....	294	Wiring Diagram - CAN - .....	358
Wiring Diagram - CAN - .....	295	Work Flow .....	361
Work Flow .....	298	CHECK SHEET .....	363
		CHECK SHEET RESULTS (EXAMPLE) .....	365
		Circuit Check Between TCM and Data Link Con-	

nector .....	377	ABS Actuator and Electric Unit (Control Unit) .....	445
Circuit Check Between Data Link Connector and		ECM Circuit Check .....	446
ABS Actuator and Electric Unit (Control Unit) .....	377	TCM Circuit Check .....	447
ECM Circuit Check .....	378	Low Tire Pressure Warning Control Unit Circuit	
TCM Circuit Check .....	379	Check .....	447
Display Control Unit Circuit Check .....	379	Display Control Unit Circuit Check .....	448
Data Link Connector Circuit Check .....	380	Data Link Connector Circuit Check .....	448
BCM Circuit Check .....	380	BCM Circuit Check .....	449
Unified Meter and A/C Amp. Circuit Check .....	381	Unified Meter and A/C Amp. Circuit Check .....	449
Steering Angle Sensor Circuit Check .....	381	Steering Angle Sensor Circuit Check .....	450
ABS Actuator and Electric Unit (Control Unit) Circuit		ABS Actuator and Electric Unit (Control Unit) Circuit	
Check .....	382	Check .....	450
IPDM E/R Circuit Check .....	382	IPDM E/R Circuit Check .....	451
CAN Communication Circuit Check .....	383	CAN Communication Circuit Check .....	451
IPDM E/R Ignition Relay Circuit Check .....	386	IPDM E/R Ignition Relay Circuit Check .....	454
Component Inspection .....	386	Component Inspection .....	454
ECM/IPDM E/R INTERNAL CIRCUIT INSPEC-		ECM/IPDM E/R INTERNAL CIRCUIT INSPEC-	
TION .....	386	TION .....	454
<b>CAN SYSTEM (TYPE 12) .....</b>	<b>387</b>	<b>CAN SYSTEM (TYPE 14) .....</b>	<b>455</b>
System Description .....	387	System Description .....	455
Component Parts and Harness Connector Location	387	Component Parts and Harness Connector Location	455
Schematic .....	388	Schematic .....	456
Wiring Diagram - CAN - .....	389	Wiring Diagram - CAN - .....	457
Work Flow .....	392	Work Flow .....	460
CHECK SHEET .....	394	CHECK SHEET .....	462
CHECK SHEET RESULTS (EXAMPLE) .....	396	CHECK SHEET RESULTS (EXAMPLE) .....	464
Circuit Check Between TCM and Data Link Con-		Circuit Check Between TCM and Data Link Con-	
connector .....	410	connector .....	479
Circuit Check Between Data Link Connector and		Circuit Check Between Data Link Connector and	
Driver Seat Control Unit .....	410	Driver Seat Control Unit .....	479
Circuit Check Between Driver Seat Control Unit and		Circuit Check Between Driver Seat Control Unit and	
ABS Actuator and Electric Unit (Control Unit) .....	411	ABS Actuator and Electric Unit (Control Unit) .....	480
ECM Circuit Check .....	412	ECM Circuit Check .....	481
TCM Circuit Check .....	412	TCM Circuit Check .....	481
Display Unit Circuit Check .....	413	Low Tire Pressure Warning Control Unit Circuit	
Data Link Connector Circuit Check .....	413	Check .....	482
BCM Circuit Check .....	414	Display Unit Circuit Check .....	482
Unified Meter and A/C Amp. Circuit Check .....	414	Data Link Connector Circuit Check .....	483
Steering Angle Sensor Circuit Check .....	415	BCM Circuit Check .....	483
Driver Seat Control Unit Circuit Check .....	415	Unified Meter and A/C Amp. Circuit Check .....	484
ABS Actuator and Electric Unit (Control Unit) Circuit		Steering Angle Sensor Circuit Check .....	484
Check .....	416	Driver Seat Control Unit Circuit Check .....	485
IPDM E/R Circuit Check .....	416	ABS Actuator and Electric Unit (Control Unit) Circuit	
CAN Communication Circuit Check .....	417	Check .....	485
IPDM E/R Ignition Relay Circuit Check .....	422	IPDM E/R Circuit Check .....	486
Component Inspection .....	422	CAN Communication Circuit Check .....	487
ECM/IPDM E/R INTERNAL CIRCUIT INSPEC-		IPDM E/R Ignition Relay Circuit Check .....	491
TION .....	422	Component Inspection .....	491
<b>CAN SYSTEM (TYPE 13) .....</b>	<b>423</b>	ECM/IPDM E/R INTERNAL CIRCUIT INSPEC-	
System Description .....	423	TION .....	491
Component Parts and Harness Connector Location	423	<b>CAN SYSTEM (TYPE 15) .....</b>	<b>492</b>
Schematic .....	424	System Description .....	492
Wiring Diagram - CAN - .....	425	Component Parts and Harness Connector Location	492
Work Flow .....	428	Schematic .....	493
CHECK SHEET .....	430	Wiring Diagram - CAN - .....	494
CHECK SHEET RESULTS (EXAMPLE) .....	432	Work Flow .....	497
Circuit Check Between TCM and Data Link Con-		CHECK SHEET .....	499
connector .....	445	CHECK SHEET RESULTS (EXAMPLE) .....	501
Circuit Check Between Data Link Connector and		Circuit Check Between TCM and Data Link Con-	



nector .....	515	CHECK SHEET .....	571
Circuit Check Between Data Link Connector and Driver Seat Control Unit .....	515	CHECK SHEET RESULTS (EXAMPLE) .....	573
Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit) .....	516	Circuit Check Between TCM and Data Link Connector .....	585
ECM Circuit Check .....	517	Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit) .....	585
TCM Circuit Check .....	517	ECM Circuit Check .....	586
Display Control Unit Circuit Check .....	518	TCM Circuit Check .....	587
Data Link Connector Circuit Check .....	518	Display Unit Circuit Check .....	587
BCM Circuit Check .....	519	Data Link Connector Circuit Check .....	588
Unified Meter and A/C Amp. Circuit Check .....	519	BCM Circuit Check .....	588
Steering Angle Sensor Circuit Check .....	520	Unified Meter and A/C Amp. Circuit Check .....	589
Driver Seat Control Unit Circuit Check .....	520	AWD Control Unit Circuit Check .....	589
ABS Actuator and Electric Unit (Control Unit) Circuit Check .....	521	ABS Actuator and Electric Unit (Control Unit) Circuit Check .....	590
IPDM E/R Circuit Check .....	521	IPDM E/R Circuit Check .....	590
CAN Communication Circuit Check .....	522	CAN Communication Circuit Check .....	591
IPDM E/R Ignition Relay Circuit Check .....	526	IPDM E/R Ignition Relay Circuit Check .....	594
Component Inspection .....	526	Component Inspection .....	594
ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION .....	526	ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION .....	594
<b>CAN SYSTEM (TYPE 16) .....</b>	<b>527</b>	<b>CAN SYSTEM (TYPE 18) .....</b>	<b>595</b>
System Description .....	527	System Description .....	595
Component Parts and Harness Connector Location .....	527	Component Parts and Harness Connector Location .....	595
Schematic .....	528	Schematic .....	596
Wiring Diagram - CAN - .....	529	Wiring Diagram - CAN - .....	597
Work Flow .....	532	Work Flow .....	600
CHECK SHEET .....	534	CHECK SHEET .....	602
CHECK SHEET RESULTS (EXAMPLE) .....	536	CHECK SHEET RESULTS (EXAMPLE) .....	604
Circuit Check Between TCM and Data Link Connector .....	551	Circuit Check Between TCM and Data Link Connector .....	617
Circuit Check Between Data Link Connector and Driver Seat Control Unit .....	551	Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit) .....	617
Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit) .....	552	ECM Circuit Check .....	618
ECM Circuit Check .....	553	TCM Circuit Check .....	619
TCM Circuit Check .....	553	Low Tire Pressure Warning Control Unit Circuit Check .....	619
Low Tire Pressure Warning Control Unit Circuit Check .....	554	Display Unit Circuit Check .....	620
Display Control Unit Circuit Check .....	554	Data Link Connector Circuit Check .....	620
Data Link Connector Circuit Check .....	555	BCM Circuit Check .....	621
BCM Circuit Check .....	555	Unified Meter and A/C Amp. Circuit Check .....	621
Unified Meter and A/C Amp. Circuit Check .....	556	AWD Control Unit Circuit Check .....	622
Steering Angle Sensor Circuit Check .....	556	ABS Actuator and Electric Unit (Control Unit) Circuit Check .....	622
Driver Seat Control Unit Circuit Check .....	557	IPDM E/R Circuit Check .....	623
ABS Actuator and Electric Unit (Control Unit) Circuit Check .....	557	CAN Communication Circuit Check .....	623
IPDM E/R Circuit Check .....	558	IPDM E/R Ignition Relay Circuit Check .....	626
CAN Communication Circuit Check .....	559	Component Inspection .....	627
IPDM E/R Ignition Relay Circuit Check .....	563	ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION .....	627
Component Inspection .....	563	<b>CAN SYSTEM (TYPE 19) .....</b>	<b>628</b>
ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION .....	563	System Description .....	628
<b>CAN SYSTEM (TYPE 17) .....</b>	<b>564</b>	Component Parts and Harness Connector Location .....	628
System Description .....	564	Schematic .....	629
Component Parts and Harness Connector Location .....	564	Wiring Diagram - CAN - .....	630
Schematic .....	565	Work Flow .....	633
Wiring Diagram - CAN - .....	566	CHECK SHEET .....	635
Work Flow .....	569	CHECK SHEET RESULTS (EXAMPLE) .....	637
		Circuit Check Between TCM and Data Link Con-	

nector .....	649	ABS Actuator and Electric Unit (Control Unit) .....	717
Circuit Check Between Data Link Connector and		ECM Circuit Check .....	718
ABS Actuator and Electric Unit (Control Unit) .....	649	TCM Circuit Check .....	719
ECM Circuit Check .....	650	Low Tire Pressure Warning Control Unit Circuit	
TCM Circuit Check .....	651	Check .....	719
Display Control Unit Circuit Check .....	651	Display Control Unit Circuit Check .....	720
Data Link Connector Circuit Check .....	652	Data Link Connector Circuit Check .....	720
BCM Circuit Check .....	652	BCM Circuit Check .....	721
Unified Meter and A/C Amp. Circuit Check .....	653	Unified Meter and A/C Amp. Circuit Check .....	721
AWD Control Unit Circuit Check .....	653	AWD Control Unit Circuit Check .....	722
ABS Actuator and Electric Unit (Control Unit) Circuit		ABS Actuator and Electric Unit (Control Unit) Circuit	
Check .....	654	Check .....	722
IPDM E/R Circuit Check .....	654	IPDM E/R Circuit Check .....	723
CAN Communication Circuit Check .....	655	CAN Communication Circuit Check .....	723
IPDM E/R Ignition Relay Circuit Check .....	658	IPDM E/R Ignition Relay Circuit Check .....	726
Component Inspection .....	658	Component Inspection .....	727
ECM/IPDM E/R INTERNAL CIRCUIT INSPEC-		ECM/IPDM E/R INTERNAL CIRCUIT INSPEC-	
TION .....	658	TION .....	727
<b>CAN SYSTEM (TYPE 20) .....</b>	<b>659</b>	<b>CAN SYSTEM (TYPE 22) .....</b>	<b>728</b>
System Description .....	659	System Description .....	728
Component Parts and Harness Connector Location	659	Component Parts and Harness Connector Location	728
Schematic .....	660	Schematic .....	729
Wiring Diagram - CAN - .....	661	Wiring Diagram - CAN - .....	730
Work Flow .....	664	Work Flow .....	733
CHECK SHEET .....	666	CHECK SHEET .....	735
CHECK SHEET RESULTS (EXAMPLE) .....	668	CHECK SHEET RESULTS (EXAMPLE) .....	737
Circuit Check Between TCM and Data Link Con-		Circuit Check Between TCM and Data Link Con-	
connector .....	682	connector .....	752
Circuit Check Between Data Link Connector and		Circuit Check Between Data Link Connector and	
Driver Seat Control Unit .....	682	Driver Seat Control Unit .....	752
Circuit Check Between Driver Seat Control Unit and		Circuit Check Between Driver Seat Control Unit and	
ABS Actuator and Electric Unit (Control Unit) .....	683	ABS Actuator and Electric Unit (Control Unit) .....	753
ECM Circuit Check .....	684	ECM Circuit Check .....	754
TCM Circuit Check .....	684	TCM Circuit Check .....	754
Display Unit Circuit Check .....	685	Low Tire Pressure Warning Control Unit Circuit	
Data Link Connector Circuit Check .....	685	Check .....	755
BCM Circuit Check .....	686	Display Unit Circuit Check .....	755
Unified Meter and A/C Amp. Circuit Check .....	686	Data Link Connector Circuit Check .....	756
Driver Seat Control Unit Circuit Check .....	687	BCM Circuit Check .....	756
AWD Control Unit Circuit Check .....	687	Unified Meter and A/C Amp. Circuit Check .....	757
ABS Actuator and Electric Unit (Control Unit) Circuit		Driver Seat Control Unit Circuit Check .....	757
Check .....	688	AWD Control Unit Circuit Check .....	758
IPDM E/R Circuit Check .....	688	ABS Actuator and Electric Unit (Control Unit) Circuit	
CAN Communication Circuit Check .....	689	Check .....	758
IPDM E/R Ignition Relay Circuit Check .....	693	IPDM E/R Circuit Check .....	759
Component Inspection .....	694	CAN Communication Circuit Check .....	760
ECM/IPDM E/R INTERNAL CIRCUIT INSPEC-		IPDM E/R Ignition Relay Circuit Check .....	764
TION .....	694	Component Inspection .....	764
<b>CAN SYSTEM (TYPE 21) .....</b>	<b>695</b>	ECM/IPDM E/R INTERNAL CIRCUIT INSPEC-	
System Description .....	695	TION .....	764
Component Parts and Harness Connector Location	695	<b>CAN SYSTEM (TYPE 23) .....</b>	<b>765</b>
Schematic .....	696	System Description .....	765
Wiring Diagram - CAN - .....	697	Component Parts and Harness Connector Location	765
Work Flow .....	700	Schematic .....	766
CHECK SHEET .....	702	Wiring Diagram - CAN - .....	767
CHECK SHEET RESULTS (EXAMPLE) .....	704	Work Flow .....	770
Circuit Check Between TCM and Data Link Con-		CHECK SHEET .....	772
connector .....	717	CHECK SHEET RESULTS (EXAMPLE) .....	774
Circuit Check Between Data Link Connector and		Circuit Check Between TCM and Data Link Con-	

nector .....	788	CHECK SHEET .....	845	
Circuit Check Between Data Link Connector and Driver Seat Control Unit .....	788	CHECK SHEET RESULTS (EXAMPLE) .....	847	A
Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit) .....	789	Circuit Check Between TCM and Data Link Connector .....	860	B
ECM Circuit Check .....	790	Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit) .....	860	C
TCM Circuit Check .....	790	ECM Circuit Check .....	861	C
Display Control Unit Circuit Check .....	791	TCM Circuit Check .....	862	C
Data Link Connector Circuit Check .....	791	Display Unit Circuit Check .....	862	D
BCM Circuit Check .....	792	Data Link Connector Circuit Check .....	863	D
Unified Meter and A/C Amp. Circuit Check .....	792	BCM Circuit Check .....	863	D
Driver Seat Control Unit Circuit Check .....	793	Unified Meter and A/C Amp. Circuit Check .....	864	E
AWD Control Unit Circuit Check .....	793	Steering Angle Sensor Circuit Check .....	864	E
ABS Actuator and Electric Unit (Control Unit) Circuit Check .....	794	AWD Control Unit Circuit Check .....	865	F
IPDM E/R Circuit Check .....	794	ABS Actuator and Electric Unit (Control Unit) Circuit Check .....	865	F
CAN Communication Circuit Check .....	795	IPDM E/R Circuit Check .....	866	G
IPDM E/R Ignition Relay Circuit Check .....	799	CAN Communication Circuit Check .....	866	G
Component Inspection .....	800	IPDM E/R Ignition Relay Circuit Check .....	869	H
ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION .....	800	Component Inspection .....	870	H
<b>CAN SYSTEM (TYPE 24) .....</b>	<b>801</b>	ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION .....	870	I
System Description .....	801	<b>CAN SYSTEM (TYPE 26) .....</b>	<b>871</b>	I
Component Parts and Harness Connector Location .....	801	System Description .....	871	J
Schematic .....	802	Component Parts and Harness Connector Location .....	871	J
Wiring Diagram - CAN - .....	803	Schematic .....	872	J
Work Flow .....	806	Wiring Diagram - CAN - .....	873	J
CHECK SHEET .....	808	Work Flow .....	876	J
CHECK SHEET RESULTS (EXAMPLE) .....	810	CHECK SHEET .....	878	J
Circuit Check Between TCM and Data Link Connector .....	825	CHECK SHEET RESULTS (EXAMPLE) .....	880	J
Circuit Check Between Data Link Connector and Driver Seat Control Unit .....	825	Circuit Check Between TCM and Data Link Connector .....	894	J
Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit) .....	826	Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit) .....	894	J
ECM Circuit Check .....	827	ECM Circuit Check .....	895	J
TCM Circuit Check .....	827	TCM Circuit Check .....	896	J
Low Tire Pressure Warning Control Unit Circuit Check .....	828	Low Tire Pressure Warning Control Unit Circuit Check .....	896	J
Display Control Unit Circuit Check .....	828	Display Unit Circuit Check .....	897	J
Data Link Connector Circuit Check .....	829	Data Link Connector Circuit Check .....	897	J
BCM Circuit Check .....	829	BCM Circuit Check .....	898	J
Unified Meter and A/C Amp. Circuit Check .....	830	Unified Meter and A/C Amp. Circuit Check .....	898	J
Driver Seat Control Unit Circuit Check .....	830	Steering Angle Sensor Circuit Check .....	899	J
AWD Control Unit Circuit Check .....	831	AWD Control Unit Circuit Check .....	899	J
ABS Actuator and Electric Unit (Control Unit) Circuit Check .....	831	ABS Actuator and Electric Unit (Control Unit) Circuit Check .....	900	J
IPDM E/R Circuit Check .....	832	IPDM E/R Circuit Check .....	900	J
CAN Communication Circuit Check .....	833	CAN Communication Circuit Check .....	901	J
IPDM E/R Ignition Relay Circuit Check .....	837	IPDM E/R Ignition Relay Circuit Check .....	904	J
Component Inspection .....	837	Component Inspection .....	905	J
ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION .....	837	ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION .....	905	J
<b>CAN SYSTEM (TYPE 25) .....</b>	<b>838</b>	<b>CAN SYSTEM (TYPE 27) .....</b>	<b>906</b>	J
System Description .....	838	System Description .....	906	J
Component Parts and Harness Connector Location .....	838	Component Parts and Harness Connector Location .....	906	J
Schematic .....	839	Schematic .....	907	J
Wiring Diagram - CAN - .....	840	Wiring Diagram - CAN - .....	908	J
Work Flow .....	843	Work Flow .....	911	J
		CHECK SHEET .....	913	J

CHECK SHEET RESULTS (EXAMPLE) .....	915	CHECK SHEET RESULTS (EXAMPLE) .....	985
Circuit Check Between TCM and Data Link Connector .....	928	Circuit Check Between TCM and Data Link Connector .....	999
Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit) .....	928	Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit) .....	999
ECM Circuit Check .....	929	ECM Circuit Check .....	1000
TCM Circuit Check .....	930	TCM Circuit Check .....	1001
Display Control Unit Circuit Check .....	930	Low Tire Pressure Warning Control Unit Circuit Check .....	1001
Data Link Connector Circuit Check .....	931	Display Control Unit Circuit Check .....	1002
BCM Circuit Check .....	931	Data Link Connector Circuit Check .....	1002
Unified Meter and A/C Amp. Circuit Check .....	932	BCM Circuit Check .....	1003
Steering Angle Sensor Circuit Check .....	932	Unified Meter and A/C Amp. Circuit Check .....	1003
AWD Control Unit Circuit Check .....	933	Steering Angle Sensor Circuit Check .....	1004
ABS Actuator and Electric Unit (Control Unit) Circuit Check .....	933	AWD Control Unit Circuit Check .....	1004
IPDM E/R Circuit Check .....	934	ABS Actuator and Electric Unit (Control Unit) Circuit Check .....	1005
CAN Communication Circuit Check .....	934	IPDM E/R Circuit Check .....	1005
IPDM E/R Ignition Relay Circuit Check .....	937	CAN Communication Circuit Check .....	1006
Component Inspection .....	938	IPDM E/R Ignition Relay Circuit Check .....	1009
ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION .....	938	Component Inspection .....	1010
<b>CAN SYSTEM (TYPE 28) .....</b>	<b>939</b>	ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION .....	1010
System Description .....	939	<b>CAN SYSTEM (TYPE 30) .....</b>	<b>1011</b>
Component Parts and Harness Connector Location .....	939	System Description .....	1011
Schematic .....	940	Component Parts and Harness Connector Location .....	1011
Wiring Diagram - CAN - .....	941	Schematic .....	1012
Work Flow .....	944	Wiring Diagram - CAN - .....	1013
CHECK SHEET .....	946	Work Flow .....	1016
CHECK SHEET RESULTS (EXAMPLE) .....	948	CHECK SHEET .....	1018
Circuit Check Between TCM and Data Link Connector .....	963	CHECK SHEET RESULTS (EXAMPLE) .....	1020
Circuit Check Between Data Link Connector and Driver Seat Control Unit .....	963	Circuit Check Between TCM and Data Link Connector .....	1036
Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit) .....	964	Circuit Check Between Data Link Connector and Driver Seat Control Unit .....	1036
ECM Circuit Check .....	965	Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit) .....	1037
TCM Circuit Check .....	965	ECM Circuit Check .....	1038
Display Unit Circuit Check .....	966	TCM Circuit Check .....	1038
Data Link Connector Circuit Check .....	966	Low Tire Pressure Warning Control Unit Circuit Check .....	1039
BCM Circuit Check .....	967	Display Unit Circuit Check .....	1039
Unified Meter and A/C Amp. Circuit Check .....	967	Data Link Connector Circuit Check .....	1040
Steering Angle Sensor Circuit Check .....	968	BCM Circuit Check .....	1040
Driver Seat Control Unit Circuit Check .....	968	Unified Meter and A/C Amp. Circuit Check .....	1041
AWD Control Unit Circuit Check .....	969	Steering Angle Sensor Circuit Check .....	1041
ABS Actuator and Electric Unit (Control Unit) Circuit Check .....	969	Driver Seat Control Unit Circuit Check .....	1042
IPDM E/R Circuit Check .....	970	AWD Control Unit Circuit Check .....	1042
CAN Communication Circuit Check .....	971	ABS Actuator and Electric Unit (Control Unit) Circuit Check .....	1043
IPDM E/R Ignition Relay Circuit Check .....	975	IPDM E/R Circuit Check .....	1043
Component Inspection .....	975	CAN Communication Circuit Check .....	1044
ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION .....	975	IPDM E/R Ignition Relay Circuit Check .....	1048
<b>CAN SYSTEM (TYPE 29) .....</b>	<b>976</b>	Component Inspection .....	1049
System Description .....	976	ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION .....	1049
Component Parts and Harness Connector Location .....	976	<b>CAN SYSTEM (TYPE 31) .....</b>	<b>1050</b>
Schematic .....	977	System Description .....	1050
Wiring Diagram - CAN - .....	978	Component Parts and Harness Connector Location .....	1050
Work Flow .....	981		
CHECK SHEET .....	983		

Schematic .....	1051	Schematic .....	1088
Wiring Diagram - CAN - .....	1052	Wiring Diagram - CAN - .....	1089
Work Flow .....	1055	Work Flow .....	1092
CHECK SHEET .....	1057	CHECK SHEET .....	1094
CHECK SHEET RESULTS (EXAMPLE) .....	1059	CHECK SHEET RESULTS (EXAMPLE) .....	1096
Circuit Check Between TCM and Data Link Connector .....	1074	Circuit Check Between TCM and Data Link Connector .....	1112
Circuit Check Between Data Link Connector and Driver Seat Control Unit .....	1074	Circuit Check Between Data Link Connector and Driver Seat Control Unit .....	1112
Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit) .....	1075	Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit) .....	1113
ECM Circuit Check .....	1076	ECM Circuit Check .....	1114
TCM Circuit Check .....	1076	TCM Circuit Check .....	1114
Display Control Unit Circuit Check .....	1077	Low Tire Pressure Warning Control Unit Circuit Check .....	1115
Data Link Connector Circuit Check .....	1077	Display Control Unit Circuit Check .....	1115
BCM Circuit Check .....	1078	Data Link Connector Circuit Check .....	1116
Unified Meter and A/C Amp. Circuit Check .....	1078	BCM Circuit Check .....	1116
Steering Angle Sensor Circuit Check .....	1079	Unified Meter and A/C Amp. Circuit Check .....	1117
Driver Seat Control Unit Circuit Check .....	1079	Steering Angle Sensor Circuit Check .....	1117
AWD Control Unit Circuit Check .....	1080	Driver Seat Control Unit Circuit Check .....	1118
ABS Actuator and Electric Unit (Control Unit) Circuit Check .....	1080	AWD Control Unit Circuit Check .....	1118
IPDM E/R Circuit Check .....	1081	ABS Actuator and Electric Unit (Control Unit) Circuit Check .....	1119
CAN Communication Circuit Check .....	1082	IPDM E/R Circuit Check .....	1119
IPDM E/R Ignition Relay Circuit Check .....	1086	CAN Communication Circuit Check .....	1120
Component Inspection .....	1086	IPDM E/R Ignition Relay Circuit Check .....	1124
ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION .....	1086	Component Inspection .....	1125
<b>CAN SYSTEM (TYPE 32) .....</b>	<b>1087</b>	ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION .....	1125
System Description .....	1087		
Component Parts and Harness Connector Location .....	1087		

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**PRECAUTIONS**

PFP:00001

**Precautions for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"**

AKS007PK

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the SRS and SB section of this Service Manual.

**WARNING:**

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SRS section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

**Precautions When Using CONSULT-II**

AKS004YM

When connecting CONSULT-II to data link connector, connect them through CONSULT-II CONVERTER.

**CAUTION:**

If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carry out CAN communication.

**CHECK POINTS FOR USING CONSULT-II**

1. Has CONSULT-II been used without connecting CONSULT-II CONVERTER on this vehicle?
  - If YES, GO TO 2.
  - If NO, GO TO 5.
2. Is there any indication other than indications relating to CAN communication system in the self-diagnosis results?
  - If YES, GO TO 3.
  - If NO, GO TO 4.
3. Based on self-diagnosis results unrelated to CAN communication, carry out the inspection.
4. Malfunctions may be detected in self-diagnosis depending on control units carrying out CAN communication. Therefore, erase the self-diagnosis results.
5. Diagnose CAN communication system. Refer to [LAN-12, "CAN Communication Unit For 2WD Models"](#) or [LAN-23, "CAN Communication Unit For AWD Models"](#).

**Precautions For Trouble Diagnosis  
CAN SYSTEM**

AKS004YN

- Do not apply voltage of 7.0V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0V or less.
- Be sure to turn ignition switch off and disconnect negative battery terminal before checking the circuit.

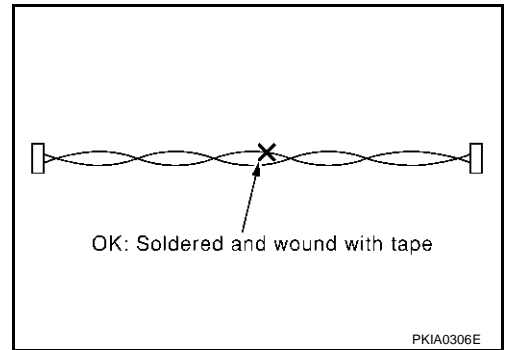
# PRECAUTIONS

[CAN]

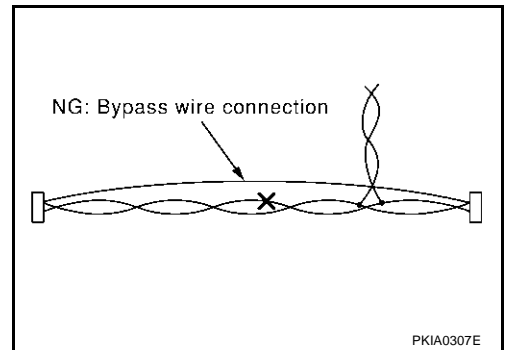
## Precautions For Harness Repair CAN SYSTEM

AKS004YO

- Solder the repaired parts, and wrap with tape. [Frays of twisted line must be within 110 mm (4.33 in)]



- Do not perform bypass wire connections for the repair parts. (The spliced wire will become separated and the characteristics of twisted line will be lost.)



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## CAN COMMUNICATION

PFP:23710

### System Description

AKS004YP

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

### CAN Communication Unit For 2WD Models

AKS004YQ

Go to CAN system, when selecting your CAN system type from the following table.

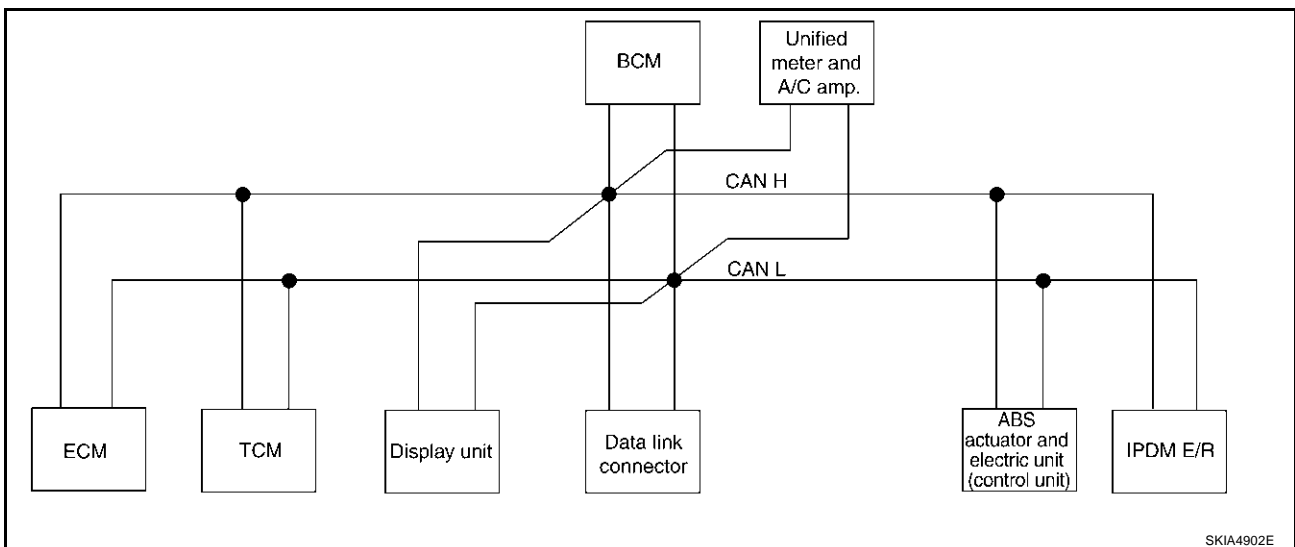
Body type	Wagon															
Axle	2WD															
Engine	VQ35DE															
Transmission	CVT															
Brake control	ABS								VDC							
Low tire pressure warning system		×			×	×		×		×			×	×		×
Navigation system			×		×		×	×			×		×		×	×
Automatic drive positioner				×		×	×	×			×		×	×	×	×
CAN communication type	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
CAN system trouble diagnosis	<a href="#">LAN-34</a>	<a href="#">LAN-63</a>	<a href="#">LAN-94</a>	<a href="#">LAN-123</a>	<a href="#">LAN-157</a>	<a href="#">LAN-188</a>	<a href="#">LAN-224</a>	<a href="#">LAN-258</a>	<a href="#">LAN-293</a>	<a href="#">LAN-324</a>	<a href="#">LAN-356</a>	<a href="#">LAN-387</a>	<a href="#">LAN-423</a>	<a href="#">LAN-455</a>	<a href="#">LAN-492</a>	<a href="#">LAN-527</a>

×: Applicable

### TYPE 1/TYPE 2/TYPE 3/TYPE 4/TYPE 5/TYPE 6/TYPE 7/TYPE 8

#### System Diagram

- Type1

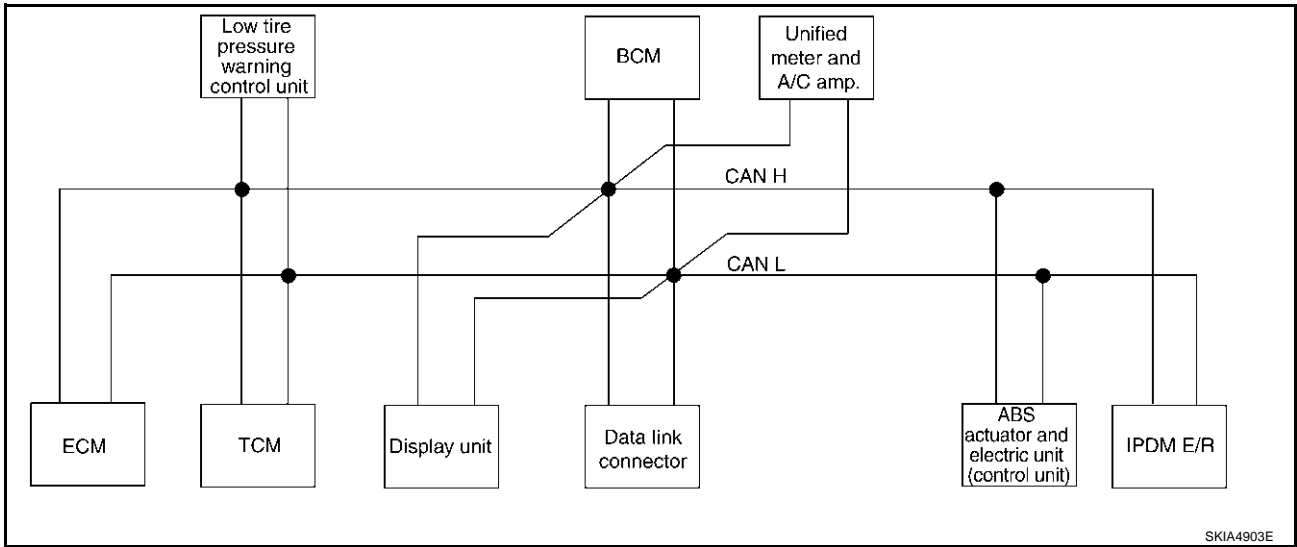




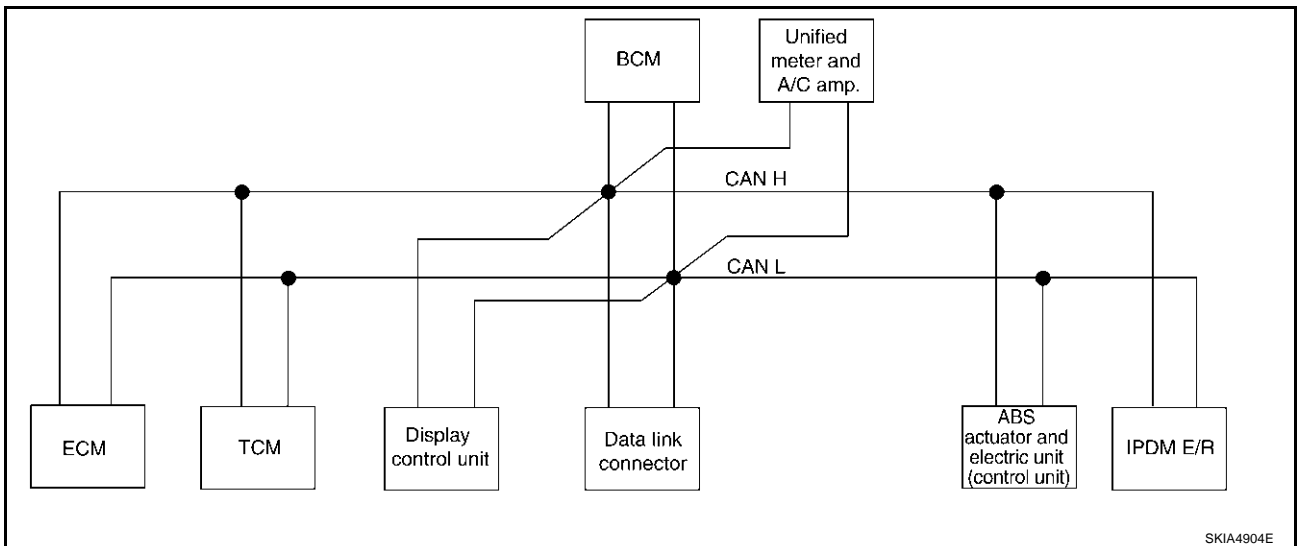
# CAN COMMUNICATION

[CAN]

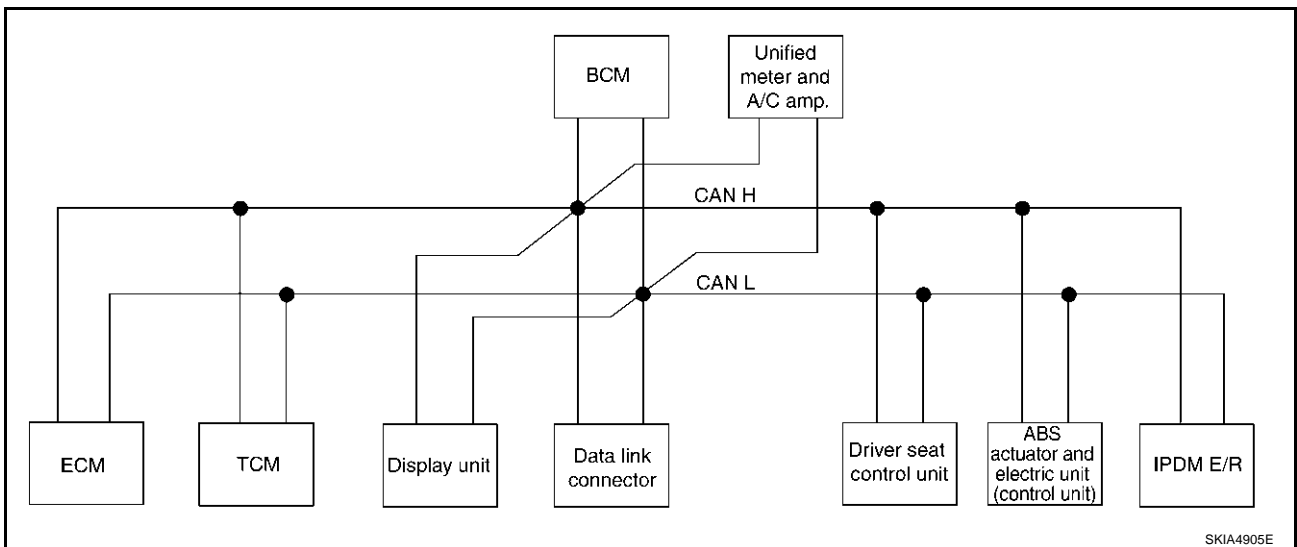
- Type2



- Type3



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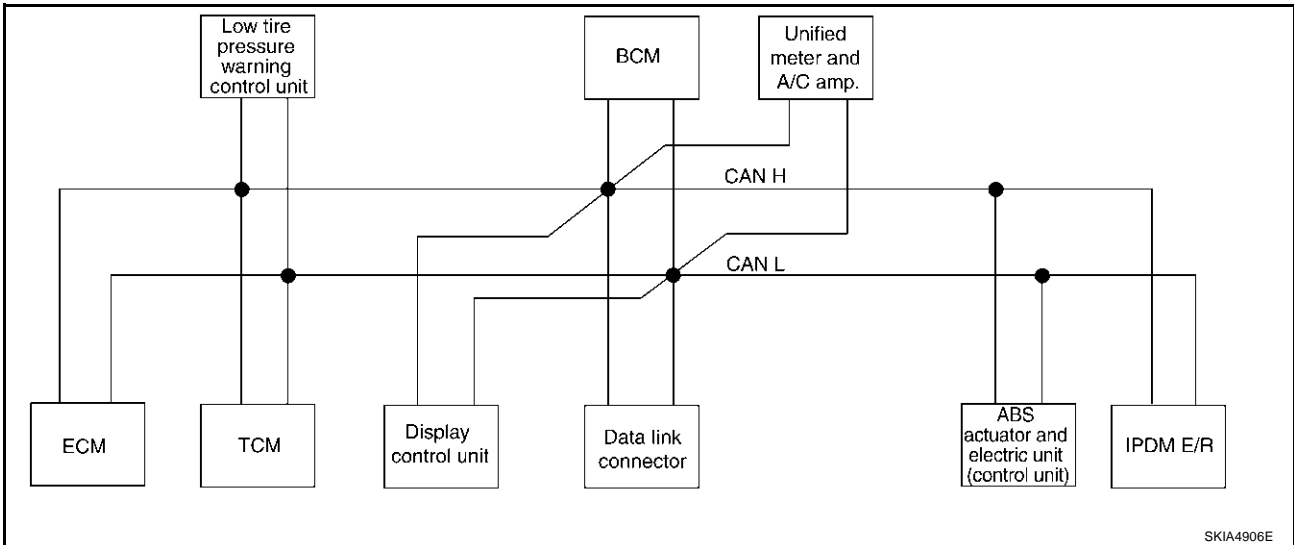
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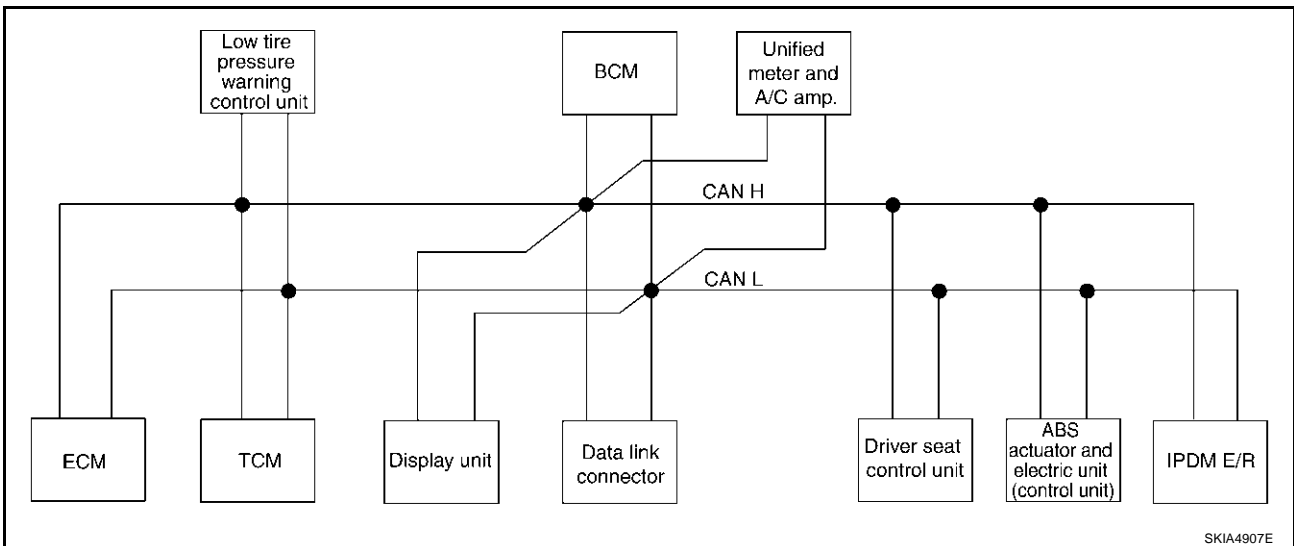
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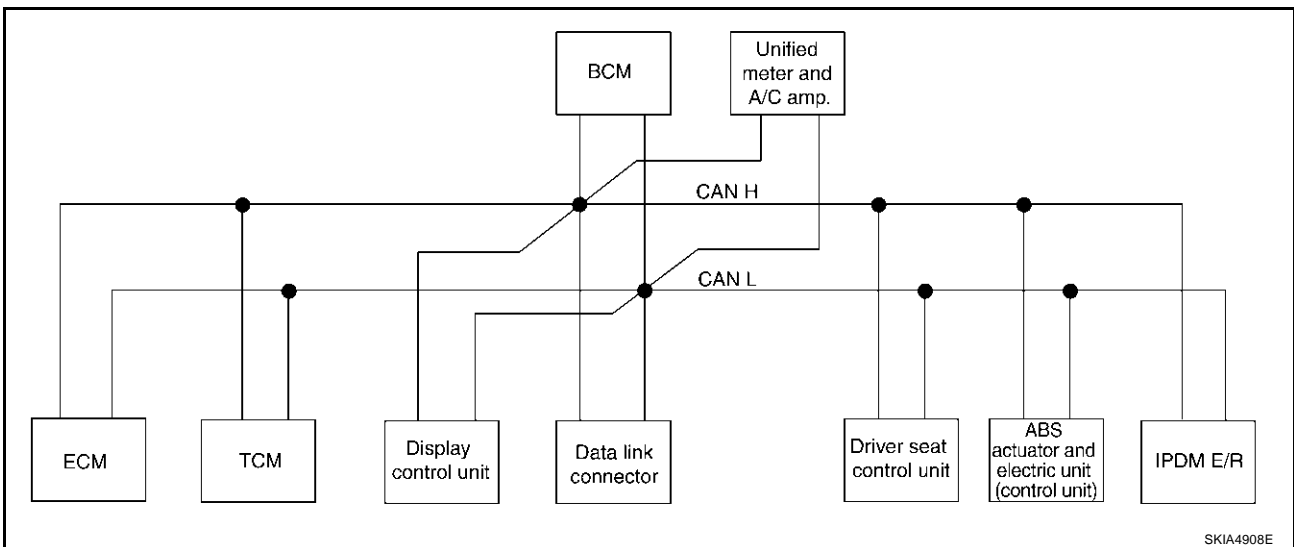
- Type5



- Type6



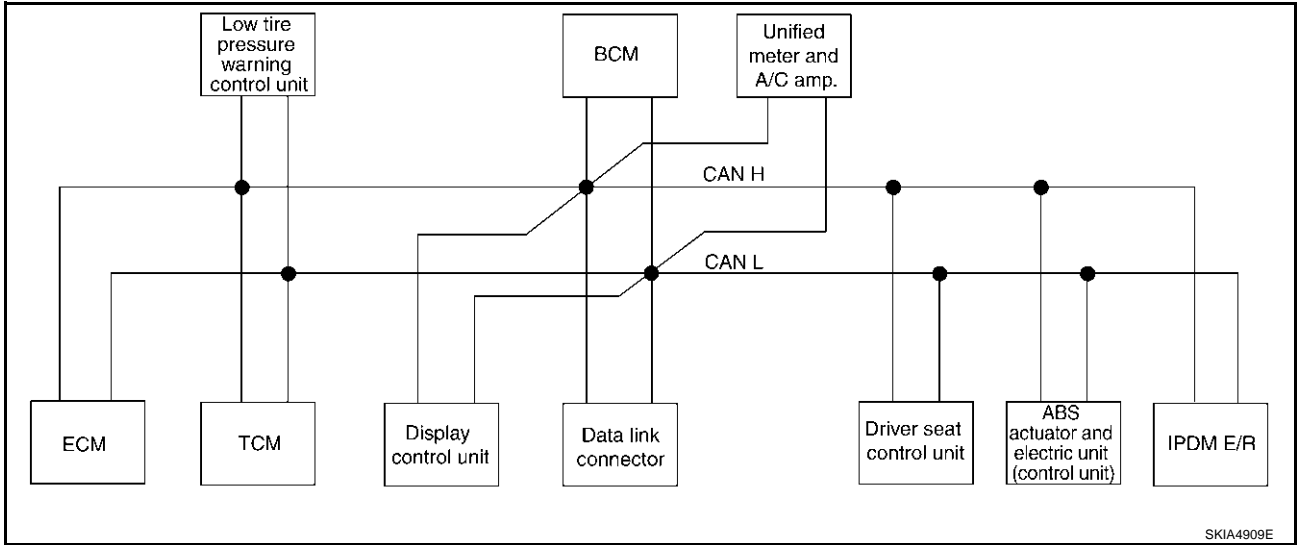
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# CAN COMMUNICATION

[CAN]

- Type8



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# CAN COMMUNICATION

[CAN]

## Input/output Signal Chart

T: Transmit R: Receive

Signals	ECM	TCM	Low tire pressure warning control unit	Display unit	Display control unit	BCM	Unified meter and A/C amp.	Driver seat control unit	ABS actuator and electric unit (control unit)	IPDM E/R
Engine speed signal	T	R			R	R	R			
Engine status signal	T					R				
Engine coolant temperature signal	T						R			
CVT position indicator signal		T					R			
Second position signal		R					T			
Second position indicator signal		T					R			
Engine and CVT integrated control signal	T	R								
	R	T								
Accelerator pedal position signal	T	R								
Closed throttle position signal	T	R								
Wide open throttle position signal	T	R								
Key switch signal						T		R		
Ignition switch signal						T		R		R
P range signal		T						R		
Stop lamp switch signal		R					T			
Fuel consumption monitor signal	T						R			
CVT self-diagnosis signal	R	T								
ABS operation signal		R							T	
Air conditioner switch signal	R					T				
A/C compressor request signal	T									R
A/C compressor feedback signal	T						R			
Blower fan motor switch signal	R					T				
A/C control signal				T	T		R			
				R	R		T			
Cooling fan speed request signal	T									R
Position lights request signal						T	R			R
Low beam request signal						T				R
Low beam status signal	R									T
High beam request signal						T	R			R
High beam status signal	R									T
Front fog lights request signal						T				R
Vehicle speed signal		R					R		T	
	R		R		R	R	T	R		
Sleep request 1 signal						T	R			
Sleep request 2 signal						T				R
Door switch signal						R	T			
				R	R	T	R	R		R
Turn indicator signal						T	R			

# CAN COMMUNICATION

[CAN]

Signals	ECM	TCM	Low tire pressure warning control unit	Display unit	Display control unit	BCM	Unified meter and A/C amp.	Driver seat control unit	ABS actuator and electric unit (control unit)	IPDM E/R
Key fob ID signal						T		R		
Key fob door unlock signal						T		R		
Seat belt buckle switch signal						R	T			
Oil pressure switch signal						R				T
						T	R			
Buzzer output signal						T	R			
Fuel level sensor signal	R						T			
Fuel level low warning signal				R	R		T			
Malfunction indicator lamp signal	T						R			
ASCD SET lamp signal	T						R			
ASCD CRUISE lamp signal	T						R			
Input shaft revolution signal	R	T								
Output shaft revolution signal	R	T								
Front wiper request signal						T				R
Front wiper stop position signal						R				T
Rear window defogger switch signal						T				R
Rear window defogger control signal	R			R	R					T
Hood switch signal						R				T
Theft warning horn request signal						T				R
Horn chirp signal						T				R
Tire pressure signal			T				R			
Tire pressure data signal			T	R	R					
ABS warning lamp signal							R		T	
Brake warning lamp signal							R		T	
System setting signal				T	T			R		
Parking brake switch signal						R	T			

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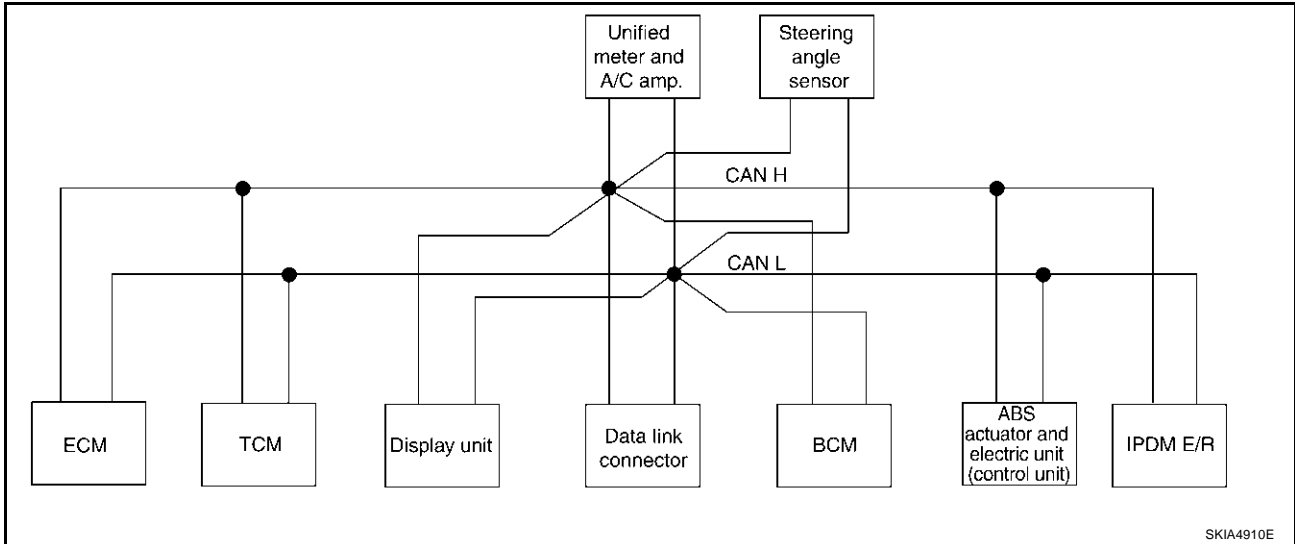
# CAN COMMUNICATION

[CAN]

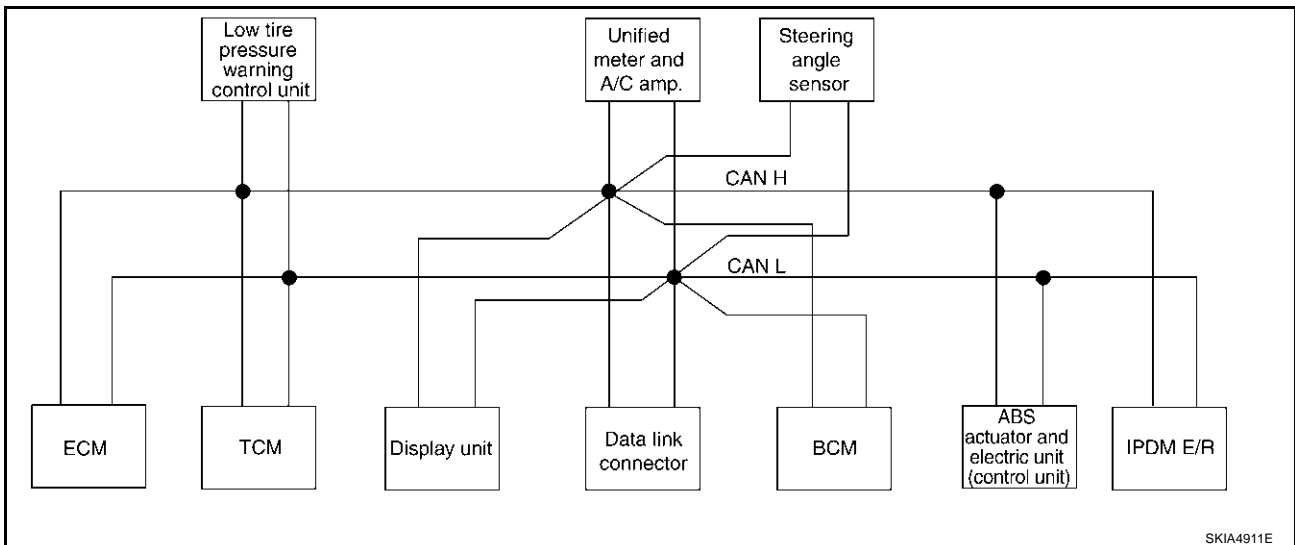
## TYPE 9/TYPER10/TYPER 11/TYPER 12/TYPER 13/TYPER 14/TYPER 15/TYPER 16

### System Diagram

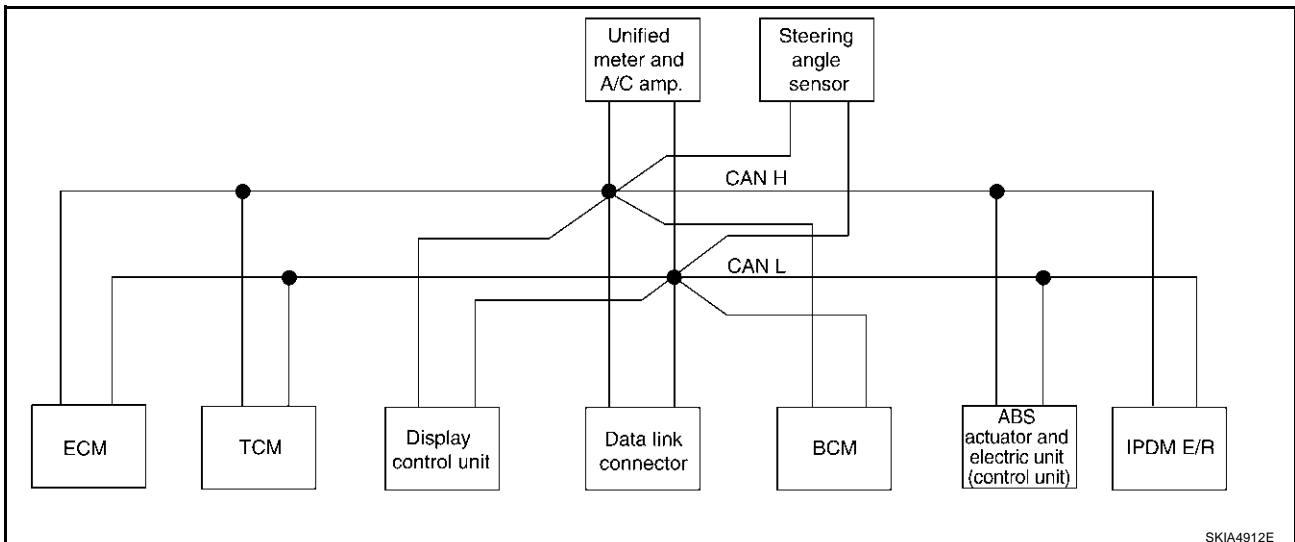
- Type9



- Type10



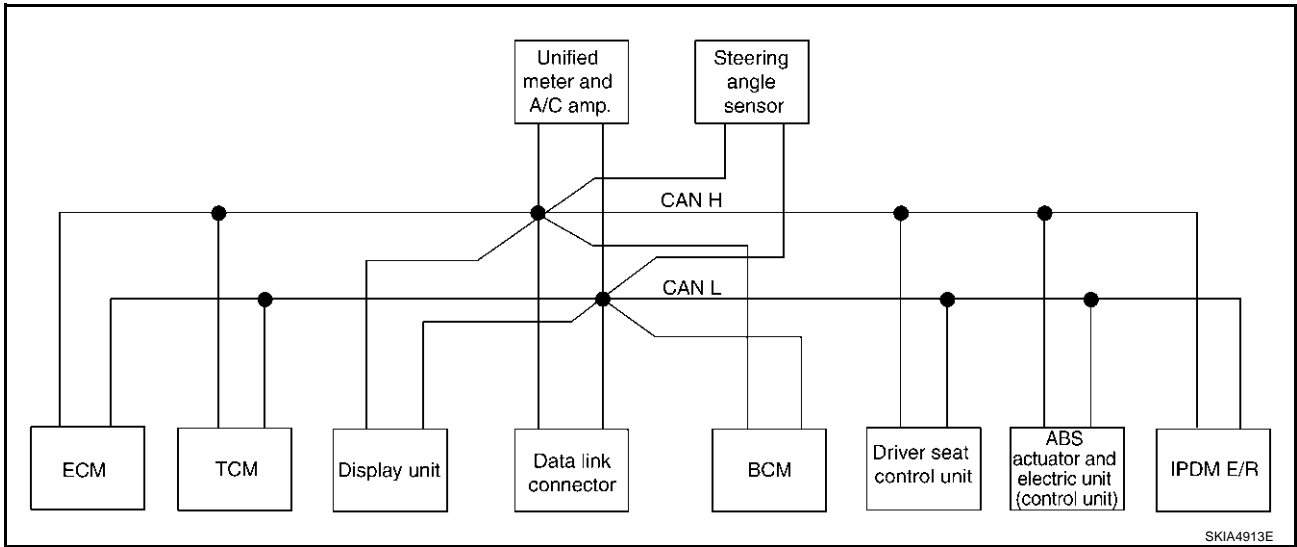
- Type11



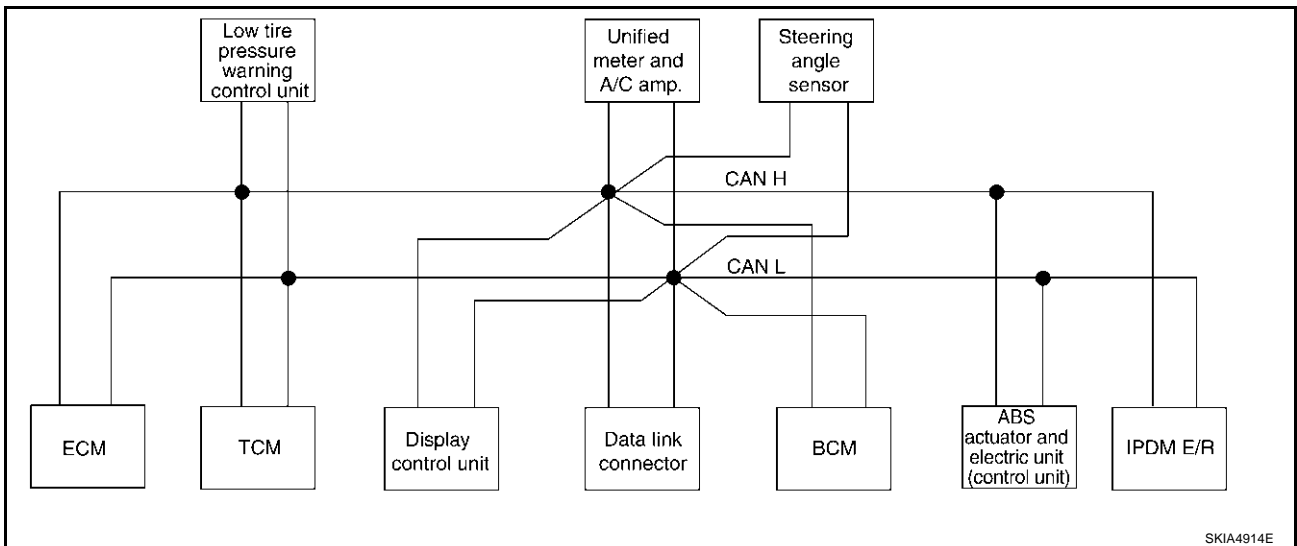
# CAN COMMUNICATION

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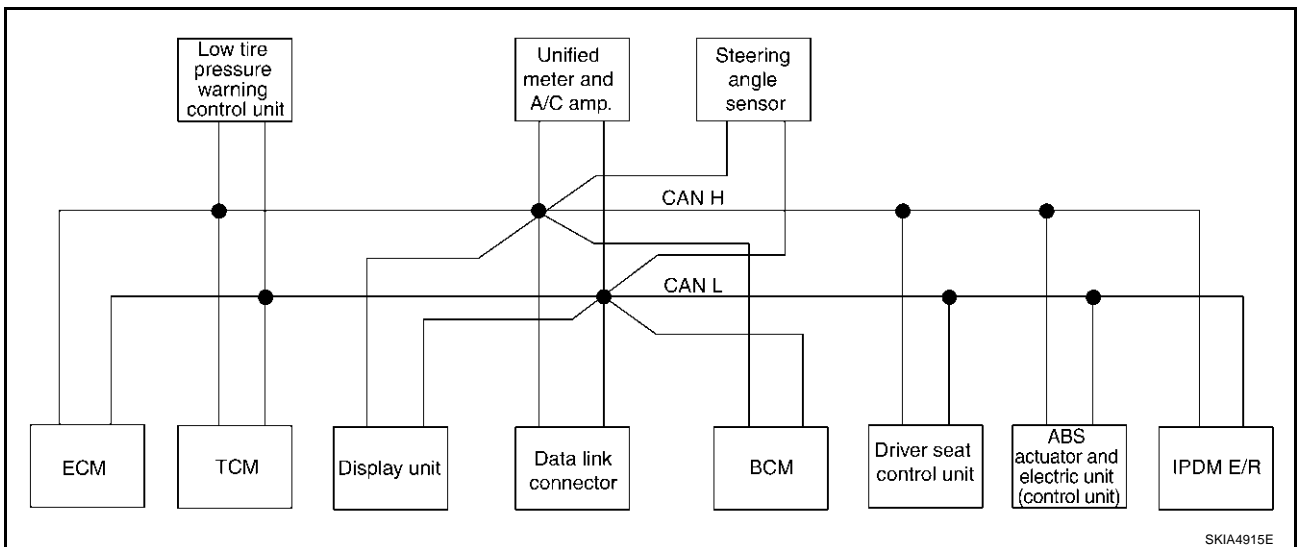
- Type12



- Type13



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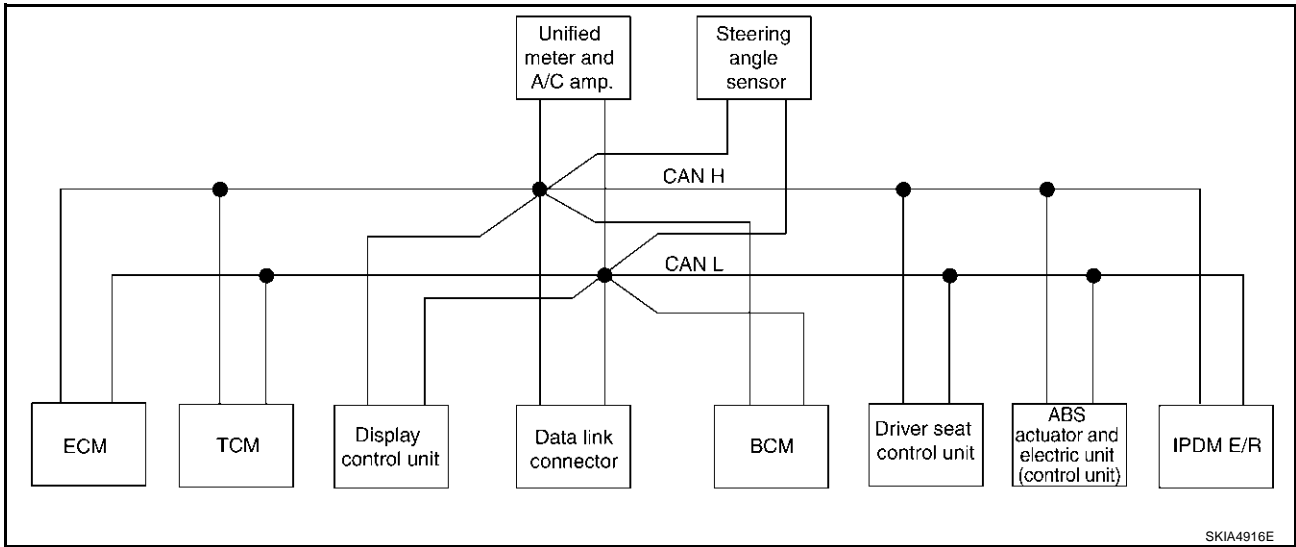
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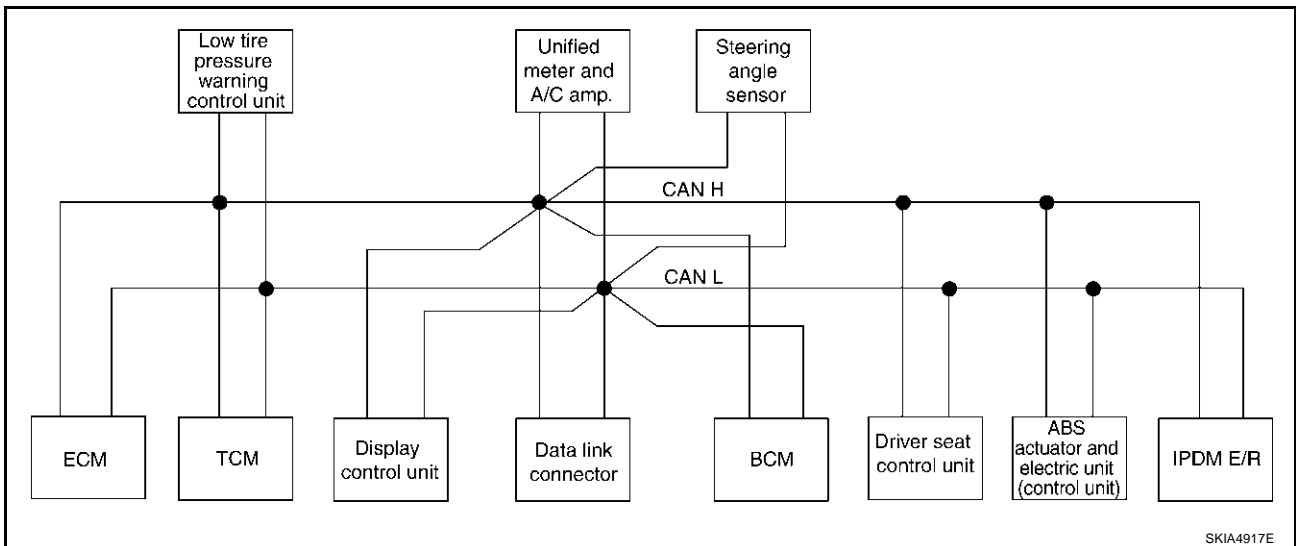
# CAN COMMUNICATION

[CAN]

- Type15



- Type16





# CAN COMMUNICATION

[CAN]

## Input/output Signal Chart

T: Transmit R: Receive

Signals	ECM	TCM	Low tire pressure warning control unit	Display unit	Display control unit	BCM	Unified meter and A/C amp.	Steering angle sensor	Driver seat control unit	ABS actuator and electric unit (control unit)	IPDM E/R
Engine speed signal	T	R			R	R	R			R	
Engine status signal	T					R					
Engine coolant temperature signal	T						R				
Engine and CVT integrated control signal	T	R									
	R	T									
Accelerator pedal position signal	T	R								R	
Closed throttle position signal	T	R									
Wide open throttle position signal	T	R									
Key switch signal						T			R		
Ignition switch signal						T			R		R
P range signal		T							R	R	
Stop lamp switch signal		R					T				
VDC operation signal		R								T	
Second position indicator signal		T					R			R	
Second position signal		R					T				
Fuel consumption monitor signal	T						R				
CVT self-diagnosis signal	R	T									
Input shaft revolution signal	R	T								R	
Output shaft revolution signal	R	T								R	
Air conditioner switch signal	R					T					
A/C compressor request signal	T										R
A/C compressor feedback signal	T						R				
Blower fan motor switch signal	R					T					
A/C control signal				T	T		R				
				R	R		T				
Cooling fan speed request signal	T										R
Position lights request signal						T	R				R
Low beam request signal						T					R
Low beam status signal	R										T
High beam request signal						T	R				R
High beam status signal	R										T
Front fog lights request signal						T					R
Vehicle speed signal		R					R			T	
	R		R		R	R	T		R		
Sleep request 1 signal						T	R				
Sleep request 2 signal						T					R

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# CAN COMMUNICATION

[CAN]

Signals	ECM	TCM	Low tire pressure warning control unit	Display unit	Display control unit	BCM	Unified meter and A/C amp.	Steering angle sensor	Driver seat control unit	ABS actuator and electric unit (control unit)	IPDM E/R
Door switch signal						R	T				
Turn indicator signal				R	R	T	R		R		R
Key fob ID signal						T			R		
Key fob door unlock signal						T			R		
Seat belt buckle switch signal						R	T				
Oil pressure switch signal						R					T
Buzzer output signal						T	R				
Fuel level sensor signal	R						T				
Fuel level low warning signal				R	R		T				
Malfunction indicator signal	T						R				
ASCD SET lamp signal	T						R				
ASCD CRUISE lamp signal	T						R				
Front wiper request signal						T					R
Front wiper stop position signal						R					T
Rear window defogger switch signal						T					R
Rear window defogger control signal	R			R	R						T
Hood switch signal						R					T
Theft warning horn request signal						T					R
Horn chirp signal						T					R
Steering angle sensor signal								T		R	
Tire pressure signal			T				R				
Tire pressure data signal			T	R	R						
CVT position indicator signal		T					R			R	
ABS warning lamp signal							R			T	
VDC OFF indicator lamp signal							R			T	
SLIP indicator lamp signal							R			T	
Brake warning lamp signal							R			T	
System setting signal				T	T				R		
Parking brake switch signal						R	T				

## CAN Communication Unit For AWD Models

Go to CAN system, when selecting your CAN system type from the following table.

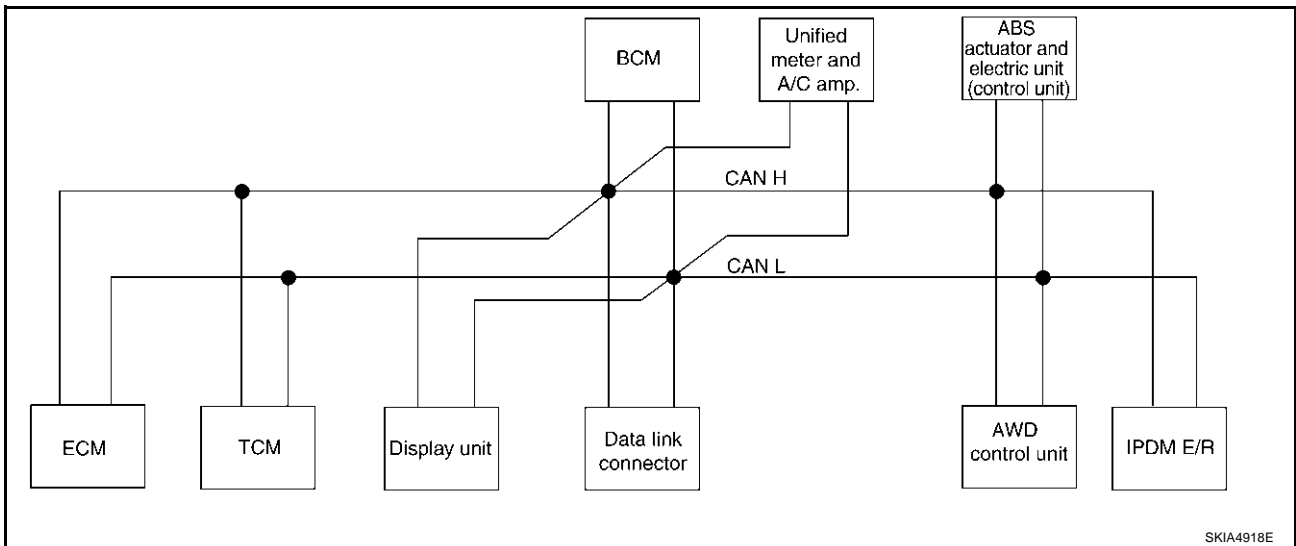
Body type	Wagon															
Axle	AWD															
Engine	VQ35DE															
Transmission	CVT															
Brake control	ABS								VDC							
Low tire pressure warning system		×			×	×		×		×			×	×		×
Navigation system			×		×		×	×			×		×		×	×
Automatic drive positioner				×		×	×	×				×		×	×	×
CAN system type	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
CAN system trouble diagnosis	<u>LA</u> <u>N-</u> <u>564</u>	<u>LA</u> <u>N-</u> <u>595</u>	<u>LA</u> <u>N-</u> <u>628</u>	<u>LA</u> <u>N-</u> <u>659</u>	<u>LA</u> <u>N-</u> <u>695</u>	<u>LA</u> <u>N-</u> <u>728</u>	<u>LA</u> <u>N-</u> <u>765</u>	<u>LA</u> <u>N-</u> <u>801</u>	<u>LA</u> <u>N-</u> <u>838</u>	<u>LA</u> <u>N-</u> <u>871</u>	<u>LA</u> <u>N-</u> <u>906</u>	<u>LA</u> <u>N-</u> <u>939</u>	<u>LA</u> <u>N-</u> <u>976</u>	<u>LA</u> <u>N-</u> <u>101</u> <u>1</u>	<u>LA</u> <u>N-</u> <u>105</u> <u>0</u>	<u>LA</u> <u>N-</u> <u>108</u> <u>7</u>

×: Applicable

### TYPE 17/TYPE 18/TYPE 19/TYPE 20/TYPE 21/TYPE 22/TYPE 23/TYPE 24

#### System Diagram

- Type17

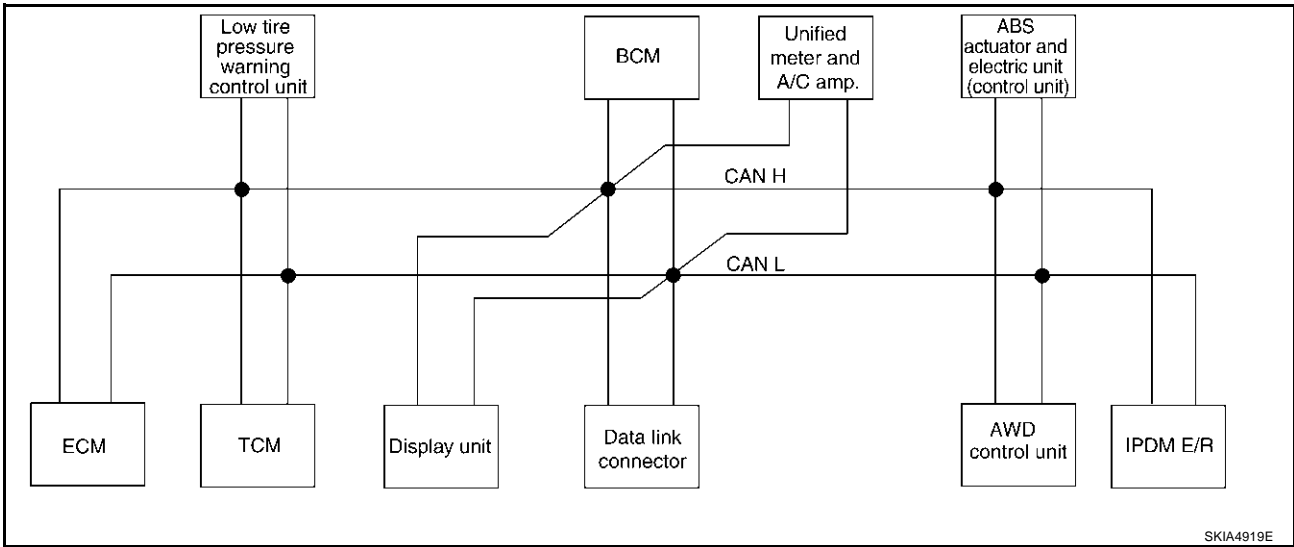


LAN

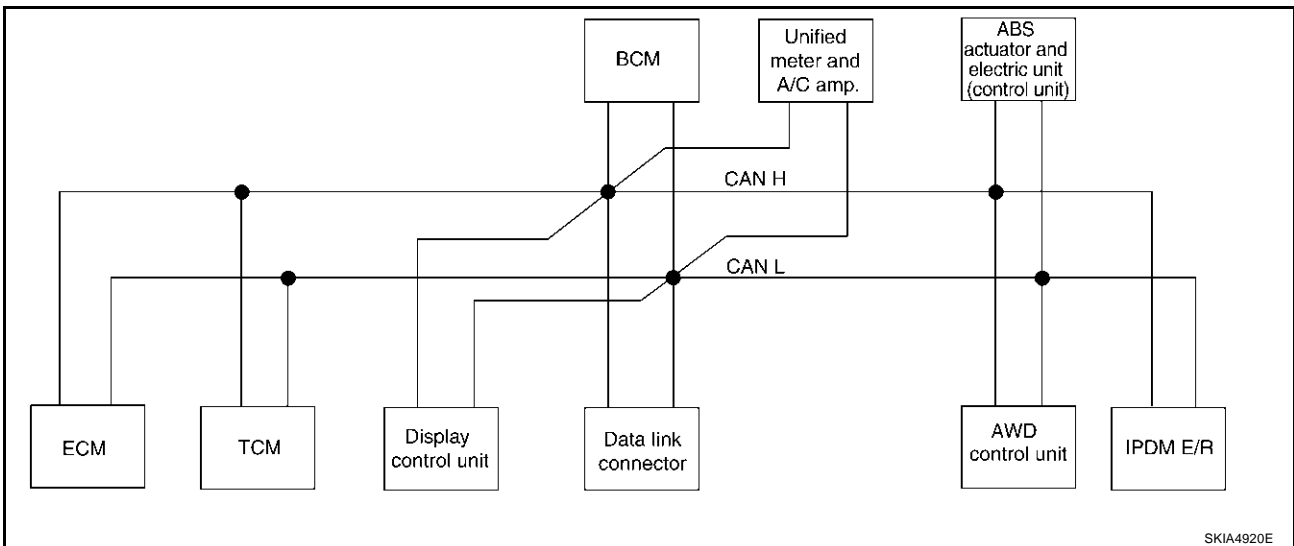
# CAN COMMUNICATION

[CAN]

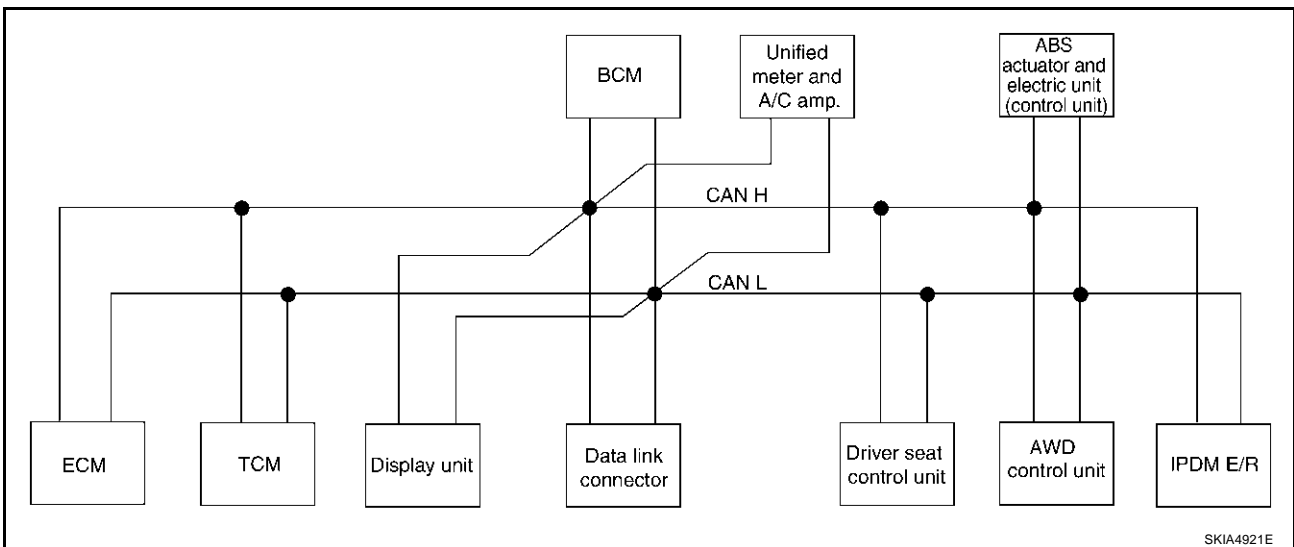
- Type18



- Type19



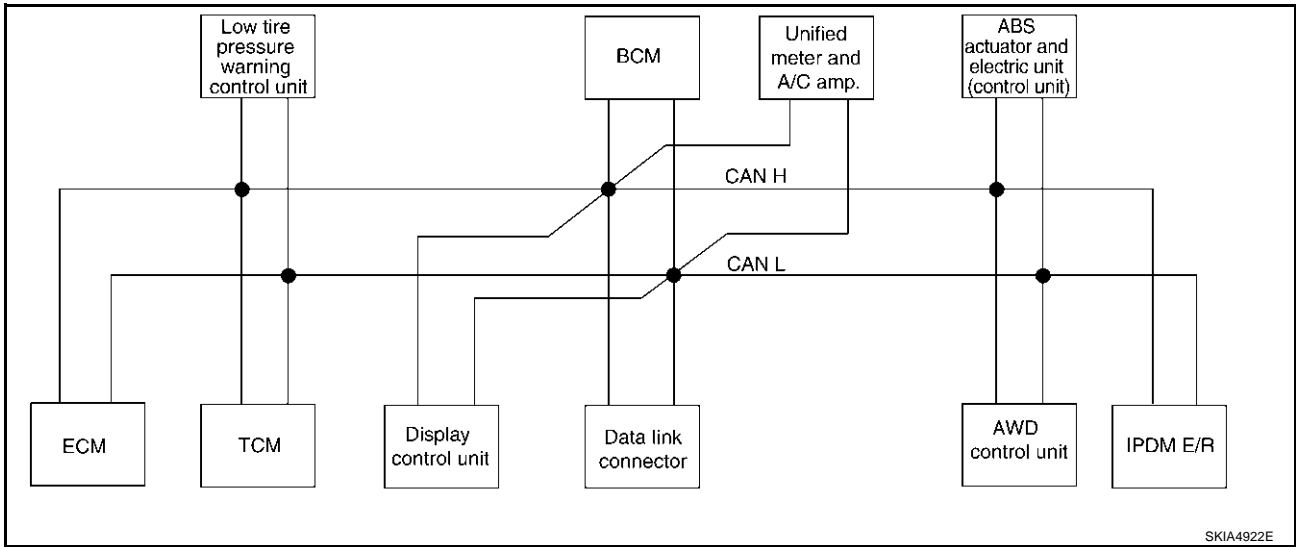
- Type20



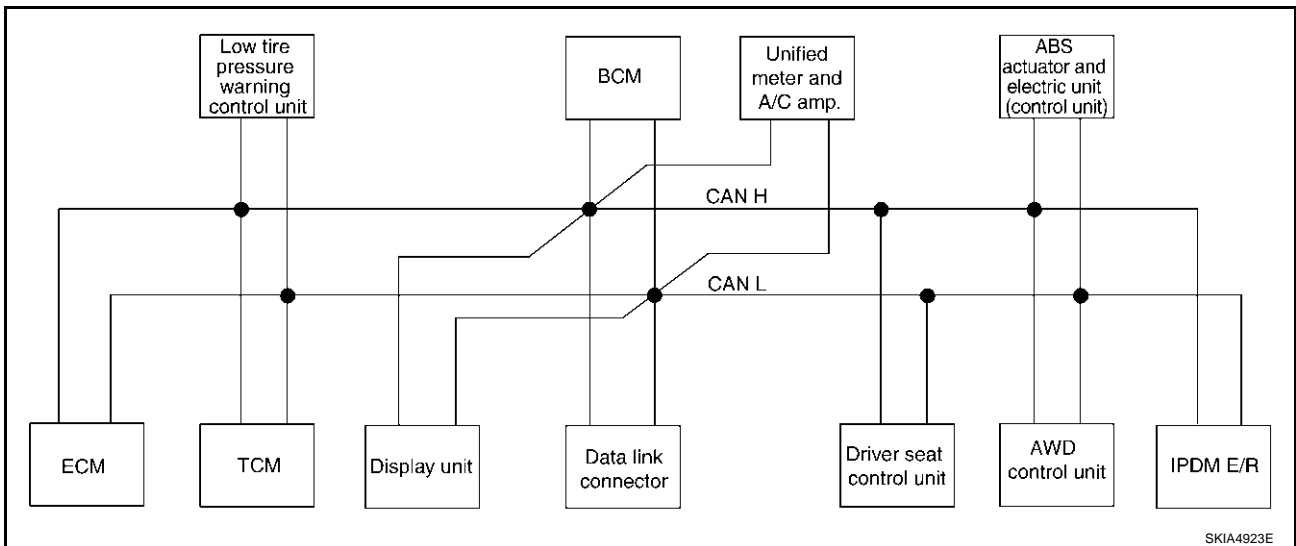
# CAN COMMUNICATION

[CAN]

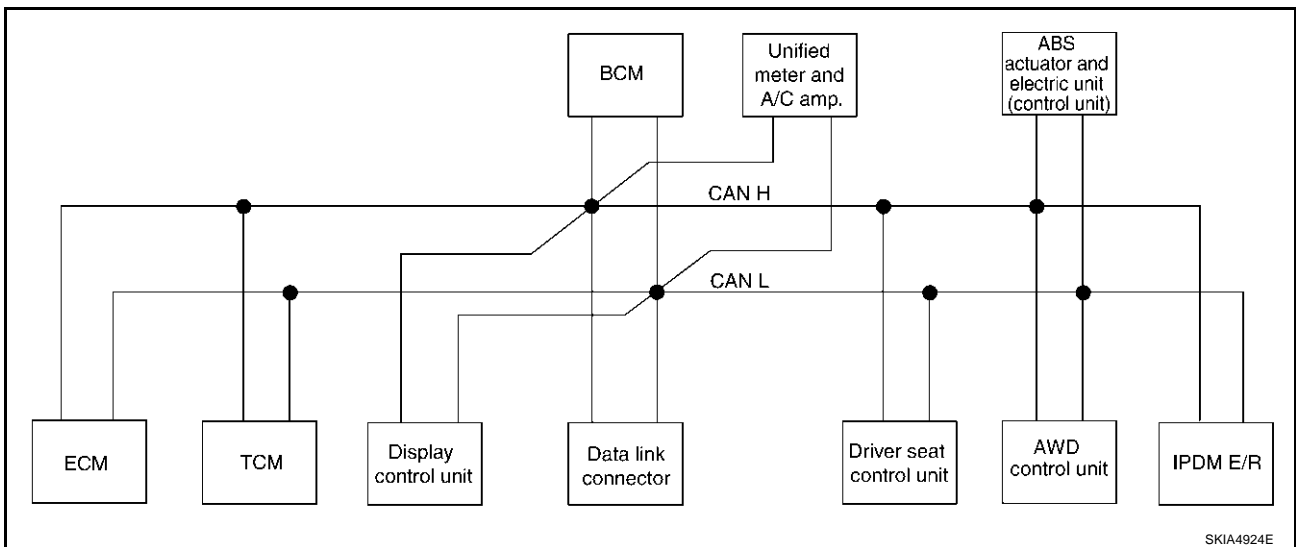
- Type21



- Type22



- Type23



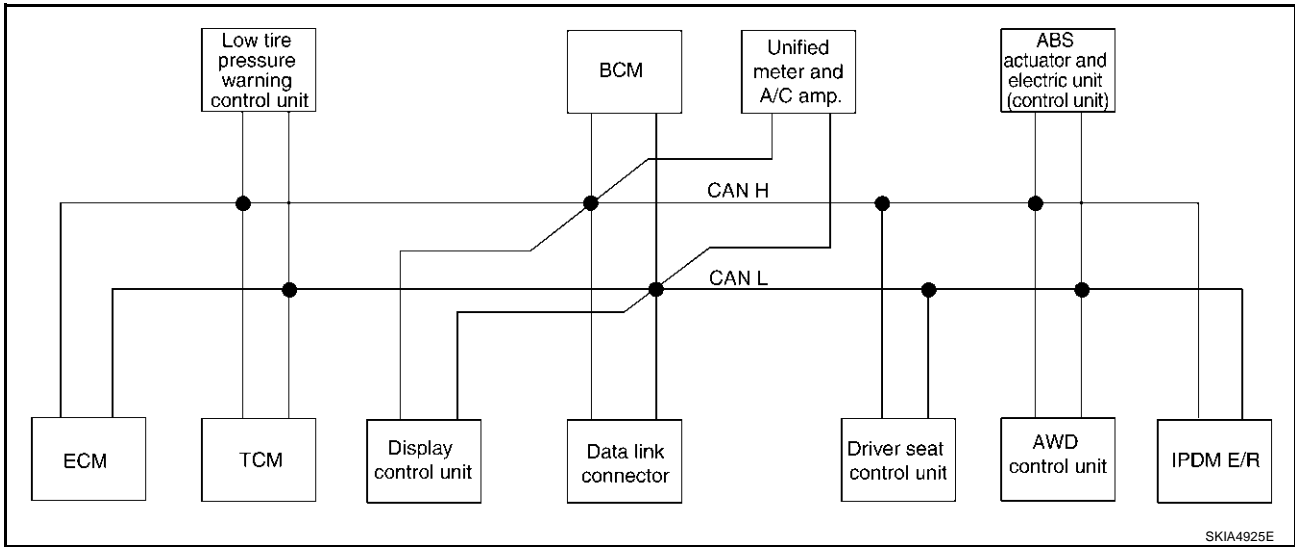
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# CAN COMMUNICATION

[CAN]

- Type24



# CAN COMMUNICATION

[CAN]

## Input/output Signal Chart

T: Transmit R: Receive

Signals	ECM	TCM	Low tire pressure warning control unit	Display unit	Display control unit	BCM	Unified meter and A/C amp.	Driver seat control unit	AWD control unit	ABS actuator and electric unit (control unit)	IPDM E/R
CVT position indicator signal		T					R				
Second position signal		R					T				
Second position indicator signal		T					R				
Engine speed signal	T	R	R		R	R	R		R		
Engine status signal	T					R					
Engine coolant temperature signal	T						R				
Accelerator pedal position signal	T	R							R		
Closed throttle position signal	T	R									
Wide open throttle position signal	T	R									
Key switch signal						T		R			
Ignition switch signal						T		R			R
P range signal		T						R			
Stop lamp switch signal		R					T		R		
Fuel consumption monitor signal	T						R				
CVT self-diagnosis signal	R	T									
ABS operation signal		R							R	T	
Air conditioner switch signal	R					T					
A/C compressor request signal	T										R
A/C compressor feedback signal	T						R				
Blower fan motor switch signal	R					T					
A/C control signal				T	T		R				
				R	R		T				
Cooling fan speed request signal	T										R
Position lights request signal						T	R				R
Low beam request signal						T					R
Low beam status signal	R										T
High beam request signal						T	R				R
High beam status signal	R										T
Front fog lights request signal						T					R
Vehicle speed signal		R					R		R	T	
	R		R		R	R	T	R			
Sleep request 1 signal						T	R				
Sleep request 2 signal						T					R
Door switch signal						R	T				
				R	R	T	R	R			R
Key fob ID signal						T		R			
Key fob door unlock signal						T		R			

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# CAN COMMUNICATION

[CAN]

Signals	ECM	TCM	Low tire pressure warning control unit	Display unit	Display control unit	BCM	Unified meter and A/C amp.	Driver seat control unit	AWD control unit	ABS actuator and electric unit (control unit)	IPDM E/R
Turn indicator signal						T	R				
Seat belt buckle switch signal						R	T				
Oil pressure switch signal						R					T
						T	R				
Buzzer output signal						T	R				
Fuel level sensor signal	R						T				
Fuel level low warning signal				R	R		T				
Malfunction indicator lamp signal	T						R				
ASCD SET lamp signal	T						R				
ASCD CRUISE lamp signal	T						R				
Input shaft revolution signal	R	T									
Output shaft revolution signal	R	T									
Front wiper request signal						T					R
Front wiper stop position signal						R					T
Rear window defogger switch signal						T					R
Rear window defogger control signal	R			R	R						T
Engine and CVT integrated control signal	T	R									
	R	T									
Hood switch signal						R					T
Theft warning horn request signal						T					R
Horn chirp signal						T					R
Tire pressure signal			T				R				
Tire pressure data signal			T	R	R						
ABS warning lamp signal							R			T	
Brake warning lamp signal							R			T	
System setting signal				T	T			R			
AWD warning lamp signal							R		T		
AWD lock indicator lamp signal							R		T		
AWD lock switch signal							T		R		
Parking brake switch signal						R	T		R		



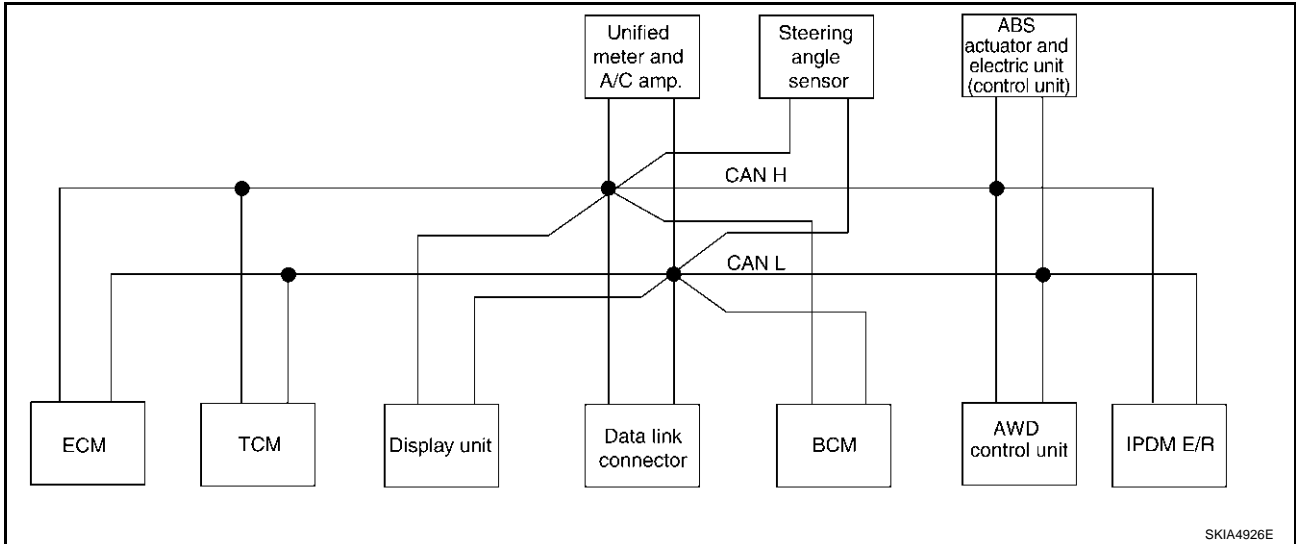
# CAN COMMUNICATION

[CAN]

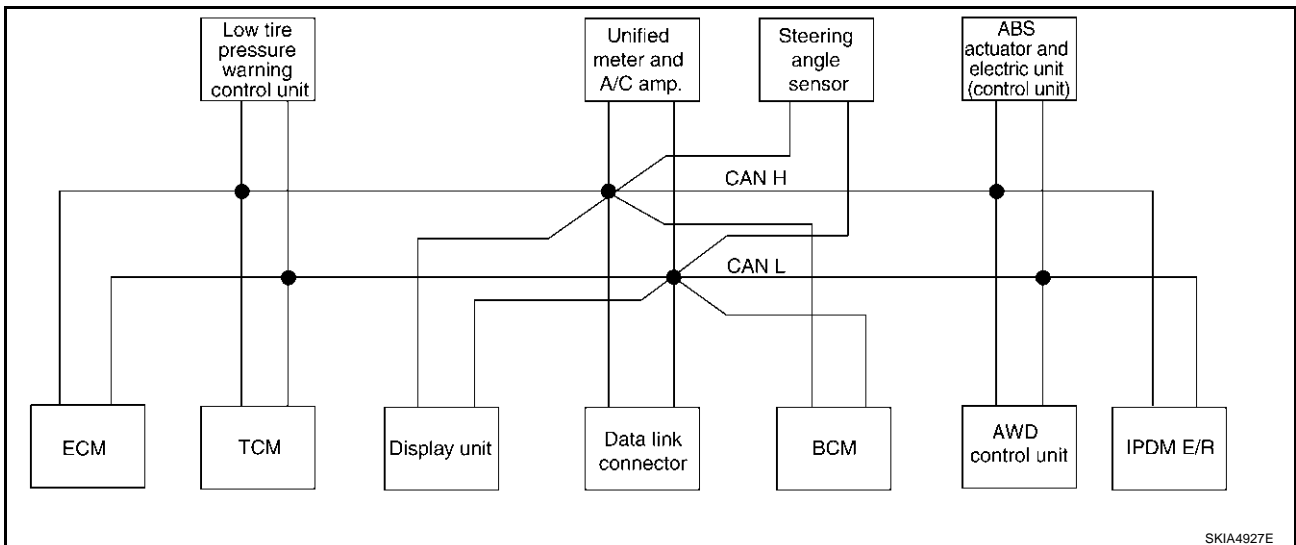
## TYPE 25/TYPER26/TYPER 27/TYPER 28/TYPER 29/TYPER 30/TYPER 31/TYPER 32

### System Diagram

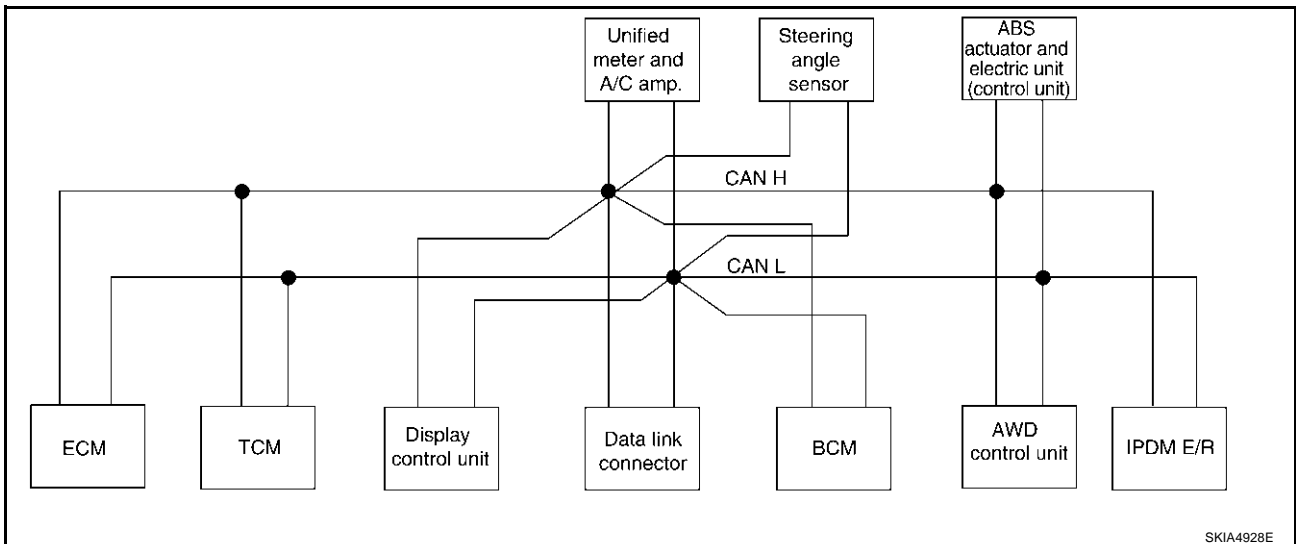
- Type25



- Type26



- Type27



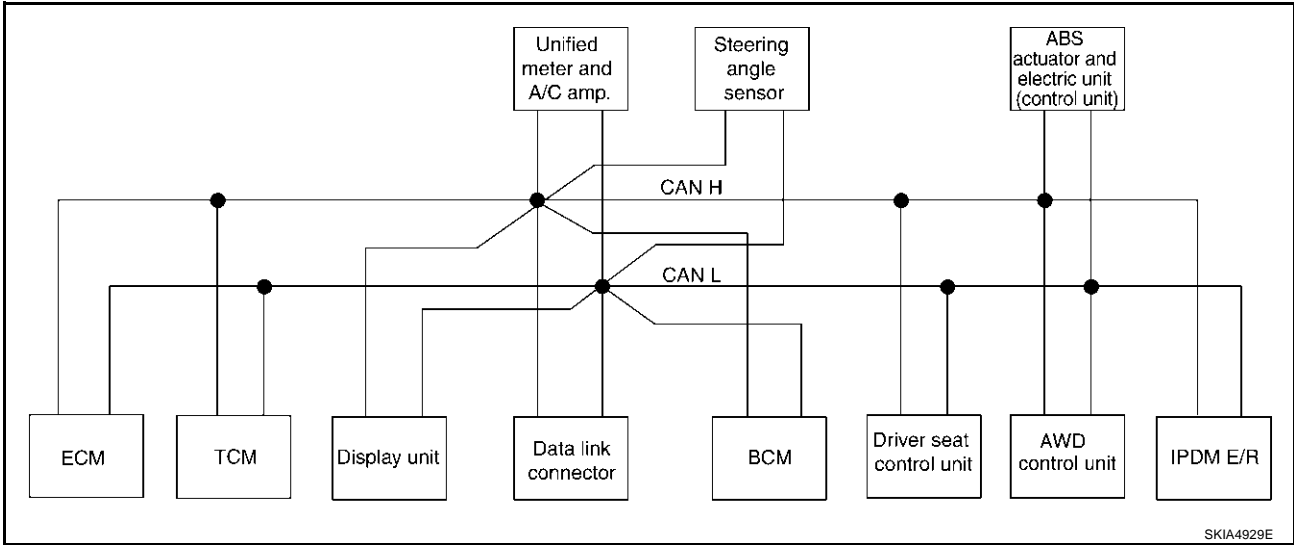
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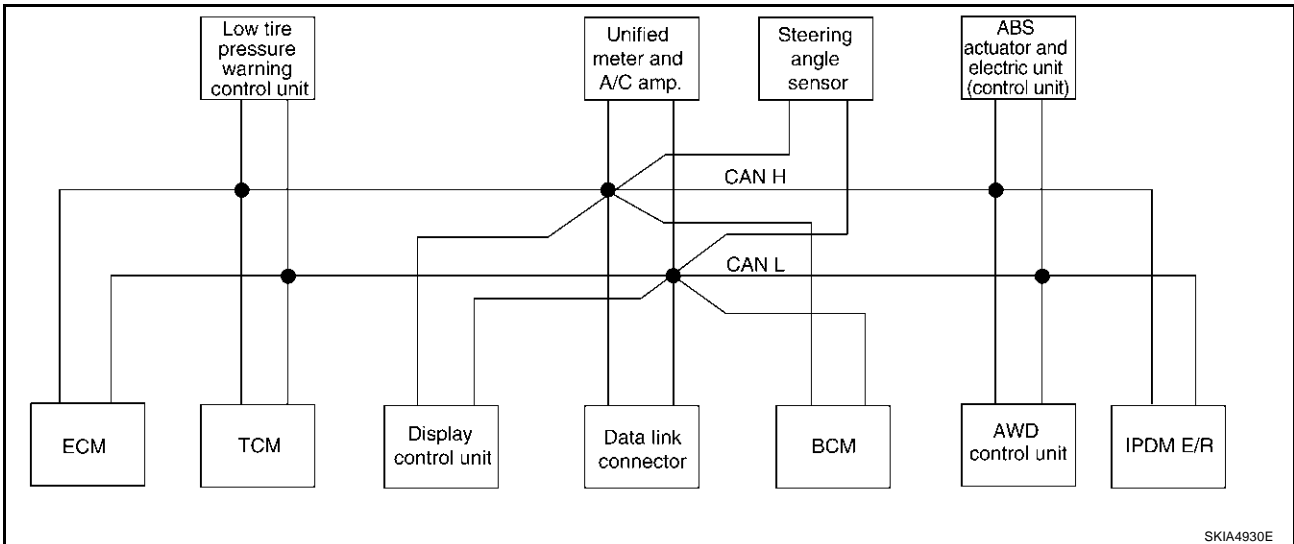
# CAN COMMUNICATION

[CAN]

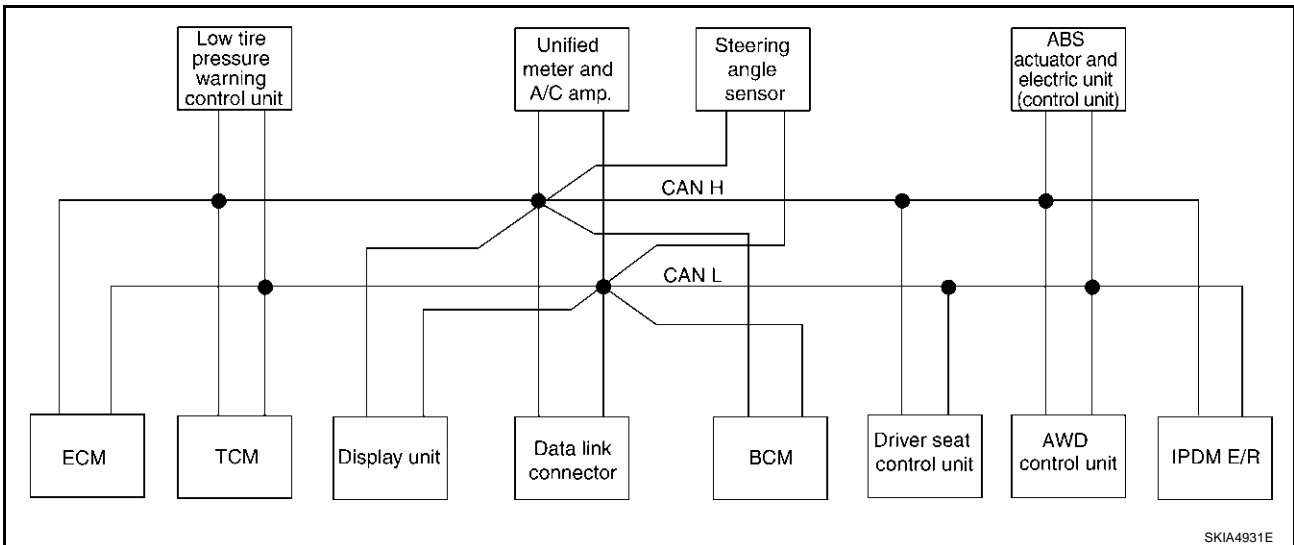
- Type28



- Type29



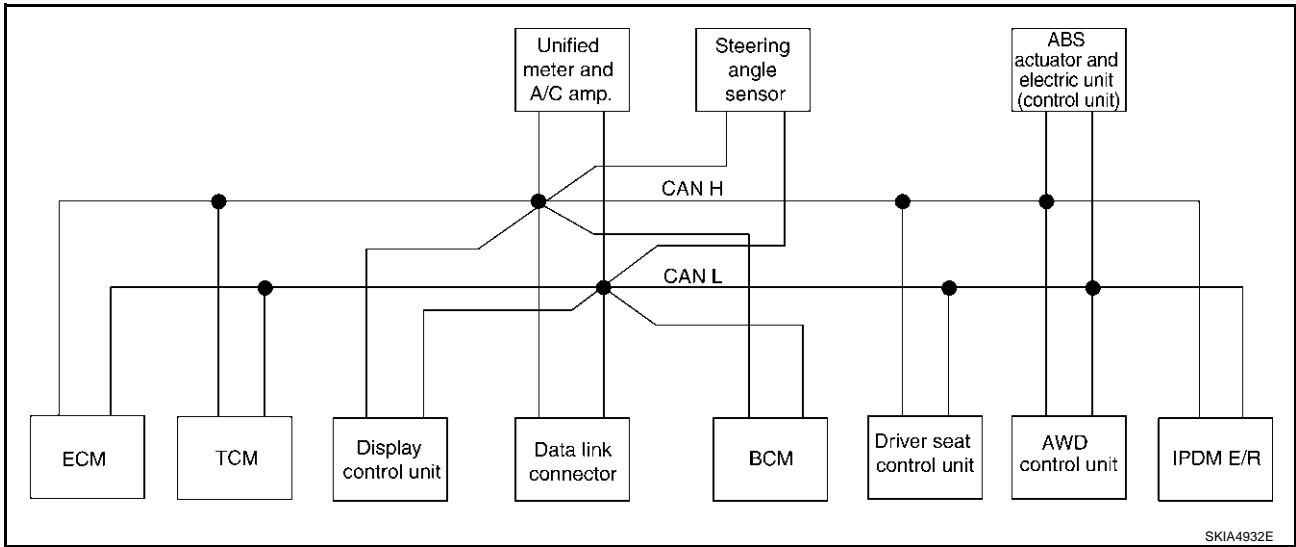
- Type30



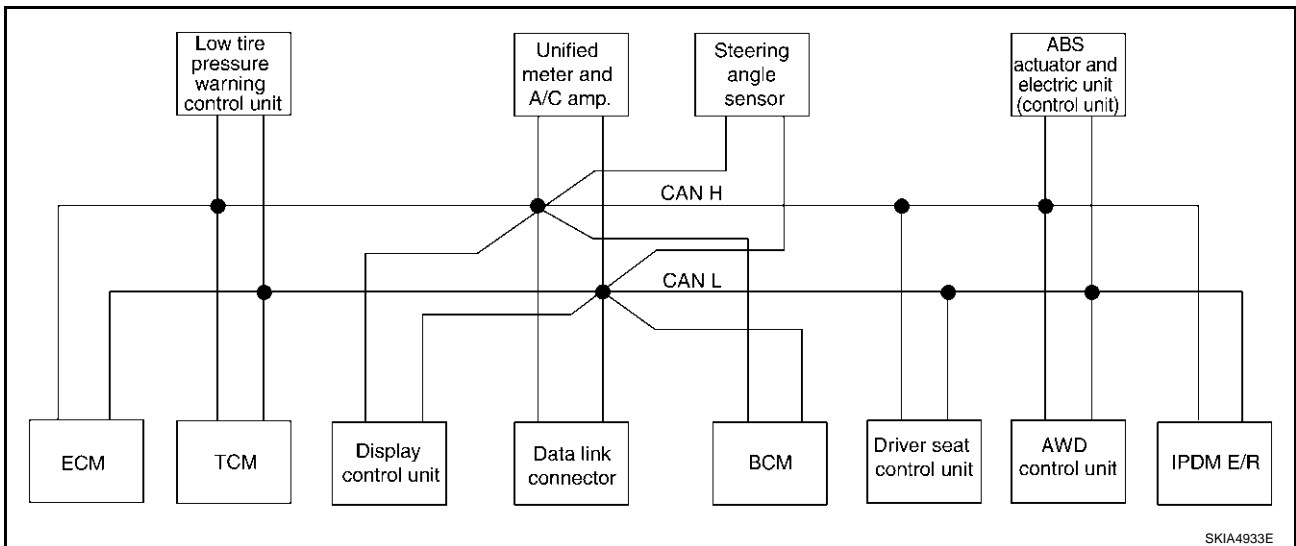
# CAN COMMUNICATION

[CAN]

- Type31



- Type32



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# CAN COMMUNICATION

[CAN]

## Input/output Signal Chart

T: Transmit R: Receive

Signals	ECM	TCM	Low tire pressure warning control unit	Display unit	Display control unit	BCM	Unified meter and A/C amp.	Steering angle sensor	Driver seat control unit	AWD control unit	ABS actuator and electric unit (control unit)	IPDM E/R
Engine and CVT integrated control signal	T	R										
	R	T										
Second position signal		R					T					
VDC operation signal		R								R	T	
Stop lamp switch signal		R					T			R		
Key switch signal						T			R			
Ignition switch signal						T			R			R
P range signal		T							R		R	
Closed throttle position signal	T	R										
Wide open throttle position signal	T	R										
Second position indicator signal		T					R				R	
Engine speed signal	T	R			R	R	R			R	R	
Engine status signal	T					R						
Engine coolant temperature signal	T						R					
Accelerator pedal position signal	T	R								R	R	
Fuel consumption monitor signal	T						R					
CVT self-diagnosis signal	R	T										
Input shaft revolution signal	R	T									R	
Output shaft revolution signal	R	T									R	
Air conditioner switch signal	R					T						
A/C compressor request signal	T											R
A/C compressor feedback signal	T						R					T
Blower fan motor switch signal	R					T						
A/C control signal				T	T		R					
				R	R		T					
Cooling fan speed request signal	T											R
Position lights request signal						T	R					R
Low beam request signal						T						R
Low beam status signal	R											T
High beam request signal						T	R					R
High beam status signal	R											T
Front fog lights request signal						T						R
Vehicle speed signal		R					R			R	T	
	R		R		R	R	T		R			
Sleep request 1 signal						T	R					
Sleep request 2 signal						T						R

# CAN COMMUNICATION

[CAN]

Signals	ECM	TCM	Low tire pressure warning control unit	Display unit	Display control unit	BCM	Unified meter and A/C amp.	Steering angle sensor	Driver seat control unit	AWD control unit	ABS actuator and electric unit (control unit)	IPDM E/R
Door switch signal						R	T					
Turn indicator signal				R	R	T	R		R			R
Key fob ID signal						T			R			
Key fob door unlock signal						T			R			
Seat belt buckle switch signal						R	T					
Oil pressure switch signal						R						T
Buzzer output signal						T	R					
Fuel level sensor signal	R						T					
Fuel level low warning signal				R	R		T					
Malfunction indicator signal	T						R					
ASCD SET lamp signal	T						R					
ASCD CRUISE lamp signal	T						R					
Front wiper request signal						T						R
Front wiper stop position signal						R						T
Rear window defogger switch signal						T						R
Rear window defogger control signal	R			R	R							T
Hood switch signal						R						T
Theft warning horn request signal						T						R
Horn chirp signal						T						R
Steering angle sensor signal								T			R	
Tire pressure signal			T				R					
Tire pressure data signal			T	R	R							
CVT position indicator signal		T					R				R	
ABS warning lamp signal							R				T	
VDC OFF indicator lamp signal							R				T	
SLIP indicator lamp signal							R				T	
Brake warning lamp signal							R				T	
System setting signal				T	T				R			
AWD warning lamp signal							R			T		
AWD lock indicator lamp signal							R			T		
AWD lock switch signal							T			R		
Parking brake switch signal						R	T			R		

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## CAN SYSTEM (TYPE 1)

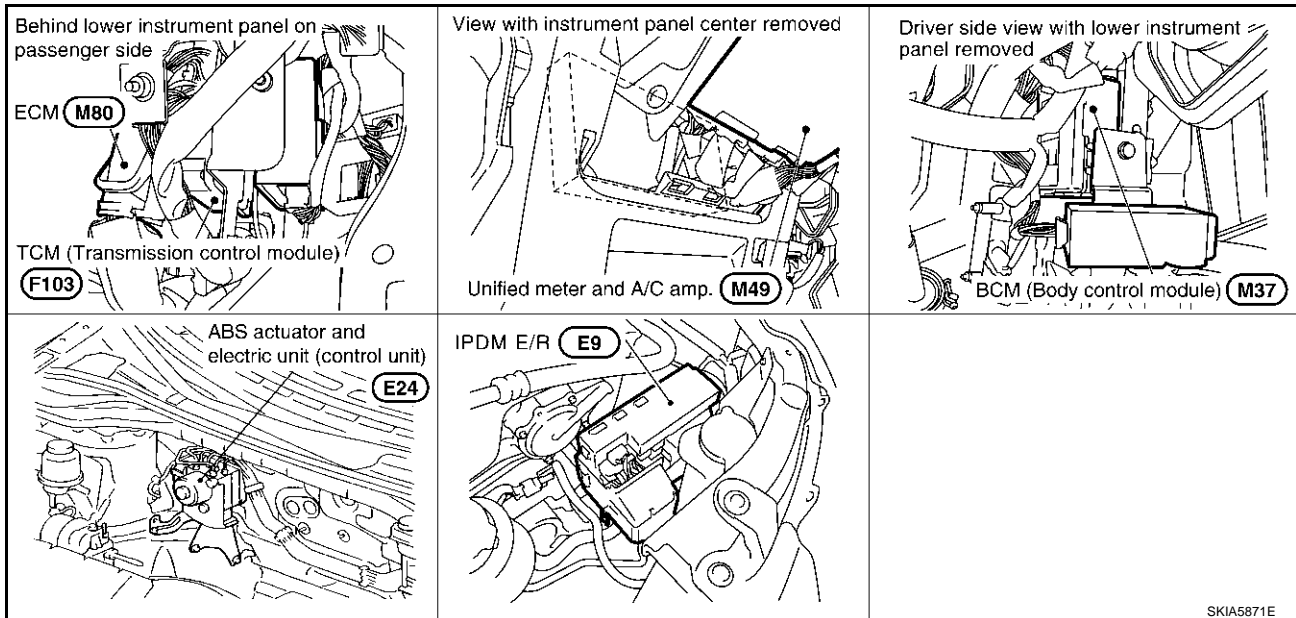
### System Description

AKS0068S

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

### Component Parts and Harness Connector Location

AKS0068T



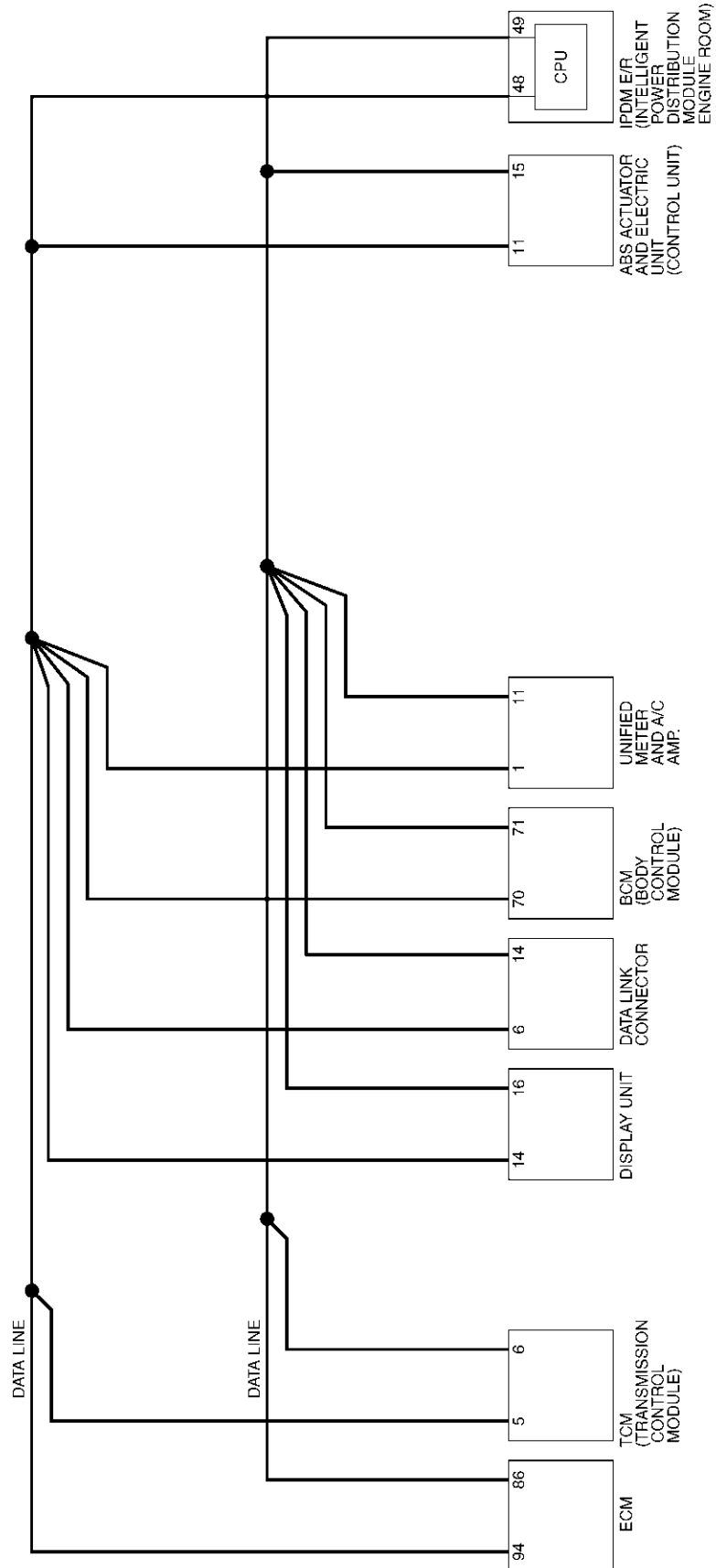
SKIA5871E

# CAN SYSTEM (TYPE 1)

[CAN]

## Schematic

AKS0069A



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TKWA0789E

# CAN SYSTEM (TYPE 1)

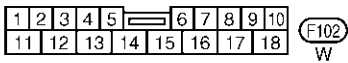
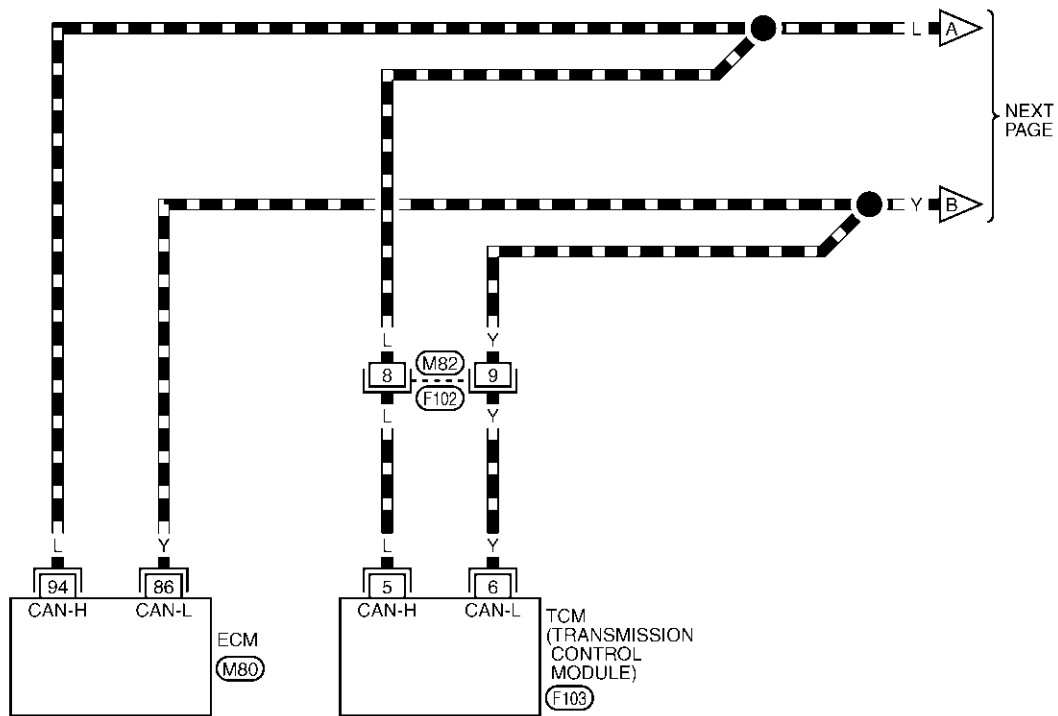
[CAN]

## Wiring Diagram - CAN -

AKS006BU

LAN-CAN-01

▬ : DATA LINE



REFER TO THE FOLLOWING.  
 (M80), (F103) -ELECTRICAL  
 UNITS

TKWA0790E

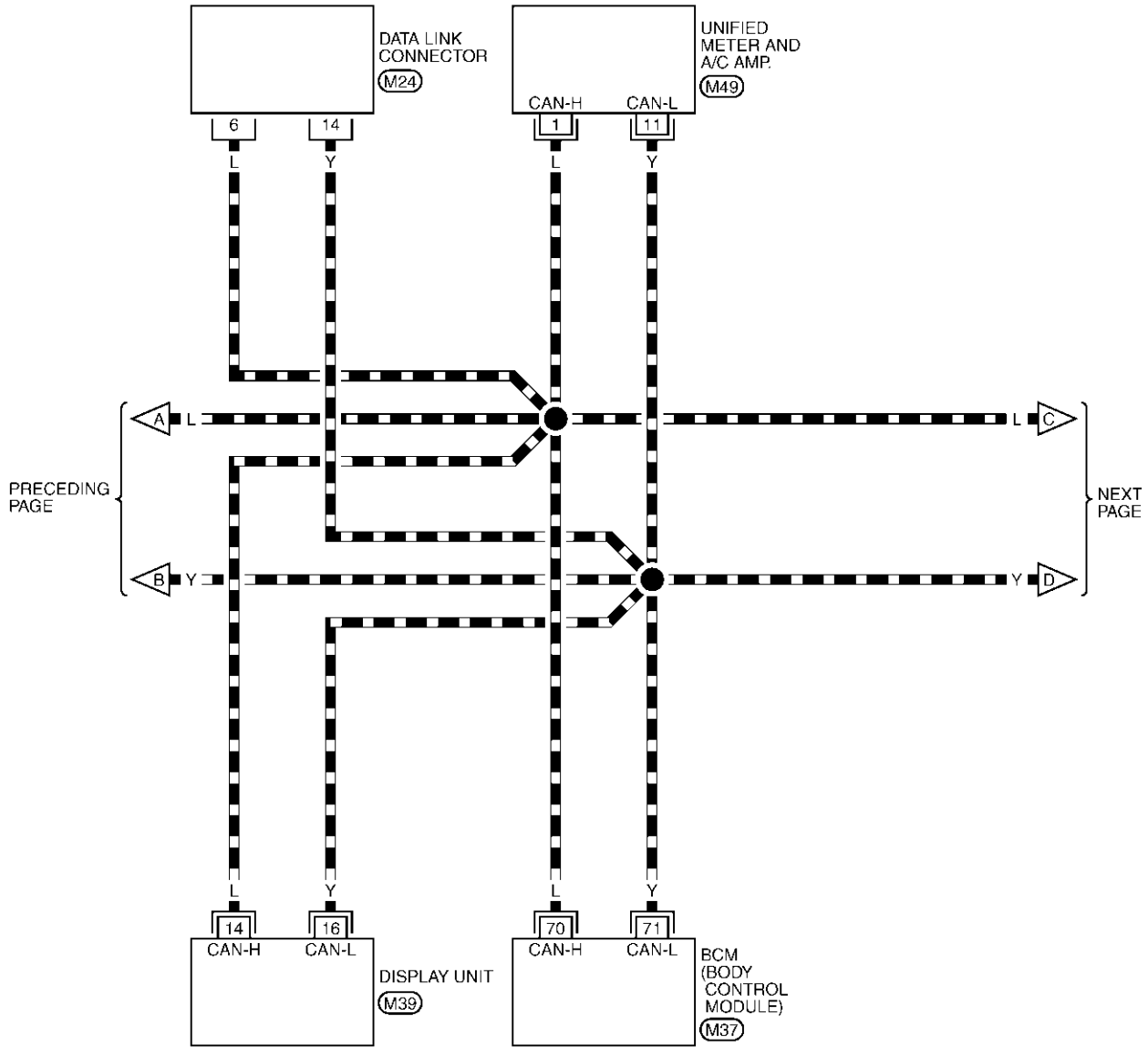


# CAN SYSTEM (TYPE 1)

[CAN]

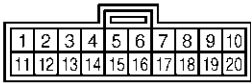
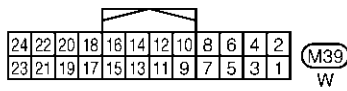
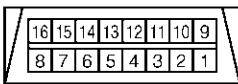
LAN-CAN-02

▬ : DATA LINE



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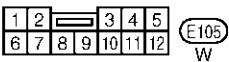
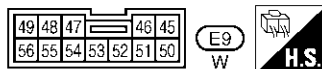
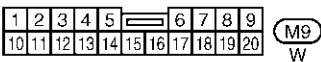
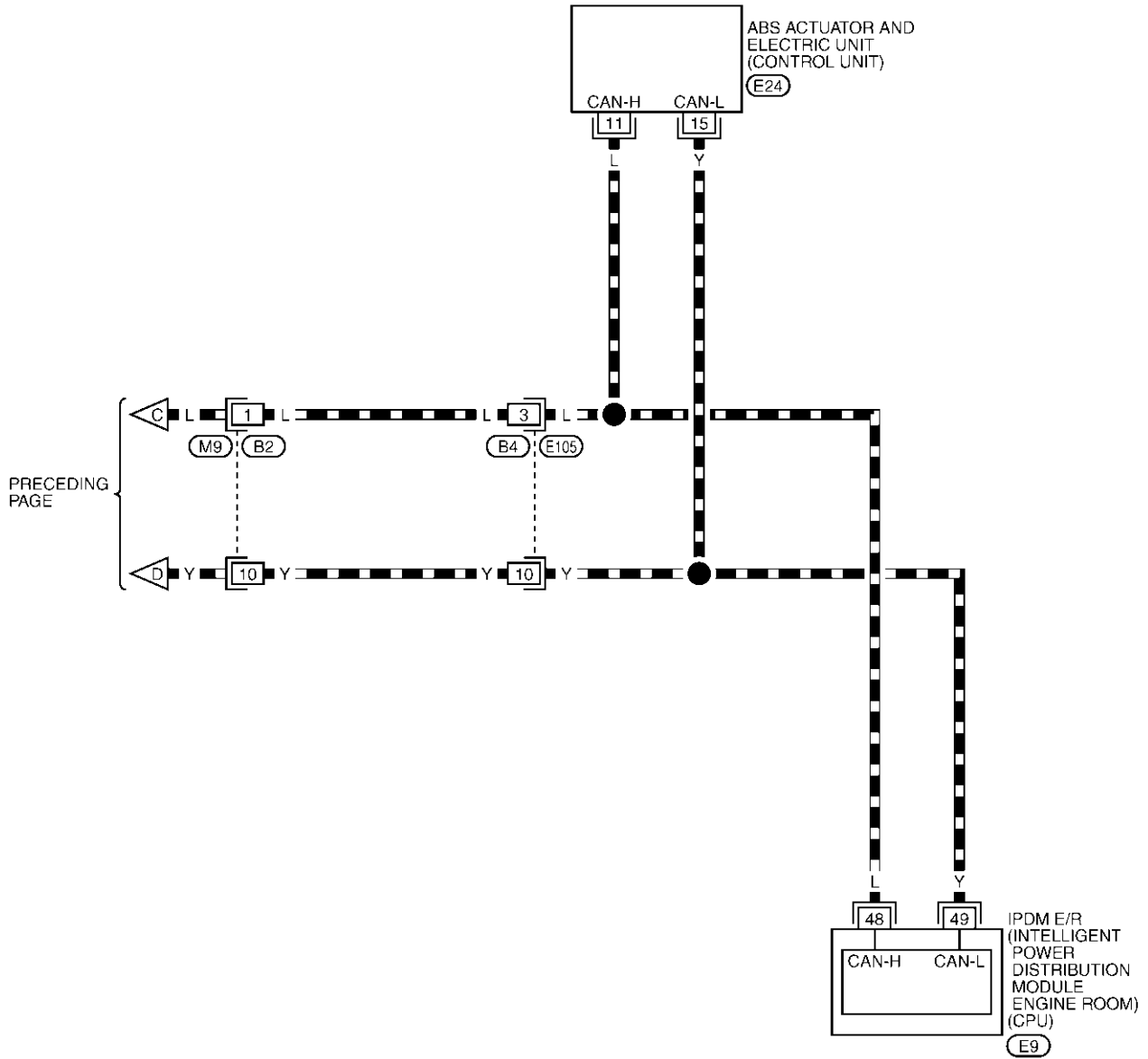


REFER TO THE FOLLOWING.  
M37 -ELECTRICAL UNITS

TKWA0791E

## LAN-CAN-03

▬ : DATA LINE



REFER TO THE FOLLOWING.

(E24) -ELECTRICAL UNITS

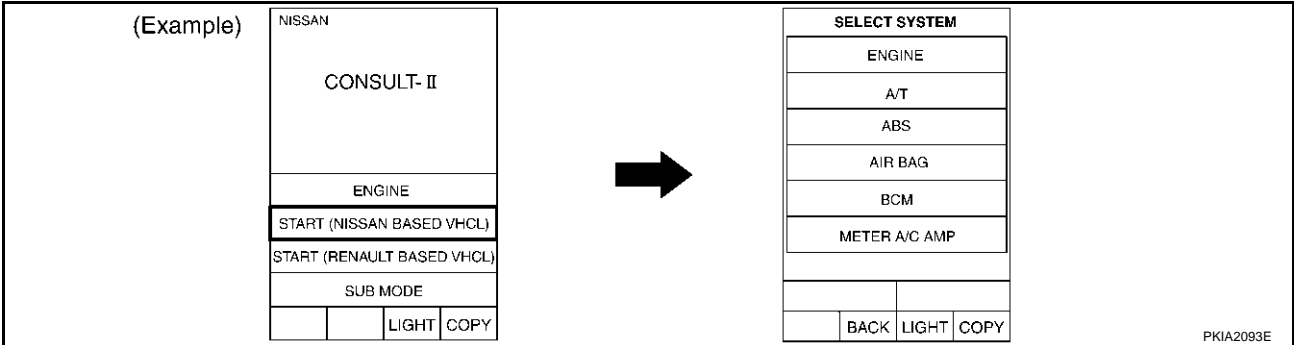
# CAN SYSTEM (TYPE 1)

[CAN]

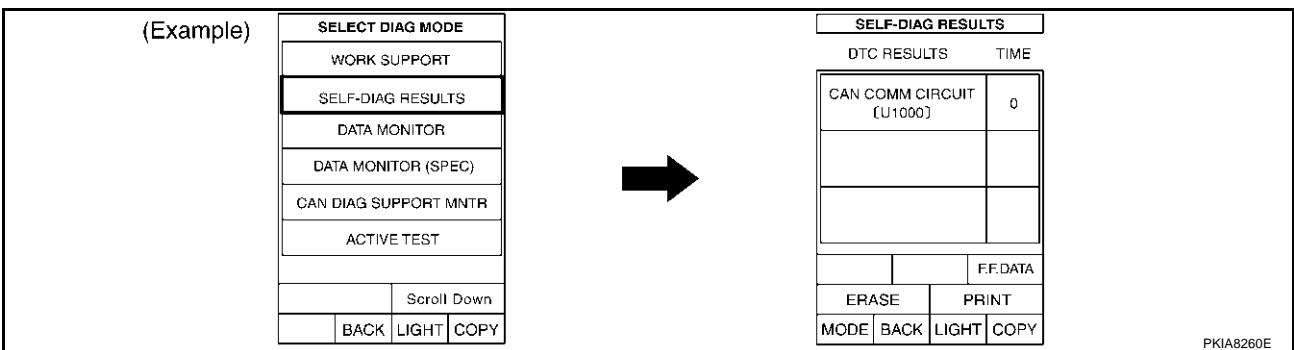
AKS00C4T

## Work Flow

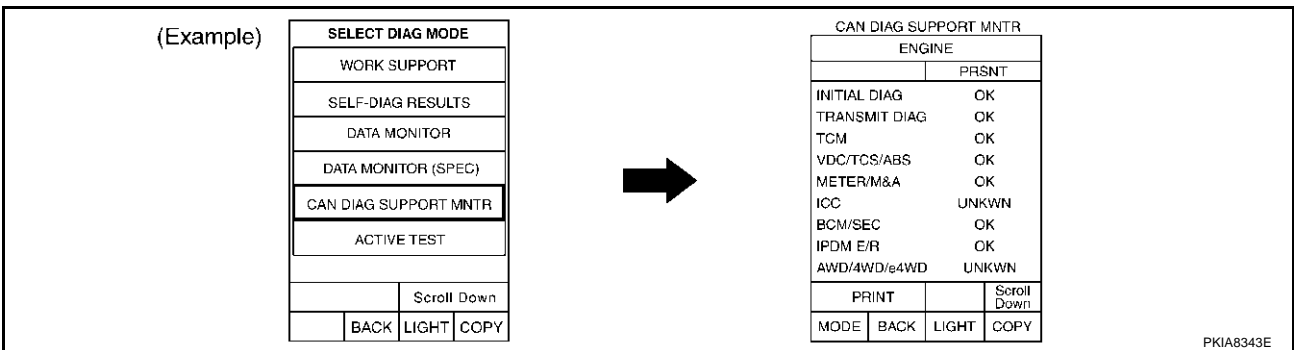
- When there are no indications of "TRANSMISSION" or "METER A/C AMP" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP" and "ABS" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP" and "ABS" displayed on CONSULT-II.



- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-41, "CHECK SHEET"](#) .
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "v" onto the items with "No indication", "NG", or "UNKWVN" in the check sheet table. Refer to [LAN-41, "CHECK SHEET"](#) .

**NOTE:**

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual. So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the integrated display system. Refer to [AV-110, "CAN Communication Line Check"](#) .
- Attach the CAN DIAG MONITOR check sheet onto the check sheet. Refer to [LAN-41, "CHECK SHEET"](#) .
- Mark the "NG" or "UNKWVN" item of the check sheet table with "v" from the result of CAN DIAG MONITOR check sheet. Refer to [LAN-41, "CHECK SHEET"](#) .

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**NOTE:**

If "NG" is displayed on "CAN COMM" as "CAN DIAG MNTR" for the diagnosed control unit, replace the control unit. Refer to [AV-110, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-43, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

# CAN SYSTEM (TYPE 1)

[CAN]

## CHECK SHEET

### NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

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SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

Attach copy of  
display unit  
CAN DIAG MONITOR check sheet

PKIB0421E

# CAN SYSTEM (TYPE 1)

[CAN]

Attach copy of  
ENGINE  
SELF-DIAG RESULTS

Attach copy of  
TRANSMISSION  
SELF-DIAG RESULTS

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
METER A/C AMP  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

Attach copy of  
ENGINE  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
TRANSMISSION  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
BCM  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
METER A/C AMP  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ABS  
CAN DIAG SUPPORT  
MNTR

PKIB0422E

## CHECK SHEET RESULTS (EXAMPLE)

**NOTE:**

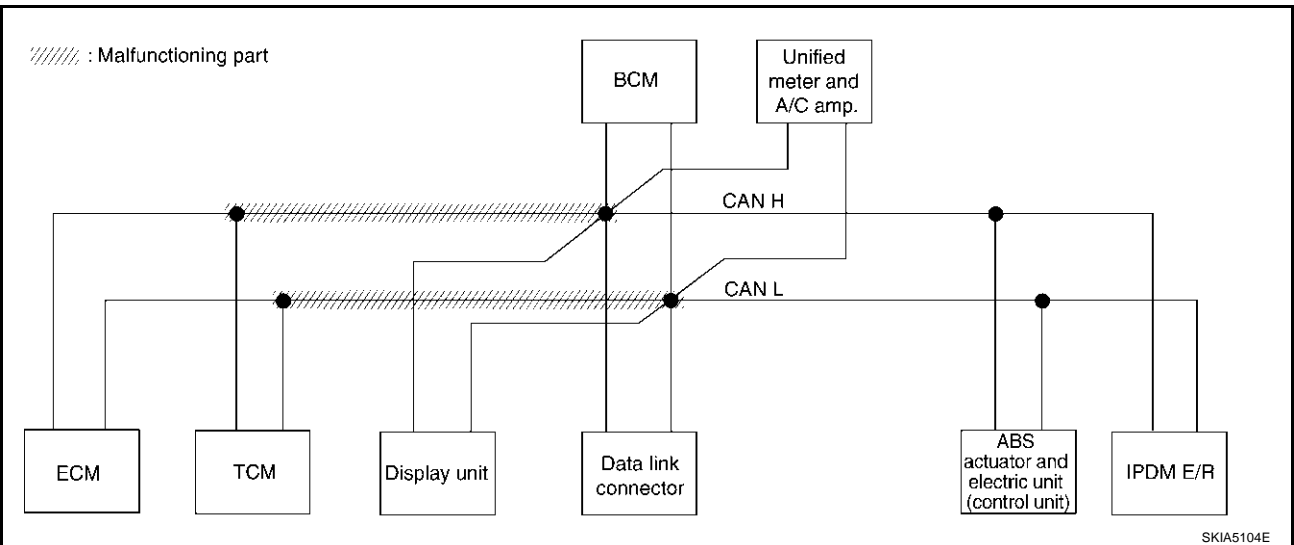
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

**Case 1**

Check harness between TCM and data link connector. Refer to [LAN-54, "Circuit Check Between TCM and Data Link Connector"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3 ✓	—	—	CAN 2	CAN 5	—	CAN 7
BCM	—	NG	UNKWN	UNKWN ✓	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN ✓	UNKWN ✓	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN ✓	—	—	—	—	—	—

PKIB0423E



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# CAN SYSTEM (TYPE 1)

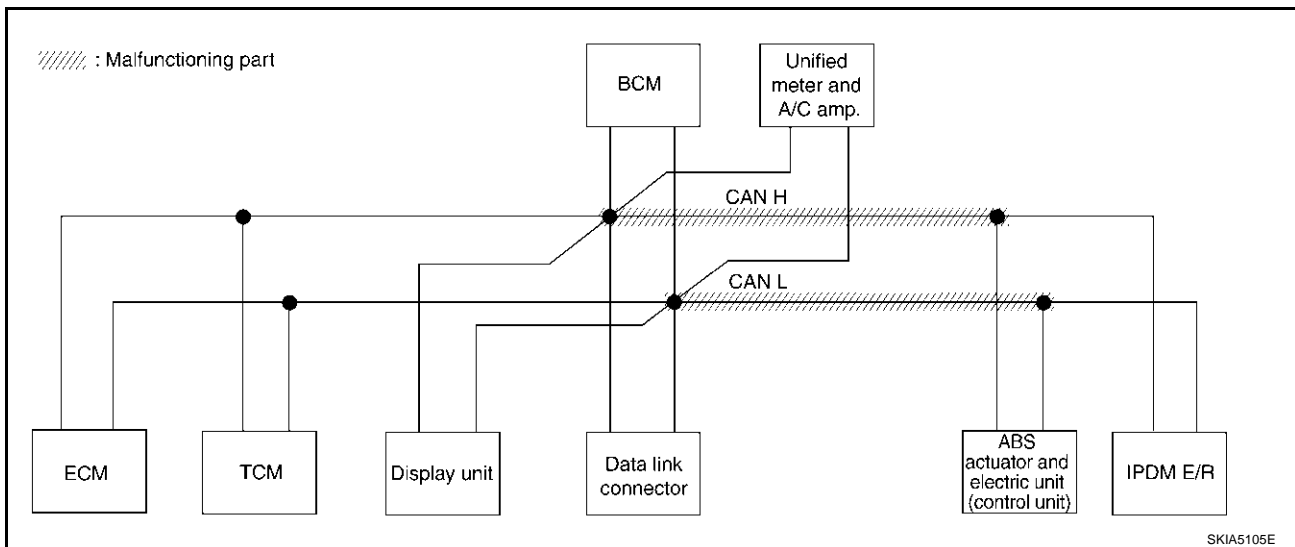
[CAN]

## Case 2

Check harness between data link connector and ABS actuator and electric unit (control unit). Refer to [LAN-54](#), "Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit)".

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

PKIB0424E





# CAN SYSTEM (TYPE 1)

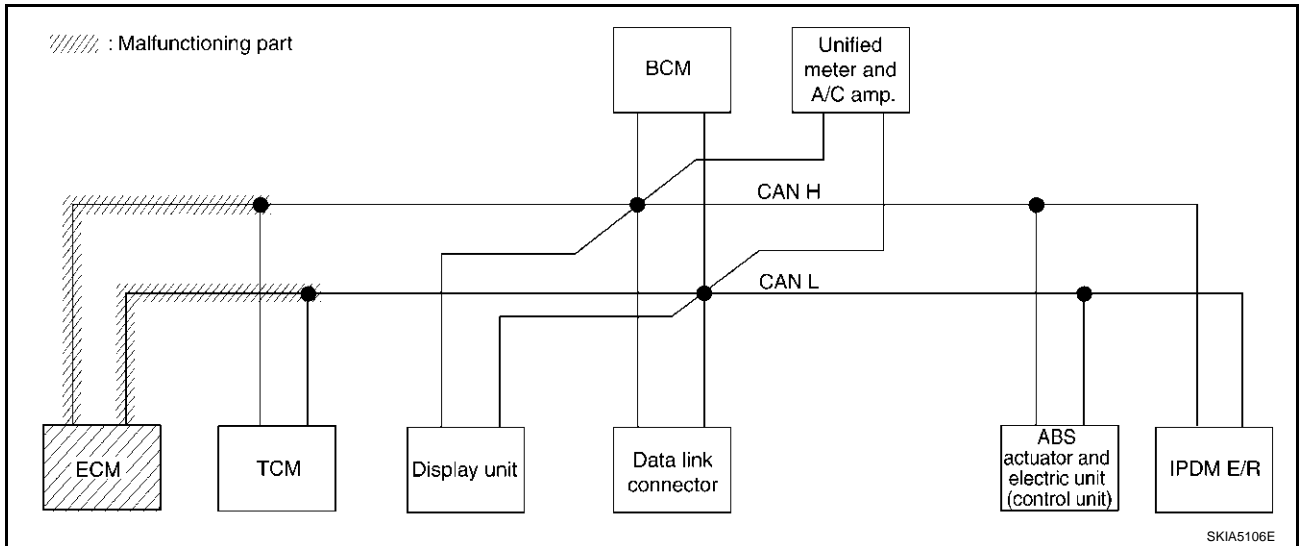
[CAN]

## Case 3

Check ECM circuit. Refer to [LAN-55, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						IPDM E/R
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	
ENGINE	—	NG	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N
TRANSMISSION	No indication	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	CAN 7
BCM	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N
METER A/C AMP	No indication	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—
ABS	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	—	—	—

PKIB0425E



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# CAN SYSTEM (TYPE 1)

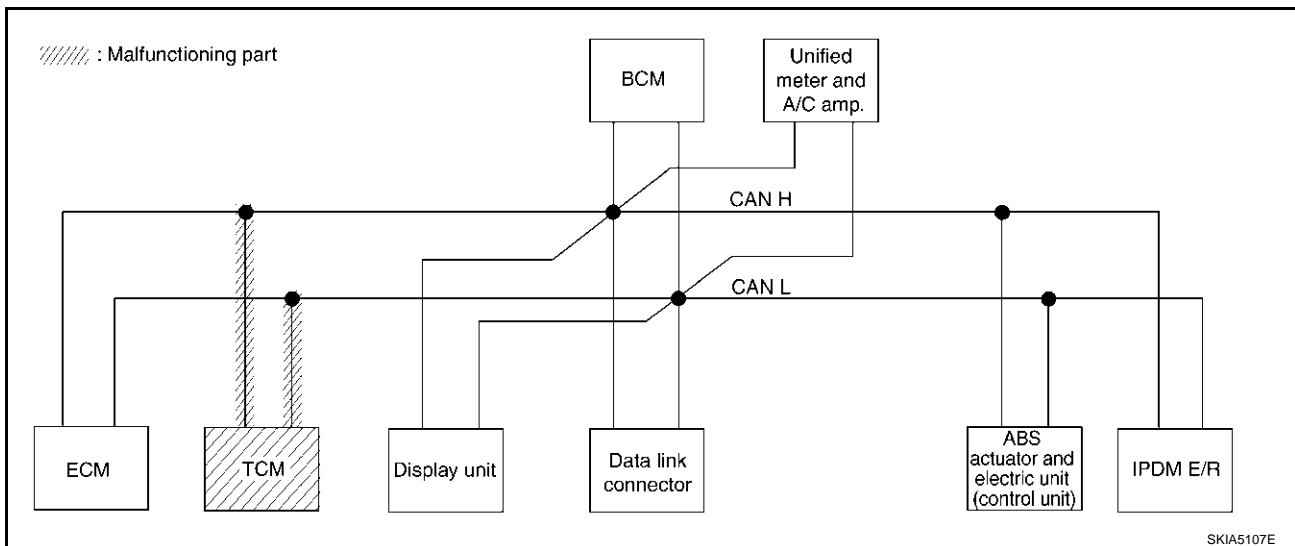
[CAN]

## Case 4

Check TCM circuit. Refer to [LAN-56, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN ✓	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN ✓	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

PKIB0426E



# CAN SYSTEM (TYPE 1)

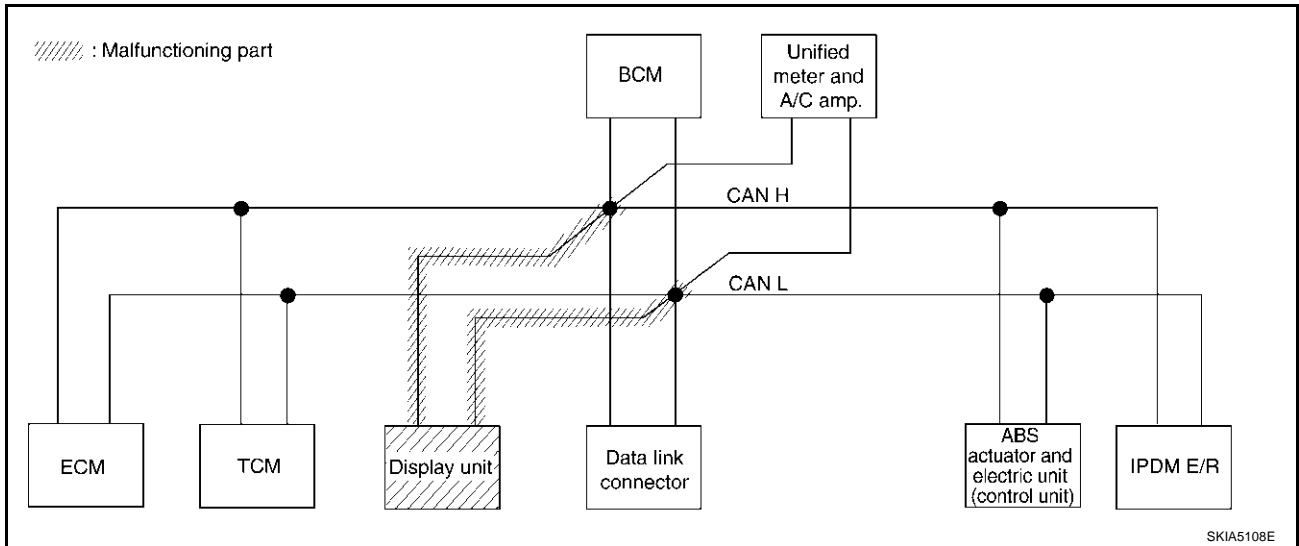
[CAN]

## Case 5

Check display unit circuit. Refer to [LAN-56](#). "Display Unit Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display unit	—	CAN COMM	CA $\checkmark$ 1	CA $\checkmark$ 3	—	—	CA $\checkmark$ 2	CA $\checkmark$ 5	—	CA $\checkmark$ 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

PKIB0427E



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# CAN SYSTEM (TYPE 1)

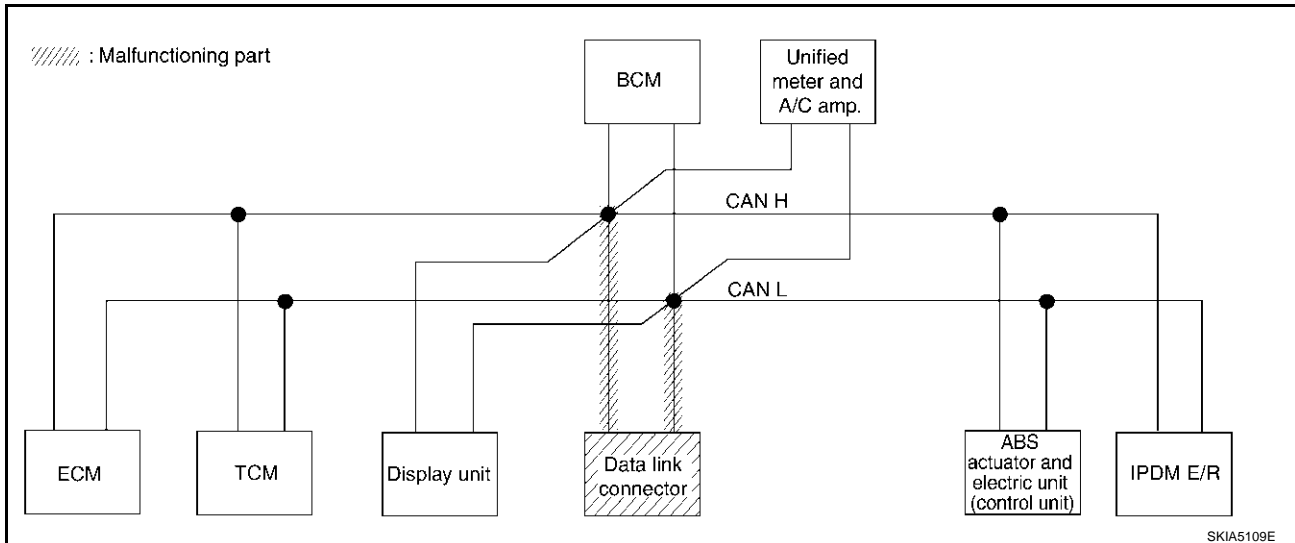
[CAN]

## Case 6

Check data link connector circuit. Refer to [LAN-57, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

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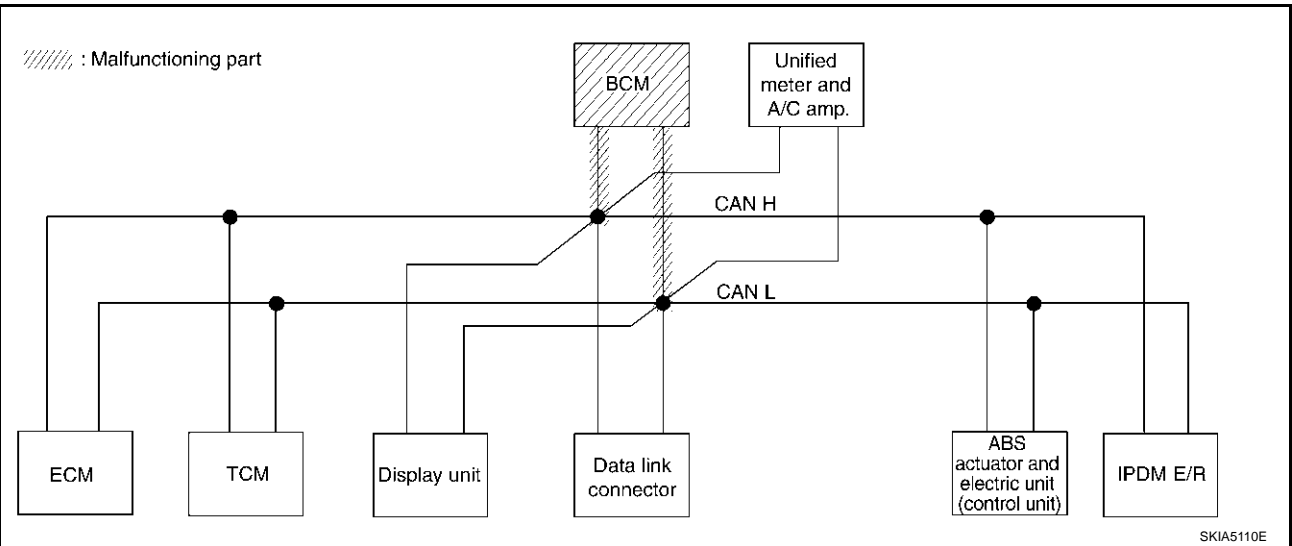


## Case 7

Check BCM circuit. Refer to [LAN-57, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN ✓	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2 ✓	CAN 5	—	CAN 7	
BCM	—	NG	UNKWN ✓	UNKWN ✓	—	—	—	UNKWN ✓	—	UNKWN ✓	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN ✓	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	

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# CAN SYSTEM (TYPE 1)

[CAN]

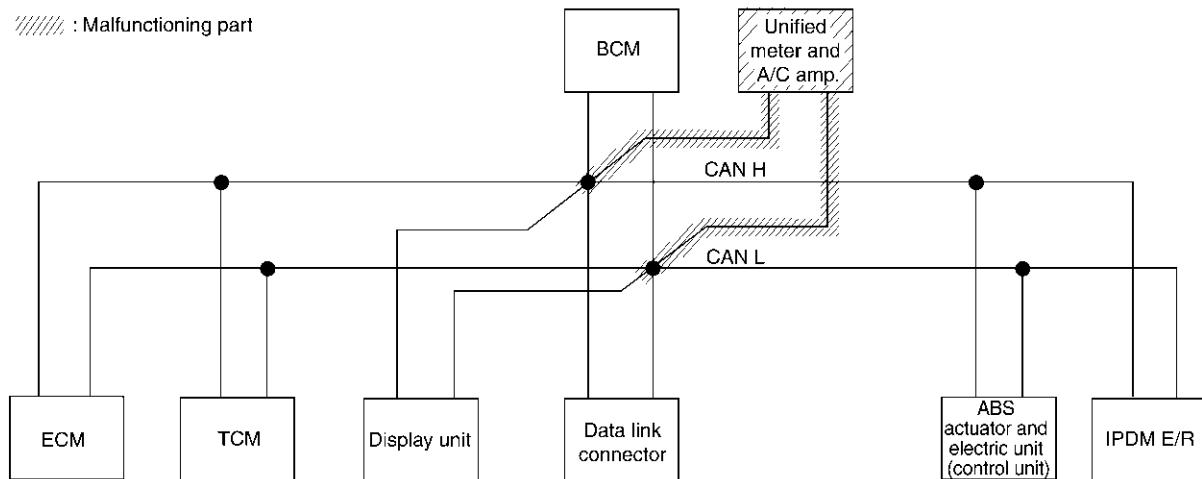
## Case 8

Check unified meter and A/C amp. circuit. Refer to [LAN-58, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

PKIB0430E

//// : Malfunctioning part



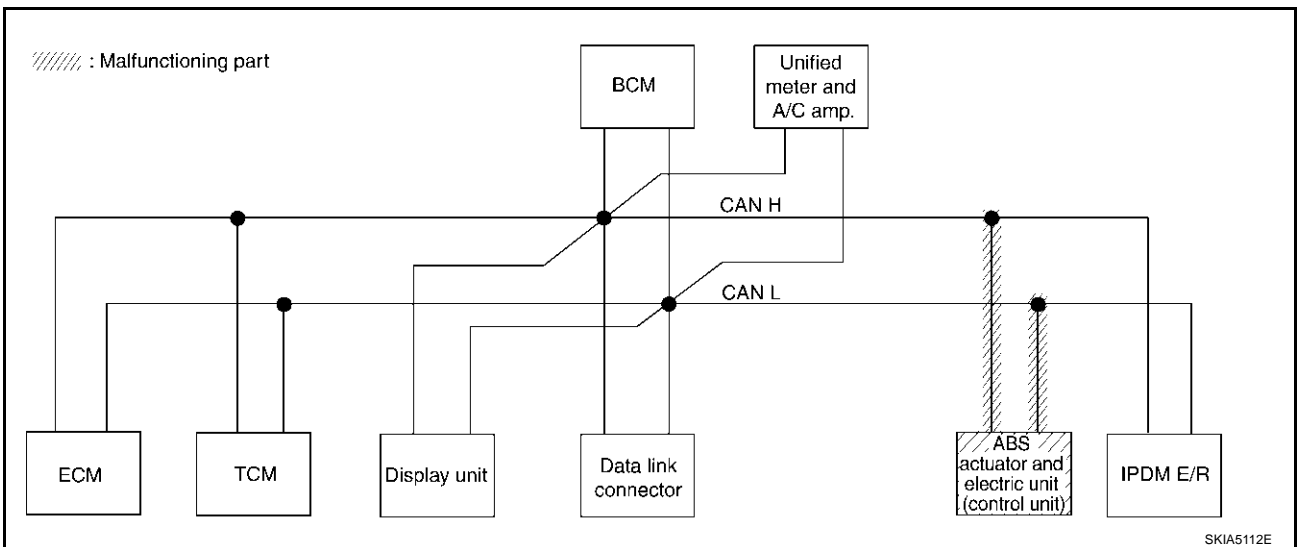
SKIA5111E

## Case 9

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-58, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

PKIB0431E



# CAN SYSTEM (TYPE 1)

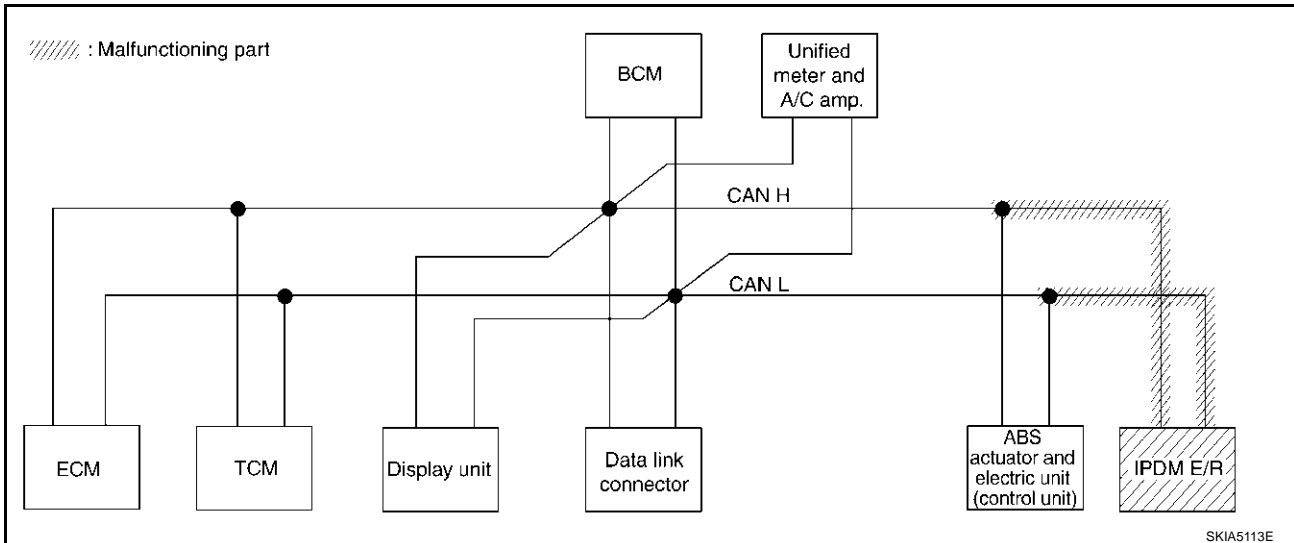
[CAN]

## Case 10

Check IPDM E/R circuit. Refer to [LAN-59, "IPDM E/R Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN ✓
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	CAN 7 ✓
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN ✓
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

PKIB0432E



## Case 11

Check CAN communication circuit. Refer to [LAN-59, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN ✓	—	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	—	UNKWN ✓
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display unit	—	CAN COMM	CAN 1 ✓	CAN 3 ✓	—	—	CAN 2 ✓	CAN 5 ✓	—	CAN 7 ✓
BCM	—	NG	UNKWN ✓	UNKWN ✓	—	—	—	UNKWN ✓	—	UNKWN ✓
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN ✓	UNKWN ✓	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 1)

[CAN]

## Case 12

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-62, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

PKIB0434E

## Case 13

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-62, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

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LAN

## Circuit Check Between TCM and Data Link Connector

### 1. CHECK HARNESS FOR OPEN CIRCUIT

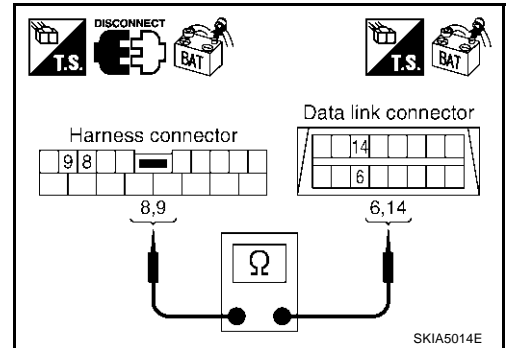
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

**8 (L) - 6 (L) : Continuity should exist.**

**9 (Y) - 14 (Y) : Continuity should exist.**

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-39, "Work Flow"](#) .
- NG >> Repair harness.



## Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit)

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector M9
  - Harness connector B2
  - Harness connector B4
  - Harness connector E105

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

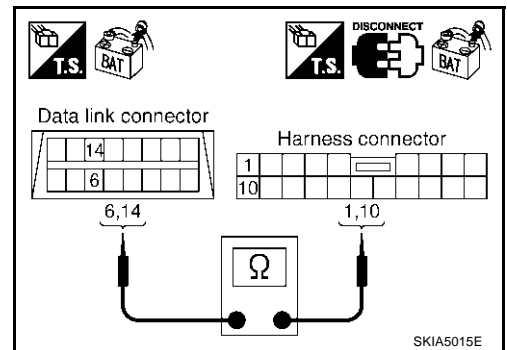
1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

**6 (L) - 1 (L) : Continuity should exist.**

**14 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



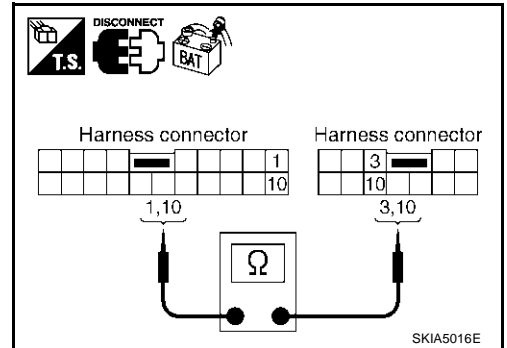
## 3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

1 (L) - 3 (L) : Continuity should exist.  
10 (Y) - 10 (Y) : Continuity should exist.

OK or NG

- OK >> GO TO 4.  
 NG >> Repair harness.



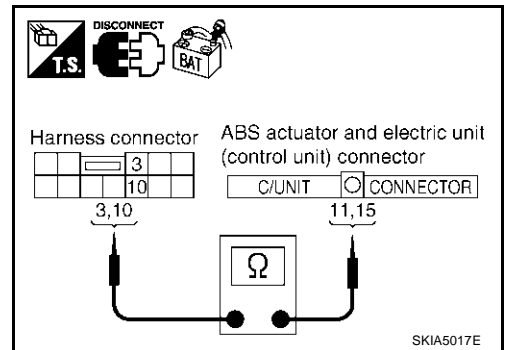
## 4. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

3 (L) - 11 (L) : Continuity should exist.  
10 (Y) - 15 (Y) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-39. "Work Flow"](#).  
 NG >> Repair harness.



## ECM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

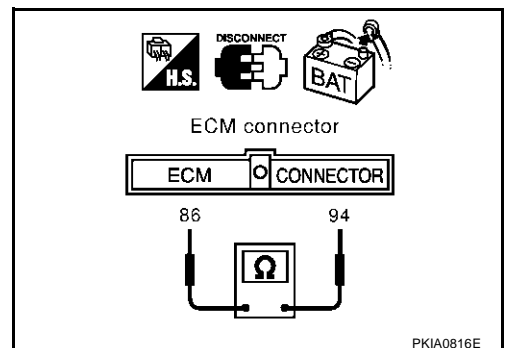
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

94 (L) - 86 (Y) : Approx. 108 - 132Ω

OK or NG

- OK >> Replace ECM.  
 NG >> Repair harness between ECM and TCM.



**TCM Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
  - TCM connector
  - Harness connector F102
  - Harness connector M82

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

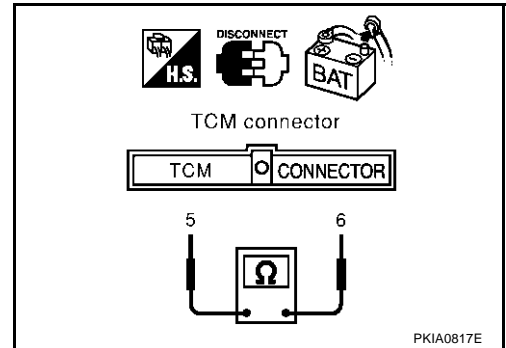
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace TCM.  
 NG >> Repair harness between TCM and ECM.

**Display Unit Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display unit for damage, bend and loose connection (unit side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

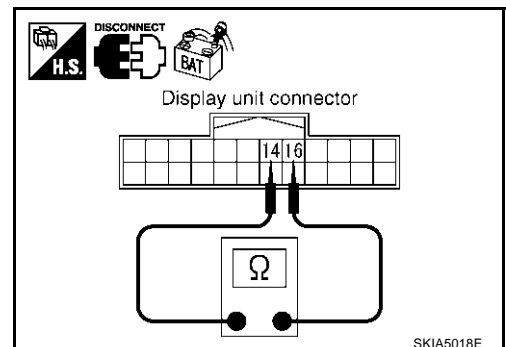
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect display unit connector.
2. Check resistance between display unit harness connector M39 terminals 14 (L) and 16 (Y).

**14 (L) - 16 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace display unit.  
 NG >> Repair harness between display unit and data link connector.



**Data Link Connector Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

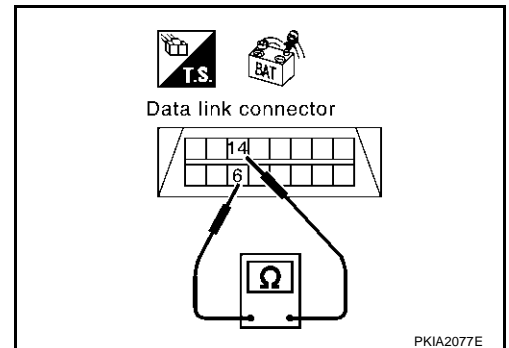
**2. CHECK HARNESS FOR OPEN CIRCUIT**

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Diagnose again. Refer to [LAN-39, "Work Flow"](#) .  
 NG >> Repair harness between data link connector and BCM.

**BCM Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

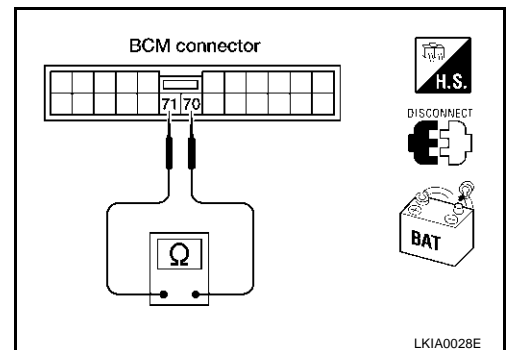
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M37 terminals 70 (L) and 71 (Y).

**70 (L) - 71 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace BCM. Refer to [BCS-36, "Removal and Installation of BCM"](#) .  
 NG >> Repair harness between BCM and data link connector.



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## Unified Meter and A/C Amp. Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

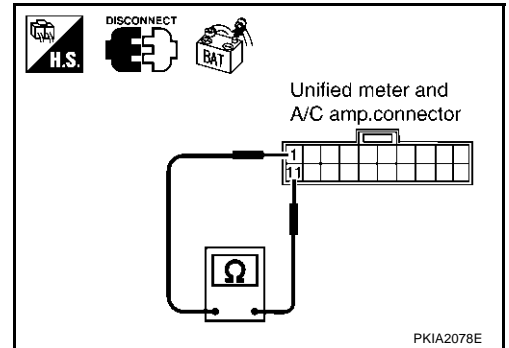
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

**1 (L) - 11 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace unified meter and A/C amp.  
 NG >> Repair harness between unified meter and A/C amp. and data link connector.



## ABS Actuator and Electric Unit (Control Unit) Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

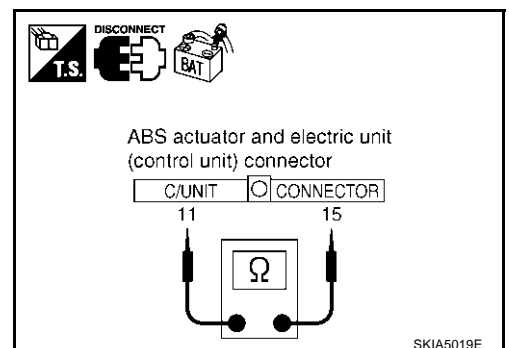
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

**11 (L) - 15 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).  
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



**IPDM E/R Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

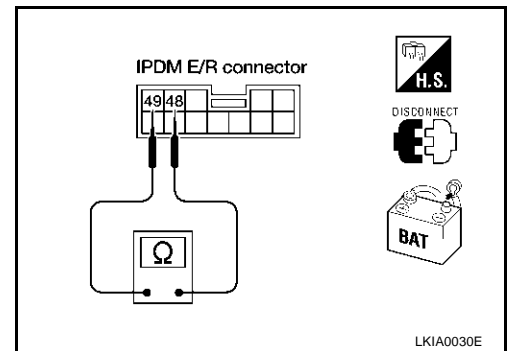
- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y)****: Approx. 108 - 132Ω**OK or NG

- OK >> Replace IPDM E/R.  
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).

**CAN Communication Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, unit side, meter side, control unit side and harness side).

- ECM
- TCM
- Display unit
- BCM
- Unified meter and A/C amp.
- ABS actuator and electric unit (control unit)
- IPDM E/R
- Between ECM and IPDM E/R
- Between ECM and TCM

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR SHORT CIRCUIT

- Disconnect following connectors.
  - ECM connector
  - Harness connector M82
  - Display unit connector
  - BCM connector
  - Unified meter and A/C amp. connector
  - Harness connector M9
- Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

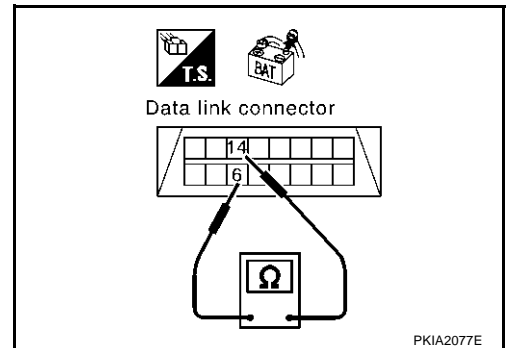
**6 (L) - 14 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 3.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9.



## 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

**6 (L) - Ground : Continuity should not exist.**

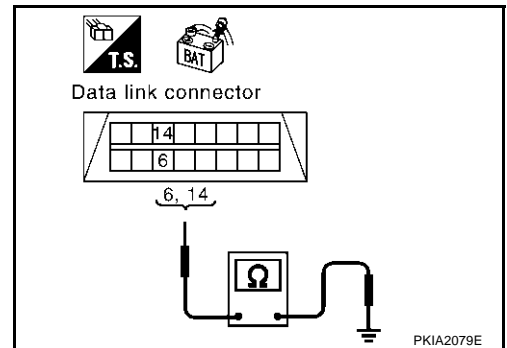
**14 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9.





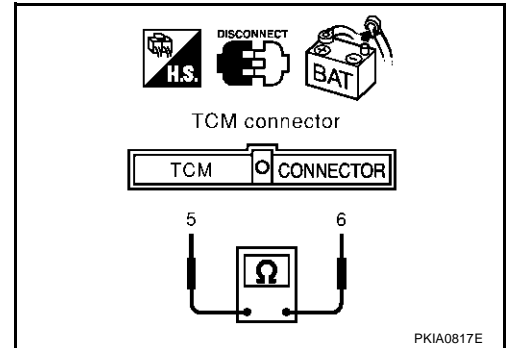
## 4. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Continuity should not exist.**

OK or NG

- OK >> GO TO 5.  
 NG >> Repair harness between TCM and harness connector F102.



## 5. CHECK HARNESS FOR SHORT CIRCUIT

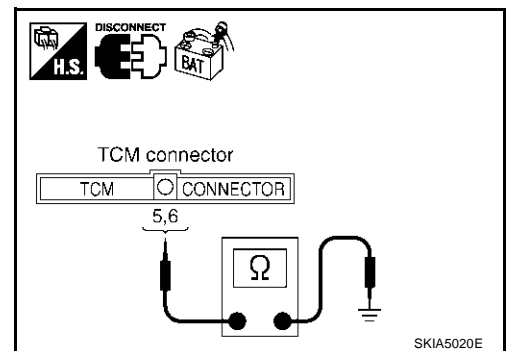
- Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

**5 (L) - Ground : Continuity should not exist.**

**6 (Y) - Ground : Continuity should not exist.**

OK or NG

- OK >> GO TO 6.  
 NG >> Repair harness between TCM and harness connector F102.



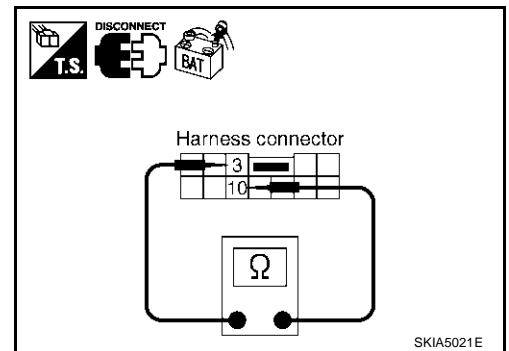
## 6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B4.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

**3 (L) - 10 (Y) : Continuity should not exist.**

OK or NG

- OK >> GO TO 7.  
 NG >> Repair harness between harness connector B4 and harness connector B2.



## 7. CHECK HARNESS FOR SHORT CIRCUIT

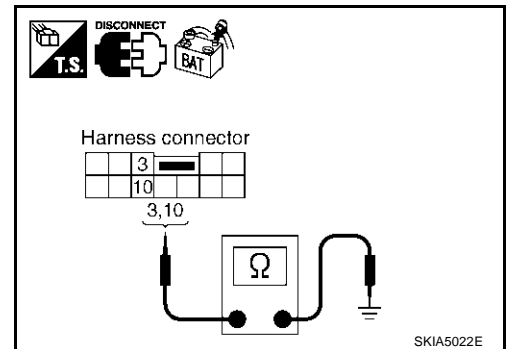
- Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

**3 (L) - Ground : Continuity should not exist.**

**10 (Y) - Ground : Continuity should not exist.**

OK or NG

- OK >> GO TO 8.  
 NG >> Repair harness between harness connector B4 and harness connector B2.



## 8. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

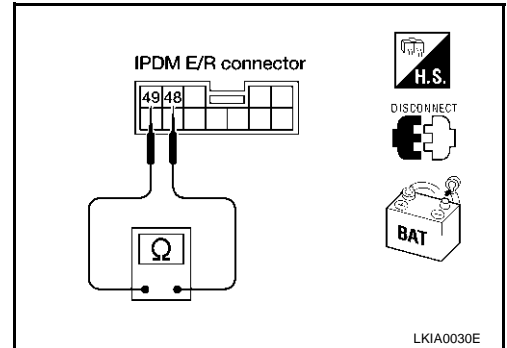
**48 (L) - 49 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 9.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

**48 (L) - Ground : Continuity should not exist.**

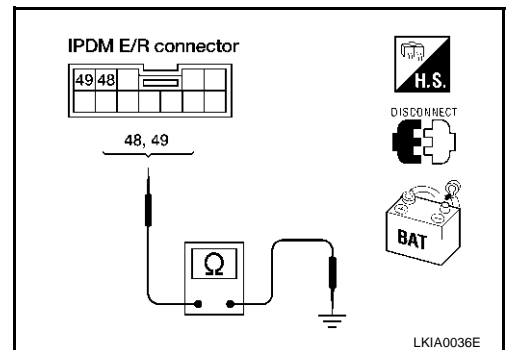
**49 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 10.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 10. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-62, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

### OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-39, "Work Flow"](#).

NG >> Replace ECM and/or IPDM E/R.

### IPDM E/R Ignition Relay Circuit Check

AKS00698

Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-45, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#).

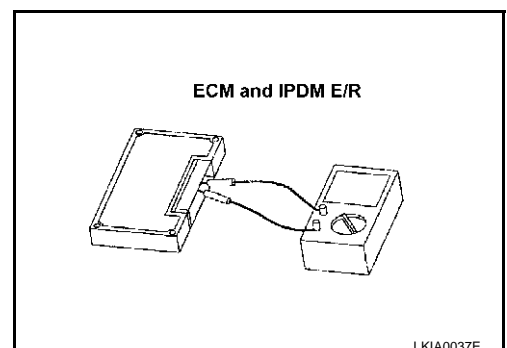
### Component Inspection

#### ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

AKS00699

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



## CAN SYSTEM (TYPE 2)

PFP:23710

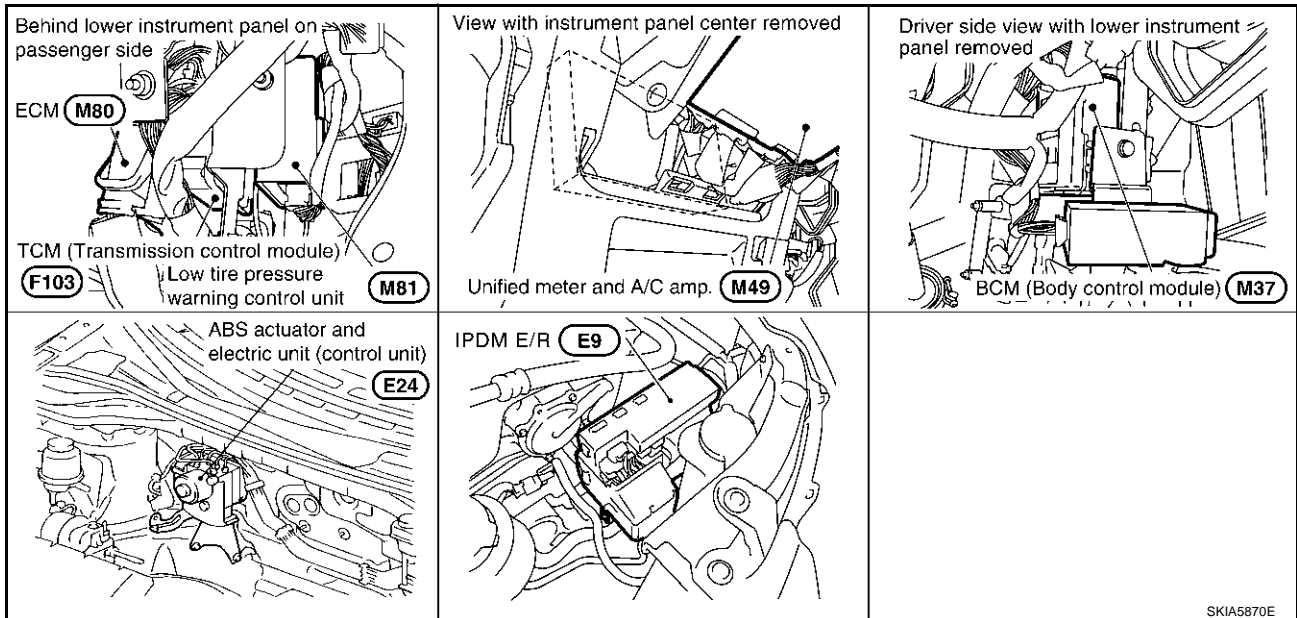
### System Description

AKS006P9

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

### Component Parts and Harness Connector Location

AKS006PA



A  
B  
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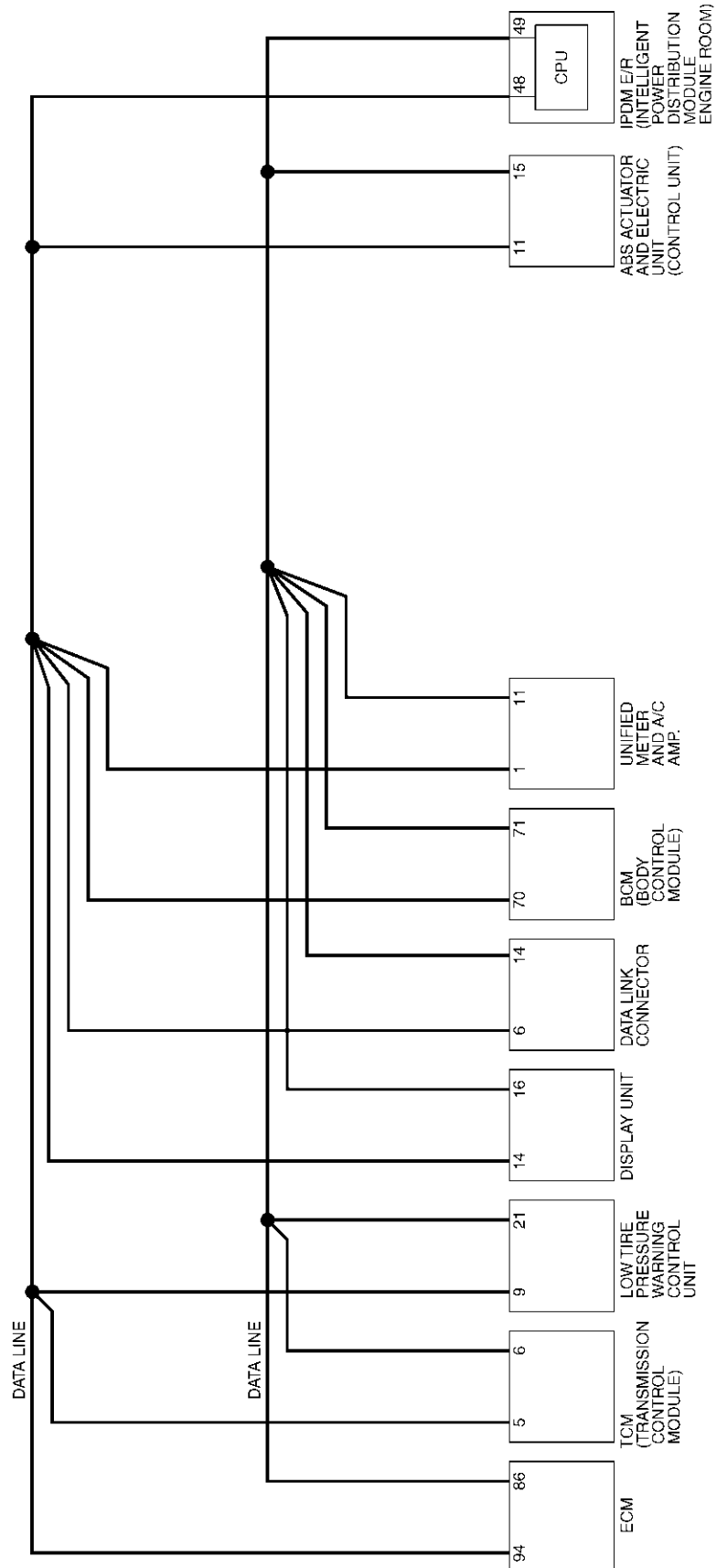
LAN

# CAN SYSTEM (TYPE 2)

[CAN]

AKS006PB

## Schematic



TKWA0927E

# CAN SYSTEM (TYPE 2)

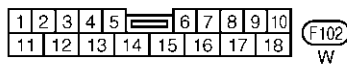
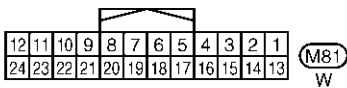
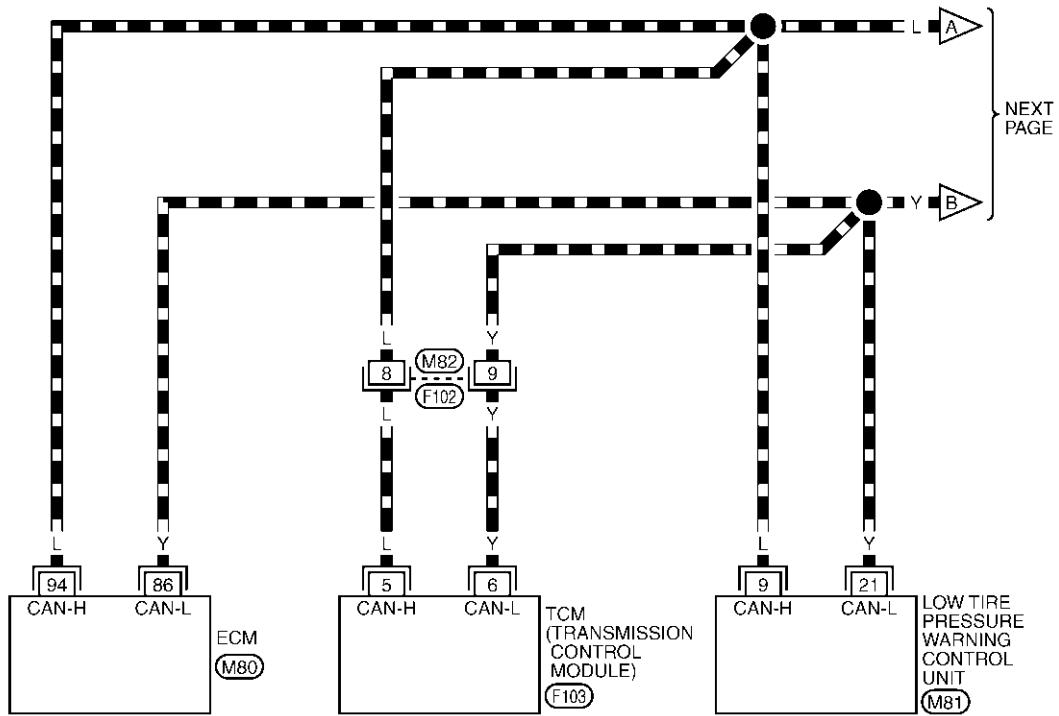
[CAN]

## Wiring Diagram - CAN -

AKS006PC

### LAN-CAN-04

▬ : DATA LINE



REFER TO THE FOLLOWING.  
 (M80), (F103) -ELECTRICAL  
 UNITS

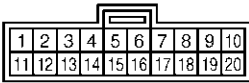
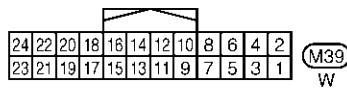
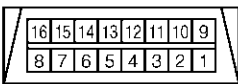
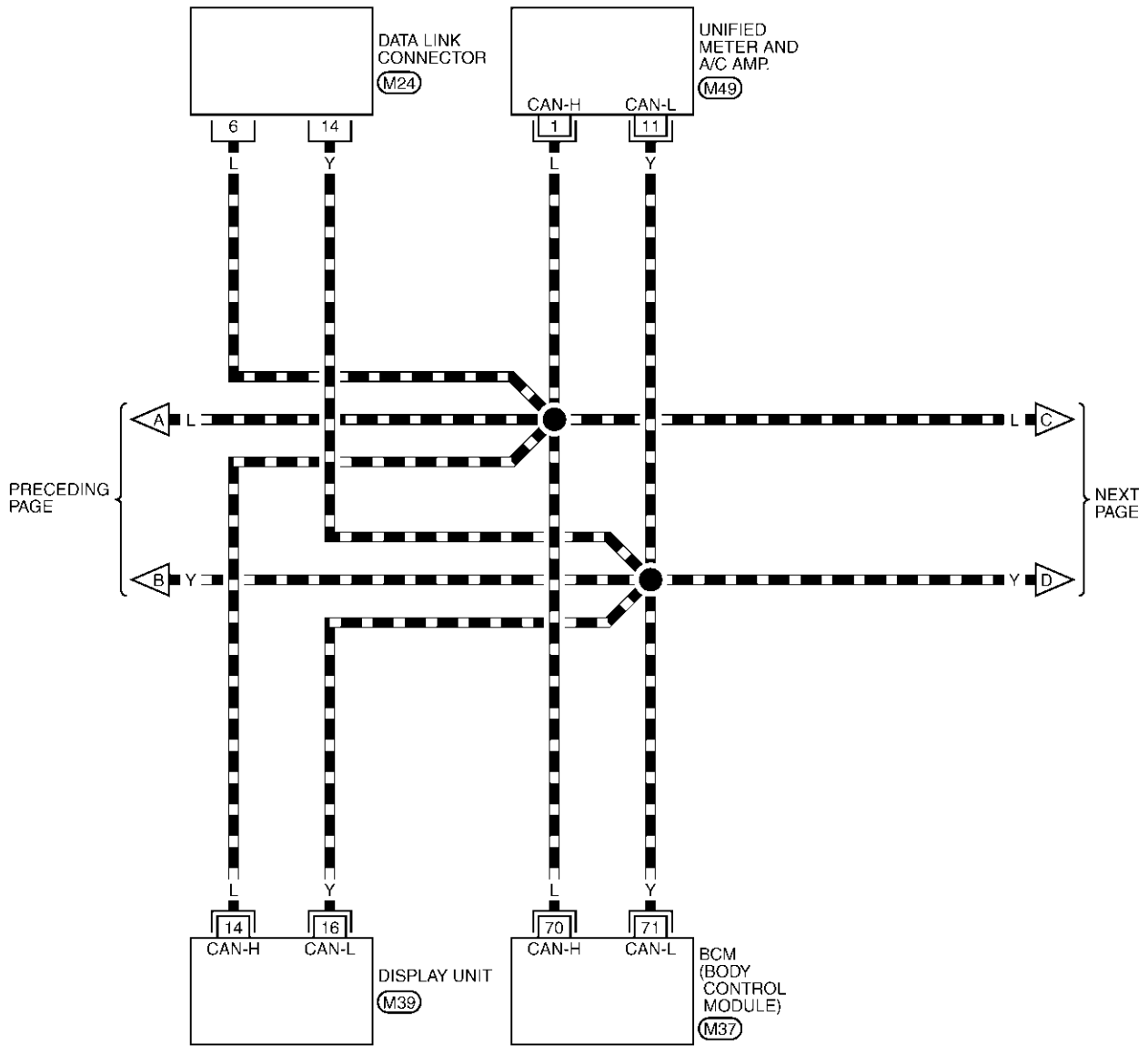
TKWA0928E

# CAN SYSTEM (TYPE 2)

[CAN]

## LAN-CAN-05

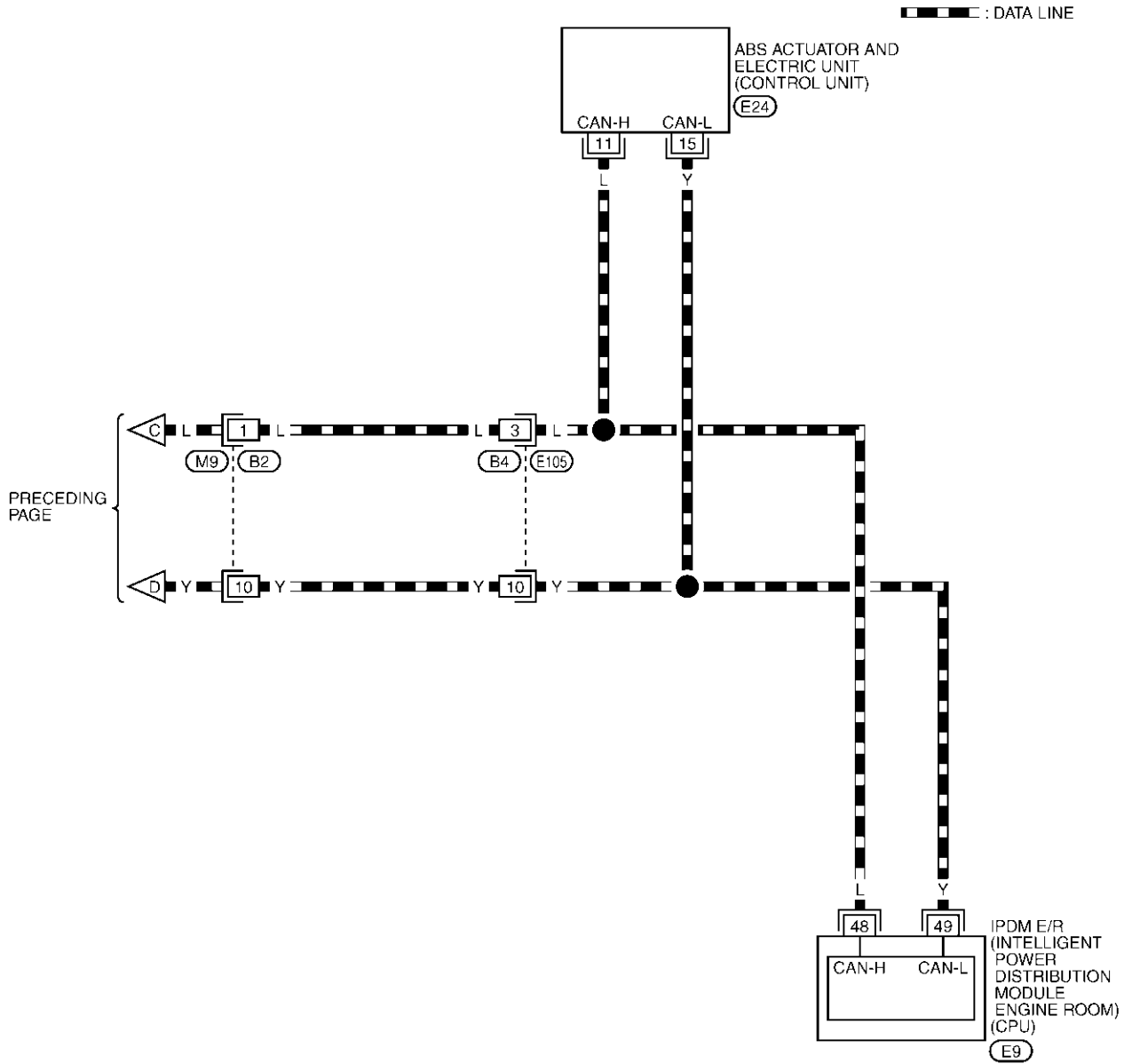
▬ : DATA LINE



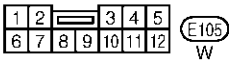
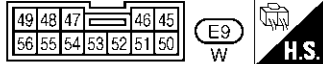
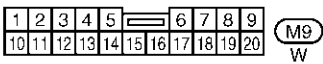
REFER TO THE FOLLOWING.  
(M37) -ELECTRICAL UNITS

TKWA0929E

## LAN-CAN-06



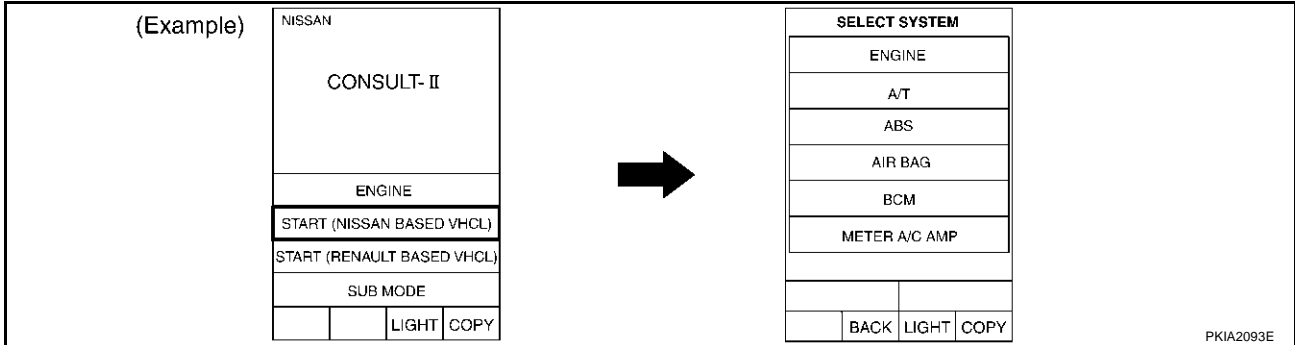
A  
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I  
J  
LAN  
L  
M



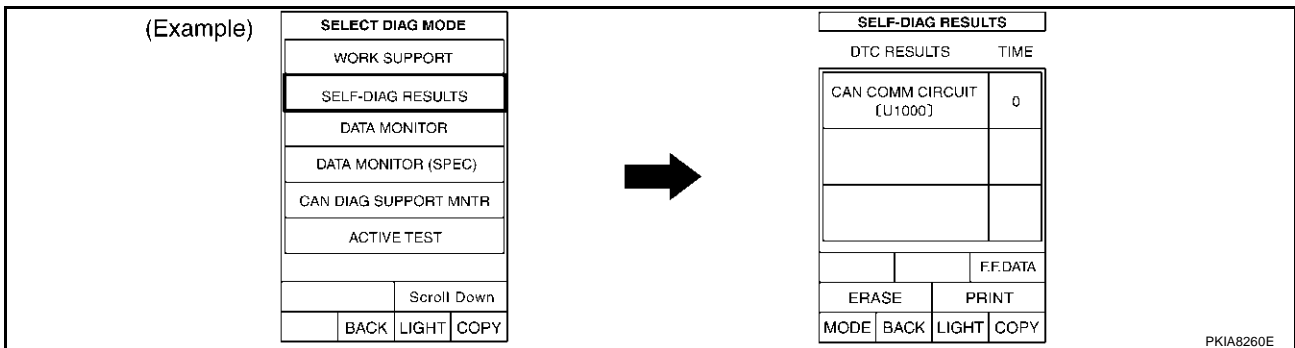
REFER TO THE FOLLOWING.  
 (E24) -ELECTRICAL UNITS

## Work Flow

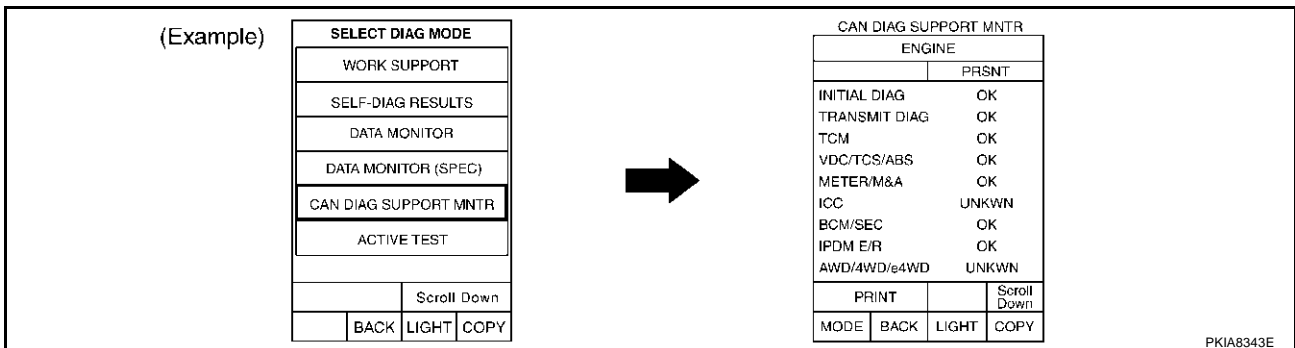
- When there are no indications of "TRANSMISSION", "AIR PRESSURE MONITOR" or "METER A/C AMP" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP" and "ABS" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP" and "ABS" displayed on CONSULT-II.



- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-70, "CHECK SHEET"](#) .
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "v" onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-70, "CHECK SHEET"](#) .

**NOTE:**

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual.  
So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the integrated display system. Refer to [AV-110, "CAN Communication Line Check"](#) .
- Attach the CAN DIAG MONITOR check sheet onto the check sheet. Refer to [LAN-70, "CHECK SHEET"](#) .
- Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG MONITOR check sheet. Refer to [LAN-70, "CHECK SHEET"](#) .



## CAN SYSTEM (TYPE 2)

[CAN]

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**NOTE:**

If "NG" is displayed on "CAN COMM" as "CAN DIAG MNTR" for the diagnosed control unit, replace the control unit. Refer to [AV-110, "CAN Communication Line Check"](#).

9. According to the check sheet results (example), start inspection. Refer to [LAN-72, "CHECK SHEET RESULTS \(EXAMPLE\)"](#).

A

B

C

D

E

F

G

H

I

J

LAN

L

M

# CAN SYSTEM (TYPE 2)

[CAN]

## CHECK SHEET

**NOTE:**

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	UNKWN	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

Attach copy of  
display unit  
CAN DIAG MONITOR check sheet

PKIB0436E

# CAN SYSTEM (TYPE 2)

[CAN]

A  
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LAN  
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M

Attach copy of  
ENGINE  
SELF-DIAG RESULTS

Attach copy of  
TRANSMISSION  
SELF-DIAG RESULTS

Attach copy of  
AIR PRESSURE  
MONITOR  
SELF-DIAG RESULTS

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
METER A/C AMP  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

Attach copy of  
ENGINE  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
TRANSMISSION  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
AIR PRESSURE  
MONITOR  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
BCM  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
METER A/C AMP  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ABS  
CAN DIAG SUPPORT  
MNTR

PKIB0437E

## CHECK SHEET RESULTS (EXAMPLE)

### NOTE:

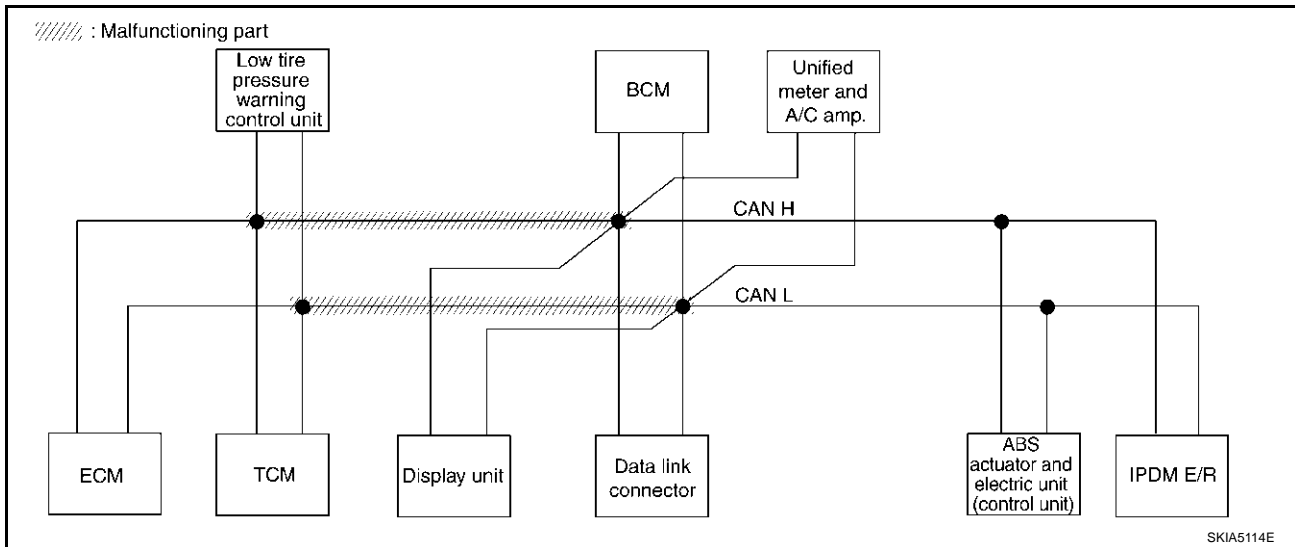
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

### Case 1

Check harness between TCM and data link connector. Refer to [LAN-84, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3 ✓	—	CAN 6 ✓	—	CAN 2	CAN 5	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

PKIB0438E



# CAN SYSTEM (TYPE 2)

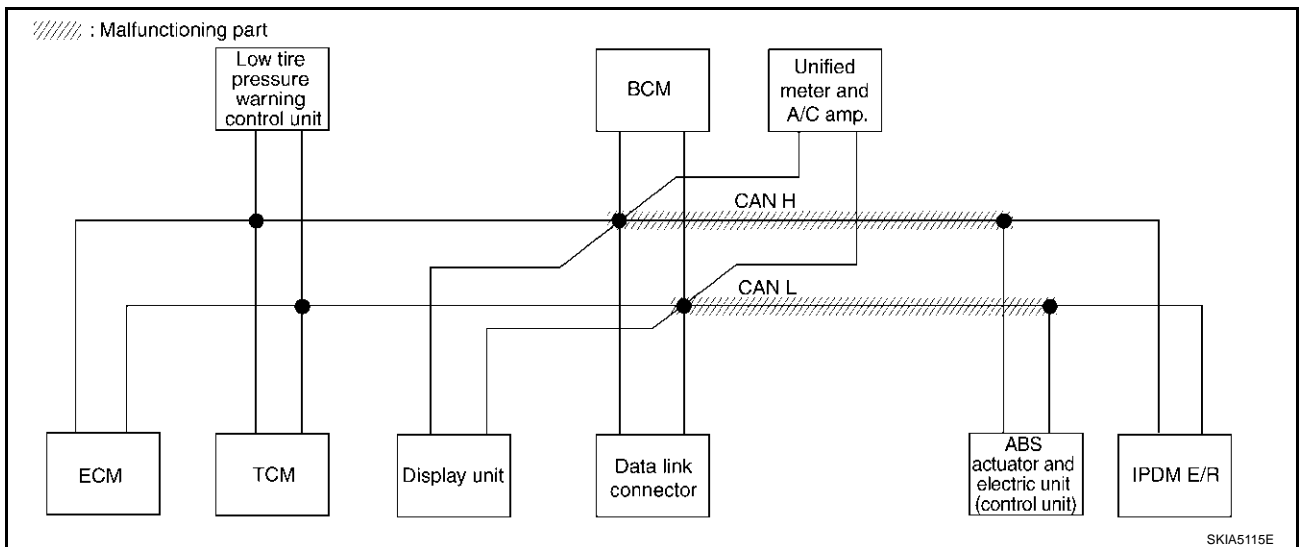
[CAN]

## Case 2

Check harness between data link connector and ABS actuator and electric unit (control unit). Refer to [LAN-84](#), "Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit)".

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN ✓
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN ✓	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	CAN 7 ✓
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN ✓
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN ✓	—
ABS	—	NG	UNKWN	UNKWN ✓	—	—	—	—	—	—	—

PKIB0439E



# CAN SYSTEM (TYPE 2)

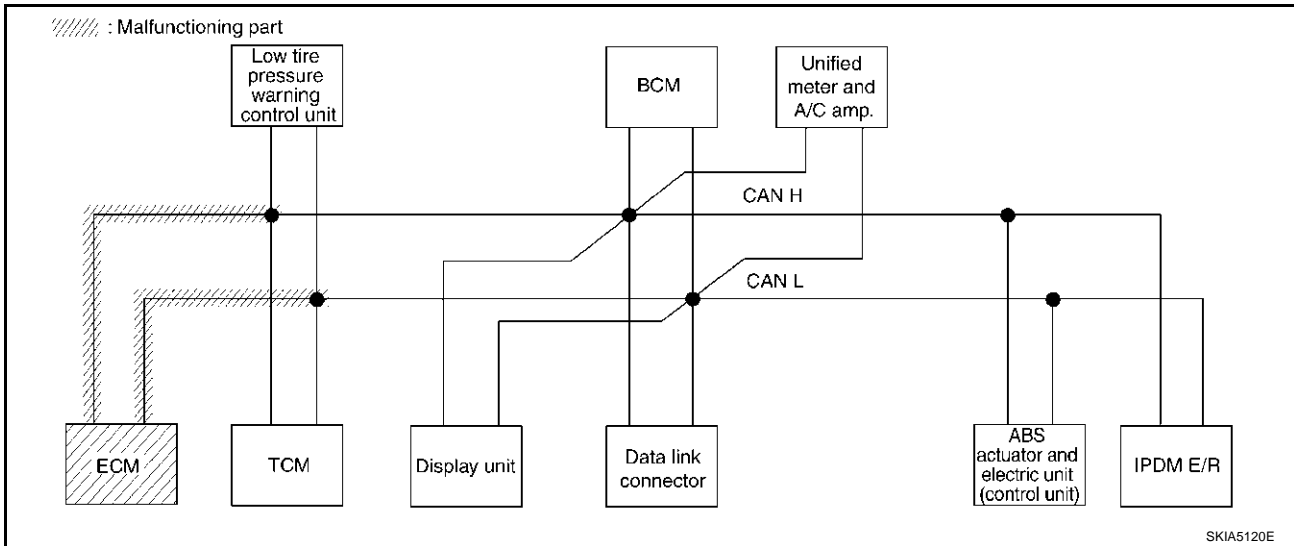
[CAN]

## Case 3

Check ECM circuit. Refer to [LAN-85, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN ✓	—	UNKWN ✓	—	—	UNKWN ✓	UNKWN ✓	—	UNKWN ✓
TRANSMISSION	No indication	NG	UNKWN	UNKWN ✓	—	—	—	—	UNKWN	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3 ✓	—	CAN 6	—	CAN 2	CAN 5	—	CAN 7
BCM	—	NG	UNKWN	UNKWN ✓	—	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN ✓	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN ✓	—	—	—	—	—	—	—

PKIB0440E



# CAN SYSTEM (TYPE 2)

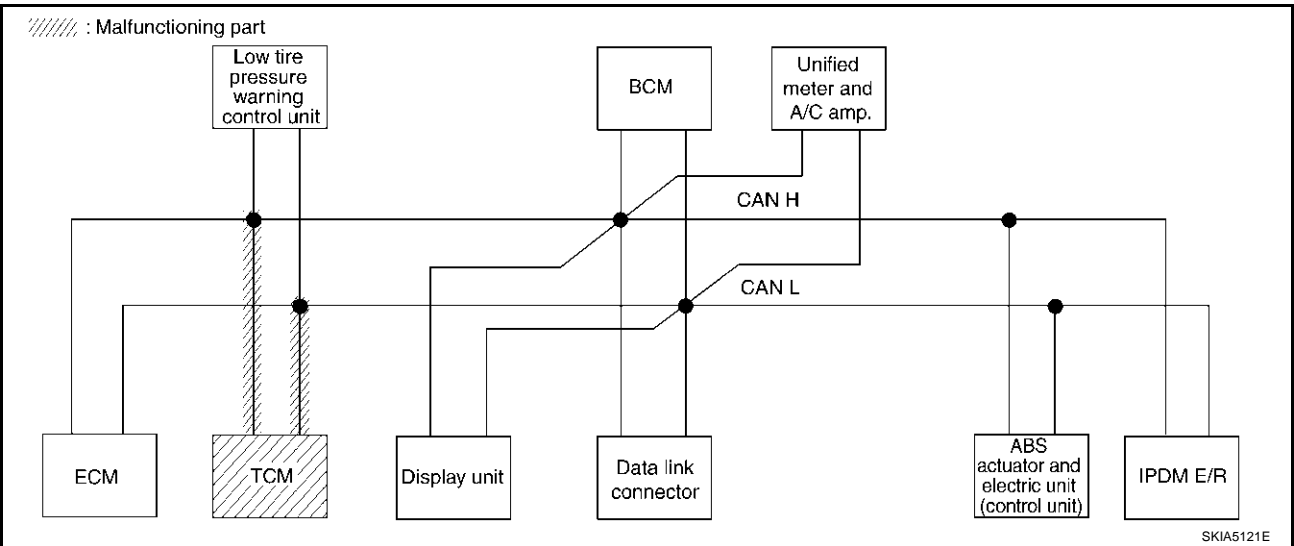
[CAN]

## Case 4

Check TCM circuit. Refer to [LAN-86, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 2)

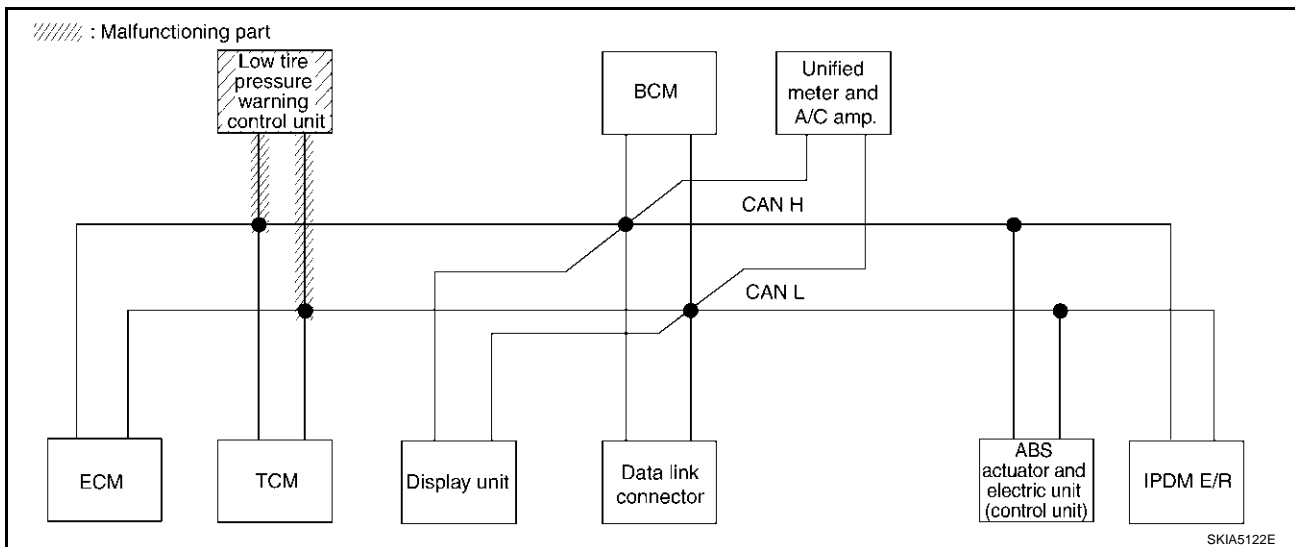
[CAN]

## Case 5

Check low tire pressure warning control unit circuit. Refer to [LAN-86, "Low Tire Pressure Warning Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6 ✓	—	CAN 2	CAN 5	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	UNKWN	—	UNKWN	—
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# CAN SYSTEM (TYPE 2)

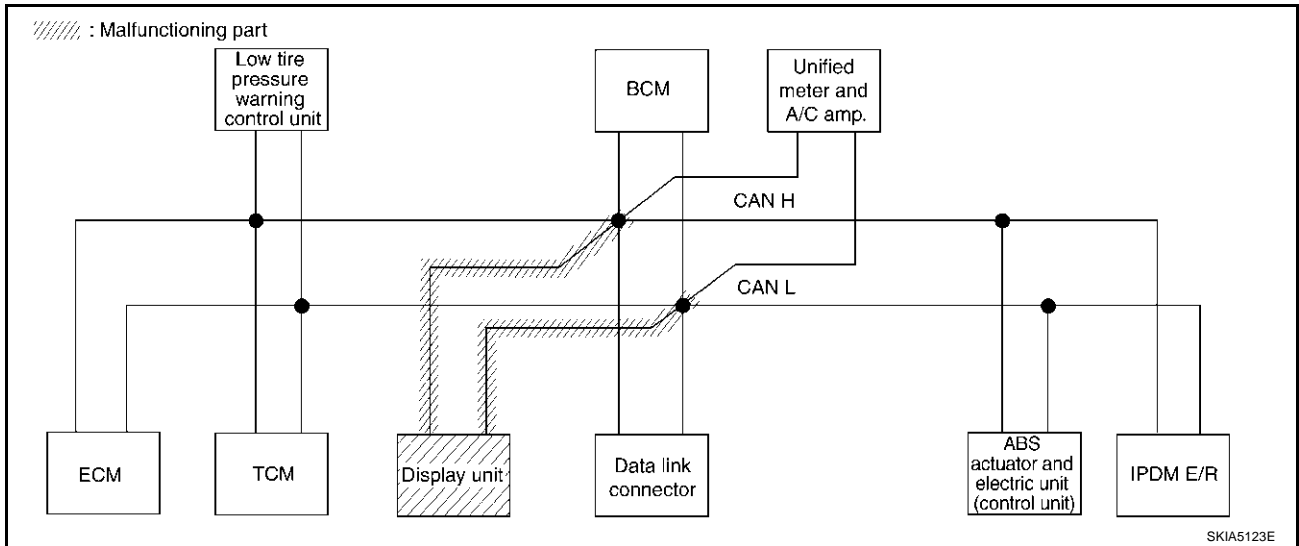
[CAN]

## Case 6

Check display unit circuit. Refer to [LAN-87, "Display Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—
Display unit	—	CAN COMM	CA <del>N</del> 1	CA <del>N</del> 3	—	CA <del>N</del> 6	—	CA <del>N</del> 2	CA <del>N</del> 5	—	CA <del>N</del> 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UN <del>K</del> WN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 2)

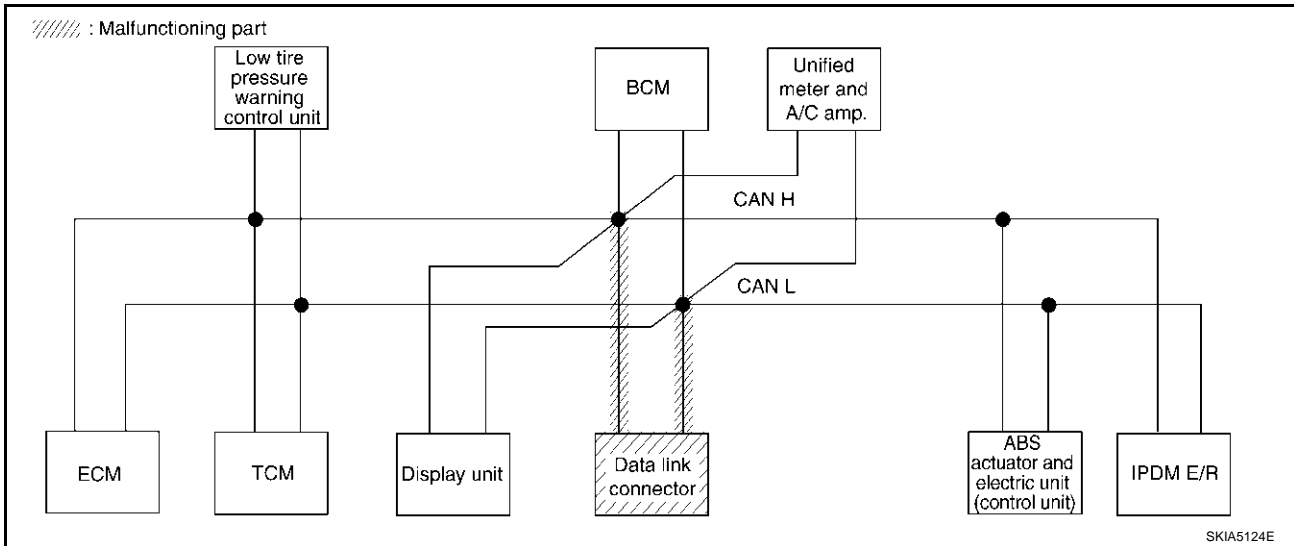
[CAN]

## Case 7

Check data link connector circuit. Refer to [LAN-87, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW N	—	UNKW N	—	—	UNKW N	UNKW N	—	UNKW N
TRANSMISSION	No indication ✓	NG	UNKW N	UNKW N	—	—	—	—	UNKW N	UNKW N	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKW N	—	—	—	—	—	UNKW N	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	CAN 7
BCM	—	NG	UNKW N	UNKW N	—	—	—	—	UNKW N	—	UNKW N
METER A/C AMP	No indication ✓	—	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N	—	UNKW N	—
ABS	—	NG	UNKW N	UNKW N	—	—	—	—	—	—	—

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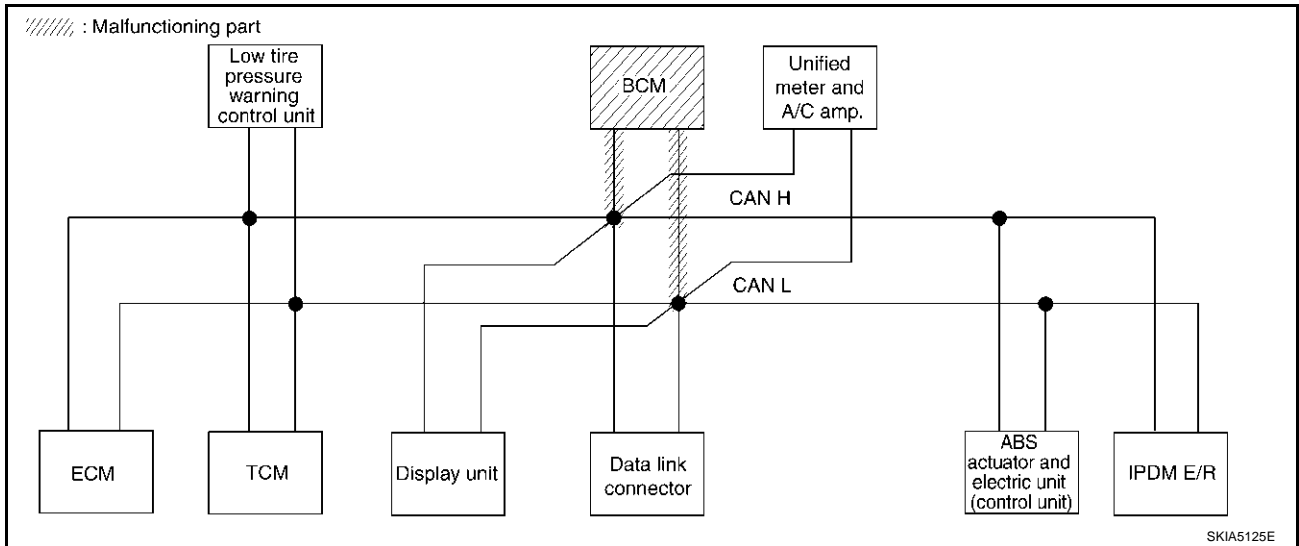


## Case 8

Check BCM circuit. Refer to [LAN-88, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R	
ENGINE	-	NG	UNKWN	-	UNKWN	-	-	UNKWN ✓	UNKWN	-	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	-	-	UNKWN	UNKWN	-	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	-	-	-	-	UNKWN	-	-	
Display unit	-	CAN COMM	CAN 1	CAN 3	-	CAN 6	-	CAN 2 ✓	CAN 5	-	CAN 7	
BCM	-	NG	UNKWN ✓	UNKWN ✓	-	-	-	-	UNKWN ✓	-	UNKWN ✓	
METER A/C AMP	No indication	-	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN ✓	-	UNKWN	-	
ABS	-	NG	UNKWN	UNKWN	-	-	-	-	-	-	-	

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# CAN SYSTEM (TYPE 2)

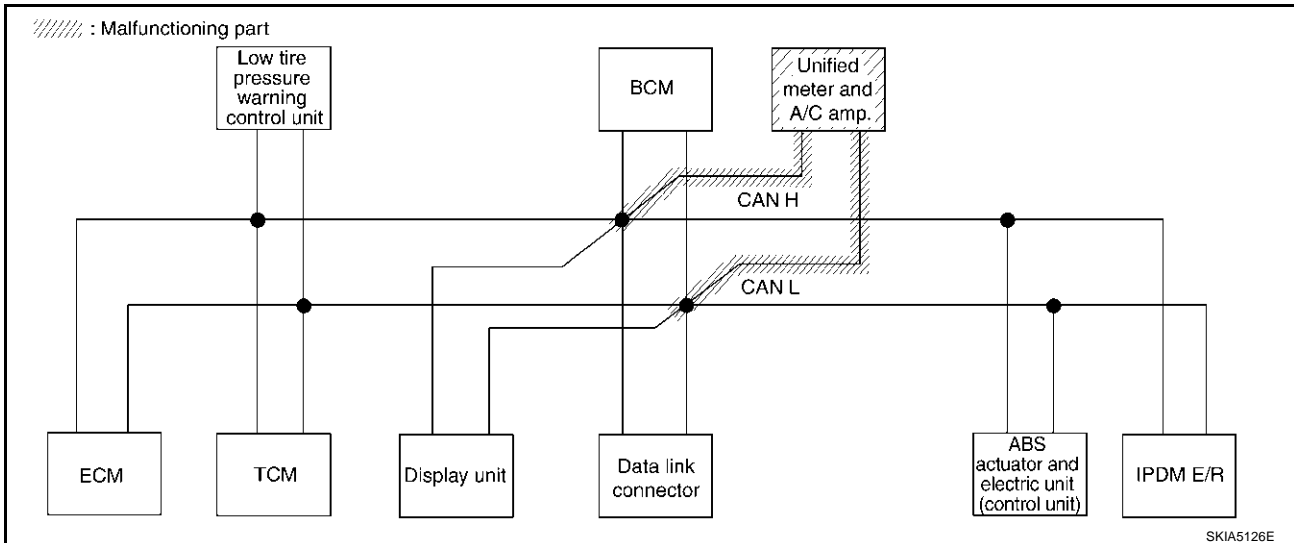
[CAN]

## Case 9

Check unified meter and A/C amp. circuit. Refer to [LAN-88, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN ✓	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN ✓	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN ✓	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5 ✓	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN ✓	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 2)

[CAN]

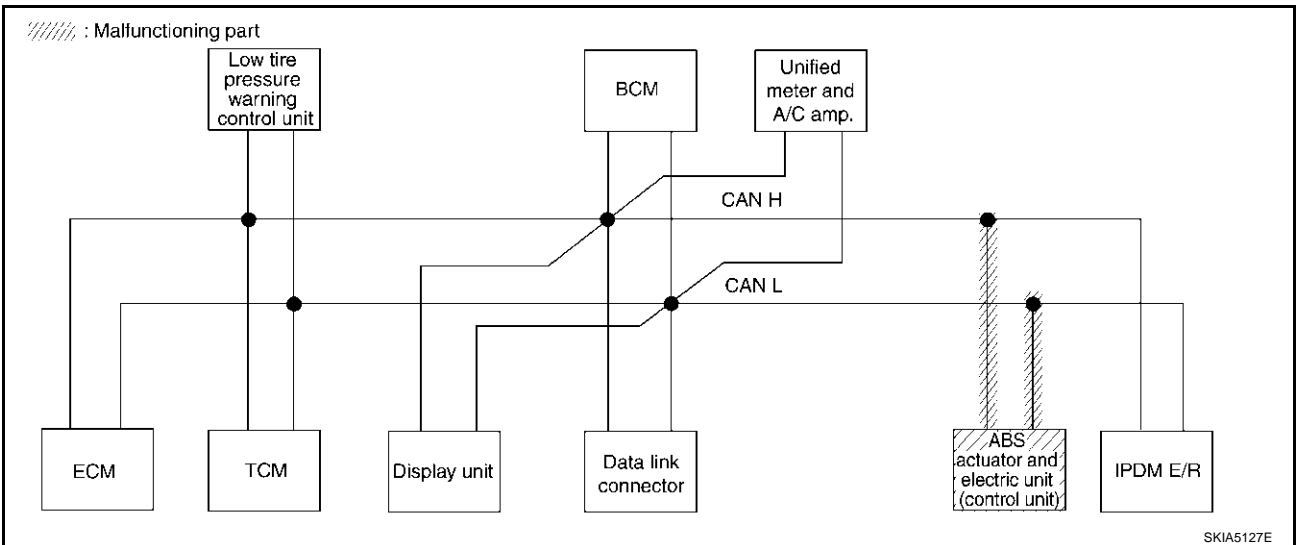
## Case 10

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-89, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

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SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN ✓	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN ✓	—
ABS	—	NG	UNKWN ✓	UNKWN ✓	—	—	—	—	—	—	—

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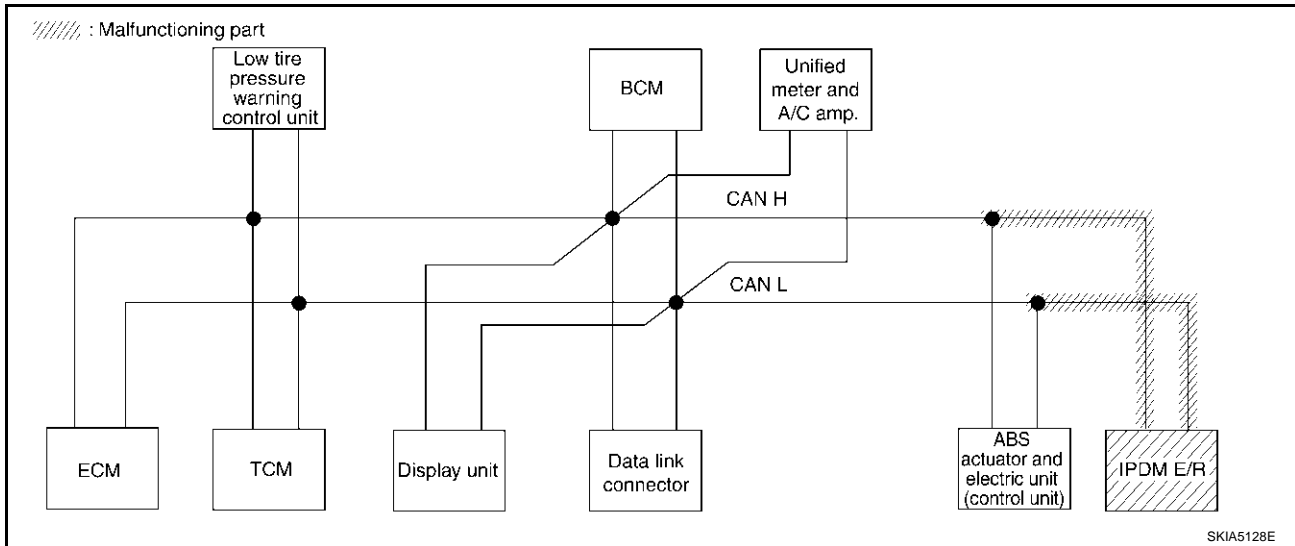


## Case 11

Check IPDM E/R circuit. Refer to [LAN-89, "IPDM E/R Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS		
ENGINE	—	NG	UNKW <del>N</del>	—	UNKW <del>N</del>	—	—	UNKW <del>N</del>	UNKW <del>N</del>	—	UNKW <del>N</del> ✓	
TRANSMISSION	No indication	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	—	UNKW <del>N</del>	UNKW <del>N</del>	—	
AIR PRESSURE MONITOR	No indication	NG	UNKW <del>N</del>	—	—	—	—	—	UNKW <del>N</del>	—	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	CAN 7 ✓	
BCM	—	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	—	UNKW <del>N</del>	—	UNKW <del>N</del> ✓	
METER A/C AMP	No indication	—	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	—	UNKW <del>N</del>	—	
ABS	—	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	—	—	—	—	

PKIB0448E



## Case 12

Check CAN communication circuit. Refer to [LAN-90, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS		
ENGINE	—	NG	UNKW <del>N</del> ✓	—	UNKW <del>N</del> ✓	—	—	UNKW <del>N</del> ✓	UNKW <del>N</del> ✓	—	UNKW <del>N</del> ✓	
TRANSMISSION	No indication ✓	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	—	UNKW <del>N</del>	UNKW <del>N</del>	—	
AIR PRESSURE MONITOR	No indication ✓	NG	UNKW <del>N</del>	—	—	—	—	—	UNKW <del>N</del>	—	—	
Display unit	—	CAN COMM	CAN 1 ✓	CAN 3 ✓	—	CAN 6 ✓	—	CAN 2 ✓	CAN 5 ✓	—	CAN 7 ✓	
BCM	—	NG	UNKW <del>N</del> ✓	UNKW <del>N</del> ✓	—	—	—	—	UNKW <del>N</del> ✓	—	UNKW <del>N</del> ✓	
METER A/C AMP	No indication ✓	—	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	—	UNKW <del>N</del>	—	
ABS	—	NG	UNKW <del>N</del> ✓	UNKW <del>N</del> ✓	—	—	—	—	—	—	—	

PKIB0448E

# CAN SYSTEM (TYPE 2)

[CAN]

## Case 13

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-90, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN ✓	—	—	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN ✓	UNKWN	UNKWN	UNKWN	—	UNKWN ✓	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

PKIB0450E

## Case 14

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-93, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN ✓	—	—	—	—	UNKWN ✓	UNKWN	—	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN ✓	—	—	—	—	—	—	—	—

PKIB0451E

## Circuit Check Between TCM and Data Link Connector

### 1. CHECK HARNESS FOR OPEN CIRCUIT

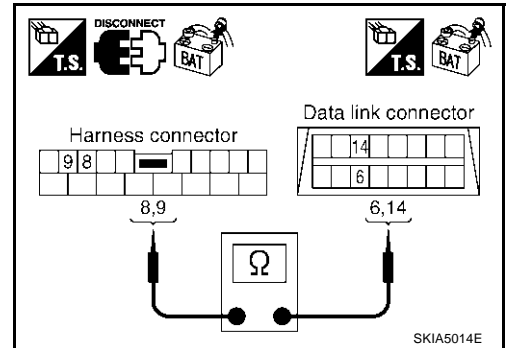
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

**8 (L) - 6 (L) : Continuity should exist.**

**9 (Y) - 14 (Y) : Continuity should exist.**

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-68, "Work Flow"](#) .
- NG >> Repair harness.



## Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit)

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector M9
  - Harness connector B2
  - Harness connector B4
  - Harness connector E105

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

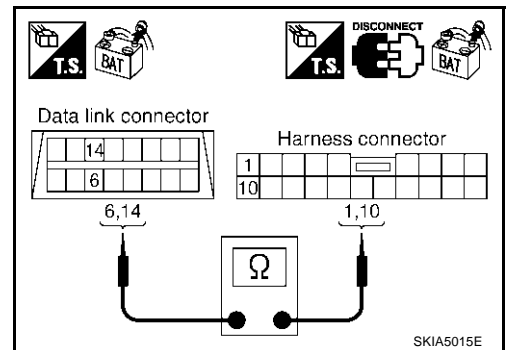
1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

**6 (L) - 1 (L) : Continuity should exist.**

**14 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.





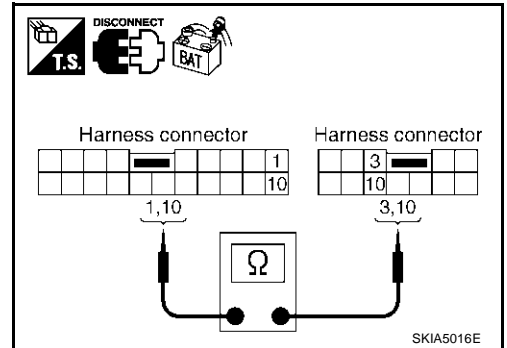
## 3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

1 (L) - 3 (L) : Continuity should exist.  
10 (Y) - 10 (Y) : Continuity should exist.

OK or NG

- OK >> GO TO 4.  
 NG >> Repair harness.



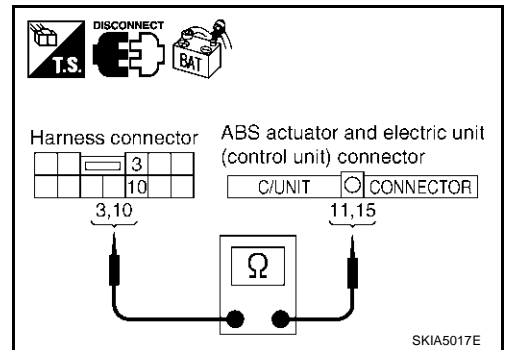
## 4. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

3 (L) - 11 (L) : Continuity should exist.  
10 (Y) - 15 (Y) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-68, "Work Flow"](#).  
 NG >> Repair harness.



## ECM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

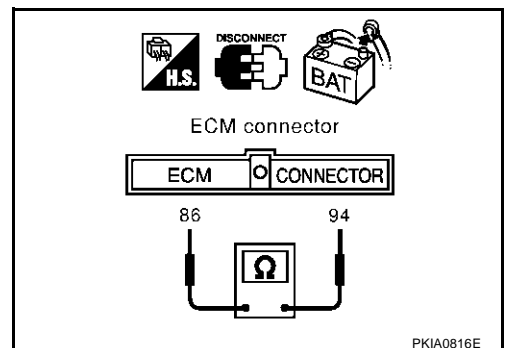
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

94 (L) - 86 (Y) : Approx. 108 - 132Ω

OK or NG

- OK >> Replace ECM.  
 NG >> Repair harness between ECM and TCM.



**TCM Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
  - TCM connector
  - Harness connector F102
  - Harness connector M82

**OK or NG**

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

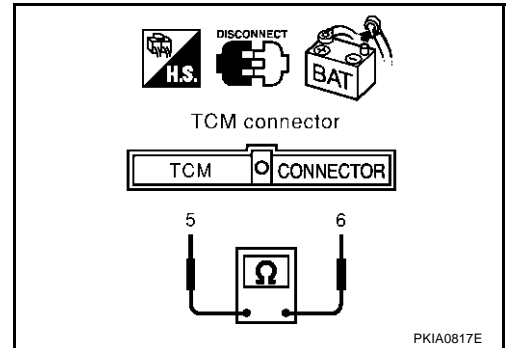
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Approx. 54 - 66Ω**

**OK or NG**

- OK >> Replace TCM.  
 NG >> Repair harness between TCM and low tire pressure warning control unit.

**Low Tire Pressure Warning Control Unit Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of low tire pressure warning control unit for damage, bend and loose connection (control unit side and harness side).

**OK or NG**

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

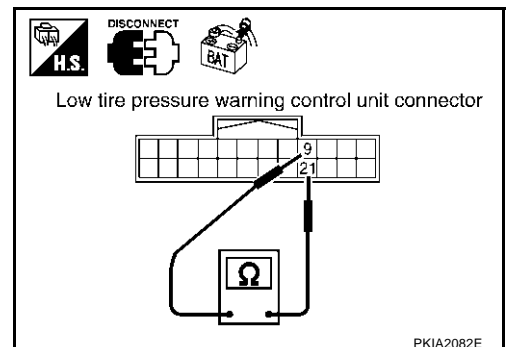
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect low tire pressure warning control unit connector.
2. Check resistance between low tire pressure warning control unit harness connector M81 terminals 9 (L) and 21 (Y).

**9 (L) - 21 (Y) : Approx. 54 - 66Ω**

**OK or NG**

- OK >> Replace low tire pressure warning control unit.  
 NG >> Repair harness between low tire pressure warning control unit and TCM.



## Display Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display unit for damage, bend and loose connection (unit side and harness side).

#### OK or NG

- OK >> GO TO 2.  
NG >> Repair terminal or connector.

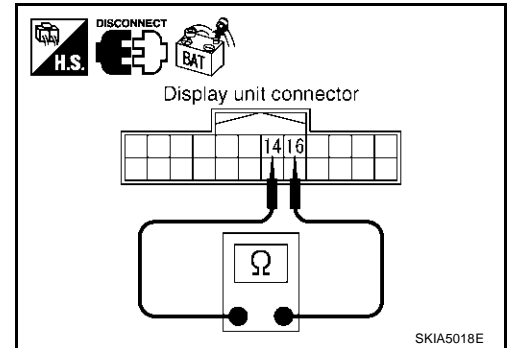
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect display unit connector.
2. Check resistance between display unit harness connector M39 terminals 14 (L) and 16 (Y).

**14 (L) - 16 (Y) : Approx. 54 - 66Ω**

#### OK or NG

- OK >> Replace display unit.  
NG >> Repair harness between display unit and data link connector.



## Data Link Connector Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

#### OK or NG

- OK >> GO TO 2.  
NG >> Repair terminal or connector.

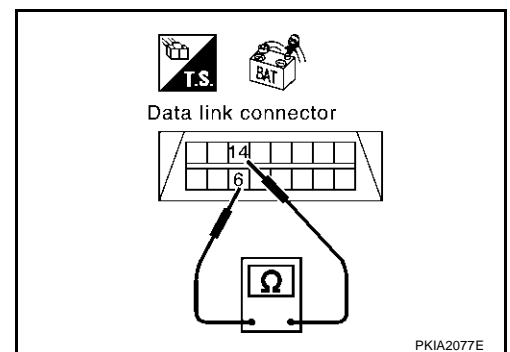
### 2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Approx. 54 - 66Ω**

#### OK or NG

- OK >> Diagnose again. Refer to [LAN-68, "Work Flow"](#) .  
NG >> Repair harness between data link connector and BCM.



**BCM Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

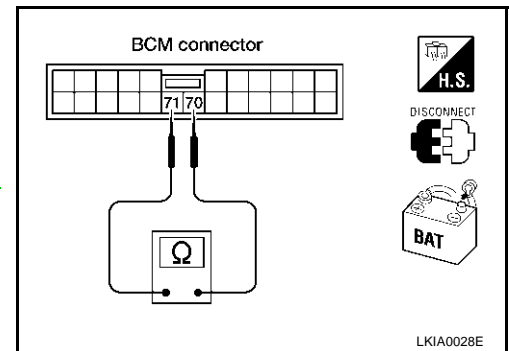
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M37 terminals 70 (L) and 71 (Y).

**70 (L) - 71 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace BCM. Refer to [BCS-36, "Removal and Installation of BCM"](#) .  
 NG >> Repair harness between BCM and data link connector.

**Unified Meter and A/C Amp. Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

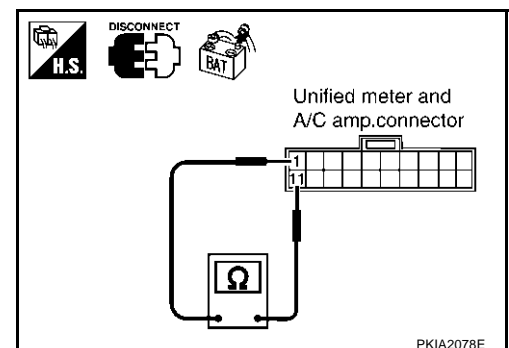
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

**1 (L) - 11 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace unified meter and A/C amp.  
 NG >> Repair harness between unified meter and A/C amp. and data link connector.



**ABS Actuator and Electric Unit (Control Unit) Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

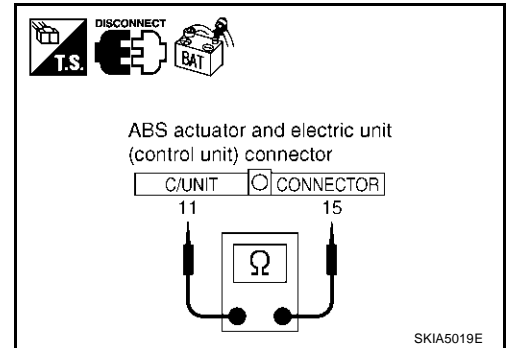
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

**11 (L) - 15 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).  
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.

**IPDM E/R Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

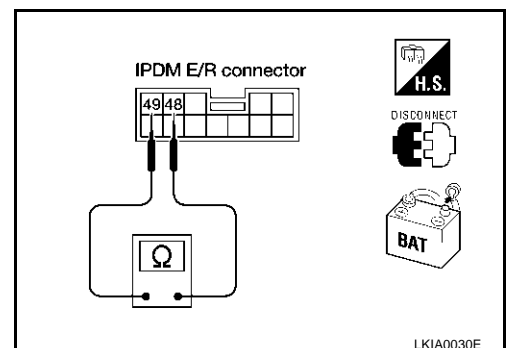
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y) : Approx. 108 - 132Ω**

OK or NG

- OK >> Replace IPDM E/R.  
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



## CAN Communication Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, unit side, meter side and harness side).
  - ECM
  - TCM
  - Low tire pressure warning control unit
  - Display unit
  - BCM
  - Unified meter and A/C amp.
  - ABS actuator and electric unit (control unit)
  - IPDM E/R
  - Between ECM and IPDM E/R
  - Between ECM and TCM

#### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

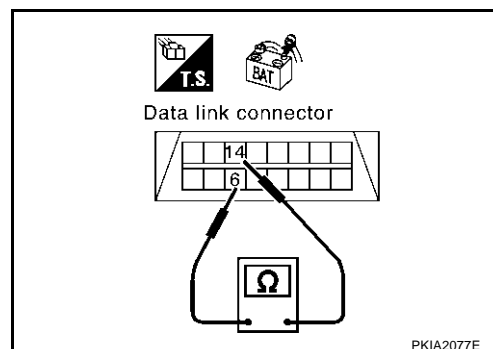
### 2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
  - ECM connector
  - Low tire pressure warning control unit connector
  - Harness connector M82
  - Display unit connector
  - BCM connector
  - Unified meter and A/C amp. connector
  - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Continuity should not exist.**

#### OK or NG

- OK >> GO TO 3.  
 NG >> Check the following harnesses. If any harness is damaged, repair the harness.
- Harness between data link connector and ECM.
  - Harness between data link connector and low tire pressure warning control unit.
  - Harness between data link connector and harness connector M82.
  - Harness between data link connector and display unit.
  - Harness between data link connector and BCM.
  - Harness between data link connector and unified meter and A/C amp.
  - Harness between data link connector and harness connector M9.



### 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

**6 (L) - Ground : Continuity should not exist.**

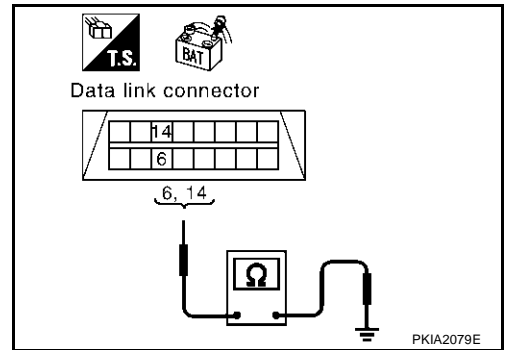
**14 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9.



### 4. CHECK HARNESS FOR SHORT CIRCUIT

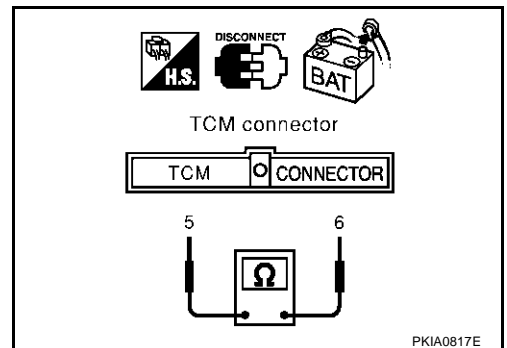
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 5.

NG >> Repair harness between TCM and harness connector F102.



### 5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

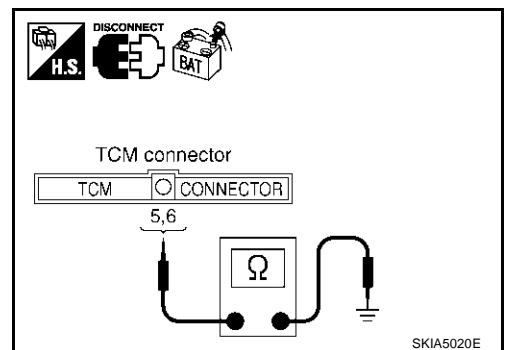
**5 (L) - Ground : Continuity should not exist.**

**6 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 6.

NG >> Repair harness between TCM and harness connector F102.



A  
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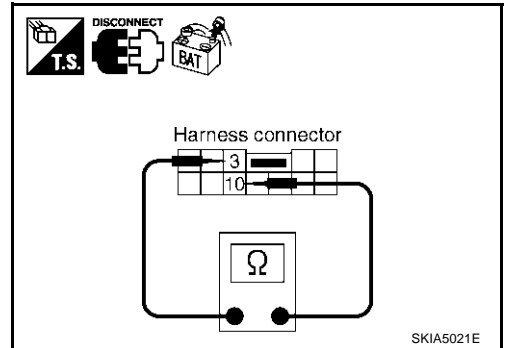
**6. CHECK HARNESS FOR SHORT CIRCUIT**

1. Disconnect harness connector B4.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

**3 (L) - 10 (Y) : Continuity should not exist.**

OK or NG

- OK >> GO TO 7.  
 NG >> Repair harness between harness connector B4 and harness connector B2.



**7. CHECK HARNESS FOR SHORT CIRCUIT**

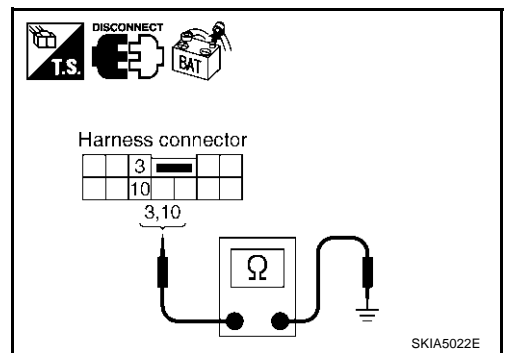
- Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

**3 (L) - Ground : Continuity should not exist.**

**10 (Y) - Ground : Continuity should not exist.**

OK or NG

- OK >> GO TO 8.  
 NG >> Repair harness between harness connector B4 and harness connector B2.



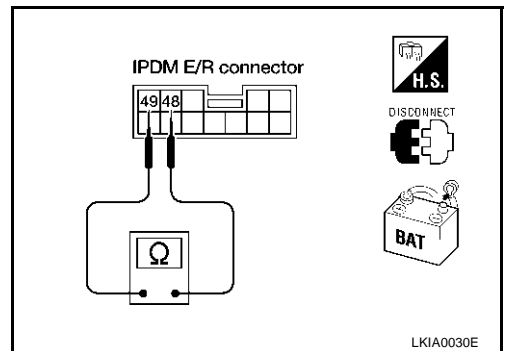
**8. CHECK HARNESS FOR SHORT CIRCUIT**

1. Disconnect ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y) : Continuity should not exist.**

OK or NG

- OK >> GO TO 9.  
 NG >> Check the following harnesses. If any harness is damaged, repair the harness.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
  - Harness between IPDM E/R and harness connector E105.





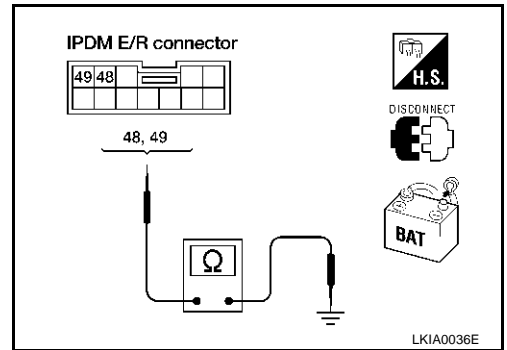
**9. CHECK HARNESS FOR SHORT CIRCUIT**

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

- 48 (L) - Ground : Continuity should not exist.**
- 49 (Y) - Ground : Continuity should not exist.**

OK or NG

- OK >> GO TO 10.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between IPDM E/R and ABS actuator and electric unit (control unit).
  - Harness between IPDM E/R and harness connector E105.



**10. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION**

Check components inspection. Refer to [LAN-93, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#) .

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-68, "Work Flow"](#) .
- NG >> Replace ECM and/or IPDM E/R.

**IPDM E/R Ignition Relay Circuit Check**

AKS006PQ

Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-45, "IPDM E/R Power/Ground Circuit Inspection"](#) .
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START""](#) .

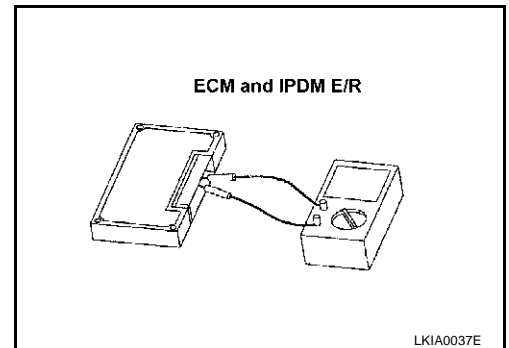
**Component Inspection**

**ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION**

AKS006PR

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



A  
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LAN

## CAN SYSTEM (TYPE 3)

PFP:23710

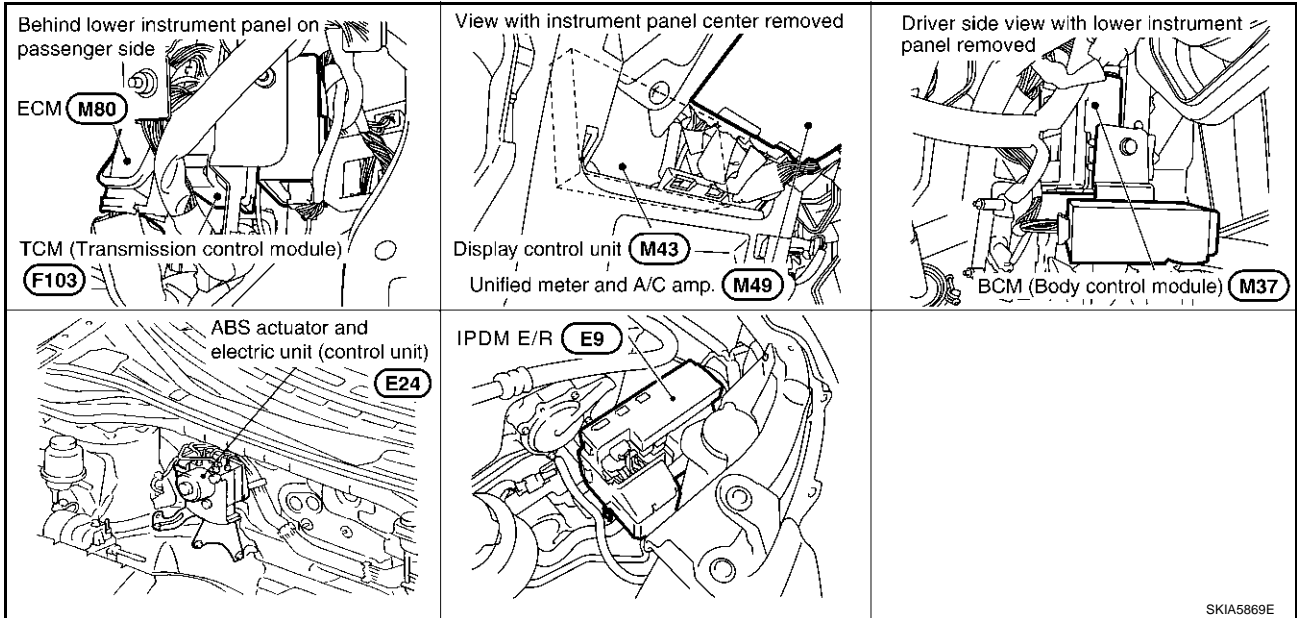
### System Description

AKS006PS

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

### Component Parts and Harness Connector Location

AKS006PT



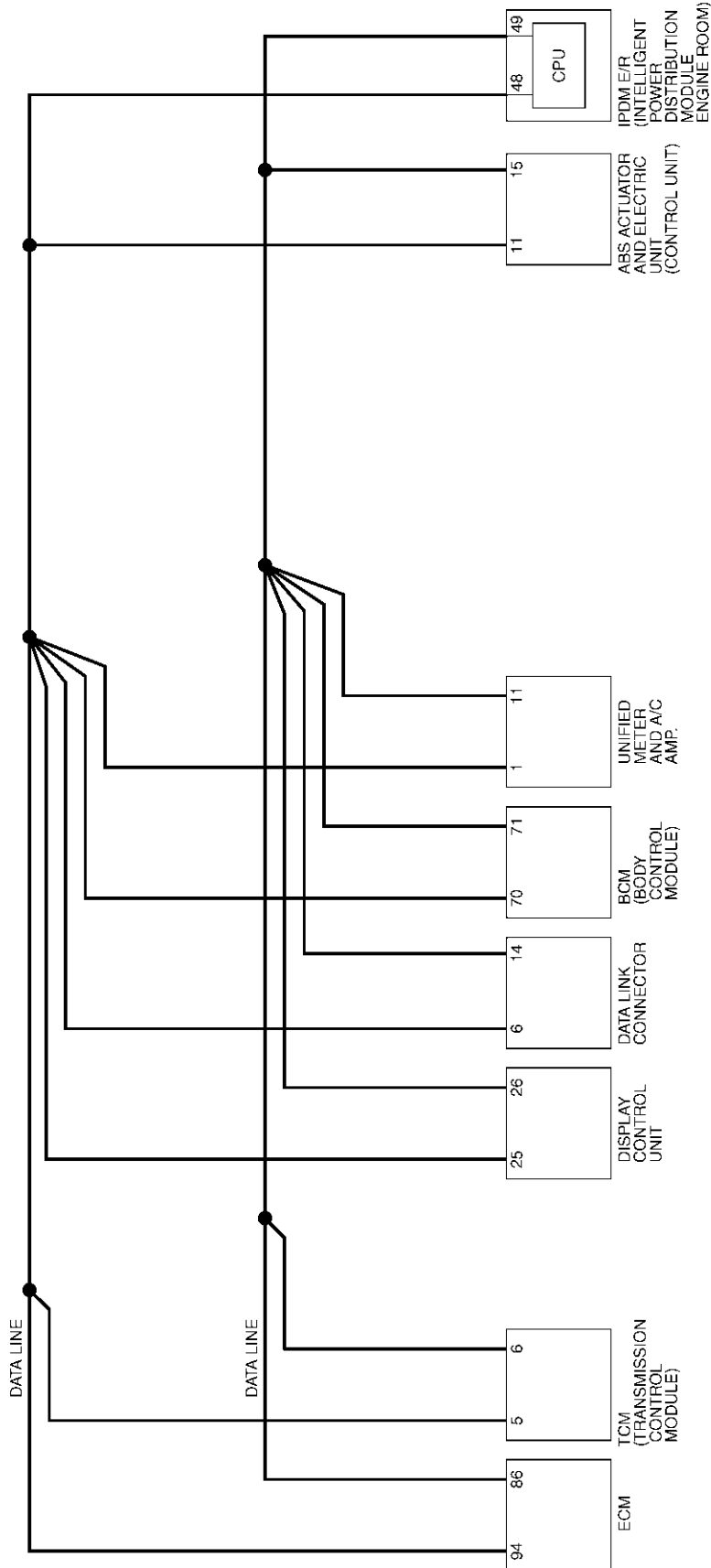
SKIA5869E

# CAN SYSTEM (TYPE 3)

[CAN]

## Schematic

AKS006PU



A  
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TKWA0931E

# CAN SYSTEM (TYPE 3)

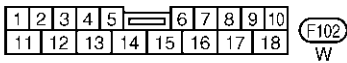
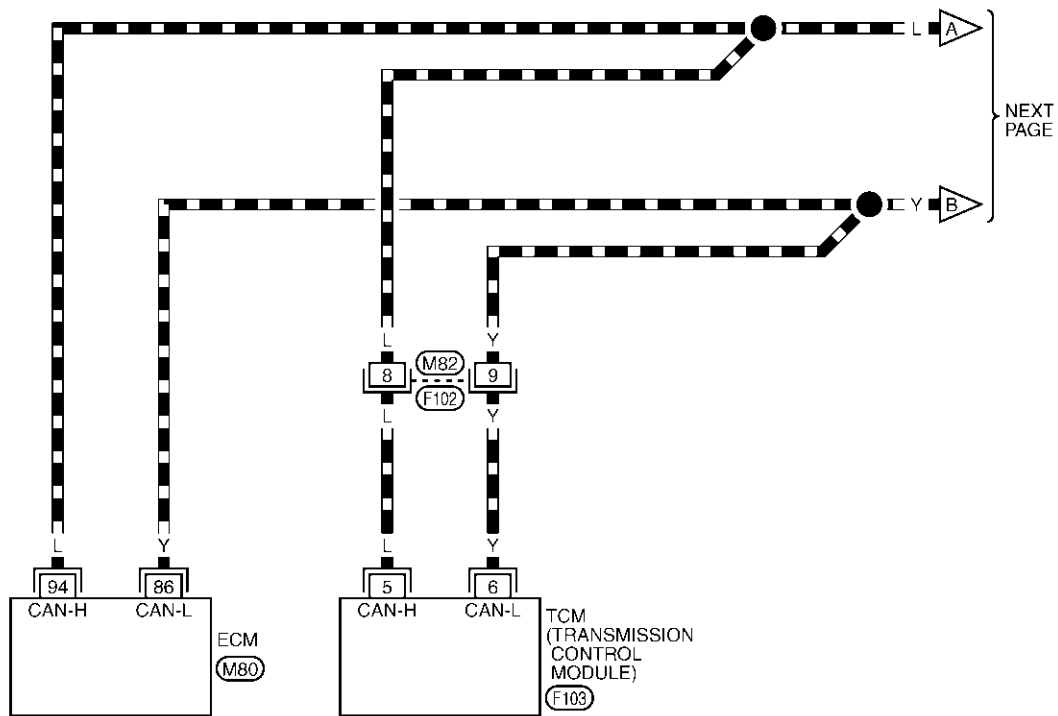
[CAN]

## Wiring Diagram - CAN -

AKS006PV

LAN-CAN-07

▬ : DATA LINE



REFER TO THE FOLLOWING.  
 (M80), (F103) -ELECTRICAL  
 UNITS

TKWA0932E

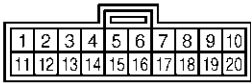
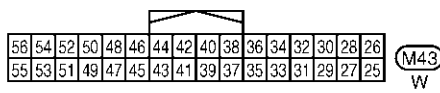
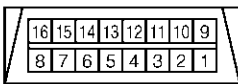
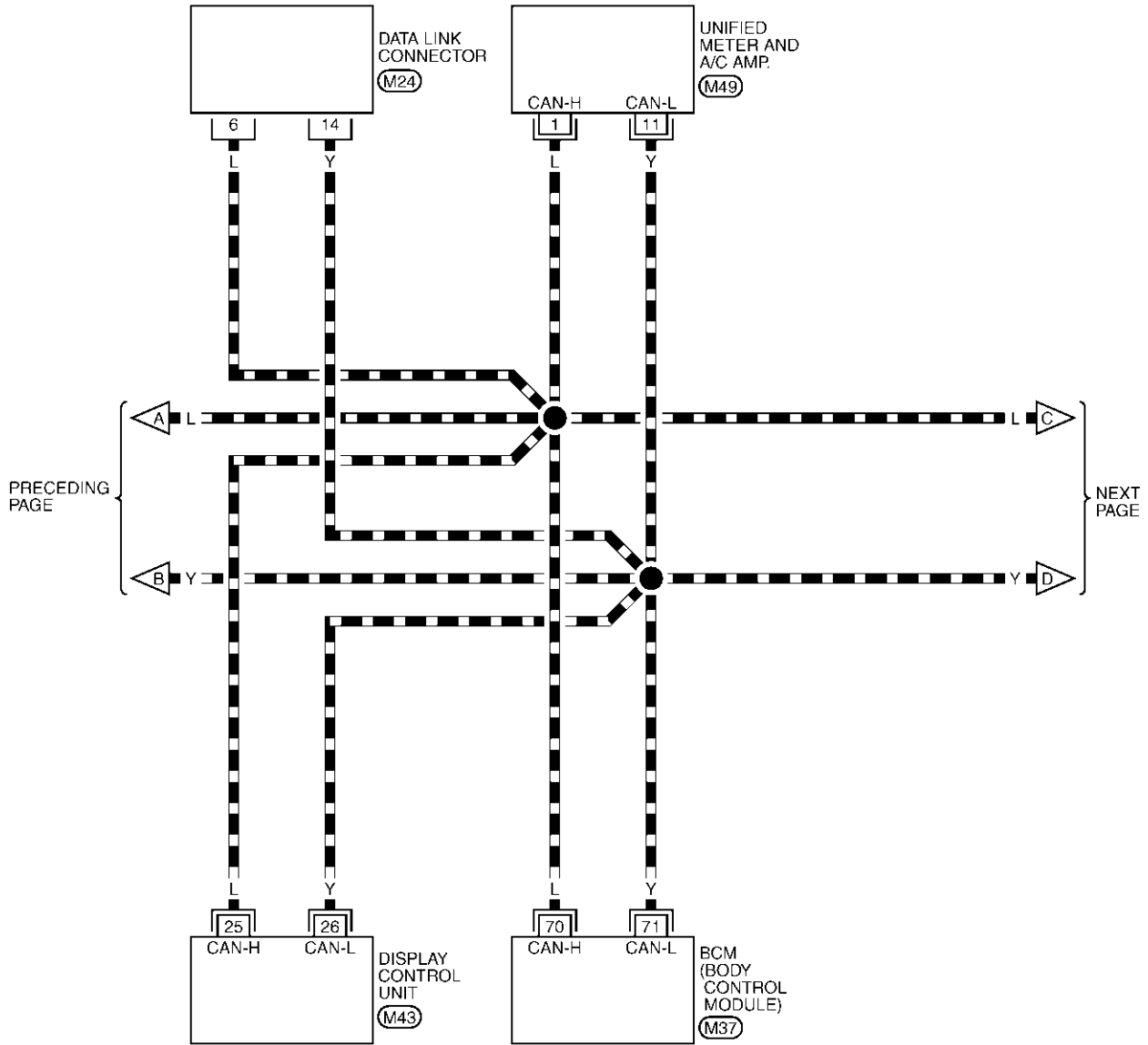
# CAN SYSTEM (TYPE 3)

[CAN]

LAN-CAN-08

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▬ : DATA LINE

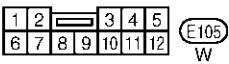
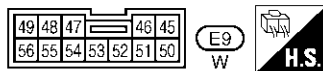
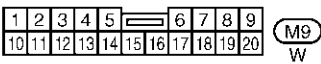
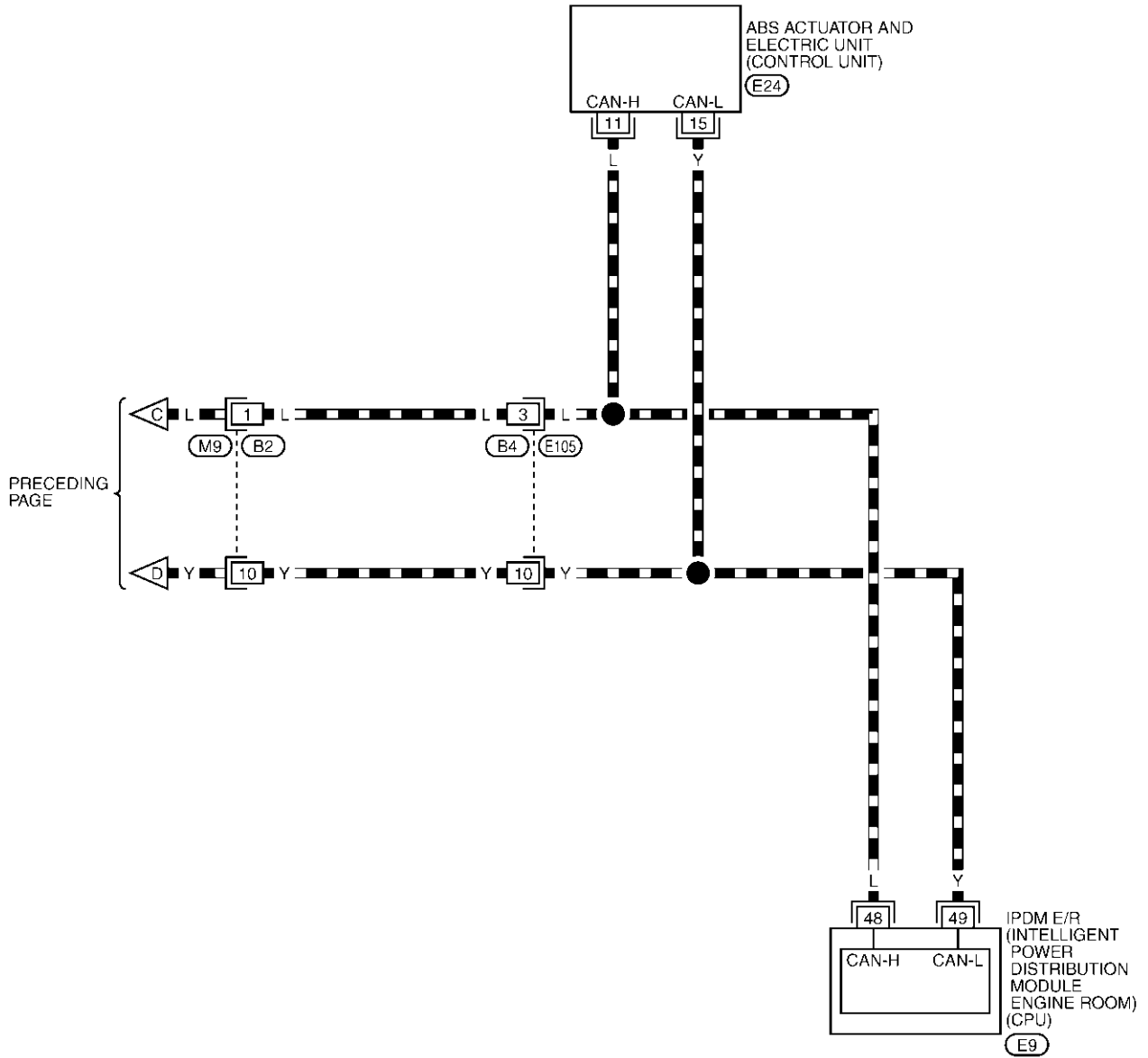


REFER TO THE FOLLOWING.  
(M37) -ELECTRICAL UNITS

TKWA0933E

## LAN-CAN-09

▬ : DATA LINE



REFER TO THE FOLLOWING.

(E24) -ELECTRICAL UNITS

TKWA0934E

## Work Flow

- When there are no indications of "TRANSMISSION" or "METER A/C AMP" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".

(Example)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="4" style="text-align: center;">NISSAN</td></tr> <tr><td colspan="4" style="text-align: center;">CONSULT-II</td></tr> <tr><td colspan="4" style="text-align: center;">ENGINE</td></tr> <tr><td colspan="4" style="text-align: center;">START (NISSAN BASED VHCL)</td></tr> <tr><td colspan="4" style="text-align: center;">START (RENAULT BASED VHCL)</td></tr> <tr><td colspan="4" style="text-align: center;">SUB MODE</td></tr> <tr><td style="width: 25%;"></td><td style="width: 25%;"></td><td style="width: 25%;">LIGHT</td><td style="width: 25%;">COPY</td></tr> </table>	NISSAN				CONSULT-II				ENGINE				START (NISSAN BASED VHCL)				START (RENAULT BASED VHCL)				SUB MODE						LIGHT	COPY	➔	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="4" style="text-align: center;">SELECT SYSTEM</td></tr> <tr><td colspan="4" style="text-align: center;">ENGINE</td></tr> <tr><td colspan="4" style="text-align: center;">A/T</td></tr> <tr><td colspan="4" style="text-align: center;">ABS</td></tr> <tr><td colspan="4" style="text-align: center;">AIR BAG</td></tr> <tr><td colspan="4" style="text-align: center;">BCM</td></tr> <tr><td colspan="4" style="text-align: center;">METER A/C AMP</td></tr> <tr><td colspan="4" style="text-align: center;"> </td></tr> <tr><td colspan="2"></td><td style="width: 25%;">BACK</td><td style="width: 25%;">LIGHT COPY</td></tr> </table>	SELECT SYSTEM				ENGINE				A/T				ABS				AIR BAG				BCM				METER A/C AMP										BACK	LIGHT COPY
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PKIA2093E

- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP" and "ABS" displayed on CONSULT-II.

(Example)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="4" style="text-align: center;">SELECT DIAG MODE</td></tr> <tr><td colspan="4" style="text-align: center;">WORK SUPPORT</td></tr> <tr><td colspan="4" style="text-align: center;">SELF-DIAG RESULTS</td></tr> <tr><td colspan="4" style="text-align: center;">DATA MONITOR</td></tr> <tr><td colspan="4" style="text-align: center;">DATA MONITOR (SPEC)</td></tr> <tr><td colspan="4" style="text-align: center;">CAN DIAG SUPPORT MNTR</td></tr> <tr><td colspan="4" style="text-align: center;">ACTIVE TEST</td></tr> <tr><td colspan="4" style="text-align: center;"> </td></tr> <tr><td colspan="3"></td><td style="text-align: right;">Scroll Down</td></tr> <tr><td style="width: 25%;"></td><td style="width: 25%;"></td><td style="width: 25%;">BACK</td><td style="width: 25%;">LIGHT COPY</td></tr> </table>	SELECT DIAG MODE				WORK SUPPORT				SELF-DIAG RESULTS				DATA MONITOR				DATA MONITOR (SPEC)				CAN DIAG SUPPORT MNTR				ACTIVE TEST											Scroll Down			BACK	LIGHT COPY	➔	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="4" style="text-align: center;">SELF-DIAG RESULTS</td></tr> <tr><td colspan="2" style="text-align: center;">DTC RESULTS</td><td colspan="2" style="text-align: center;">TIME</td></tr> <tr><td style="width: 50%;">CAN COMM CIRCUIT [U1000]</td><td style="width: 50%;"></td><td style="width: 50%;"></td><td style="width: 50%; text-align: center;">0</td></tr> <tr><td colspan="4" style="text-align: center;"> </td></tr> <tr><td colspan="4" style="text-align: center;"> </td></tr> <tr><td colspan="4" style="text-align: center;"> </td></tr> <tr><td colspan="3"></td><td style="text-align: right;">F.F.DATA</td></tr> <tr><td colspan="2" style="text-align: center;">ERASE</td><td colspan="2" style="text-align: center;">PRINT</td></tr> <tr><td style="width: 25%;">MODE</td><td style="width: 25%;">BACK</td><td style="width: 25%;">LIGHT</td><td style="width: 25%;">COPY</td></tr> </table>	SELF-DIAG RESULTS				DTC RESULTS		TIME		CAN COMM CIRCUIT [U1000]			0																F.F.DATA	ERASE		PRINT		MODE	BACK	LIGHT	COPY
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PKIA8260E

- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP" and "ABS" displayed on CONSULT-II.

(Example)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="4" style="text-align: center;">SELECT DIAG MODE</td></tr> <tr><td colspan="4" style="text-align: center;">WORK SUPPORT</td></tr> <tr><td colspan="4" style="text-align: center;">SELF-DIAG RESULTS</td></tr> <tr><td colspan="4" style="text-align: center;">DATA MONITOR</td></tr> <tr><td colspan="4" style="text-align: center;">DATA MONITOR (SPEC)</td></tr> <tr><td colspan="4" style="text-align: center;">CAN DIAG SUPPORT MNTR</td></tr> <tr><td colspan="4" style="text-align: center;">ACTIVE TEST</td></tr> <tr><td colspan="4" style="text-align: center;"> </td></tr> <tr><td colspan="3"></td><td style="text-align: right;">Scroll Down</td></tr> <tr><td style="width: 25%;"></td><td style="width: 25%;"></td><td style="width: 25%;">BACK</td><td style="width: 25%;">LIGHT COPY</td></tr> </table>	SELECT DIAG MODE				WORK SUPPORT				SELF-DIAG RESULTS				DATA MONITOR				DATA MONITOR (SPEC)				CAN DIAG SUPPORT MNTR				ACTIVE TEST											Scroll Down			BACK	LIGHT COPY	➔	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="4" style="text-align: center;">CAN DIAG SUPPORT MNTR</td></tr> <tr><td colspan="4" style="text-align: center;">ENGINE</td></tr> <tr><td colspan="2"></td><td colspan="2" style="text-align: center;">PRNT</td></tr> <tr><td style="width: 50%;">INITIAL DIAG</td><td style="width: 50%;"></td><td style="width: 50%;"></td><td style="width: 50%; text-align: center;">OK</td></tr> <tr><td>TRANSMIT DIAG</td><td></td><td></td><td style="text-align: center;">OK</td></tr> <tr><td>TCM</td><td></td><td></td><td style="text-align: center;">OK</td></tr> <tr><td>VDC/TCS/ABS</td><td></td><td></td><td style="text-align: center;">OK</td></tr> <tr><td>METER/M&amp;A</td><td></td><td></td><td style="text-align: center;">OK</td></tr> <tr><td>ICC</td><td></td><td style="text-align: center;">UNKW/N</td><td></td></tr> <tr><td>BCM/SEC</td><td></td><td></td><td style="text-align: center;">OK</td></tr> <tr><td>IPDM E/R</td><td></td><td></td><td style="text-align: center;">OK</td></tr> <tr><td>AWD/4WD/e4WD</td><td></td><td style="text-align: center;">UNKW/N</td><td></td></tr> <tr><td colspan="2" style="text-align: center;">PRINT</td><td colspan="2" style="text-align: right;">Scroll Down</td></tr> <tr><td style="width: 25%;">MODE</td><td style="width: 25%;">BACK</td><td style="width: 25%;">LIGHT</td><td style="width: 25%;">COPY</td></tr> </table>	CAN DIAG SUPPORT MNTR				ENGINE						PRNT		INITIAL DIAG			OK	TRANSMIT DIAG			OK	TCM			OK	VDC/TCS/ABS			OK	METER/M&A			OK	ICC		UNKW/N		BCM/SEC			OK	IPDM E/R			OK	AWD/4WD/e4WD		UNKW/N		PRINT		Scroll Down		MODE	BACK	LIGHT	COPY
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TRANSMIT DIAG			OK																																																																																																
TCM			OK																																																																																																
VDC/TCS/ABS			OK																																																																																																
METER/M&A			OK																																																																																																
ICC		UNKW/N																																																																																																	
BCM/SEC			OK																																																																																																
IPDM E/R			OK																																																																																																
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- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-101, "CHECK SHEET"](#).
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "v" onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-101, "CHECK SHEET"](#).

**NOTE:**

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual. So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the navigation system. Refer to [AV-203, "CAN Communication Line Check"](#).
- Attach the CAN DIAG SUPPORT MONITOR check sheet onto the check sheet. Refer to [LAN-101, "CHECK SHEET"](#).

## CAN SYSTEM (TYPE 3)

[CAN]

- 
8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG SUPPORT MONITOR check sheet. Refer to [LAN-101, "CHECK SHEET"](#) .

**NOTE:**

If "NG" is displayed on "CAN COMM" as "CAN DIAG SUPPORT MONITOR" for the diagnosed control unit, replace the control unit. Refer to [AV-203, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-103, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .



# CAN SYSTEM (TYPE 3)

[CAN]

## CHECK SHEET

**NOTE:**

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

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SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

Attach copy of  
display control unit  
CAN DIAG SUPPORT MONITOR check sheet

PKIB0452E

# CAN SYSTEM (TYPE 3)

[CAN]

Attach copy of  
ENGINE  
SELF-DIAG RESULTS

Attach copy of  
TRANSMISSION  
SELF-DIAG RESULTS

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
METER A/C AMP  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

Attach copy of  
ENGINE  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
TRANSMISSION  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
BCM  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
METER A/C AMP  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
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CAN DIAG SUPPORT  
MNTR

PKIB0422E

## CHECK SHEET RESULTS (EXAMPLE)

**NOTE:**

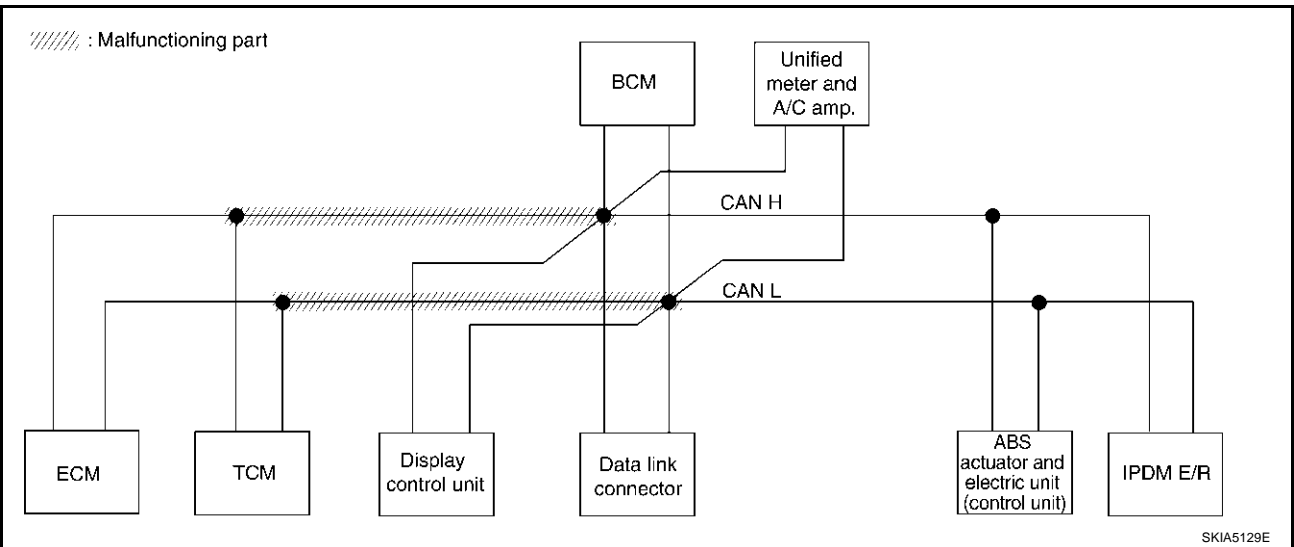
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

**Case 1**

Check harness between TCM and data link connector. Refer to [LAN-114, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWVN	—	UNKWVN	—	UNKWVN	UNKWVN	—	UNKWVN
TRANSMISSION	No indication	NG	UNKWVN	UNKWVN	—	—	—	UNKWVN	UNKWVN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKWVN	UNKWVN	—	—	—	UNKWVN	—	UNKWVN
METER A/C AMP	No indication	—	UNKWVN	UNKWVN	UNKWVN	UNKWVN	UNKWVN	—	UNKWVN	—
ABS	—	NG	UNKWVN	UNKWVN	—	—	—	—	—	—

PKIB0453E



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# CAN SYSTEM (TYPE 3)

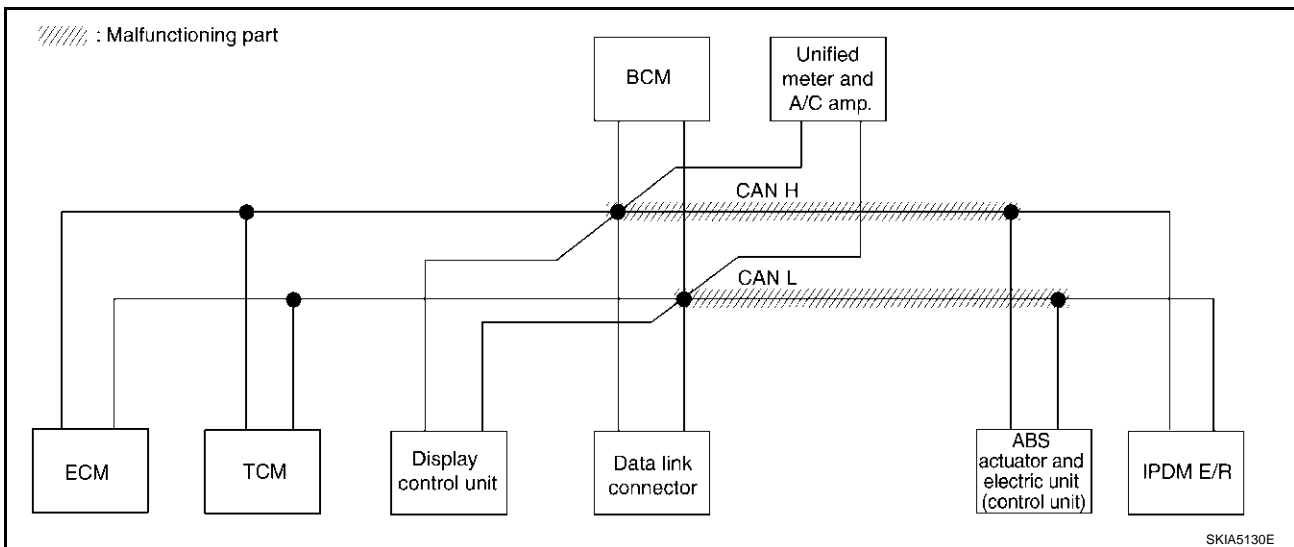
[CAN]

## Case 2

Check harness between data link connector and ABS actuator and electric unit (control unit). Refer to [LAN-114, "Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit \(Control Unit\)"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

PKIB0454E



# CAN SYSTEM (TYPE 3)

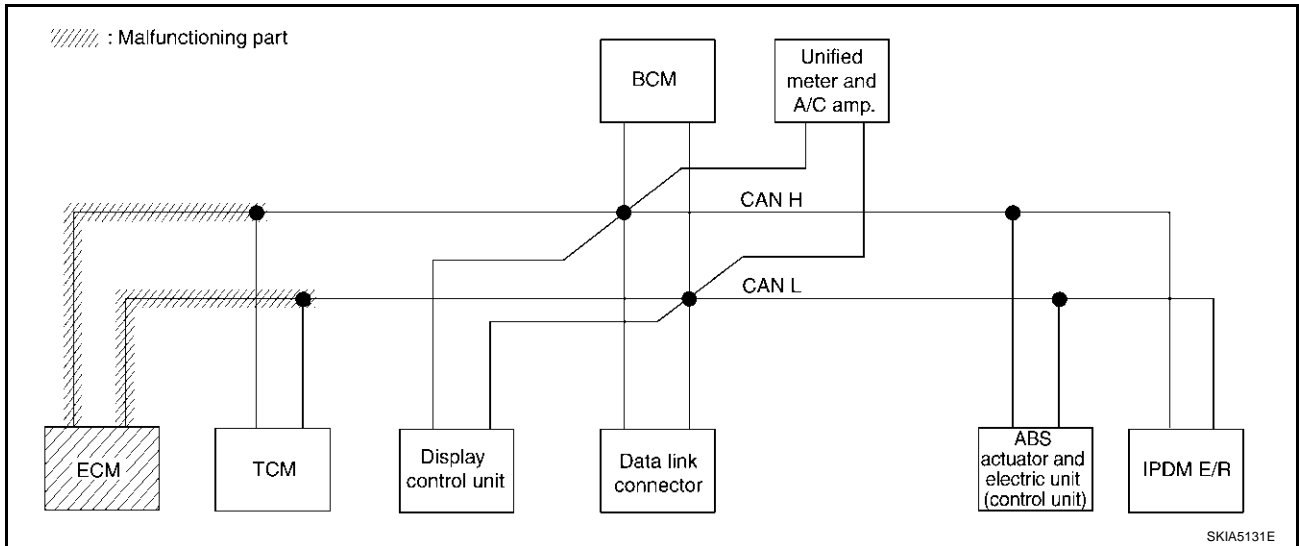
[CAN]

## Case 3

Check ECM circuit. Refer to [LAN-115, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N
TRANSMISSION	No indication	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N
METER A/C AMP	No indication	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—
ABS	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	—	—	—

PKIB0455E



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# CAN SYSTEM (TYPE 3)

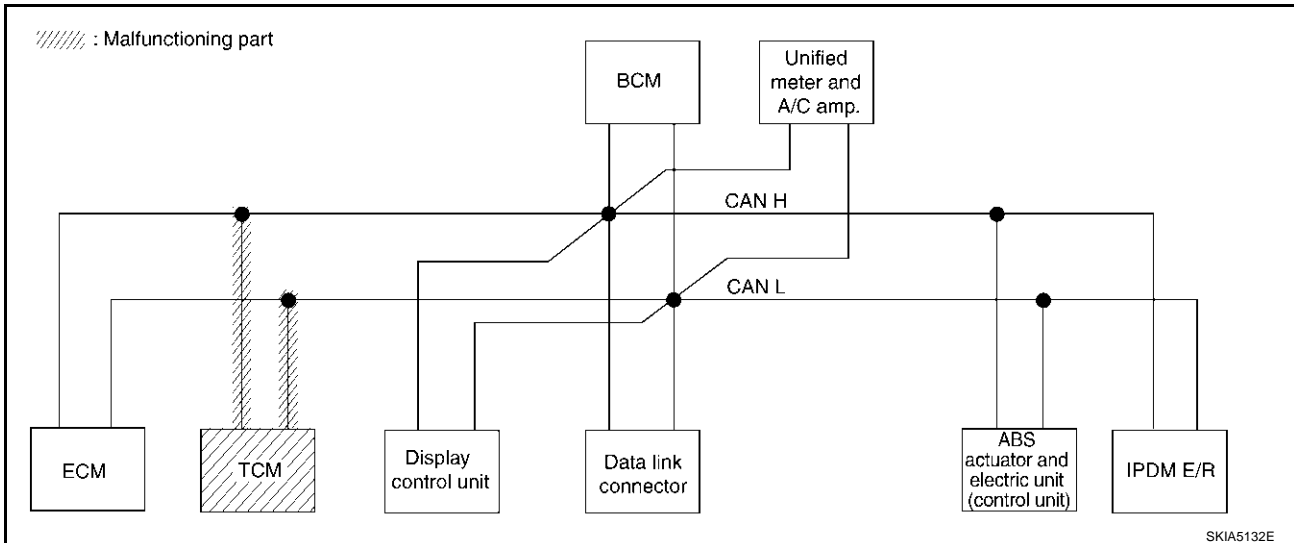
[CAN]

## Case 4

Check TCM circuit. Refer to [LAN-116, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN ✓	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN ✓	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

PKIB0456E



# CAN SYSTEM (TYPE 3)

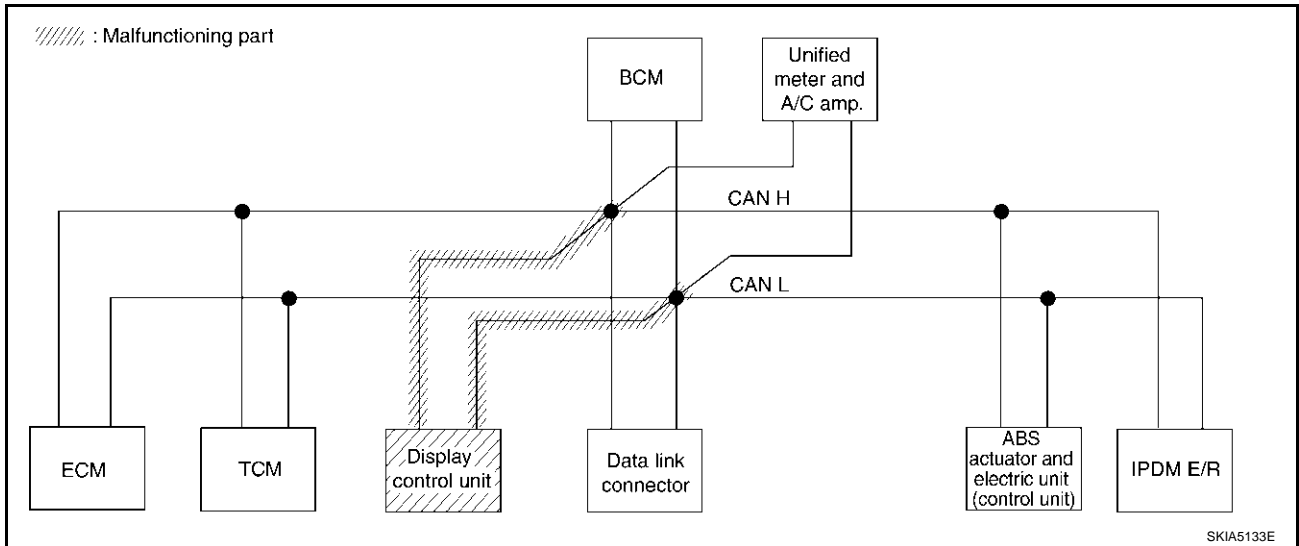
[CAN]

## Case 5

Check display control unit circuit. Refer to [LAN-116, "Display Control Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display control unit	—	CAN COMM	CAN <sub>TRC</sub> 1 ✓	CAN <sub>TRC</sub> 3 ✓	—	—	CAN <sub>TRC</sub> 2 ✓	CAN <sub>TRC</sub> 5 ✓	—	CAN <sub>TRC</sub> 7 ✓
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

PKIB0457E



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# CAN SYSTEM (TYPE 3)

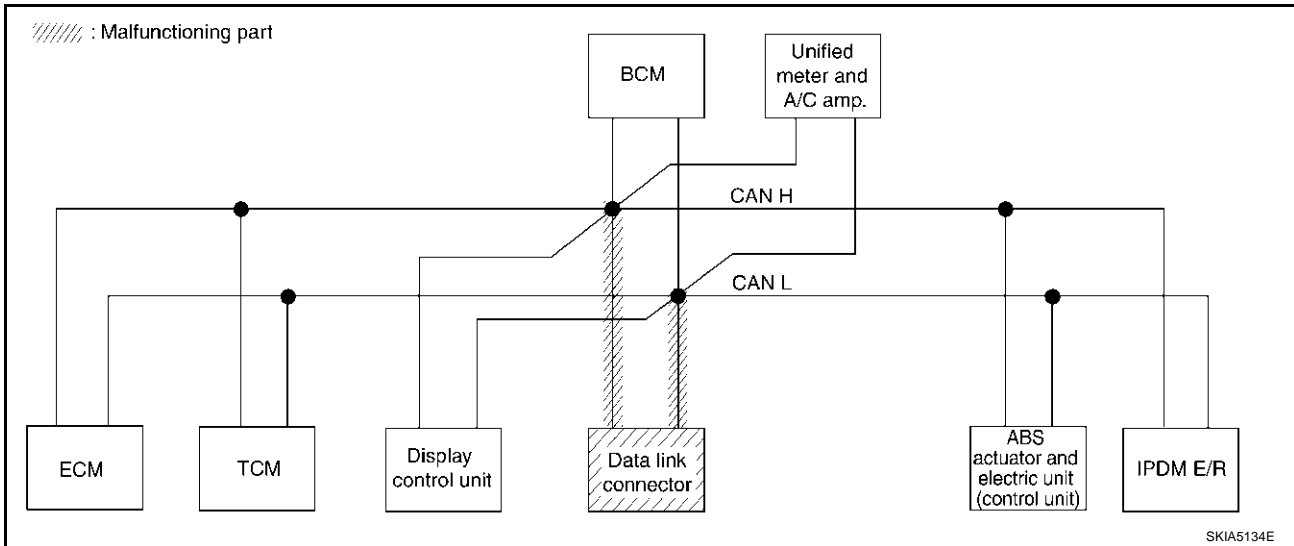
[CAN]

## Case 6

Check data link connector circuit. Refer to [LAN-117, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 3)

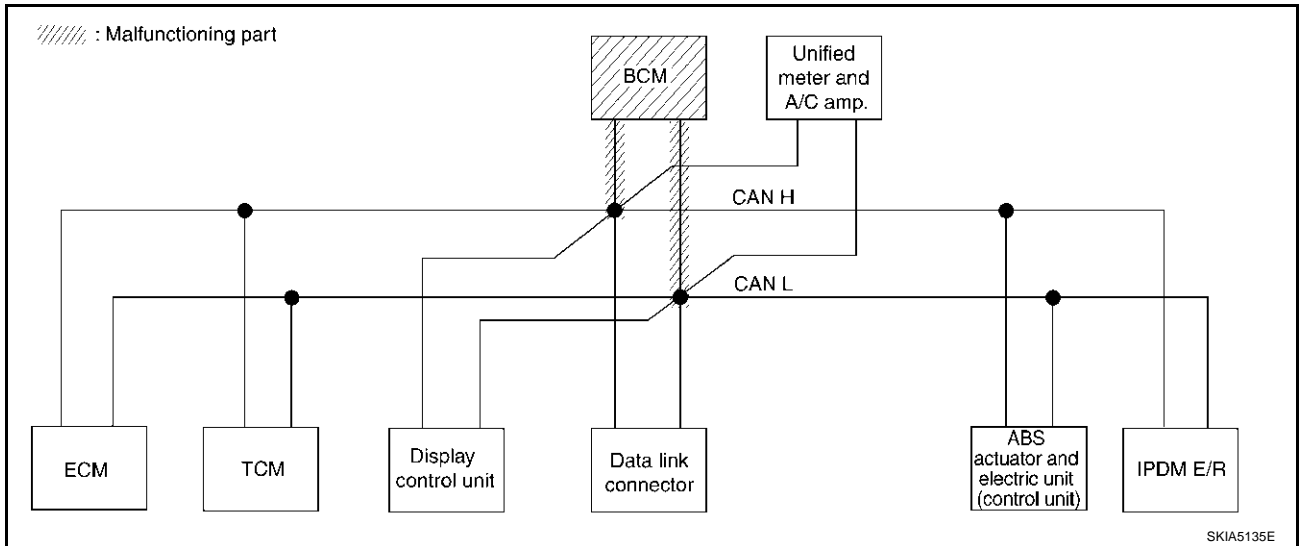
[CAN]

## Case 7

Check BCM circuit. Refer to [LAN-117, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 3)

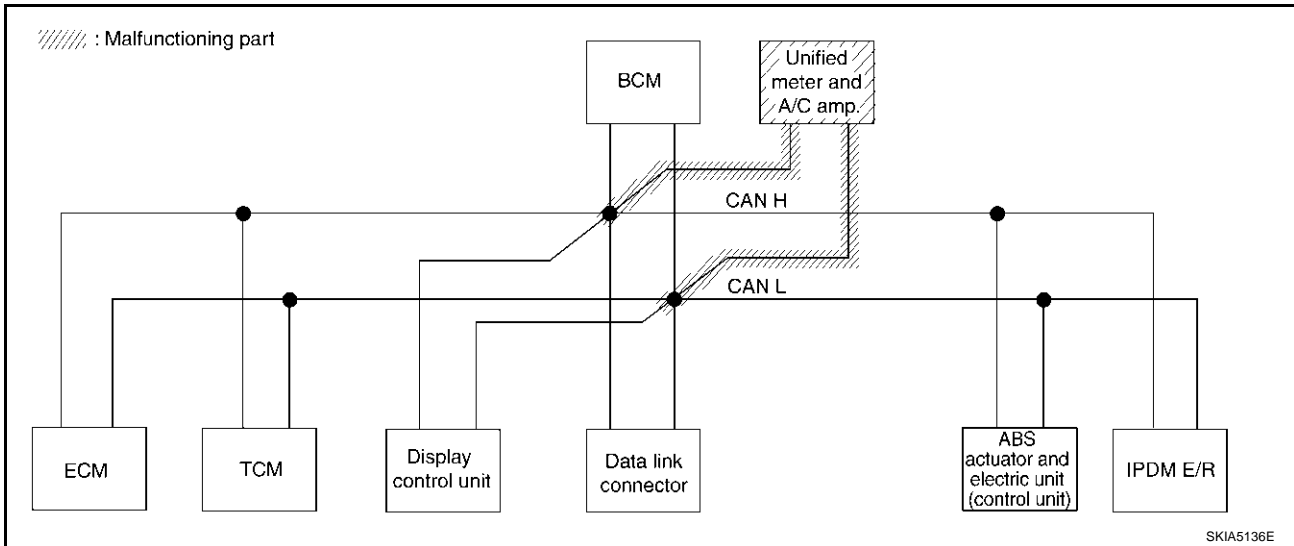
[CAN]

## Case 8

Check unified meter and A/C amp. circuit. Refer to [LAN-118, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN ✓	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN ✓	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5 ✓	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN ✓	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 3)

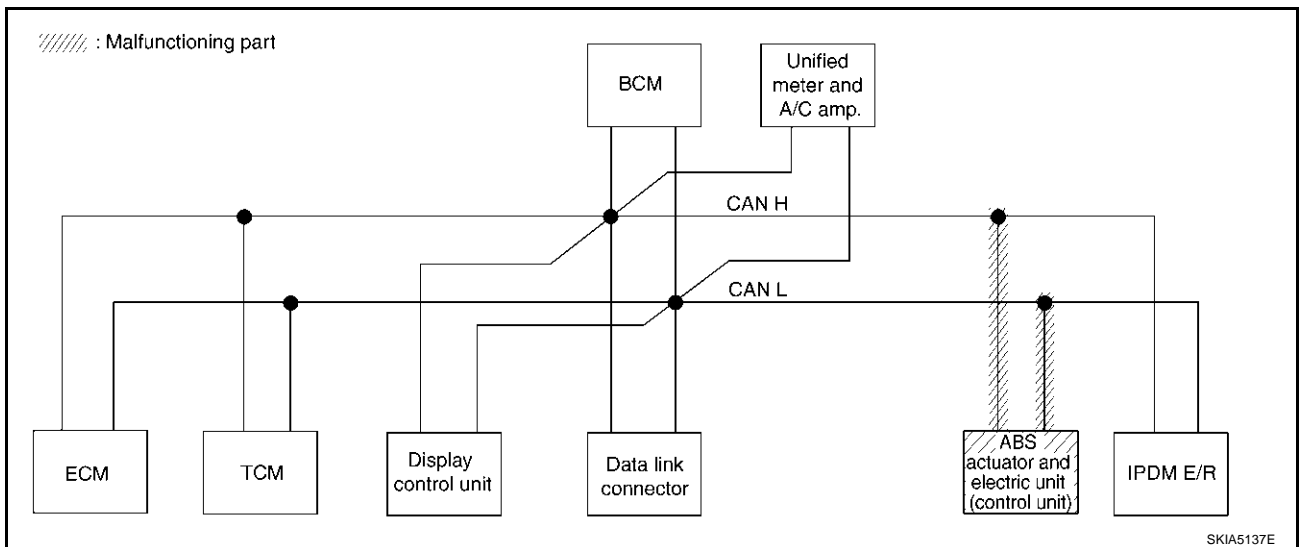
[CAN]

## Case 9

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-118, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

PKIB0461E



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# CAN SYSTEM (TYPE 3)

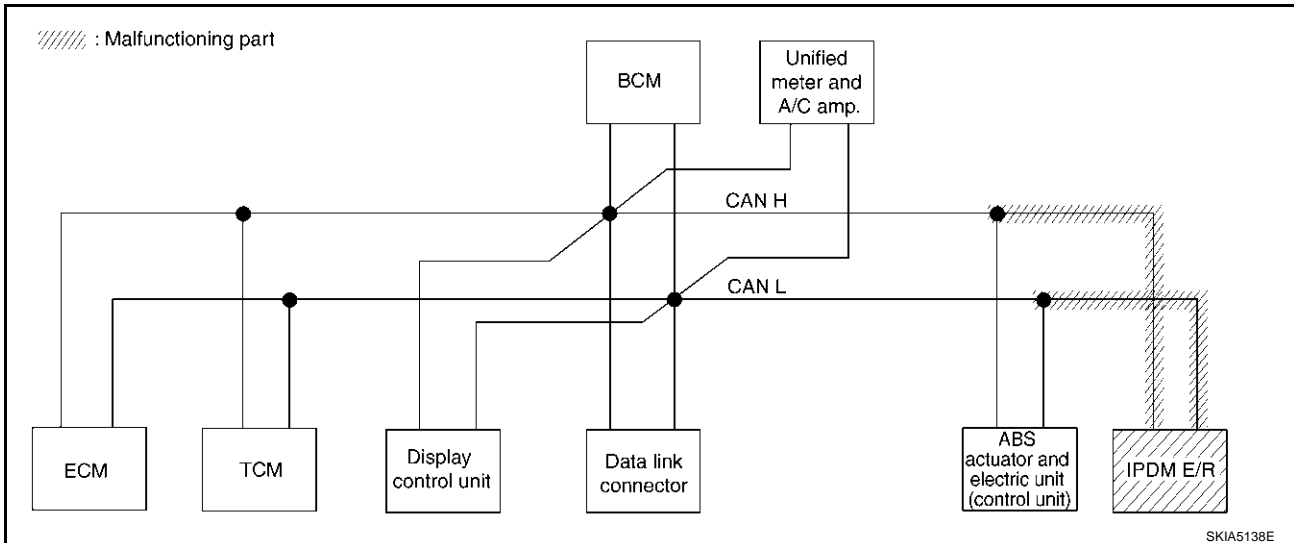
[CAN]

## Case 10

Check IPDM E/R circuit. Refer to [LAN-119, "IPDM E/R Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN ✓
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7 ✓
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN ✓
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

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## Case 11

Check CAN communication circuit. Refer to [LAN-119, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN ✓	—	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	—	UNKWN ✓
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1 ✓	CAN CIRC 3 ✓	—	—	CAN CIRC 2 ✓	CAN CIRC 5 ✓	—	CAN CIRC 7 ✓
BCM	—	NG	UNKWN ✓	UNKWN ✓	—	—	—	UNKWN ✓	—	UNKWN ✓
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN ✓	UNKWN ✓	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 3)

[CAN]

## Case 12

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-122, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN ✓	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN ✓	UNKWN	UNKWN	—	UNKWN ✓	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

PKIB0464E

## Case 13

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-122, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN ✓	—	—	—	UNKWN ✓	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN ✓	—	—	—	—	—	—

PKIB0465E

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LAN

## Circuit Check Between TCM and Data Link Connector

### 1. CHECK HARNESS FOR OPEN CIRCUIT

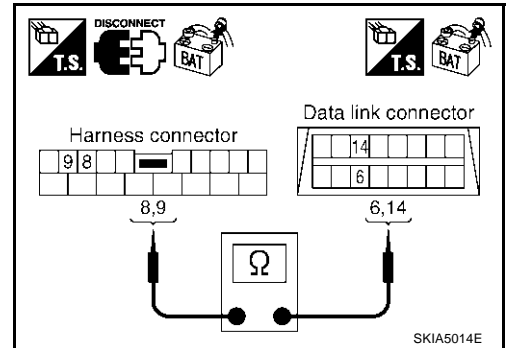
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

**8 (L) - 6 (L) : Continuity should exist.**

**9 (Y) - 14 (Y) : Continuity should exist.**

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-99, "Work Flow"](#) .
- NG >> Repair harness.



## Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit)

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector M9
  - Harness connector B2
  - Harness connector B4
  - Harness connector E105

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

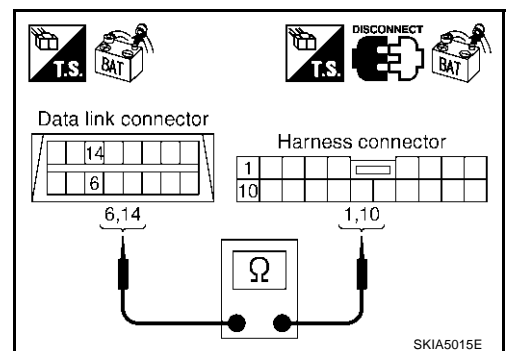
1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

**6 (L) - 1 (L) : Continuity should exist.**

**14 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



## 3. CHECK HARNESS FOR OPEN CIRCUIT

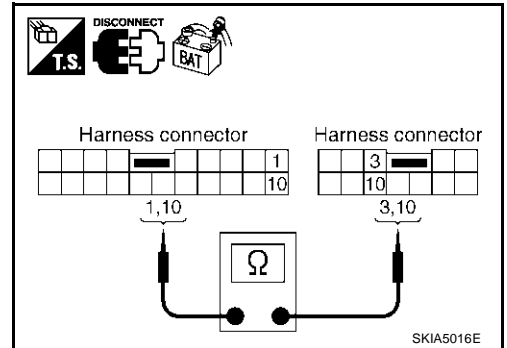
1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

- OK >> GO TO 4.  
 NG >> Repair harness.



## 4. CHECK HARNESS FOR OPEN CIRCUIT

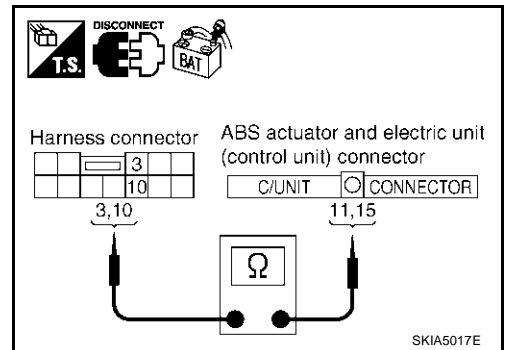
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

**3 (L) - 11 (L) : Continuity should exist.**

**10 (Y) - 15 (Y) : Continuity should exist.**

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-99. "Work Flow"](#).  
 NG >> Repair harness.



## ECM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

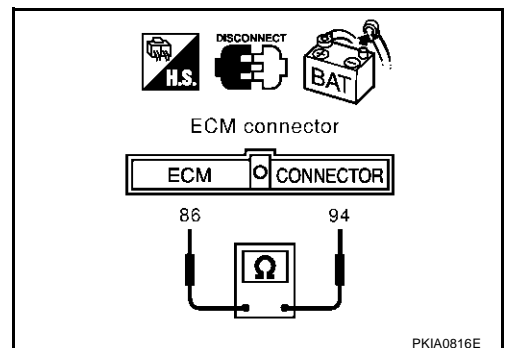
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

**94 (L) - 86 (Y) : Approx. 108 - 132Ω**

OK or NG

- OK >> Replace ECM.  
 NG >> Repair harness between ECM and TCM.



**TCM Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
  - TCM connector
  - Harness connector F102
  - Harness connector M82

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

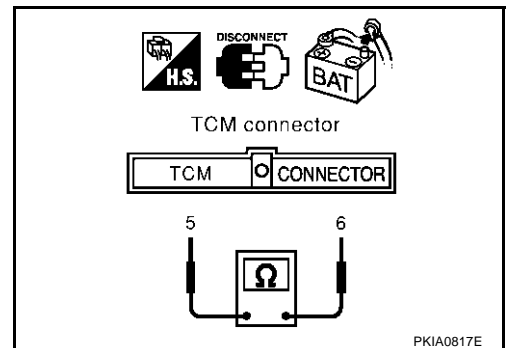
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace TCM.  
 NG >> Repair harness between TCM and ECM.

**Display Control Unit Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display control unit for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

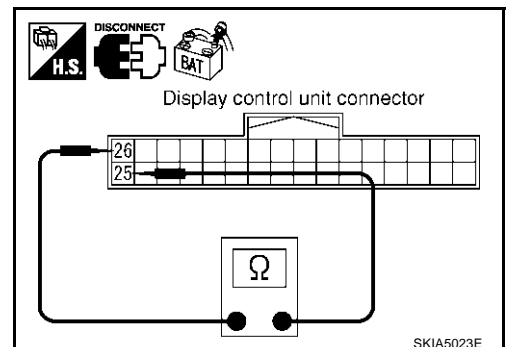
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect display control unit connector.
2. Check resistance between display control unit harness connector M43 terminals 25 (L) and 26 (Y).

**25 (L) - 26 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace display control unit.  
 NG >> Repair harness between display control unit and data link connector.





**Data Link Connector Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

**OK or NG**

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

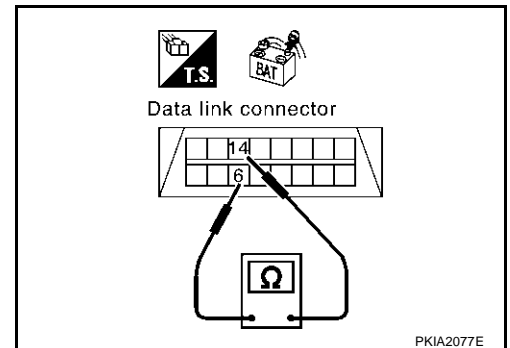
**2. CHECK HARNESS FOR OPEN CIRCUIT**

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Approx. 54 - 66Ω**

**OK or NG**

- OK >> Diagnose again. Refer to [LAN-99, "Work Flow"](#) .  
 NG >> Repair harness between data link connector and BCM.

**BCM Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

**OK or NG**

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

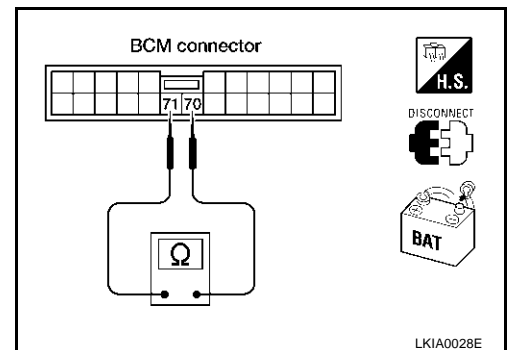
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M37 terminals 70 (L) and 71 (Y).

**70 (L) - 71 (Y) : Approx. 54 - 66Ω**

**OK or NG**

- OK >> Replace BCM. Refer to [BCS-36, "Removal and Installation of BCM"](#) .  
 NG >> Repair harness between BCM and data link connector.



**Unified Meter and A/C Amp. Circuit Check**

AKS006Q4

**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

**OK or NG**

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

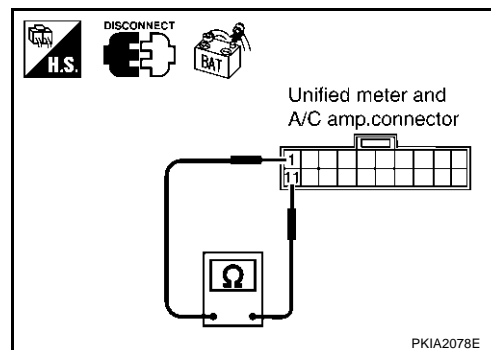
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

**1 (L) - 11 (Y) : Approx. 54 - 66Ω**

**OK or NG**

- OK >> Replace unified meter and A/C amp.  
 NG >> Repair harness between unified meter and A/C amp. and data link connector.

**ABS Actuator and Electric Unit (Control Unit) Circuit Check**

AKS006Q5

**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

**OK or NG**

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

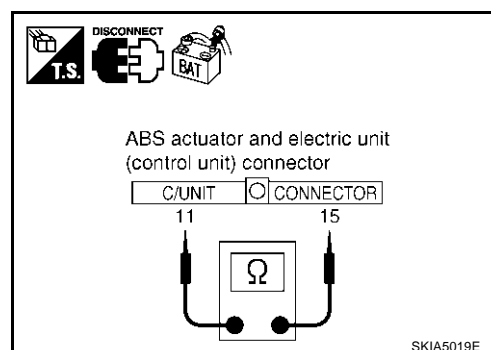
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

**11 (L) - 15 (Y) : Approx. 54 - 66Ω**

**OK or NG**

- OK >> Replace ABS actuator and electric unit (control unit).  
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



**IPDM E/R Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

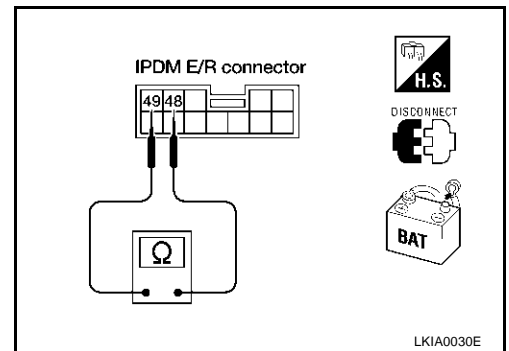
- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y)****: Approx. 108 - 132Ω**OK or NG

- OK >> Replace IPDM E/R.  
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).

**CAN Communication Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, meter side and harness side).

- ECM
- TCM
- Display control unit
- BCM
- Unified meter and A/C amp.
- ABS actuator and electric unit (control unit)
- IPDM E/R
- Between ECM and IPDM E/R
- Between ECM and TCM

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
  - ECM connector
  - Harness connector M82
  - Display control unit connector
  - BCM connector
  - Unified meter and A/C amp. connector
  - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

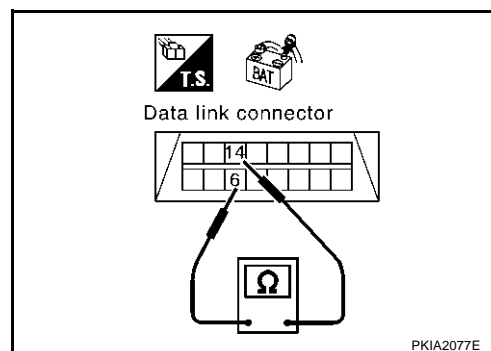
**6 (L) - 14 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 3.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9.



## 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

**6 (L) - Ground : Continuity should not exist.**

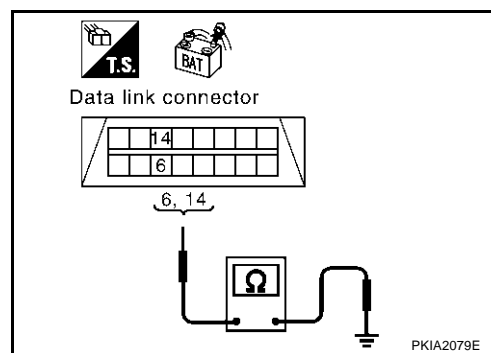
**14 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9.



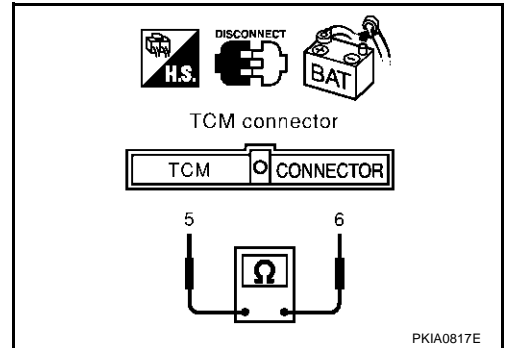
## 4. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Continuity should not exist.**

OK or NG

- OK >> GO TO 5.
- NG >> Repair harness between TCM and harness connector F102.



## 5. CHECK HARNESS FOR SHORT CIRCUIT

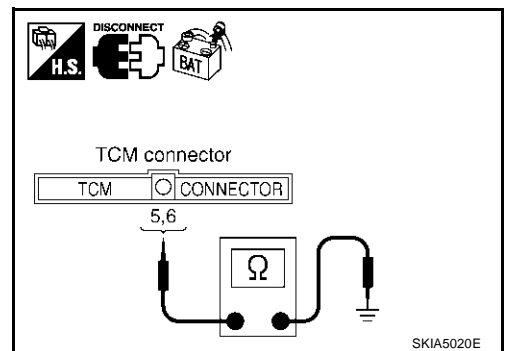
Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

**5 (L) - Ground : Continuity should not exist.**

**6 (Y) - Ground : Continuity should not exist.**

OK or NG

- OK >> GO TO 6.
- NG >> Repair harness between TCM and harness connector F102.



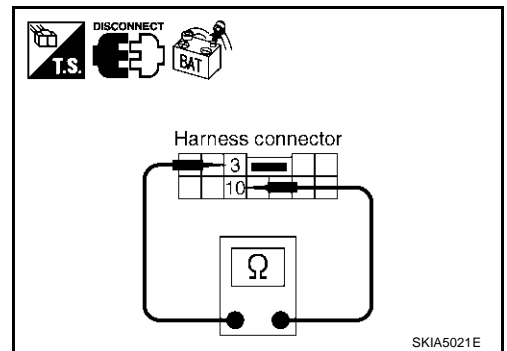
## 6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B4.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

**3 (L) - 10 (Y) : Continuity should not exist.**

OK or NG

- OK >> GO TO 7.
- NG >> Repair harness between harness connector B4 and harness connector B2.



## 7. CHECK HARNESS FOR SHORT CIRCUIT

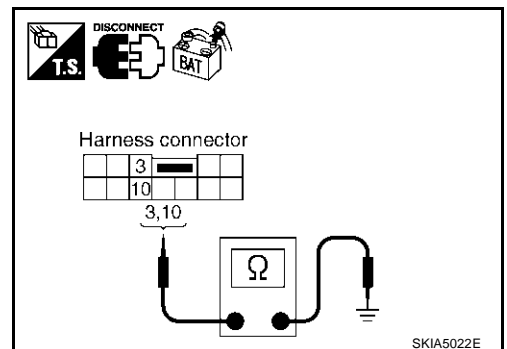
Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

**3 (L) - Ground : Continuity should not exist.**

**10 (Y) - Ground : Continuity should not exist.**

OK or NG

- OK >> GO TO 8.
- NG >> Repair harness between harness connector B4 and harness connector B2.



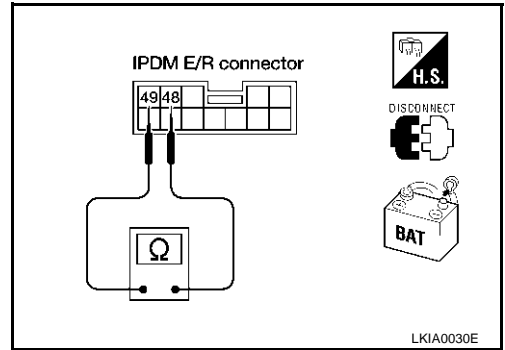
**8. CHECK HARNESS FOR SHORT CIRCUIT**

1. Disconnect ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y) : Continuity should not exist.**

OK or NG

- OK >> GO TO 9.  
 NG >> Check the following harnesses. If any harness is damaged, repair the harness.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
  - Harness between IPDM E/R and harness connector E105.



**9. CHECK HARNESS FOR SHORT CIRCUIT**

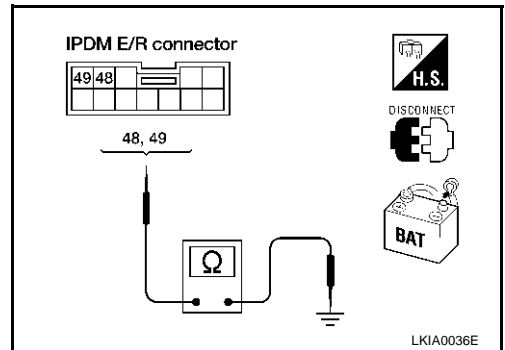
Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

**48 (L) - Ground : Continuity should not exist.**

**49 (Y) - Ground : Continuity should not exist.**

OK or NG

- OK >> GO TO 10.  
 NG >> Check the following harnesses. If any harness is damaged, repair the harness.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
  - Harness between IPDM E/R and harness connector E105.



**10. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION**

Check components inspection. Refer to [LAN-122, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-99, "Work Flow"](#).  
 NG >> Replace ECM and/or IPDM E/R.

**IPDM E/R Ignition Relay Circuit Check**

AKS006Q8

Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-45, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#).

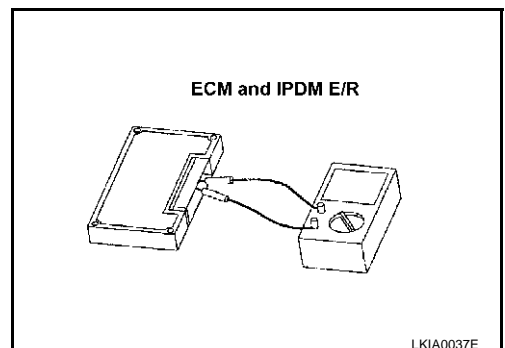
**Component Inspection**

**ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION**

AKS006Q9

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



## CAN SYSTEM (TYPE 4)

PFP:23710

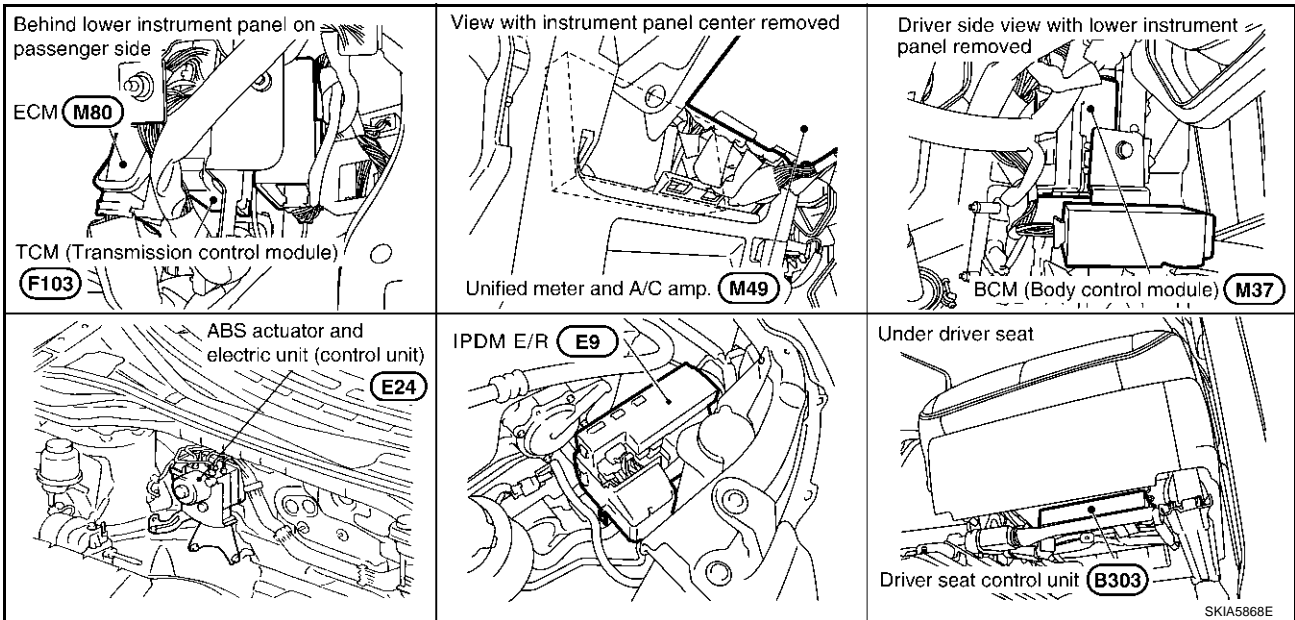
### System Description

AKS006GT

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

### Component Parts and Harness Connector Location

AKS006QU



A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
L  
M

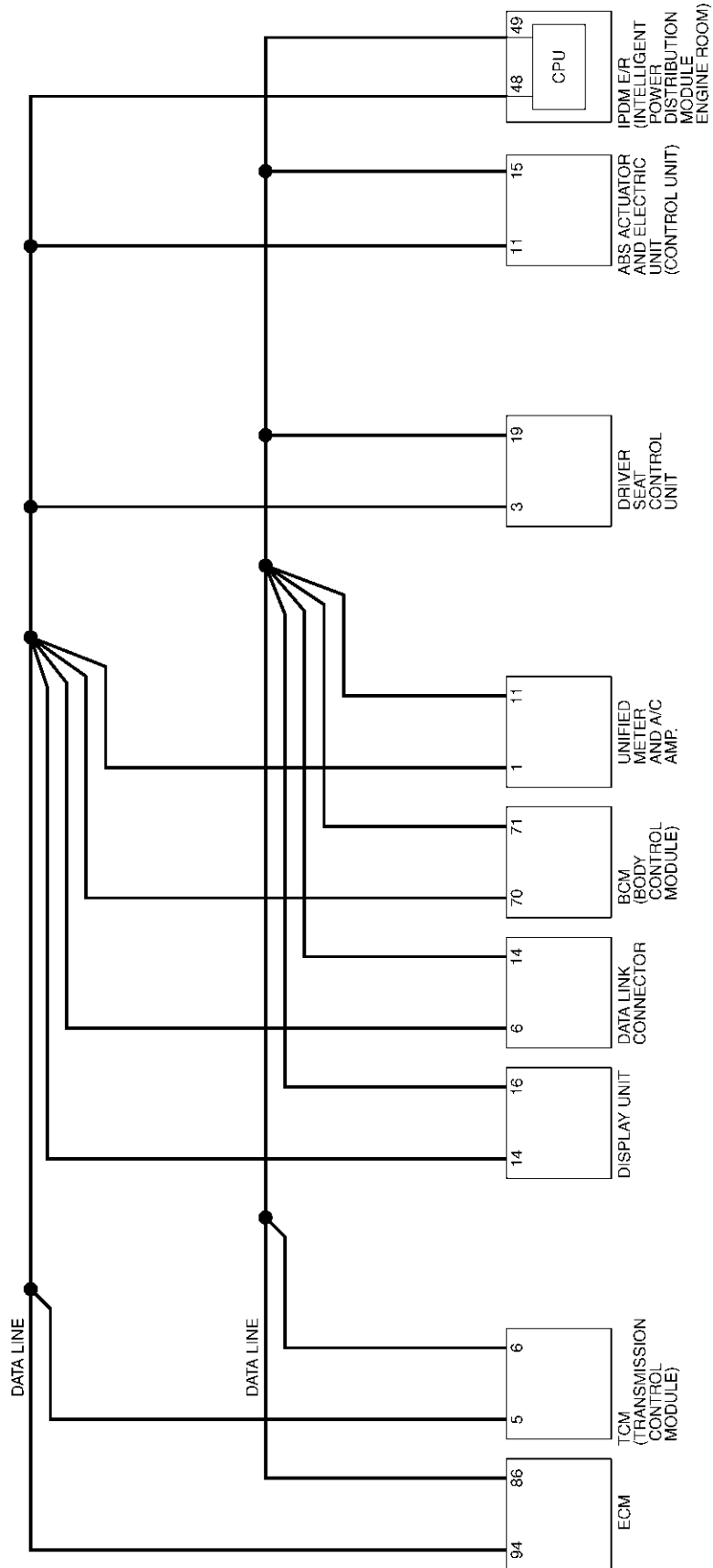
LAN

# CAN SYSTEM (TYPE 4)

[CAN]

## Schematic

AKS006QV



TKWA0935E



# CAN SYSTEM (TYPE 4)

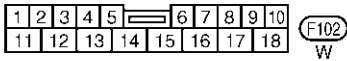
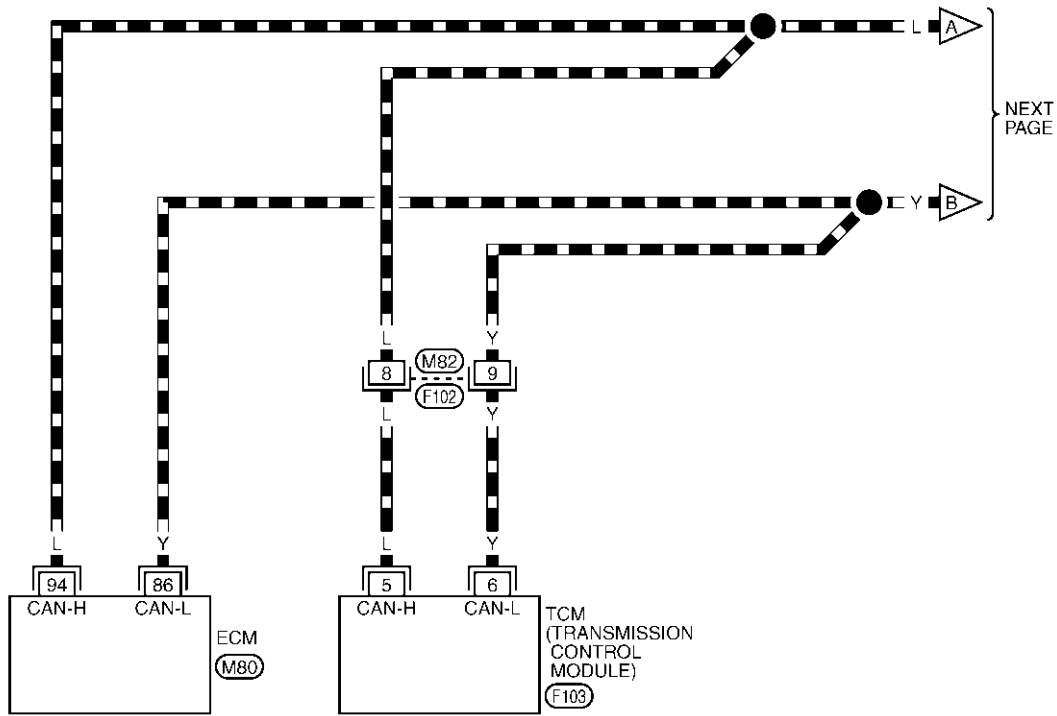
[CAN]

## Wiring Diagram - CAN -

AKS006QW

### LAN-CAN-10

▬ : DATA LINE



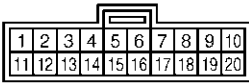
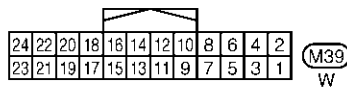
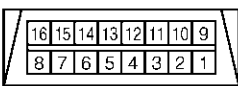
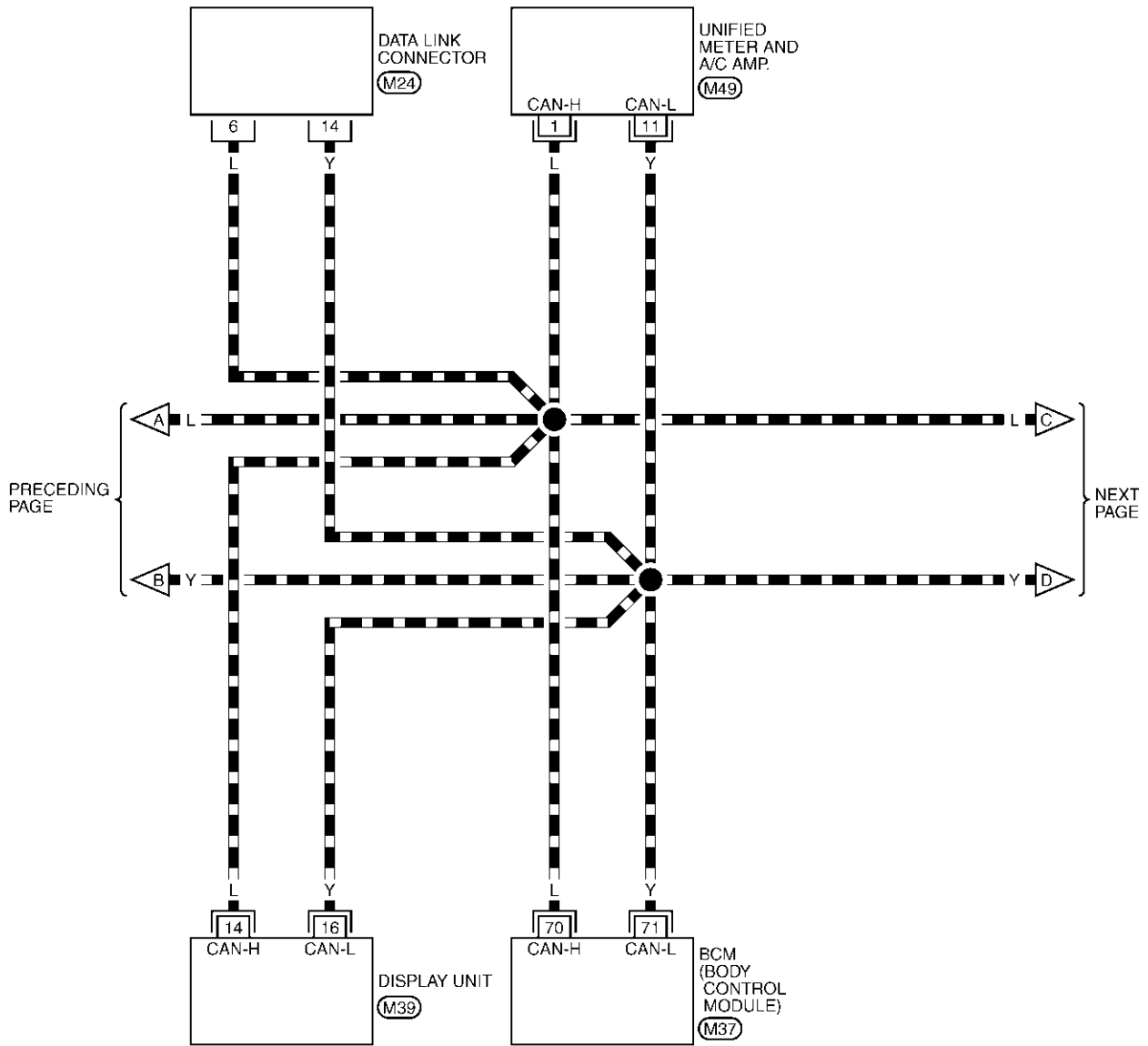
REFER TO THE FOLLOWING.  
 (M80), (F103) -ELECTRICAL  
 UNITS

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
L  
M

LAN

## LAN-CAN-11

▬ : DATA LINE



REFER TO THE FOLLOWING.  
M37 -ELECTRICAL UNITS

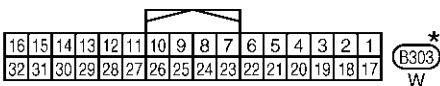
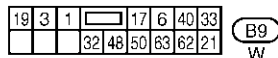
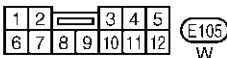
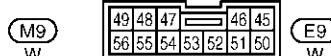
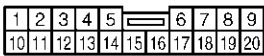
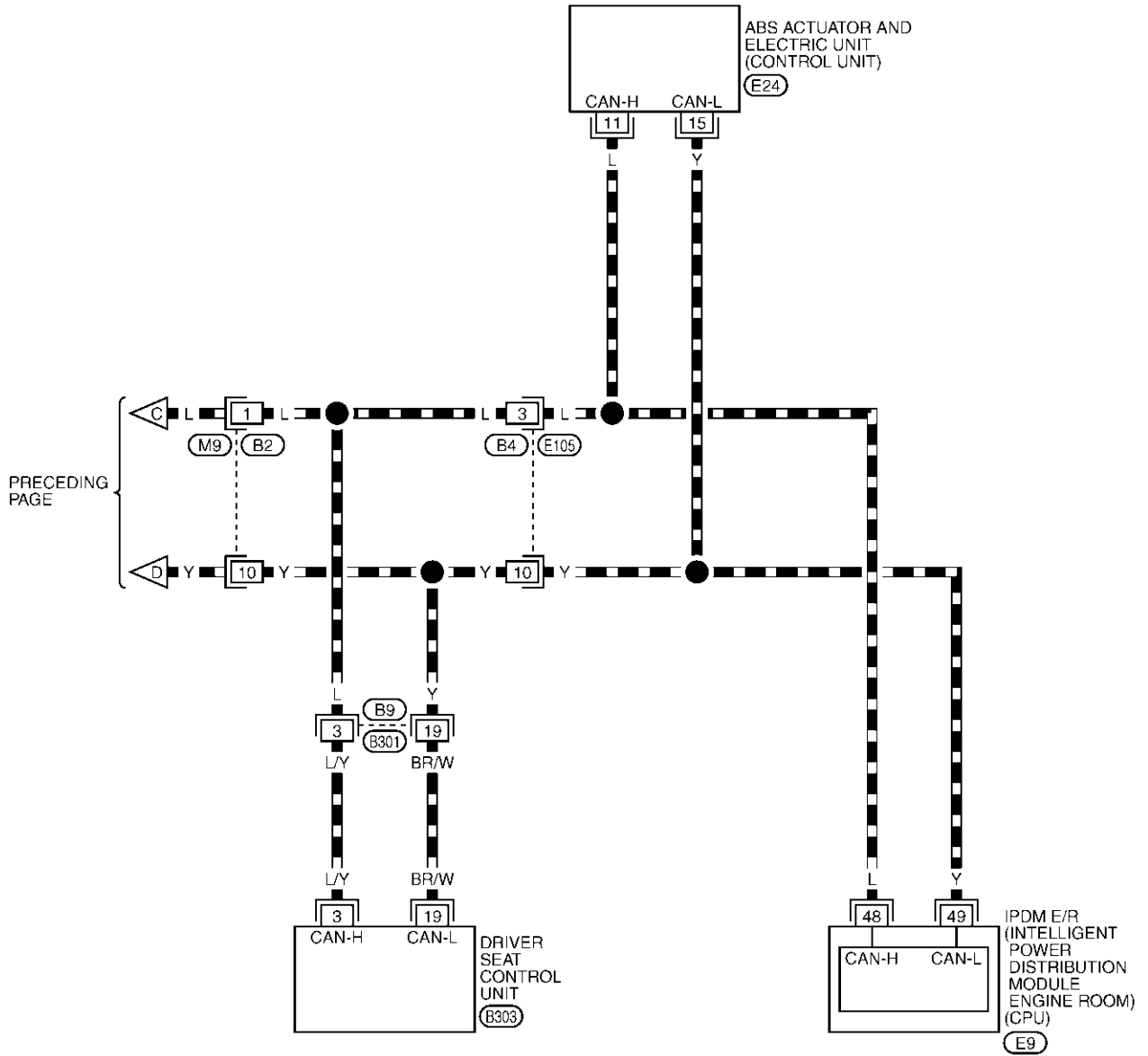
TKWA0937E

# CAN SYSTEM (TYPE 4)

[CAN]

## LAN-CAN-12

▬ : DATA LINE



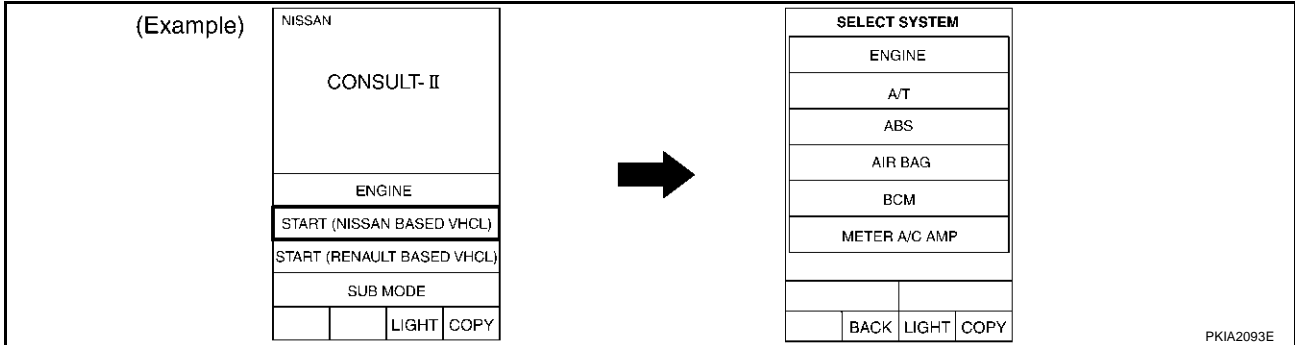
\*: THIS CONNECTOR IS NOT SHOWN IN "HARNES LAYOUT", PG SECTION.

REFER TO THE FOLLOWING.  
E24 -ELECTRICAL UNITS

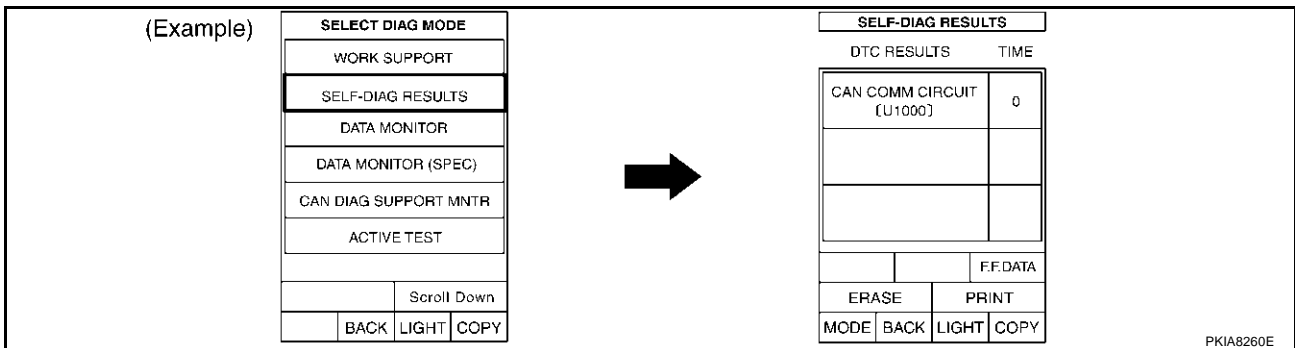
TKWA0938E

## Work Flow

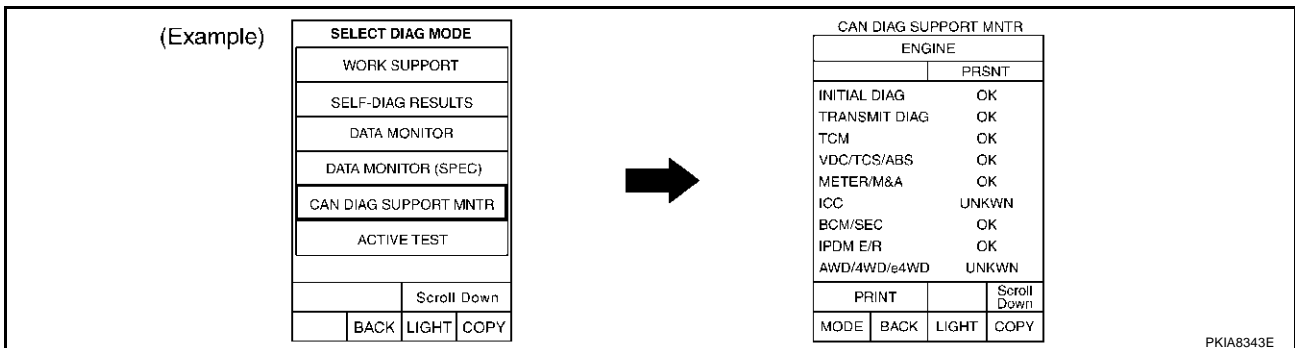
- When there are no indications of "TRANSMISSION", "METER A/C AMP" or "AUTO DRIVE POS." on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP", "AUTO DRIVE POS." and "ABS" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP", "AUTO DRIVE POS." and "ABS" displayed on CONSULT-II.



- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-130, "CHECK SHEET"](#) .
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "v" onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-130, "CHECK SHEET"](#) .

**NOTE:**

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual.  
So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the integrated display system. Refer to [AV-110, "CAN Communication Line Check"](#) .
- Attach the CAN DIAG MONITOR check sheet onto the check sheet. Refer to [LAN-130, "CHECK SHEET"](#) .

## CAN SYSTEM (TYPE 4)

[CAN]

8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG MONITOR check sheet. Refer to [LAN-130, "CHECK SHEET"](#) .

**NOTE:**

If "NG" is displayed on "CAN COMM" as "CAN DIAG MNTR" for the diagnosed control unit, replace the control unit. Refer to [AV-110, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-132, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

A

B

C

D

E

F

G

H

I

J

LAN

L

M

# CAN SYSTEM (TYPE 4)

[CAN]

## CHECK SHEET

**NOTE:**

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

Attach copy of  
display unit  
CAN DIAG MONITOR check sheet

PKIB0466E

# CAN SYSTEM (TYPE 4)

[CAN]

Attach copy of ENGINE SELF-DIAG RESULTS	Attach copy of TRANSMISSION SELF-DIAG RESULTS	Attach copy of BCM SELF-DIAG RESULTS	A
Attach copy of METER A/C AMP SELF-DIAG RESULTS	Attach copy of AUTO DRIVE POS. SELF-DIAG RESULTS	Attach copy of ABS SELF-DIAG RESULTS	B
Attach copy of ENGINE CAN DIAG SUPPORT MNTR	Attach copy of TRANSMISSION CAN DIAG SUPPORT MNTR	Attach copy of BCM CAN DIAG SUPPORT MNTR	C
Attach copy of METER A/C AMP CAN DIAG SUPPORT MNTR	Attach copy of AUTO DRIVE POS. CAN DIAG SUPPORT MNTR	Attach copy of ABS CAN DIAG SUPPORT MNTR	D
			E
			F
			G
			H
			I
			J
			LAN
			L
			M

PKIB0467E

## CHECK SHEET RESULTS (EXAMPLE)

**NOTE:**

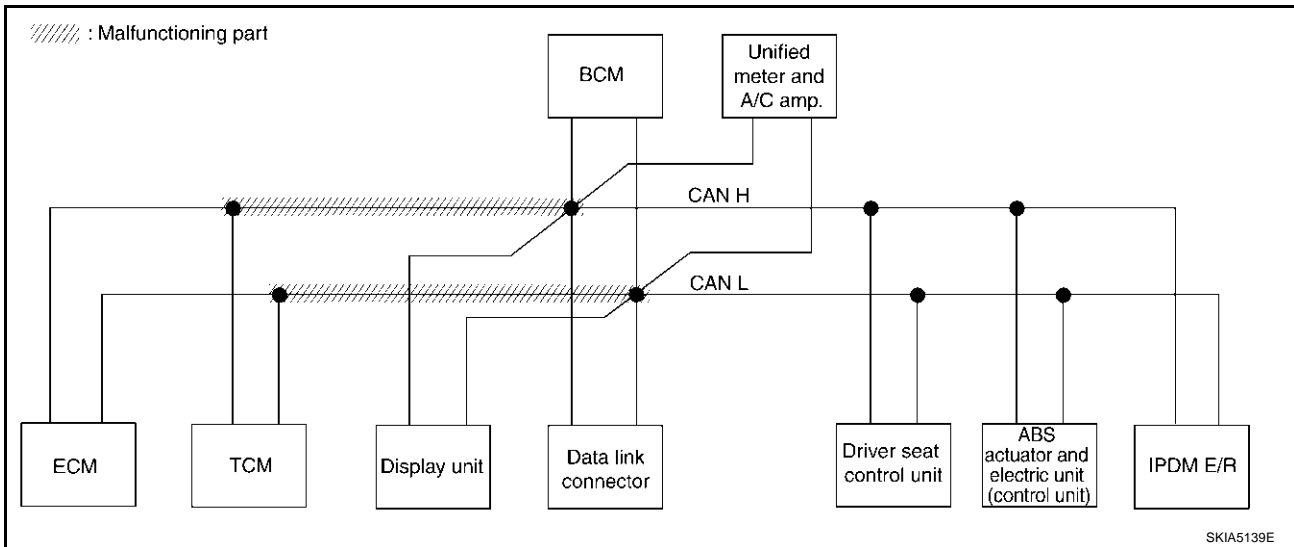
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

**Case 1**

Check harness between TCM and data link connector. Refer to [LAN-145, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						IPDM E/R
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

PKIB0468E





# CAN SYSTEM (TYPE 4)

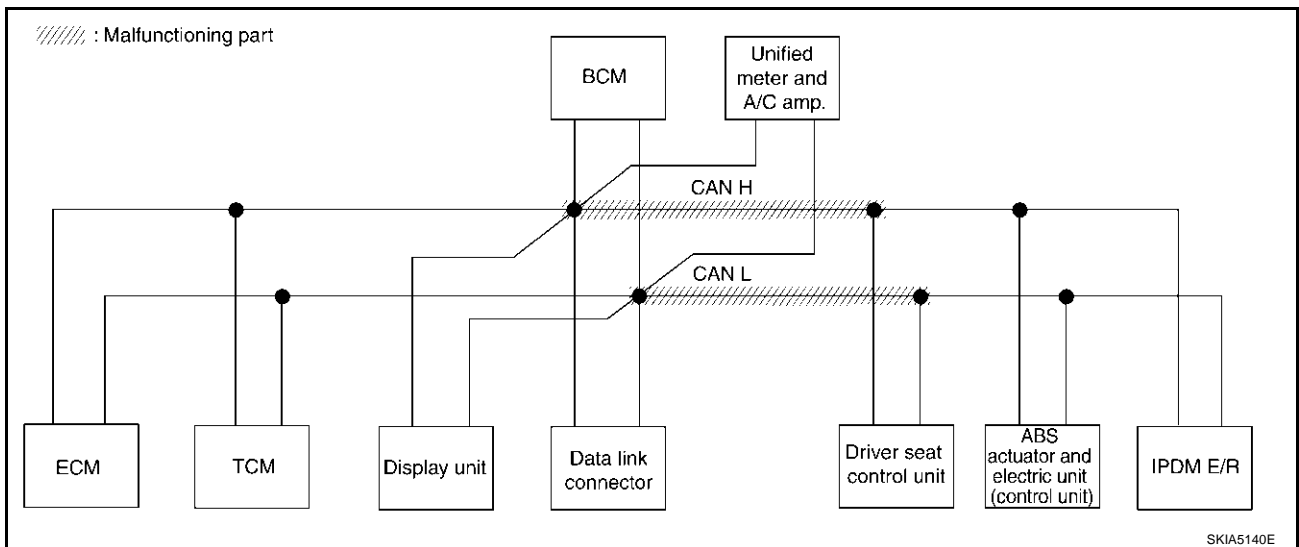
[CAN]

## Case 2

Check harness between data link connector and driver seat control unit. Refer to [LAN-145, "Circuit Check Between Data Link Connector and Driver Seat Control Unit"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN ✓
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN ✓	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	CAN 7 ✓
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN ✓
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN ✓	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN ✓	—	—	—	—	—	—

PKIB0469E



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# CAN SYSTEM (TYPE 4)

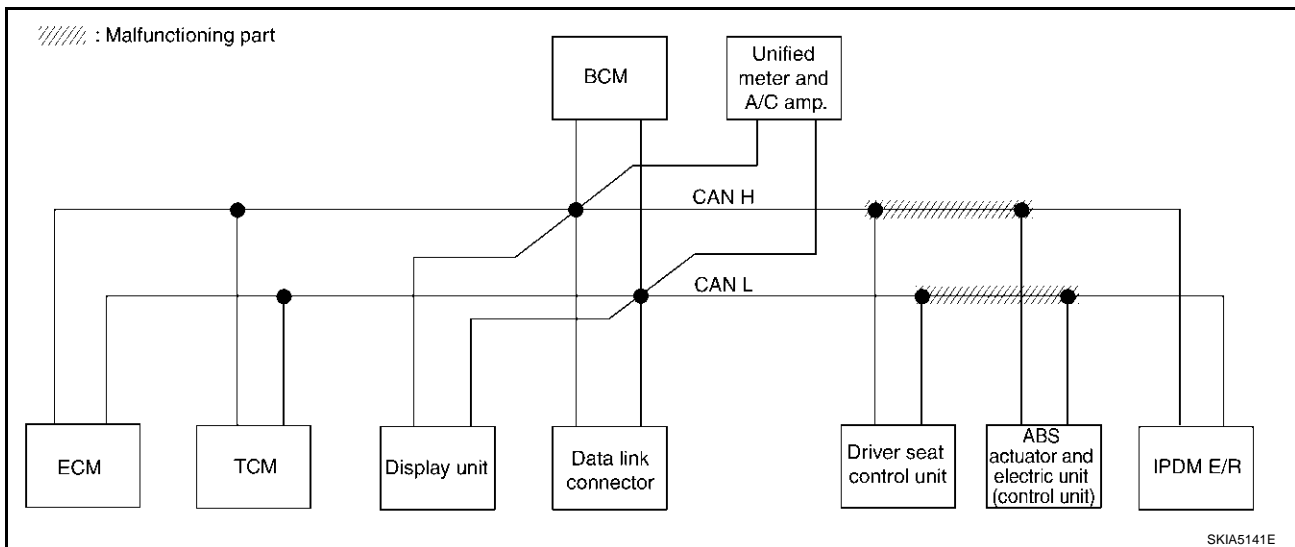
[CAN]

## Case 3

Check harness between driver seat control unit and ABS actuator and electric unit (control unit). Refer to [LAN-146, "Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit \(Control Unit\)"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN ✓
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN ✓	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	CAN 7 ✓
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN ✓
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN ✓	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN ✓	—	—	—	—	—	—

PKIB0470E



# CAN SYSTEM (TYPE 4)

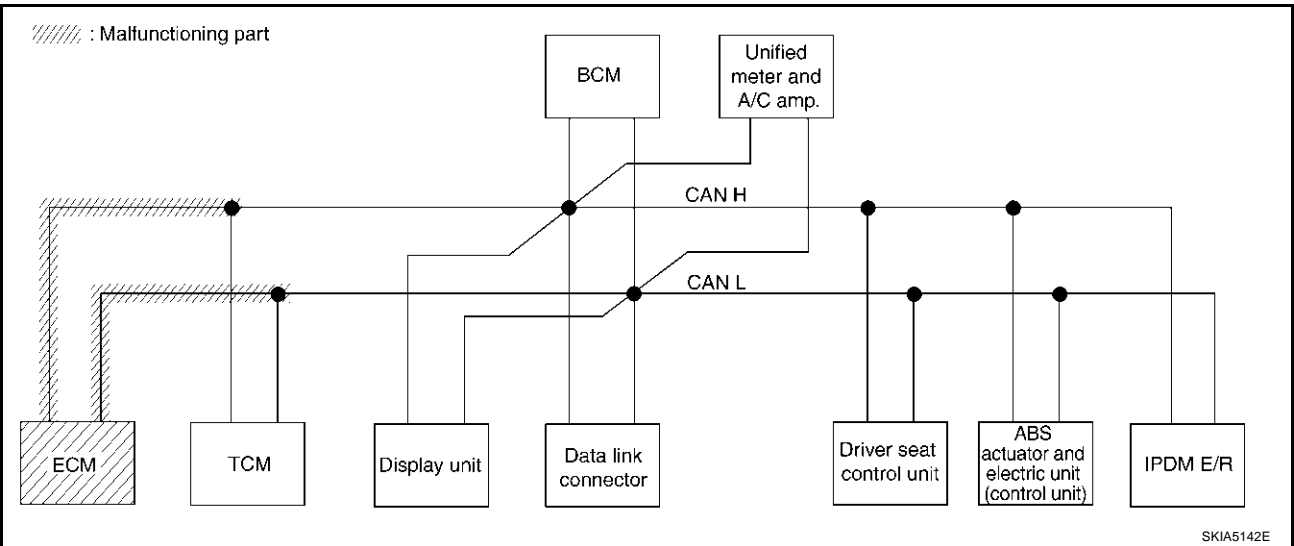
[CAN]

## Case 4

Check ECM circuit. Refer to [LAN-147, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW <del>N</del>	—	UNKW <del>N</del>	—	UNKW <del>N</del>	UNKW <del>N</del>	—	UNKW <del>N</del>
TRANSMISSION	No indication	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	UNKW <del>N</del>	UNKW <del>N</del>	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	CAN 7
BCM	—	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	UNKW <del>N</del>	—	UNKW <del>N</del>
METER A/C AMP	No indication	—	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	—	UNKW <del>N</del>	—
AUTO DRIVE POS.	No indication	NG	UNKW <del>N</del>	—	UNKW <del>N</del>	—	UNKW <del>N</del>	UNKW <del>N</del>	—	—
ABS	—	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	—	—	—

PKIB0471E



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# CAN SYSTEM (TYPE 4)

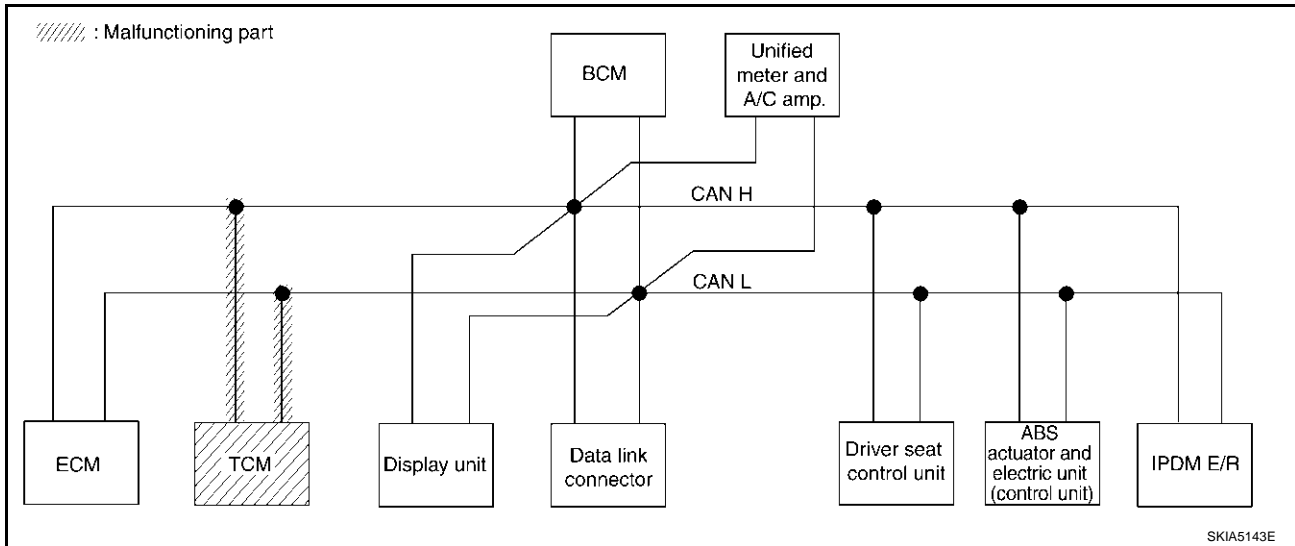
[CAN]

## Case 5

Check TCM circuit. Refer to [LAN-147, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

PKIB0472E



# CAN SYSTEM (TYPE 4)

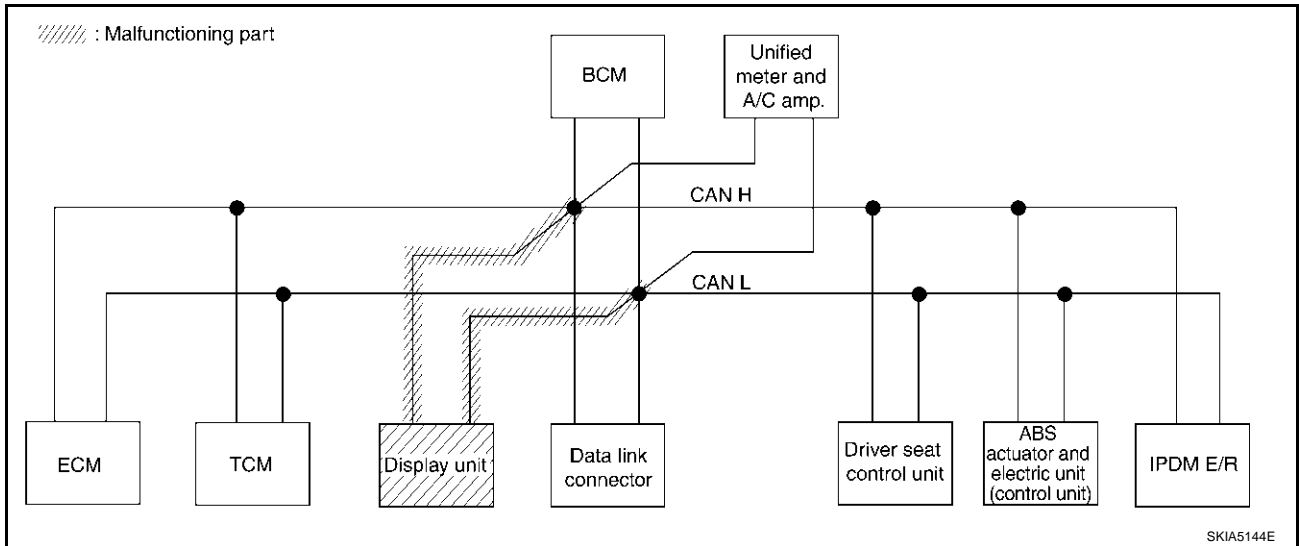
[CAN]

## Case 6

Check display unit circuit. Refer to [LAN-148, "Display Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display unit	—	CAN COMM	CAN 1 ✓	CAN 3 ✓	—	—	CAN 2 ✓	CAN 5 ✓	—	CAN 7 ✓
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

PKIB0473E



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# CAN SYSTEM (TYPE 4)

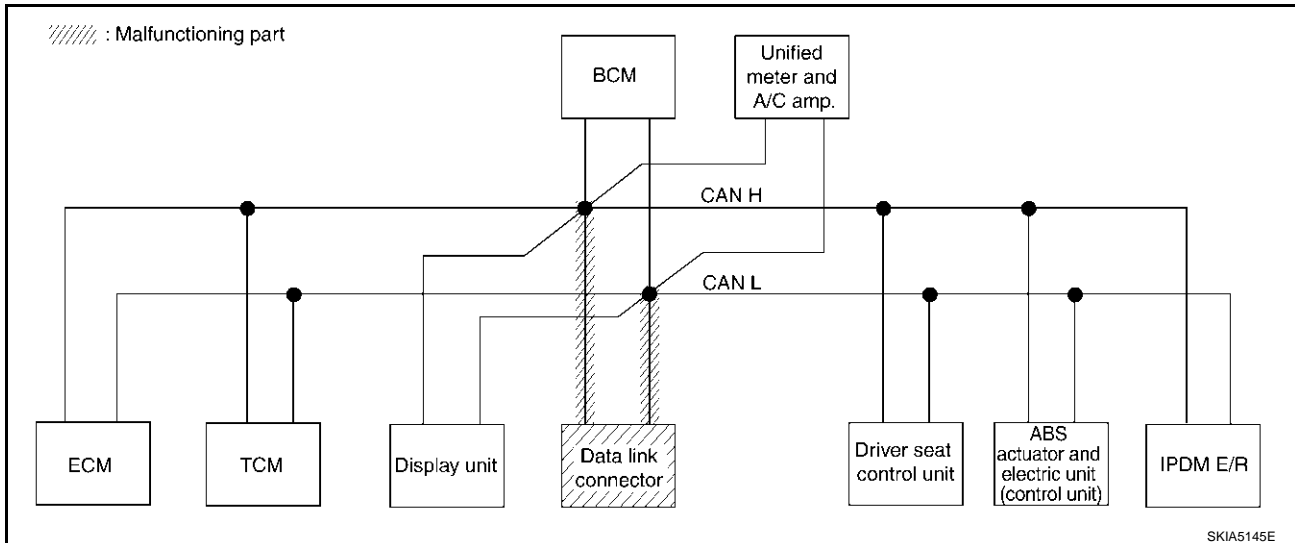
[CAN]

## Case 7

Check data link connector circuit. Refer to [LAN-148, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

PKIB0474E



# CAN SYSTEM (TYPE 4)

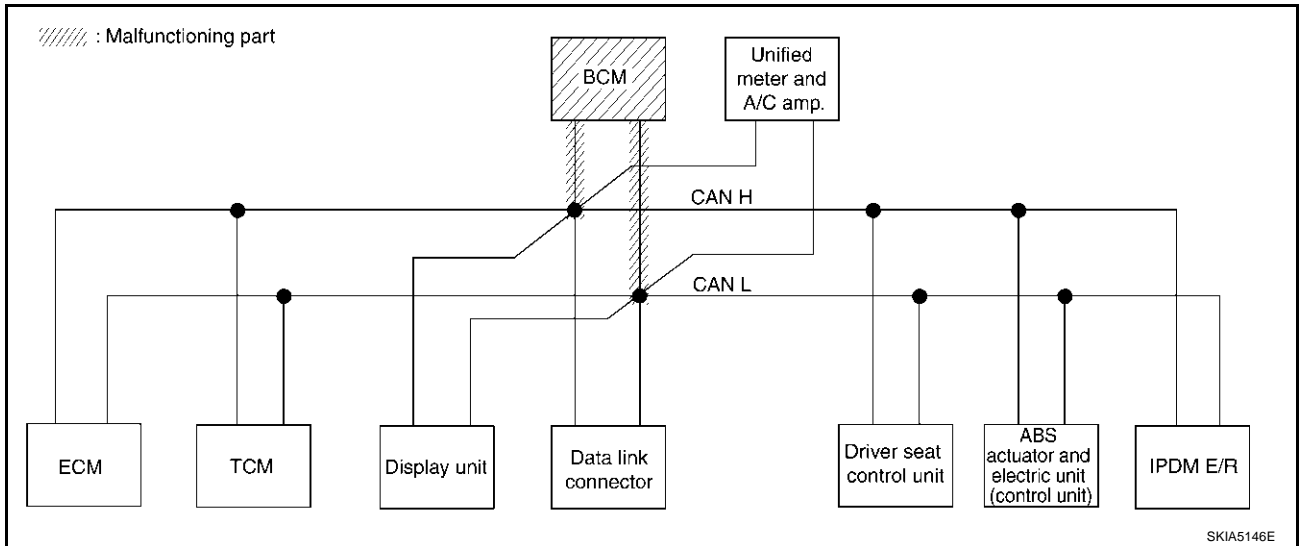
[CAN]

## Case 8

Check BCM circuit. Refer to [LAN-149, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 4)

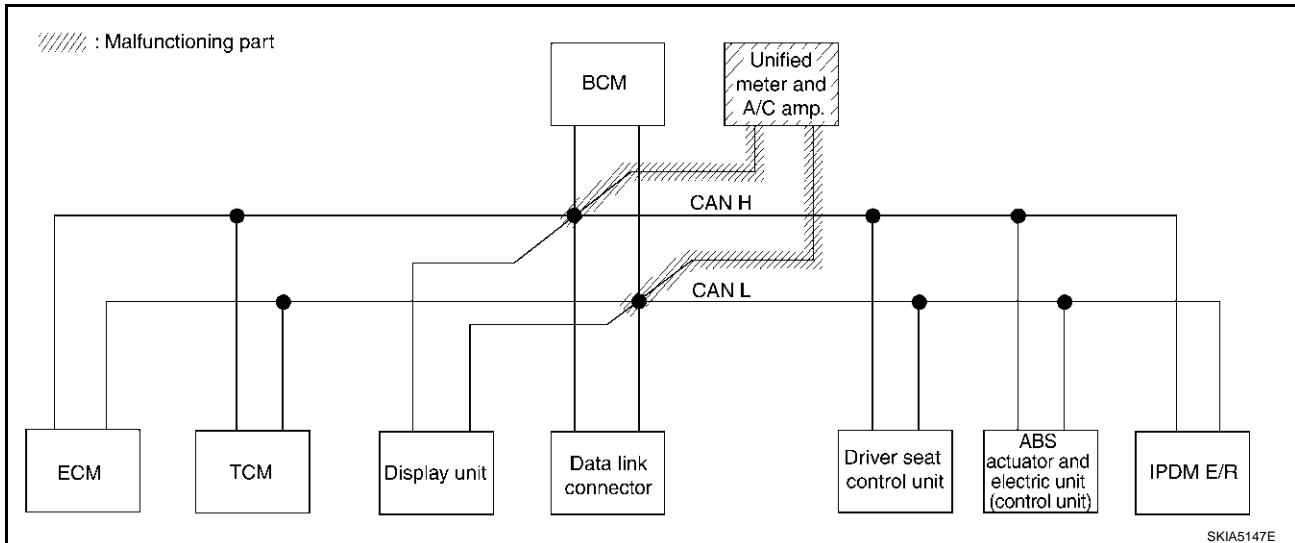
[CAN]

## Case 9

Check unified meter and A/C amp. circuit. Refer to [LAN-149, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN ✓	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN ✓	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5 ✓	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN ✓	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN ✓	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

PKIB0476E





# CAN SYSTEM (TYPE 4)

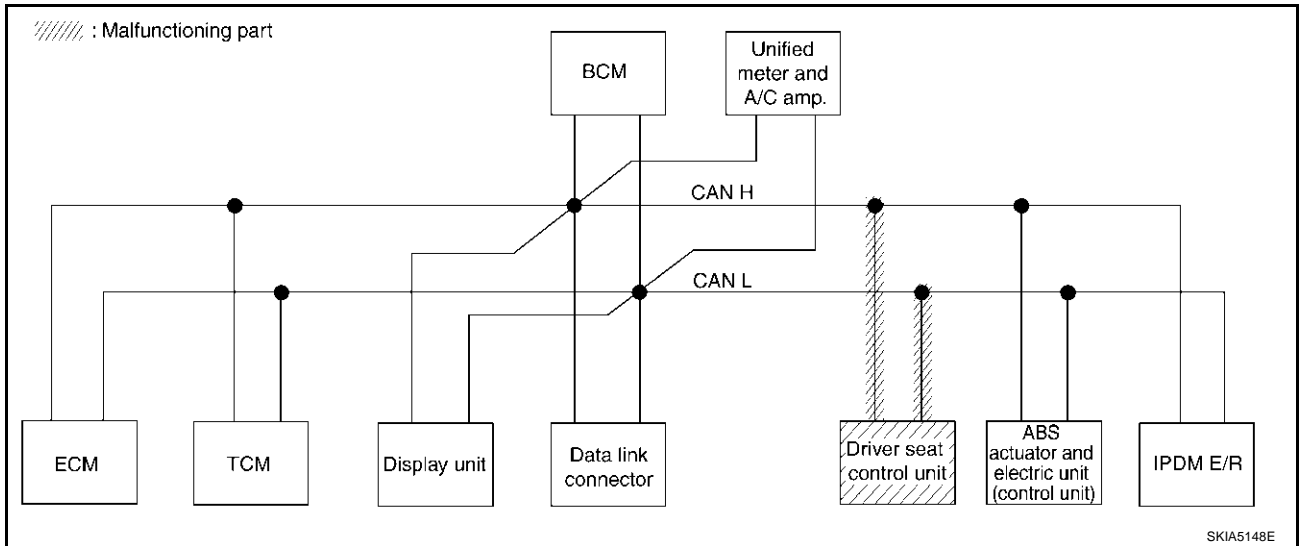
[CAN]

## Case 10

Check driver seat control unit circuit. Refer to [LAN-150, "Driver Seat Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

PKIB0477E



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# CAN SYSTEM (TYPE 4)

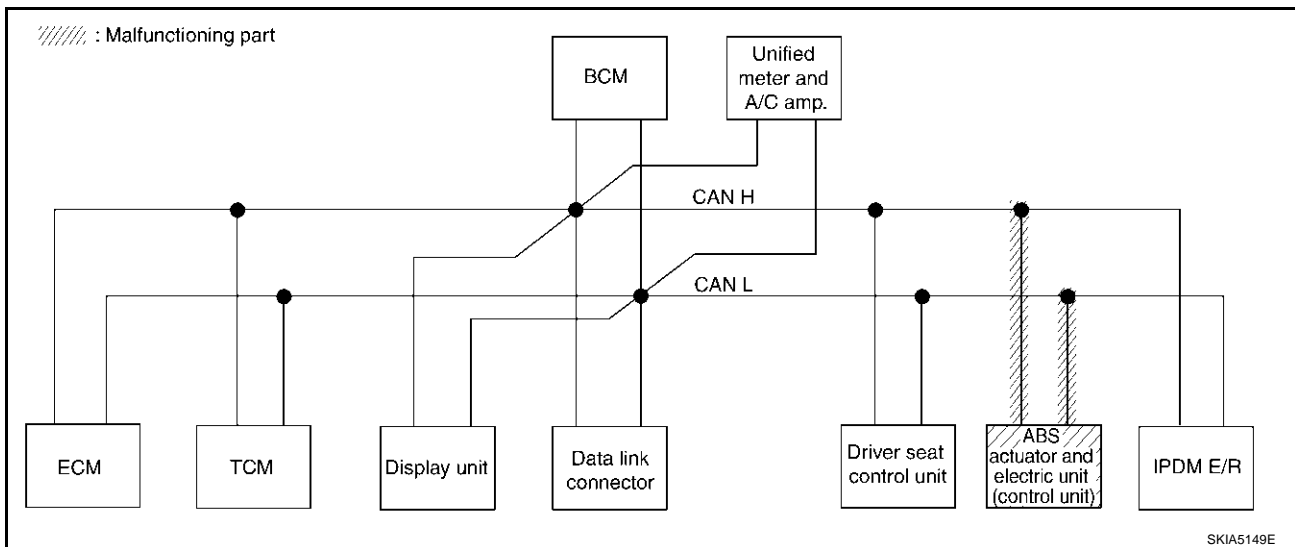
[CAN]

## Case 11

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-150, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

PKIB0478E



# CAN SYSTEM (TYPE 4)

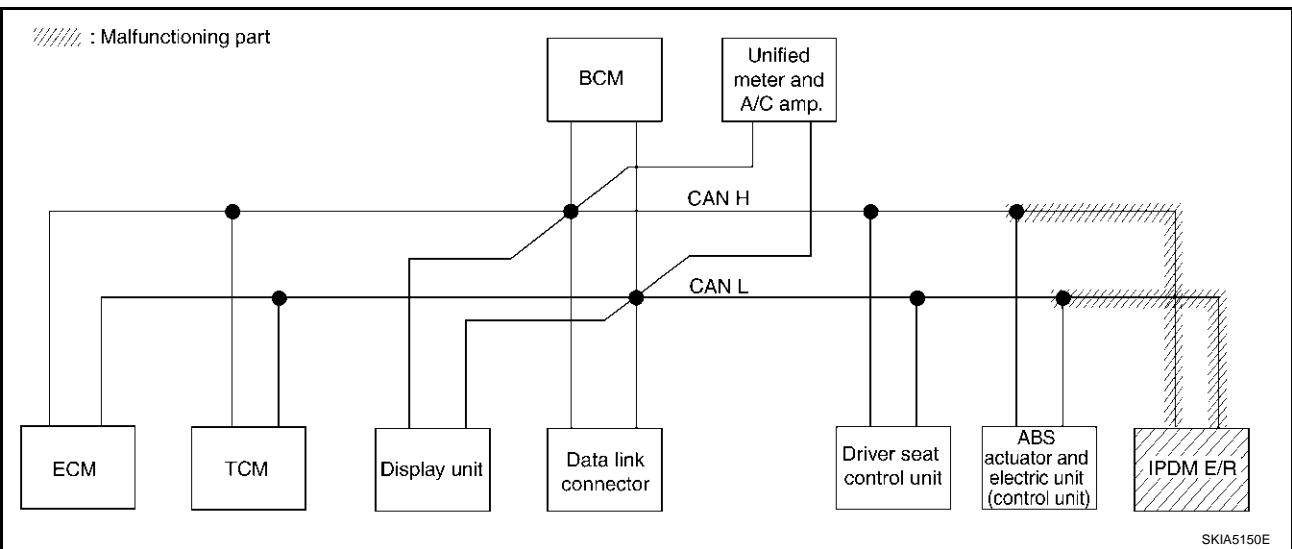
[CAN]

## Case 12

Check IPDM E/R circuit. Refer to [LAN-151, "IPDM E/R Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW <del>N</del>	—	UNKW <del>N</del>	—	UNKW <del>N</del>	UNKW <del>N</del>	—	UNKW <del>N</del> ✓
TRANSMISSION	No indication	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	UNKW <del>N</del>	UNKW <del>N</del>	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	CAN 7 ✓
BCM	—	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	UNKW <del>N</del>	—	UNKW <del>N</del> ✓
METER A/C AMP	No indication	—	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	—	UNKW <del>N</del>	—
AUTO DRIVE POS.	No indication	NG	UNKW <del>N</del>	—	UNKW <del>N</del>	—	UNKW <del>N</del>	UNKW <del>N</del>	—	—
ABS	—	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	—	—	—

PKIB0479E



## Case 13

Check CAN communication circuit. Refer to [LAN-152, "CAN Communication Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW <del>N</del> ✓	—	UNKW <del>N</del> ✓	—	UNKW <del>N</del> ✓	UNKW <del>N</del> ✓	—	UNKW <del>N</del> ✓
TRANSMISSION	No indication ✓	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	UNKW <del>N</del>	UNKW <del>N</del>	—
Display unit	—	CAN COMM	CAN 1 ✓	CAN 3 ✓	—	—	CAN 2 ✓	CAN 5 ✓	—	CAN 7 ✓
BCM	—	NG	UNKW <del>N</del> ✓	UNKW <del>N</del> ✓	—	—	—	UNKW <del>N</del> ✓	—	UNKW <del>N</del> ✓
METER A/C AMP	No indication ✓	—	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	—	UNKW <del>N</del>	—
AUTO DRIVE POS.	No indication ✓	NG	UNKW <del>N</del>	—	UNKW <del>N</del>	—	UNKW <del>N</del>	UNKW <del>N</del>	—	—
ABS	—	NG	UNKW <del>N</del> ✓	UNKW <del>N</del> ✓	—	—	—	—	—	—

PKIB0480E

# CAN SYSTEM (TYPE 4)

[CAN]

## Case 14

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-156, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UN <del>KN</del> ✓W	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UN <del>KN</del> ✓W	UNKWN	UNKWN	—	UN <del>KN</del> ✓W	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UN <del>KN</del> ✓W	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

PKIB0481E

## Case 15

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-156, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UN <del>KN</del> ✓W	—	—	—	UN <del>KN</del> ✓W	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UN <del>KN</del> ✓W	—	—	—	—	—	—

PKIB0482E

## Circuit Check Between TCM and Data Link Connector

AKS006QY

### 1. CHECK HARNESS FOR OPEN CIRCUIT

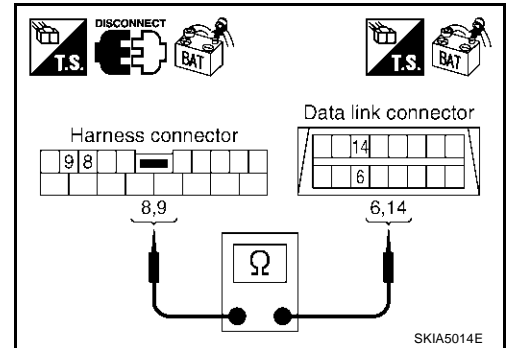
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

**8 (L) - 6 (L) : Continuity should exist.**

**9 (Y) - 14 (Y) : Continuity should exist.**

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-128, "Work Flow"](#).
- NG >> Repair harness.



## Circuit Check Between Data Link Connector and Driver Seat Control Unit

AKS006RB

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).

- Harness connector M9
- Harness connector B2

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

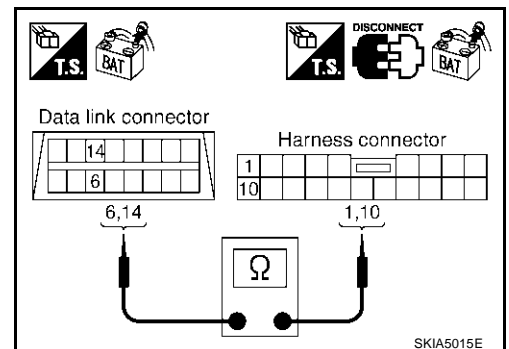
1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

**6 (L) - 1 (L) : Continuity should exist.**

**14 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



### 3. CHECK HARNESS FOR OPEN CIRCUIT

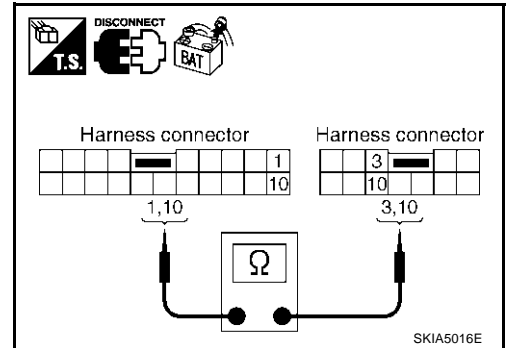
1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-128, "Work Flow"](#) .
- NG >> Repair harness.



## Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit)

AKS006QZ

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector B4
  - Harness connector E105

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

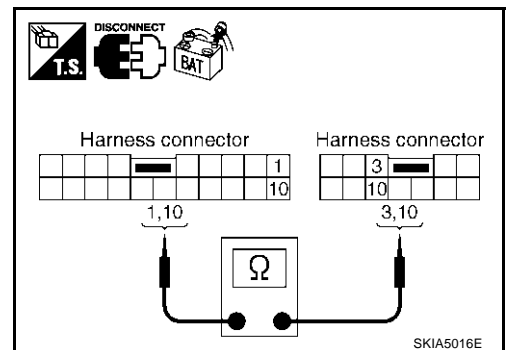
1. Disconnect harness connector B2 and harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



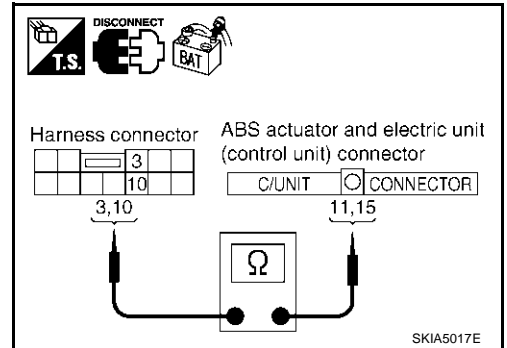
### 3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

**3 (L) - 11 (L) : Continuity should exist.**  
**10 (Y) - 15 (Y) : Continuity should exist.**

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-128, "Work Flow"](#) .  
 NG >> Repair harness.



AKS006R0

### ECM Circuit Check

#### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

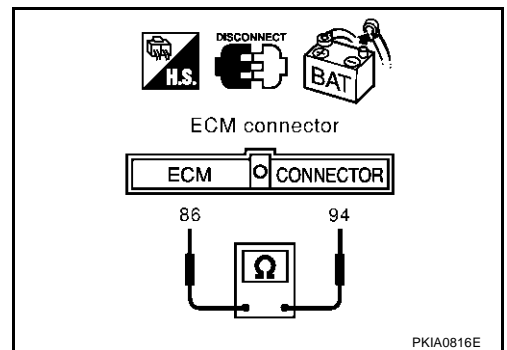
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

**94 (L) - 86 (Y) : Approx. 108 - 132Ω**

OK or NG

- OK >> Replace ECM.  
 NG >> Repair harness between ECM and TCM.



AKS006R1

### TCM Circuit Check

#### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
  - TCM connector
  - Harness connector F102
  - Harness connector M82

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

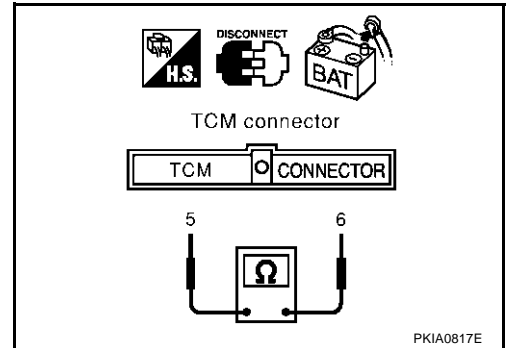
1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y)**

**: Approx. 54 - 66Ω**

OK or NG

- OK >> Replace TCM.  
 NG >> Repair harness between TCM and ECM.



## Display Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display unit for damage, bend and loose connection (unit side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

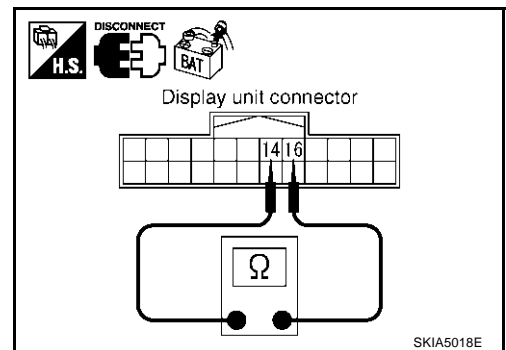
1. Disconnect display unit connector.
2. Check resistance between display unit harness connector M39 terminals 14 (L) and 16 (Y).

**14 (L) - 16 (Y)**

**: Approx. 54 - 66Ω**

OK or NG

- OK >> Replace display unit.  
 NG >> Repair harness between display unit and data link connector.



## Data Link Connector Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.



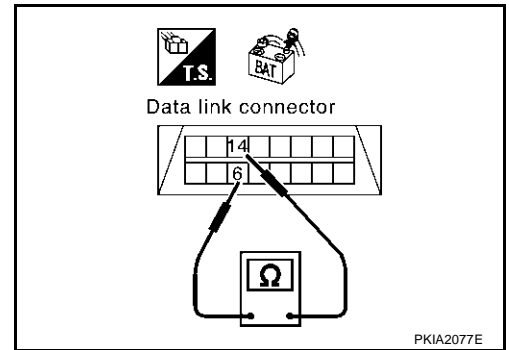
## 2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Diagnose again. Refer to [LAN-128, "Work Flow"](#).  
 NG >> Repair harness between data link connector and BCM.



PKIA2077E

AKS006R4

## BCM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

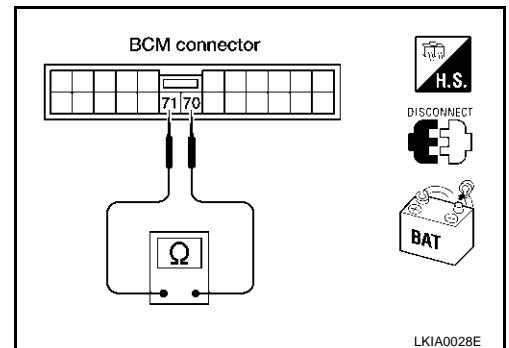
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M37 terminals 70 (L) and 71 (Y).

**70 (L) - 71 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace BCM. Refer to [BCS-36, "Removal and Installation of BCM"](#).  
 NG >> Repair harness between BCM and data link connector.



LKIA0028E

AKS006R5

## Unified Meter and A/C Amp. Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

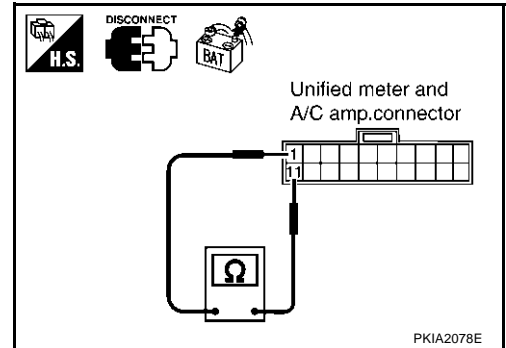
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

**1 (L) - 11 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace unified meter and A/C amp.
- NG >> Repair harness between unified meter and A/C amp. and data link connector.



## Driver Seat Control Unit Circuit Check

AKS006RC

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control unit side and harness side).
  - Driver seat control unit connector
  - Harness connector B301
  - Harness connector B9

### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

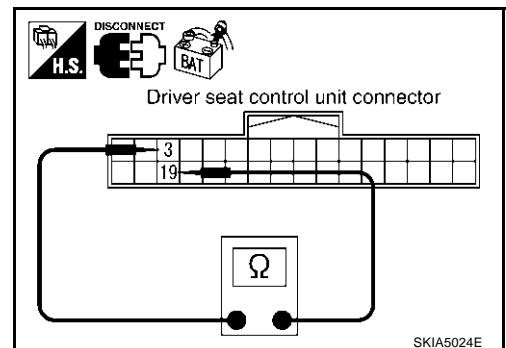
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect driver seat control unit connector.
2. Check resistance between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

**3 (L/Y) - 19 (BR/W) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace driver seat control unit.
- NG >> Repair harness between driver seat control unit and harness connector B4.



## ABS Actuator and Electric Unit (Control Unit) Circuit Check

AKS006R6

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

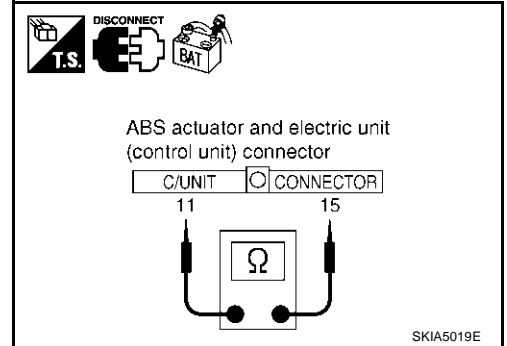
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

**11 (L) - 15 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).  
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



AKS006R7

## IPDM E/R Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

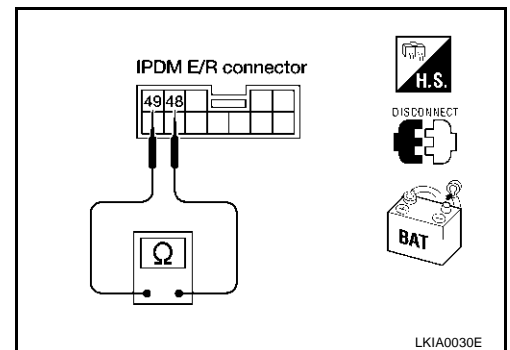
1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y)**

**: Approx. 108 - 132Ω**

### OK or NG

- OK >> Replace IPDM E/R.  
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



LKIA0030E

## CAN Communication Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, unit side, meter side, control unit side and harness side).
  - ECM
  - TCM
  - Display unit
  - BCM
  - Unified meter and A/C amp.
  - Driver seat control unit
  - ABS actuator and electric unit (control unit)
  - IPDM E/R
  - Between ECM and IPDM E/R
  - Between ECM and TCM
  - Between ECM and driver seat control unit

#### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

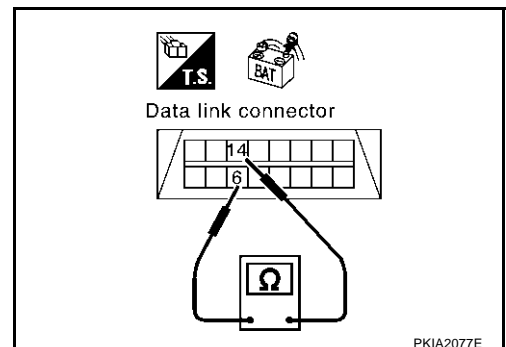
### 2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
  - ECM connector
  - Harness connector M82
  - Display unit connector
  - BCM connector
  - Unified meter and A/C amp. connector
  - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Continuity should not exist.**

#### OK or NG

- OK >> GO TO 3.  
 NG >> Check the following harnesses. If any harness is damaged, repair the harness.
- Harness between data link connector and ECM.
  - Harness between data link connector and harness connector M82.
  - Harness between data link connector and display unit.
  - Harness between data link connector and BCM.
  - Harness between data link connector and unified meter and A/C amp.
  - Harness between data link connector and harness connector M9.



### 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

**6 (L) - Ground : Continuity should not exist.**

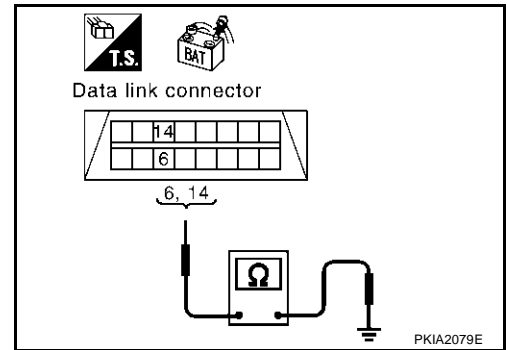
**14 (Y) - Ground : Continuity should not exist.**

#### OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9.



### 4. CHECK HARNESS FOR SHORT CIRCUIT

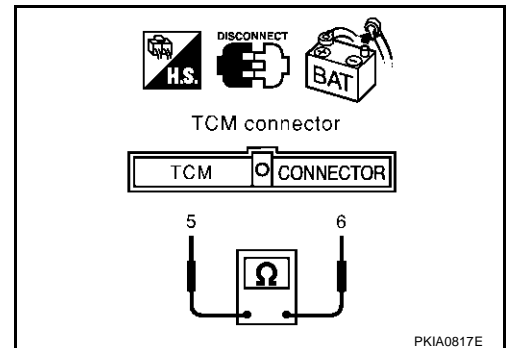
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Continuity should not exist.**

#### OK or NG

OK >> GO TO 5.

NG >> Repair harness between TCM and harness connector F102.



### 5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

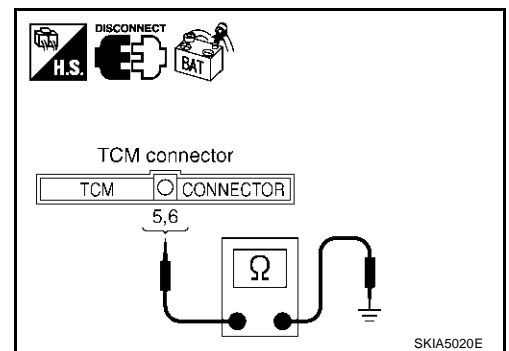
**5 (L) - Ground : Continuity should not exist.**

**6 (Y) - Ground : Continuity should not exist.**

#### OK or NG

OK >> GO TO 6.

NG >> Repair harness between TCM and harness connector F102.



## 6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B4 and harness connector B9.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

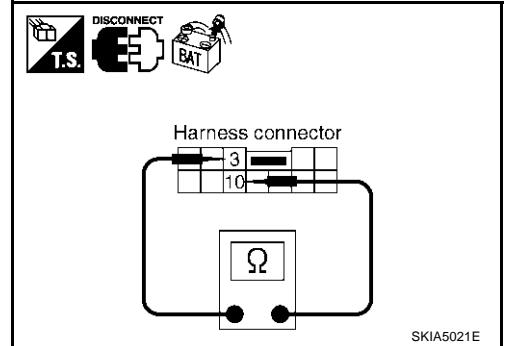
**3 (L) - 10 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 7.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Repair harness between harness connector B4 and harness connector B2.
- Repair harness between harness connector B4 and harness connector B9.



## 7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

**3 (L) - Ground : Continuity should not exist.**

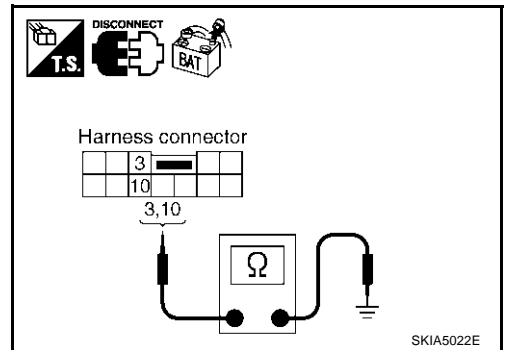
**10 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 8.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Repair harness between harness connector B4 and harness connector B2.
- Repair harness between harness connector B4 and harness connector B9.



## 8. CHECK HARNESS FOR SHORT CIRCUIT

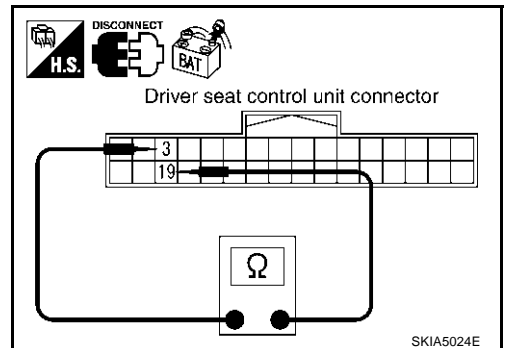
1. Disconnect driver seat control unit connector.
2. Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

**3 (L/Y) - 19 (BR/W) : Continuity should not exist.**

OK or NG

OK >> GO TO 9.

NG >> Repair harness between driver seat control unit and harness connector B301.



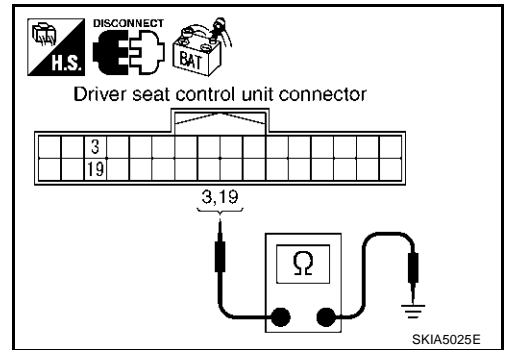
**9. CHECK HARNESS FOR SHORT CIRCUIT**

Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y), 19 (BR/W) and ground.

- 3 (L/Y) - Ground : Continuity should not exist.**
- 19 (BR/W) - Ground : Continuity should not exist.**

OK or NG

- OK >> GO TO 10.
- NG >> Repair harness between driver seat control unit and harness connector B301.



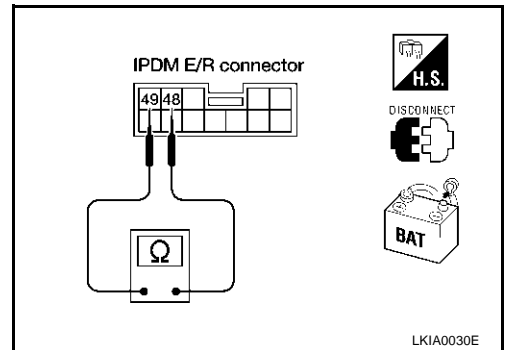
**10. CHECK HARNESS FOR SHORT CIRCUIT**

1. Disconnect ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

- 48 (L) - 49 (Y) : Continuity should not exist.**

OK or NG

- OK >> GO TO 11.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between IPDM E/R and ABS actuator and electric unit (control unit).
  - Harness between IPDM E/R and harness connector E105.



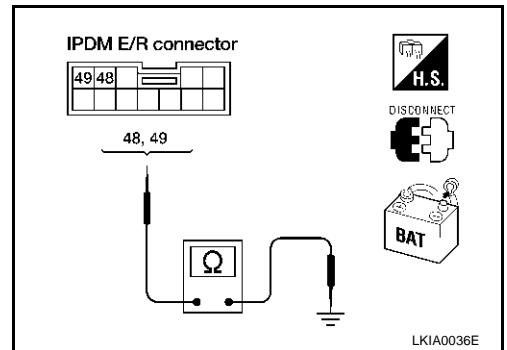
**11. CHECK HARNESS FOR SHORT CIRCUIT**

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

- 48 (L) - Ground : Continuity should not exist.**
- 49 (Y) - Ground : Continuity should not exist.**

OK or NG

- OK >> GO TO 12.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between IPDM E/R and ABS actuator and electric unit (control unit).
  - Harness between IPDM E/R and harness connector E105.



**12. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION**

Check components inspection. Refer to [LAN-156, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-128, "Work Flow"](#).
- NG >> Replace ECM and/or IPDM E/R.

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
LAN  
L  
M

## IPDM E/R Ignition Relay Circuit Check

AKS006R9

Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-45, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#).

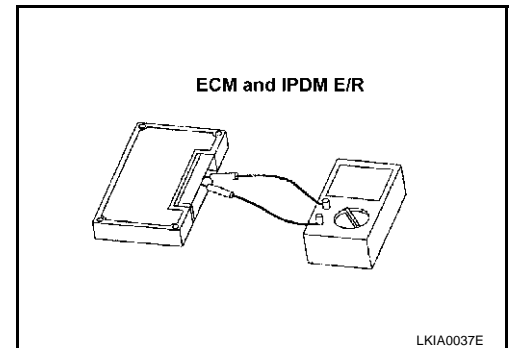
## Component Inspection

AKS006RA

### ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value ( $\Omega$ ) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	





## CAN SYSTEM (TYPE 5)

PFP:23710

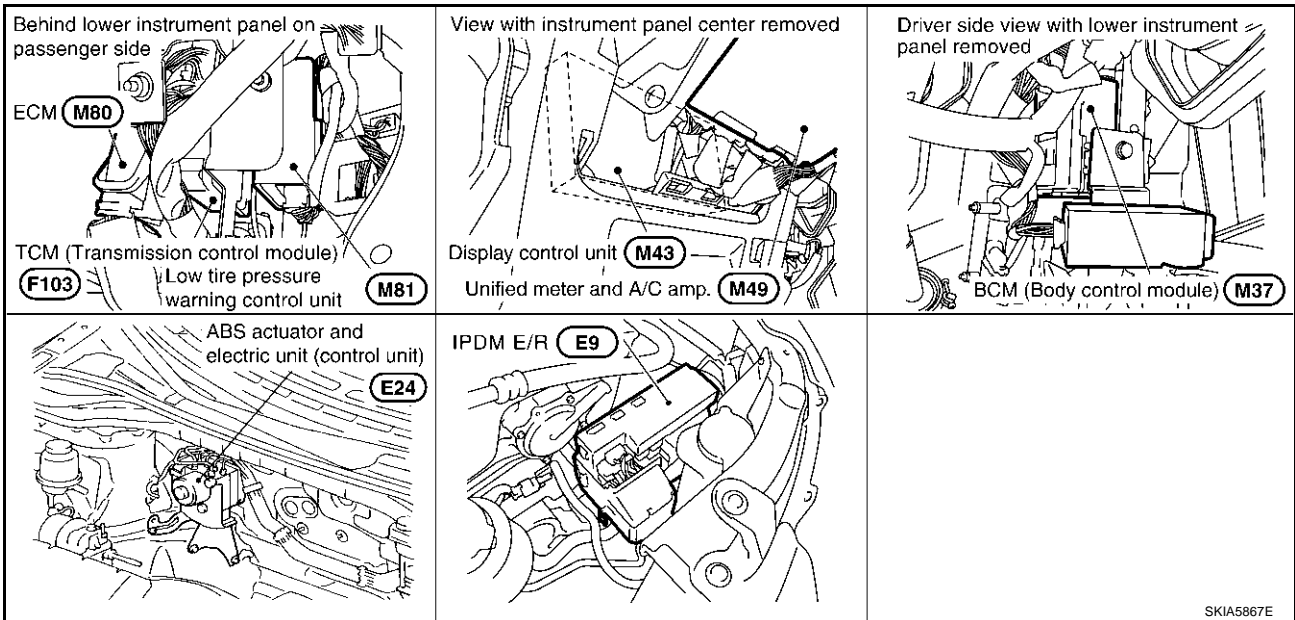
### System Description

AKS006QA

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

### Component Parts and Harness Connector Location

AKS006QB



A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
L  
M

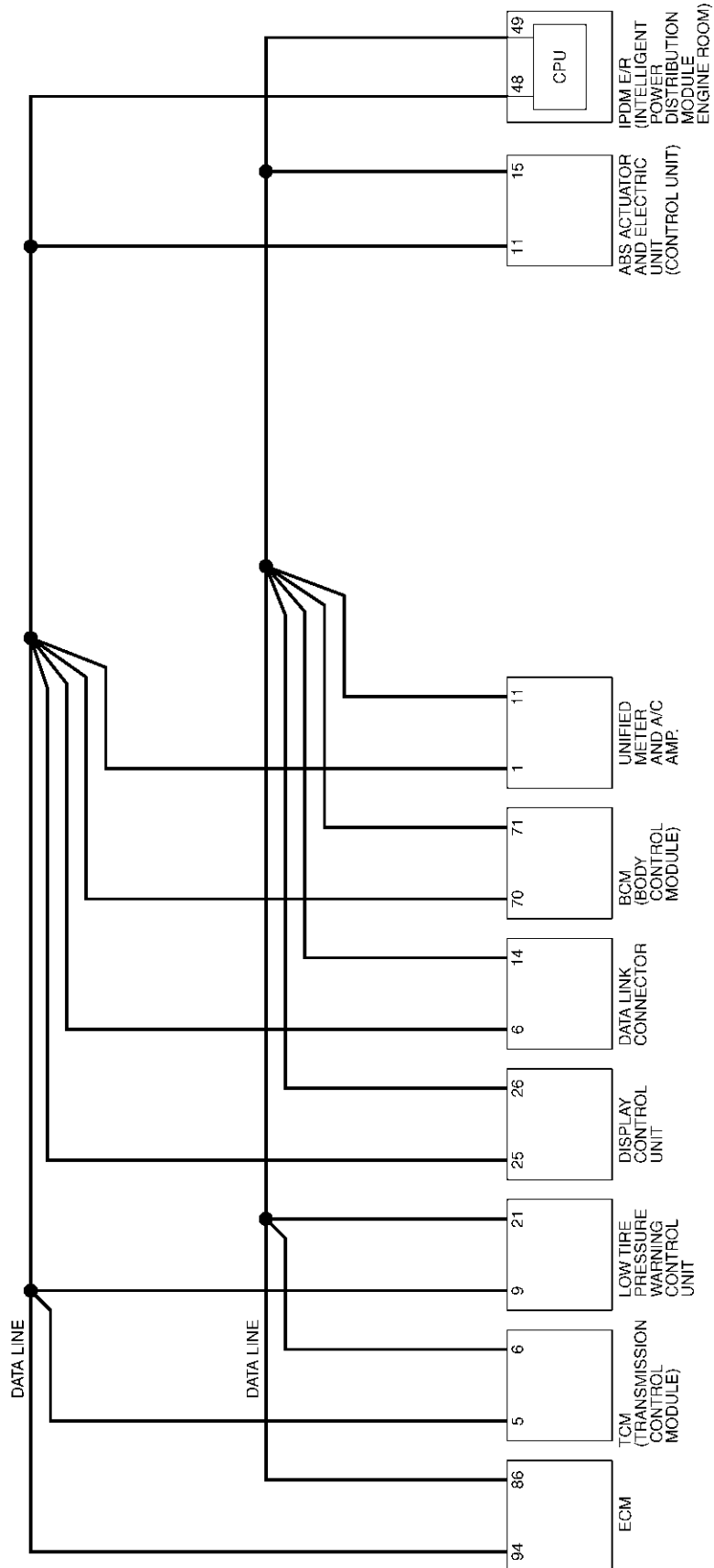
LAN

# CAN SYSTEM (TYPE 5)

[CAN]

## Schematic

AKS006QC



TKWA0939E

# CAN SYSTEM (TYPE 5)

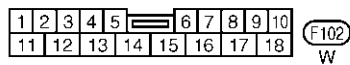
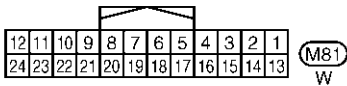
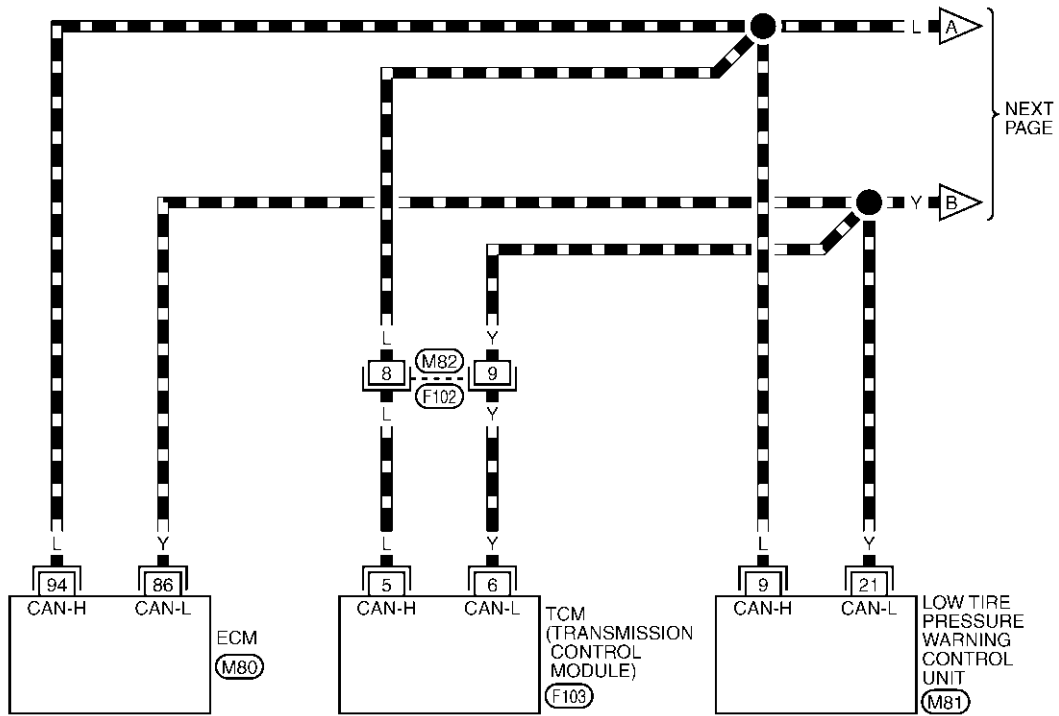
[CAN]

## Wiring Diagram - CAN -

AKS0060D

### LAN-CAN-13

▬ : DATA LINE

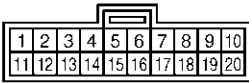
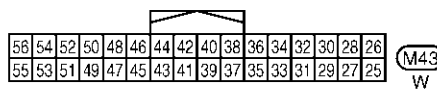
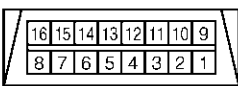
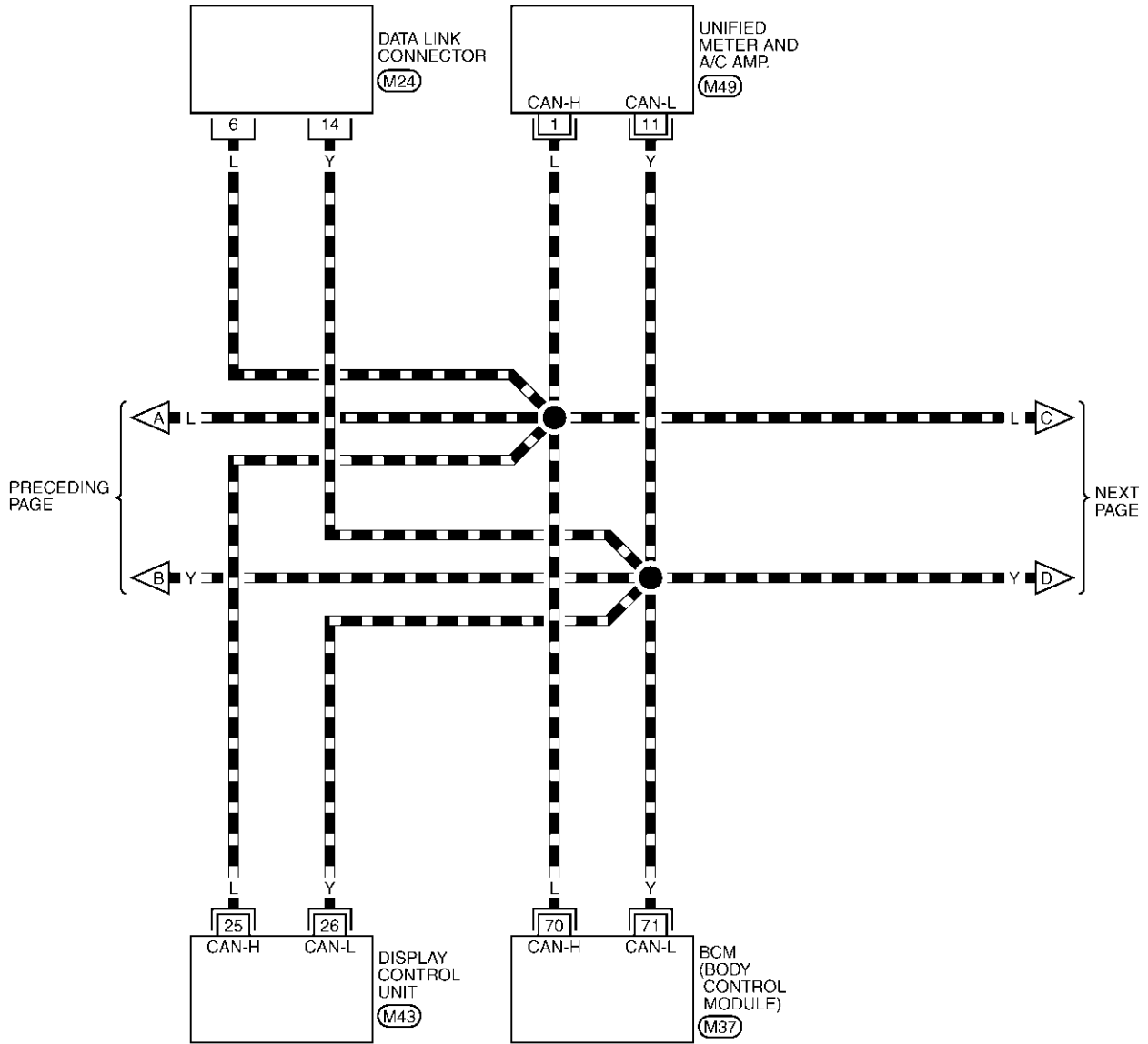


REFER TO THE FOLLOWING.  
 (M80), (F103) -ELECTRICAL  
 UNITS

TKWA0940E

## LAN-CAN-14

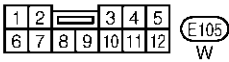
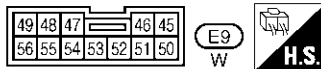
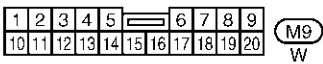
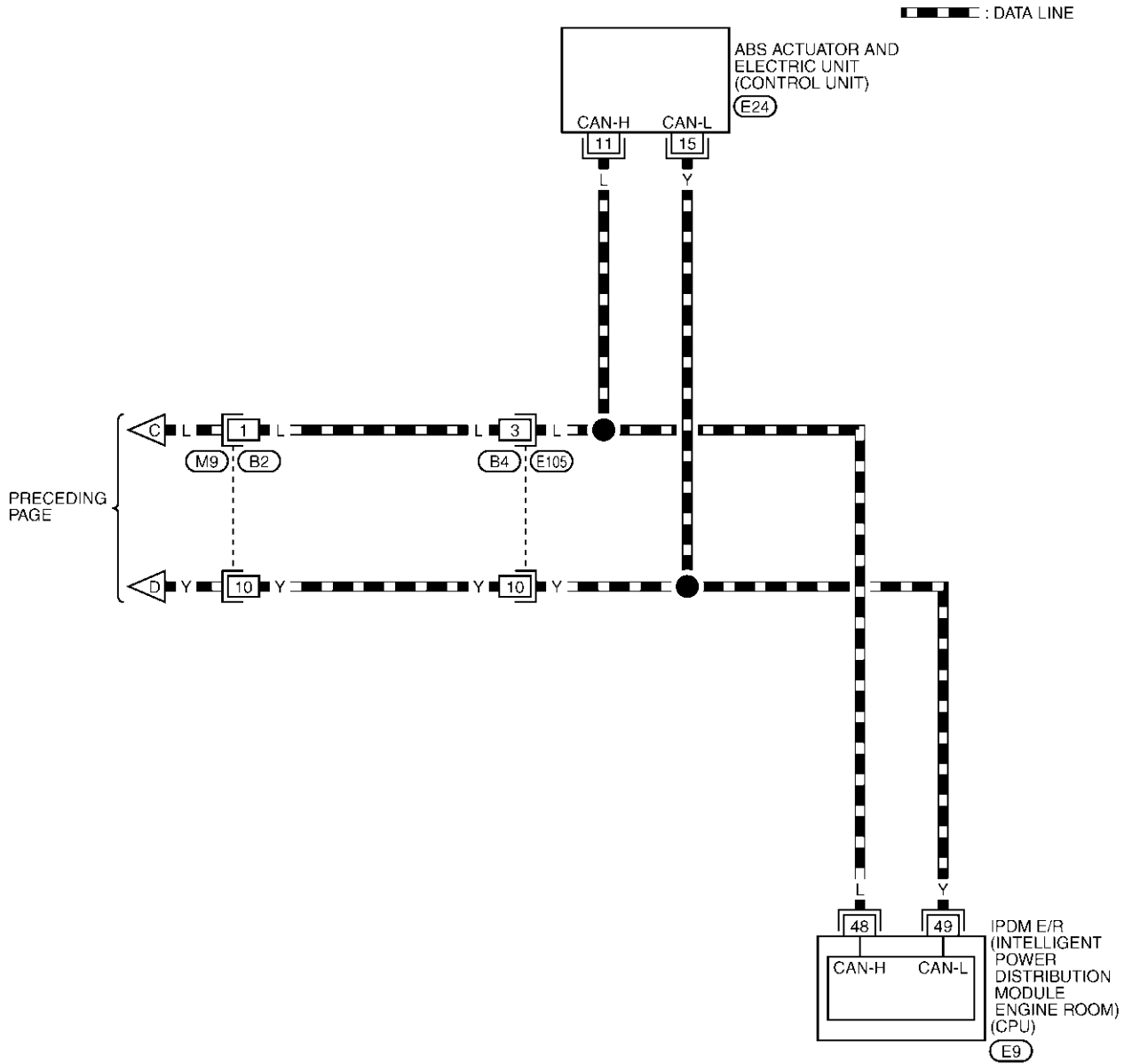
▬ : DATA LINE



REFER TO THE FOLLOWING.  
M37 -ELECTRICAL UNITS

TKWA0941E

## LAN-CAN-15



REFER TO THE FOLLOWING.  
E24 -ELECTRICAL UNITS

## Work Flow

- When there are no indications of "TRANSMISSION", "AIR PRESSURE MONITOR" or "METER A/C AMP" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".

(Example)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="4" style="text-align: center;">NISSAN</td></tr> <tr><td colspan="4" style="text-align: center;">CONSULT- II</td></tr> <tr><td colspan="4" style="text-align: center;">ENGINE</td></tr> <tr><td colspan="4" style="text-align: center;">START (NISSAN BASED VHCL)</td></tr> <tr><td colspan="4" style="text-align: center;">START (RENAULT BASED VHCL)</td></tr> <tr><td colspan="4" style="text-align: center;">SUB MODE</td></tr> <tr> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;">LIGHT</td> <td style="width: 25%;">COPY</td> </tr> </table>	NISSAN				CONSULT- II				ENGINE				START (NISSAN BASED VHCL)				START (RENAULT BASED VHCL)				SUB MODE						LIGHT	COPY	➔	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="4" style="text-align: center;">SELECT SYSTEM</td></tr> <tr><td colspan="4" style="text-align: center;">ENGINE</td></tr> <tr><td colspan="4" style="text-align: center;">A/T</td></tr> <tr><td colspan="4" style="text-align: center;">ABS</td></tr> <tr><td colspan="4" style="text-align: center;">AIR BAG</td></tr> <tr><td colspan="4" style="text-align: center;">BCM</td></tr> <tr><td colspan="4" style="text-align: center;">METER A/C AMP</td></tr> <tr><td colspan="4" style="text-align: center;"> </td></tr> <tr> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;">BACK</td> <td style="width: 25%;">LIGHT COPY</td> </tr> </table>	SELECT SYSTEM				ENGINE				A/T				ABS				AIR BAG				BCM				METER A/C AMP										BACK	LIGHT COPY
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- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP" and "ABS" displayed on CONSULT-II.

(Example)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="4" style="text-align: center;">SELECT DIAG MODE</td></tr> <tr><td colspan="4" style="text-align: center;">WORK SUPPORT</td></tr> <tr><td colspan="4" style="text-align: center;">SELF-DIAG RESULTS</td></tr> <tr><td colspan="4" style="text-align: center;">DATA MONITOR</td></tr> <tr><td colspan="4" style="text-align: center;">DATA MONITOR (SPEC)</td></tr> <tr><td colspan="4" style="text-align: center;">CAN DIAG SUPPORT MNTR</td></tr> <tr><td colspan="4" style="text-align: center;">ACTIVE TEST</td></tr> <tr><td colspan="4" style="text-align: center;"> </td></tr> <tr><td colspan="4" style="text-align: center;">Scroll Down</td></tr> <tr> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;">BACK</td> <td style="width: 25%;">LIGHT COPY</td> </tr> </table>	SELECT DIAG MODE				WORK SUPPORT				SELF-DIAG RESULTS				DATA MONITOR				DATA MONITOR (SPEC)				CAN DIAG SUPPORT MNTR				ACTIVE TEST								Scroll Down						BACK	LIGHT COPY	➔	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="4" style="text-align: center;">SELF-DIAG RESULTS</td></tr> <tr><td colspan="2" style="text-align: center;">DTC RESULTS</td><td colspan="2" style="text-align: center;">TIME</td></tr> <tr> <td style="width: 50%;">CAN COMM CIRCUIT [U1000]</td> <td style="width: 50%;"></td> <td style="width: 50%;"></td> <td style="width: 50%;"></td> </tr> <tr><td colspan="4" style="text-align: center;"> </td></tr> <tr><td colspan="4" style="text-align: center;"> </td></tr> <tr><td colspan="4" style="text-align: center;"> </td></tr> <tr><td colspan="4" style="text-align: center;">F.F.DATA</td></tr> <tr><td colspan="2" style="text-align: center;">ERASE</td><td colspan="2" style="text-align: center;">PRINT</td></tr> <tr> <td style="width: 25%;">MODE</td> <td style="width: 25%;">BACK</td> <td style="width: 25%;">LIGHT</td> <td style="width: 25%;">COPY</td> </tr> </table>	SELF-DIAG RESULTS				DTC RESULTS		TIME		CAN COMM CIRCUIT [U1000]																F.F.DATA				ERASE		PRINT		MODE	BACK	LIGHT	COPY
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- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP" and "ABS" displayed on CONSULT-II.

(Example)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="4" style="text-align: center;">SELECT DIAG MODE</td></tr> <tr><td colspan="4" style="text-align: center;">WORK SUPPORT</td></tr> <tr><td colspan="4" style="text-align: center;">SELF-DIAG RESULTS</td></tr> <tr><td colspan="4" style="text-align: center;">DATA MONITOR</td></tr> <tr><td colspan="4" style="text-align: center;">DATA MONITOR (SPEC)</td></tr> <tr><td colspan="4" style="text-align: center;">CAN DIAG SUPPORT MNTR</td></tr> <tr><td colspan="4" style="text-align: center;">ACTIVE TEST</td></tr> <tr><td colspan="4" style="text-align: center;"> </td></tr> <tr><td colspan="4" style="text-align: center;">Scroll Down</td></tr> <tr> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;">BACK</td> <td style="width: 25%;">LIGHT COPY</td> </tr> </table>	SELECT DIAG MODE				WORK SUPPORT				SELF-DIAG RESULTS				DATA MONITOR				DATA MONITOR (SPEC)				CAN DIAG SUPPORT MNTR				ACTIVE TEST								Scroll Down						BACK	LIGHT COPY	➔	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="4" style="text-align: center;">CAN DIAG SUPPORT MNTR</td></tr> <tr><td colspan="4" style="text-align: center;">ENGINE</td></tr> <tr><td colspan="2" style="text-align: center;"> </td><td colspan="2" style="text-align: center;">PRSNT</td></tr> <tr><td>INITIAL DIAG</td><td>OK</td><td> </td><td> </td></tr> <tr><td>TRANSMIT DIAG</td><td>OK</td><td> </td><td> </td></tr> <tr><td>TCM</td><td>OK</td><td> </td><td> </td></tr> <tr><td>VDC/TCS/ABS</td><td>OK</td><td> </td><td> </td></tr> <tr><td>METER/M&amp;A</td><td>OK</td><td> </td><td> </td></tr> <tr><td>ICC</td><td>UNKWN</td><td> </td><td> </td></tr> <tr><td>BCM/SEC</td><td>OK</td><td> </td><td> </td></tr> <tr><td>IPDM E/R</td><td>OK</td><td> </td><td> </td></tr> <tr><td>AWD/4WD/e4WD</td><td>UNKWN</td><td> </td><td> </td></tr> <tr><td colspan="2" style="text-align: center;">PRINT</td><td colspan="2" style="text-align: center;">Scroll Down</td></tr> <tr> <td style="width: 25%;">MODE</td> <td style="width: 25%;">BACK</td> <td style="width: 25%;">LIGHT</td> <td style="width: 25%;">COPY</td> </tr> </table>	CAN DIAG SUPPORT MNTR				ENGINE						PRSNT		INITIAL DIAG	OK			TRANSMIT DIAG	OK			TCM	OK			VDC/TCS/ABS	OK			METER/M&A	OK			ICC	UNKWN			BCM/SEC	OK			IPDM E/R	OK			AWD/4WD/e4WD	UNKWN			PRINT		Scroll Down		MODE	BACK	LIGHT	COPY
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- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-164, "CHECK SHEET"](#) .

- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "v" onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-164, "CHECK SHEET"](#) .

**NOTE:**

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual.  
So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the navigation system. Refer to [AV-203, "CAN Communication Line Check"](#) .

- Attach the CAN DIAG SUPPORT MONITOR check sheet onto the check sheet. Refer to [LAN-164, "CHECK SHEET"](#) .

# CAN SYSTEM (TYPE 5)

[CAN]

8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG SUPPORT MONITOR check sheet. Refer to [LAN-164, "CHECK SHEET"](#) .

**NOTE:**

If "NG" is displayed on "CAN COMM" as "CAN DIAG SUPPORT MONITOR" for the diagnosed control unit, replace the control unit. Refer to [AV-203, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-166, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

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# CAN SYSTEM (TYPE 5)

[CAN]

## CHECK SHEET

**NOTE:**

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

Attach copy of  
display control unit  
CAN DIAG SUPPORT MONITOR check sheet

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# CAN SYSTEM (TYPE 5)

[CAN]

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Attach copy of  
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Attach copy of  
TRANSMISSION  
SELF-DIAG RESULTS

Attach copy of  
AIR PRESSURE  
MONITOR  
SELF-DIAG RESULTS

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
METER A/C AMP  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

Attach copy of  
ENGINE  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
TRANSMISSION  
CAN DIAG SUPPORT  
MNTR

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MNTR

Attach copy of  
BCM  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
METER A/C AMP  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ABS  
CAN DIAG SUPPORT  
MNTR

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## CHECK SHEET RESULTS (EXAMPLE)

### NOTE:

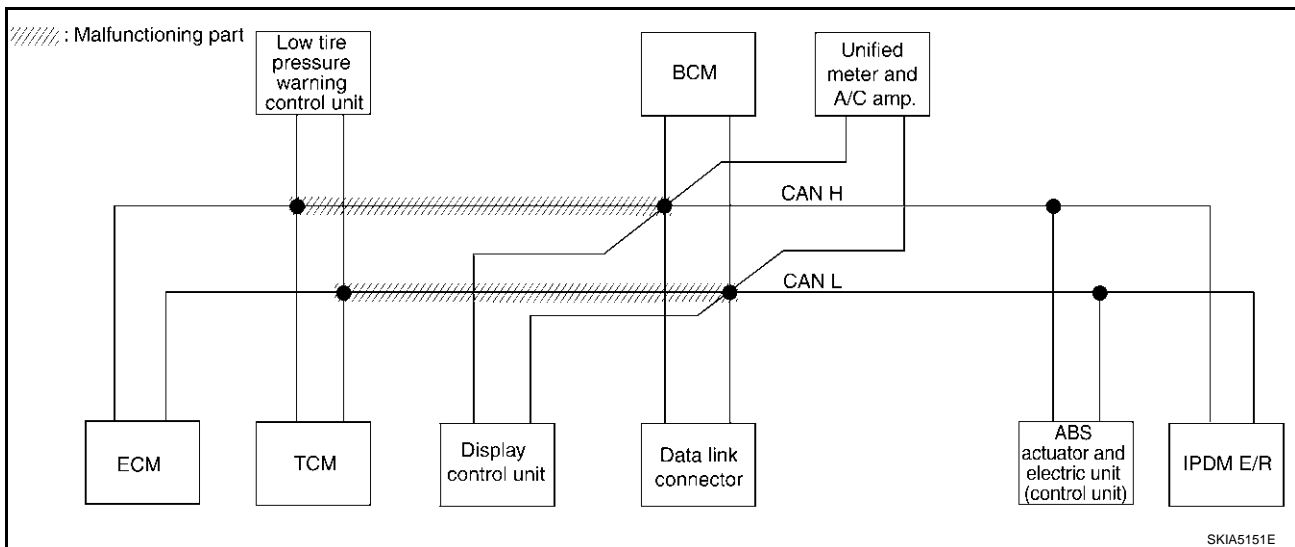
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

### Case 1

Check harness between TCM and data link connector. Refer to [LAN-178, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	

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# CAN SYSTEM (TYPE 5)

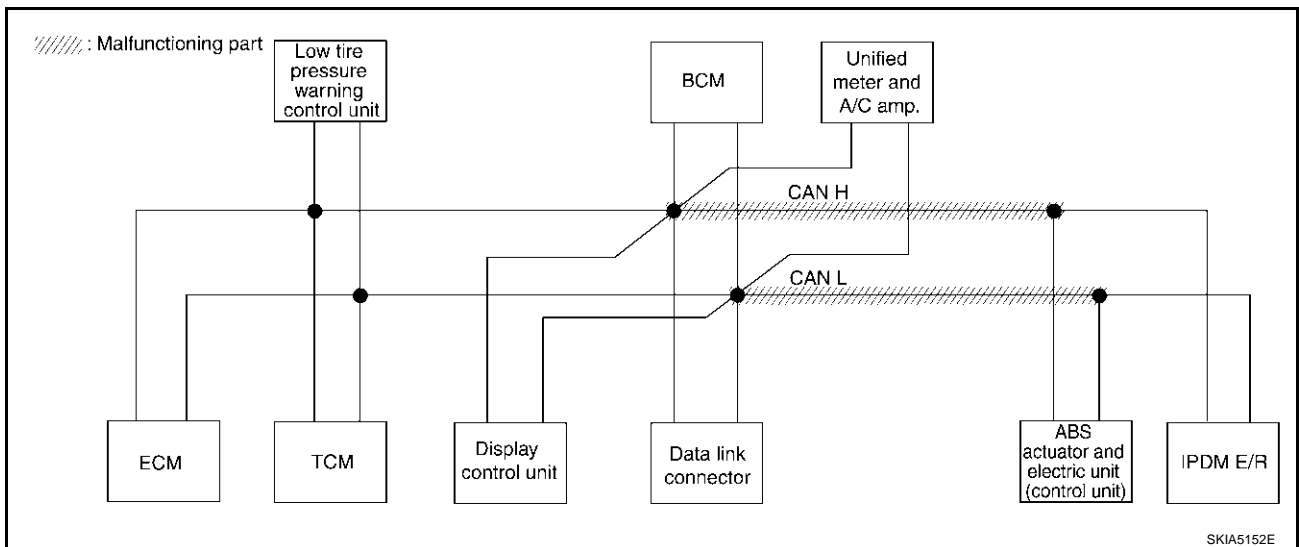
[CAN]

## Case 2

Check harness between data link connector and ABS actuator and electric unit (control unit). Refer to [LAN-178, "Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit \(Control Unit\)"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN ✓
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN ✓	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7 ✓
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN ✓
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN ✓	—
ABS	—	NG	UNKWN	UNKWN ✓	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 5)

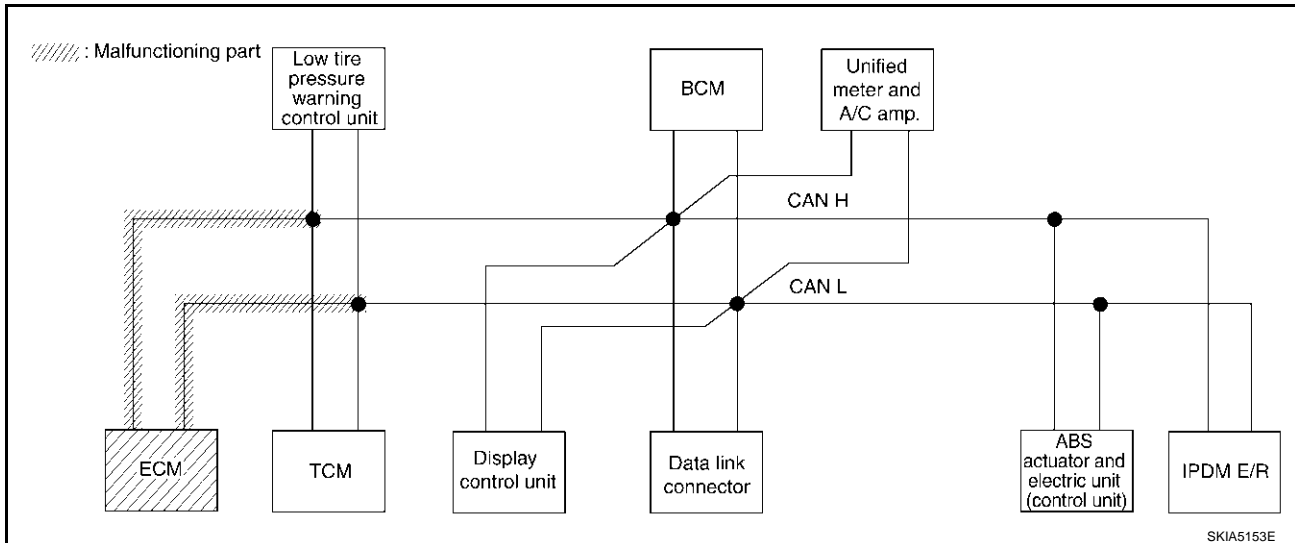
[CAN]

## Case 3

Check ECM circuit. Refer to [LAN-179, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N
TRANSMISSION	No indication	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—
AIR PRESSURE MONITOR	No indication	NG	UNKW <sup>✓</sup> N	—	—	—	—	—	UNKW <sup>✓</sup> N	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	—	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N
METER A/C AMP	No indication	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—
ABS	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 5)

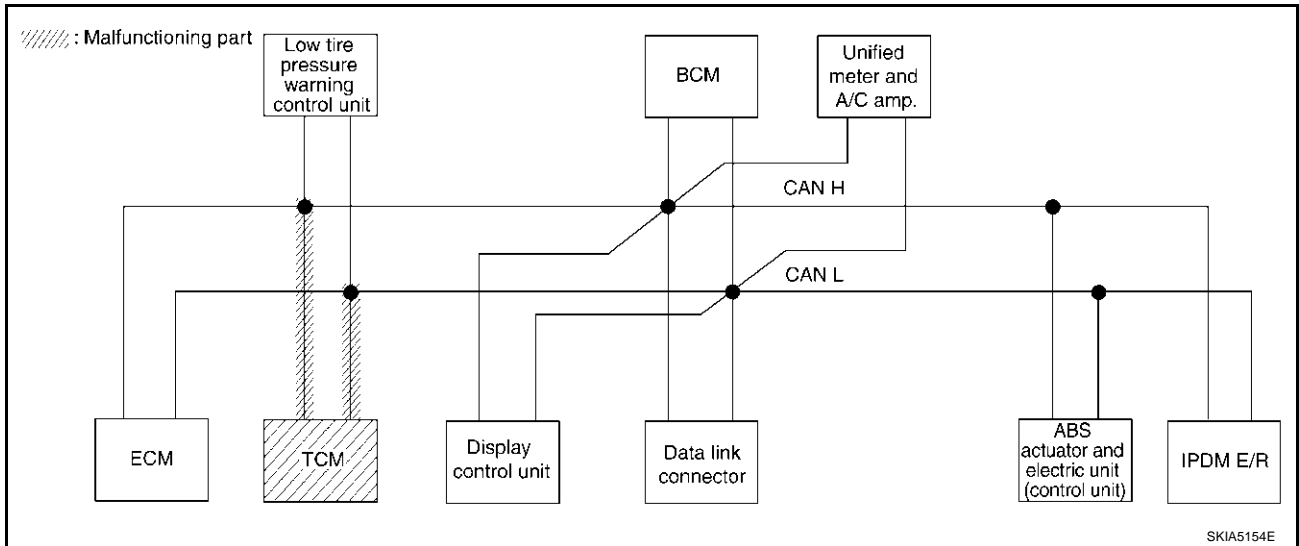
[CAN]

## Case 4

Check TCM circuit. Refer to [LAN-180, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 5)

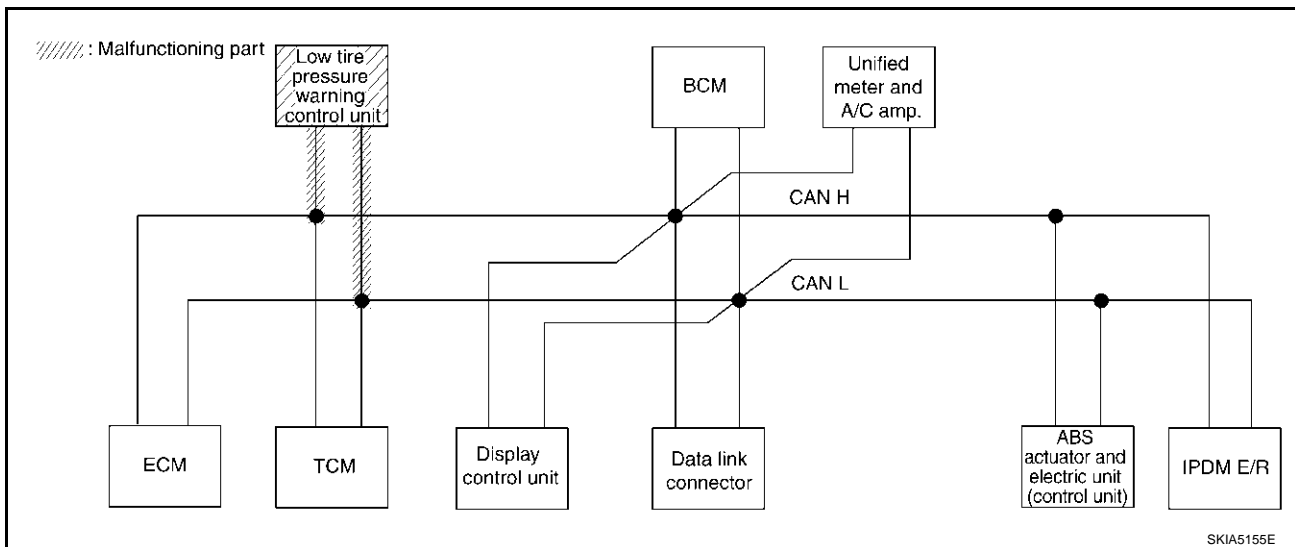
[CAN]

## Case 5

Check low tire pressure warning control unit circuit. Refer to [LAN-180, "Low Tire Pressure Warning Control Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 5)

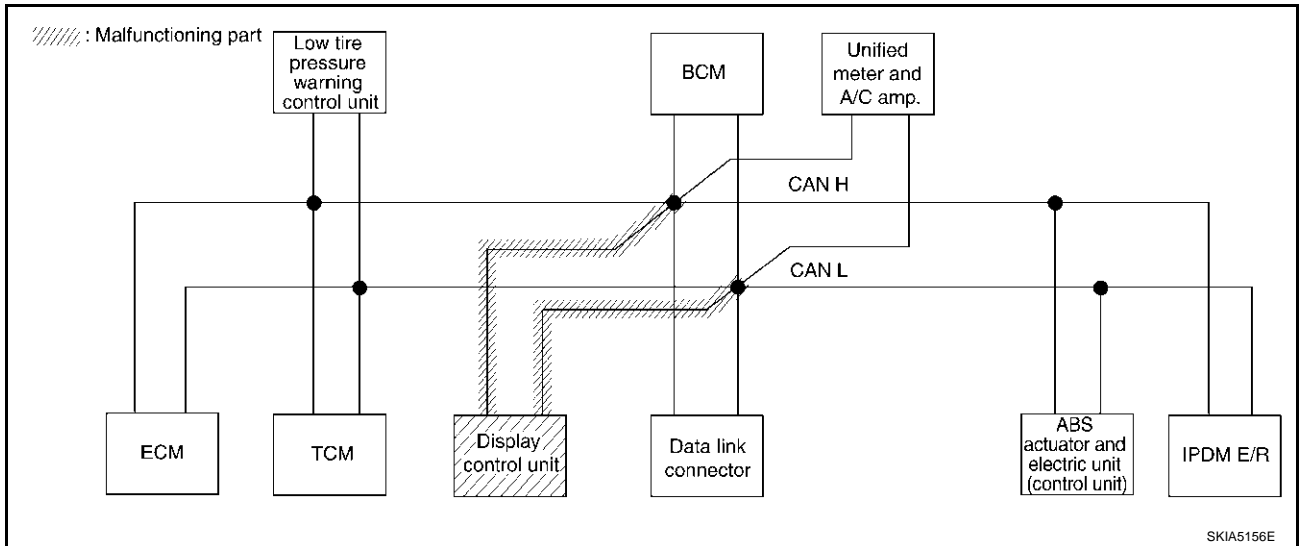
[CAN]

## Case 6

Check display control unit circuit. Refer to [LAN-181, "Display Control Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	
Display control unit	—	CAN COMM	CAN ✓CRC 1	CAN ✓CRC 3	—	CAN ✓CRC 6	—	CAN ✓CRC 2	CAN ✓CRC 5	—	CAN ✓CRC 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	

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# CAN SYSTEM (TYPE 5)

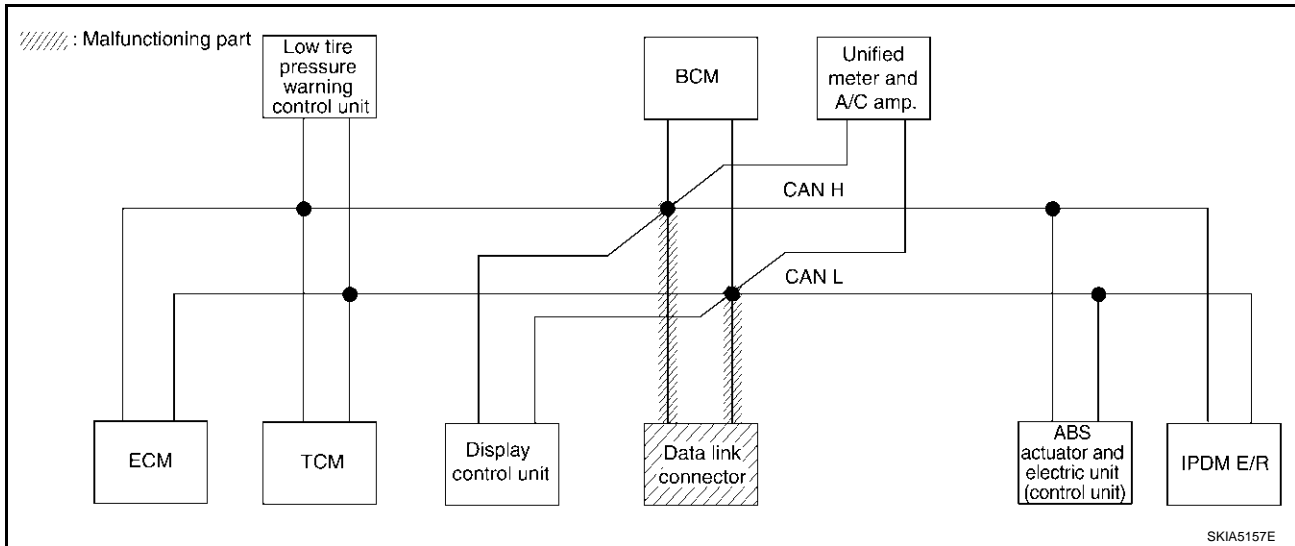
[CAN]

## Case 7

Check data link connector circuit. Refer to [LAN-181, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 5)

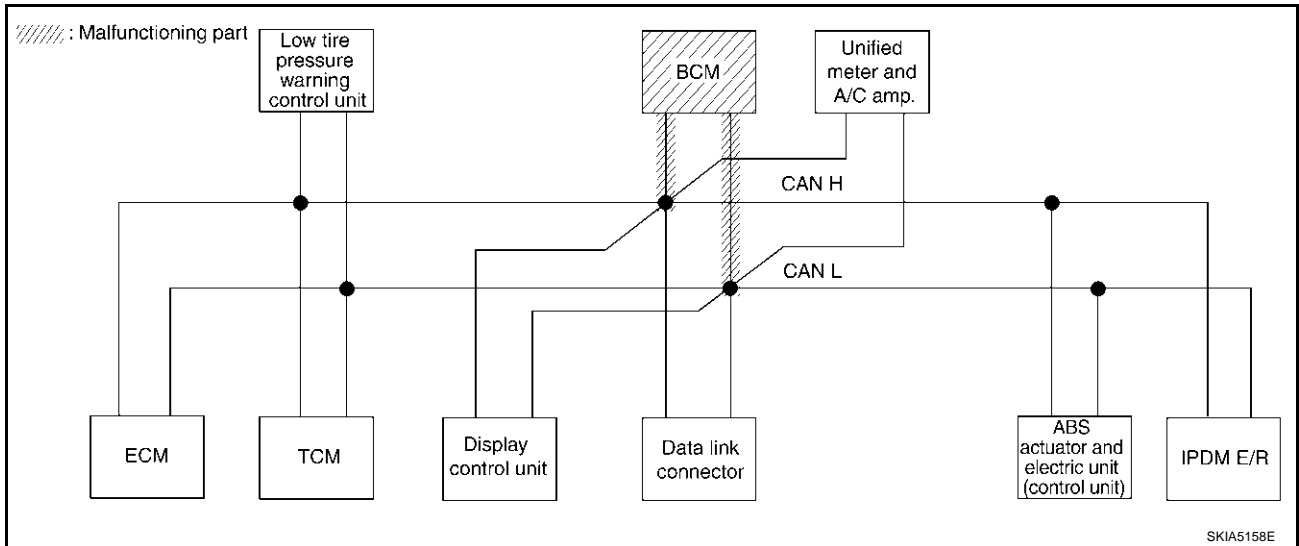
[CAN]

## Case 8

Check BCM circuit. Refer to [LAN-182, "BCM Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	

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# CAN SYSTEM (TYPE 5)

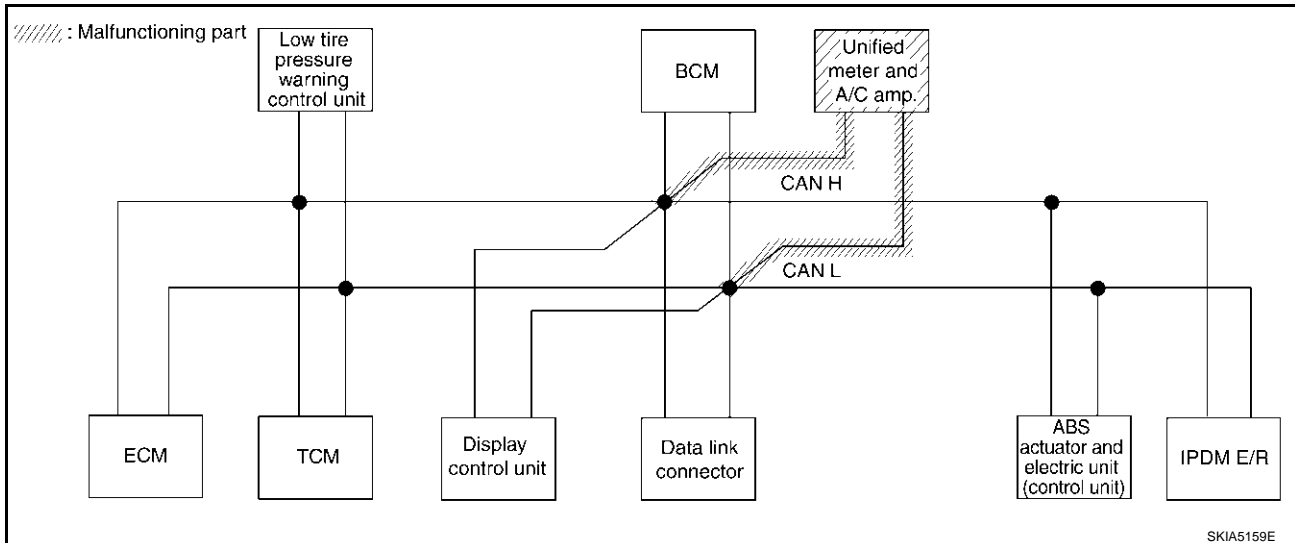
[CAN]

## Case 9

Check unified meter and A/C amp. circuit. Refer to [LAN-182, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 5)

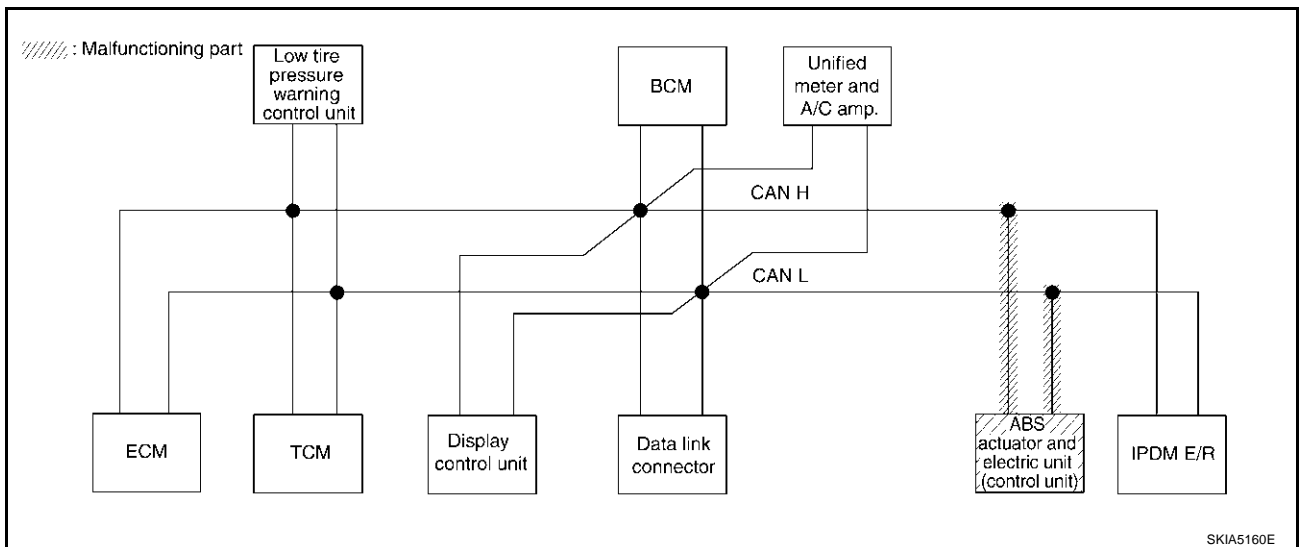
[CAN]

## Case 10

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-183, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN ✓	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN ✓	—
ABS	—	NG	UNKWN ✓	UNKWN ✓	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 5)

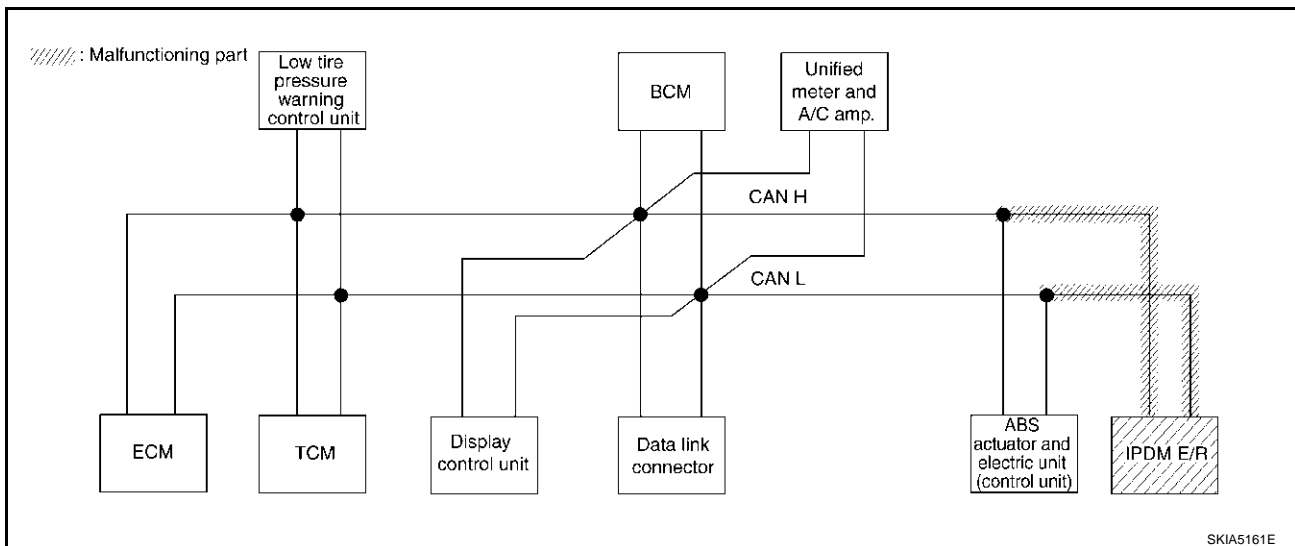
[CAN]

## Case 11

Check IPDM E/R circuit. Refer to [LAN-183, "IPDM E/R Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN ✓
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7 ✓
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN ✓
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

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**Case 12**

Check CAN communication circuit. Refer to [LAN-184, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—	—	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N
TRANSMISSION	No indication <sup>✓</sup>	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	—	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—
AIR PRESSURE MONITOR	No indication <sup>✓</sup>	NG	UNKW <sup>✓</sup> N	—	—	—	—	—	—	UNKW <sup>✓</sup> N	—	—
Display control unit	—	CAN COMM	CAN CIRC 1 <sup>✓</sup>	CAN CIRC 3 <sup>✓</sup>	—	CAN CIRC 6 <sup>✓</sup>	—	CAN CIRC 2 <sup>✓</sup>	CAN CIRC 5 <sup>✓</sup>	—	—	CAN CIRC 7 <sup>✓</sup>
BCM	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	—	—	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N
METER A/C AMP	No indication <sup>✓</sup>	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—	—
ABS	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	—	—	—	—	—

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**Case 13**

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-187, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—	—	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N
TRANSMISSION	No indication <sup>✓</sup>	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	—	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—
AIR PRESSURE MONITOR	No indication <sup>✓</sup>	NG	UNKW <sup>✓</sup> N	—	—	—	—	—	—	UNKW <sup>✓</sup> N	—	—
Display control unit	—	CAN COMM	CAN CIRC 1 <sup>✓</sup>	CAN CIRC 3 <sup>✓</sup>	—	CAN CIRC 6 <sup>✓</sup>	—	CAN CIRC 2 <sup>✓</sup>	CAN CIRC 5 <sup>✓</sup>	—	—	CAN CIRC 7 <sup>✓</sup>
BCM	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	—	—	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N
METER A/C AMP	No indication <sup>✓</sup>	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—	—
ABS	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	—	—	—	—	—

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## Case 14

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-187, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWVN	—	UNKWVN	—	—	UNKWVN	UNKWVN	—	UNKWVN
TRANSMISSION	No indication	NG	UNKWVN	UNKWVN	—	—	—	—	UNKWVN	UNKWVN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWVN	—	—	—	—	—	UNKWVN	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKWVN	UNKWVN	—	—	—	—	UNKWVN	—	UNKWVN
METER A/C AMP	No indication	—	UNKWVN	UNKWVN	UNKWVN	UNKWVN	UNKWVN	UNKWVN	—	UNKWVN	—
ABS	—	NG	UNKWVN	UNKWVN	—	—	—	—	—	—	—

PKIB0496E

## Circuit Check Between TCM and Data Link Connector

AKS006QF

### 1. CHECK HARNESS FOR OPEN CIRCUIT

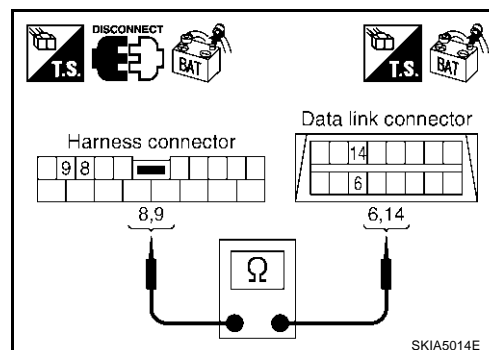
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

**8 (L) - 6 (L) : Continuity should exist.**

**9 (Y) - 14 (Y) : Continuity should exist.**

#### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-162, "Work Flow"](#) .
- NG >> Repair harness.



## Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit)

AKS006QG

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector M9
  - Harness connector B2
  - Harness connector B4
  - Harness connector E105

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

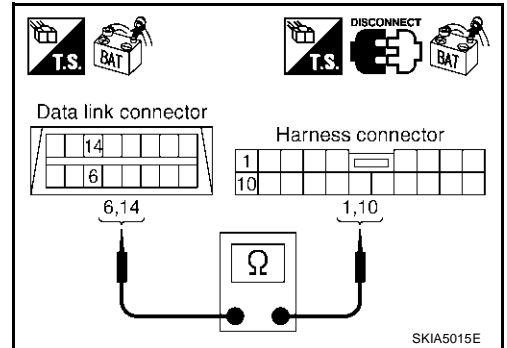
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

**6 (L) - 1 (L) : Continuity should exist.**  
**14 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

- OK >> GO TO 3.  
 NG >> Repair harness.



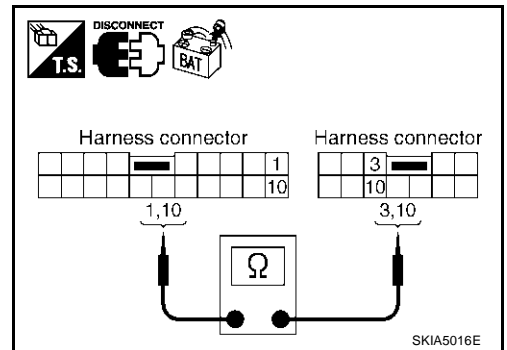
**3. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

**1 (L) - 3 (L) : Continuity should exist.**  
**10 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

- OK >> GO TO 4.  
 NG >> Repair harness.



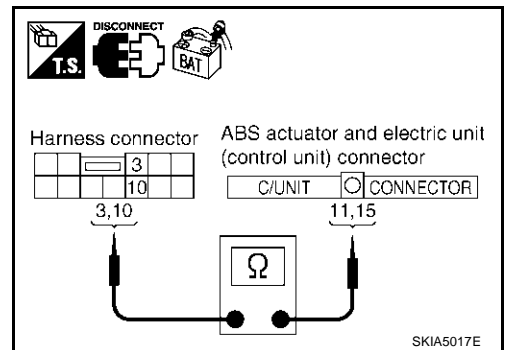
**4. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

**3 (L) - 11 (L) : Continuity should exist.**  
**10 (Y) - 15 (Y) : Continuity should exist.**

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-162, "Work Flow"](#).  
 NG >> Repair harness.



**ECM Circuit Check**

**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

AKS006QH

## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

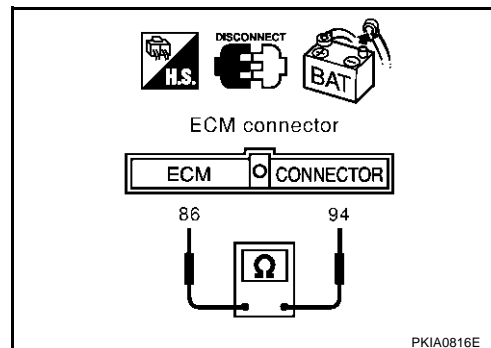
**94 (L) - 86 (Y)**

**: Approx. 108 - 132Ω**

OK or NG

OK >> Replace ECM.

NG >> Repair harness between ECM and TCM.



AKS006QI

## TCM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
  - TCM connector
  - Harness connector F102
  - Harness connector M82

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

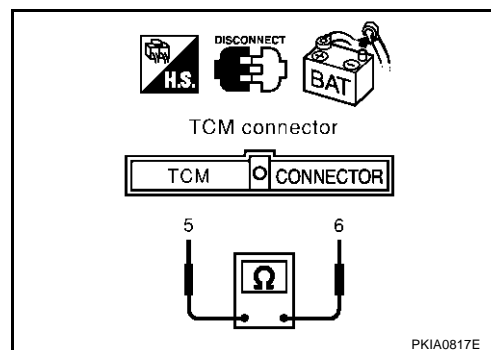
**5 (L) - 6 (Y)**

**: Approx. 54 - 66Ω**

OK or NG

OK >> Replace TCM.

NG >> Repair harness between TCM and low tire pressure warning control unit.



AKS006QJ

## Low Tire Pressure Warning Control Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of low tire pressure warning control unit for damage, bend and loose connection (control unit side and harness side).

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.



## 2. CHECK HARNESS FOR OPEN CIRCUIT

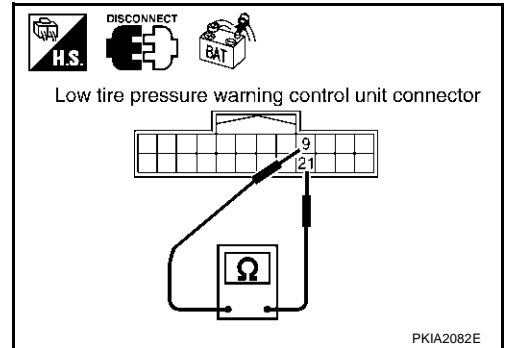
1. Disconnect low tire pressure warning control unit connector.
2. Check resistance between low tire pressure warning control unit harness connector M81 terminals 9 (L) and 21 (Y).

9 (L) - 21 (Y)

: Approx. 54 - 66Ω

### OK or NG

- OK >> Replace low tire pressure warning control unit.  
 NG >> Repair harness between low tire pressure warning control unit and TCM.



AKS006QK

## Display Control Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display control unit for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

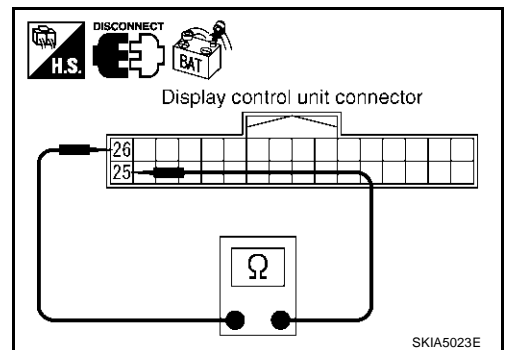
1. Disconnect display control unit connector.
2. Check resistance between display control unit harness connector M43 terminals 25 (L) and 26 (Y).

25 (L) - 26 (Y)

: Approx. 54 - 66Ω

### OK or NG

- OK >> Replace display control unit.  
 NG >> Repair harness between display control unit and data link connector.



AKS006QL

## Data Link Connector Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

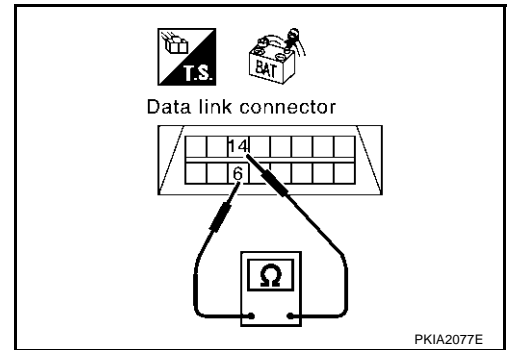
## 2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Diagnose again. Refer to [LAN-162, "Work Flow"](#).  
 NG >> Repair harness between data link connector and BCM.



AKS006QM

## BCM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

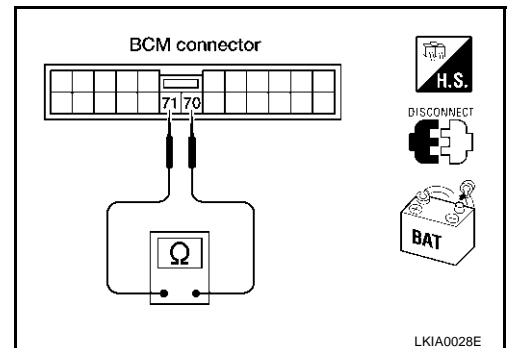
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M37 terminals 70 (L) and 71 (Y).

**70 (L) - 71 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace BCM. Refer to [BCS-36, "Removal and Installation of BCM"](#).  
 NG >> Repair harness between BCM and data link connector.



AKS006QM

## Unified Meter and A/C Amp. Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

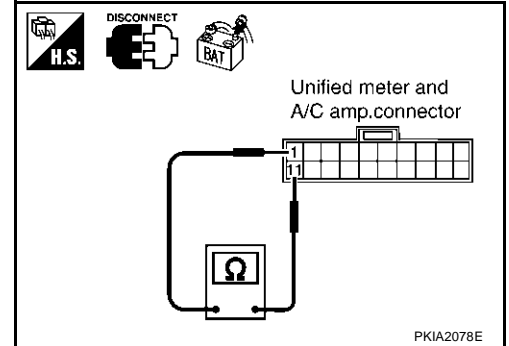
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

**1 (L) - 11 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace unified meter and A/C amp.  
 NG >> Repair harness between unified meter and A/C amp. and data link connector.



## ABS Actuator and Electric Unit (Control Unit) Circuit Check

AKS006QO

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

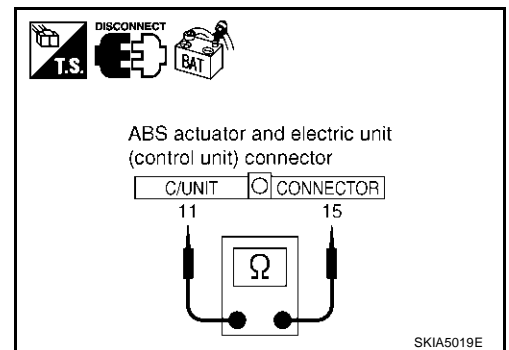
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

**11 (L) - 15 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).  
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



## IPDM E/R Circuit Check

AKS006QP

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

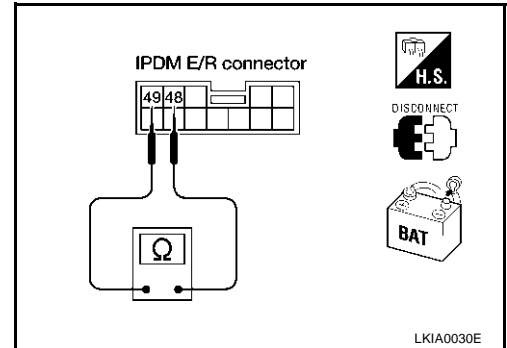
1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y)**

**: Approx. 108 - 132Ω**

### OK or NG

- OK >> Replace IPDM E/R.  
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



## CAN Communication Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, meter side and harness side).

- ECM
- TCM
- Low tire pressure warning control unit
- Display control unit
- BCM
- Unified meter and A/C amp.
- ABS actuator and electric unit (control unit)
- IPDM E/R
- Between ECM and IPDM E/R
- Between ECM and TCM

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

AKS006Q0

## 2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
  - ECM connector
  - Low tire pressure warning control unit connector
  - Harness connector M82
  - Display control unit connector
  - BCM connector
  - Unified meter and A/C amp. connector
  - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

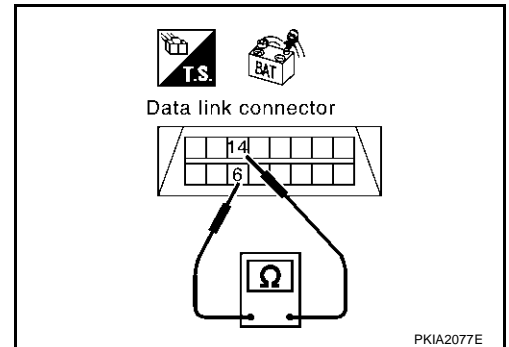
**6 (L) - 14 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 3.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9.



## 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

**6 (L) - Ground : Continuity should not exist.**

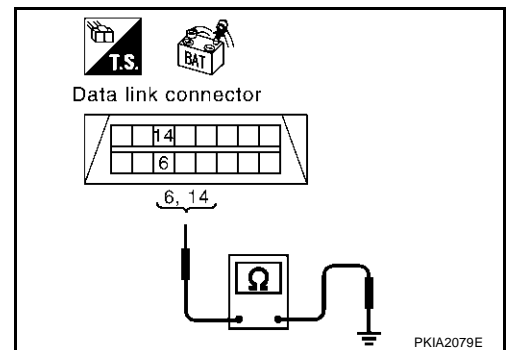
**14 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9.



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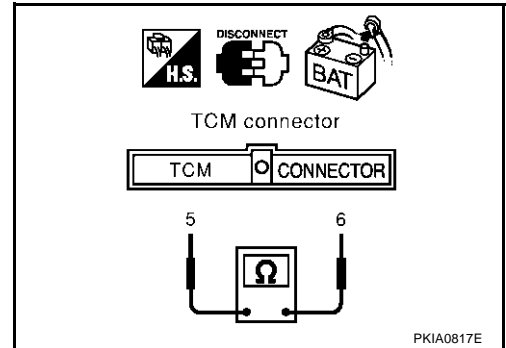
## 4. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Continuity should not exist.**

OK or NG

- OK >> GO TO 5.  
 NG >> Repair harness between TCM and harness connector F102.



## 5. CHECK HARNESS FOR SHORT CIRCUIT

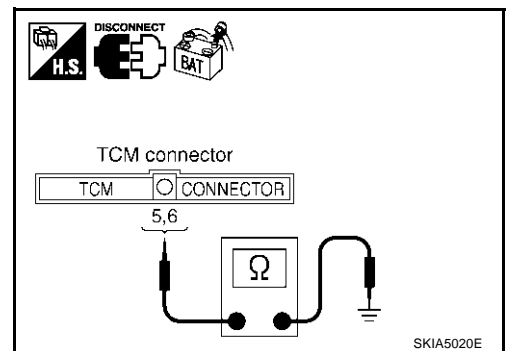
Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

**5 (L) - Ground : Continuity should not exist.**

**6 (Y) - Ground : Continuity should not exist.**

OK or NG

- OK >> GO TO 6.  
 NG >> Repair harness between TCM and harness connector F102.



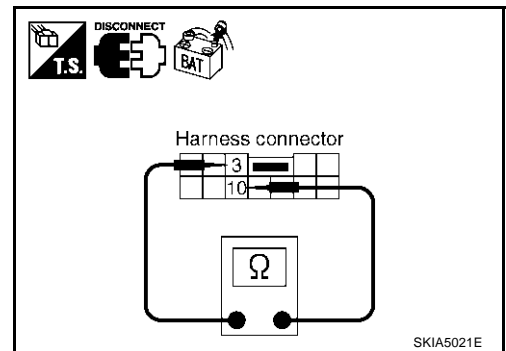
## 6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B4.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

**3 (L) - 10 (Y) : Continuity should not exist.**

OK or NG

- OK >> GO TO 7.  
 NG >> Repair harness between harness connector B4 and harness connector B2.



## 7. CHECK HARNESS FOR SHORT CIRCUIT

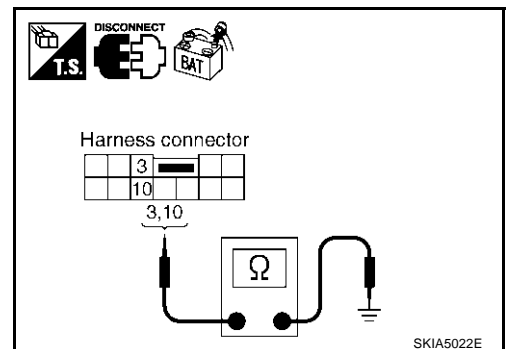
Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

**3 (L) - Ground : Continuity should not exist.**

**10 (Y) - Ground : Continuity should not exist.**

OK or NG

- OK >> GO TO 8.  
 NG >> Repair harness between harness connector B4 and harness connector B2.



**8. CHECK HARNESS FOR SHORT CIRCUIT**

1. Disconnect ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

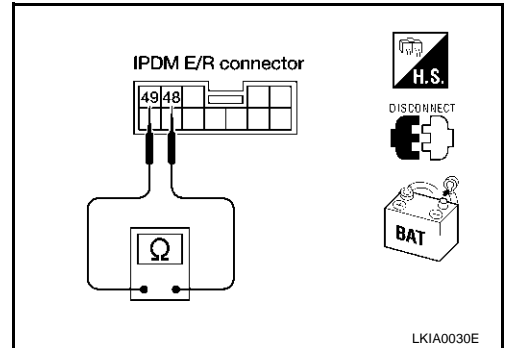
**48 (L) - 49 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 9.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



**9. CHECK HARNESS FOR SHORT CIRCUIT**

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

**48 (L) - Ground : Continuity should not exist.**

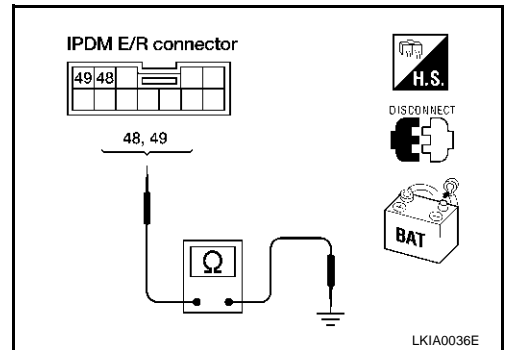
**49 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 10.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



**10. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION**

Check components inspection. Refer to [LAN-187, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#) .

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-162, "Work Flow"](#) .

NG >> Replace ECM and/or IPDM E/R.

**IPDM E/R Ignition Relay Circuit Check**

AKS006QR

Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-45, "IPDM E/R Power/Ground Circuit Inspection"](#) .
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START""](#) .

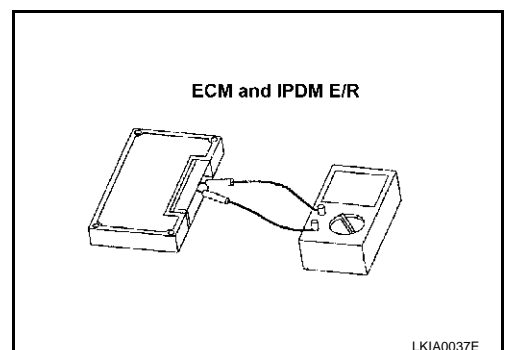
**Component Inspection**

**ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION**

AKS006QS

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



## CAN SYSTEM (TYPE 6)

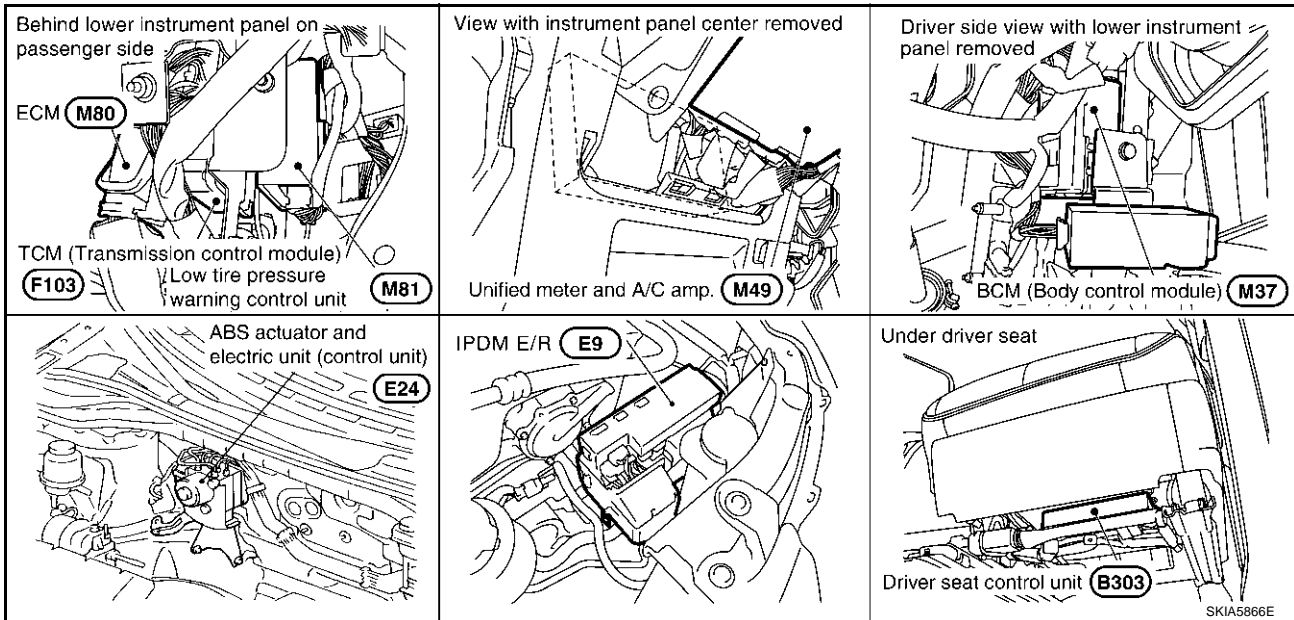
### System Description

AKS006RD

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

### Component Parts and Harness Connector Location

AKS006RE



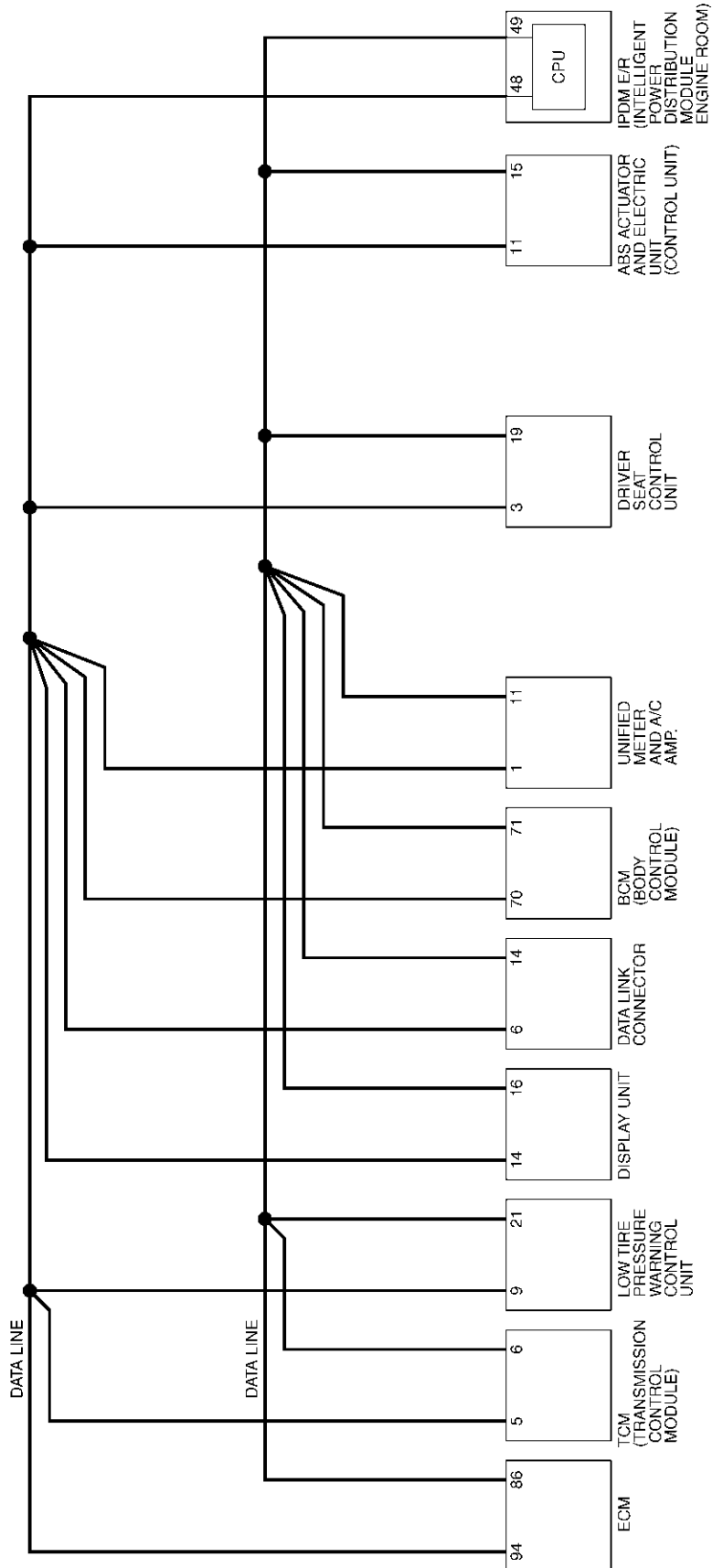


# CAN SYSTEM (TYPE 6)

[CAN]

## Schematic

AKS006RF



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TKWA0943E

# CAN SYSTEM (TYPE 6)

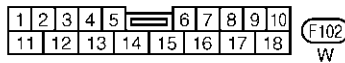
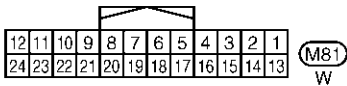
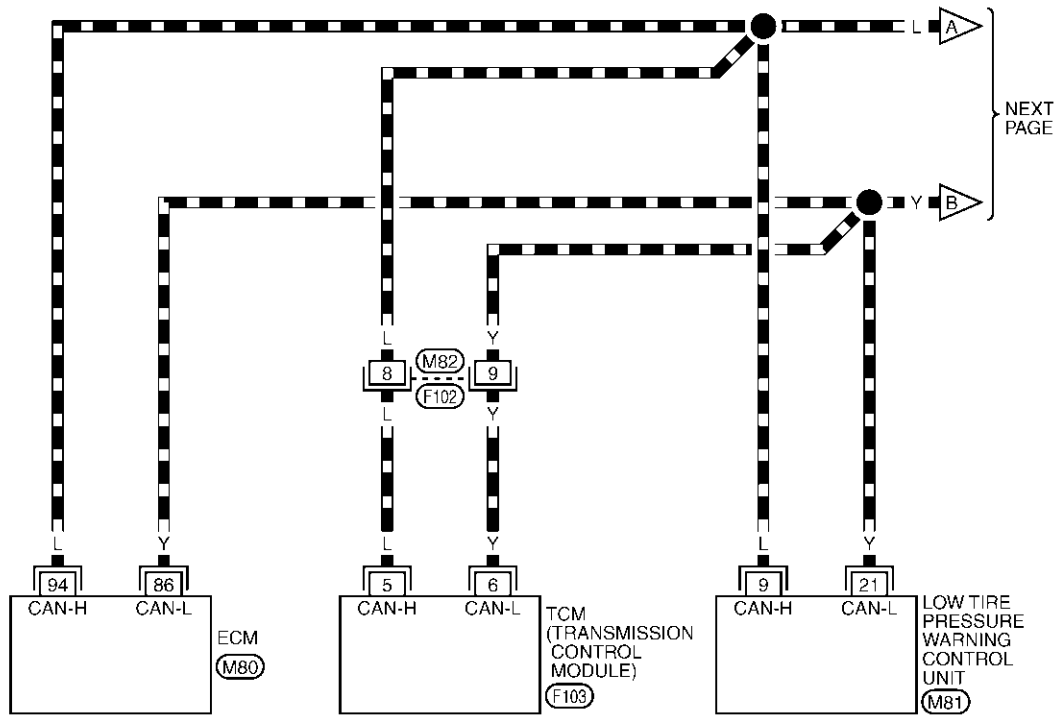
[CAN]

## Wiring Diagram - CAN -

AKS006RG

### LAN-CAN-16

▬ : DATA LINE



REFER TO THE FOLLOWING.  
(M80), (F103) -ELECTRICAL UNITS

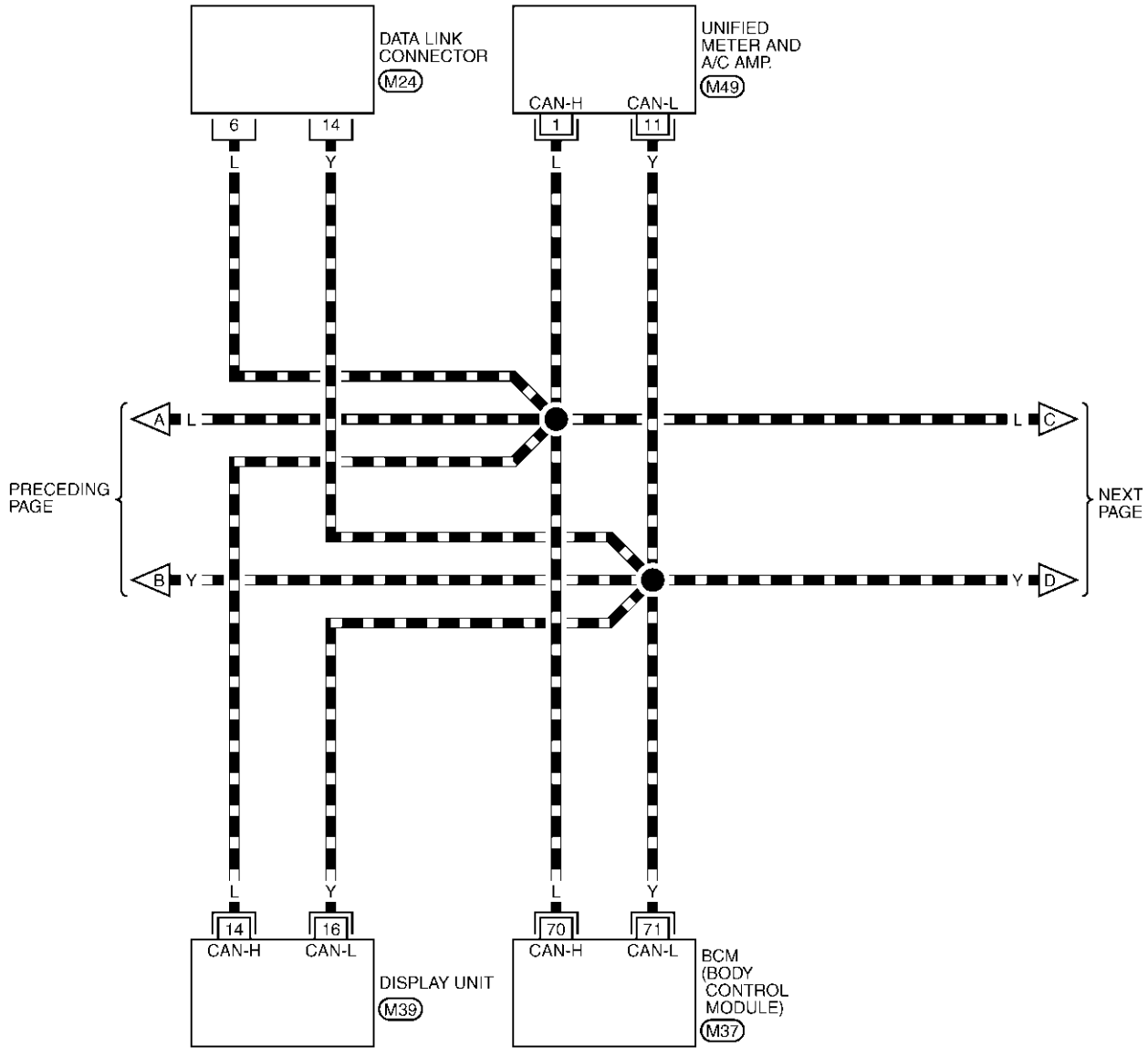
TKWA0944E

# CAN SYSTEM (TYPE 6)

[CAN]

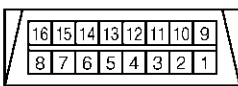
## LAN-CAN-17

▬ : DATA LINE

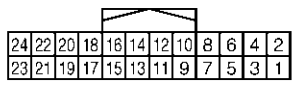


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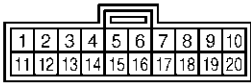
LAN



(M24)  
W



(M39)  
W



(M49)  
GR

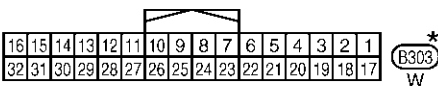
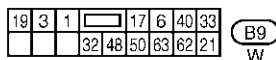
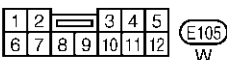
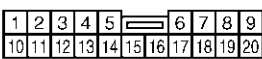
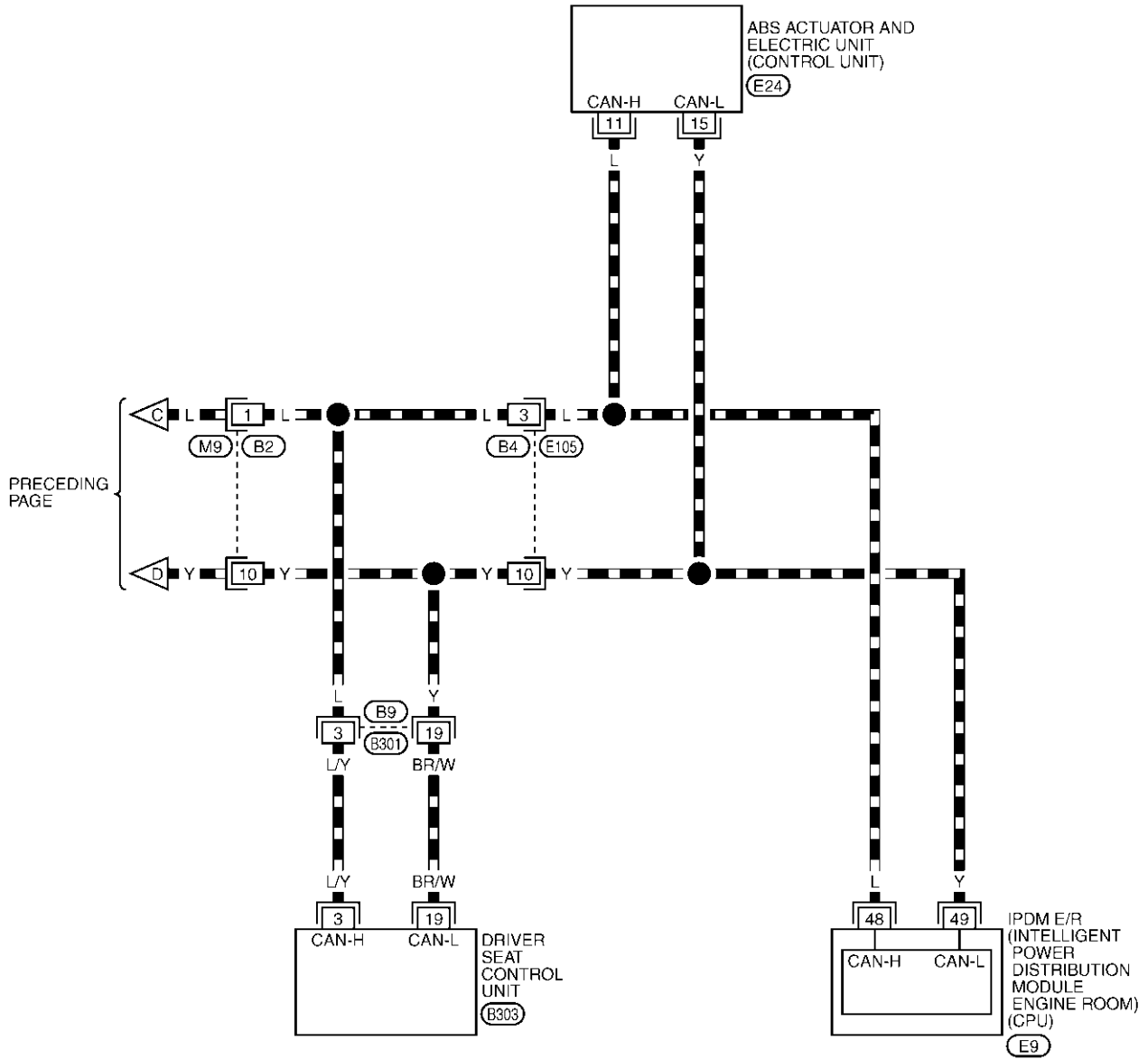


REFER TO THE FOLLOWING.  
(M37) -ELECTRICAL UNITS

TKWA0945E

## LAN-CAN-18

▬ : DATA LINE



\*: THIS CONNECTOR IS NOT SHOWN IN "HARNES LAYOUT", PG SECTION.

REFER TO THE FOLLOWING.

E24 -ELECTRICAL UNITS

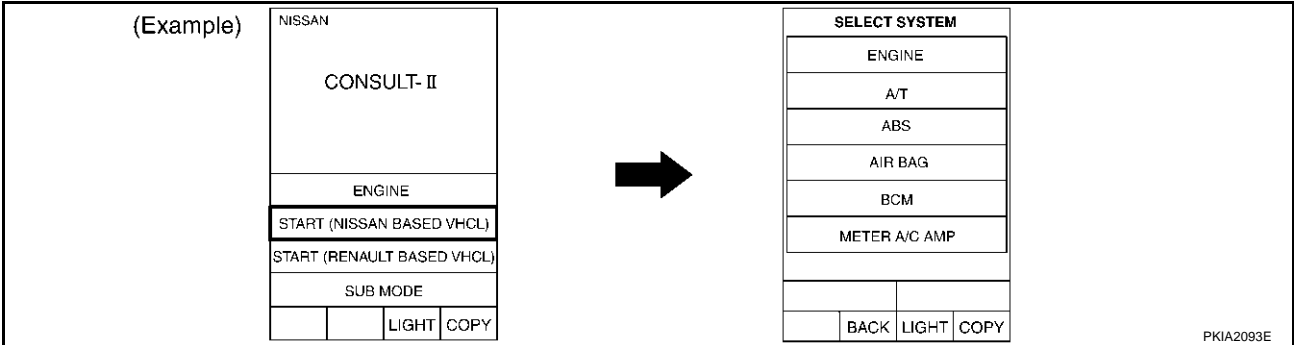
# CAN SYSTEM (TYPE 6)

[CAN]

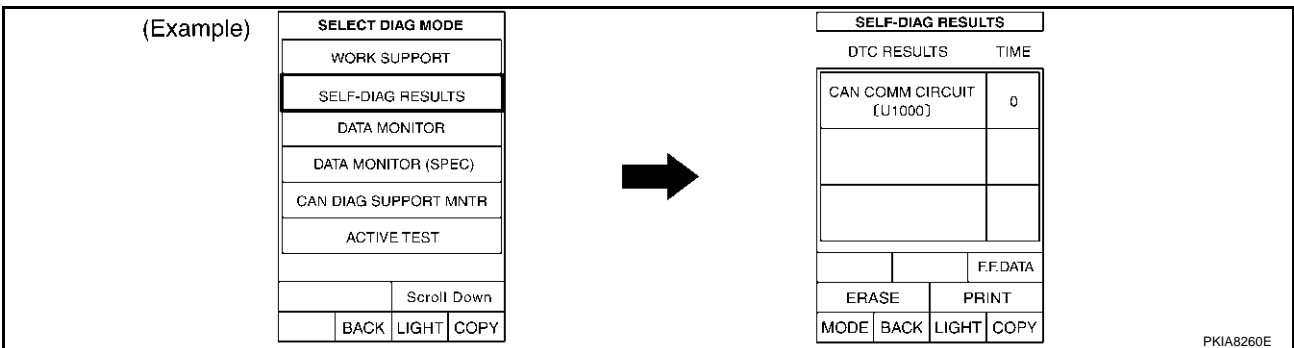
AKS00C4Y

## Work Flow

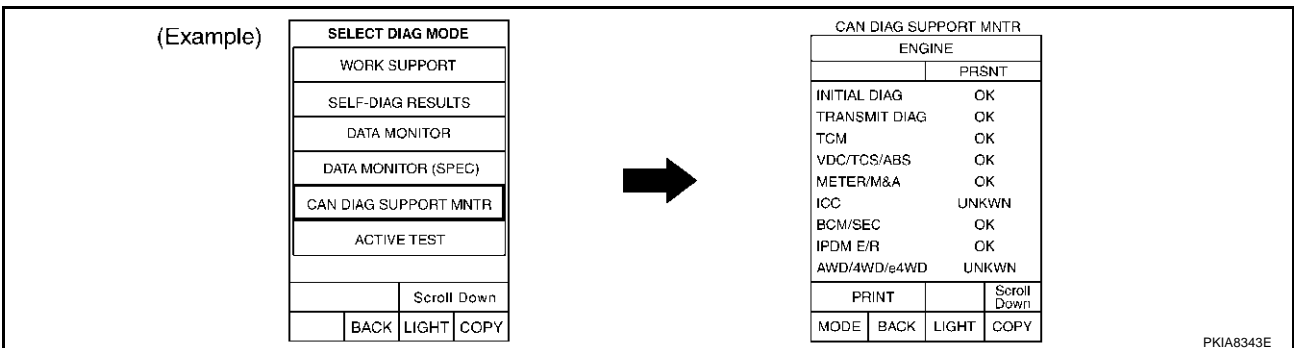
- When there are no indications of "TRANSMISSION", "AIR PRESSURE MONITOR", "METER A/C AMP" or "AUTO DRIVE POS." on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "AUTO DRIVE POS." and "ABS" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "AUTO DRIVE POS." and "ABS" displayed on CONSULT-II.



- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-195, "CHECK SHEET"](#).
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "v" onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-195, "CHECK SHEET"](#).

**NOTE:**

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual. So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the integrated display system. Refer to [AV-110, "CAN Communication Line Check"](#).
- Attach the CAN DIAG MONITOR check sheet onto the check sheet. Refer to [LAN-195, "CHECK SHEET"](#).

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8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG MONITOR check sheet. Refer to [LAN-195, "CHECK SHEET"](#) .

**NOTE:**

If "NG" is displayed on "CAN COMM" as "CAN DIAG MNTR" for the diagnosed control unit, replace the control unit. Refer to [AV-110, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-197, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

# CAN SYSTEM (TYPE 6)

[CAN]

## CHECK SHEET

### NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

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Check sheet table

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

Attach copy of  
display unit  
CAN DIAG MONITOR check sheet

PKIB0497E

# CAN SYSTEM (TYPE 6)

[CAN]

Attach copy of  
ENGINE  
SELF-DIAG RESULTS

Attach copy of  
TRANSMISSION  
SELF-DIAG RESULTS

Attach copy of  
AIR PRESSURE  
MONITOR  
SELF-DIAG RESULTS

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
METER A/C AMP  
SELF-DIAG RESULTS

Attach copy of  
AUTO DRIVE POS.  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

Attach copy of  
ENGINE  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
TRANSMISSION  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
AIR PRESSURE  
MONITOR  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
BCM  
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METER A/C AMP  
CAN DIAG SUPPORT  
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AUTO DRIVE POS.  
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MNTR

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ABS  
CAN DIAG SUPPORT  
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PKIB0498E



## CHECK SHEET RESULTS (EXAMPLE)

**NOTE:**

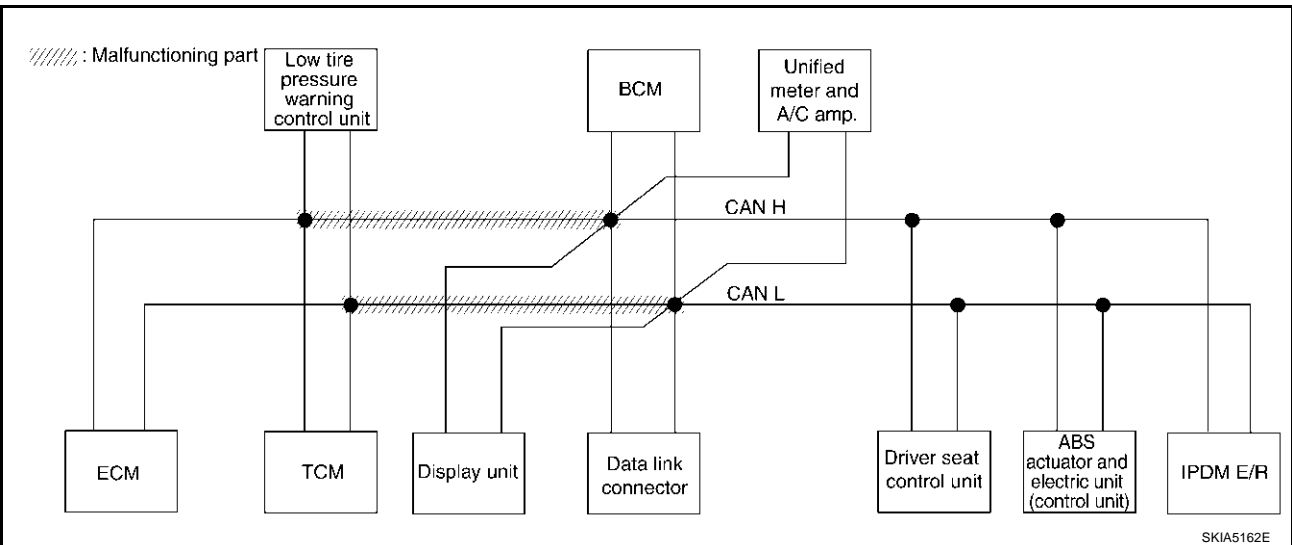
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

**Case 1**

Check harness between TCM and data link connector. Refer to [LAN-211, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	
Display unit	—	CAN COMM	CAN 1	CAN 3 ✓	—	CAN 6 ✓	—	CAN 2	CAN 5	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	

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# CAN SYSTEM (TYPE 6)

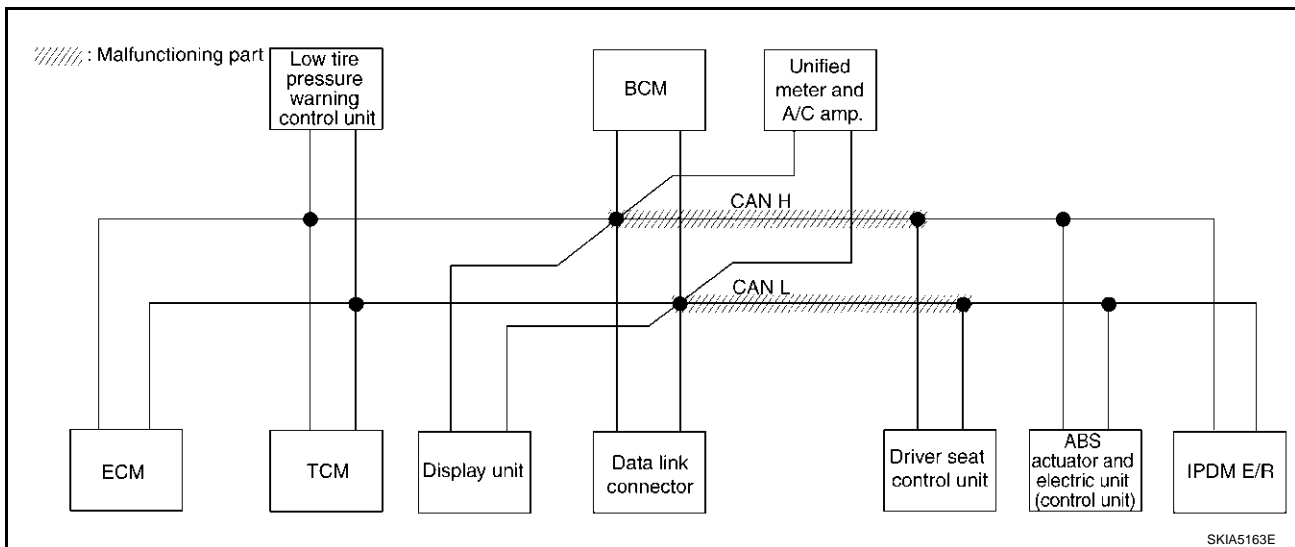
[CAN]

## Case 2

Check harness between data link connector and driver seat control unit. Refer to [LAN-211, "Circuit Check Between Data Link Connector and Driver Seat Control Unit"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN ✓
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN ✓	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	CAN 7 ✓
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN ✓
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN ✓	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN ✓	—	—	—	—	—	—	—

PKIB0500E



# CAN SYSTEM (TYPE 6)

[CAN]

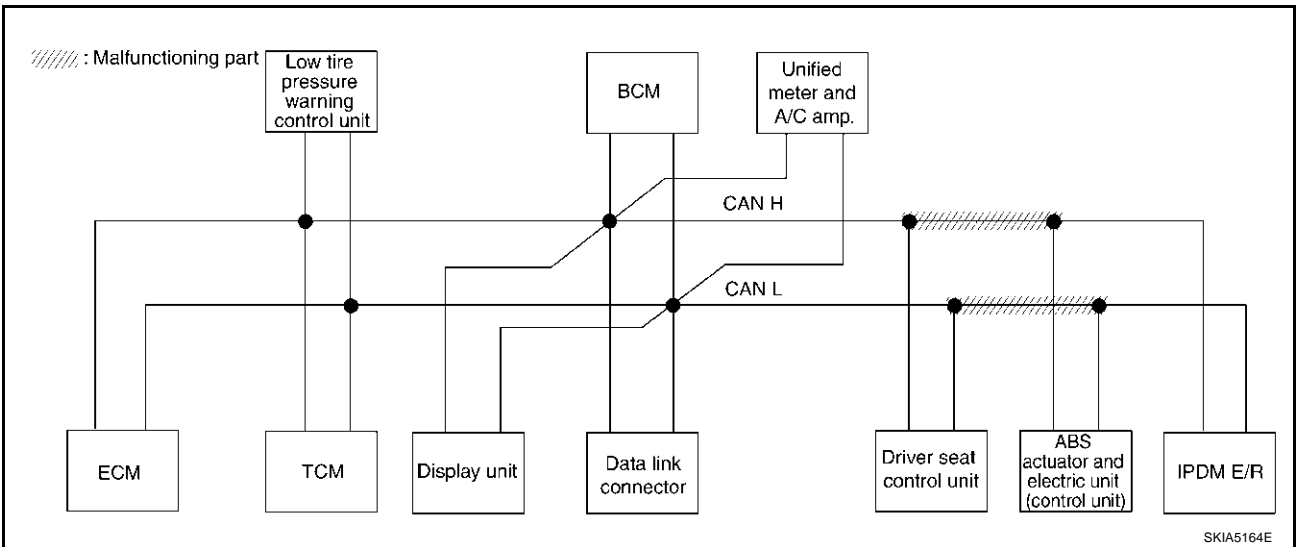
## Case 3

Check harness between driver seat control unit and ABS actuator and electric unit (control unit). Refer to LAN-212, "Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit)".

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SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	

PKIB0501E



# CAN SYSTEM (TYPE 6)

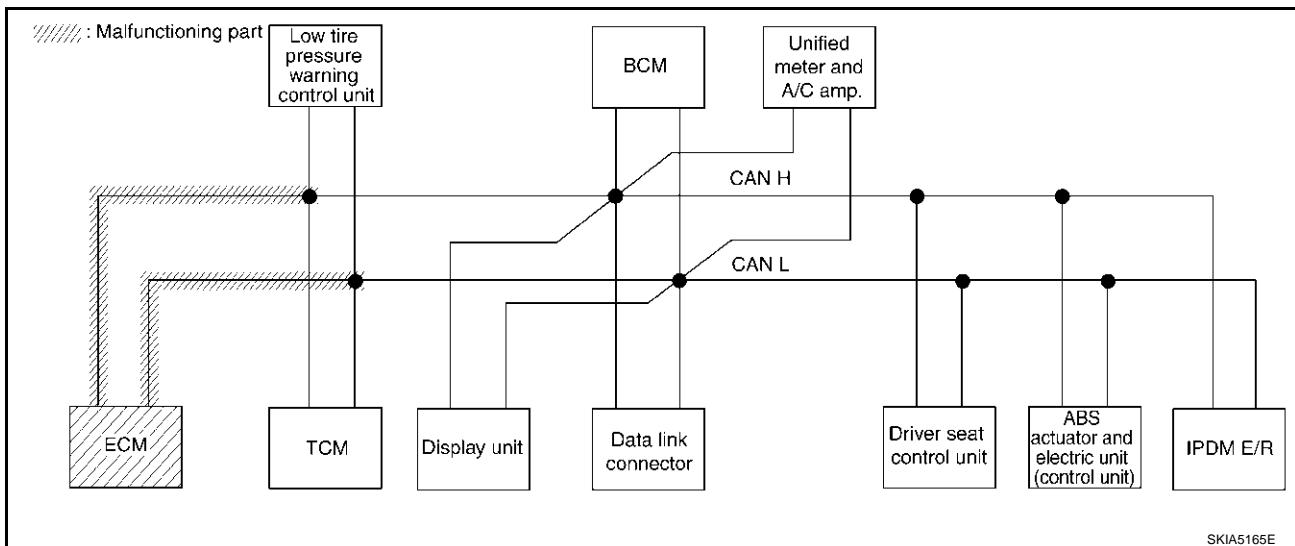
[CAN]

## Case 4

Check ECM circuit. Refer to [LAN-213, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN ✓	—	UNKWN ✓	—	—	UNKWN ✓	UNKWN ✓	—	UNKWN ✓	
TRANSMISSION	No indication	NG	UNKWN	UNKWN ✓	—	—	—	—	UNKWN	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	
Display unit	—	CAN COMM	CAN 1	CAN 3 ✓	—	CAN 6	—	CAN 2	CAN 5	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN ✓	—	—	—	—	UNKWN	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN ✓	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	
ABS	—	NG	UNKWN	UNKWN ✓	—	—	—	—	—	—	—	

PKIB0502E



# CAN SYSTEM (TYPE 6)

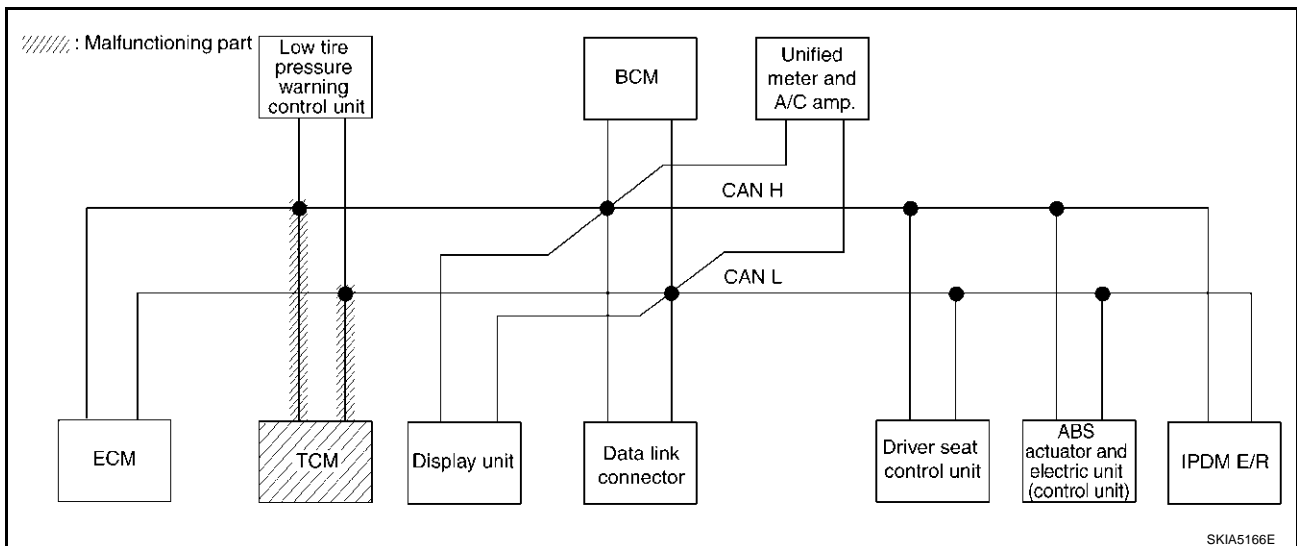
[CAN]

## Case 5

Check TCM circuit. Refer to [LAN-213, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	

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# CAN SYSTEM (TYPE 6)

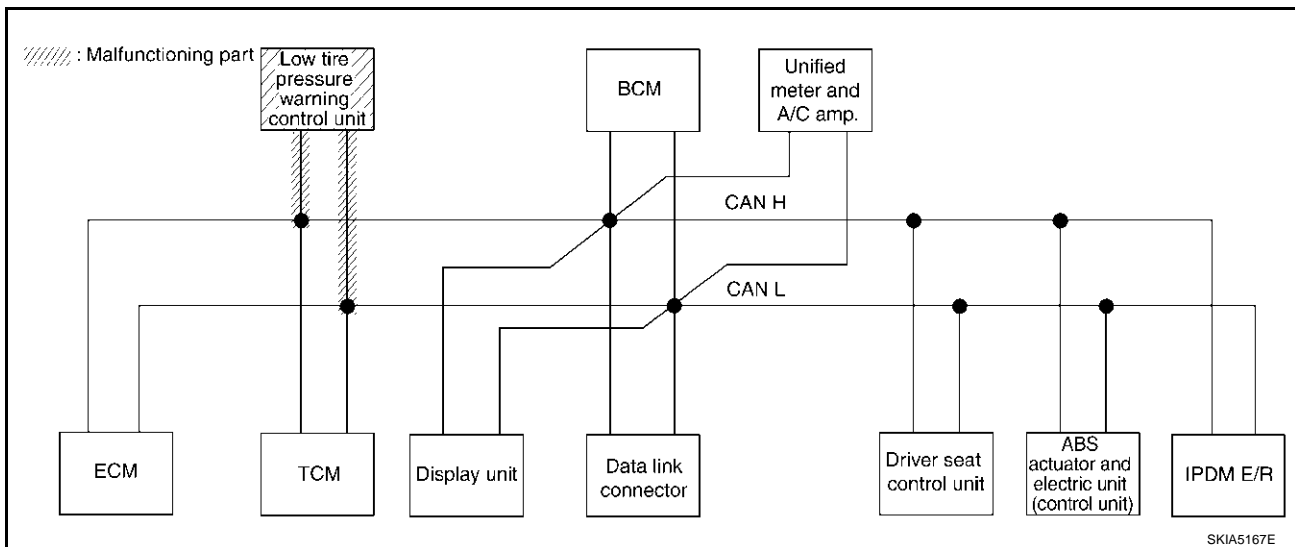
[CAN]

## Case 6

Check low tire pressure warning control unit circuit. Refer to [LAN-214, "Low Tire Pressure Warning Control Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6 ✓	—	CAN 2	CAN 5	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	UNKWN	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	

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# CAN SYSTEM (TYPE 6)

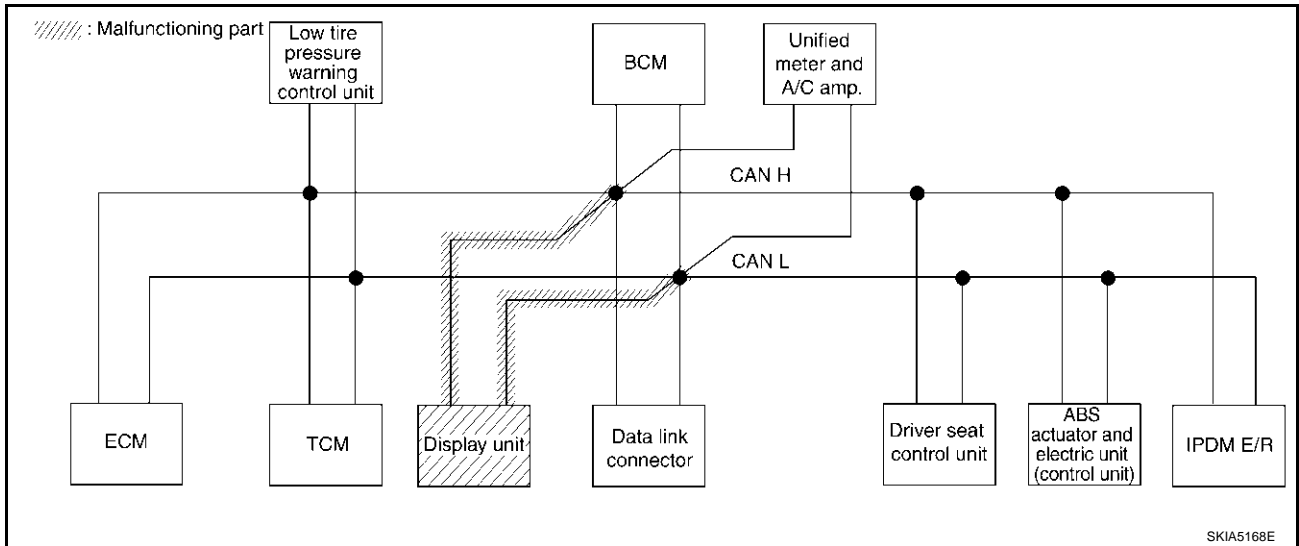
[CAN]

## Case 7

Check display unit circuit. Refer to [LAN-214, "Display Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	

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# CAN SYSTEM (TYPE 6)

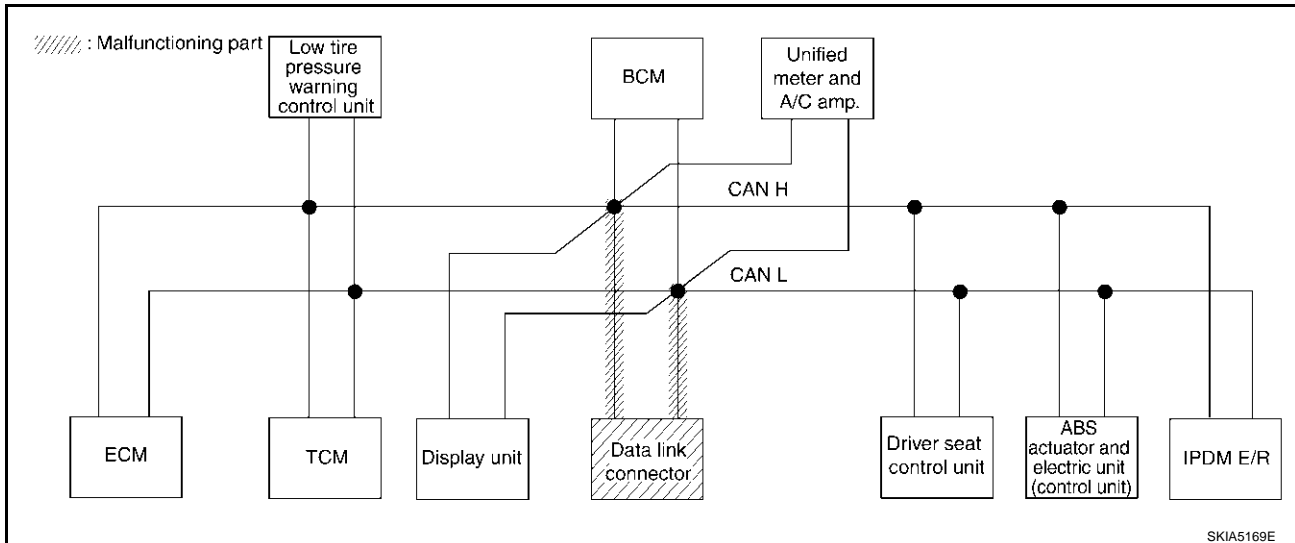
[CAN]

## Case 8

Check data link connector circuit. Refer to [LAN-215, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 6)

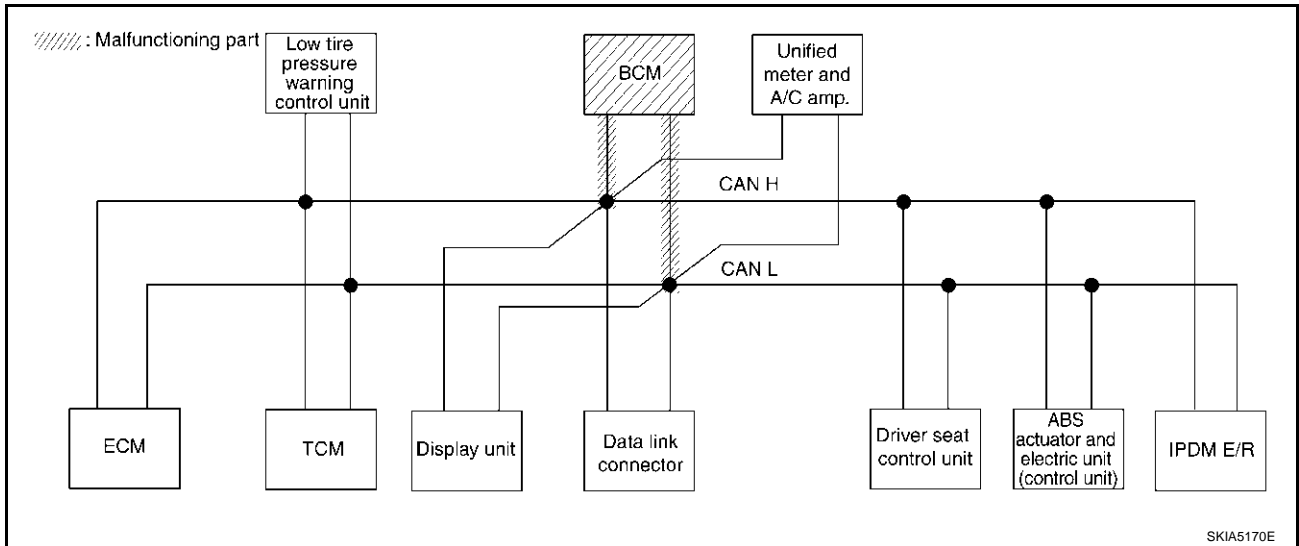
[CAN]

## Case 9

Check BCM circuit. Refer to [LAN-215, "BCM Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	✓	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	UNKWN	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	✓	CAN 2	CAN 5	—	CAN 7
BCM	—	NG	✓	✓	—	—	—	—	—	✓	—	✓
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	✓	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	✓	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 6)

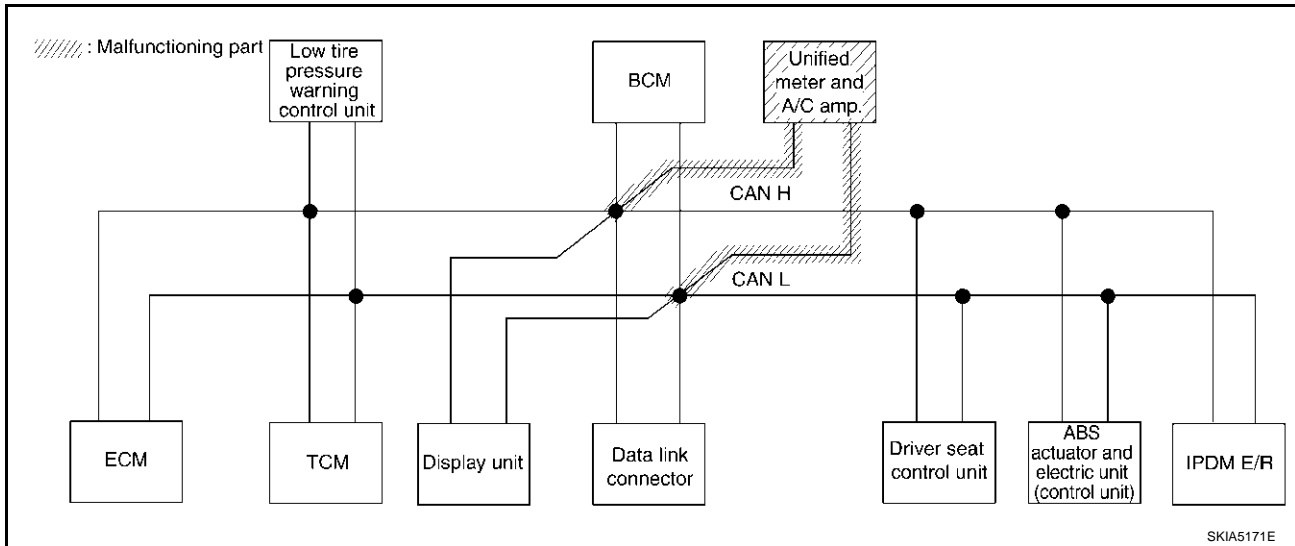
[CAN]

## Case 10

Check unified meter and A/C amp. circuit. Refer to [LAN-216, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

PKIB0508E



# CAN SYSTEM (TYPE 6)

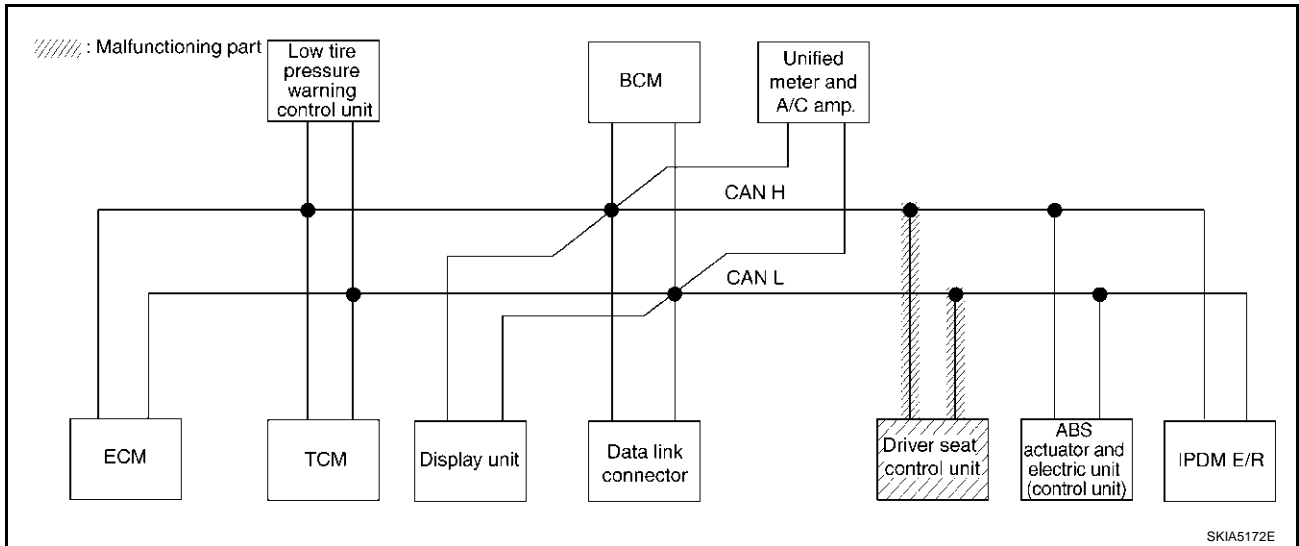
[CAN]

## Case 11

Check driver seat control unit circuit. Refer to [LAN-216, "Driver Seat Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	

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# CAN SYSTEM (TYPE 6)

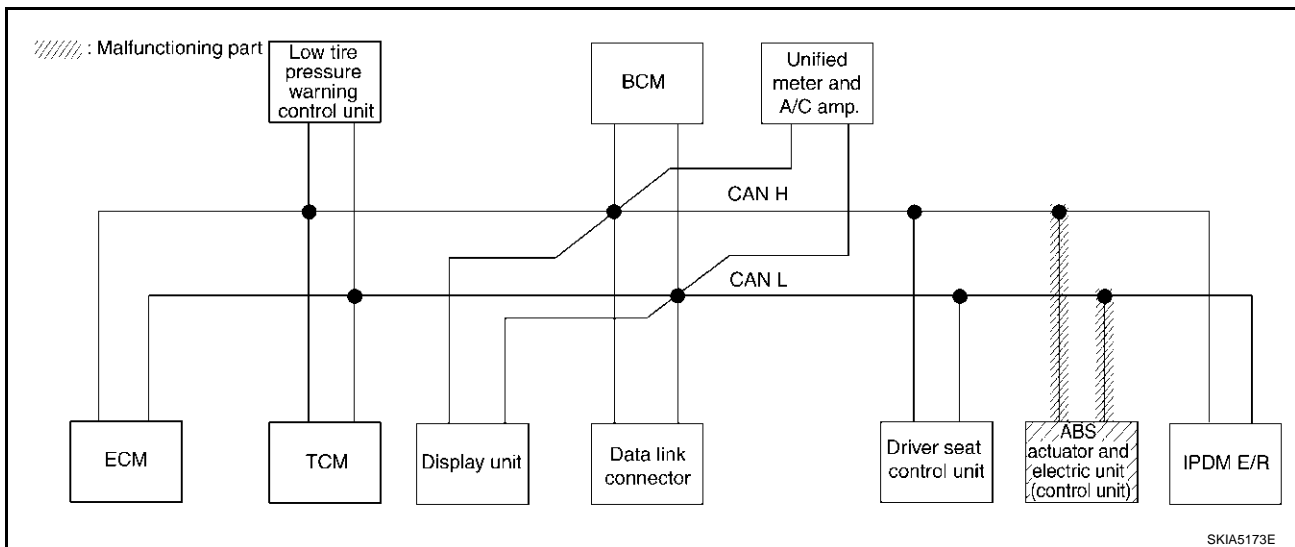
[CAN]

## Case 12

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-217, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	

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# CAN SYSTEM (TYPE 6)

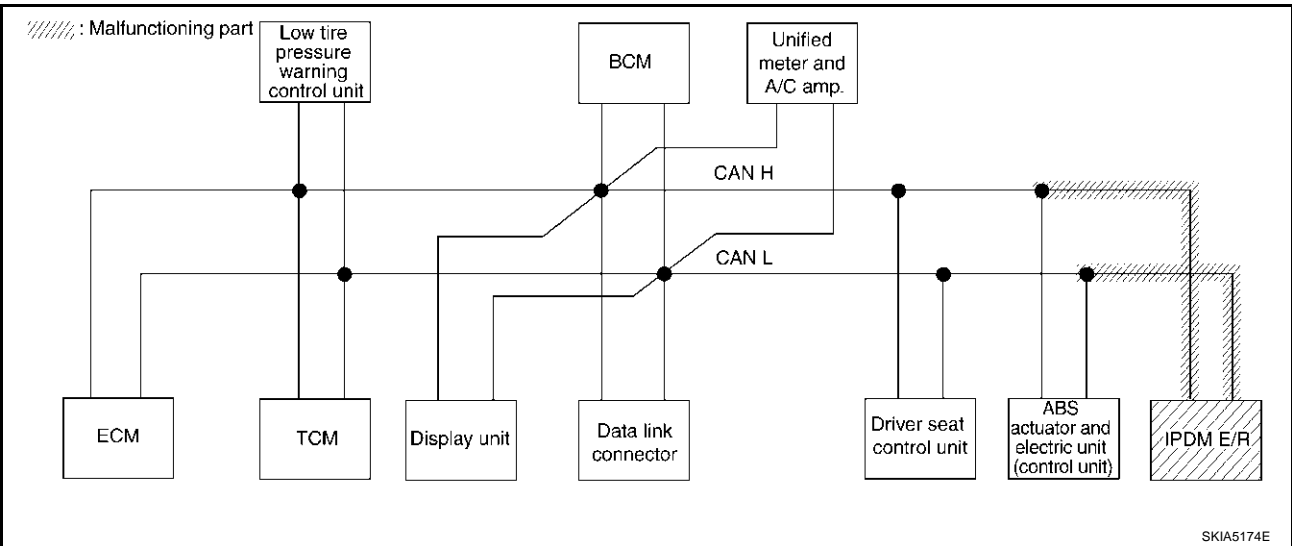
[CAN]

## Case 13

Check IPDM E/R circuit. Refer to [LAN-217, "IPDM E/R Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	

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## Case 14

Check CAN communication circuit. Refer to [LAN-218, "CAN Communication Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	

PKIB0512E

# CAN SYSTEM (TYPE 6)

[CAN]

## Case 15

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-223, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UN <del>KN</del> W <del>N</del>	—	—	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication <del>✓</del>	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	UNKWN	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UN <del>KN</del> W <del>N</del>	UNKWN	UNKWN	UNKWN	UNKWN	—	UN <del>KN</del> W <del>N</del>	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UN <del>KN</del> W <del>N</del>	—	—	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

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## Case 16

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-223, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UN <del>KN</del> W <del>N</del>	—	—	—	—	UN <del>KN</del> W <del>N</del>	UNKWN	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	UNKWN	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UN <del>KN</del> W <del>N</del>	—	—	—	—	—	—	—	—

PKIB0514E

## Circuit Check Between TCM and Data Link Connector

AKS006RI

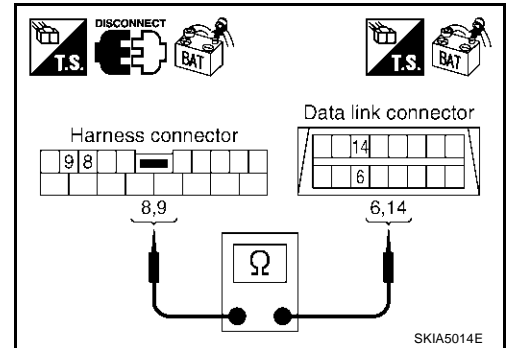
### 1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

**8 (L) - 6 (L) : Continuity should exist.**  
**9 (Y) - 14 (Y) : Continuity should exist.**

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-193, "Work Flow"](#) .
- NG >> Repair harness.



## Circuit Check Between Data Link Connector and Driver Seat Control Unit

AKS006RJ

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector M9
  - Harness connector B2

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

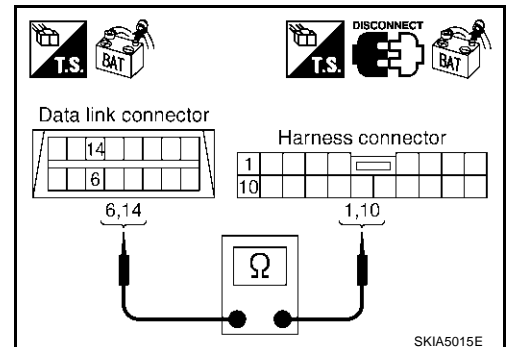
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

**6 (L) - 1 (L) : Continuity should exist.**  
**14 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



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### 3. CHECK HARNESS FOR OPEN CIRCUIT

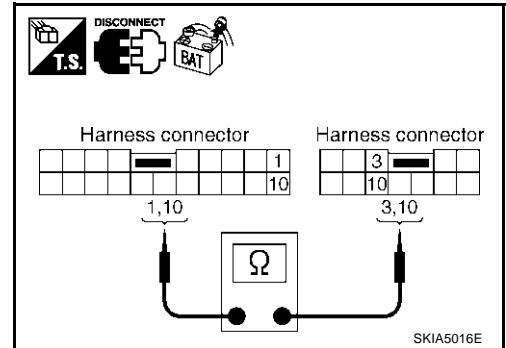
1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-193, "Work Flow"](#) .
- NG >> Repair harness.



## Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit)

AKS006RK

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector B4
  - Harness connector E105

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

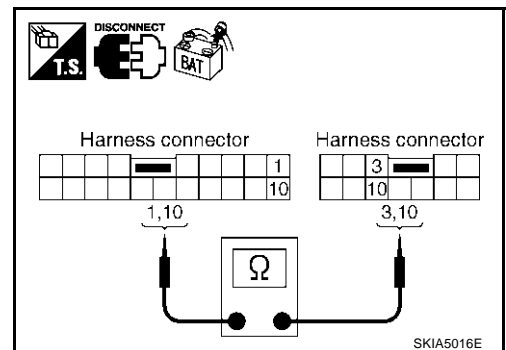
1. Disconnect harness connector B2 and harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.





### 3. CHECK HARNESS FOR OPEN CIRCUIT

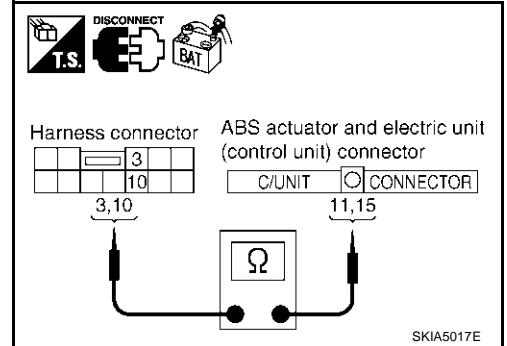
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

**3 (L) - 11 (L) : Continuity should exist.**

**10 (Y) - 15 (Y) : Continuity should exist.**

#### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-193, "Work Flow"](#).
- NG >> Repair harness.



## ECM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

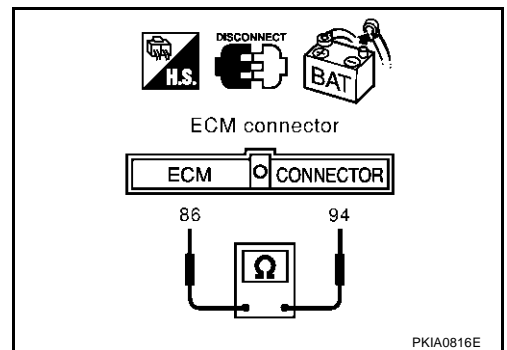
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

**94 (L) - 86 (Y) : Approx. 108 - 132Ω**

#### OK or NG

- OK >> Replace ECM.
- NG >> Repair harness between ECM and TCM.



## TCM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
  - TCM connector
  - Harness connector F102
  - Harness connector M82

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

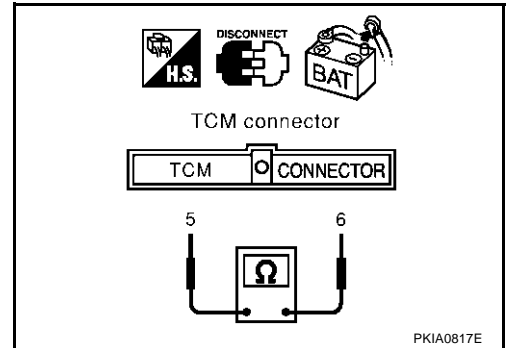
1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace TCM.  
 NG >> Repair harness between TCM and low tire pressure warning control unit.



## Low Tire Pressure Warning Control Unit Circuit Check

AKS006RN

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of low tire pressure warning control unit for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

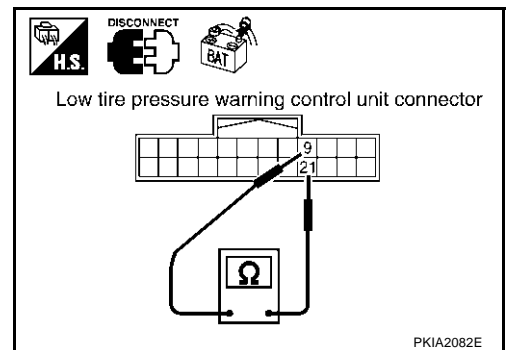
1. Disconnect low tire pressure warning control unit connector.
2. Check resistance between low tire pressure warning control unit harness connector M81 terminals 9 (L) and 21 (Y).

**9 (L) - 21 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace low tire pressure warning control unit.  
 NG >> Repair harness between low tire pressure warning control unit and TCM.



## Display Unit Circuit Check

AKS006RO

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display unit for damage, bend and loose connection (unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

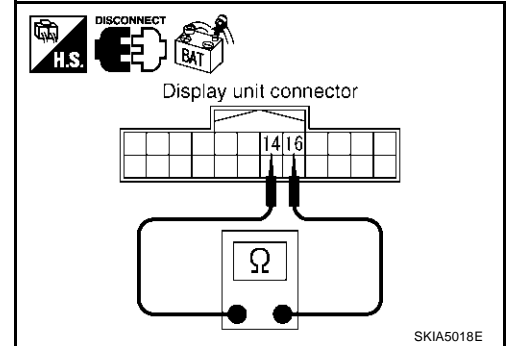
1. Disconnect display unit connector.
2. Check resistance between display unit harness connector M39 terminals 14 (L) and 16 (Y).

**14 (L) - 16 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace display unit.  
 NG >> Repair harness between display unit and data link connector.



SKIA5018E

AKS006RP

## Data Link Connector Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

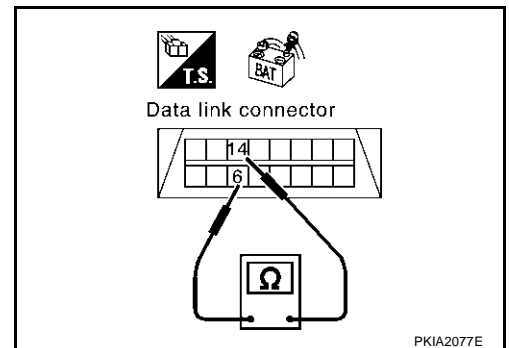
Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Diagnose again. Refer to [LAN-193, "Work Flow"](#) .  
 NG >> Repair harness between data link connector and BCM.



PKIA2077E

AKS006RQ

## BCM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

A  
B  
C  
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F  
G  
H  
I  
J  
LAN  
L  
M

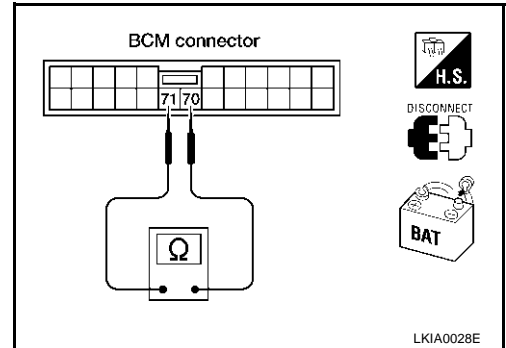
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M37 terminals 70 (L) and 71 (Y).

**70 (L) - 71 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace BCM. Refer to [BCS-36, "Removal and Installation of BCM"](#).
- NG >> Repair harness between BCM and data link connector.



## Unified Meter and A/C Amp. Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

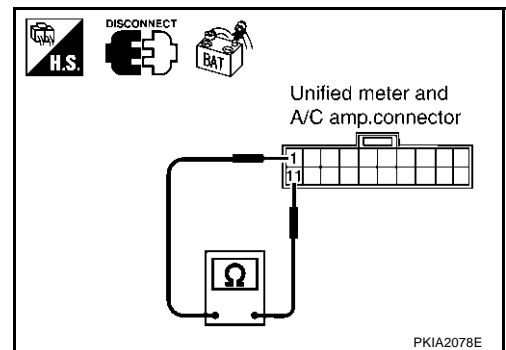
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

**1 (L) - 11 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace unified meter and A/C amp.
- NG >> Repair harness between unified meter and A/C amp. and data link connector.



## Driver Seat Control Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control unit side and harness side).
  - Driver seat control unit connector
  - Harness connector B301
  - Harness connector B9

### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

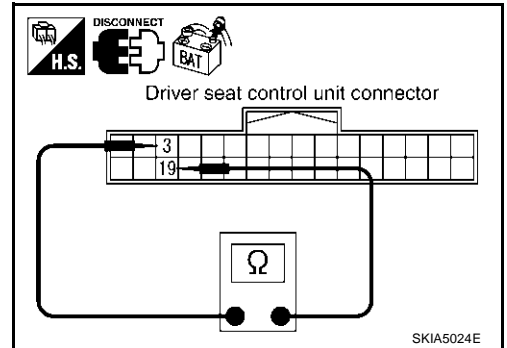
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect driver seat control unit connector.
2. Check resistance between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

**3 (L/Y) - 19 (BR/W) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace driver seat control unit.  
 NG >> Repair harness between driver seat control unit and harness connector B4.



## ABS Actuator and Electric Unit (Control Unit) Circuit Check

AKS006RT

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

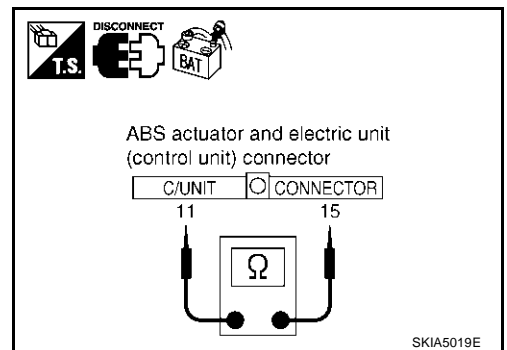
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

**11 (L) - 15 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).  
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



## IPDM E/R Circuit Check

AKS006RU

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

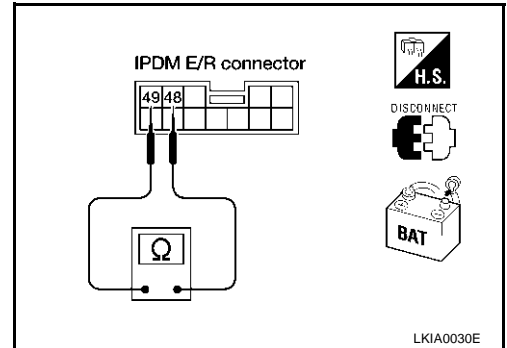
1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y)**

**: Approx. 108 - 132Ω**

### OK or NG

- OK >> Replace IPDM E/R.  
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



AKS006RV

## CAN Communication Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, unit side, meter side and harness side).
  - ECM
  - TCM
  - Low tire pressure warning control unit
  - Display unit
  - BCM
  - Unified meter and A/C amp.
  - Driver seat control unit
  - ABS actuator and electric unit (control unit)
  - IPDM E/R
  - Between ECM and IPDM E/R
  - Between ECM and TCM
  - Between ECM and driver seat control unit

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
  - ECM connector
  - Low tire pressure warning control unit connector
  - Harness connector M82
  - Display unit connector
  - BCM connector
  - Unified meter and A/C amp. connector
  - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

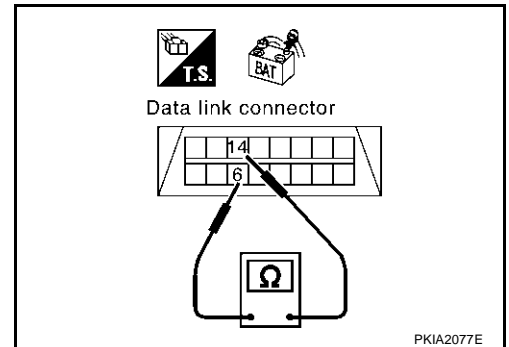
**6 (L) - 14 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 3.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9.



## 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

**6 (L) - Ground : Continuity should not exist.**

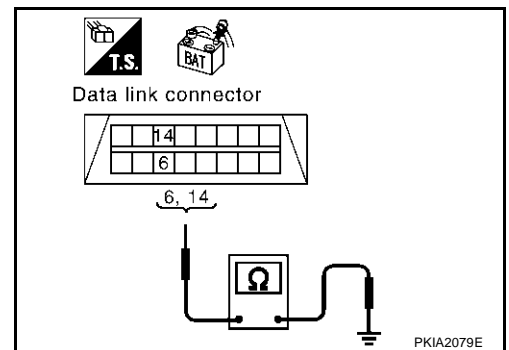
**14 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9.



#### 4. CHECK HARNESS FOR SHORT CIRCUIT

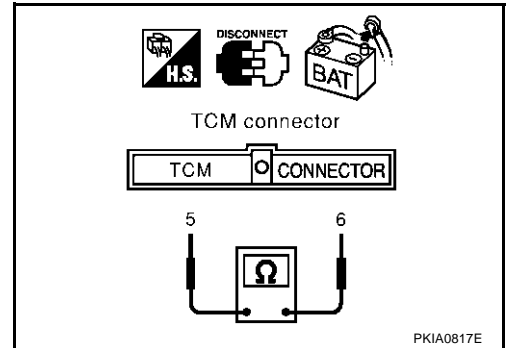
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 5.

NG >> Repair harness between TCM and harness connector F102.



#### 5. CHECK HARNESS FOR SHORT CIRCUIT

- Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

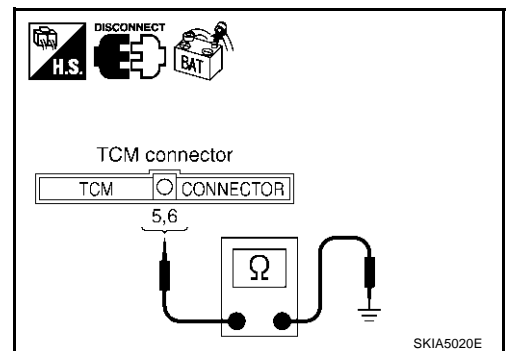
**5 (L) - Ground : Continuity should not exist.**

**6 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 6.

NG >> Repair harness between TCM and harness connector F102.



#### 6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B4 and harness connector B9.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

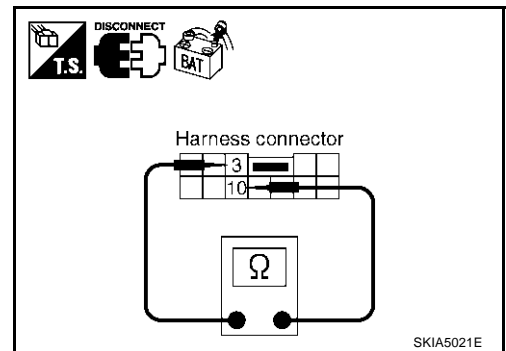
**3 (L) - 10 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 7.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Repair harness between harness connector B4 and harness connector B2.
- Repair harness between harness connector B4 and harness connector B9.





## 7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

**3 (L) - Ground : Continuity should not exist.**

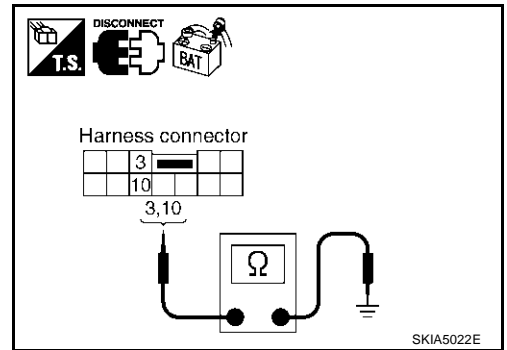
**10 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 8.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Repair harness between harness connector B4 and harness connector B2.
- Repair harness between harness connector B4 and harness connector B9.



## 8. CHECK HARNESS FOR SHORT CIRCUIT

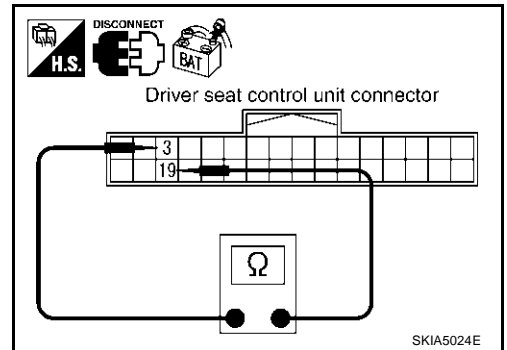
1. Disconnect driver seat control unit connector.
2. Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

**3 (L/Y) - 19 (BR/W) : Continuity should not exist.**

### OK or NG

OK >> GO TO 9.

NG >> Repair harness between driver seat control unit and harness connector B301.



## 9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y), 19 (BR/W) and ground.

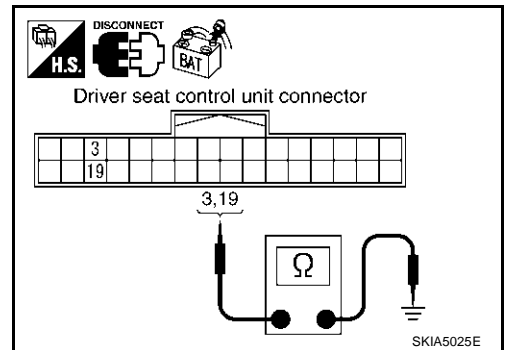
**3 (L/Y) - Ground : Continuity should not exist.**

**19 (BR/W) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 10.

NG >> Repair harness between driver seat control unit and harness connector B301.



A  
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M

LAN

## 10. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

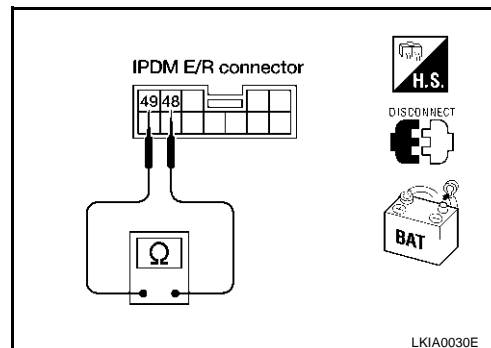
**48 (L) - 49 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 11.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 11. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

**48 (L) - Ground : Continuity should not exist.**

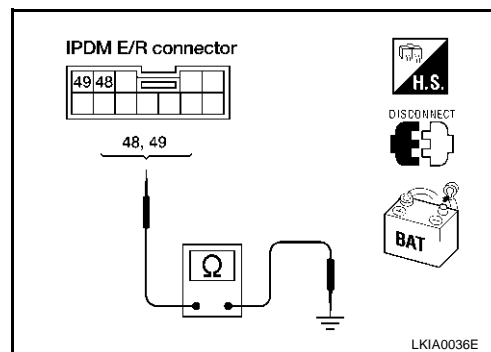
**49 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 12.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 12. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-223, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

### OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-193, "Work Flow"](#).

NG >> Replace ECM and/or IPDM E/R.

## IPDM E/R Ignition Relay Circuit Check

AKS006RW

Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-45. "IPDM E/R Power/Ground Circuit Inspection"](#) .
- Ignition power supply circuit. Refer to [PG-10. "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#) .

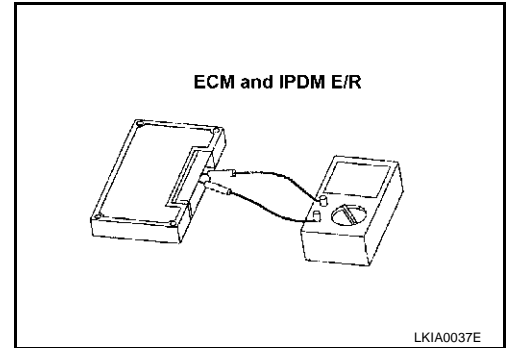
## Component Inspection

AKS006RX

### ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value ( $\Omega$ ) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



A  
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LAN

L  
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## CAN SYSTEM (TYPE 7)

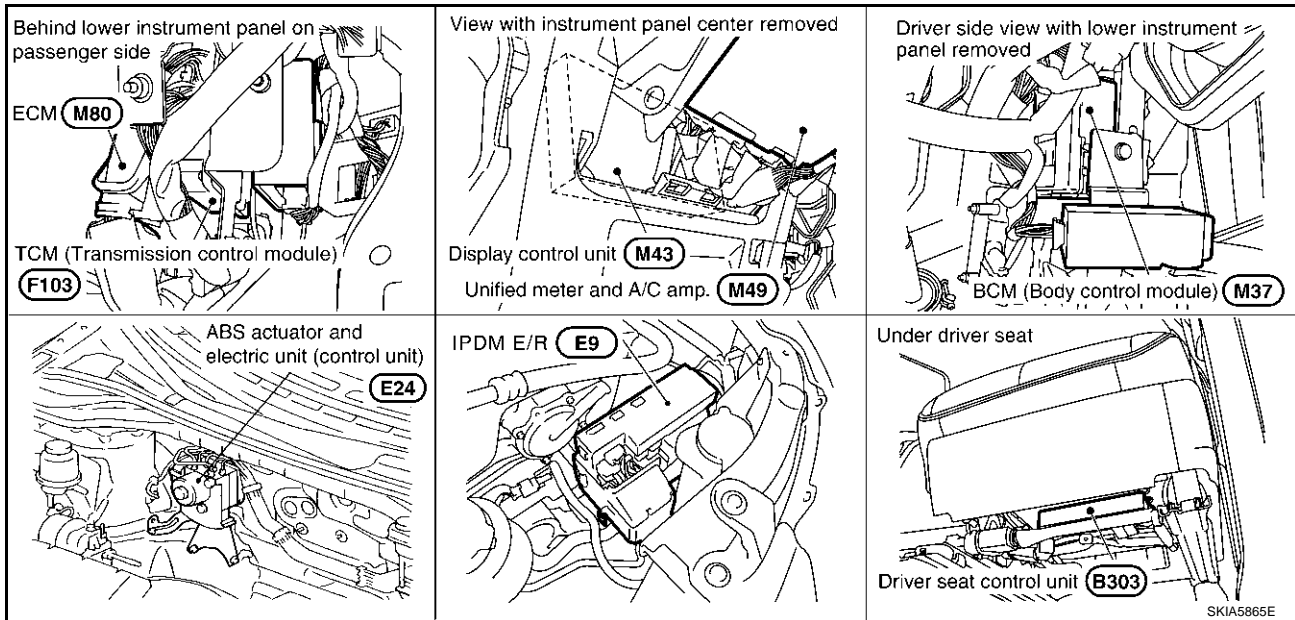
### System Description

AKS006RZ

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

### Component Parts and Harness Connector Location

AKS006S0

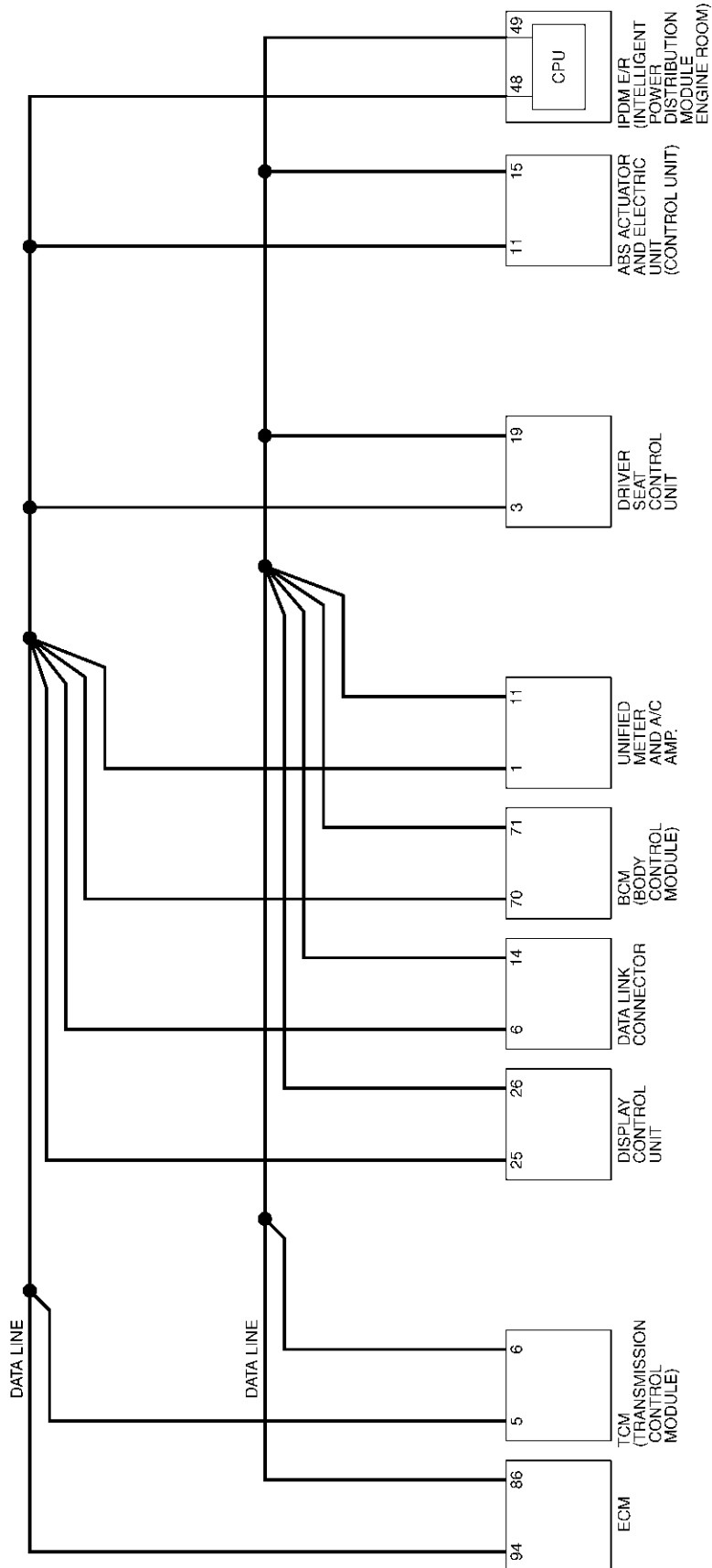


# CAN SYSTEM (TYPE 7)

[CAN]

## Schematic

AKS006S1



A  
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LAN

TKWA0947E

# CAN SYSTEM (TYPE 7)

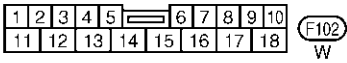
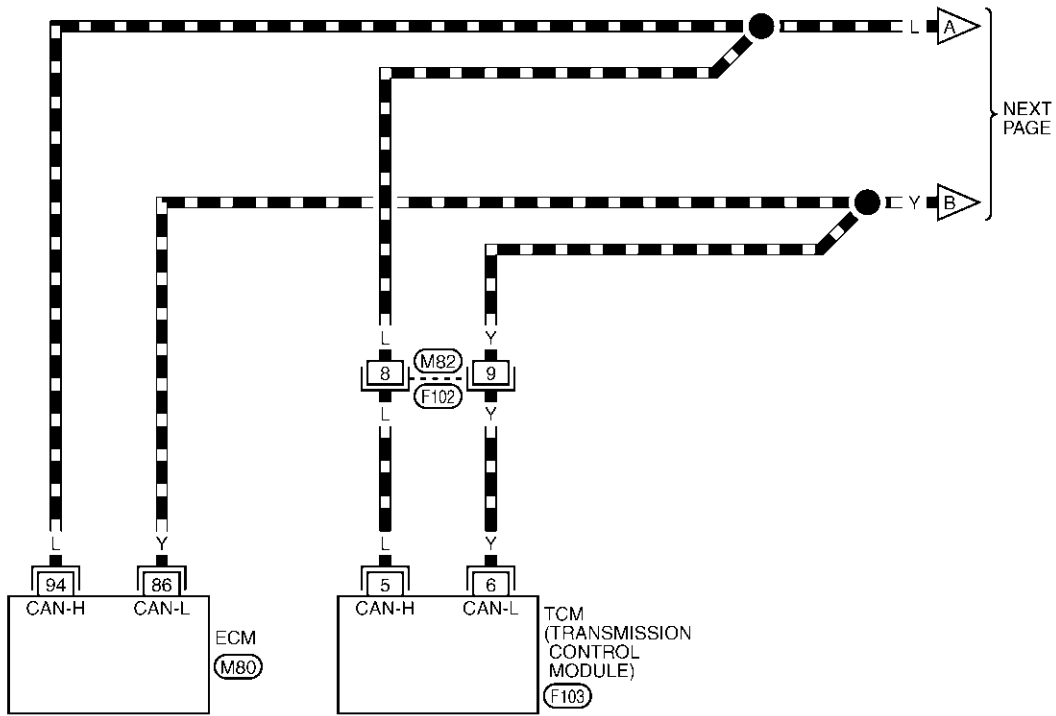
[CAN]

## Wiring Diagram - CAN -

AKS006S2

### LAN-CAN-19

▬ : DATA LINE



REFER TO THE FOLLOWING.  
 (M80), (F103) -ELECTRICAL  
 UNITS

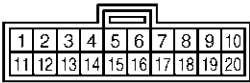
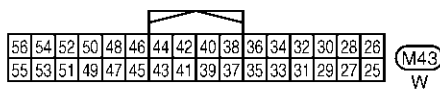
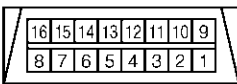
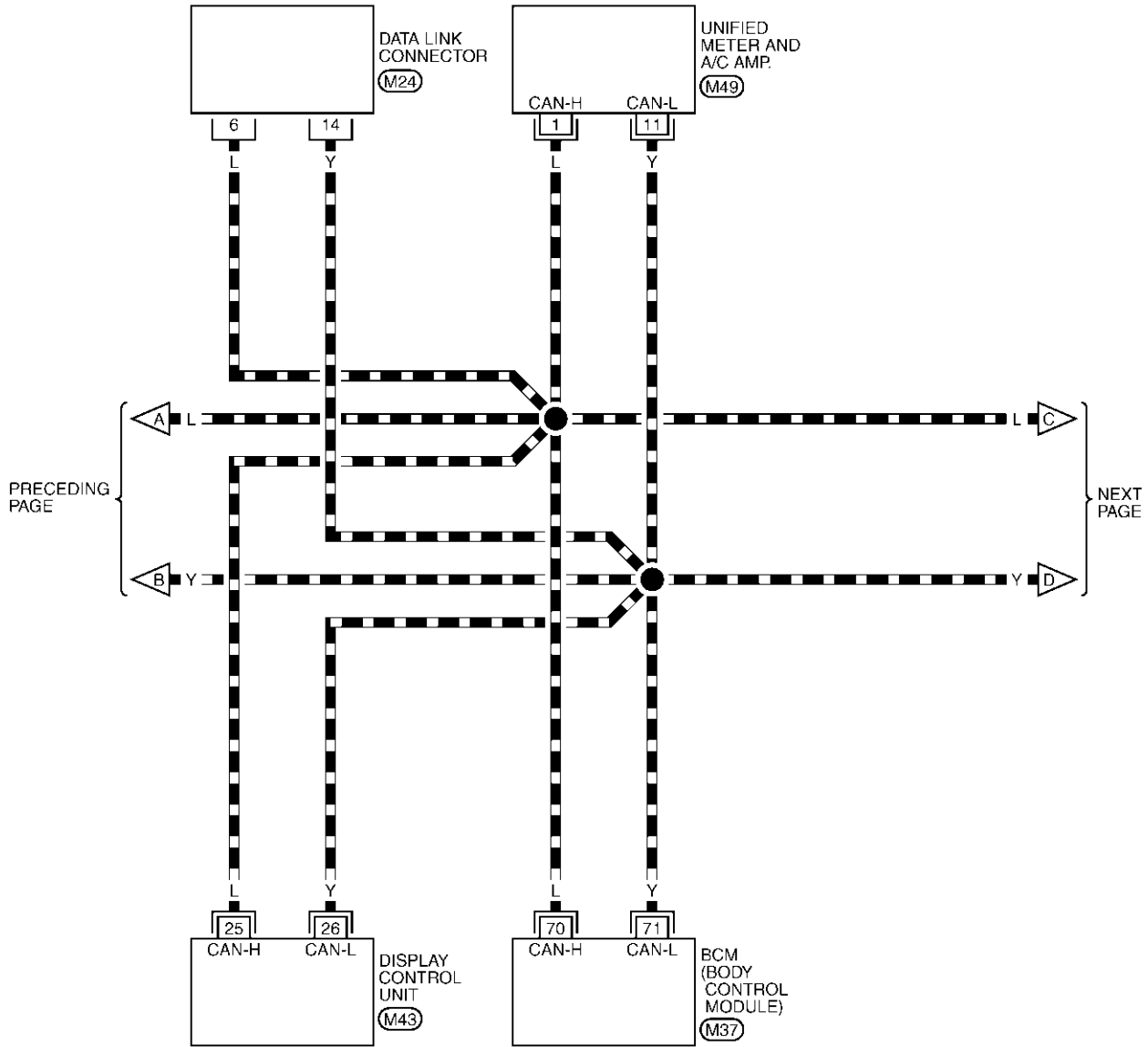
TKWA0948E

# CAN SYSTEM (TYPE 7)

[CAN]

## LAN-CAN-20

▬ : DATA LINE

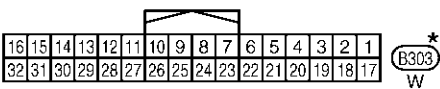
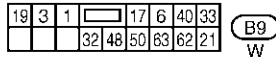
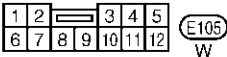
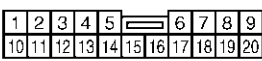
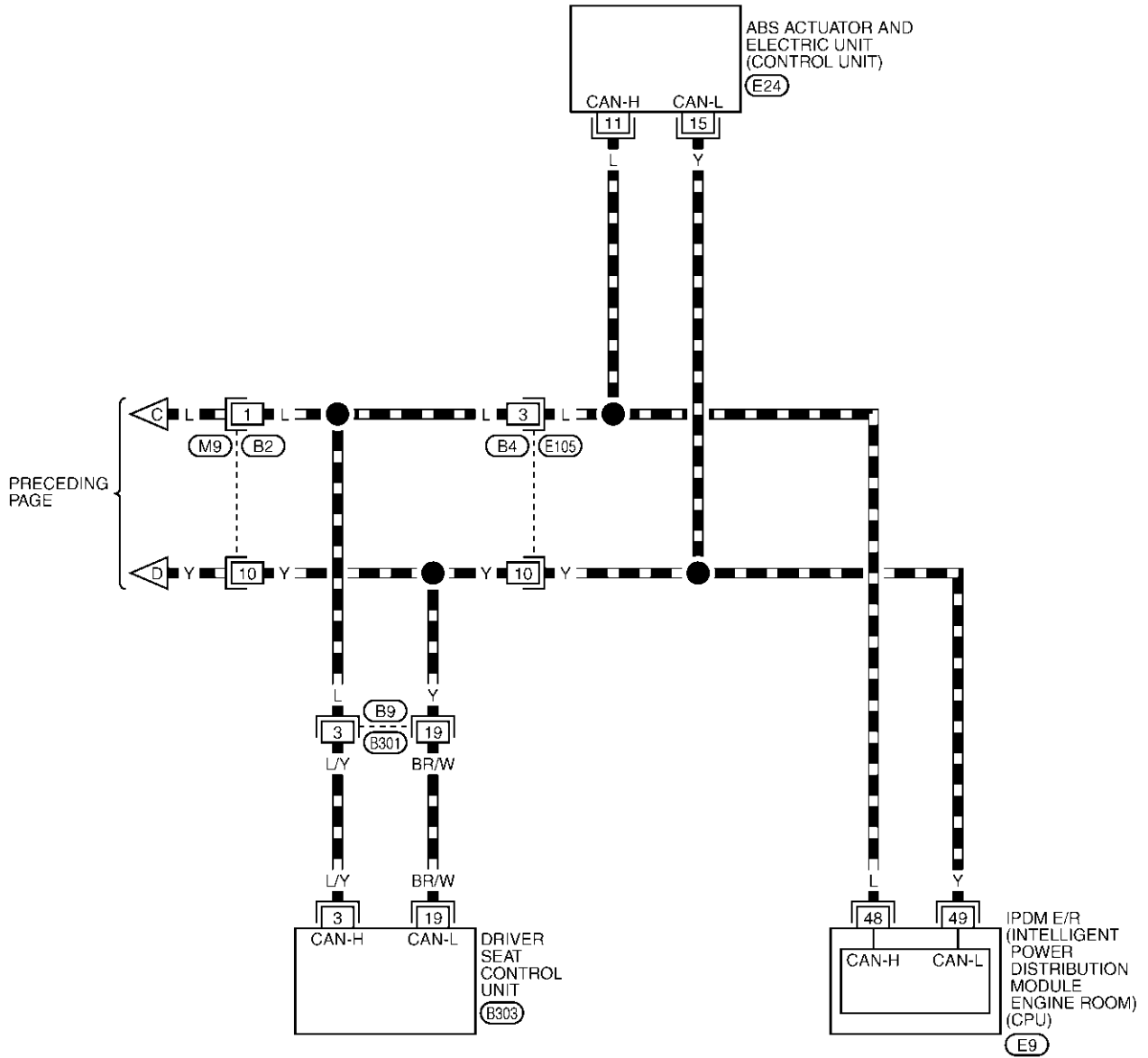


REFER TO THE FOLLOWING.  
(M37) -ELECTRICAL UNITS

TKWA0949E

## LAN-CAN-21

▬ : DATA LINE



\*: THIS CONNECTOR IS NOT SHOWN IN "HARNES LAYOUT", PG SECTION.

REFER TO THE FOLLOWING.

E24 -ELECTRICAL UNITS





## CAN SYSTEM (TYPE 7)

[CAN]

- 
8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG SUPPORT MONITOR check sheet. Refer to [LAN-231, "CHECK SHEET"](#) .

**NOTE:**

If "NG" is displayed on "CAN COMM" as "CAN DIAG SUPPORT MONITOR" for the diagnosed control unit, replace the control unit. Refer to [AV-203, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-233, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

# CAN SYSTEM (TYPE 7)

**[CAN]**

## CHECK SHEET

**NOTE:**

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

A  
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SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

Attach copy of  
display control unit  
CAN DIAG SUPPORT MONITOR check sheet

PKIB0515E

# CAN SYSTEM (TYPE 7)

[CAN]

Attach copy of  
ENGINE  
SELF-DIAG RESULTS

Attach copy of  
TRANSMISSION  
SELF-DIAG RESULTS

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
METER A/C AMP  
SELF-DIAG RESULTS

Attach copy of  
AUTO DRIVE POS.  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

Attach copy of  
ENGINE  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
TRANSMISSION  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
BCM  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
METER A/C AMP  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
AUTO DRIVE POS.  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ABS  
CAN DIAG SUPPORT  
MNTR

PKIB0467E

# CAN SYSTEM (TYPE 7)

[CAN]

## CHECK SHEET RESULTS (EXAMPLE)

### NOTE:

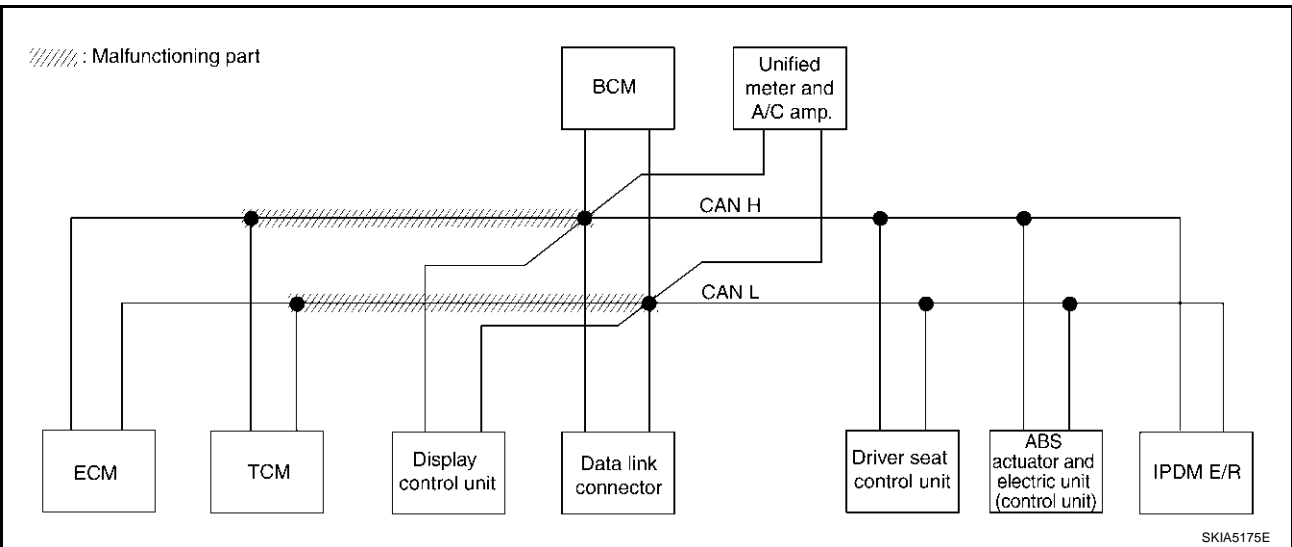
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

### Case 1

Check harness between TCM and data link connector. Refer to [LAN-246, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

PKIB0516E



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# CAN SYSTEM (TYPE 7)

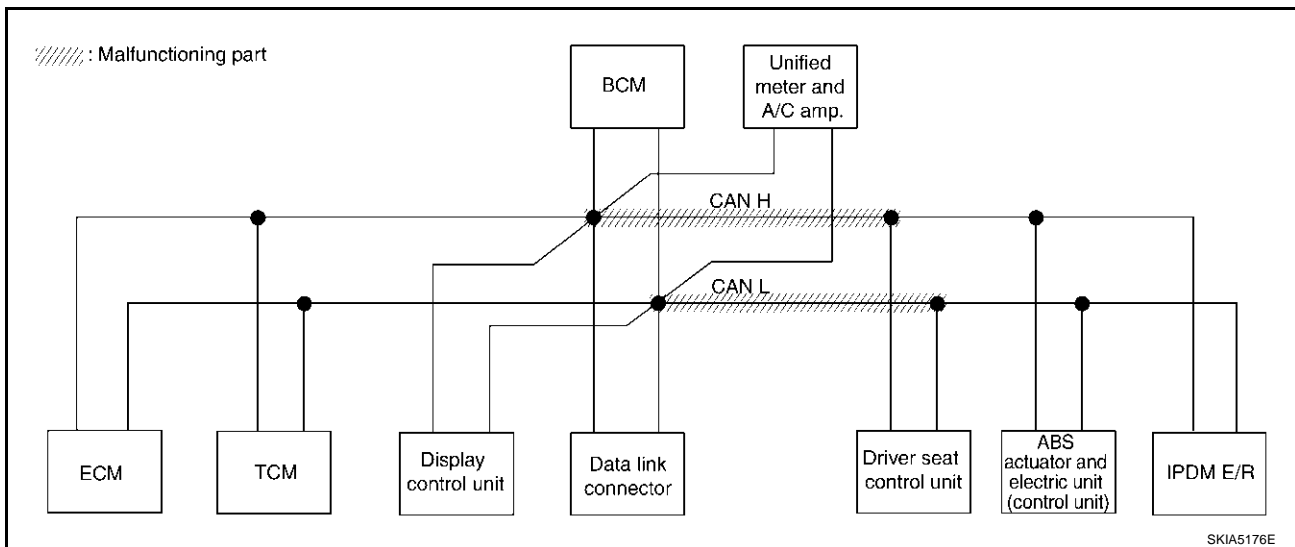
[CAN]

## Case 2

Check harness between data link connector and driver seat control unit. Refer to [LAN-246, "Circuit Check Between Data Link Connector and Driver Seat Control Unit"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN ✓
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN ✓	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7 ✓
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN ✓
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN ✓	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN ✓	—	—	—	—	—	—

PKIB0517E



# CAN SYSTEM (TYPE 7)

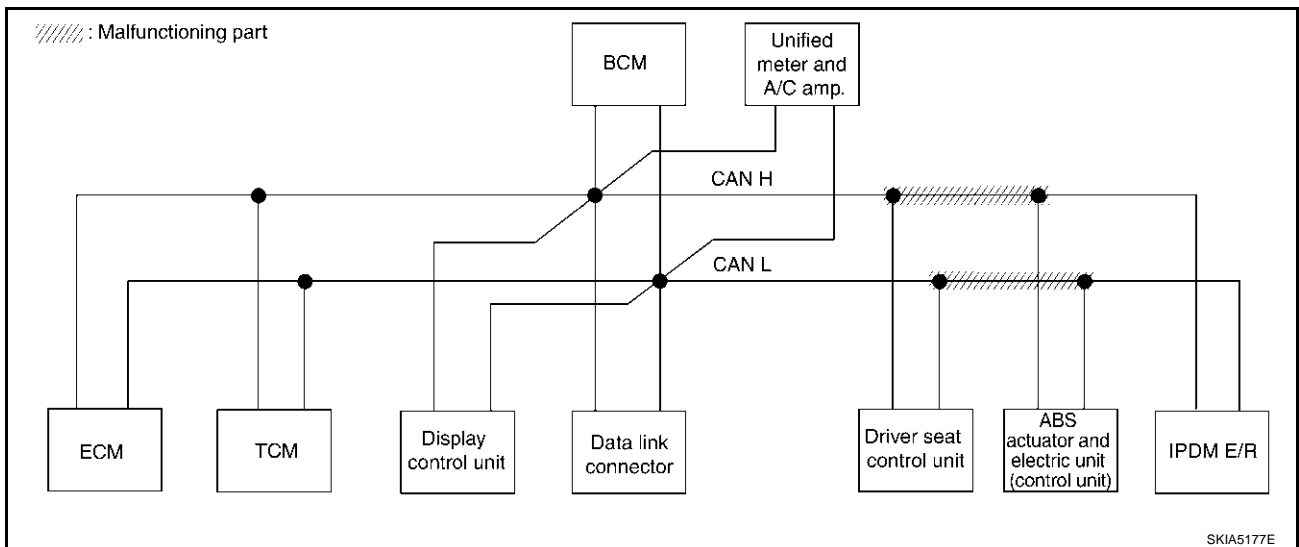
[CAN]

## Case 3

Check harness between driver seat control unit and ABS actuator and electric unit (control unit). Refer to LAN-247, "Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit)".

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN ✓
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN ✓	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7 ✓
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN ✓
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN ✓	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN ✓	—	—	—	—	—	—

PKIB0518E



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# CAN SYSTEM (TYPE 7)

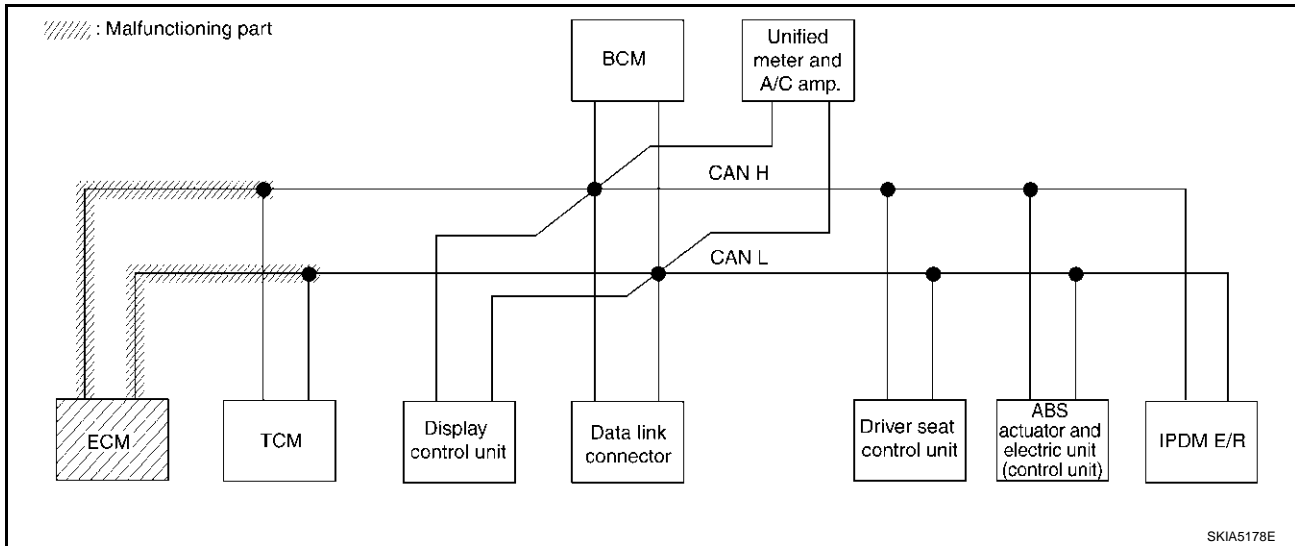
[CAN]

## Case 4

Check ECM circuit. Refer to [LAN-248, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N
TRANSMISSION	No indication	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N
METER A/C AMP	No indication	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—
AUTO DRIVE POS.	No indication	NG	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—
ABS	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	—	—	—

PKIB0519E





# CAN SYSTEM (TYPE 7)

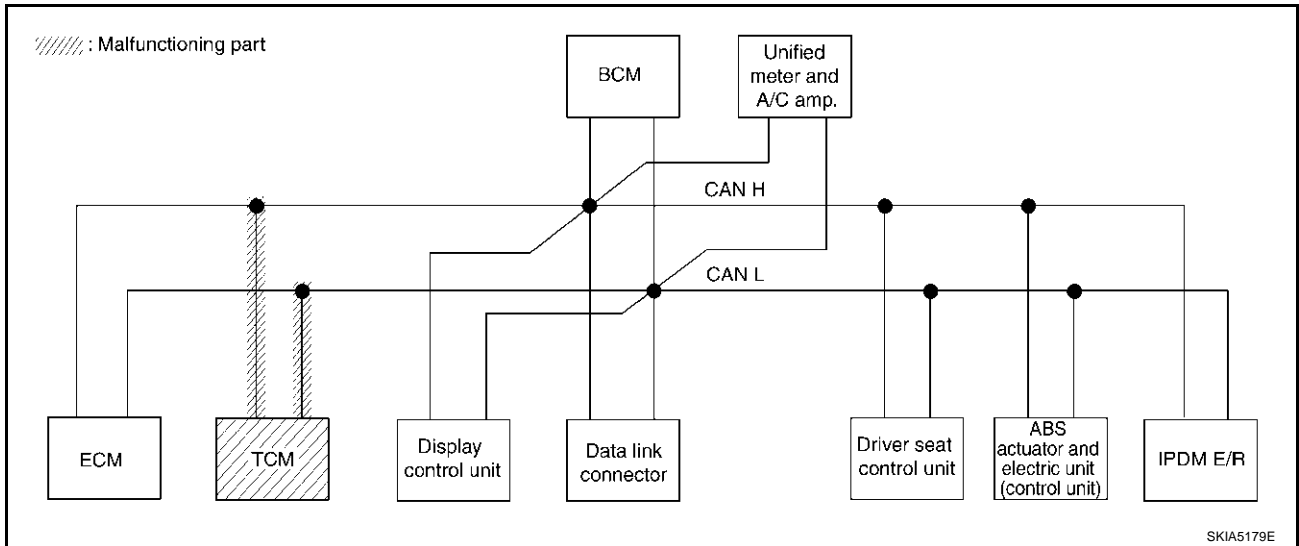
[CAN]

## Case 5

Check TCM circuit. Refer to [LAN-248, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

PKIB0520E



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# CAN SYSTEM (TYPE 7)

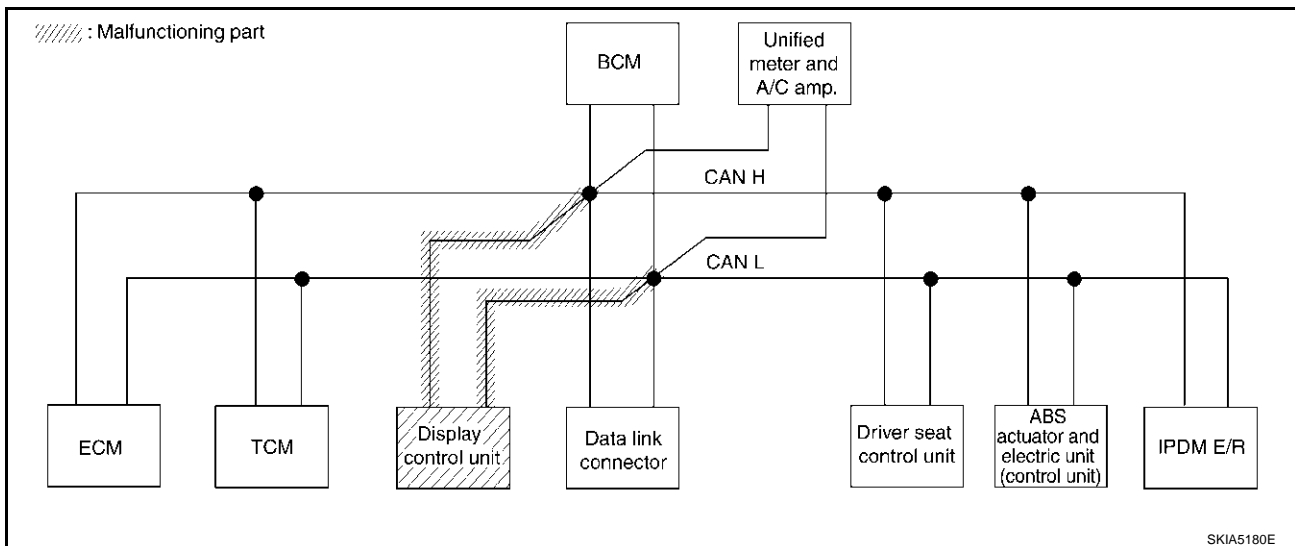
[CAN]

## Case 6

Check display control unit circuit. Refer to [LAN-249, "Display Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW	—	UNKW	—	UNKW	UNKW	—	UNKW
TRANSMISSION	No indication	NG	UNKW	UNKW	—	—	—	UNKW	UNKW	—
Display control unit	—	CAN COMM	CAN CRC 1 ✓	CAN CRC 3 ✓	—	—	CAN CRC 2 ✓	CAN CRC 5 ✓	—	CAN CRC 7 ✓
BCM	—	NG	UNKW	UNKW	—	—	—	UNKW	—	UNKW
METER A/C AMP	No indication	—	UNKW	UNKW	UNKW	UNKW ✓	UNKW	—	UNKW	—
AUTO DRIVE POS.	No indication	NG	UNKW	—	UNKW	—	UNKW	UNKW	—	—
ABS	—	NG	UNKW	UNKW	—	—	—	—	—	—

PKIB0521E



# CAN SYSTEM (TYPE 7)

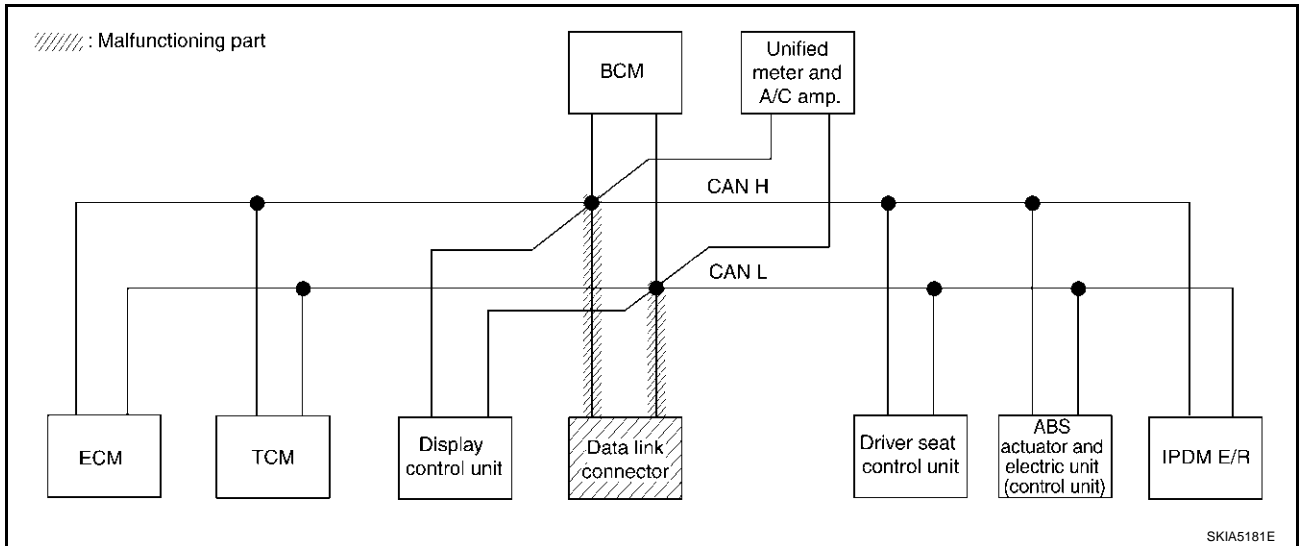
[CAN]

## Case 7

Check data link connector circuit. Refer to [LAN-249, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—
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PKIB0522E



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# CAN SYSTEM (TYPE 7)

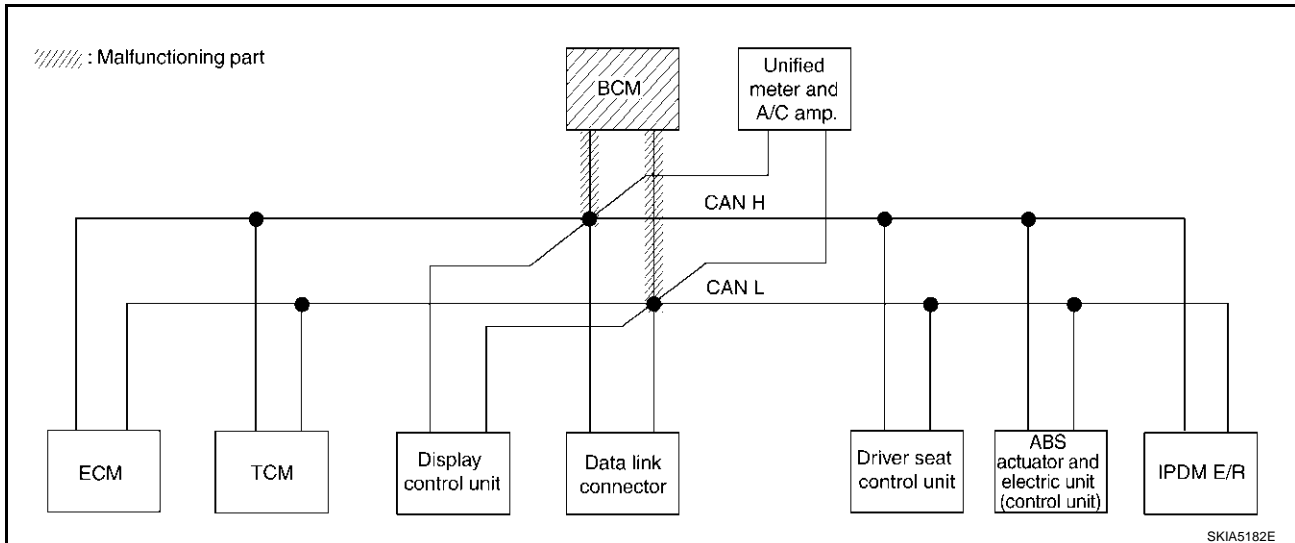
[CAN]

## Case 8

Check BCM circuit. Refer to [LAN-250, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

PKIB0523E



# CAN SYSTEM (TYPE 7)

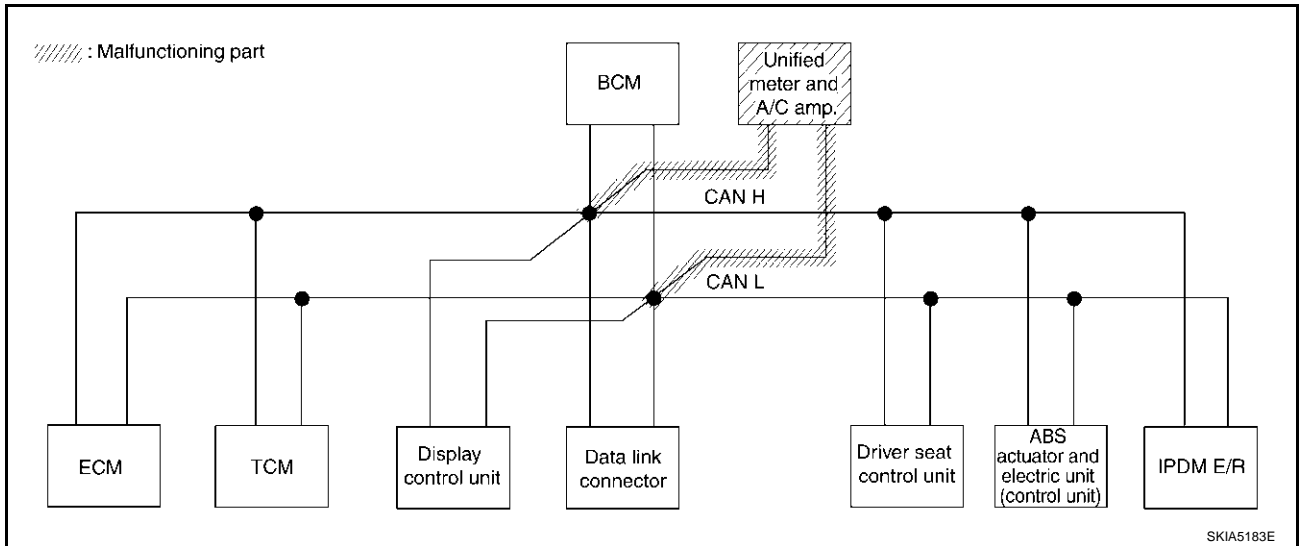
[CAN]

## Case 9

Check unified meter and A/C amp. circuit. Refer to [LAN-250, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN ✓	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN ✓	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN ✓	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN ✓	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 7)

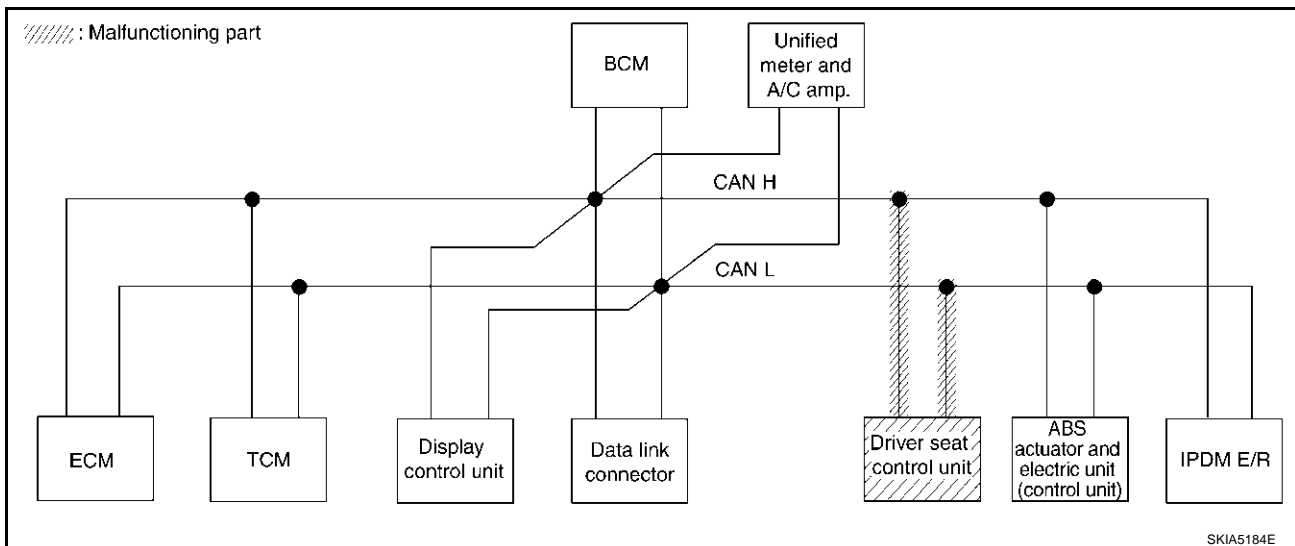
[CAN]

## Case 10

Check driver seat control unit circuit. Refer to [LAN-251, "Driver Seat Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

PKIB0525E



# CAN SYSTEM (TYPE 7)

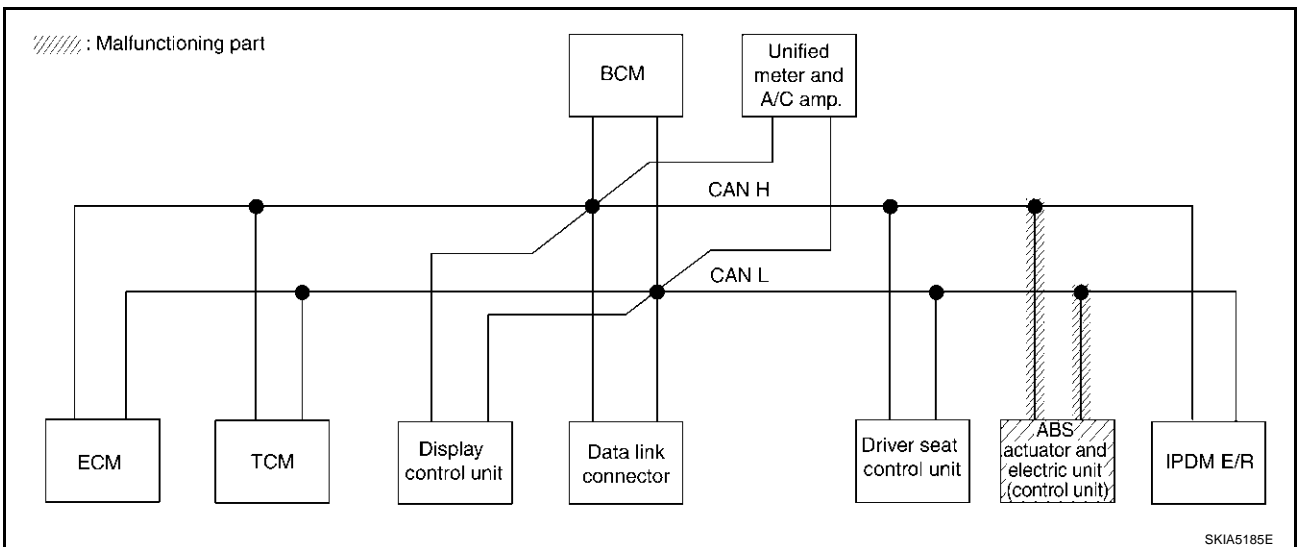
[CAN]

## Case 11

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-251, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

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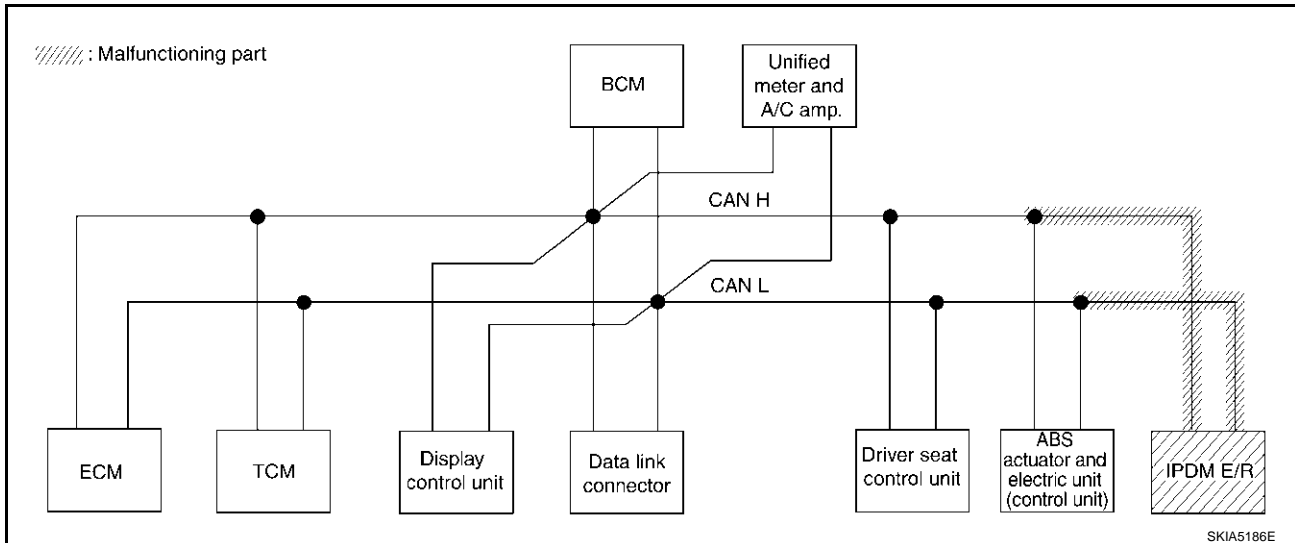
[CAN]

## Case 12

Check IPDM E/R circuit. Refer to [LAN-252, "IPDM E/R Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW <del>N</del>	—	UNKW <del>N</del>	—	UNKW <del>N</del>	UNKW <del>N</del>	—	UNKW <del>N</del>
TRANSMISSION	No indication	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	UNKW <del>N</del>	UNKW <del>N</del>	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	UNKW <del>N</del>	—	UNKW <del>N</del>
METER A/C AMP	No indication	—	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	—	UNKW <del>N</del>	—
AUTO DRIVE POS.	No indication	NG	UNKW <del>N</del>	—	UNKW <del>N</del>	—	UNKW <del>N</del>	UNKW <del>N</del>	—	—
ABS	—	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	—	—	—

PKIB0527E



## Case 13

Check CAN communication circuit. Refer to [LAN-253, "CAN Communication Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW <del>N</del>	—	UNKW <del>N</del>	—	UNKW <del>N</del>	UNKW <del>N</del>	—	UNKW <del>N</del>
TRANSMISSION	No indication	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	UNKW <del>N</del>	UNKW <del>N</del>	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	UNKW <del>N</del>	—	UNKW <del>N</del>
METER A/C AMP	No indication	—	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	—	UNKW <del>N</del>	—
AUTO DRIVE POS.	No indication	NG	UNKW <del>N</del>	—	UNKW <del>N</del>	—	UNKW <del>N</del>	UNKW <del>N</del>	—	—
ABS	—	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	—	—	—

PKIB0528E



# CAN SYSTEM (TYPE 7)

[CAN]

## Case 14

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-256, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

PKIB0529E

## Case 15

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-256, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—

PKIB0530E

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## Circuit Check Between TCM and Data Link Connector

AKS006S4

### 1. CHECK HARNESS FOR OPEN CIRCUIT

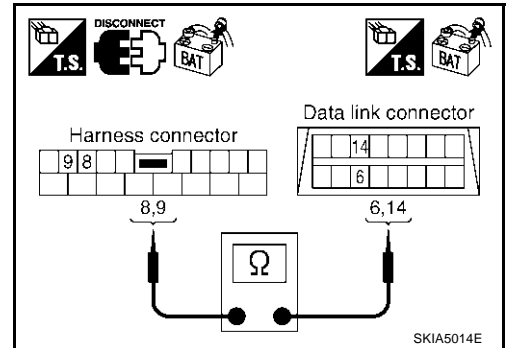
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

**8 (L) - 6 (L) : Continuity should exist.**

**9 (Y) - 14 (Y) : Continuity should exist.**

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-229, "Work Flow"](#) .
- NG >> Repair harness.



## Circuit Check Between Data Link Connector and Driver Seat Control Unit

AKS006S5

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).

- Harness connector M9
- Harness connector B2

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

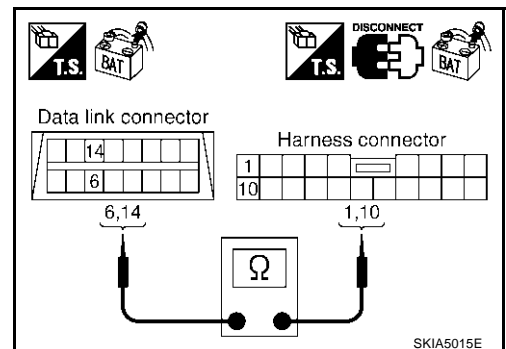
1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

**6 (L) - 1 (L) : Continuity should exist.**

**14 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



### 3. CHECK HARNESS FOR OPEN CIRCUIT

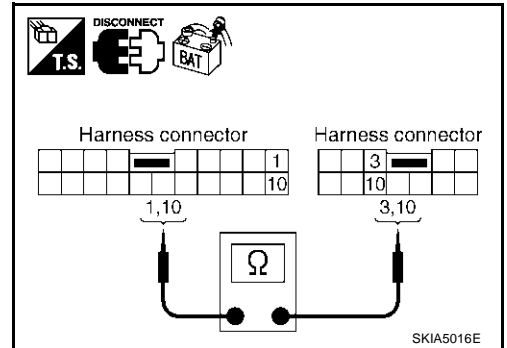
1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-229, "Work Flow"](#).
- NG >> Repair harness.



### Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit)

AKS006S6

#### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector B4
  - Harness connector E105

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

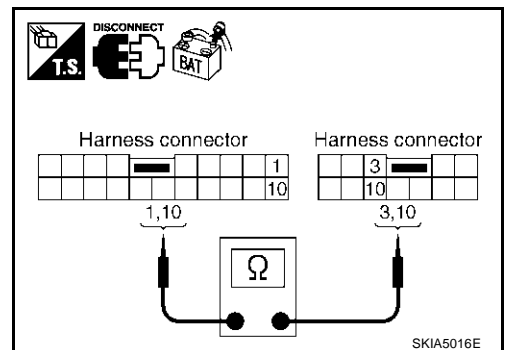
1. Disconnect harness connector B2 and harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



LAN

L

M

### 3. CHECK HARNESS FOR OPEN CIRCUIT

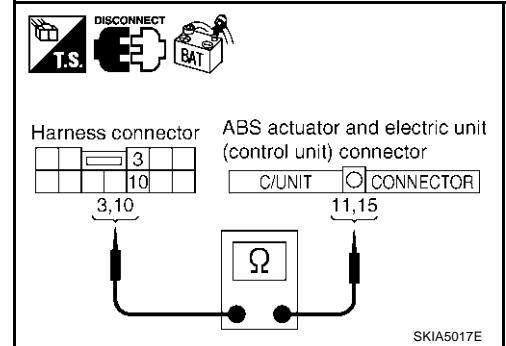
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

**3 (L) - 11 (L) : Continuity should exist.**

**10 (Y) - 15 (Y) : Continuity should exist.**

#### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-229, "Work Flow"](#).
- NG >> Repair harness.



SKIA5017E

## ECM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

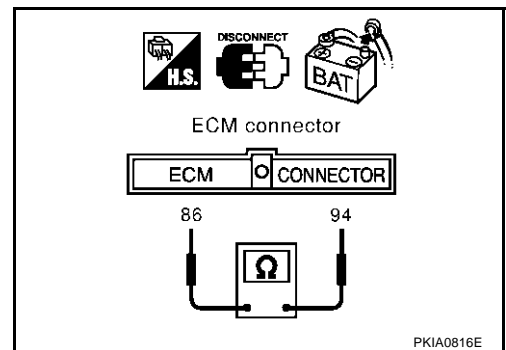
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

**94 (L) - 86 (Y) : Approx. 108 - 132Ω**

#### OK or NG

- OK >> Replace ECM.
- NG >> Repair harness between ECM and TCM.



PKIA0816E

## TCM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
  - TCM connector
  - Harness connector F102
  - Harness connector M82

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

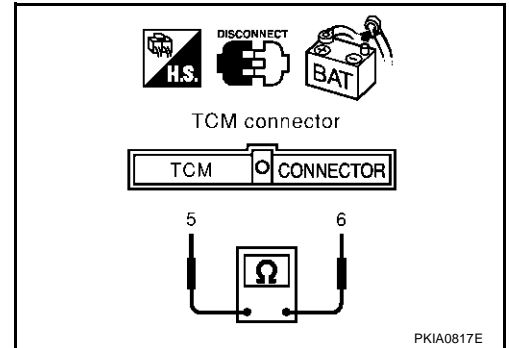
1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace TCM.  
 NG >> Repair harness between TCM and ECM.



## Display Control Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display control unit for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

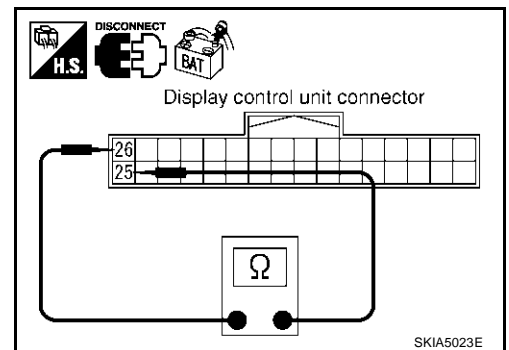
1. Disconnect display control unit connector.
2. Check resistance between display control unit harness connector M43 terminals 25 (L) and 26 (Y).

**25 (L) - 26 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace display control unit.  
 NG >> Repair harness between display control unit and data link connector.



## Data Link Connector Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

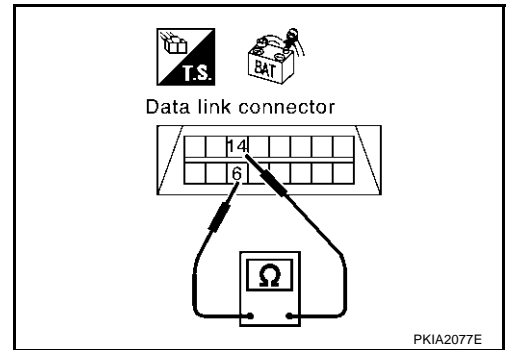
## 2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Diagnose again. Refer to [LAN-229, "Work Flow"](#) .  
 NG >> Repair harness between data link connector and BCM.



AKS006SB

## BCM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

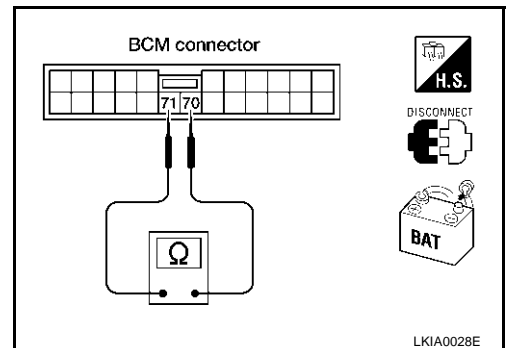
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M37 terminals 70 (L) and 71 (Y).

**70 (L) - 71 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace BCM. Refer to [BCS-36, "Removal and Installation of BCM"](#) .  
 NG >> Repair harness between BCM and data link connector.



AKS006SC

## Unified Meter and A/C Amp. Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

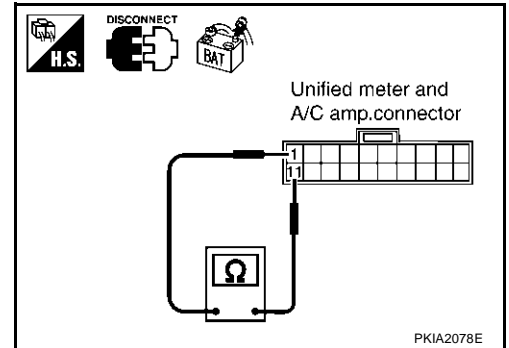
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

**1 (L) - 11 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace unified meter and A/C amp.  
 NG >> Repair harness between unified meter and A/C amp. and data link connector.



AKS006SD

## Driver Seat Control Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control unit side and harness side).
  - Driver seat control unit connector
  - Harness connector B301
  - Harness connector B9

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

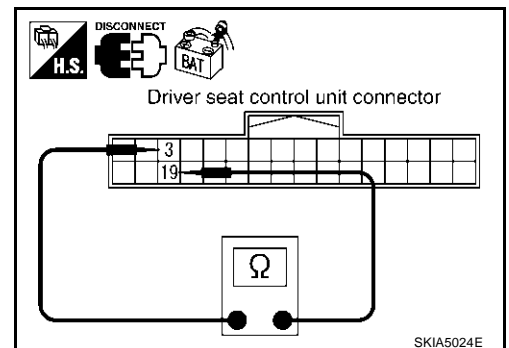
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect driver seat control unit connector.
2. Check resistance between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

**3 (L/Y) - 19 (BR/W) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace driver seat control unit.  
 NG >> Repair harness between driver seat control unit and harness connector B4.



AKS006SE

## ABS Actuator and Electric Unit (Control Unit) Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

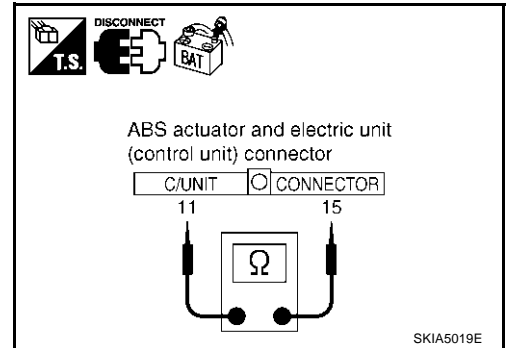
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

**11 (L) - 15 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).  
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



AKS006SF

## IPDM E/R Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

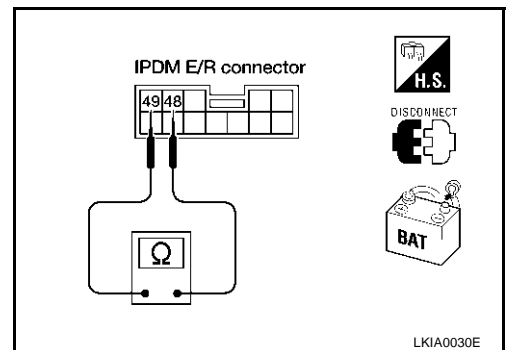
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y) : Approx. 108 - 132Ω**

### OK or NG

- OK >> Replace IPDM E/R.  
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).





**CAN Communication Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, meter side and harness side).
  - ECM
  - TCM
  - Display control unit
  - BCM
  - Unified meter and A/C amp.
  - Driver seat control unit
  - ABS actuator and electric unit (control unit)
  - IPDM E/R
  - Between ECM and IPDM E/R
  - Between ECM and TCM
  - Between ECM and driver seat control unit

**OK or NG**

OK &gt;&gt; GO TO 2.

NG &gt;&gt; Repair terminal or connector.

**2. CHECK HARNESS FOR SHORT CIRCUIT**

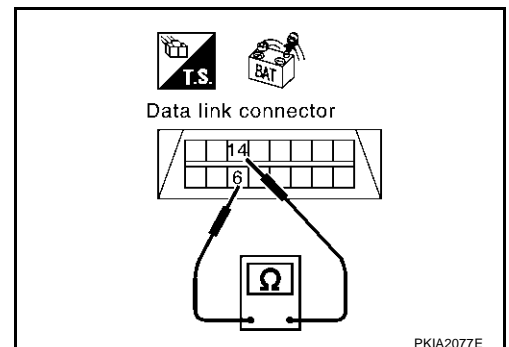
1. Disconnect following connectors.
  - ECM connector
  - Harness connector M82
  - Display control unit connector
  - BCM connector
  - Unified meter and A/C amp. connector
  - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Continuity should not exist.****OK or NG**

OK &gt;&gt; GO TO 3.

NG &gt;&gt; Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9.



PKIA2077E

## 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

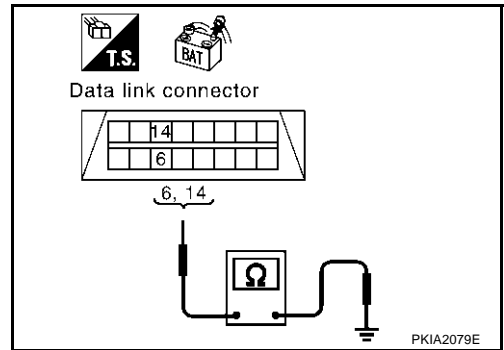
- 6 (L) - Ground : Continuity should not exist.**
- 14 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9.



## 4. CHECK HARNESS FOR SHORT CIRCUIT

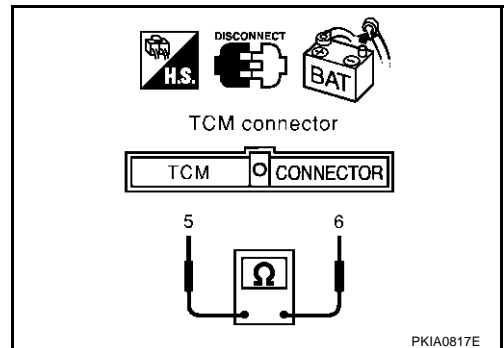
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

- 5 (L) - 6 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 5.

NG >> Repair harness between TCM and harness connector F102.



## 5. CHECK HARNESS FOR SHORT CIRCUIT

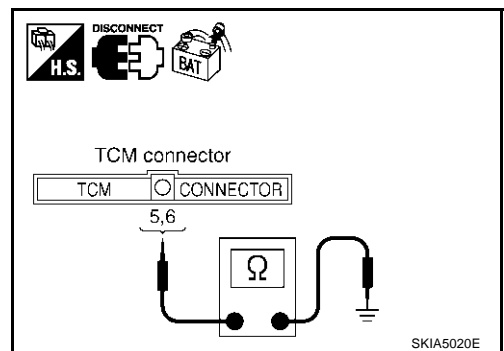
Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

- 5 (L) - Ground : Continuity should not exist.**
- 6 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 6.

NG >> Repair harness between TCM and harness connector F102.



**6. CHECK HARNESS FOR SHORT CIRCUIT**

1. Disconnect harness connector B4 and harness connector B9.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

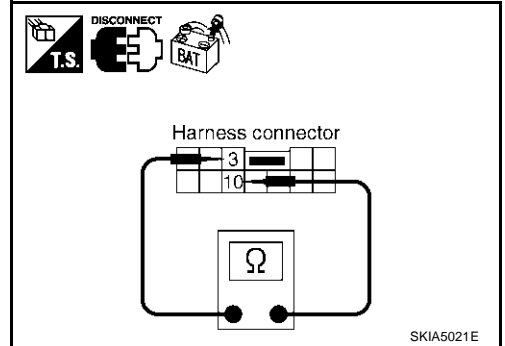
**3 (L) - 10 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 7.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Repair harness between harness connector B4 and harness connector B2.
- Repair harness between harness connector B4 and harness connector B9.



**7. CHECK HARNESS FOR SHORT CIRCUIT**

Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

**3 (L) - Ground : Continuity should not exist.**

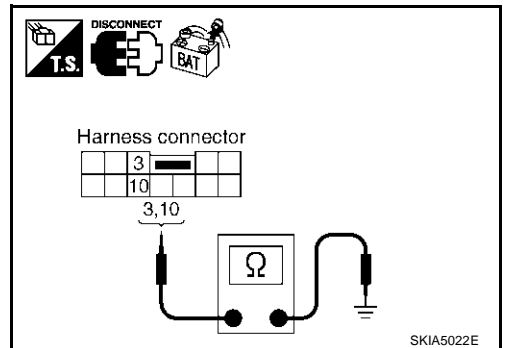
**10 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 8.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Repair harness between harness connector B4 and harness connector B2.
- Repair harness between harness connector B4 and harness connector B9.



**8. CHECK HARNESS FOR SHORT CIRCUIT**

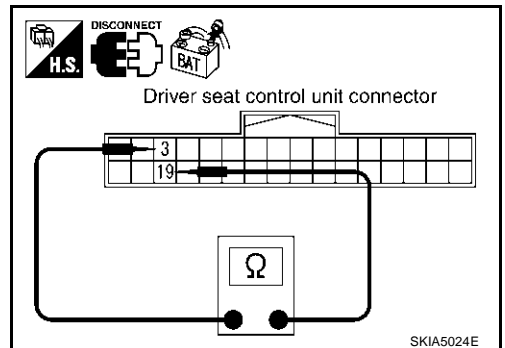
1. Disconnect driver seat control unit connector.
2. Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

**3 (L/Y) - 19 (BR/W) : Continuity should not exist.**

OK or NG

OK >> GO TO 9.

NG >> Repair harness between driver seat control unit and harness connector B301.



A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
LAN  
L  
M

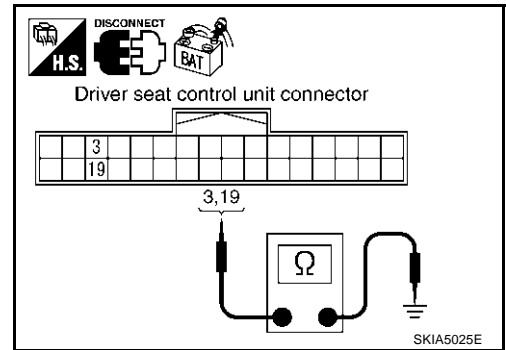
## 9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y), 19 (BR/W) and ground.

- 3 (L/Y) - Ground : Continuity should not exist.**
- 19 (BR/W) - Ground : Continuity should not exist.**

OK or NG

- OK >> GO TO 10.
- NG >> Repair harness between driver seat control unit and harness connector B301.



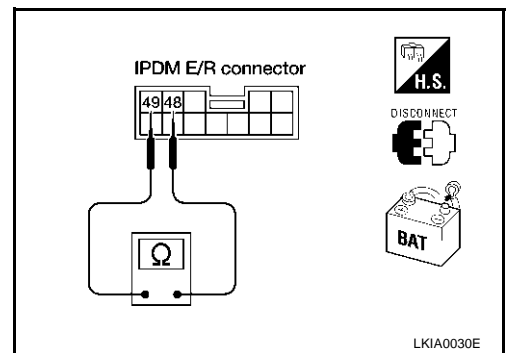
## 10. CHECK HARNESS FOR SHORT CIRCUIT

- Disconnect ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
- Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

- 48 (L) - 49 (Y) : Continuity should not exist.**

OK or NG

- OK >> GO TO 11.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between IPDM E/R and ABS actuator and electric unit (control unit).
  - Harness between IPDM E/R and harness connector E105.



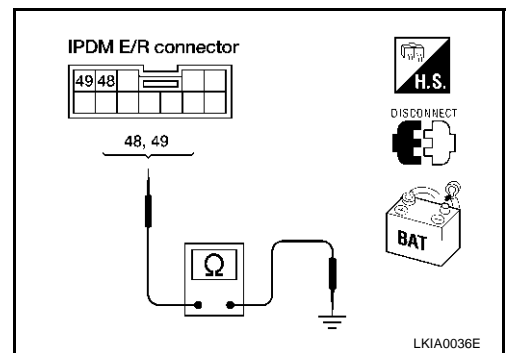
## 11. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

- 48 (L) - Ground : Continuity should not exist.**
- 49 (Y) - Ground : Continuity should not exist.**

OK or NG

- OK >> GO TO 12.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between IPDM E/R and ABS actuator and electric unit (control unit).
  - Harness between IPDM E/R and harness connector E105.



## 12. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-257, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#) .

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-229, "Work Flow"](#) .
- NG >> Replace ECM and/or IPDM E/R.

### IPDM E/R Ignition Relay Circuit Check

AKS006SH

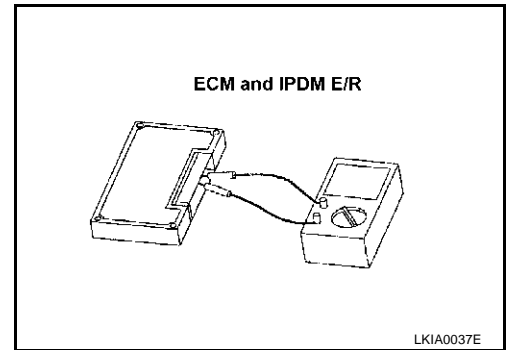
Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-45, "IPDM E/R Power/Ground Circuit Inspection"](#) .
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#) .

## Component Inspection ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value ( $\Omega$ ) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
L  
M

LAN

## CAN SYSTEM (TYPE 8)

PFP:23710

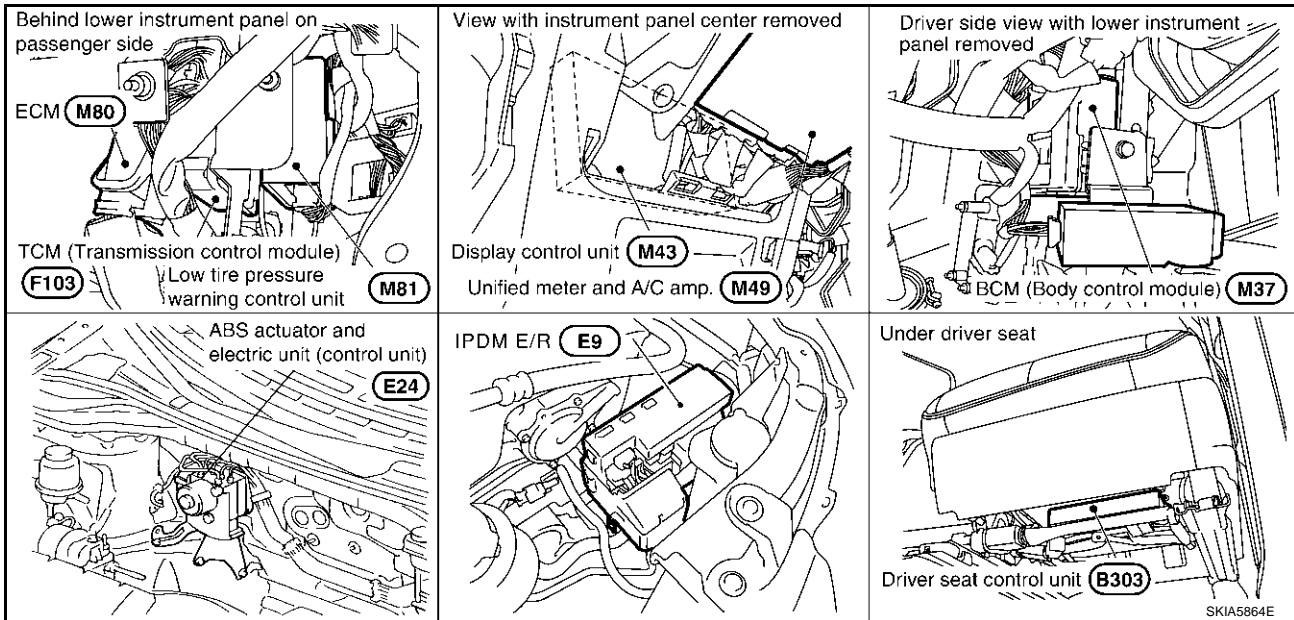
### System Description

AKS006SJ

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

### Component Parts and Harness Connector Location

AKS006SK

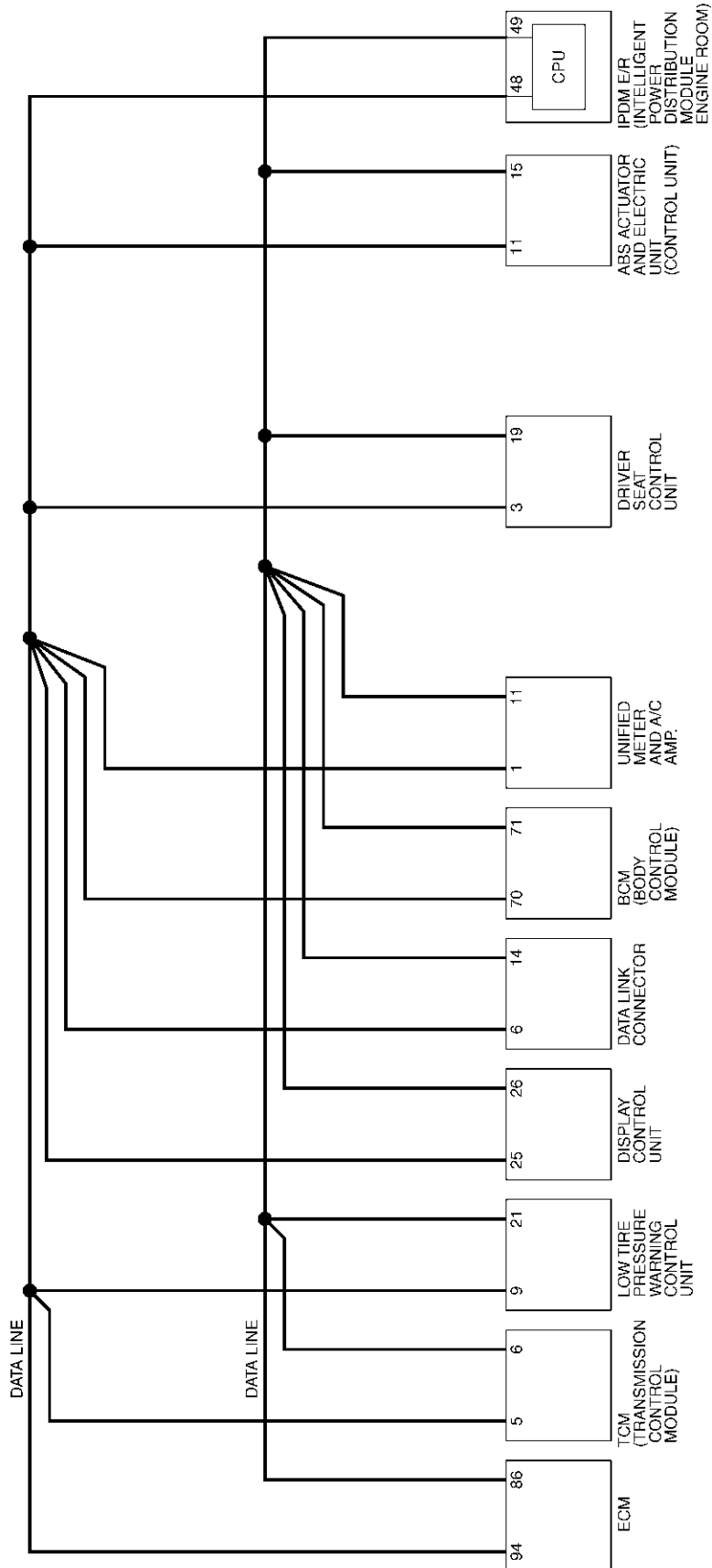


# CAN SYSTEM (TYPE 8)

[CAN]

## Schematic

AKS006SL



A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
L  
M

LAN

TKWA0951E

# CAN SYSTEM (TYPE 8)

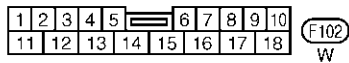
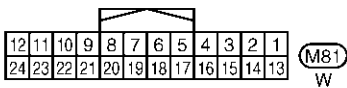
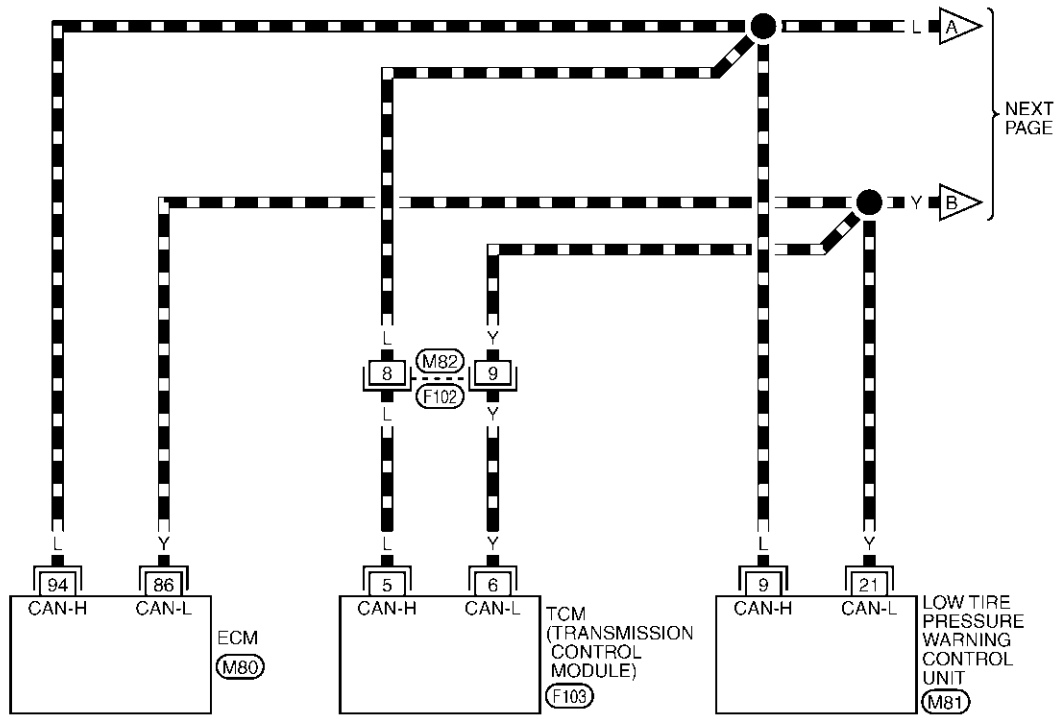
[CAN]

## Wiring Diagram - CAN -

AKS006SM

### LAN-CAN-22

▬ : DATA LINE



REFER TO THE FOLLOWING.  
(M80), (F103) -ELECTRICAL UNITS

TKWA0952E

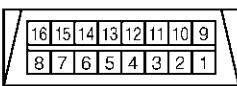
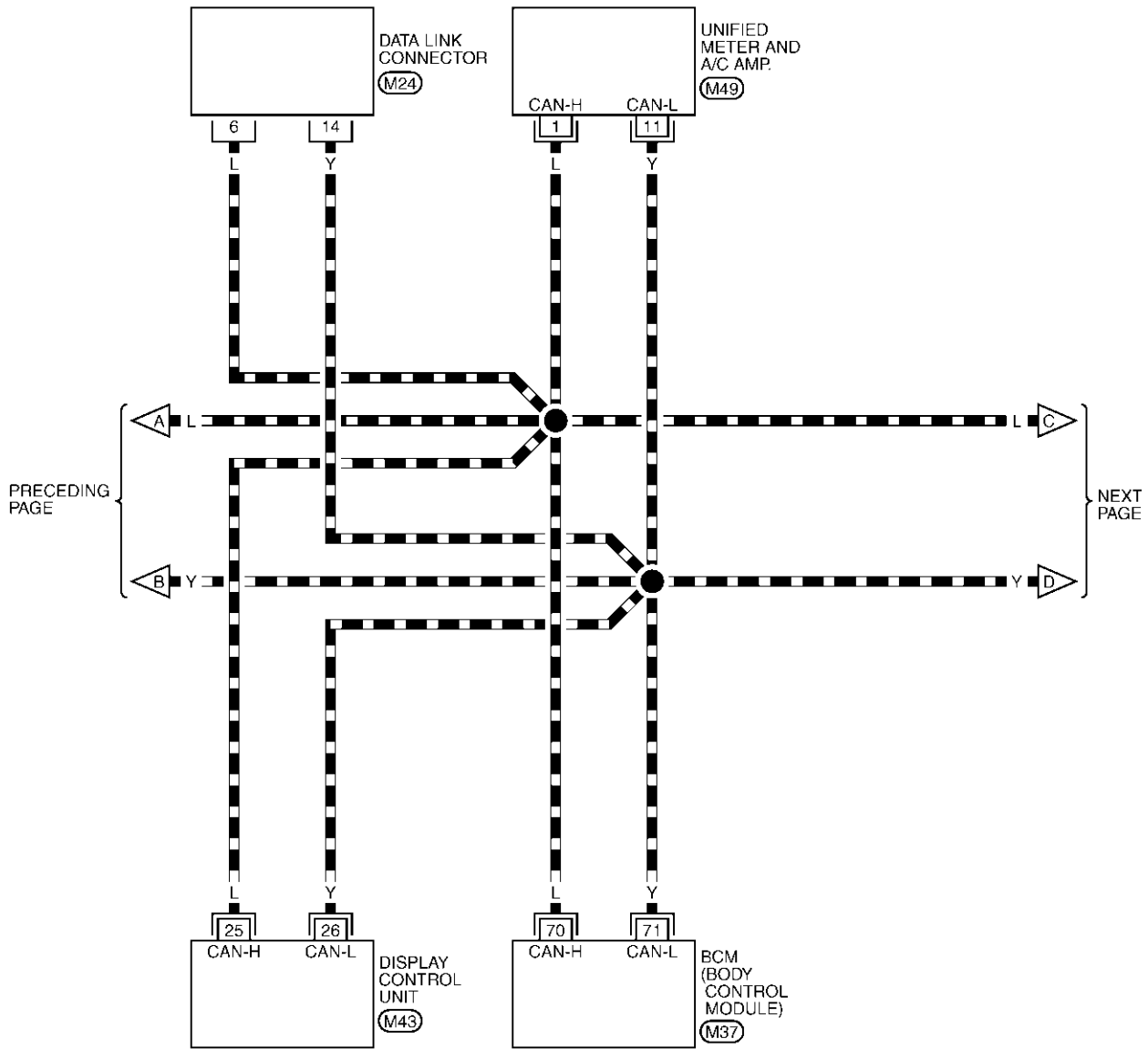


# CAN SYSTEM (TYPE 8)

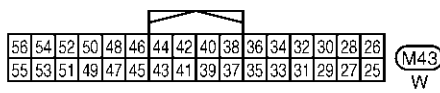
[CAN]

## LAN-CAN-23

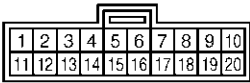
▬ : DATA LINE



(M24)  
W



(M43)  
W



(M49)  
GR



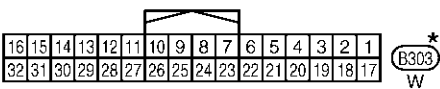
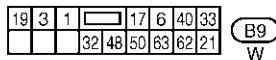
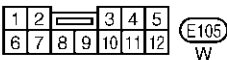
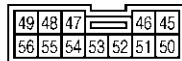
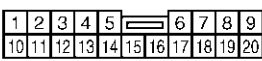
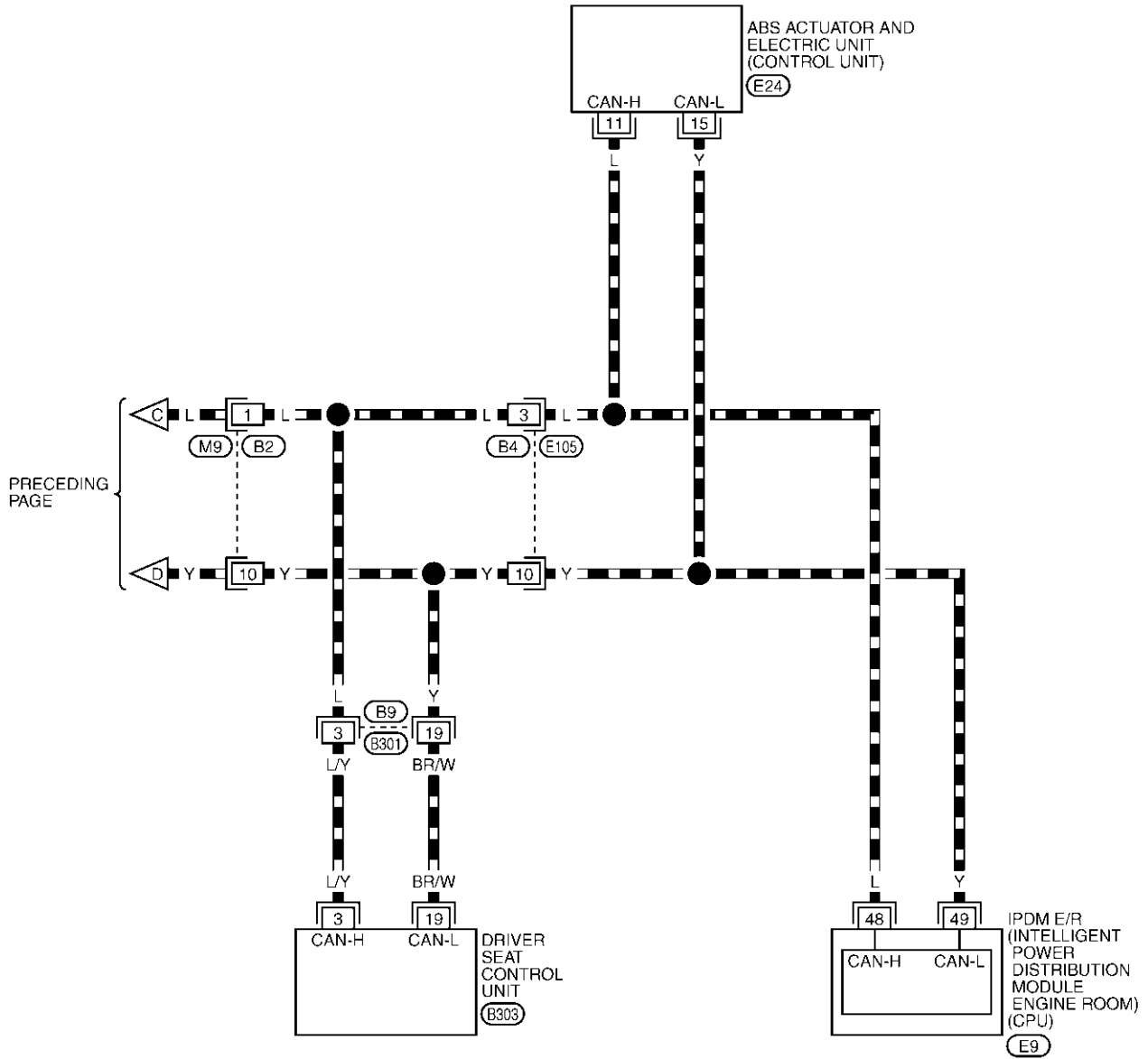
REFER TO THE FOLLOWING.

(M37) -ELECTRICAL UNITS

TKWA0953E

## LAN-CAN-24

▬ : DATA LINE



\*: THIS CONNECTOR IS NOT SHOWN IN "HARNES LAYOUT", PG SECTION.

REFER TO THE FOLLOWING.  
E24 -ELECTRICAL UNITS

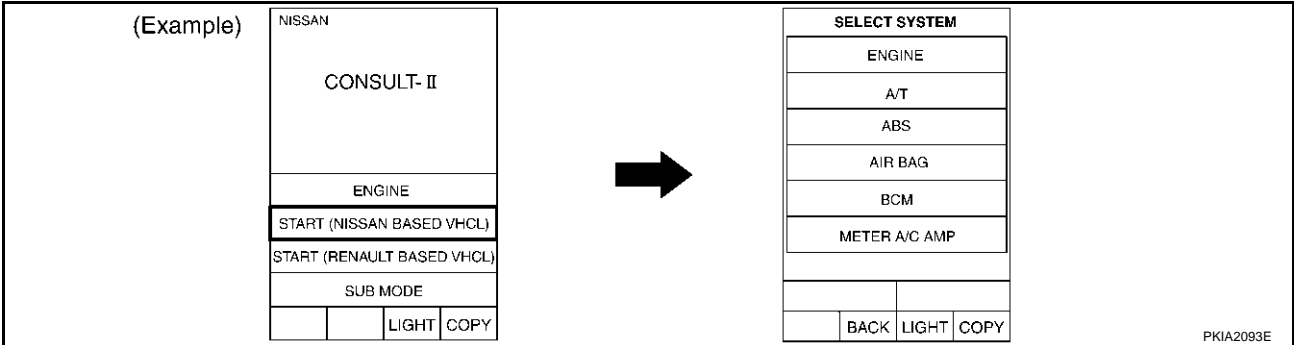
# CAN SYSTEM (TYPE 8)

[CAN]

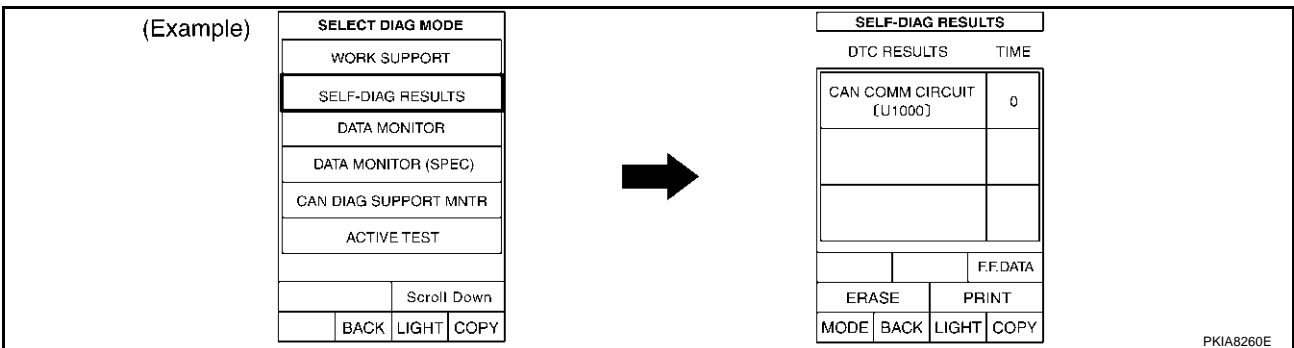
AKS00C50

## Work Flow

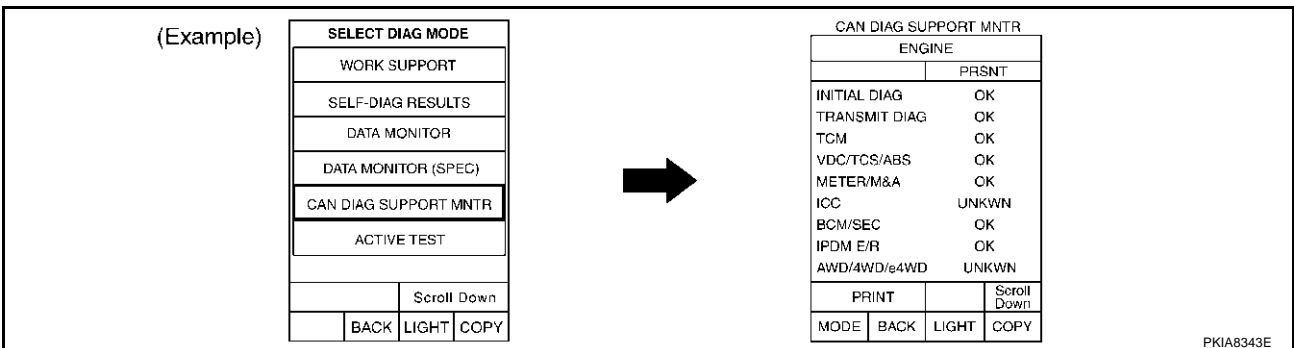
- When there are no indications of "TRANSMISSION", "AIR PRESSURE MONITOR", "METER A/C AMP" or "AUTO DRIVE POS." on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "AUTO DRIVE POS." and "ABS" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "AUTO DRIVE POS." and "ABS" displayed on CONSULT-II.



- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-265, "CHECK SHEET"](#).
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "v" onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-265, "CHECK SHEET"](#).

**NOTE:**

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual. So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the navigation system. Refer to [AV-203, "CAN Communication Line Check"](#).
- Attach the CAN DIAG SUPPORT MONITOR check sheet onto the check sheet. Refer to [LAN-265, "CHECK SHEET"](#).

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## CAN SYSTEM (TYPE 8)

[CAN]

8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG SUPPORT MONITOR check sheet. Refer to [LAN-265, "CHECK SHEET"](#) .

**NOTE:**

If "NG" is displayed on "CAN COMM" as "CAN DIAG SUPPORT MONITOR" for the diagnosed control unit, replace the control unit. Refer to [AV-203, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-267, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

# CAN SYSTEM (TYPE 8)

[CAN]

## CHECK SHEET

### NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

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SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

Attach copy of  
display control unit  
CAN DIAG SUPPORT MONITOR check sheet

# CAN SYSTEM (TYPE 8)

[CAN]

Attach copy of  
ENGINE  
SELF-DIAG RESULTS

Attach copy of  
TRANSMISSION  
SELF-DIAG RESULTS

Attach copy of  
AIR PRESSURE  
MONITOR  
SELF-DIAG RESULTS

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
METER A/C AMP  
SELF-DIAG RESULTS

Attach copy of  
AUTO DRIVE POS.  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

Attach copy of  
ENGINE  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
TRANSMISSION  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
AIR PRESSURE  
MONITOR  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
BCM  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
METER A/C AMP  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
AUTO DRIVE POS.  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ABS  
CAN DIAG SUPPORT  
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# CAN SYSTEM (TYPE 8)

[CAN]

## CHECK SHEET RESULTS (EXAMPLE)

### NOTE:

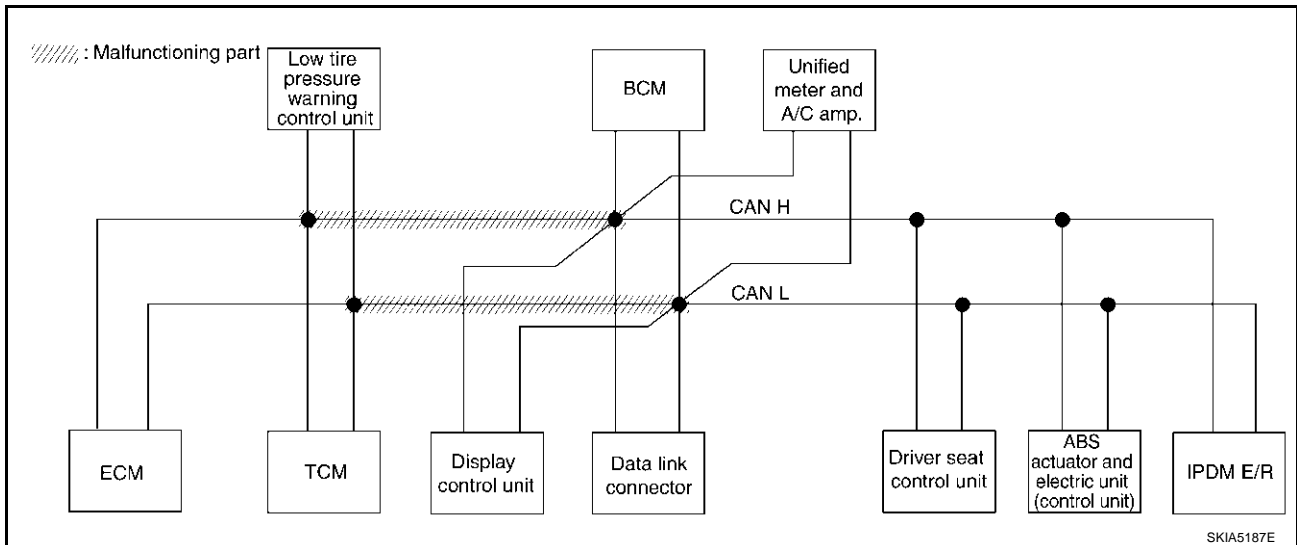
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

### Case 1

Check harness between TCM and data link connector. Refer to [LAN-281, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

PKIB0532E



# CAN SYSTEM (TYPE 8)

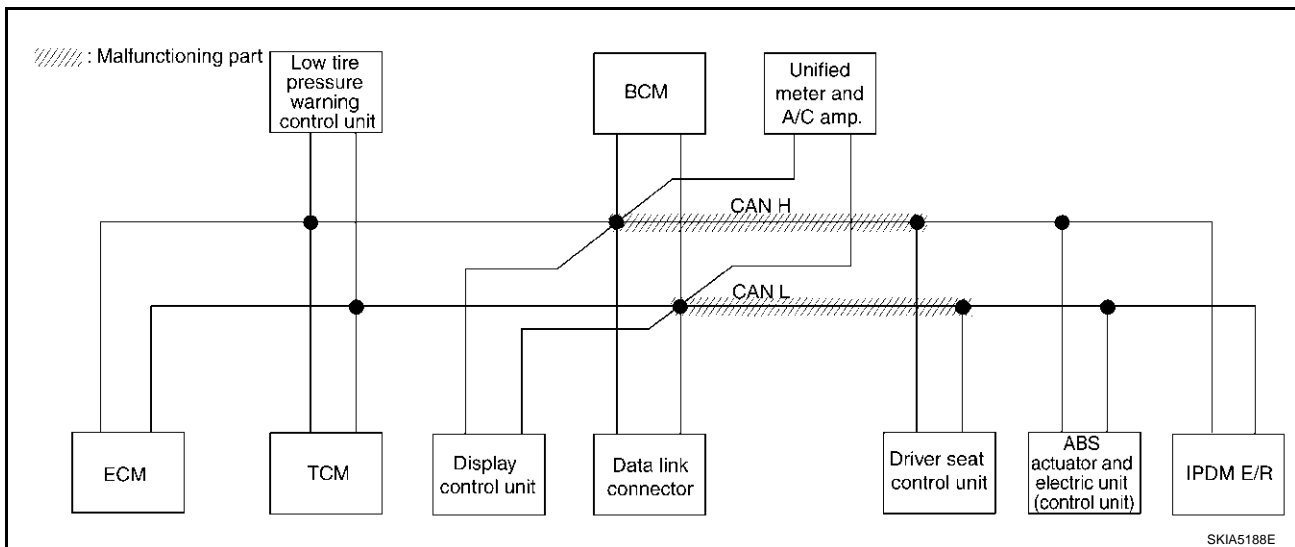
[CAN]

## Case 2

Check harness between data link connector and driver seat control unit. Refer to [LAN-281, "Circuit Check Between Data Link Connector and Driver Seat Control Unit"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN ✓	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN ✓	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7 ✓	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN ✓	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN ✓	—	
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	
ABS	—	NG	UNKWN	UNKWN ✓	—	—	—	—	—	—	—	

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# CAN SYSTEM (TYPE 8)

[CAN]

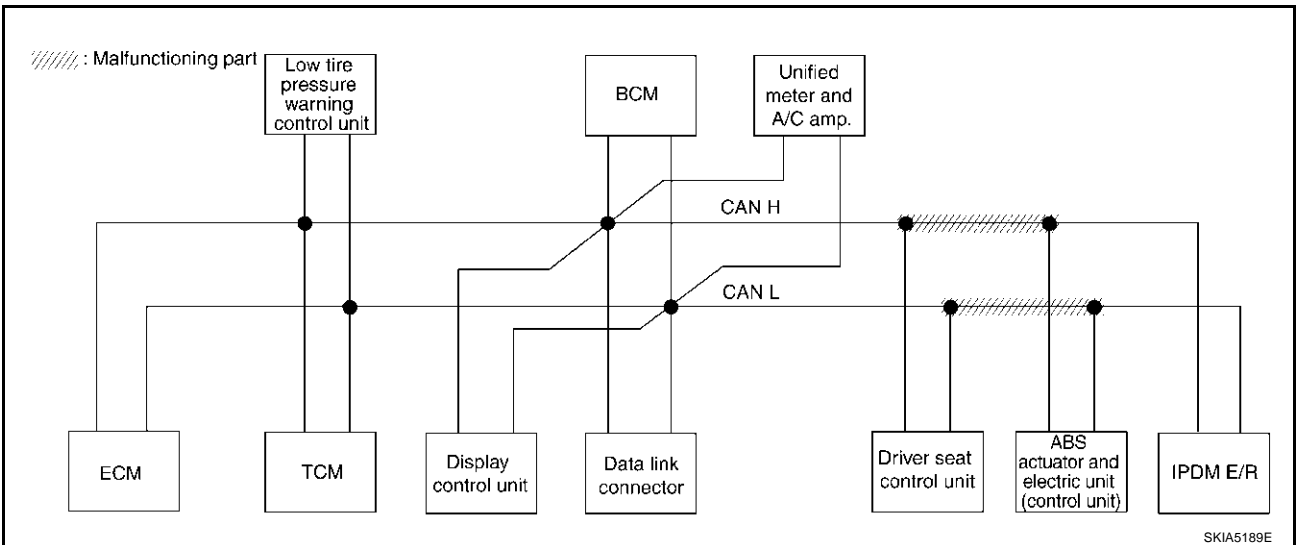
## Case 3

Check harness between driver seat control unit and ABS actuator and electric unit (control unit). Refer to LAN-282, "Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit)".

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SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	

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# CAN SYSTEM (TYPE 8)

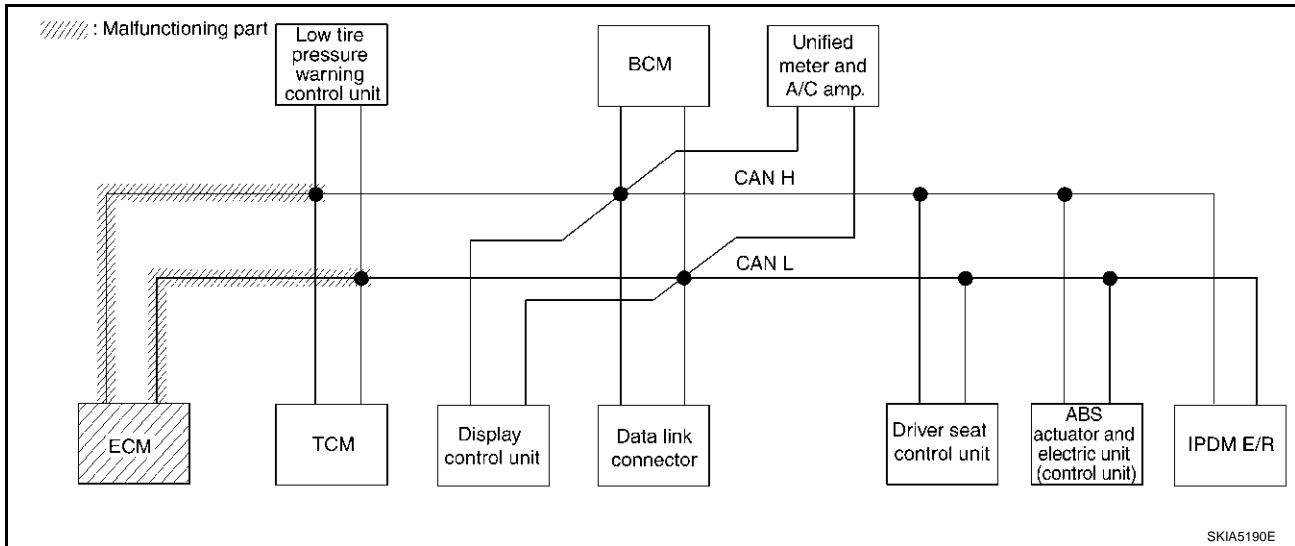
[CAN]

## Case 4

Check ECM circuit. Refer to [LAN-283, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N
TRANSMISSION	No indication	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—
AIR PRESSURE MONITOR	No indication	NG	UNKW <sup>✓</sup> N	—	—	—	—	—	UNKW <sup>✓</sup> N	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	—	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N
METER A/C AMP	No indication	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—
AUTO DRIVE POS.	No indication	NG	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—
ABS	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 8)

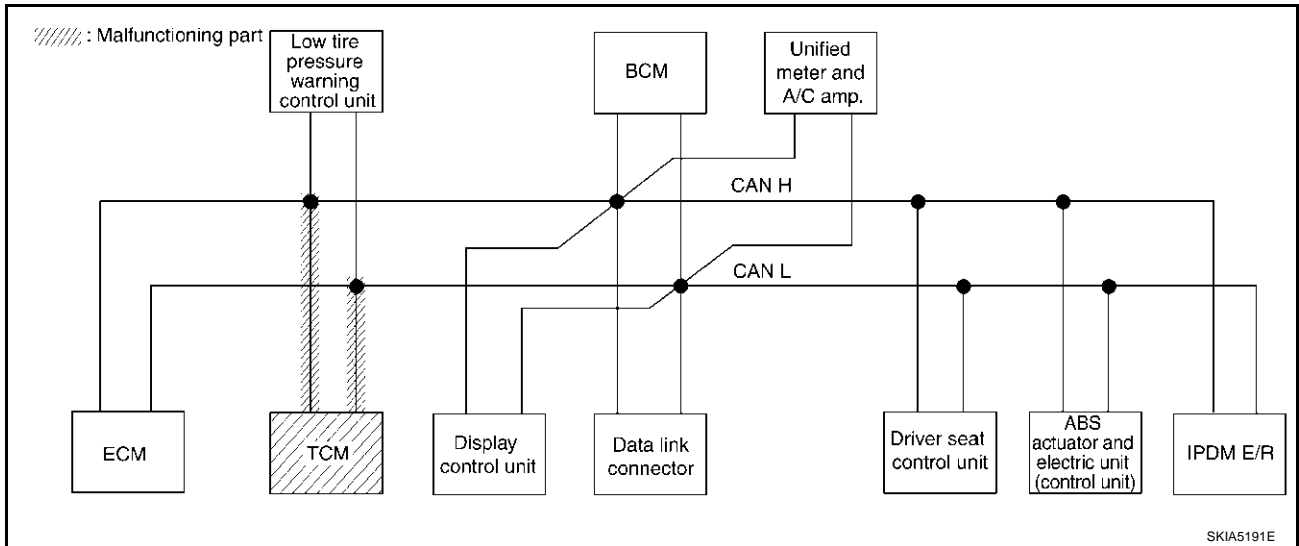
[CAN]

## Case 5

Check TCM circuit. Refer to [LAN-283, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 8)

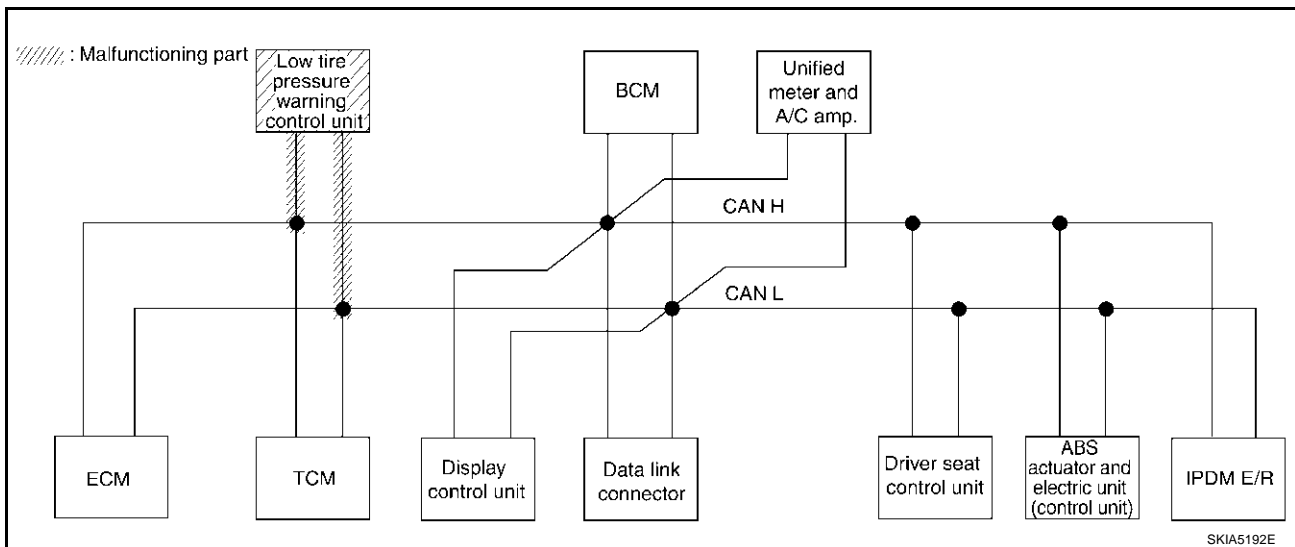
[CAN]

## Case 6

Check low tire pressure warning control unit circuit. Refer to [LAN-284, "Low Tire Pressure Warning Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 8)

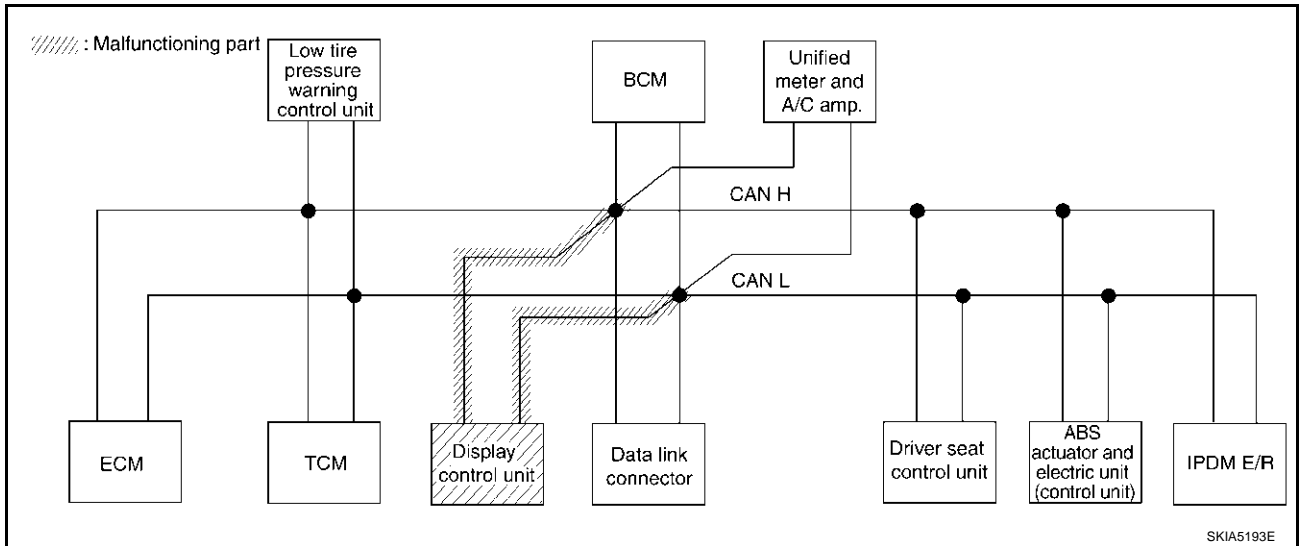
[CAN]

## Case 7

Check display control unit circuit. Refer to [LAN-284, "Display Control Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	
Display control unit	—	CAN COMM	CAN CRC 1 ✓	CAN CRC 3 ✓	—	CAN CRC 6 ✓	—	CAN CRC 2 ✓	CAN CRC 5 ✓	—	CAN CRC 7 ✓	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	

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# CAN SYSTEM (TYPE 8)

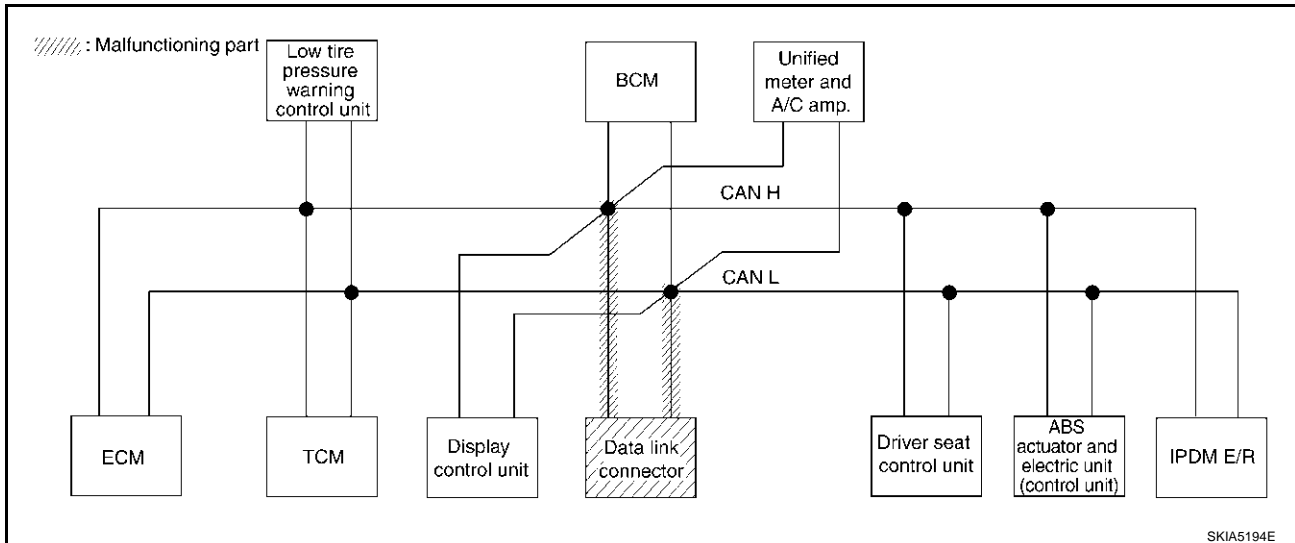
[CAN]

## Case 8

Check data link connector circuit. Refer to [LAN-285, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 8)

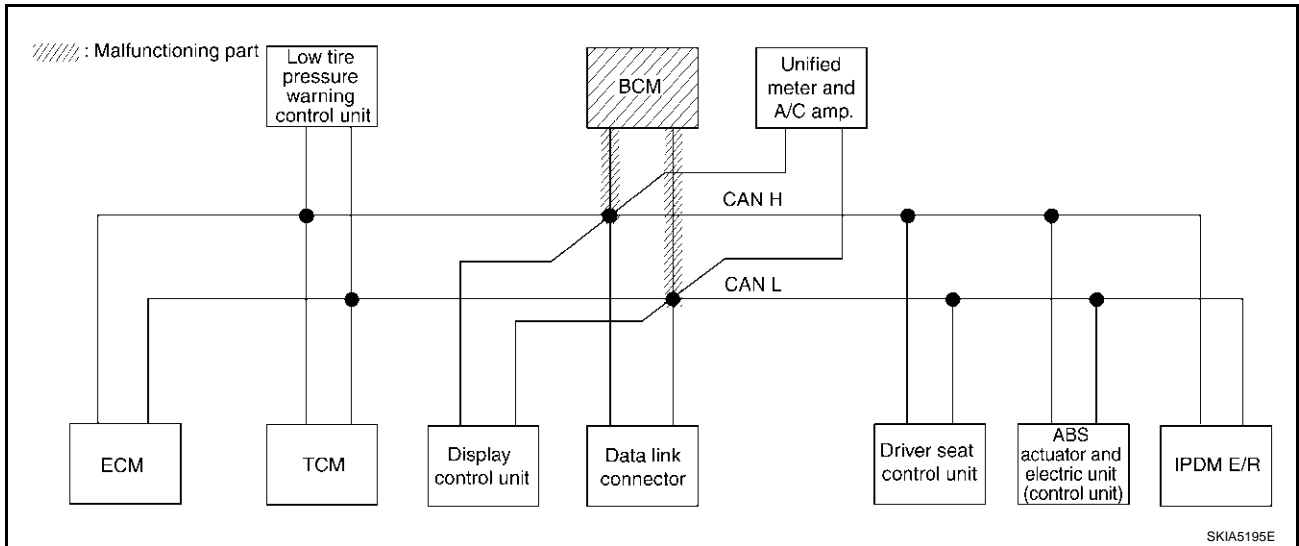
[CAN]

## Case 9

Check BCM circuit. Refer to [LAN-285, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 8)

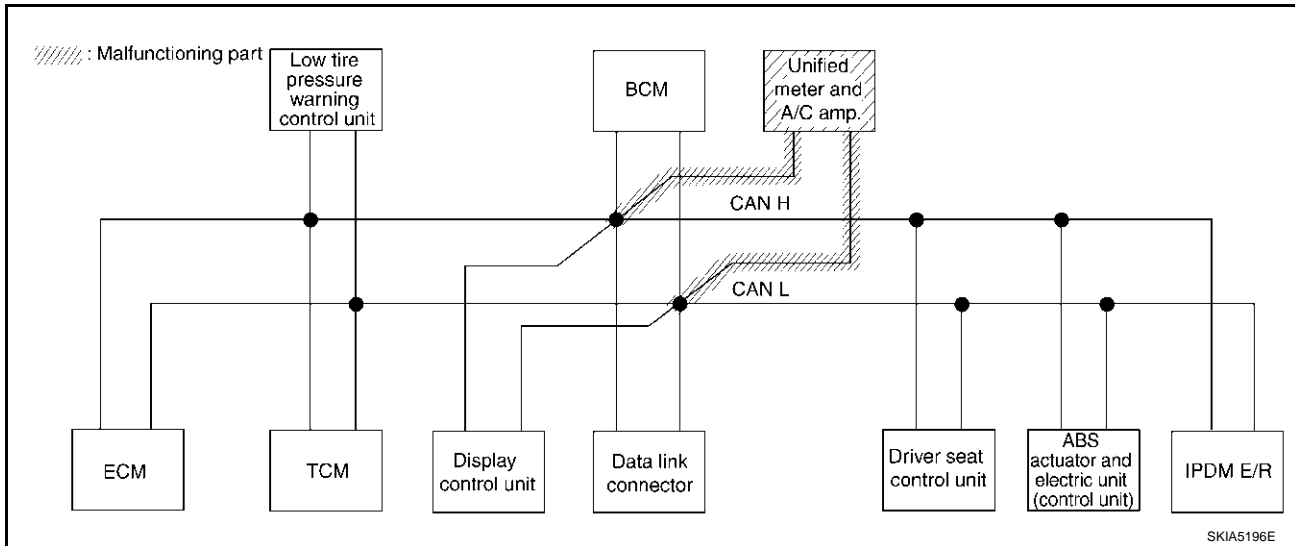
[CAN]

## Case 10

Check unified meter and A/C amp. circuit. Refer to [LAN-286, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

PKIB0541E



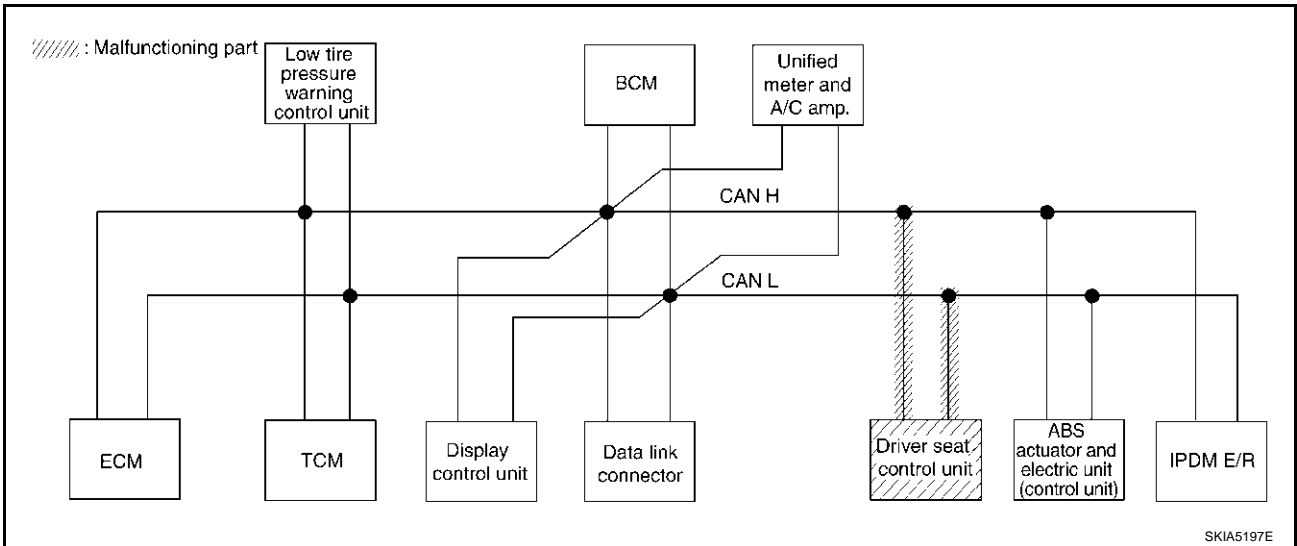


## Case 11

Check driver seat control unit circuit. Refer to [LAN-286, "Driver Seat Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	

PKIB0542E



LAN

# CAN SYSTEM (TYPE 8)

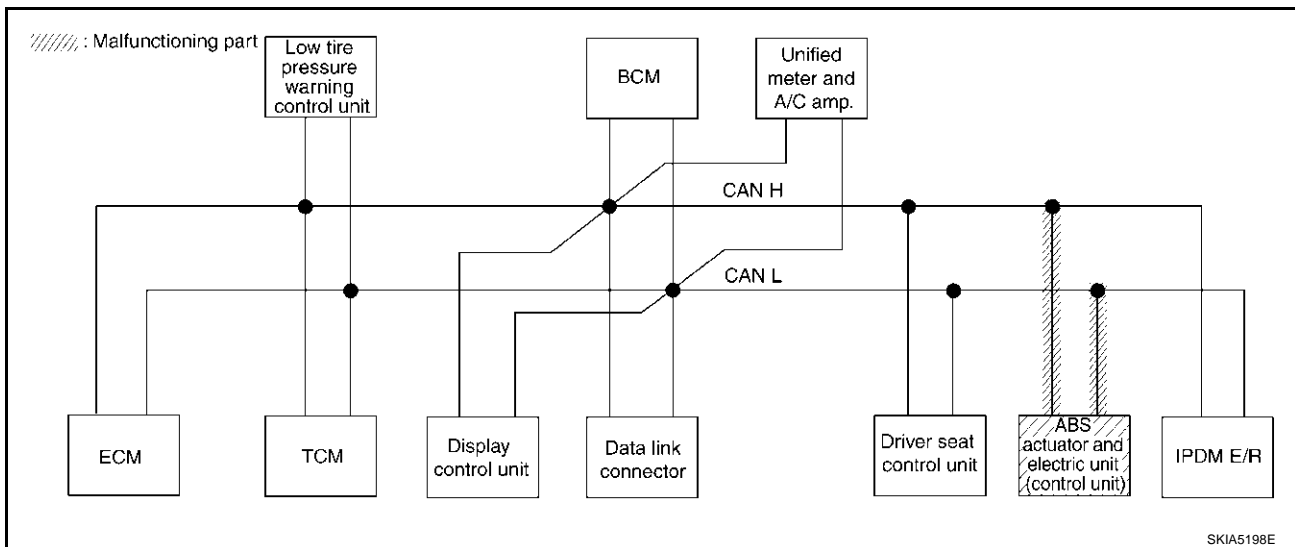
[CAN]

## Case 12

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-287, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

PKIB0543E



# CAN SYSTEM (TYPE 8)

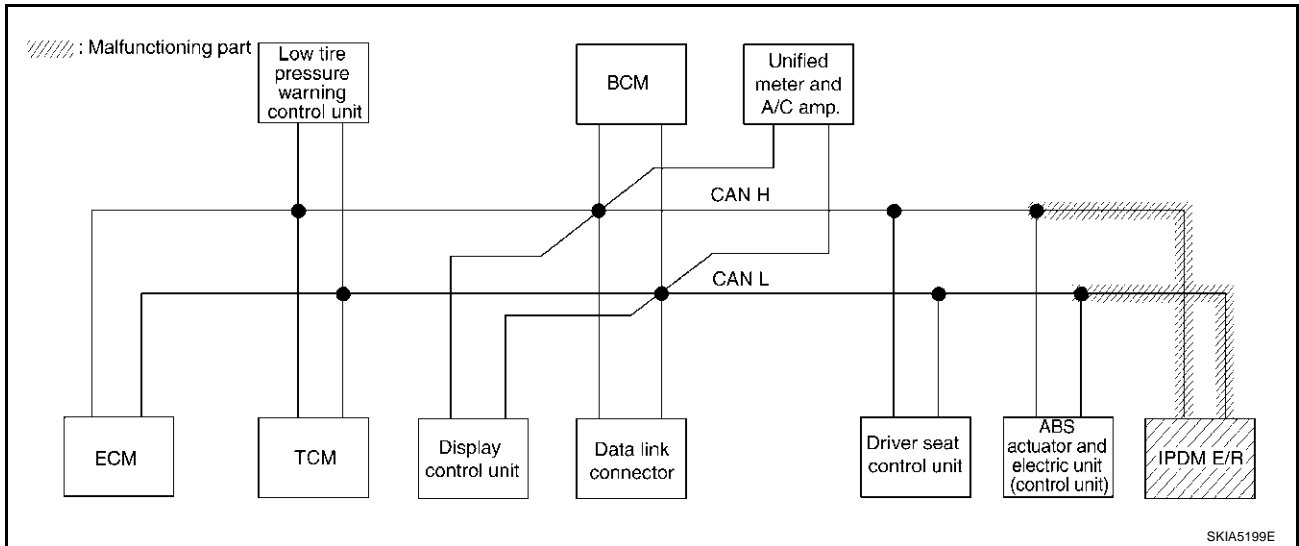
[CAN]

## Case 13

Check IPDM E/R circuit. Refer to [LAN-287, "IPDM E/R Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	

PKIB0544E



## Case 14

Check CAN communication circuit. Refer to [LAN-288, "CAN Communication Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	

PKIB0545E

# CAN SYSTEM (TYPE 8)

[CAN]

## Case 15

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-292, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UN <del>KN</del> W <del>N</del>	—	—	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7	—
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
METER A/C AMP	No indication	—	UNKWN	UNKWN	UN <del>KN</del> W <del>N</del>	UNKWN	UNKWN	UNKWN	—	UN <del>KN</del> W <del>N</del>	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UN <del>KN</del> W <del>N</del>	—	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

PKIB0546E

## Case 16

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-292, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UN <del>KN</del> W <del>N</del>	—	—	—	—	UN <del>KN</del> W <del>N</del>	UNKWN	—	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	CAN CIRC 7	—
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UN <del>KN</del> W <del>N</del>	—	—	—	—	—	—	—	—

PKIB0547E

## Circuit Check Between TCM and Data Link Connector

AKS006SO

### 1. CHECK HARNESS FOR OPEN CIRCUIT

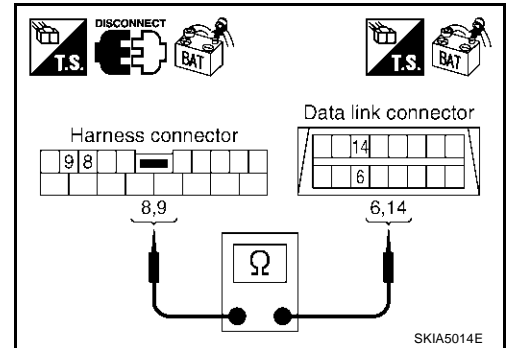
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

**8 (L) - 6 (L) : Continuity should exist.**

**9 (Y) - 14 (Y) : Continuity should exist.**

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-263, "Work Flow"](#).
- NG >> Repair harness.



## Circuit Check Between Data Link Connector and Driver Seat Control Unit

AKS006SP

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).

- Harness connector M9
- Harness connector B2

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

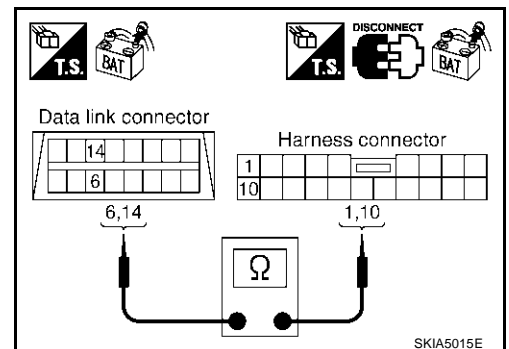
1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

**6 (L) - 1 (L) : Continuity should exist.**

**14 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
L  
M

LAN

### 3. CHECK HARNESS FOR OPEN CIRCUIT

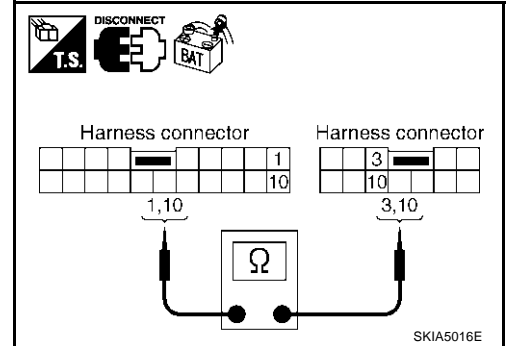
1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-263, "Work Flow"](#).
- NG >> Repair harness.



## Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit)

AKS006SQ

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector B4
  - Harness connector E105

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

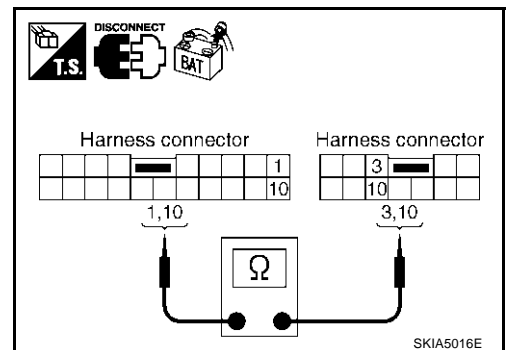
1. Disconnect harness connector B2 and harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



### 3. CHECK HARNESS FOR OPEN CIRCUIT

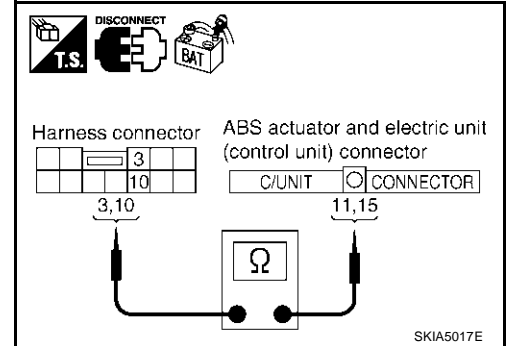
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

**3 (L) - 11 (L) : Continuity should exist.**

**10 (Y) - 15 (Y) : Continuity should exist.**

#### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-263, "Work Flow"](#).
- NG >> Repair harness.



AKS006SR

## ECM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

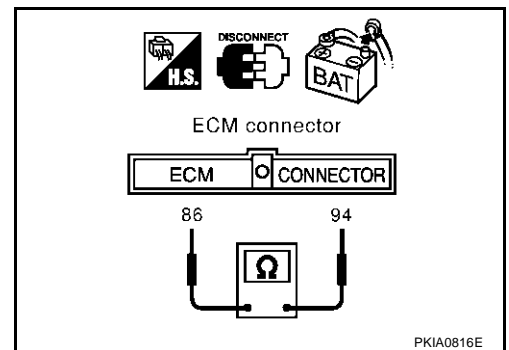
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

**94 (L) - 86 (Y) : Approx. 108 - 132Ω**

#### OK or NG

- OK >> Replace ECM.
- NG >> Repair harness between ECM and TCM.



PKIA0816E

## TCM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
  - TCM connector
  - Harness connector F102
  - Harness connector M82

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

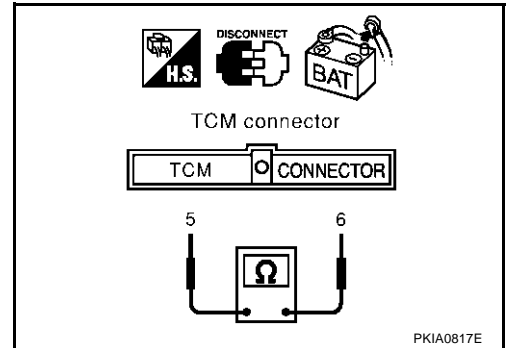
1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace TCM.  
 NG >> Repair harness between TCM and low tire pressure warning control unit.



## Low Tire Pressure Warning Control Unit Circuit Check

AKS006ST

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of low tire pressure warning control unit for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

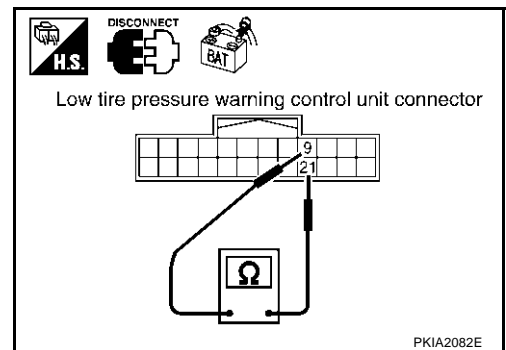
1. Disconnect low tire pressure warning control unit connector.
2. Check resistance between low tire pressure warning control unit harness connector M81 terminals 9 (L) and 21 (Y).

**9 (L) - 21 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace low tire pressure warning control unit.  
 NG >> Repair harness between low tire pressure warning control unit and TCM.



## Display Control Unit Circuit Check

AKS006SU

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display control unit for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.



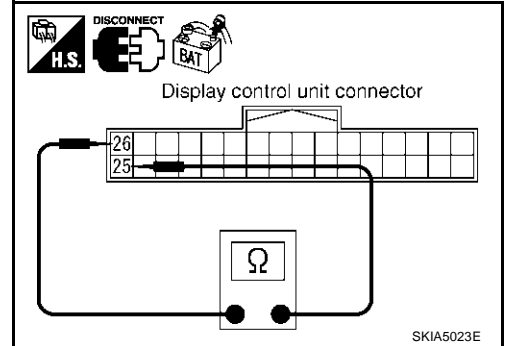
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect display control unit connector.
2. Check resistance between display control unit harness connector M43 terminals 25 (L) and 26 (Y).

**25 (L) - 26 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace display control unit.  
 NG >> Repair harness between display control unit and data link connector.



SKIA5023E  
AKS006SV

## Data Link Connector Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

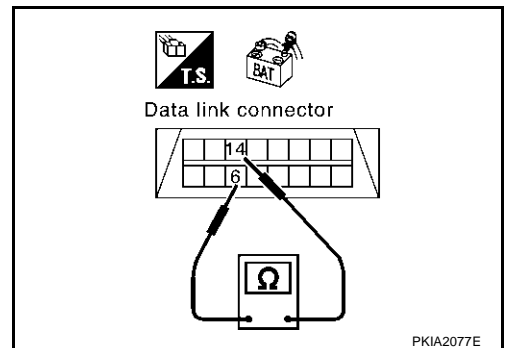
## 2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Diagnose again. Refer to [LAN-263, "Work Flow"](#) .  
 NG >> Repair harness between data link connector and BCM.



PKIA2077E  
AKS006SW

## BCM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

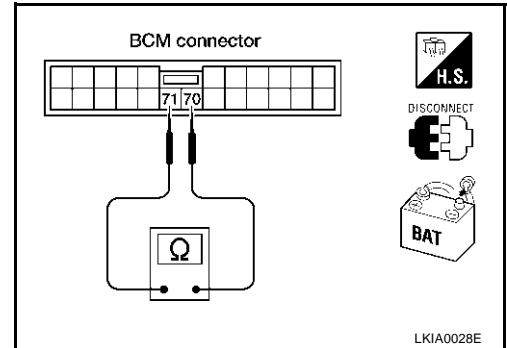
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M37 terminals 70 (L) and 71 (Y).

**70 (L) - 71 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace BCM. Refer to [BCS-36, "Removal and Installation of BCM"](#).
- NG >> Repair harness between BCM and data link connector.



## Unified Meter and A/C Amp. Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

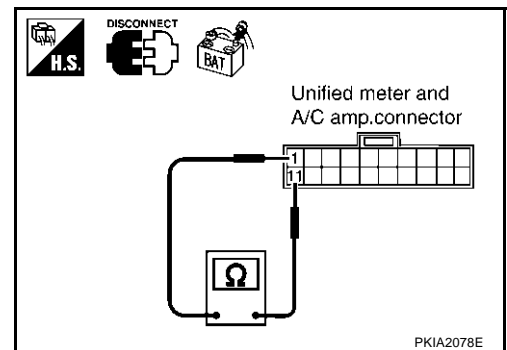
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

**1 (L) - 11 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace unified meter and A/C amp.
- NG >> Repair harness between unified meter and A/C amp. and data link connector.



## Driver Seat Control Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control unit side and harness side).
  - Driver seat control unit connector
  - Harness connector B301
  - Harness connector B9

### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

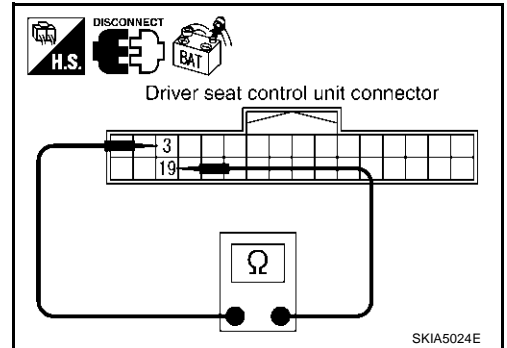
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect driver seat control unit connector.
2. Check resistance between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

**3 (L/Y) - 19 (BR/W) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace driver seat control unit.  
 NG >> Repair harness between driver seat control unit and harness connector B4.



## ABS Actuator and Electric Unit (Control Unit) Circuit Check

AKS006SZ

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

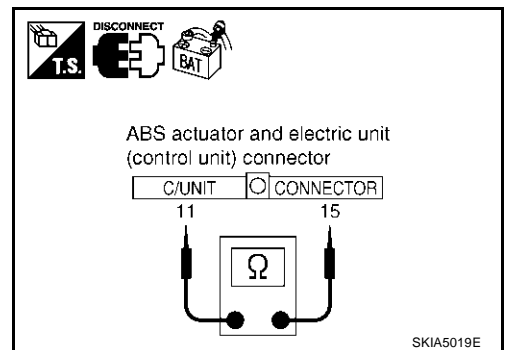
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

**11 (L) - 15 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).  
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



## IPDM E/R Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

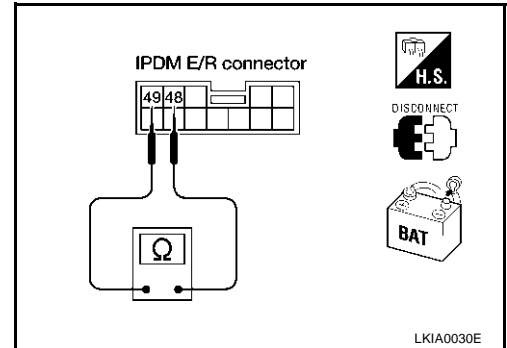
1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y)**

**: Approx. 108 - 132Ω**

### OK or NG

- OK >> Replace IPDM E/R.  
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



## CAN Communication Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, meter side and harness side).
  - ECM
  - TCM
  - Low tire pressure warning control unit
  - Display control unit
  - BCM
  - Unified meter and A/C amp.
  - Driver seat control unit
  - ABS actuator and electric unit (control unit)
  - IPDM E/R
  - Between ECM and IPDM E/R
  - Between ECM and TCM
  - Between ECM and driver seat control unit

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

AKS006T1

## 2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
  - ECM connector
  - Low tire pressure warning control unit connector
  - Harness connector M82
  - Display control unit connector
  - BCM connector
  - Unified meter and A/C amp. connector
  - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

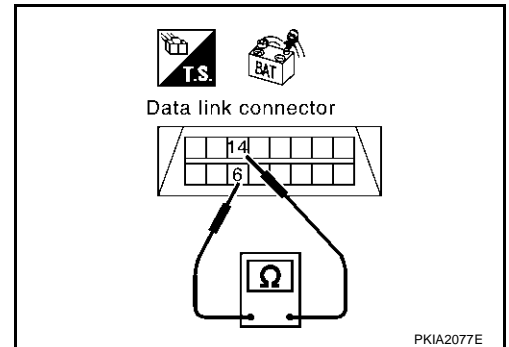
**6 (L) - 14 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 3.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9.



## 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

**6 (L) - Ground : Continuity should not exist.**

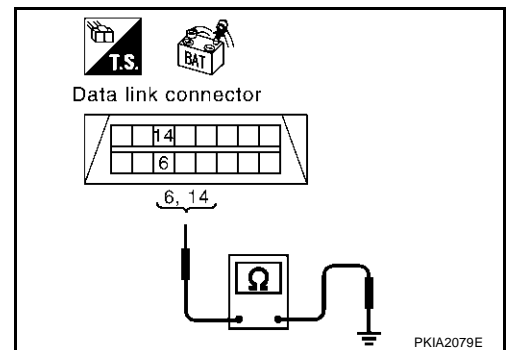
**14 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9.



#### 4. CHECK HARNESS FOR SHORT CIRCUIT

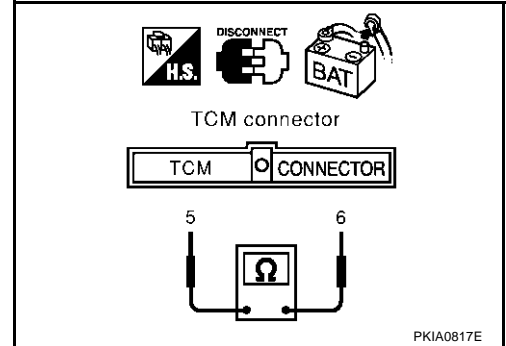
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 5.

NG >> Repair harness between TCM and harness connector F102.



#### 5. CHECK HARNESS FOR SHORT CIRCUIT

- Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

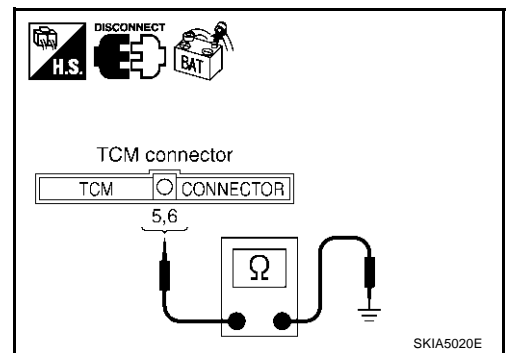
**5 (L) - Ground : Continuity should not exist.**

**6 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 6.

NG >> Repair harness between TCM and harness connector F102.



#### 6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B4 and harness connector B9.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

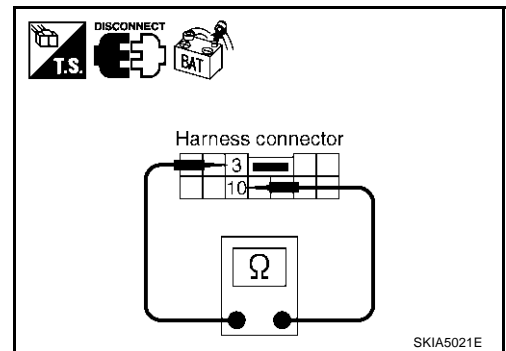
**3 (L) - 10 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 7.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Repair harness between harness connector B4 and harness connector B2.
- Repair harness between harness connector B4 and harness connector B9.



## 7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

**3 (L) - Ground : Continuity should not exist.**

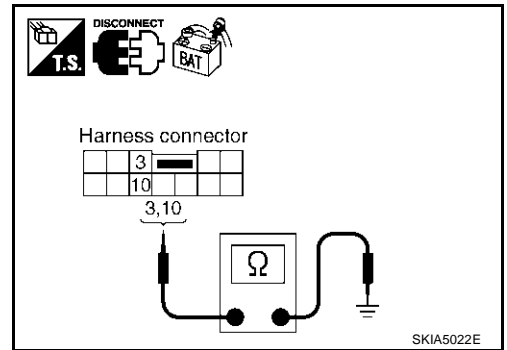
**10 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 8.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Repair harness between harness connector B4 and harness connector B2.
- Repair harness between harness connector B4 and harness connector B9.



## 8. CHECK HARNESS FOR SHORT CIRCUIT

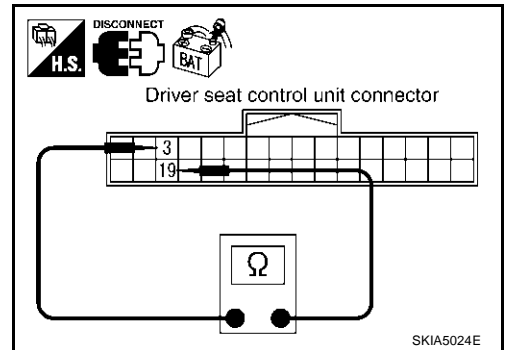
1. Disconnect driver seat control unit connector.
2. Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

**3 (L/Y) - 19 (BR/W) : Continuity should not exist.**

### OK or NG

OK >> GO TO 9.

NG >> Repair harness between driver seat control unit and harness connector B301.



## 9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y), 19 (BR/W) and ground.

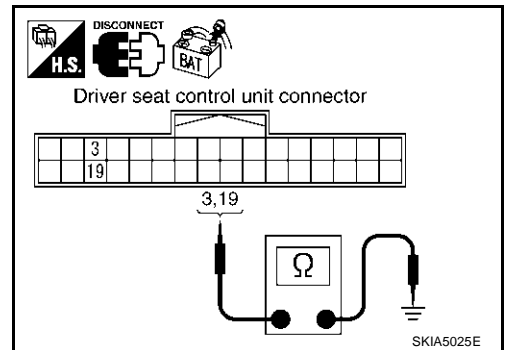
**3 (L/Y) - Ground : Continuity should not exist.**

**19 (BR/W) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 10.

NG >> Repair harness between driver seat control unit and harness connector B301.



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LAN

## 10. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

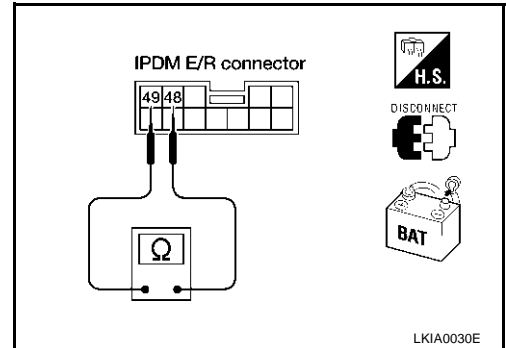
**48 (L) - 49 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 11.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 11. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

**48 (L) - Ground : Continuity should not exist.**

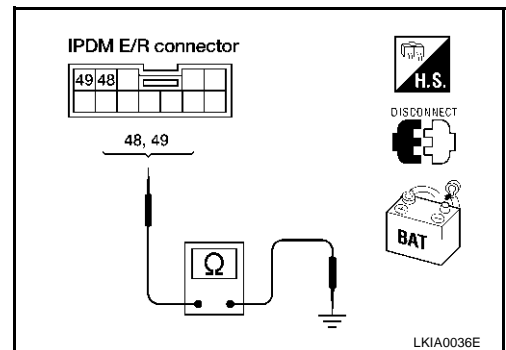
**49 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 12.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 12. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-292, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

### OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-263, "Work Flow"](#).

NG >> Replace ECM and/or IPDM E/R.

### IPDM E/R Ignition Relay Circuit Check

AKS006T2

Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-45, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#).

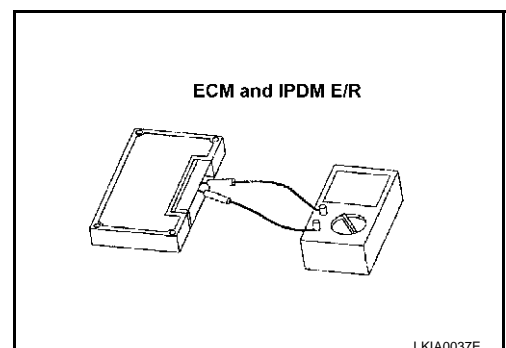
### Component Inspection

#### ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

AKS006T3

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	





## CAN SYSTEM (TYPE 9)

PF2:23710

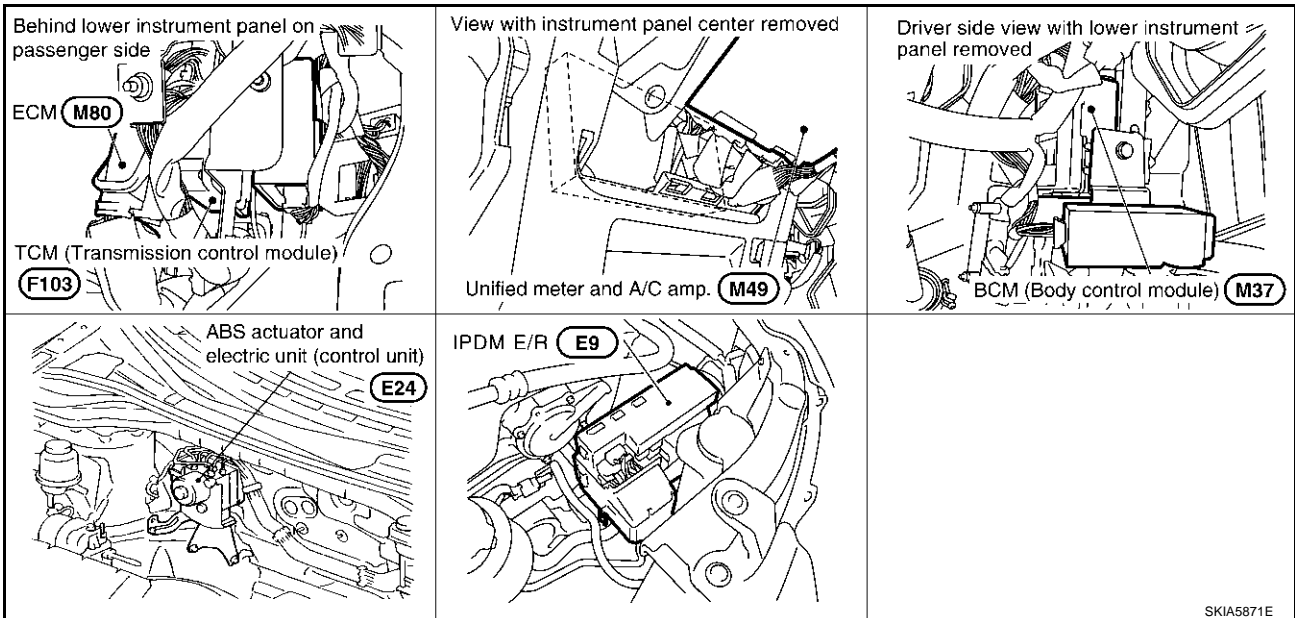
### System Description

AKS006T4

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

### Component Parts and Harness Connector Location

AKS006T5



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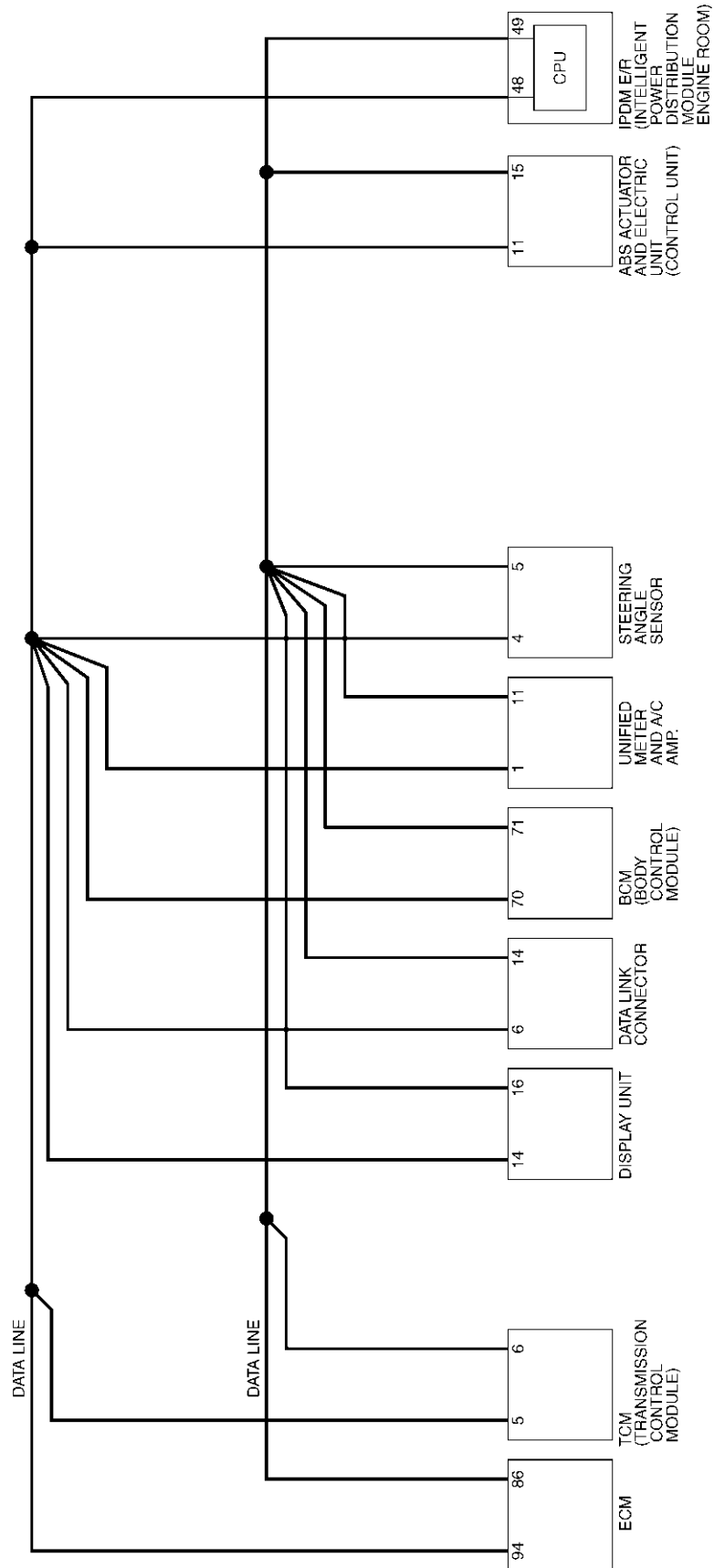
LAN

# CAN SYSTEM (TYPE 9)

[CAN]

AKS006T6

## Schematic



TKWA0955E

# CAN SYSTEM (TYPE 9)

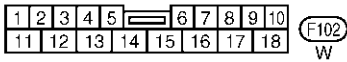
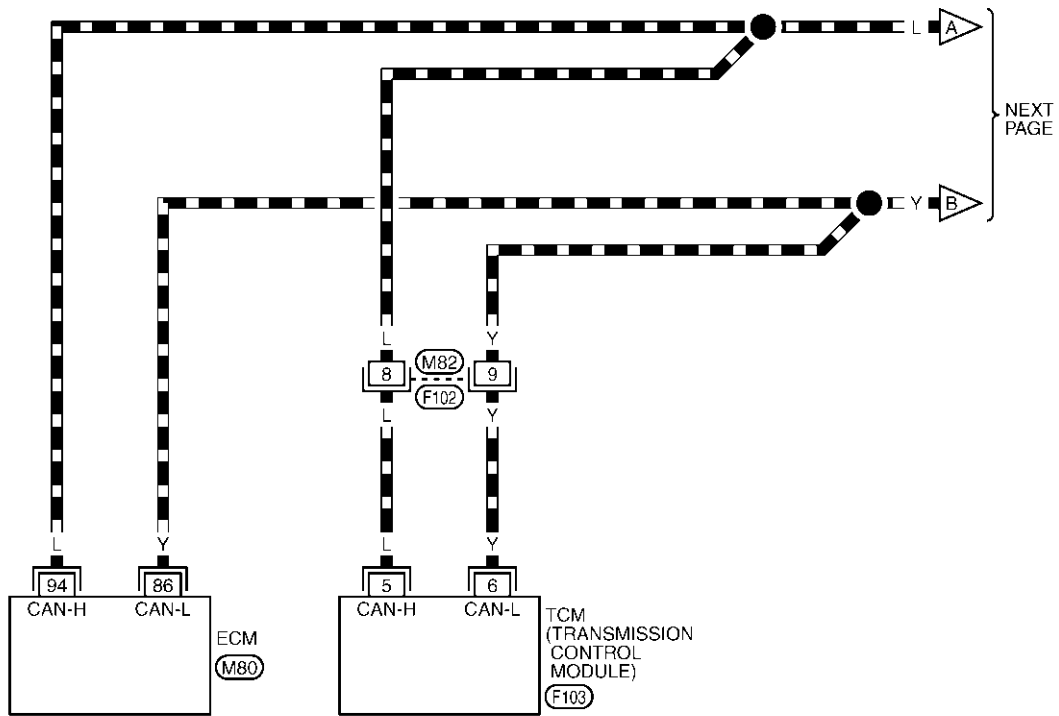
[CAN]

## Wiring Diagram - CAN -

AKS006T7

### LAN-CAN-25

▬ : DATA LINE



REFER TO THE FOLLOWING.  
(M80), (F103) -ELECTRICAL  
UNITS

A  
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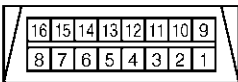
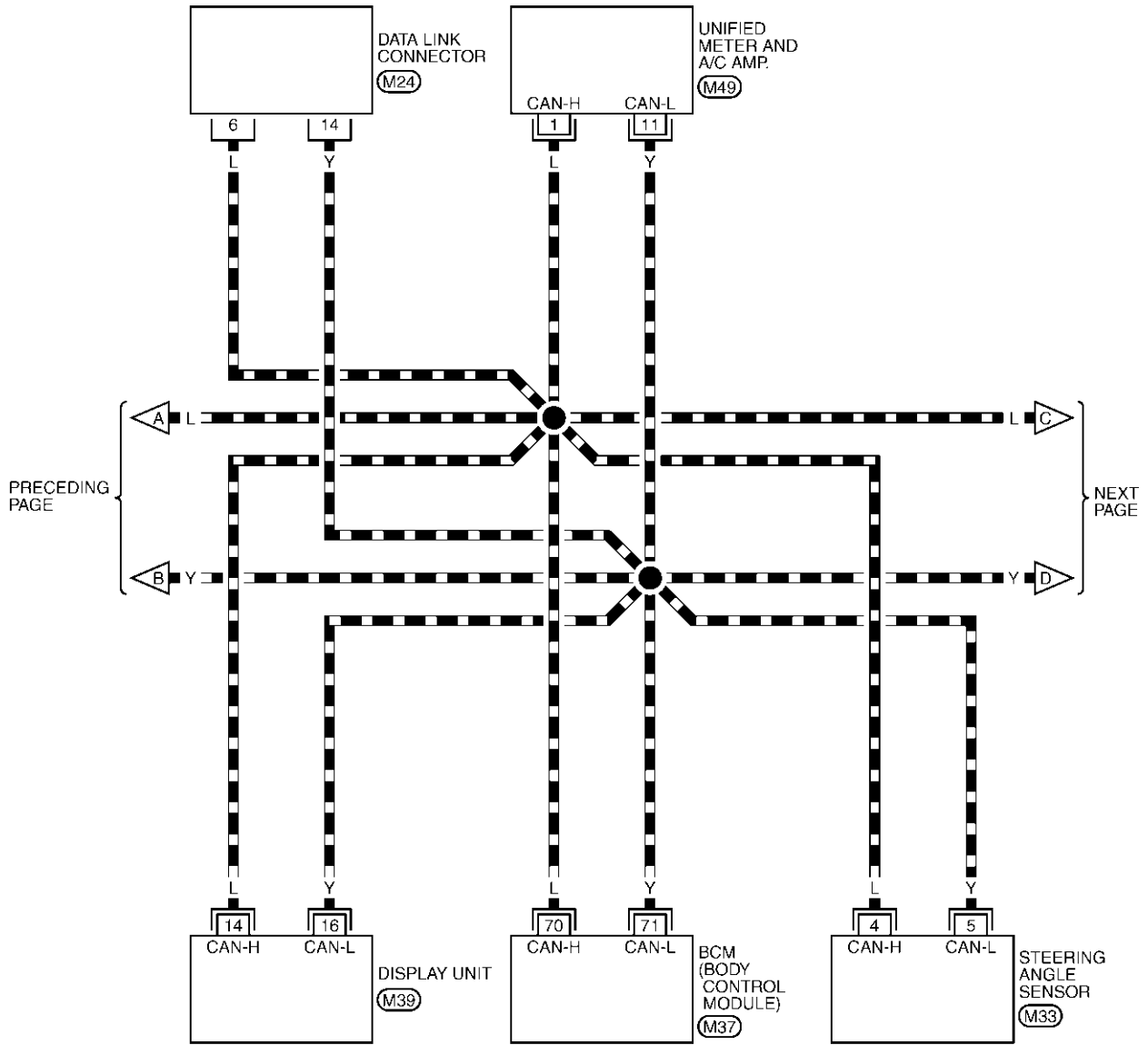
LAN

# CAN SYSTEM (TYPE 9)

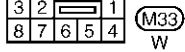
[CAN]

## LAN-CAN-26

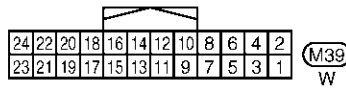
▬ : DATA LINE



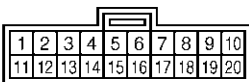
(M24)  
W



(M33)  
W



(M39)  
W



(M49)  
GR

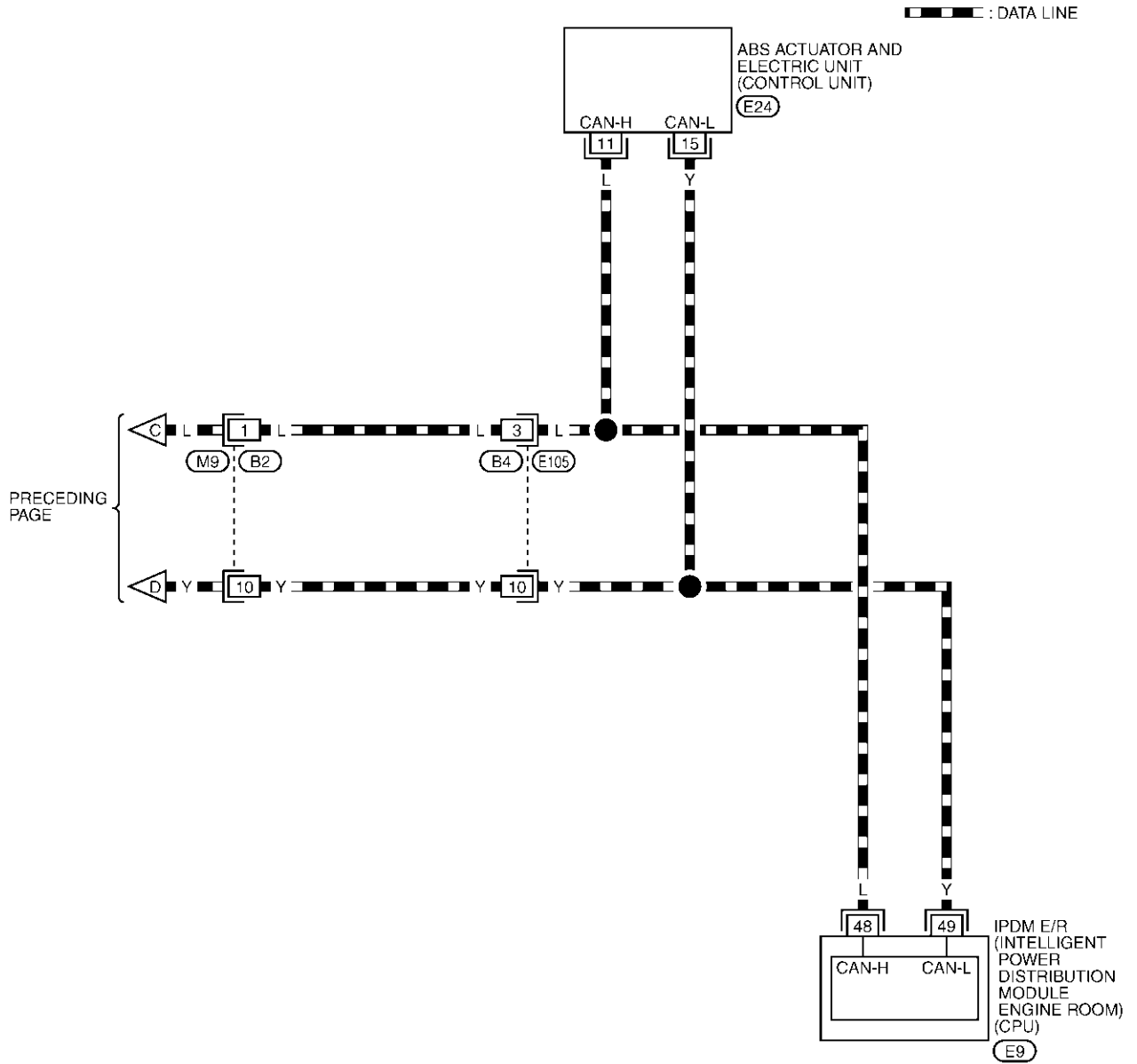


REFER TO THE FOLLOWING.

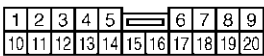
(M37) -ELECTRICAL UNITS

TKWA0957E

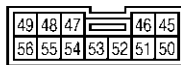
## LAN-CAN-27



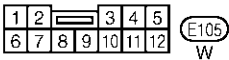
PRECEDING PAGE



M9  
W



E9  
W

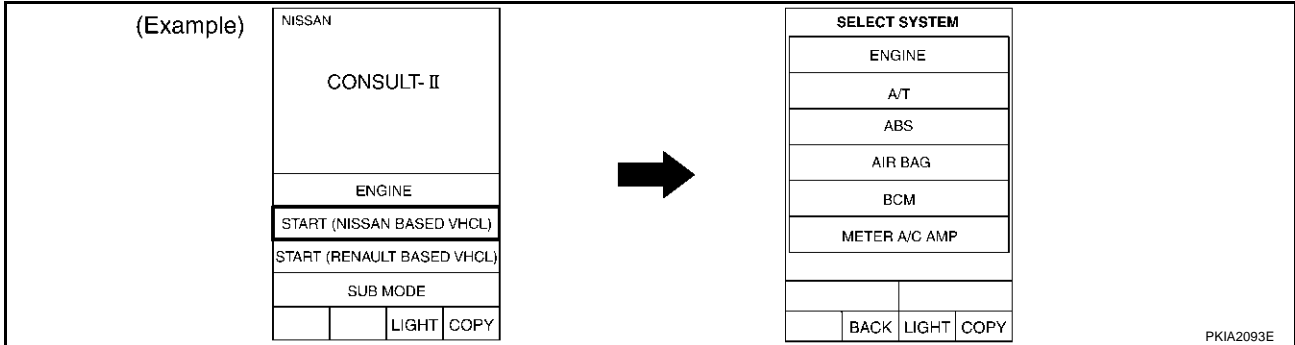


E105  
W

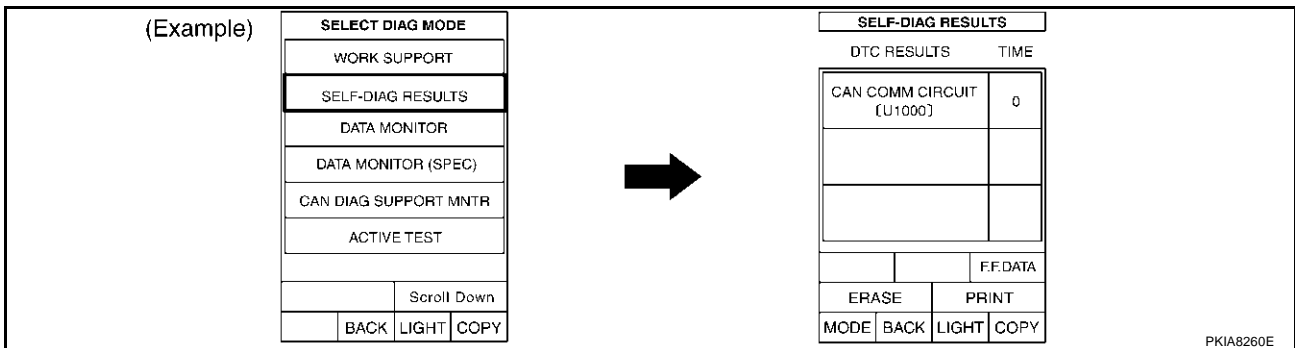
REFER TO THE FOLLOWING.  
E24 -ELECTRICAL UNITS

## Work Flow

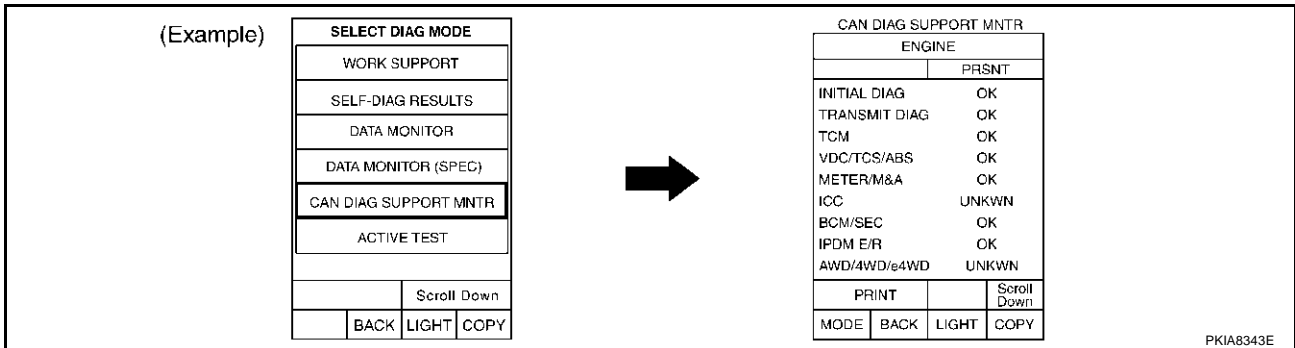
- When there are no indications of "TRANSMISSION" or "METER A/C AMP" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP" and "ABS" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP" and "ABS" displayed on CONSULT-II.



- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-300, "CHECK SHEET"](#).
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "v" onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-300, "CHECK SHEET"](#).

**NOTE:**

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual.  
So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the integrated display system. Refer to [AV-110, "CAN Communication Line Check"](#).
- Attach the CAN DIAG MONITOR check sheet onto the check sheet. Refer to [LAN-300, "CHECK SHEET"](#).

# CAN SYSTEM (TYPE 9)

[CAN]

8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG MONITOR check sheet. Refer to [LAN-300, "CHECK SHEET"](#) .

**NOTE:**

If "NG" is displayed on "CAN COMM" as "CAN DIAG MNTR" for the diagnosed control unit, replace the control unit. Refer to [AV-110, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-302, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

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LAN

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# CAN SYSTEM (TYPE 9)

[CAN]

## CHECK SHEET

**NOTE:**

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

Check sheet table

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—	

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

Attach copy of  
display unit  
CAN DIAG MONITOR check sheet



# CAN SYSTEM (TYPE 9)

[CAN]

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Attach copy of  
ENGINE  
SELF-DIAG RESULTS

Attach copy of  
TRANSMISSION  
SELF-DIAG RESULTS

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
METER A/C AMP  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

Attach copy of  
ENGINE  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
TRANSMISSION  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
BCM  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
METER A/C AMP  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ABS  
CAN DIAG SUPPORT  
MNTR

PKIB0422E

## CHECK SHEET RESULTS (EXAMPLE)

**NOTE:**

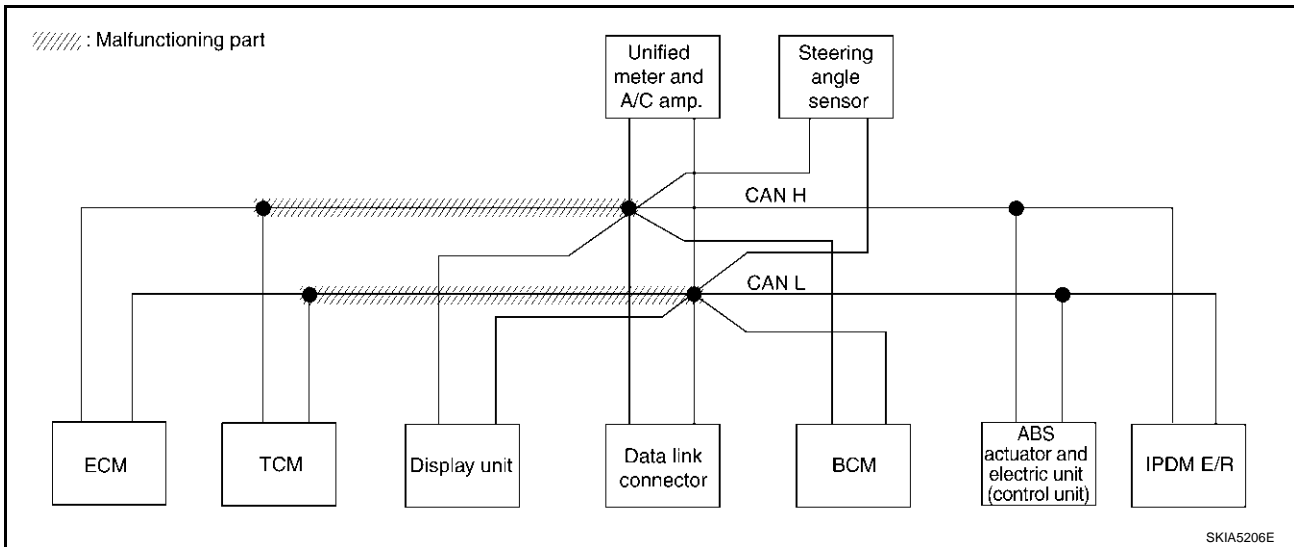
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

**Case 1**

Check harness between TCM and data link connector. Refer to [LAN-314, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

PKIB0570E



# CAN SYSTEM (TYPE 9)

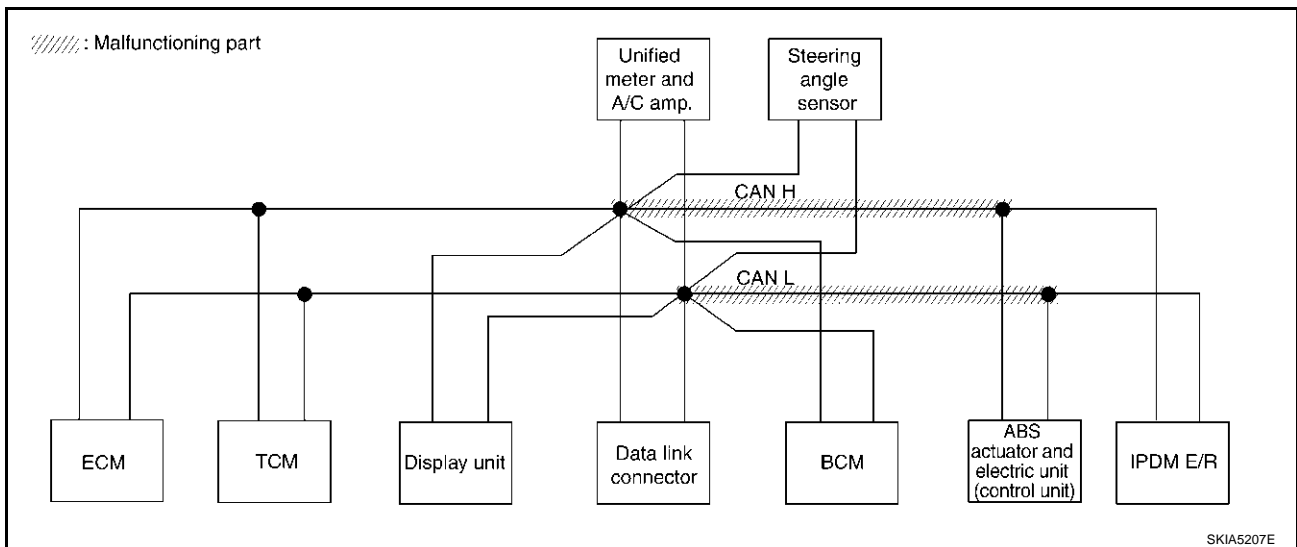
[CAN]

## Case 2

Check harness between data link connector and ABS actuator and electric unit (control unit). Refer to LAN-314, "Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit)".

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

PKIB0571E



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# CAN SYSTEM (TYPE 9)

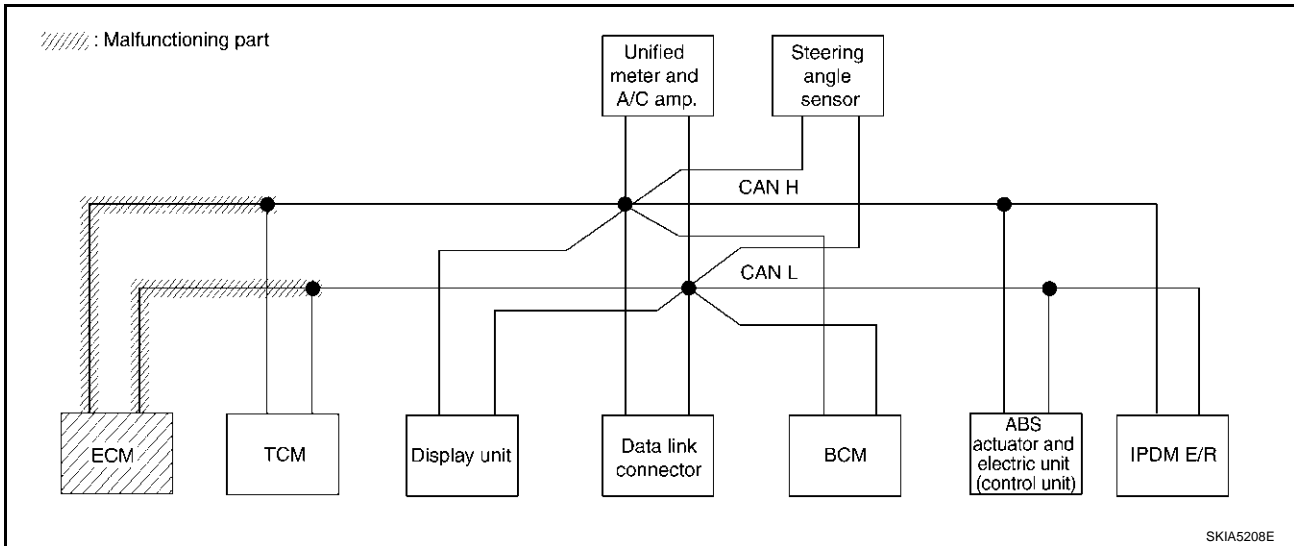
[CAN]

## Case 3

Check ECM circuit. Refer to [LAN-315, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN ✓	—	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	
TRANSMISSION	No indication	NG	UNKWN	UNKWN ✓	—	—	—	UNKWN	—	UNKWN	—	
Display unit	—	CAN COMM	CAN 1	CAN 3 ✓	—	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN ✓	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN ✓	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN	—	—	—	UNKWN	—	—	

PKIB0572E



# CAN SYSTEM (TYPE 9)

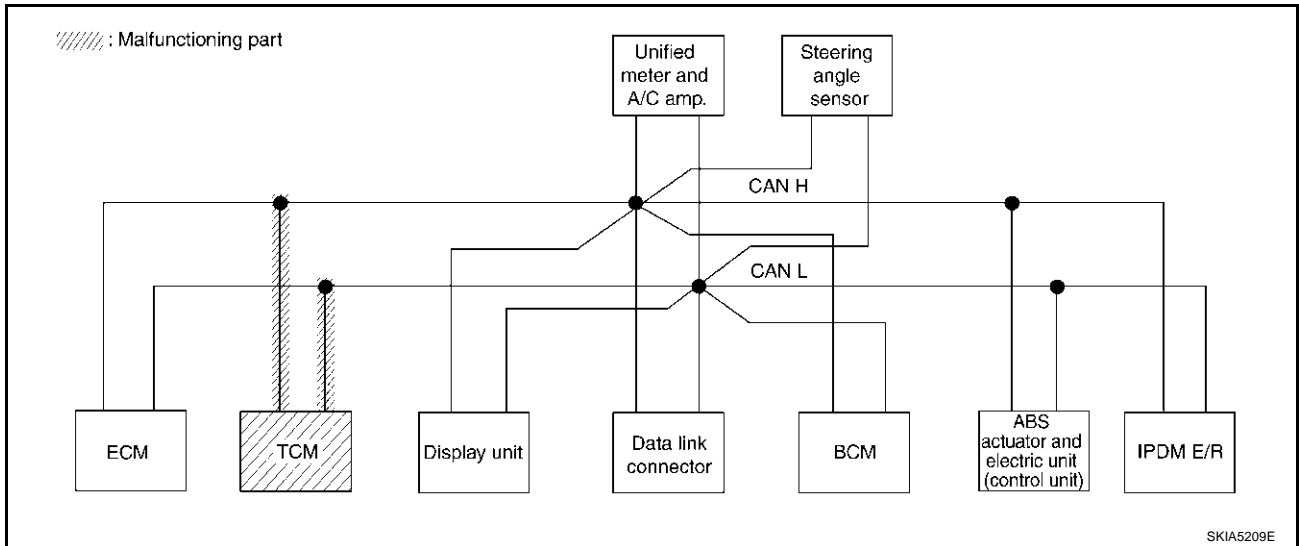
[CAN]

## Case 4

Check TCM circuit. Refer to [LAN-316, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

PKIB0573E



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# CAN SYSTEM (TYPE 9)

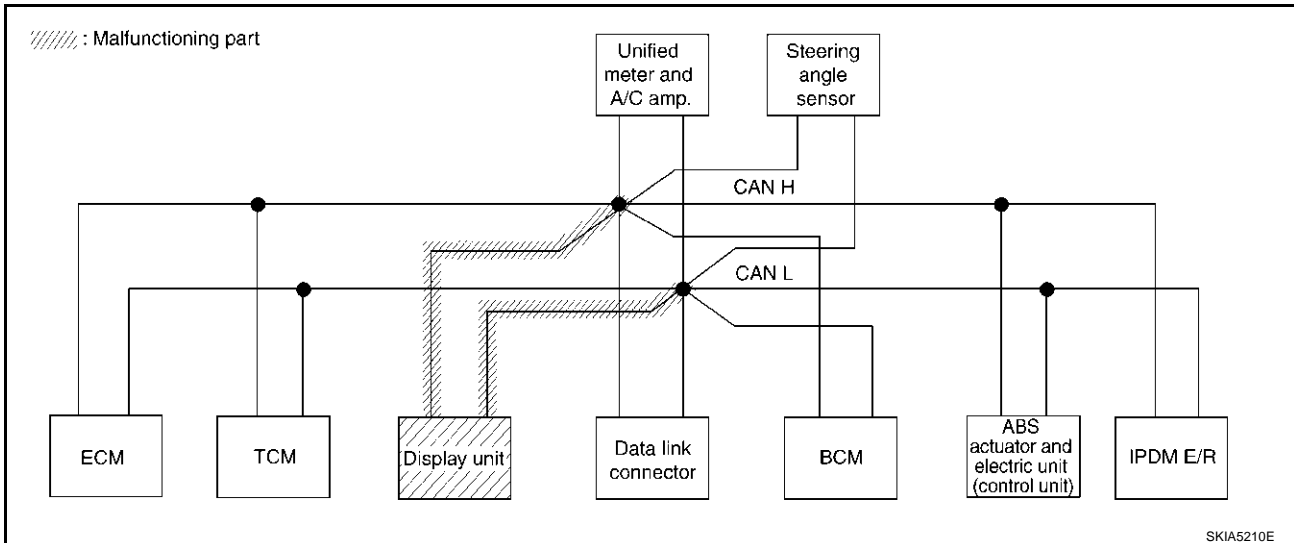
[CAN]

## Case 5

Check display unit circuit. Refer to [LAN-316, "Display Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display unit	—	CAN COMM	CAN 1 ✓	CAN 3 ✓	—	—	CAN 2 ✓	CAN 5 ✓	—	—	CAN 7 ✓	
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—	

PKIB0574E



# CAN SYSTEM (TYPE 9)

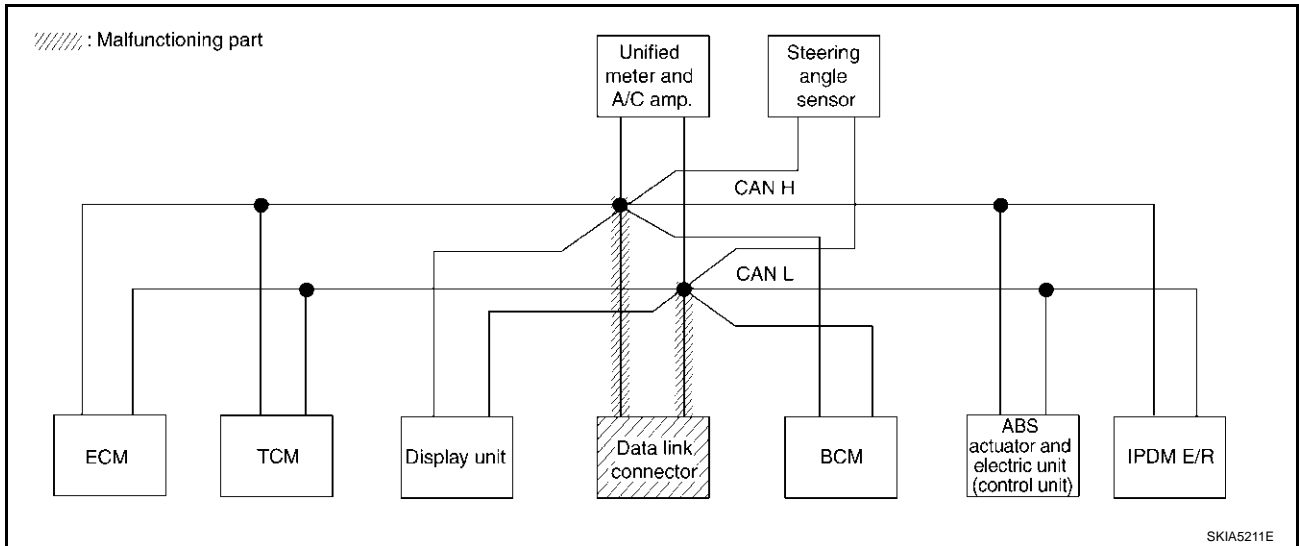
[CAN]

## Case 6

Check data link connector circuit. Refer to [LAN-317, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—	

PKIB0575E



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# CAN SYSTEM (TYPE 9)

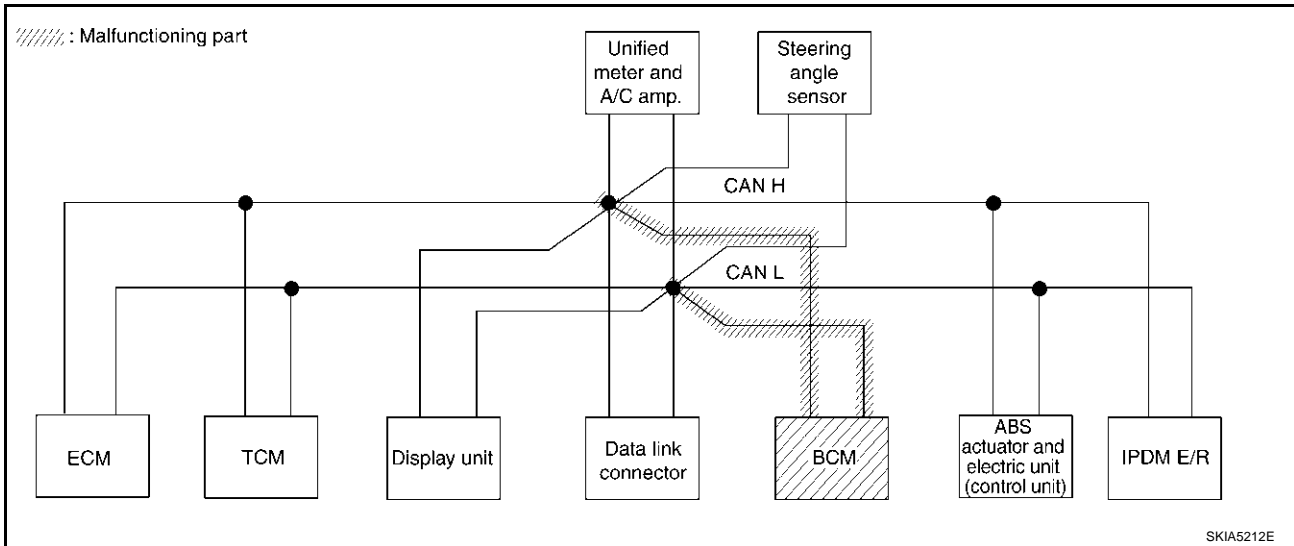
[CAN]

## Case 7

Check BCM circuit. Refer to [LAN-317, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—	

PKIB0576E





# CAN SYSTEM (TYPE 9)

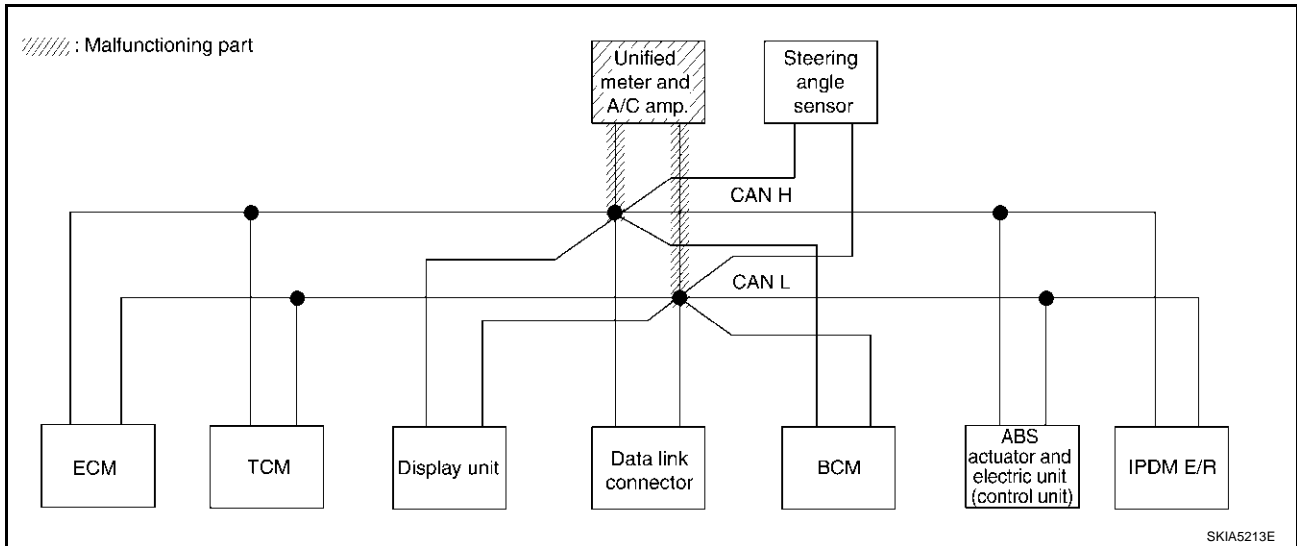
[CAN]

## Case 8

Check unified meter and A/C amp. circuit. Refer to [LAN-318, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

PKIB0577E



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# CAN SYSTEM (TYPE 9)

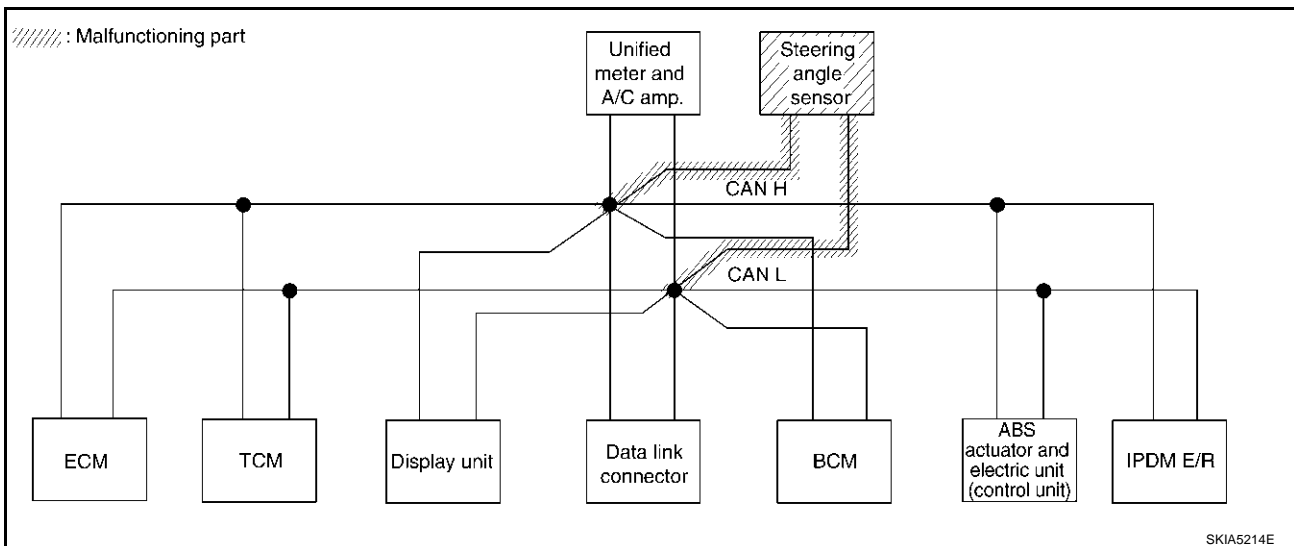
[CAN]

## Case 9

Check steering angle sensor circuit. Refer to [LAN-318, "Steering Angle Sensor Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

PKIB0578E



SKIA5214E

# CAN SYSTEM (TYPE 9)

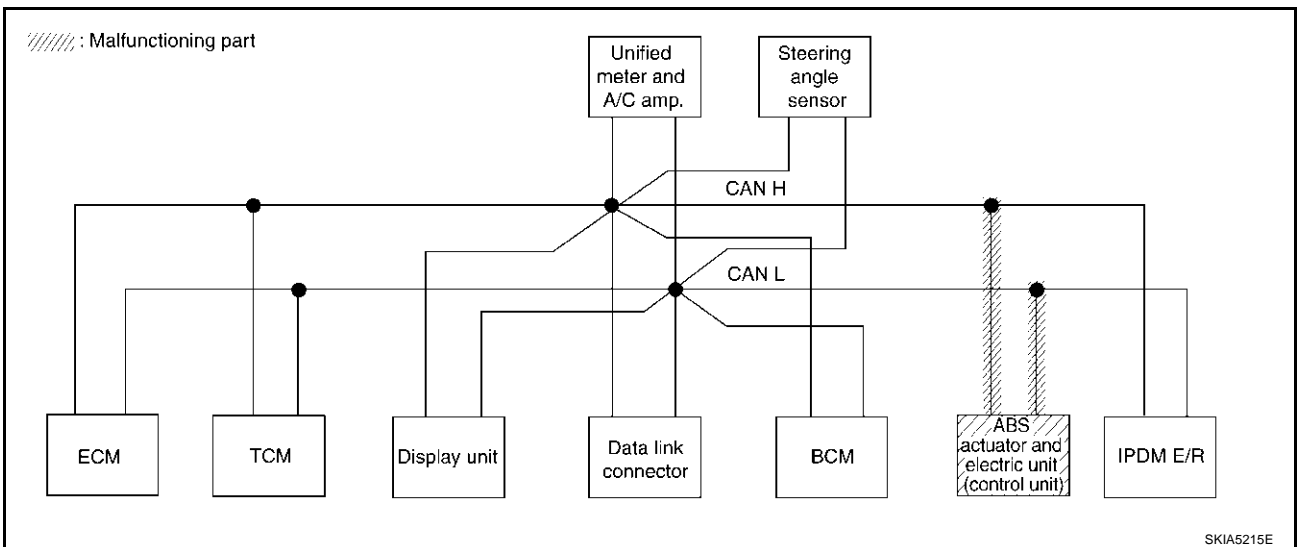
[CAN]

## Case 10

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-319, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

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# CAN SYSTEM (TYPE 9)

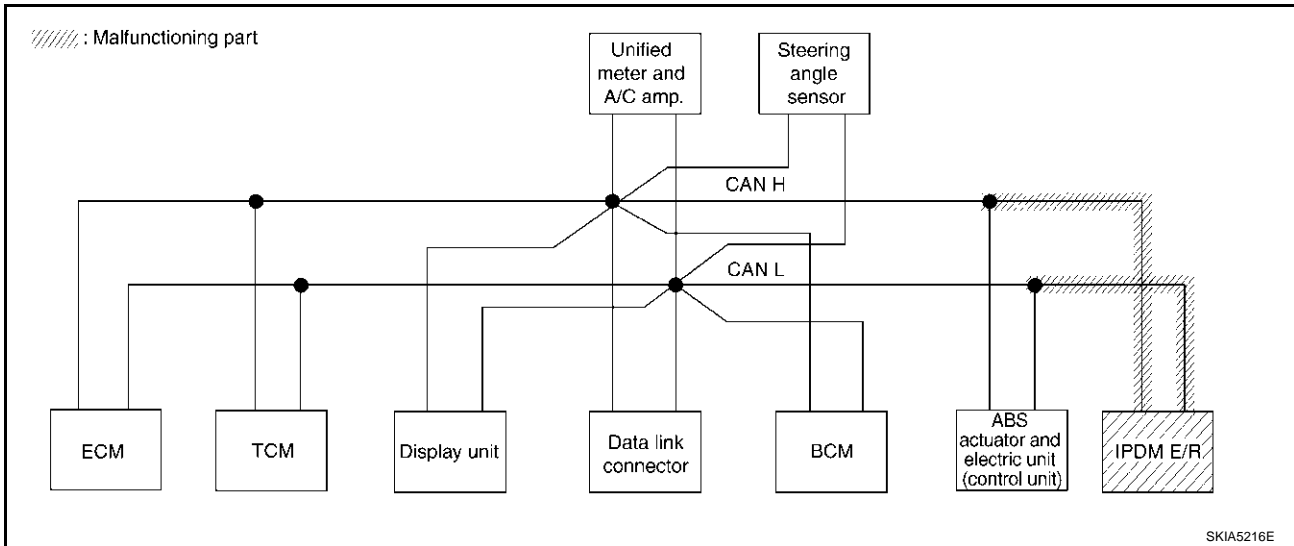
[CAN]

## Case 11

Check IPDM E/R circuit. Refer to [LAN-319, "IPDM E/R Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW <del>N</del>	—	UNKW <del>N</del>	—	UNKW <del>N</del>	UNKW <del>N</del>	—	UNKW <del>N</del>	UNKW <del>N</del> ✓
TRANSMISSION	No indication	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	UNKW <del>N</del>	—	UNKW <del>N</del>	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7 ✓
BCM	—	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	UNKW <del>N</del>	—	—	UNKW <del>N</del> ✓
METER A/C AMP	No indication	—	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	—	—	UNKW <del>N</del>	—
ABS	—	NG	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	UNKW <del>N</del>	—	—

PKIB0580E



## Case 12

Check CAN communication circuit. Refer to [LAN-320, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW <del>N</del> ✓	—	UNKW <del>N</del> ✓	—	UNKW <del>N</del> ✓	UNKW <del>N</del> ✓	—	UNKW <del>N</del> ✓	UNKW <del>N</del> ✓
TRANSMISSION	No indication ✓	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	UNKW <del>N</del>	—	UNKW <del>N</del>	—
Display unit	—	CAN COMM	CAN 1 ✓	CAN 3 ✓	—	—	CAN 2 ✓	CAN 5 ✓	—	—	CAN 7 ✓
BCM	—	NG	UNKW <del>N</del> ✓	UNKW <del>N</del> ✓	—	—	—	UNKW <del>N</del> ✓	—	—	UNKW <del>N</del> ✓
METER A/C AMP	No indication ✓	—	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	—	—	UNKW <del>N</del>	—
ABS	—	NG	UNKW <del>N</del> ✓	UNKW <del>N</del> ✓	UNKW <del>N</del> ✓	—	—	—	UNKW <del>N</del> ✓	—	—

PKIB0581E

# CAN SYSTEM (TYPE 9)

[CAN]

## Case 13

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-323, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	-	NG	UNKWN	-	UN <del>KN</del> WN	-	UNKWN	UNKWN	-	UN <del>KN</del> WN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	-	UNKWN	-	UNKWN	-
Display unit	-	CAN COMM	CAN 1	CAN 3	-	-	CAN 2	CAN 5	-	-	CAN 7
BCM	-	NG	UNKWN	UNKWN	-	-	-	UNKWN	-	-	UNKWN
METER A/C AMP	No indication	-	UNKWN	UNKWN	UN <del>KN</del> WN	UNKWN	UNKWN	-	-	UN <del>KN</del> WN	-
ABS	-	NG	UNKWN	UNKWN	UNKWN	-	-	-	UNKWN	-	-

PKIB0582E

## Case 14

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-323, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	-	NG	UNKWN	-	UNKWN	-	UNKWN	UNKWN	-	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UN <del>KN</del> WN	-	-	-	UN <del>KN</del> WN	-	UNKWN	-
Display unit	-	CAN COMM	CAN 1	CAN 3	-	-	CAN 2	CAN 5	-	-	CAN 7
BCM	-	NG	UNKWN	UNKWN	-	-	-	UNKWN	-	-	UNKWN
METER A/C AMP	No indication	-	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	-	-	UNKWN	-
ABS	-	NG	UNKWN	UN <del>KN</del> WN	UNKWN	-	-	-	UN <del>KN</del> WN	-	-

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## Circuit Check Between TCM and Data Link Connector

AKS006T9

### 1. CHECK HARNESS FOR OPEN CIRCUIT

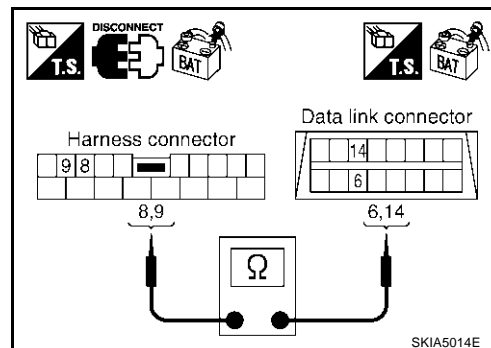
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

**8 (L) - 6 (L) : Continuity should exist.**

**9 (Y) - 14 (Y) : Continuity should exist.**

#### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-298, "Work Flow"](#).
- NG >> Repair harness.



## Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit)

AKS006TA

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector M9
  - Harness connector B2
  - Harness connector B4
  - Harness connector E105

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

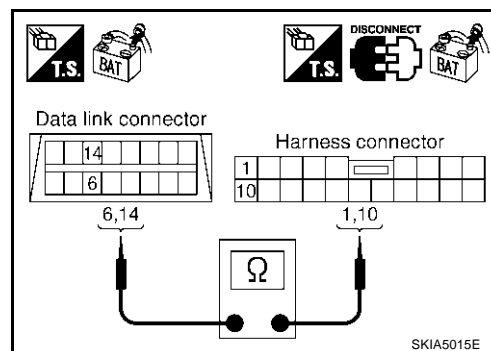
1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

**6 (L) - 1 (L) : Continuity should exist.**

**14 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



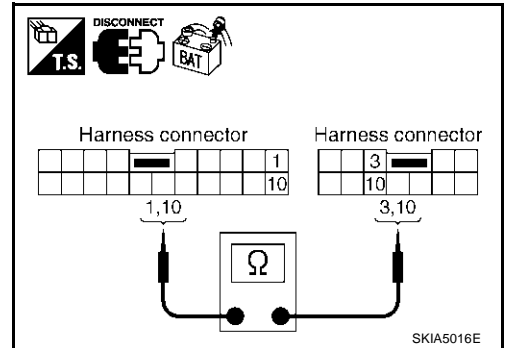
**3. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

**1 (L) - 3 (L) : Continuity should exist.**  
**10 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

- OK >> GO TO 4.  
 NG >> Repair harness.



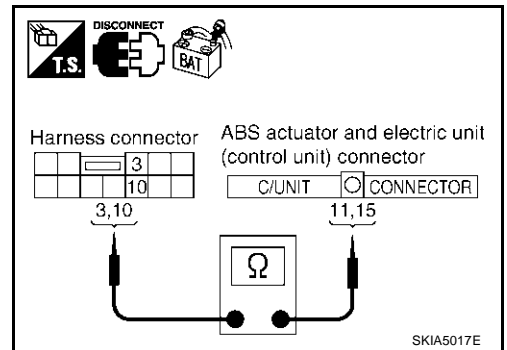
**4. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

**3 (L) - 11 (L) : Continuity should exist.**  
**10 (Y) - 15 (Y) : Continuity should exist.**

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-298. "Work Flow"](#).  
 NG >> Repair harness.



**ECM Circuit Check**

**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

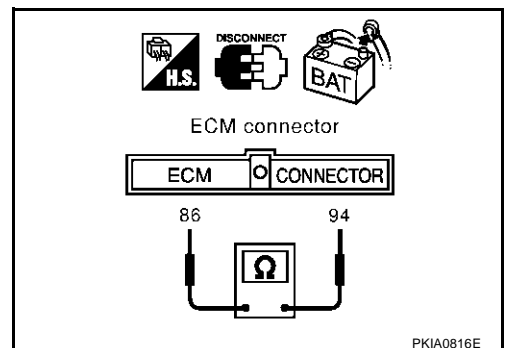
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

**94 (L) - 86 (Y) : Approx. 108 - 132Ω**

OK or NG

- OK >> Replace ECM.  
 NG >> Repair harness between ECM and TCM.



**TCM Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
  - TCM connector
  - Harness connector F102
  - Harness connector M82

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

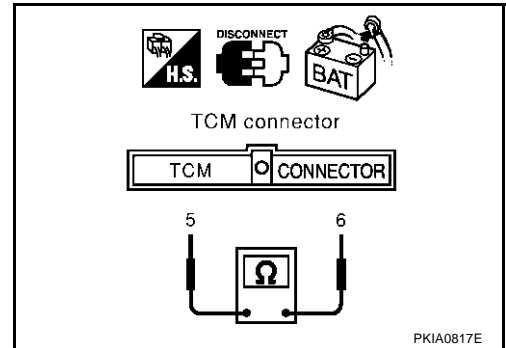
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace TCM.  
 NG >> Repair harness between TCM and ECM.



PKIA0817E

**Display Unit Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display unit for damage, bend and loose connection (unit side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

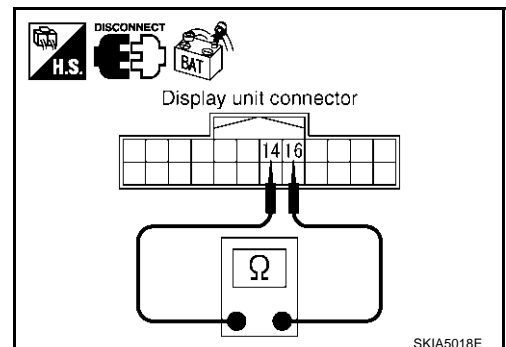
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect display unit connector.
2. Check resistance between display unit harness connector M39 terminals 14 (L) and 16 (Y).

**14 (L) - 16 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace display unit.  
 NG >> Repair harness between display unit and data link connector.



SKIA5018E



**Data Link Connector Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

**OK or NG**

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

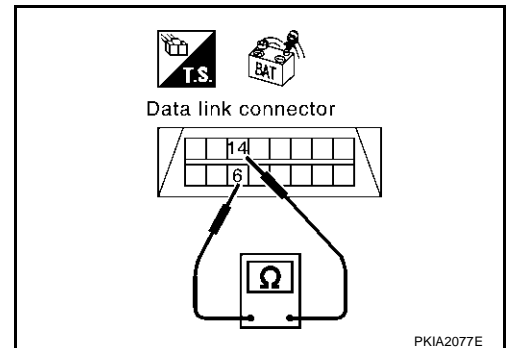
**2. CHECK HARNESS FOR OPEN CIRCUIT**

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Approx. 54 - 66Ω**

**OK or NG**

- OK >> Diagnose again. Refer to [LAN-298, "Work Flow"](#) .  
 NG >> Repair harness between data link connector and BCM.

**BCM Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

**OK or NG**

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

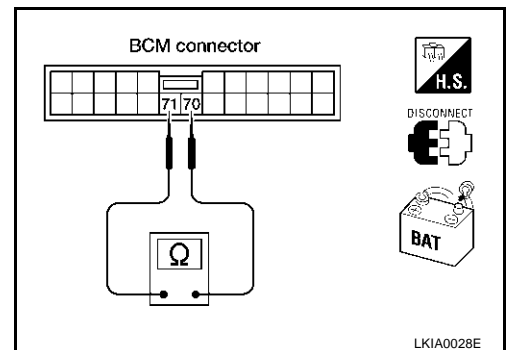
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M37 terminals 70 (L) and 71 (Y).

**70 (L) - 71 (Y) : Approx. 54 - 66Ω**

**OK or NG**

- OK >> Replace BCM. Refer to [BCS-36, "Removal and Installation of BCM"](#) .  
 NG >> Repair harness between BCM and data link connector.



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**Unified Meter and A/C Amp. Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

**OK or NG**

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

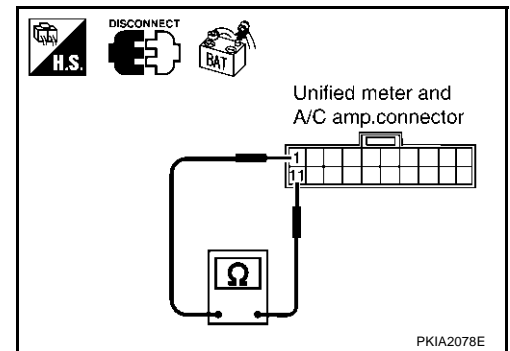
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

**1 (L) - 11 (Y) : Approx. 54 - 66Ω**

**OK or NG**

- OK >> Replace unified meter and A/C amp.  
 NG >> Repair harness between unified meter and A/C amp. and data link connector.



PKIA2078E

**Steering Angle Sensor Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of steering angle sensor for damage, bend and loose connection (sensor side and harness side).

**OK or NG**

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

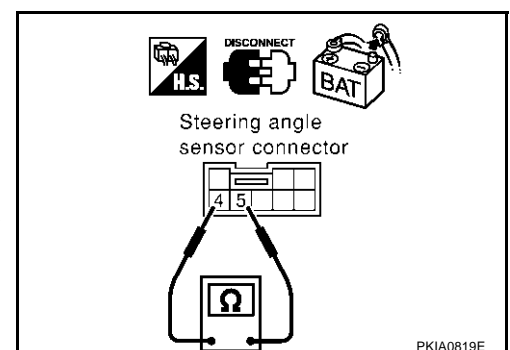
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M33 terminals 4 (L) and 5 (Y).

**4 (L) - 5 (Y) : Approx. 54 - 66Ω**

**OK or NG**

- OK >> Replace steering angle sensor.  
 NG >> Repair harness between steering angle sensor and data link connector.



PKIA0819E

**ABS Actuator and Electric Unit (Control Unit) Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

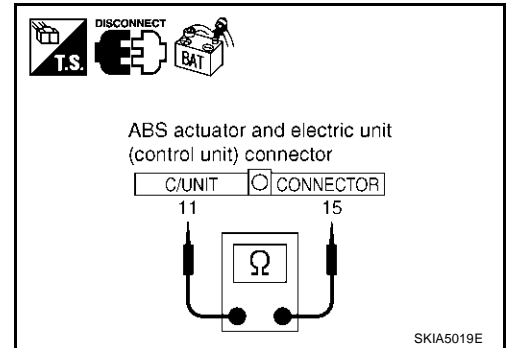
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

**11 (L) - 15 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).  
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



AKS006TJ

**IPDM E/R Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

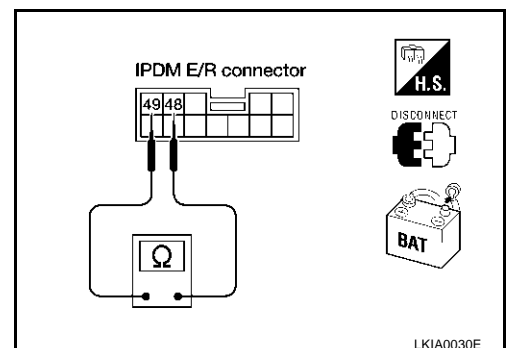
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y) : Approx. 108 - 132Ω**

OK or NG

- OK >> Replace IPDM E/R.  
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



## CAN Communication Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, unit side, meter side, sensor side, control unit side and harness side).
  - ECM
  - TCM
  - Display unit
  - BCM
  - Unified meter and A/C amp.
  - Steering angle sensor
  - ABS actuator and electric unit (control unit)
  - IPDM E/R
  - Between ECM and IPDM E/R
  - Between ECM and TCM

#### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

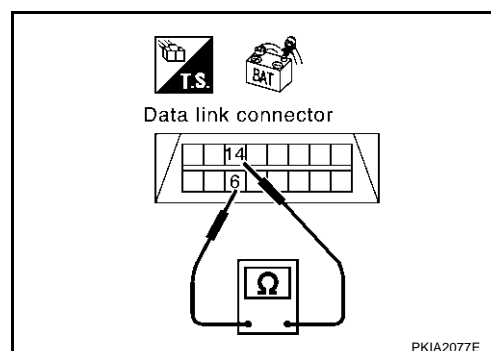
### 2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
  - ECM connector
  - Harness connector M82
  - Display unit connector
  - BCM connector
  - Unified meter and A/C amp. connector
  - Steering angle sensor connector
  - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Continuity should not exist.**

#### OK or NG

- OK >> GO TO 3.  
 NG >> Check the following harnesses. If any harness is damaged, repair the harness.
- Harness between data link connector and ECM.
  - Harness between data link connector and harness connector M82.
  - Harness between data link connector and display unit.
  - Harness between data link connector and BCM.
  - Harness between data link connector and unified meter and A/C amp.
  - Harness between data link connector and steering angle sensor.
  - Harness between data link connector and harness connector M9.



### 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

**6 (L) - Ground : Continuity should not exist.**

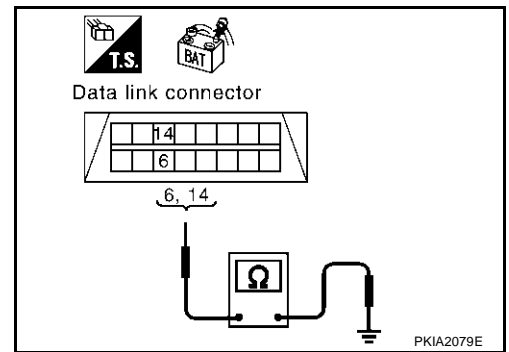
**14 (Y) - Ground : Continuity should not exist.**

#### OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M9.



### 4. CHECK HARNESS FOR SHORT CIRCUIT

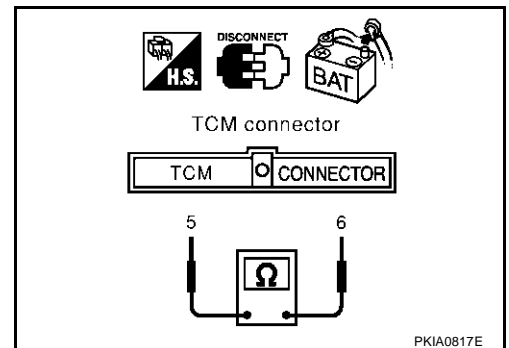
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Continuity should not exist.**

#### OK or NG

OK >> GO TO 5.

NG >> Repair harness between TCM and harness connector F102.



### 5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

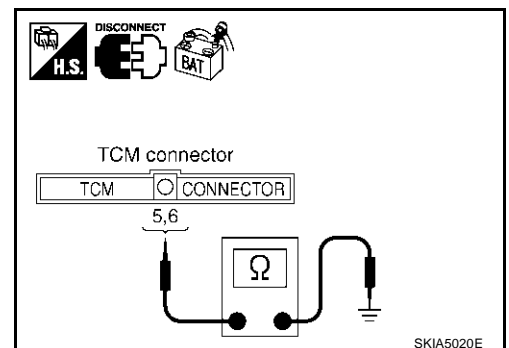
**5 (L) - Ground : Continuity should not exist.**

**6 (Y) - Ground : Continuity should not exist.**

#### OK or NG

OK >> GO TO 6.

NG >> Repair harness between TCM and harness connector F102.



## 6. CHECK HARNESS FOR SHORT CIRCUIT

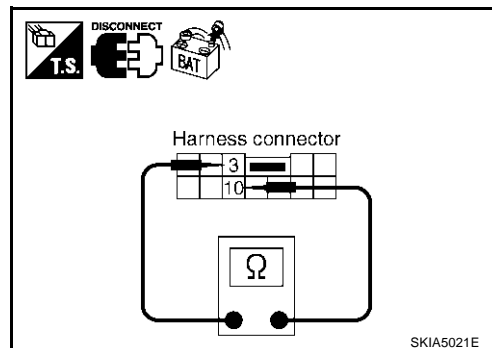
1. Disconnect harness connector B4.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

**3 (L) - 10 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 7.

NG >> Repair harness between harness connector B4 and harness connector B2.



## 7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

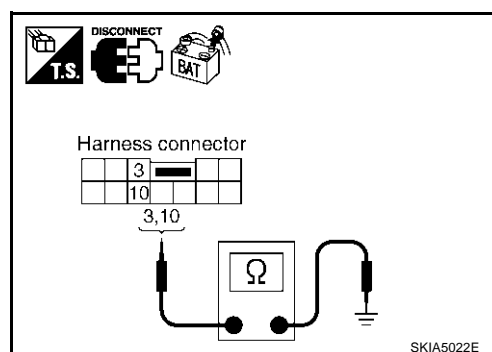
**3 (L) - Ground : Continuity should not exist.**

**10 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 8.

NG >> Repair harness between harness connector B4 and harness connector B2.



## 8. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

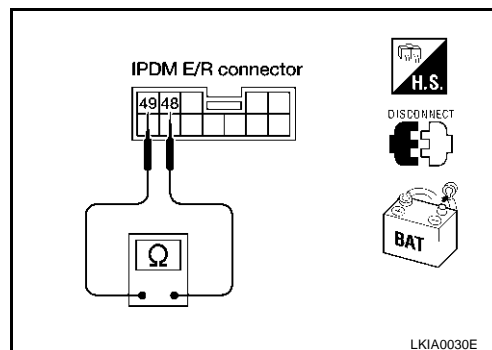
**48 (L) - 49 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 9.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



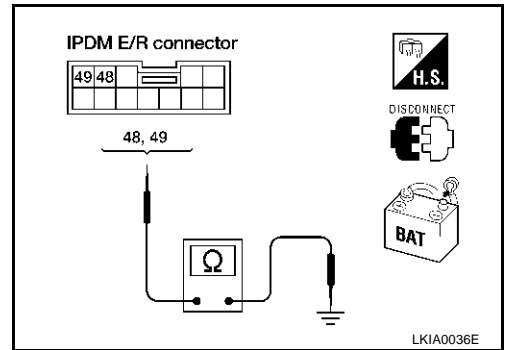
**9. CHECK HARNESS FOR SHORT CIRCUIT**

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

- 48 (L) - Ground : Continuity should not exist.**
- 49 (Y) - Ground : Continuity should not exist.**

OK or NG

- OK >> GO TO 10.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between IPDM E/R and ABS actuator and electric unit (control unit).
  - Harness between IPDM E/R and harness connector E105.



**10. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION**

Check components inspection. Refer to [LAN-323, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-298, "Work Flow"](#).
- NG >> Replace ECM and/or IPDM E/R.

**IPDM E/R Ignition Relay Circuit Check**

AKS006TL

Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-45, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START""](#).

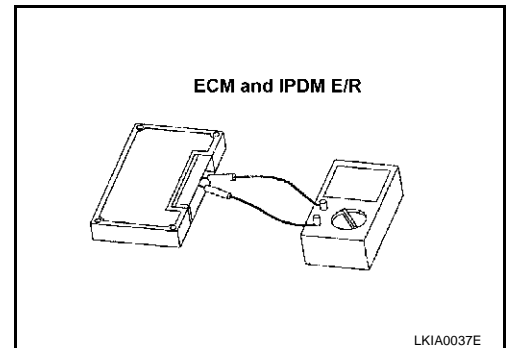
**Component Inspection**

**ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION**

AKS006TM

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



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## CAN SYSTEM (TYPE 10)

PFP:23710

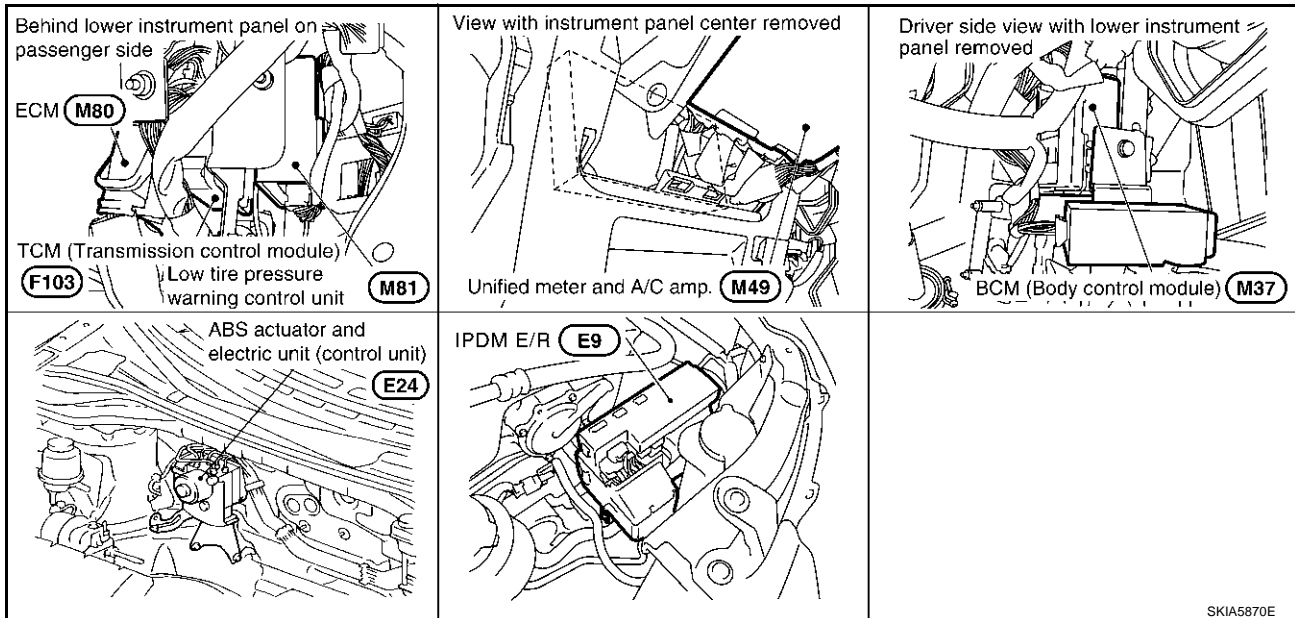
### System Description

AKS006TN

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

### Component Parts and Harness Connector Location

AKS006TO



SKIA5870E

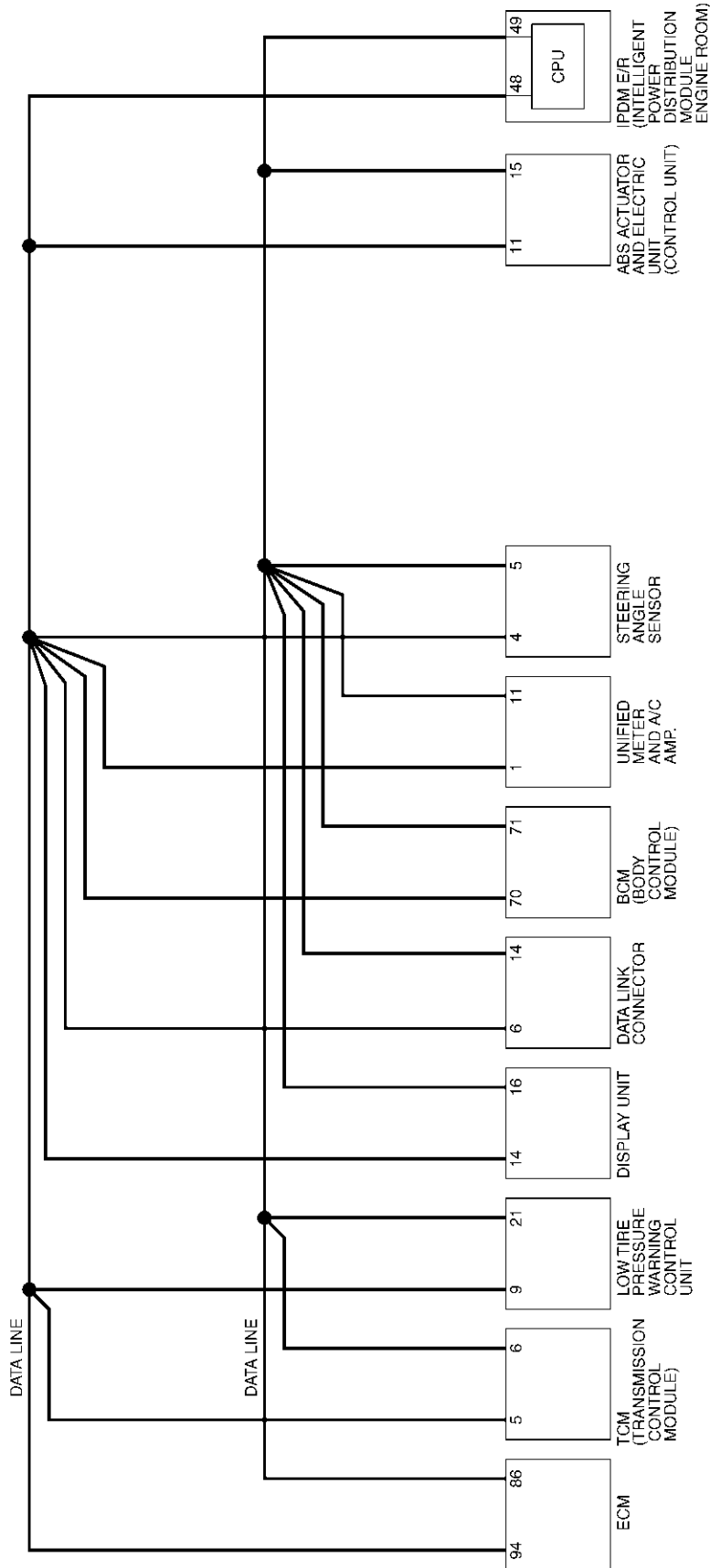


# CAN SYSTEM (TYPE 10)

[CAN]

## Schematic

AKS006TP



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TKWA0959E

# CAN SYSTEM (TYPE 10)

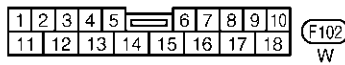
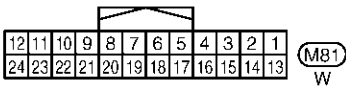
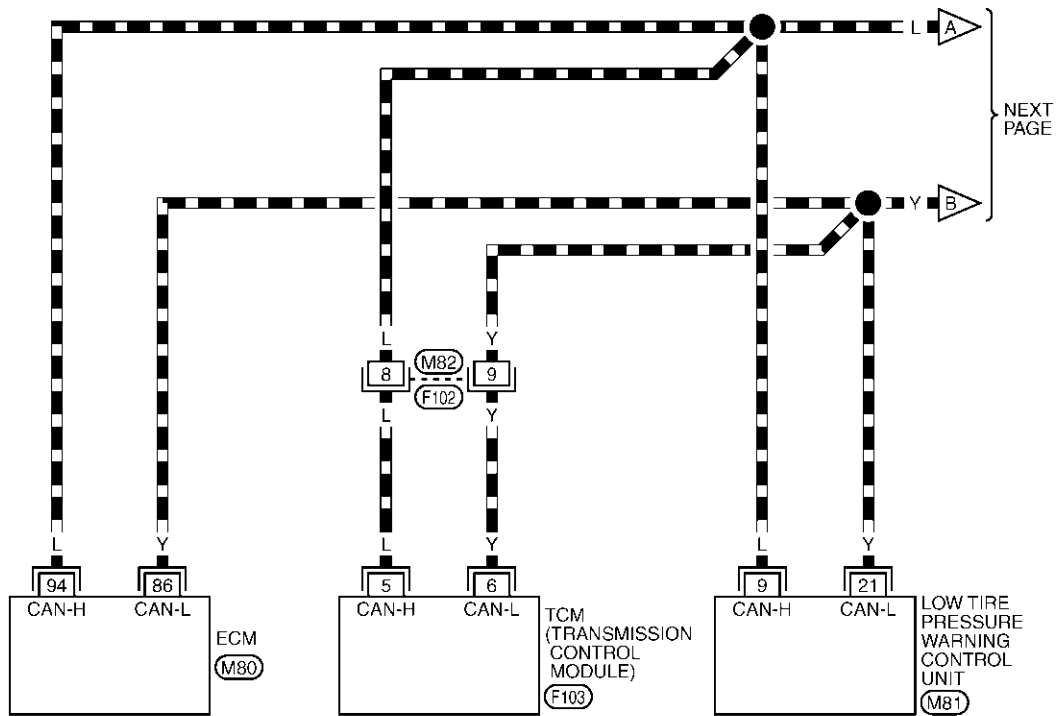
[CAN]

## Wiring Diagram - CAN -

AKS006TQ

### LAN-CAN-28

▬ : DATA LINE



REFER TO THE FOLLOWING.  
 (M80), (F103) -ELECTRICAL  
 UNITS

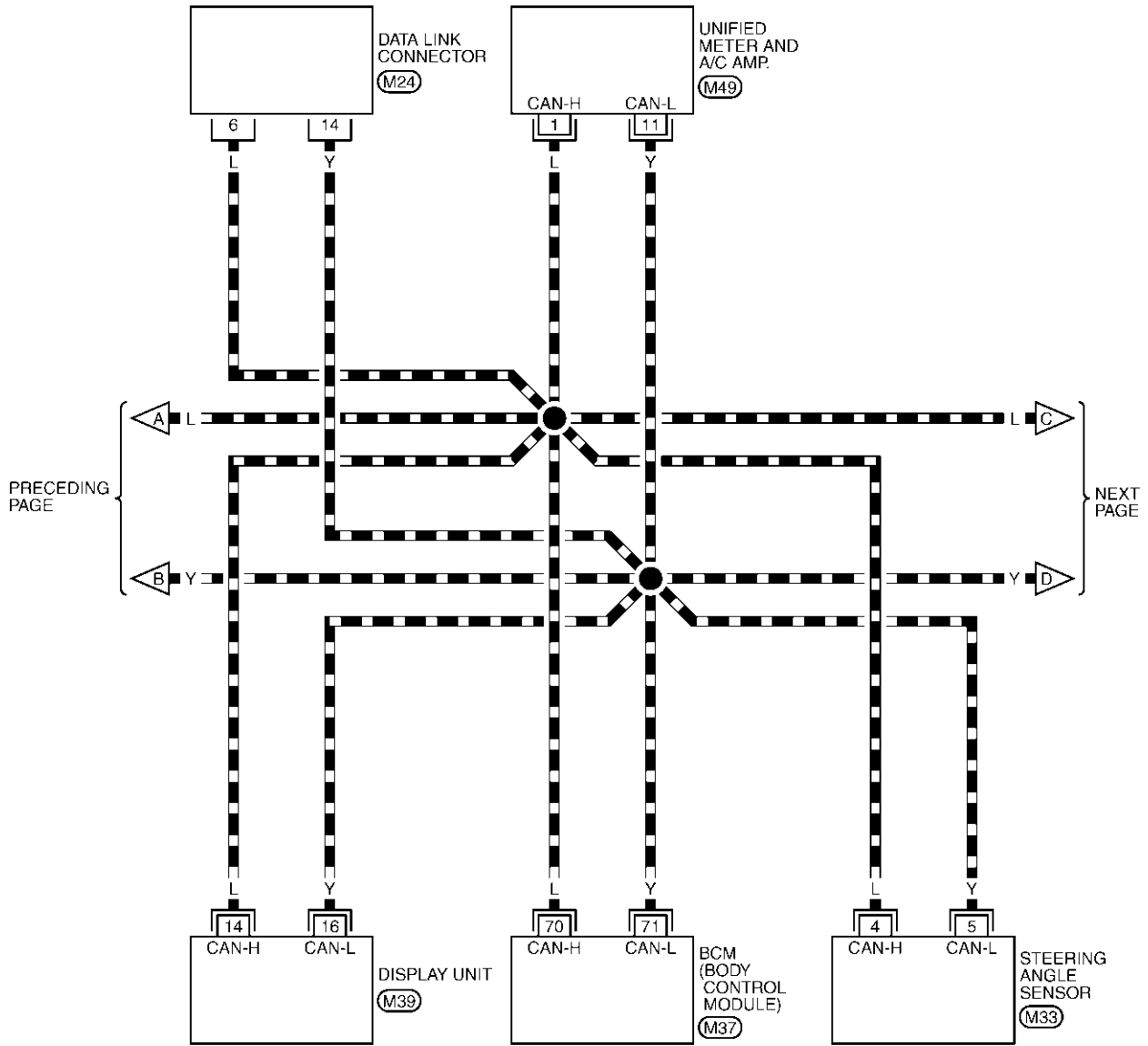
TKWA0960E

# CAN SYSTEM (TYPE 10)

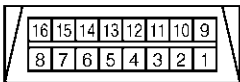
[CAN]

## LAN-CAN-29

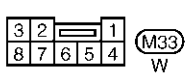
▬ : DATA LINE



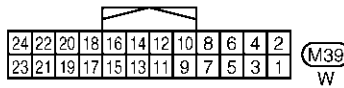
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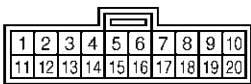
(M24)  
W



(M33)  
W



(M39)  
W



(M49)  
GR

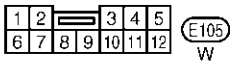
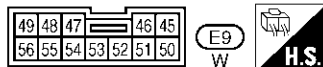
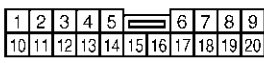
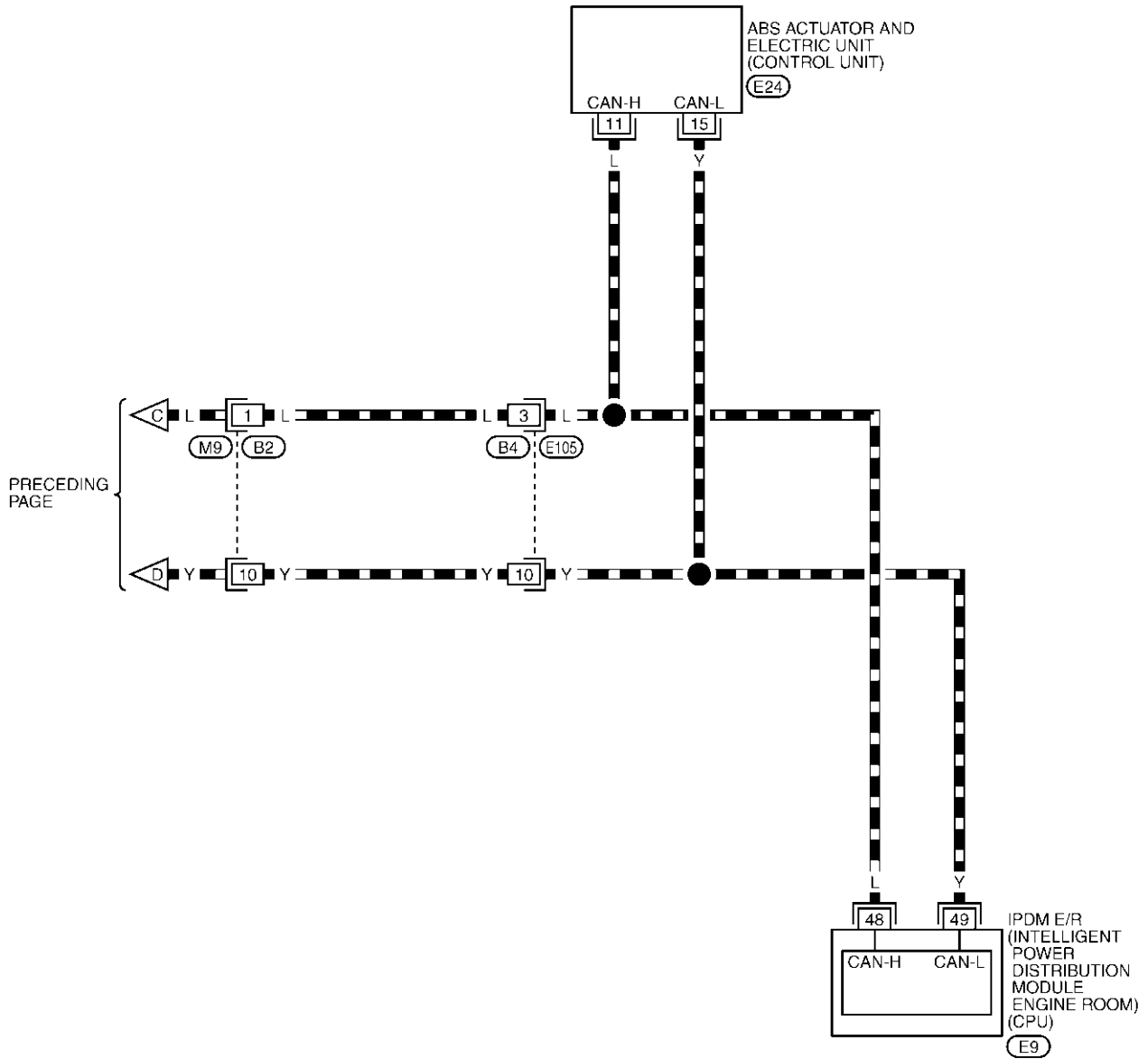


REFER TO THE FOLLOWING.  
(M37) -ELECTRICAL UNITS

TKWA0961E

## LAN-CAN-30

▬ : DATA LINE



REFER TO THE FOLLOWING.  
(E24) -ELECTRICAL UNITS

TKWA0962E

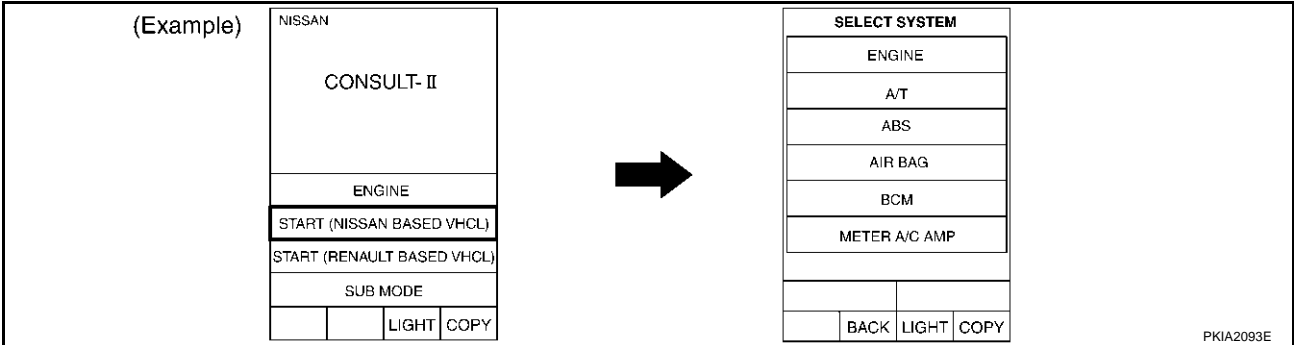
# CAN SYSTEM (TYPE 10)

[CAN]

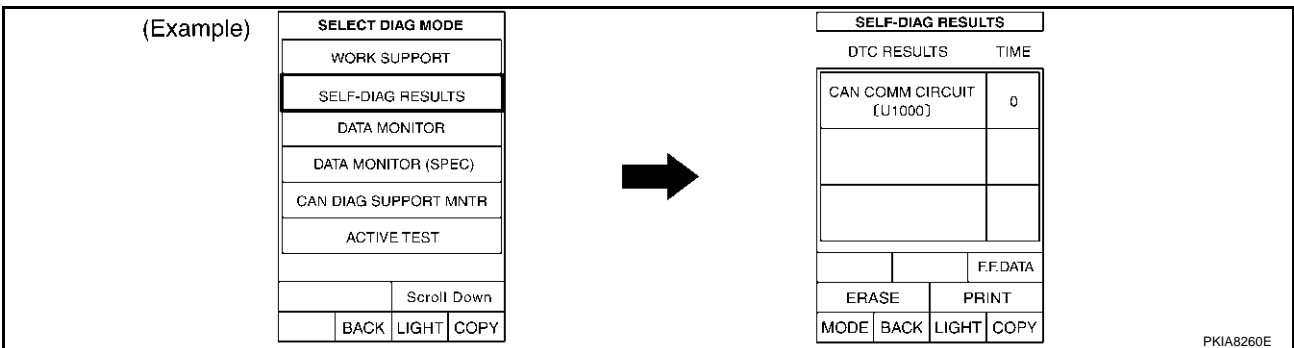
AKS00C52

## Work Flow

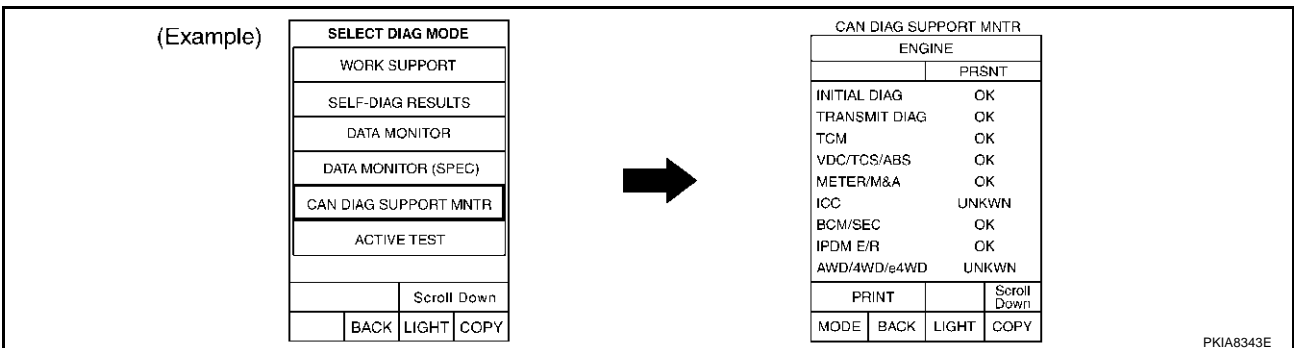
- When there are no indications of "TRANSMISSION", "AIR PRESSURE MONITOR" or "METER A/C AMP" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP" and "ABS" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP" and "ABS" displayed on CONSULT-II.



- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-331, "CHECK SHEET"](#) .
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "v" onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-331, "CHECK SHEET"](#) .

**NOTE:**

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual. So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the integrated display system. Refer to [AV-110, "CAN Communication Line Check"](#) .
- Attach the CAN DIAG MONITOR check sheet onto the check sheet. Refer to [LAN-331, "CHECK SHEET"](#) .

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8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG MONITOR check sheet. Refer to [LAN-331, "CHECK SHEET"](#) .

**NOTE:**

If "NG" is displayed on "CAN COMM" as "CAN DIAG MNTR" for the diagnosed control unit, replace the control unit. Refer to [AV-110, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-333, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

# CAN SYSTEM (TYPE 10)

[CAN]

## CHECK SHEET

### NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

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SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

Attach copy of  
display unit  
CAN DIAG MONITOR check sheet

PKIB0584E

# CAN SYSTEM (TYPE 10)

[CAN]

Attach copy of  
ENGINE  
SELF-DIAG RESULTS

Attach copy of  
TRANSMISSION  
SELF-DIAG RESULTS

Attach copy of  
AIR PRESSURE  
MONITOR  
SELF-DIAG RESULTS

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
METER A/C AMP  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

Attach copy of  
ENGINE  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
TRANSMISSION  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
AIR PRESSURE  
MONITOR  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
BCM  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
METER A/C AMP  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ABS  
CAN DIAG SUPPORT  
MNTR

PKIB0437E



# CAN SYSTEM (TYPE 10)

[CAN]

## CHECK SHEET RESULTS (EXAMPLE)

### NOTE:

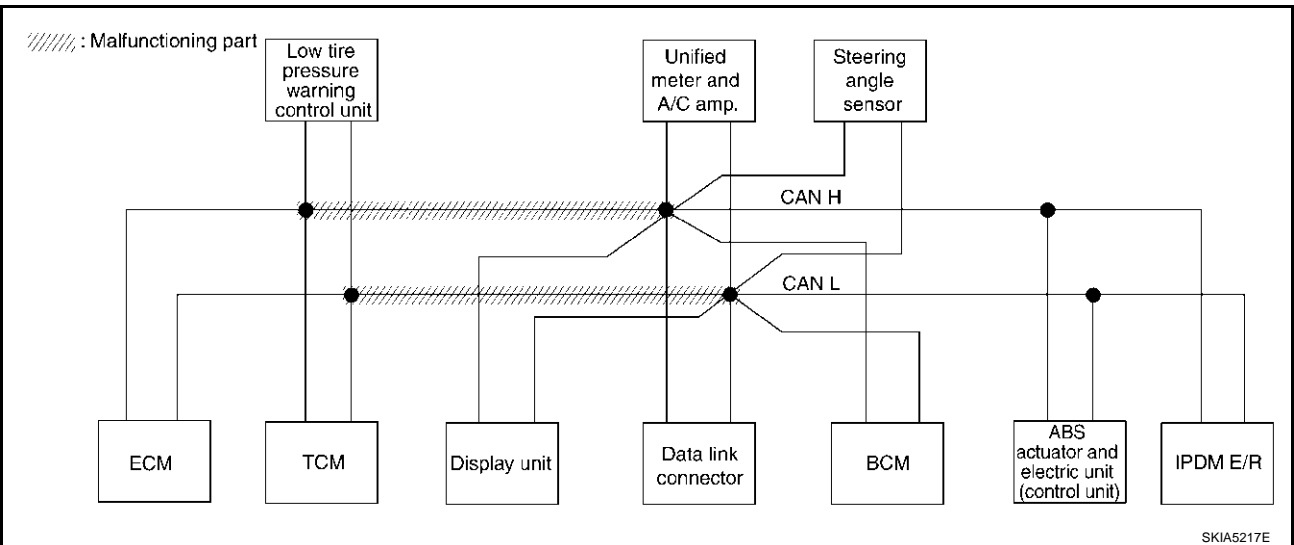
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

### Case 1

Check harness between TCM and data link connector. Refer to [LAN-346, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3 ✓	—	CAN 6 ✓	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

PKIB0585E



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# CAN SYSTEM (TYPE 10)

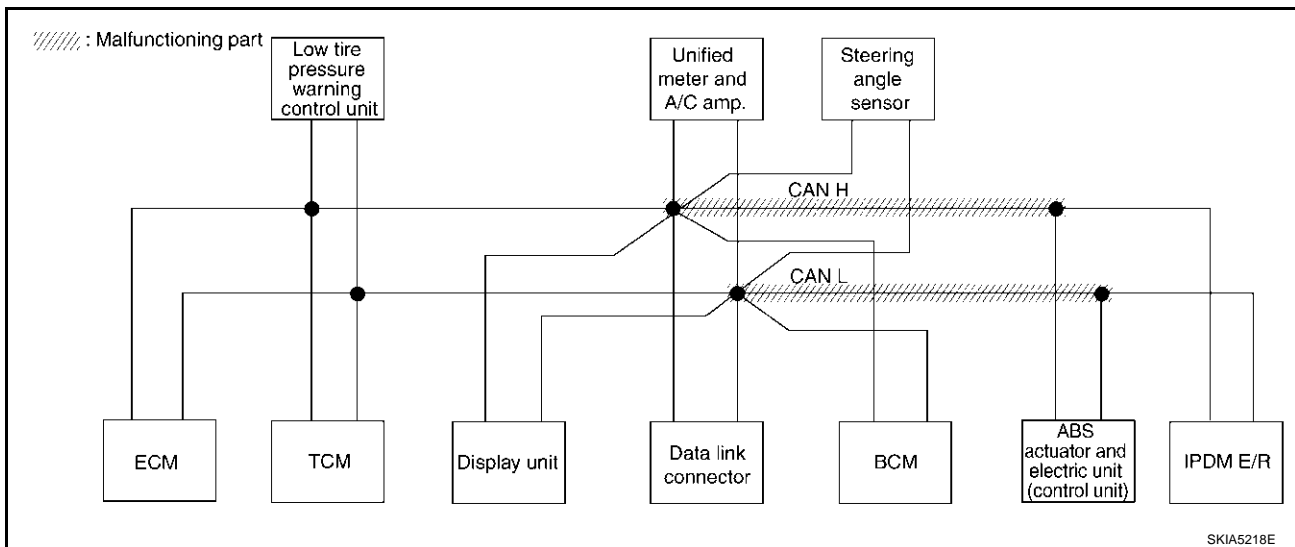
[CAN]

## Case 2

Check harness between data link connector and ABS actuator and electric unit (control unit). Refer to [LAN-346, "Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit \(Control Unit\)"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN ✓	UNKWN ✓
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN ✓	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7 ✓
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN ✓
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN ✓	—
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN ✓	—	—	—	—	UNKWN ✓	—	—

PKIB0586E



# CAN SYSTEM (TYPE 10)

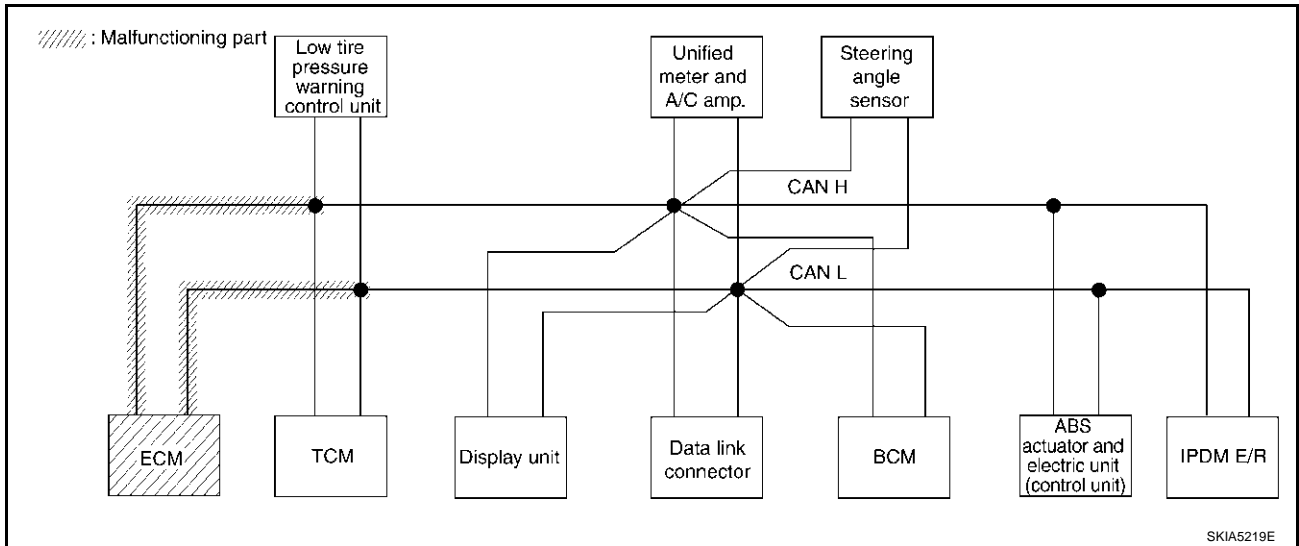
[CAN]

## Case 3

Check ECM circuit. Refer to [LAN-347, "ECM Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKW <sup>N</sup> ✓	—	UNKW <sup>N</sup> ✓	—	—	—	UNKW <sup>N</sup> ✓	UNKW <sup>N</sup> ✓	—	UNKW <sup>N</sup> ✓	UNKW <sup>N</sup> ✓
TRANSMISSION	No indication	NG	UNKW <sup>N</sup>	UNKW <sup>N</sup> ✓	—	—	—	—	UNKW <sup>N</sup>	—	—	UNKW <sup>N</sup>	—
AIR PRESSURE MONITOR	No indication	NG	UNKW <sup>N</sup>	—	—	—	—	—	UNKW <sup>N</sup>	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3 ✓	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7	—
BCM	—	NG	UNKW <sup>N</sup>	UNKW <sup>N</sup> ✓	—	—	—	—	UNKW <sup>N</sup>	—	—	UNKW <sup>N</sup>	—
METER A/C AMP	No indication	—	UNKW <sup>N</sup>	UNKW <sup>N</sup> ✓	UNKW <sup>N</sup>	UNKW <sup>N</sup>	UNKW <sup>N</sup>	UNKW <sup>N</sup>	—	—	—	UNKW <sup>N</sup>	—
ABS	—	NG	UNKW <sup>N</sup>	UNKW <sup>N</sup> ✓	UNKW <sup>N</sup>	—	—	—	—	—	UNKW <sup>N</sup>	—	—

PKIB0587E



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# CAN SYSTEM (TYPE 10)

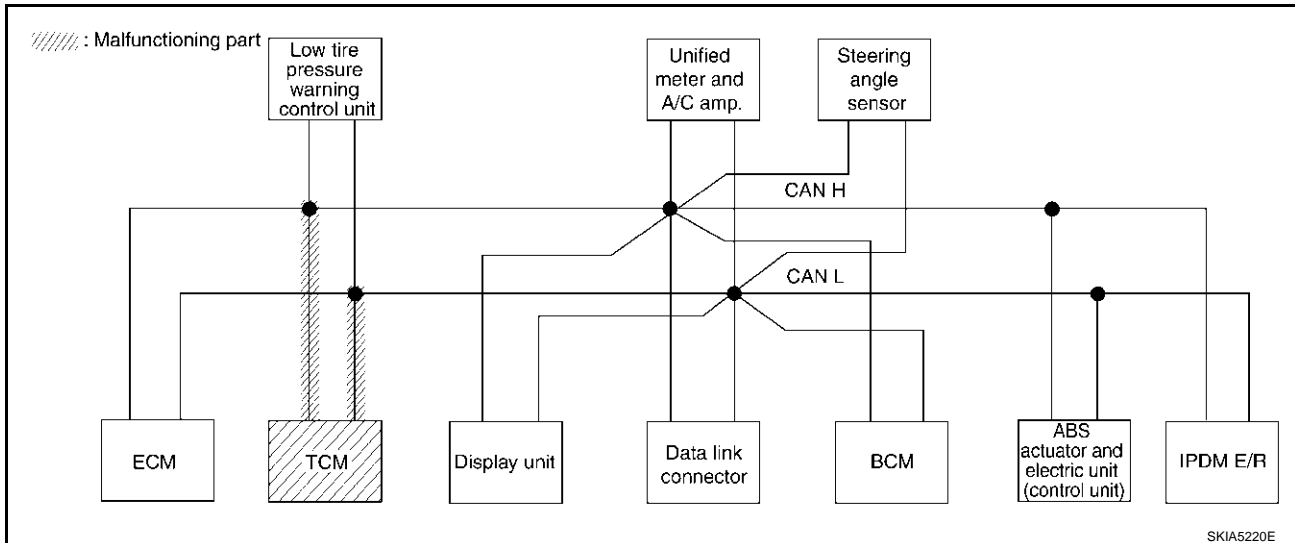
[CAN]

## Case 4

Check TCM circuit. Refer to [LAN-348, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

PKIB0588E



# CAN SYSTEM (TYPE 10)

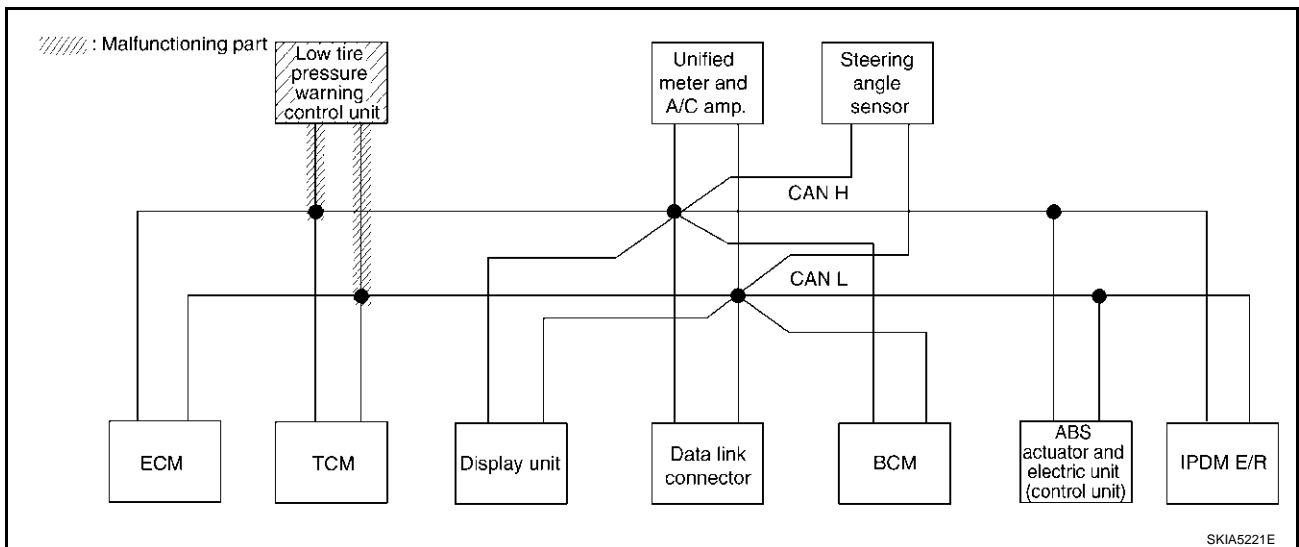
[CAN]

## Case 5

Check low tire pressure warning control unit circuit. Refer to [LAN-348, "Low Tire Pressure Warning Control Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	✓ CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	✓ UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

PKIB0589E



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# CAN SYSTEM (TYPE 10)

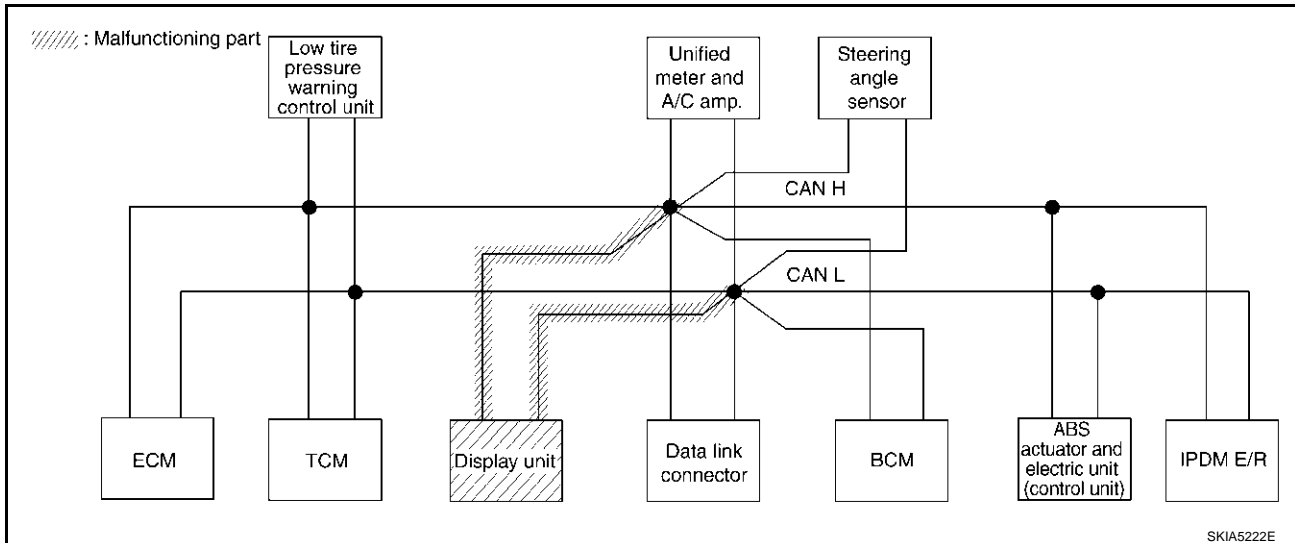
[CAN]

## Case 6

Check display unit circuit. Refer to [LAN-349, "Display Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CA1 1	CA1 3	—	CA1 6	—	CA1 2	CA1 5	—	—	CA1 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

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# CAN SYSTEM (TYPE 10)

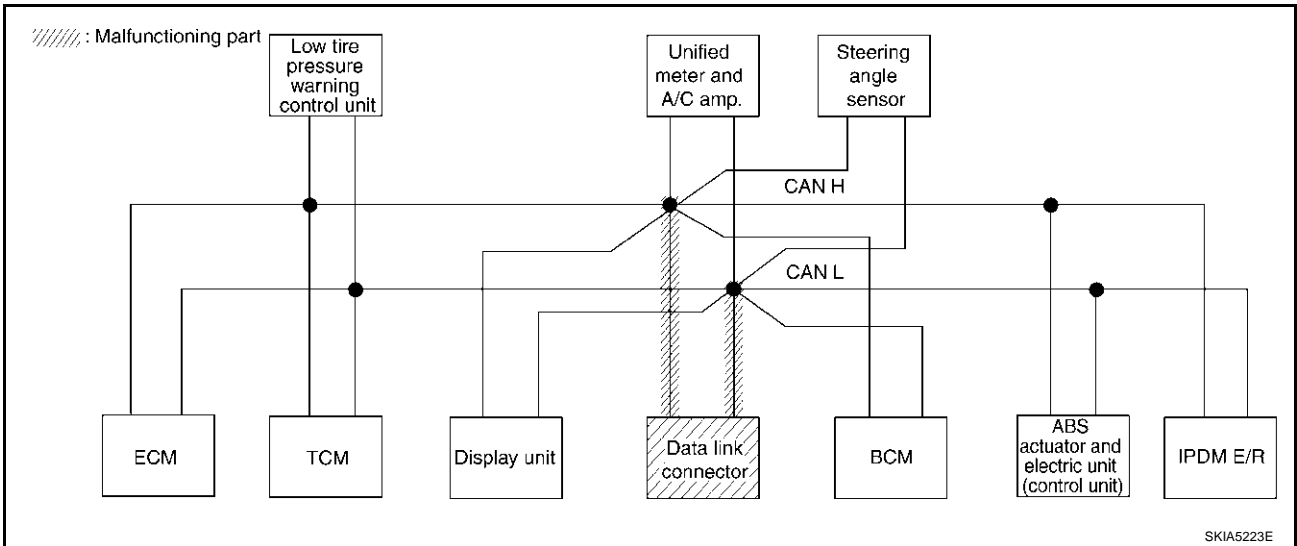
[CAN]

## Case 7

Check data link connector circuit. Refer to [LAN-349, "Data Link Connector Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

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# CAN SYSTEM (TYPE 10)

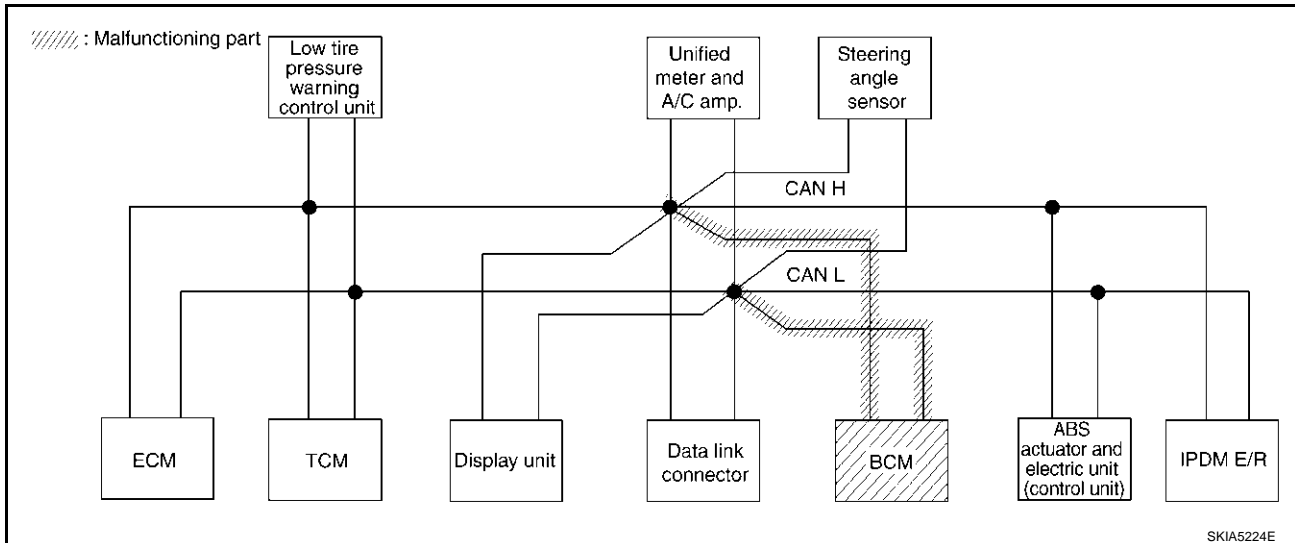
[CAN]

## Case 8

Check BCM circuit. Refer to [LAN-350, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

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# CAN SYSTEM (TYPE 10)

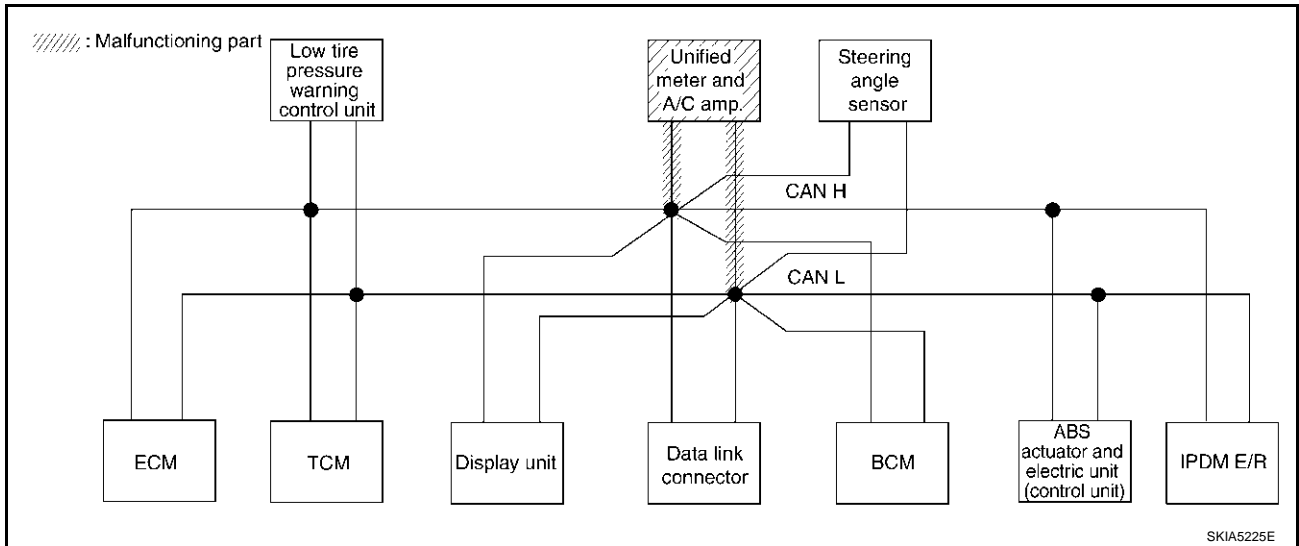
[CAN]

## Case 9

Check unified meter and A/C amp. circuit. Refer to [LAN-350, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

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# CAN SYSTEM (TYPE 10)

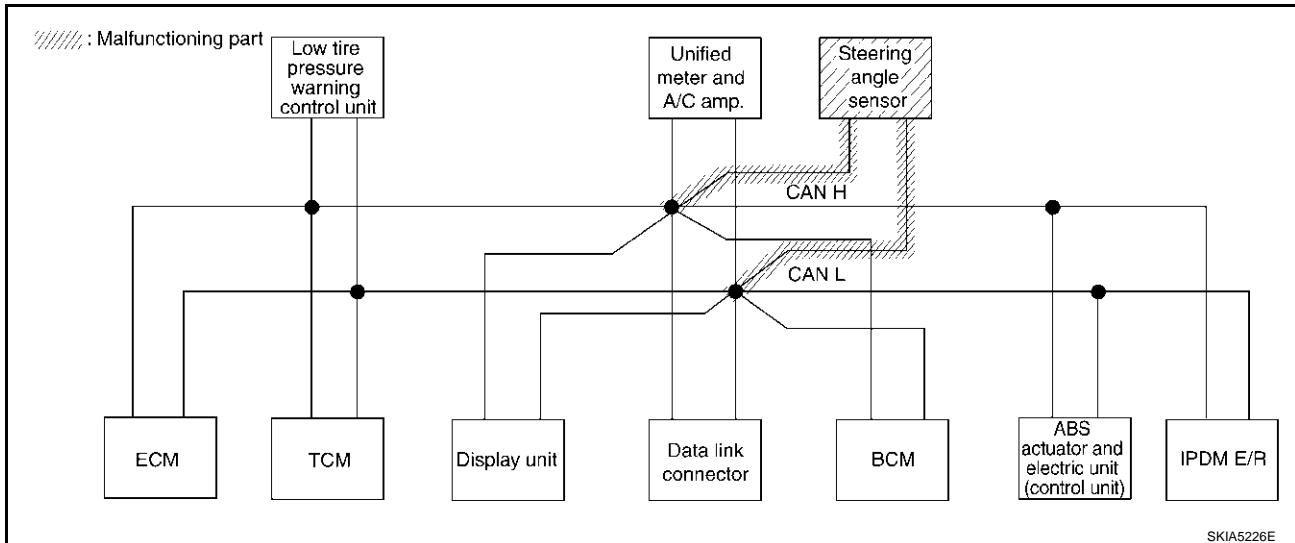
[CAN]

## Case 10

Check steering angle sensor circuit. Refer to [LAN-351, "Steering Angle Sensor Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

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# CAN SYSTEM (TYPE 10)

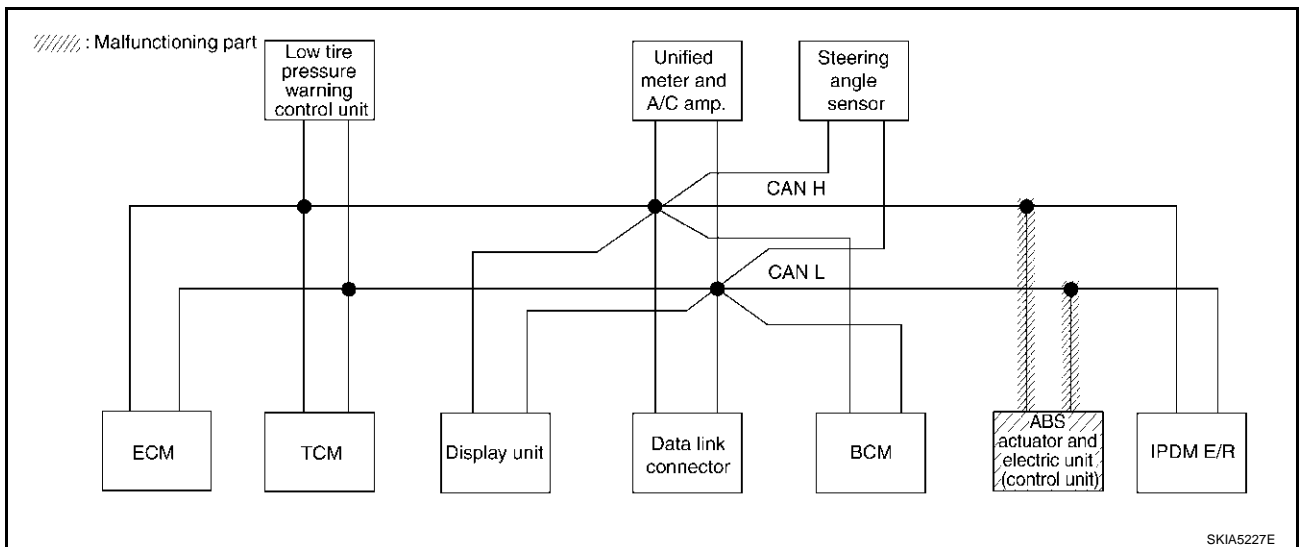
[CAN]

## Case 11

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-351, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

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# CAN SYSTEM (TYPE 10)

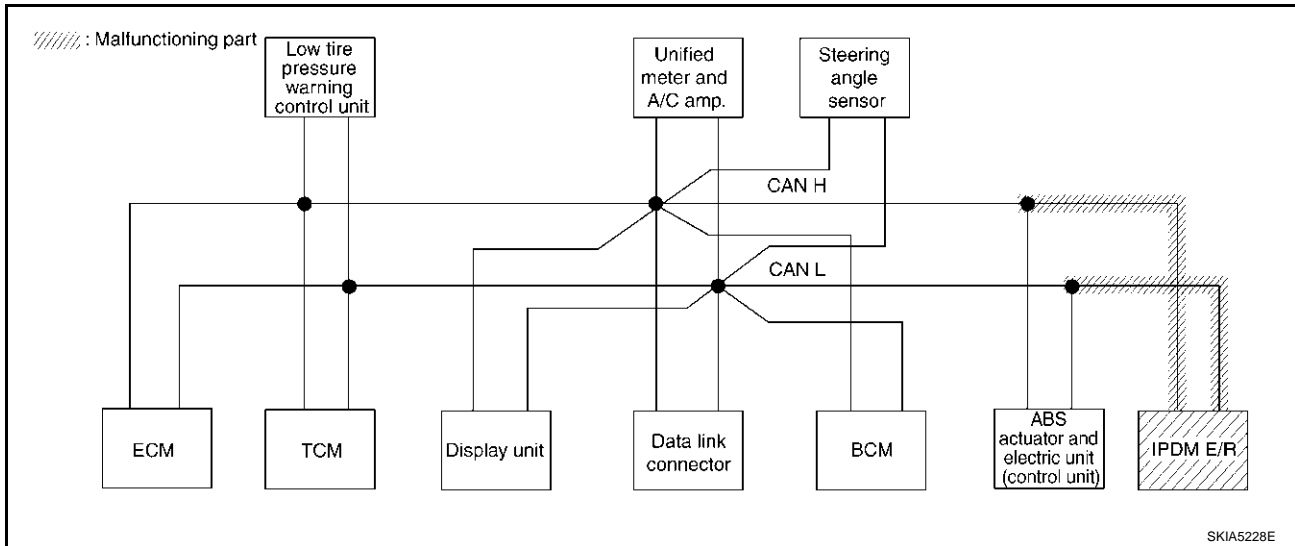
[CAN]

## Case 12

Check IPDM E/R circuit. Refer to [LAN-352, "IPDM E/R Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN ✓
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7 ✓
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN ✓
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

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## Case 13

Check CAN communication circuit. Refer to [LAN-352, "CAN Communication Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN ✓	—	UNKWN ✓	—	—	UNKWN ✓	UNKWN ✓	—	UNKWN ✓	UNKWN ✓
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1 ✓	CAN 3 ✓	—	CAN 6 ✓	—	CAN 2 ✓	CAN 5 ✓	—	—	CAN 7 ✓
BCM	—	NG	UNKWN ✓	UNKWN ✓	—	—	—	—	UNKWN ✓	—	—	UNKWN ✓
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN ✓	UNKWN ✓	UNKWN ✓	—	—	—	—	UNKWN ✓	—	—

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# CAN SYSTEM (TYPE 10)

[CAN]

## Case 14

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-355, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

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## Case 15

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-355, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

PKIB0599E

## Circuit Check Between TCM and Data Link Connector

### 1. CHECK HARNESS FOR OPEN CIRCUIT

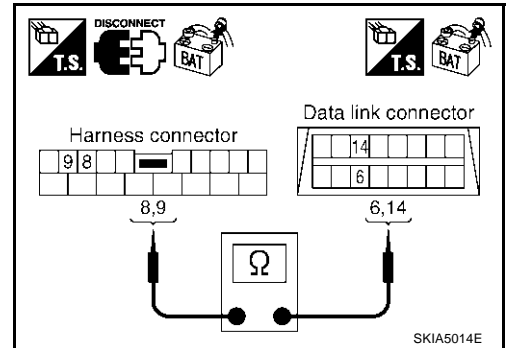
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

**8 (L) - 6 (L) : Continuity should exist.**

**9 (Y) - 14 (Y) : Continuity should exist.**

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-329, "Work Flow"](#).
- NG >> Repair harness.



## Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit)

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector M9
  - Harness connector B2
  - Harness connector B4
  - Harness connector E105

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

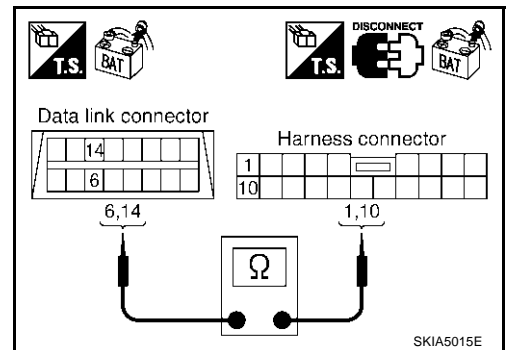
1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

**6 (L) - 1 (L) : Continuity should exist.**

**14 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



### 3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

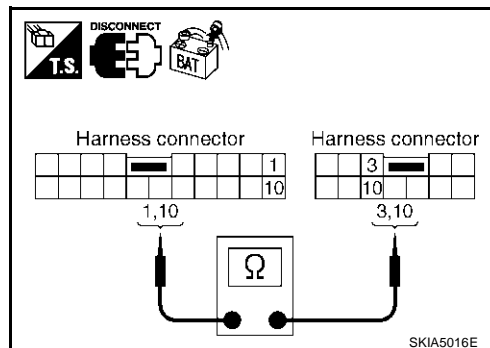
**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

OK >> GO TO 4.

NG >> Repair harness.



### 4. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

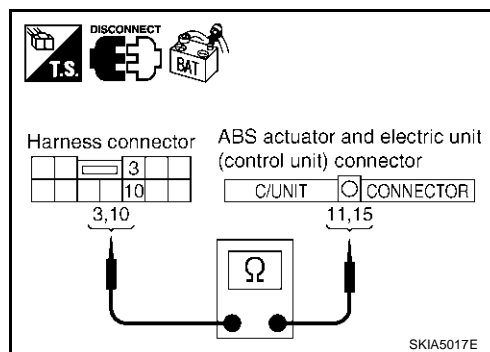
**3 (L) - 11 (L) : Continuity should exist.**

**10 (Y) - 15 (Y) : Continuity should exist.**

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-329, "Work Flow"](#).

NG >> Repair harness.



## ECM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

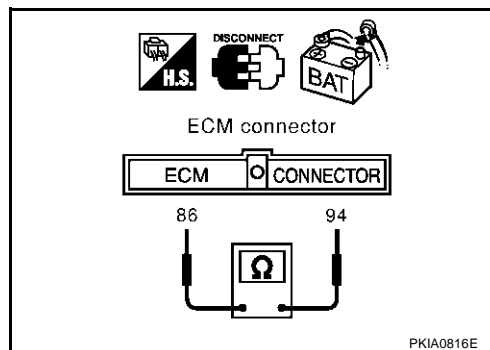
1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

**94 (L) - 86 (Y) : Approx. 108 - 132Ω**

OK or NG

OK >> Replace ECM.

NG >> Repair harness between ECM and TCM.



**TCM Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
  - TCM connector
  - Harness connector F102
  - Harness connector M82

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

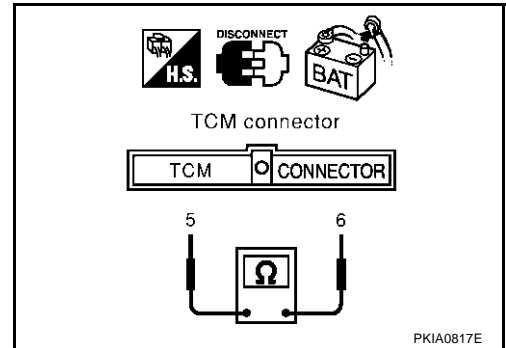
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace TCM.  
 NG >> Repair harness between TCM and low tire pressure warning control unit.

**Low Tire Pressure Warning Control Unit Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of low tire pressure warning control unit for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

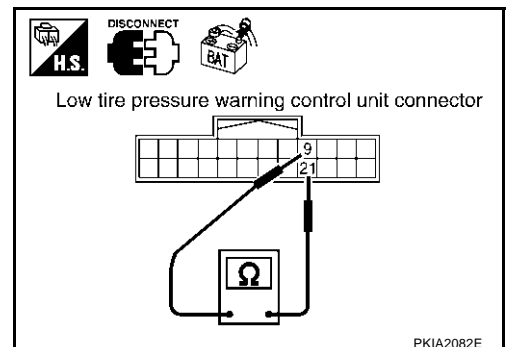
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect low tire pressure warning control unit connector.
2. Check resistance between low tire pressure warning control unit harness connector M81 terminals 9 (L) and 21 (Y).

**9 (L) - 21 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace low tire pressure warning control unit.  
 NG >> Repair harness between low tire pressure warning control unit and TCM.





## Display Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display unit for damage, bend and loose connection (unit side and harness side).

#### OK or NG

- OK >> GO TO 2.  
NG >> Repair terminal or connector.

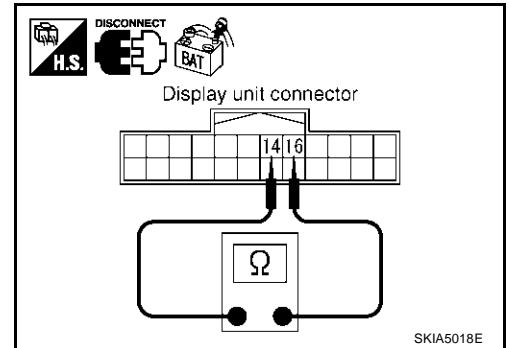
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect display unit connector.
2. Check resistance between display unit harness connector M39 terminals 14 (L) and 16 (Y).

**14 (L) - 16 (Y) : Approx. 54 - 66Ω**

#### OK or NG

- OK >> Replace display unit.  
NG >> Repair harness between display unit and data link connector.



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## Data Link Connector Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

#### OK or NG

- OK >> GO TO 2.  
NG >> Repair terminal or connector.

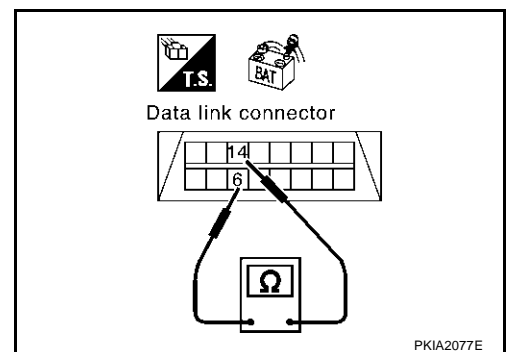
### 2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Approx. 54 - 66Ω**

#### OK or NG

- OK >> Diagnose again. Refer to [LAN-329, "Work Flow"](#).  
NG >> Repair harness between data link connector and BCM.



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**BCM Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

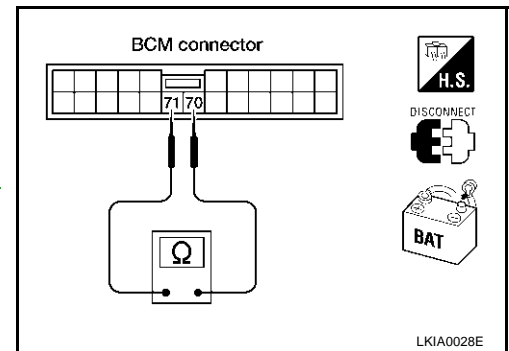
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M37 terminals 70 (L) and 71 (Y).

**70 (L) - 71 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace BCM. Refer to [BCS-36, "Removal and Installation of BCM"](#) .  
 NG >> Repair harness between BCM and data link connector.

**Unified Meter and A/C Amp. Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

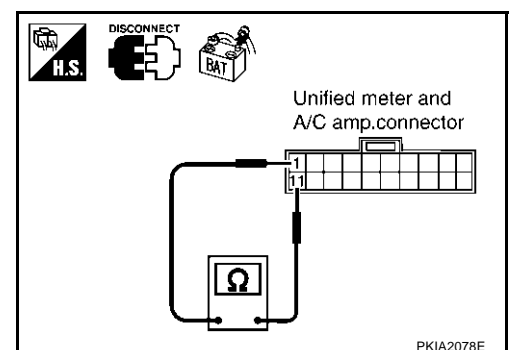
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

**1 (L) - 11 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace unified meter and A/C amp.  
 NG >> Repair harness between unified meter and A/C amp. and data link connector.



**Steering Angle Sensor Circuit Check**

AKS006U1

**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of steering angle sensor for damage, bend and loose connection (sensor side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

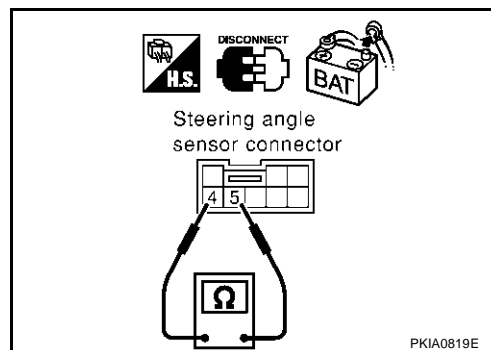
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M33 terminals 4 (L) and 5 (Y).

**4 (L) - 5 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace steering angle sensor.  
 NG >> Repair harness between steering angle sensor and data link connector.

**ABS Actuator and Electric Unit (Control Unit) Circuit Check**

AKS006U2

**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

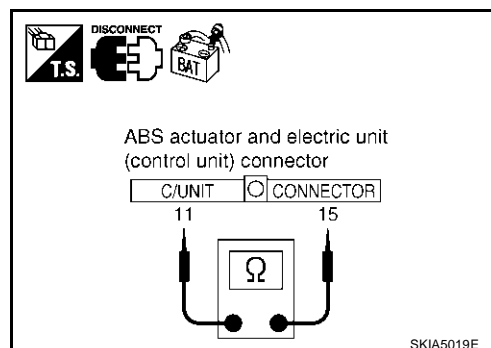
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

**11 (L) - 15 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).  
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



**IPDM E/R Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

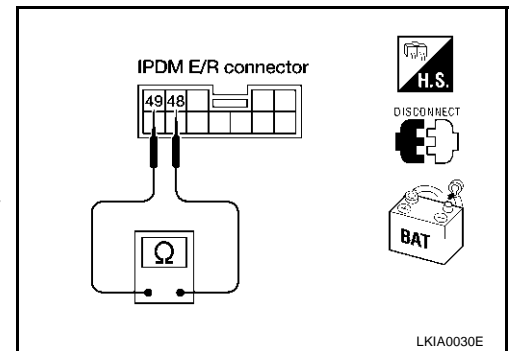
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y) : Approx. 108 - 132Ω**

OK or NG

- OK >> Replace IPDM E/R.  
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).

**CAN Communication Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, unit side, meter side, sensor side and harness side).

- ECM
- TCM
- Low tire pressure warning control unit
- Display unit
- BCM
- Unified meter and A/C amp.
- Steering angle sensor
- ABS actuator and electric unit (control unit)
- IPDM E/R
- Between ECM and IPDM E/R
- Between ECM and TCM

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
  - ECM connector
  - Low tire pressure warning control unit connector
  - Harness connector M82
  - Display unit connector
  - BCM connector
  - Unified meter and A/C amp. connector
  - Steering angle sensor connector
  - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

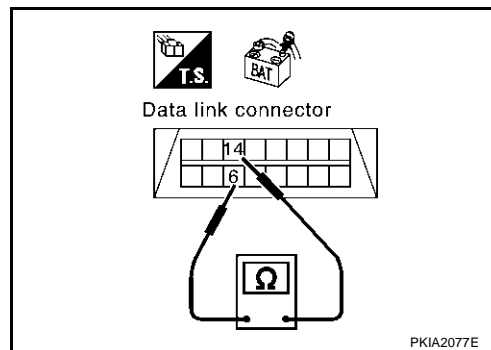
**6 (L) - 14 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 3.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M9.



## 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

**6 (L) - Ground : Continuity should not exist.**

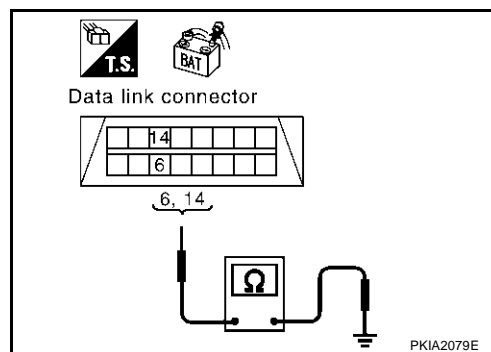
**14 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M9.



#### 4. CHECK HARNESS FOR SHORT CIRCUIT

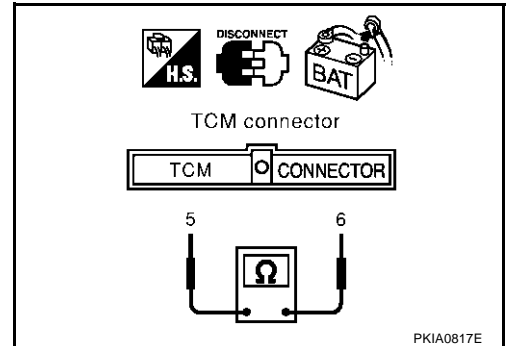
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 5.

NG >> Repair harness between TCM and harness connector F102.



#### 5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

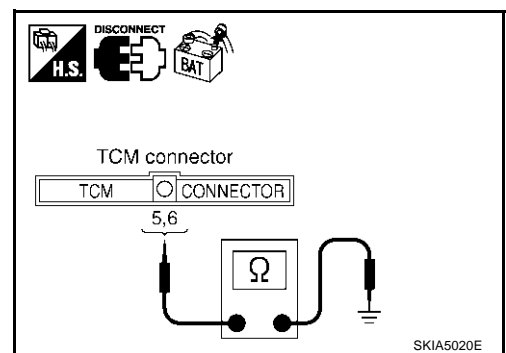
**5 (L) - Ground : Continuity should not exist.**

**6 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 6.

NG >> Repair harness between TCM and harness connector F102.



#### 6. CHECK HARNESS FOR SHORT CIRCUIT

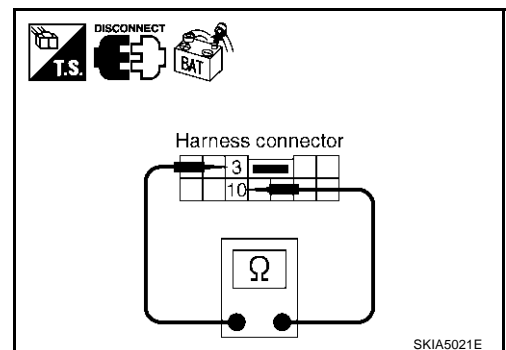
1. Disconnect harness connector B4.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

**3 (L) - 10 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 7.

NG >> Repair harness between harness connector B4 and harness connector B2.



#### 7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

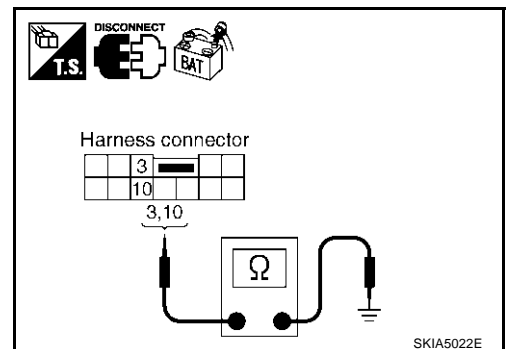
**3 (L) - Ground : Continuity should not exist.**

**10 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 8.

NG >> Repair harness between harness connector B4 and harness connector B2.



## 8. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

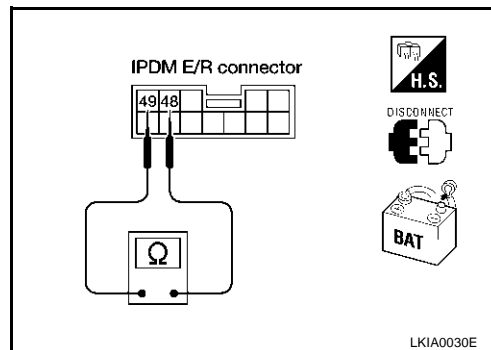
**48 (L) - 49 (Y) : Continuity should not exist.**

**OK or NG**

OK >> GO TO 9.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

**48 (L) - Ground : Continuity should not exist.**

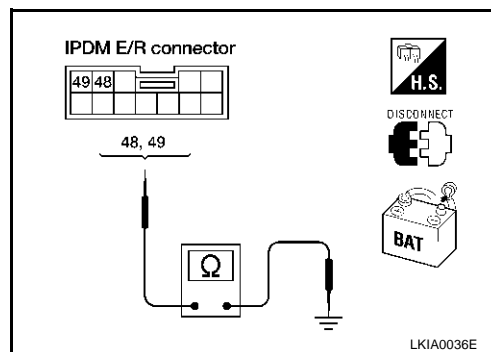
**49 (Y) - Ground : Continuity should not exist.**

**OK or NG**

OK >> GO TO 10.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 10. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-355, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

**OK or NG**

OK >> Connect all the connectors and diagnose again. Refer to [LAN-329, "Work Flow"](#).

NG >> Replace ECM and/or IPDM E/R.

### IPDM E/R Ignition Relay Circuit Check

AKS006U5

Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-45, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#).

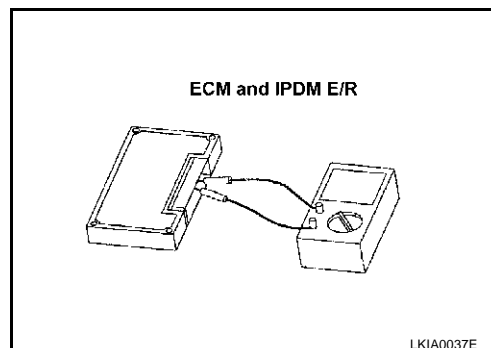
### Component Inspection

#### ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

AKS006U6

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



## CAN SYSTEM (TYPE 11)

PFP:23710

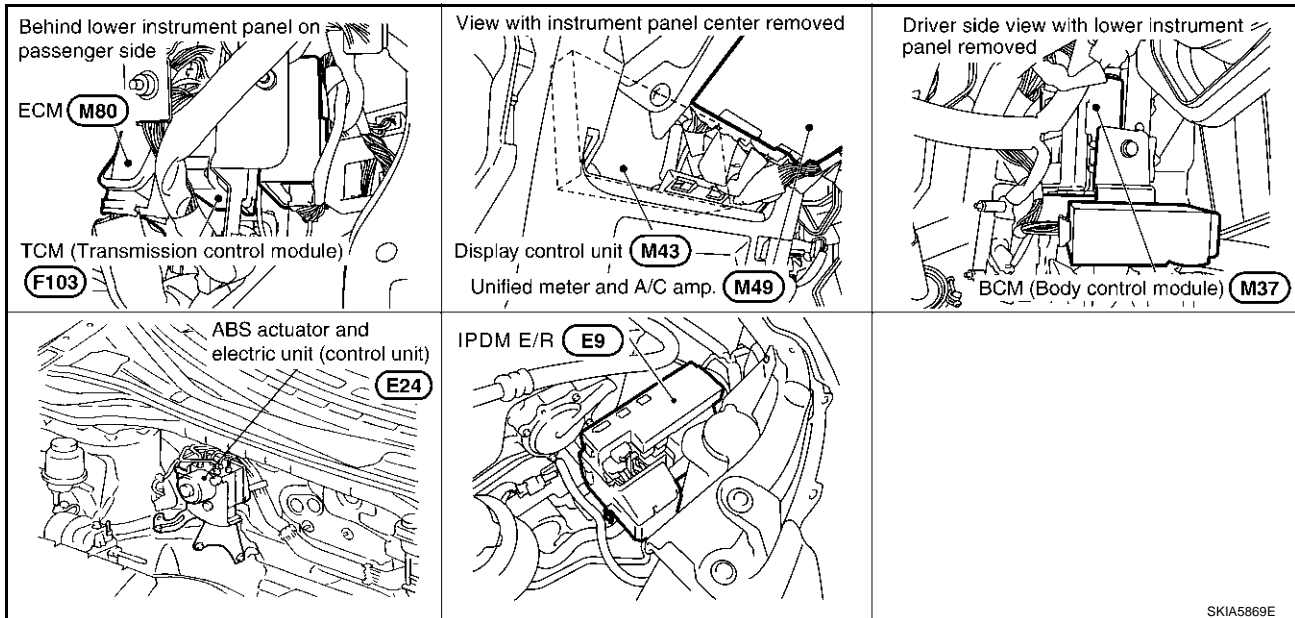
### System Description

AKS006U7

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

### Component Parts and Harness Connector Location

AKS006U8



SKIA5869E

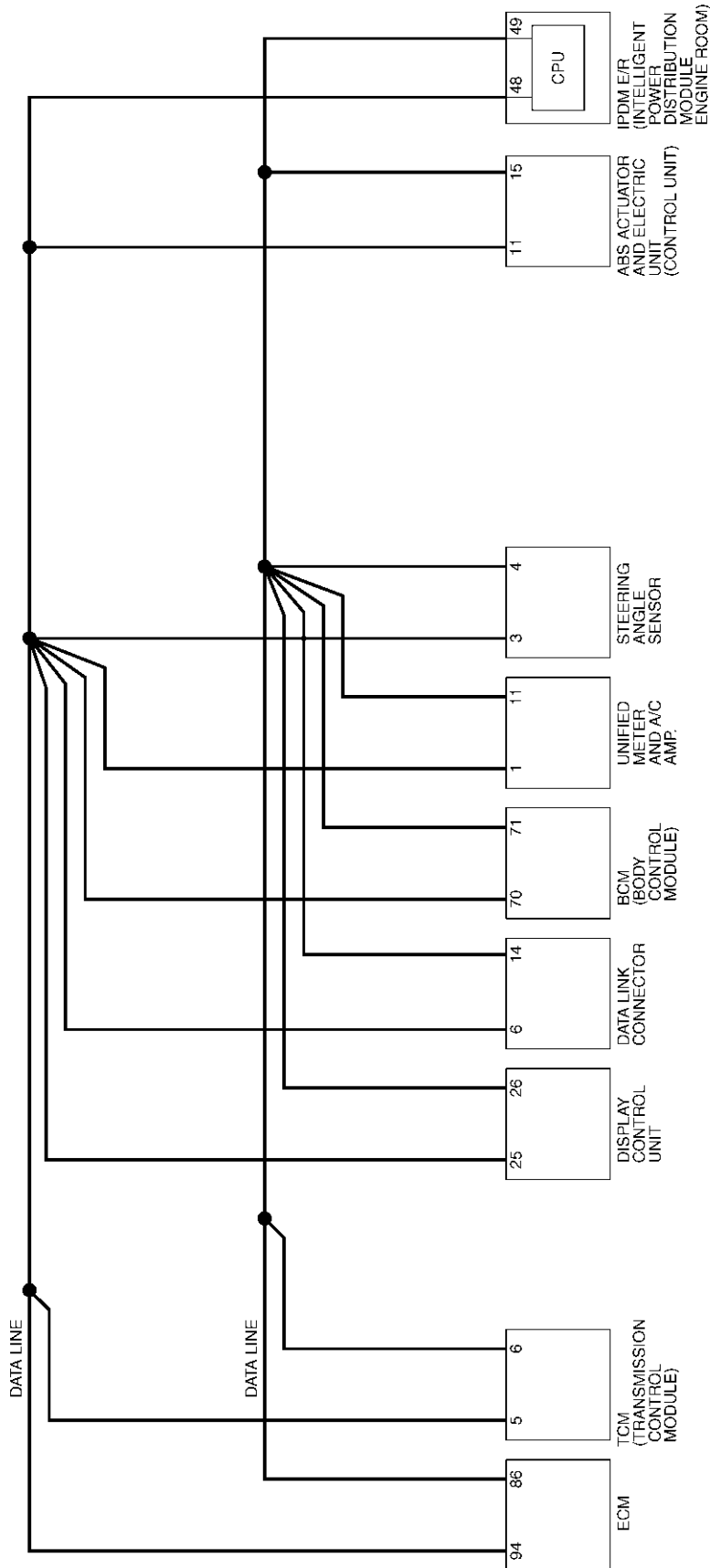


# CAN SYSTEM (TYPE 11)

[CAN]

## Schematic

AKS006U9



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TKWA0963E

# CAN SYSTEM (TYPE 11)

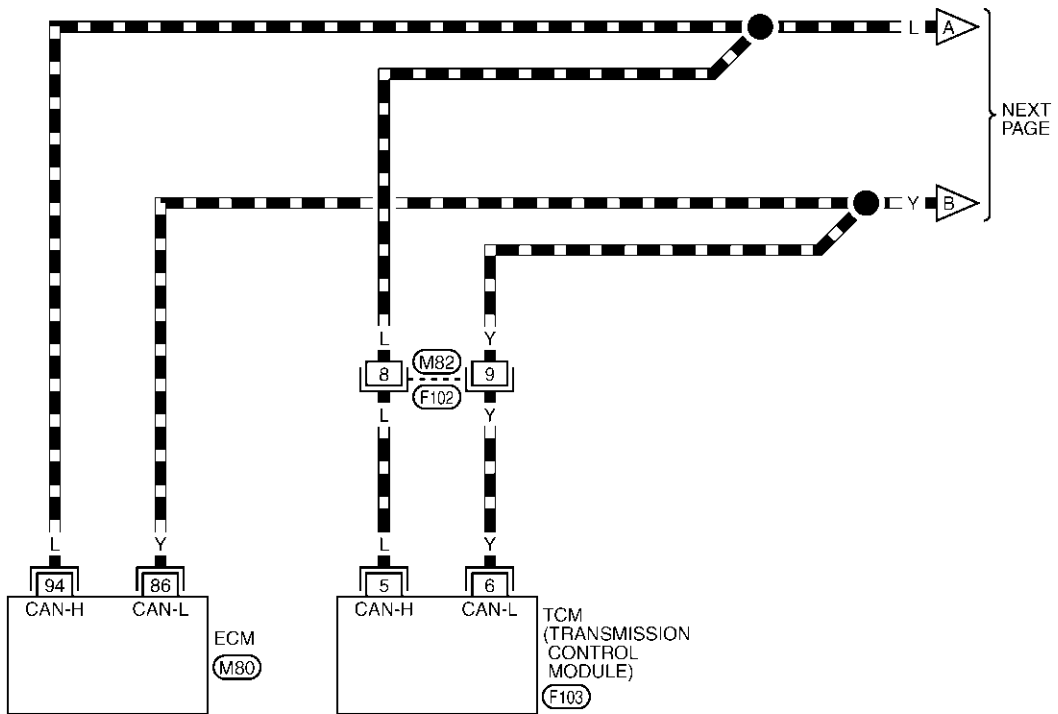
[CAN]

## Wiring Diagram - CAN -

AKS006UA

### LAN-CAN-31

▬ : DATA LINE



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18		

(F102)  
W

REFER TO THE FOLLOWING.  
(M80), (F103) -ELECTRICAL  
UNITS

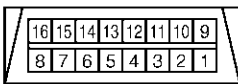
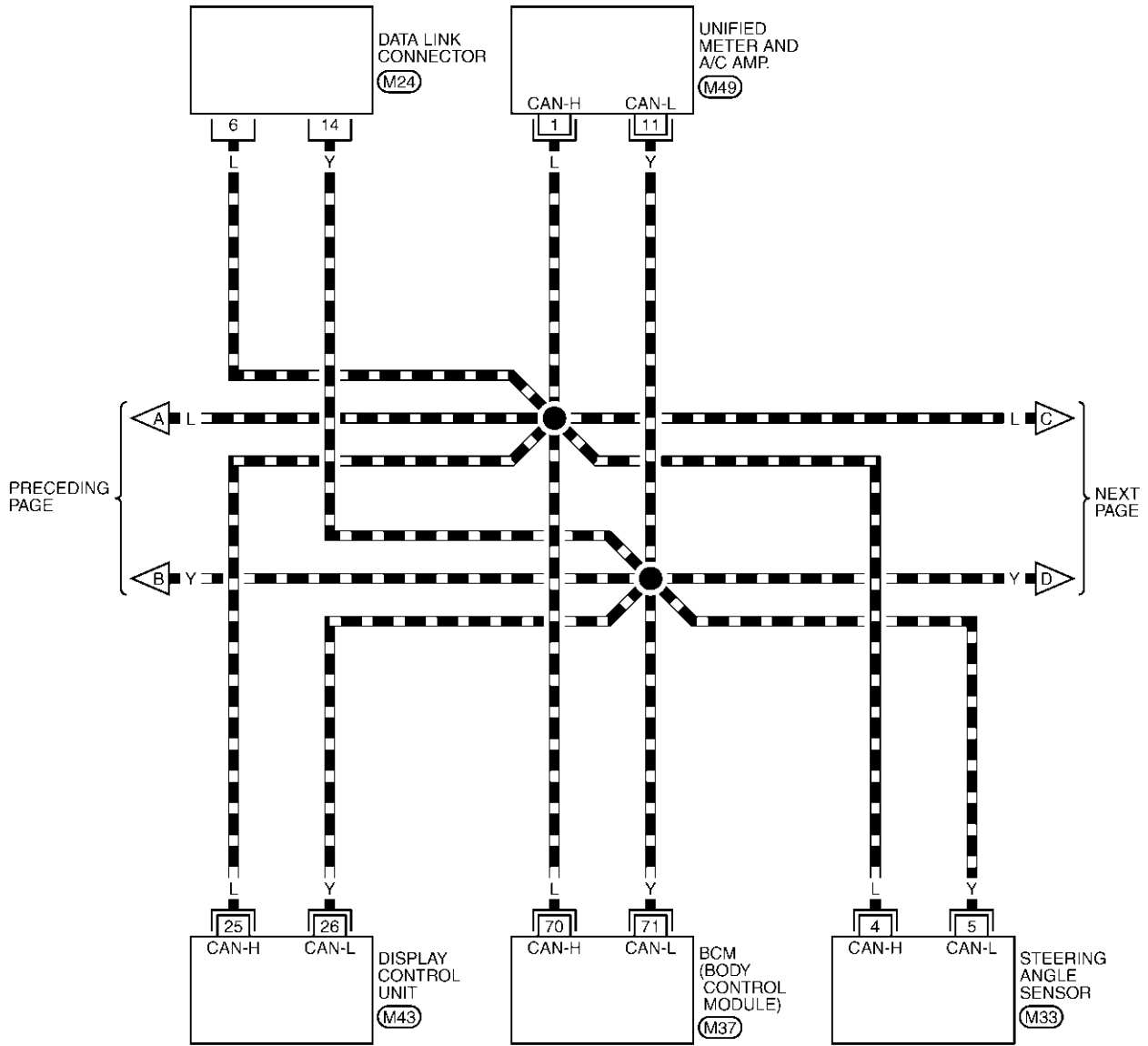
TKWA0964E

# CAN SYSTEM (TYPE 11)

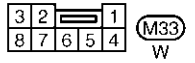
[CAN]

## LAN-CAN-32

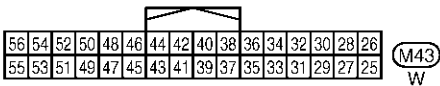
▬ : DATA LINE



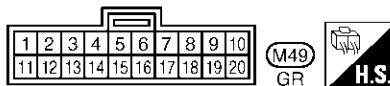
(M24)  
W



(M33)  
W



(M43)  
W

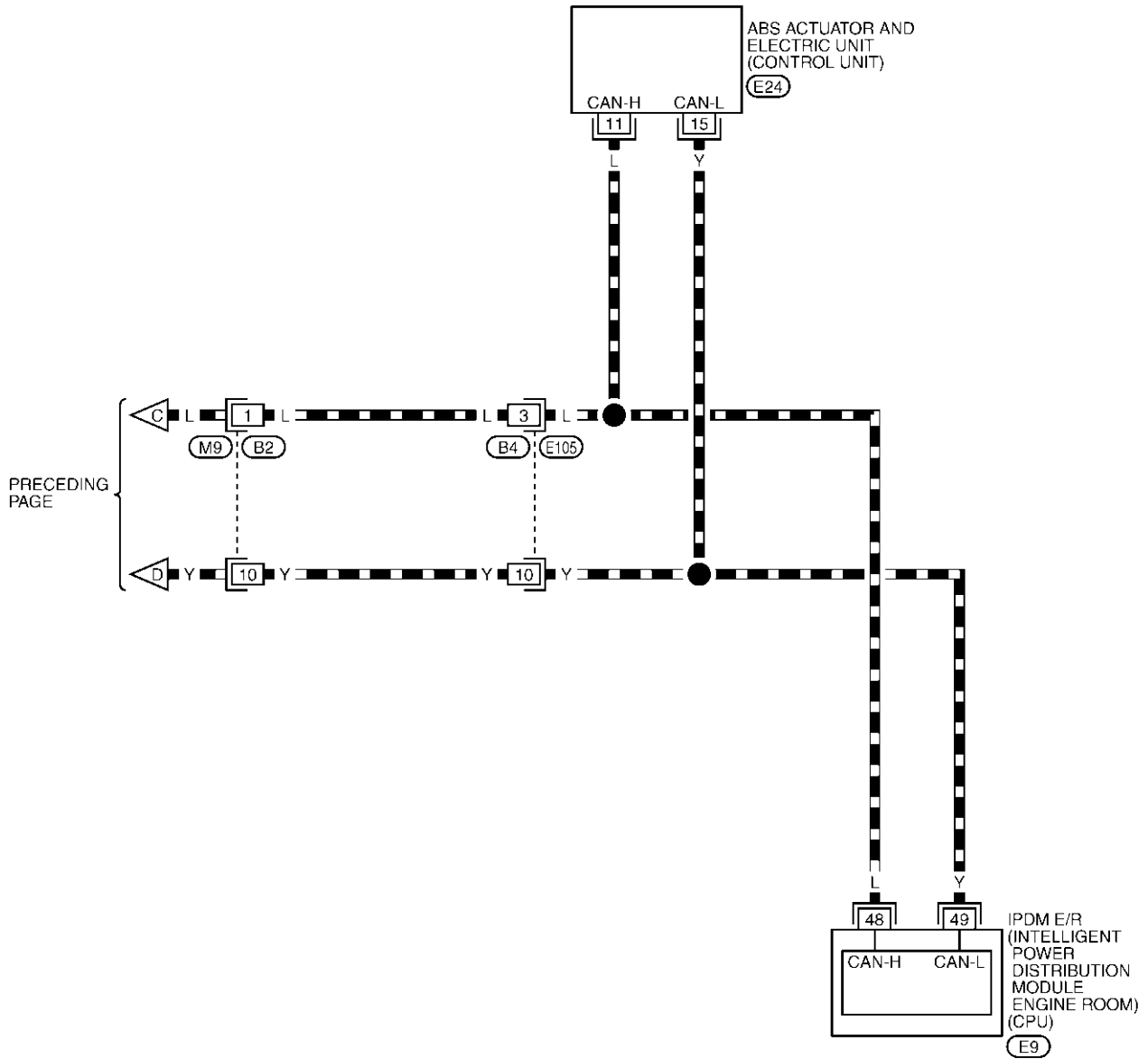


REFER TO THE FOLLOWING.  
(M37) -ELECTRICAL UNITS

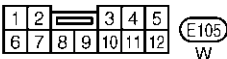
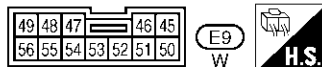
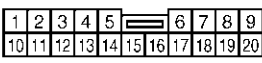
TKWA0965E

## LAN-CAN-33

▬ : DATA LINE



PRECEDING PAGE



REFER TO THE FOLLOWING.

(E24) -ELECTRICAL UNITS

TKWA0966E

# CAN SYSTEM (TYPE 11)

[CAN]


AKS00C55

## Work Flow

- When there are no indications of "TRANSMISSION" or "METER A/C AMP" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".

(Example)

NISSAN			
CONSULT-II			
ENGINE			
START (NISSAN BASED VHCL)			
START (RENAULT BASED VHCL)			
SUB MODE			
		LIGHT	COPY




SELECT SYSTEM				
ENGINE				
A/T				
ABS				
AIR BAG				
BCM				
METER A/C AMP				
		BACK	LIGHT	COPY

PKIA2093E

- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP" and "ABS" displayed on CONSULT-II.

(Example)

SELECT DIAG MODE				
WORK SUPPORT				
SELF-DIAG RESULTS				
DATA MONITOR				
DATA MONITOR (SPEC)				
CAN DIAG SUPPORT MNTR				
ACTIVE TEST				
Scroll Down				
		BACK	LIGHT	COPY




SELF-DIAG RESULTS			
DTC RESULTS		TIME	
CAN COMM CIRCUIT [U1000]		0	
F.F.DATA			
ERASE		PRINT	
MODE	BACK	LIGHT	COPY

PKIA8260E

- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP" and "ABS" displayed on CONSULT-II.

(Example)

SELECT DIAG MODE				
WORK SUPPORT				
SELF-DIAG RESULTS				
DATA MONITOR				
DATA MONITOR (SPEC)				
CAN DIAG SUPPORT MNTR				
ACTIVE TEST				
Scroll Down				
		BACK	LIGHT	COPY



CAN DIAG SUPPORT MNTR			
ENGINE			
		PRNT	
INITIAL DIAG		OK	
TRANSMIT DIAG		OK	
TCM		OK	
VDC/TCS/ABS		OK	
METER/M&A		OK	
ICC		UNKWVN	
BCM/SEC		OK	
IPDM E/R		OK	
AWD/4WD/e4WD		UNKWVN	
PRINT			Scroll Down
MODE	BACK	LIGHT	COPY

PKIA8343E

- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-363, "CHECK SHEET"](#).
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "v" onto the items with "No indication", "NG", or "UNKWVN" in the check sheet table. Refer to [LAN-363, "CHECK SHEET"](#).

**NOTE:**

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual. So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the navigation system. Refer to [AV-203, "CAN Communication Line Check"](#).
- Attach the CAN DIAG SUPPORT MONITOR check sheet onto the check sheet. Refer to [LAN-363, "CHECK SHEET"](#).

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- 
8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG SUPPORT MONITOR check sheet. Refer to [LAN-363, "CHECK SHEET"](#) .

**NOTE:**

If "NG" is displayed on "CAN COMM" as "CAN DIAG SUPPORT MONITOR" for the diagnosed control unit, replace the control unit. Refer to [AV-203, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-365, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

# CAN SYSTEM (TYPE 11)

[CAN]

## CHECK SHEET

### NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

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Check sheet table

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—	

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

Attach copy of  
display control unit  
CAN DIAG SUPPORT MONITOR check sheet

PKIB0604E

# CAN SYSTEM (TYPE 11)

[CAN]

Attach copy of  
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SELF-DIAG RESULTS

Attach copy of  
TRANSMISSION  
SELF-DIAG RESULTS

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
METER A/C AMP  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

Attach copy of  
ENGINE  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
TRANSMISSION  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
BCM  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
METER A/C AMP  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ABS  
CAN DIAG SUPPORT  
MNTR

PKIB0422E



# CAN SYSTEM (TYPE 11)

[CAN]

## CHECK SHEET RESULTS (EXAMPLE)

### NOTE:

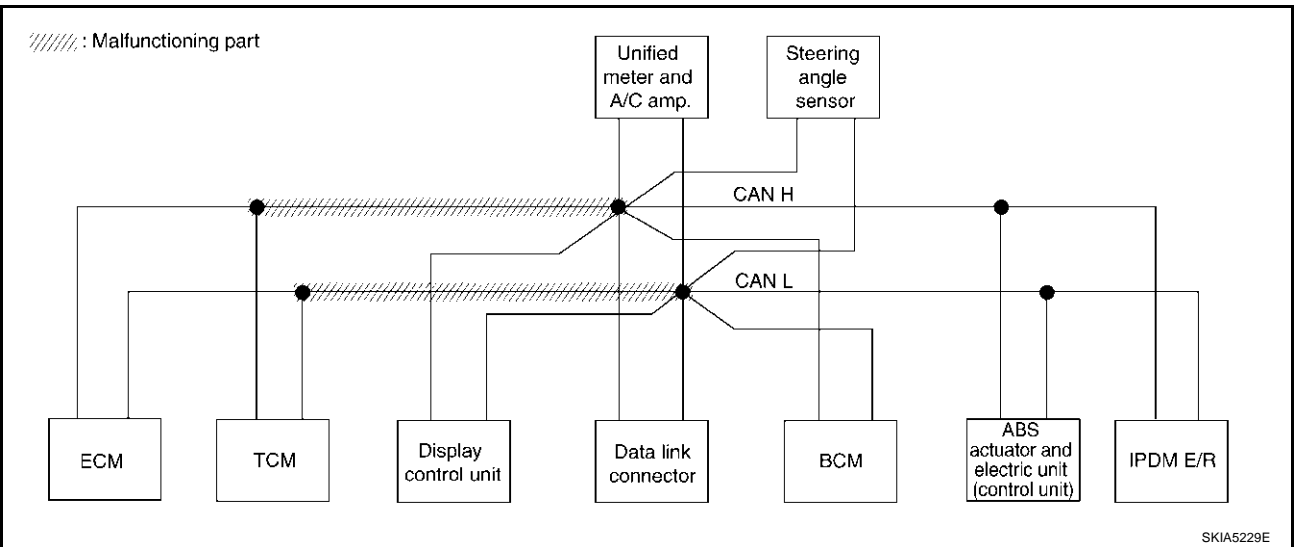
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

### Case 1

Check harness between TCM and data link connector. Refer to [LAN-377, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

PKIB0605E



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# CAN SYSTEM (TYPE 11)

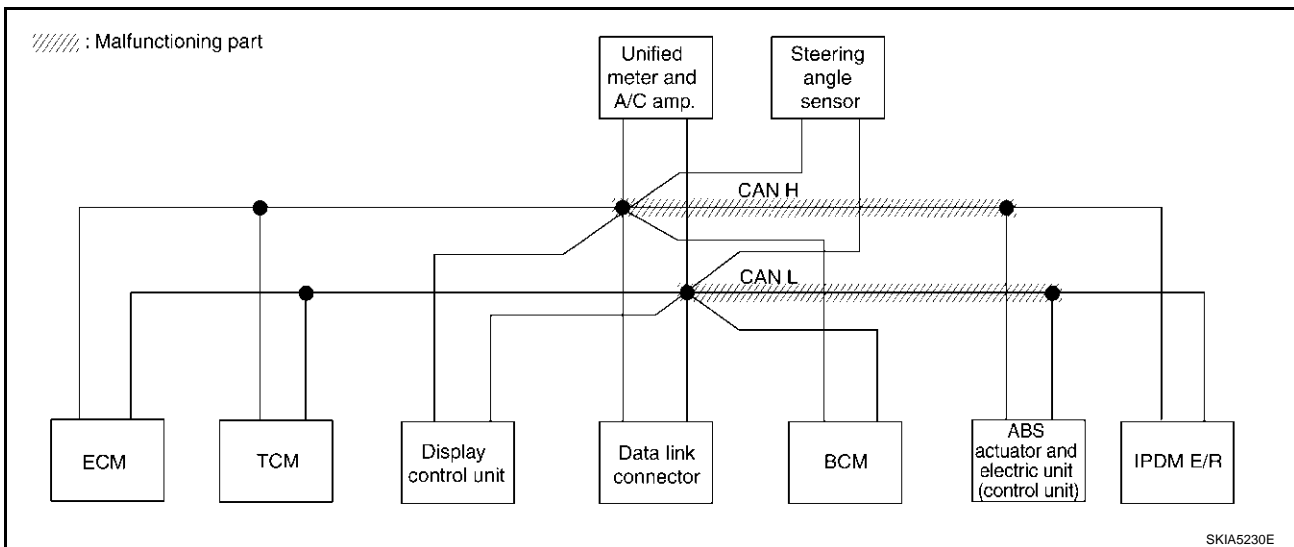
[CAN]

## Case 2

Check harness between data link connector and ABS actuator and electric unit (control unit). Refer to [LAN-377, "Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit \(Control Unit\)"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

PKIB0606E



# CAN SYSTEM (TYPE 11)

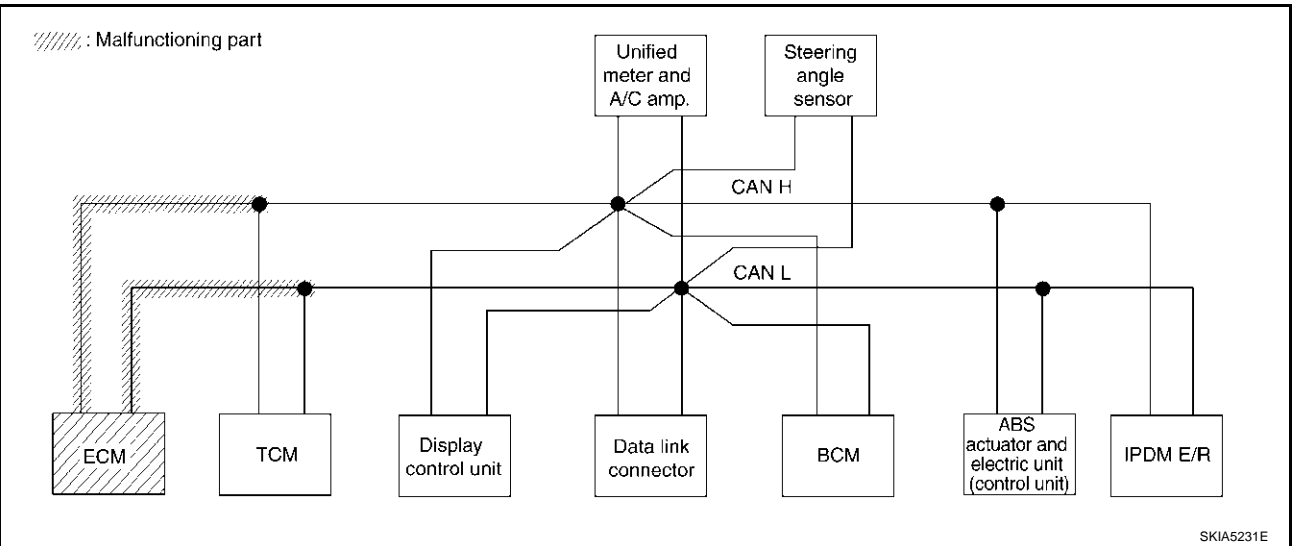
[CAN]

## Case 3

Check ECM circuit. Refer to [LAN-378, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW <del>N</del>	—	UNKW <del>N</del>	—	UNKW <del>N</del>	UNKW <del>N</del>	—	UNKW <del>N</del>	UNKW <del>N</del>
TRANSMISSION	No indication	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	UNKW <del>N</del>	—	UNKW <del>N</del>	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	UNKW <del>N</del>	—	—	UNKW <del>N</del>
METER A/C AMP	No indication	—	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	—	—	UNKW <del>N</del>	—
ABS	—	NG	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	UNKW <del>N</del>	—	—

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# CAN SYSTEM (TYPE 11)

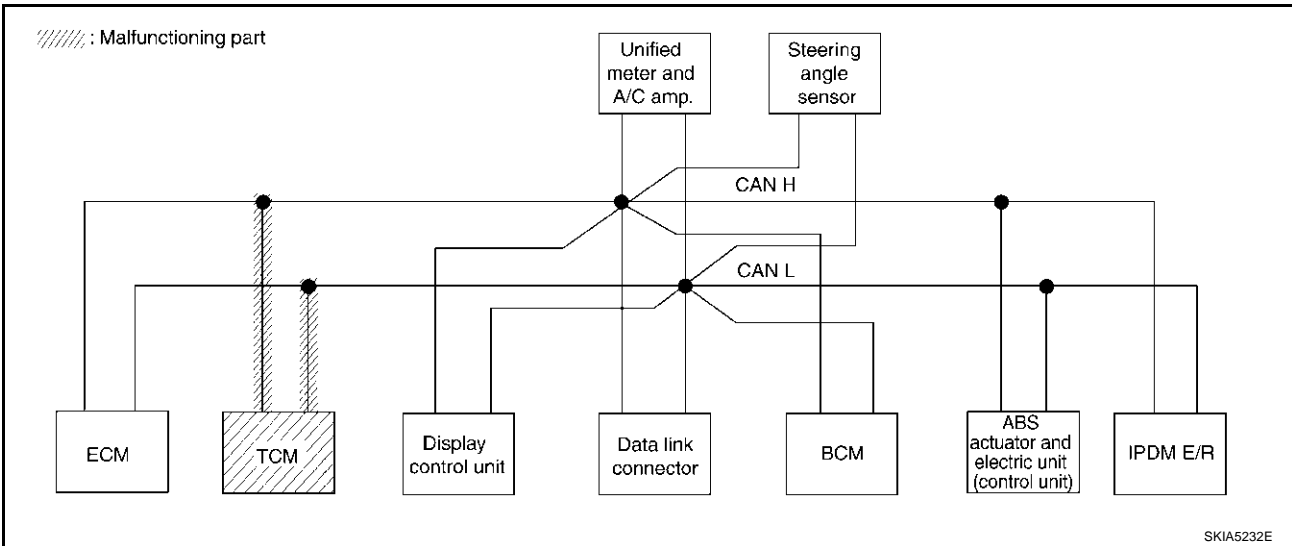
[CAN]

## Case 4

Check TCM circuit. Refer to [LAN-379, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

PKIB0608E



# CAN SYSTEM (TYPE 11)

[CAN]

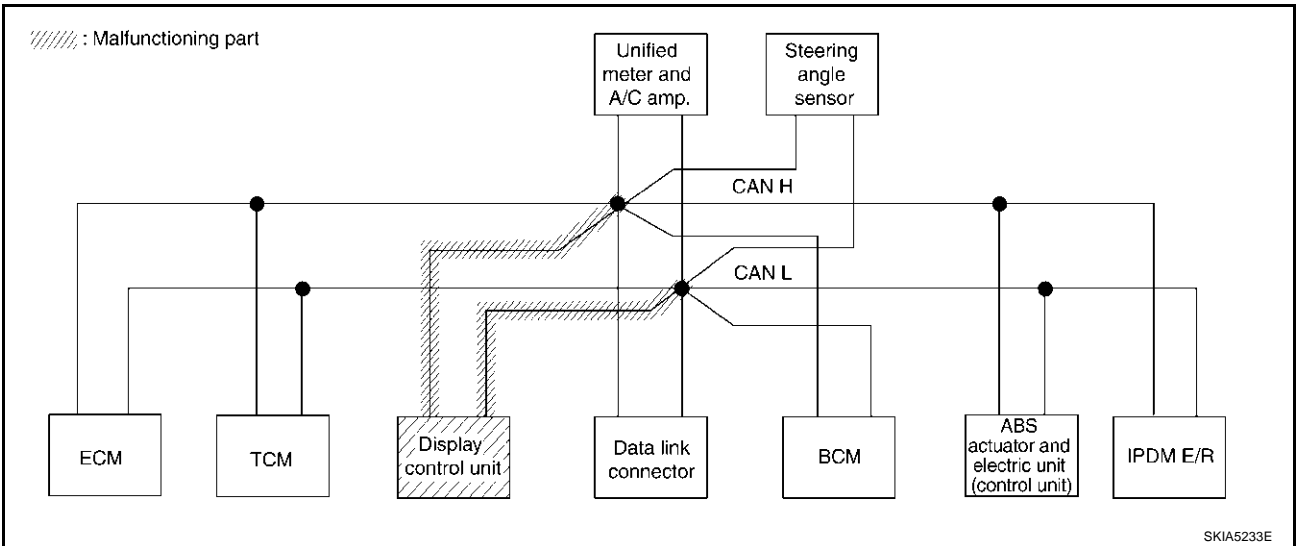
## Case 5

Check display control unit circuit. Refer to [LAN-379, "Display Control Unit Circuit Check"](#) .

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SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CRC 1 ✓	CAN CRC 3 ✓	—	—	CAN CRC 2 ✓	CAN CRC 5 ✓	—	—	CAN CRC 7 ✓
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

PKIB0609E



# CAN SYSTEM (TYPE 11)

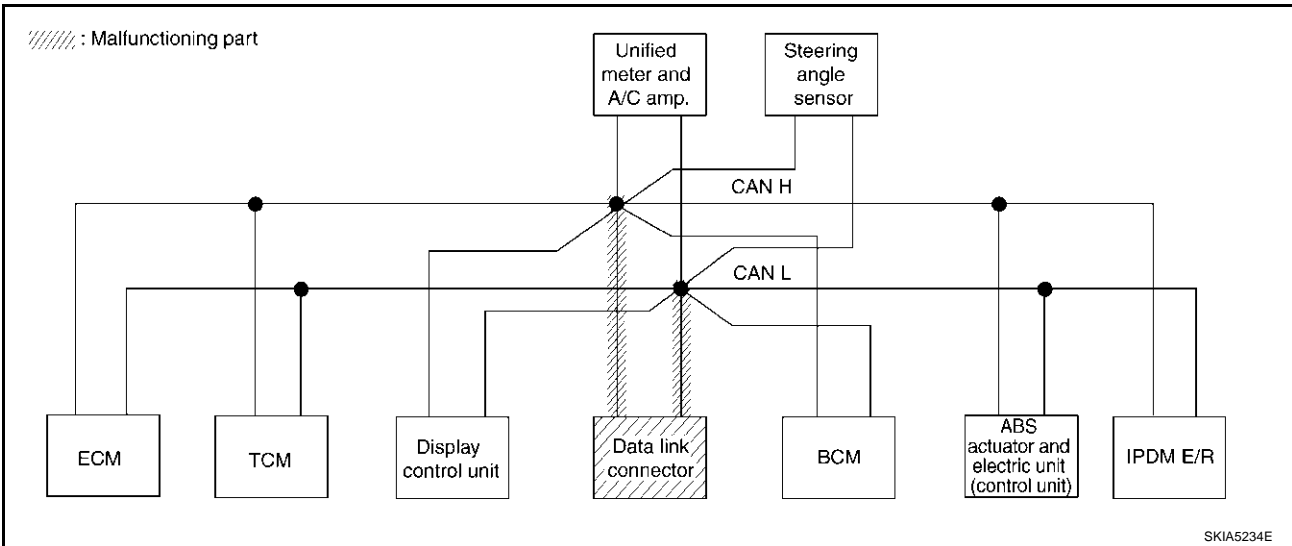
[CAN]

## Case 6

Check data link connector circuit. Refer to [LAN-380, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

PKIB0610E



# CAN SYSTEM (TYPE 11)

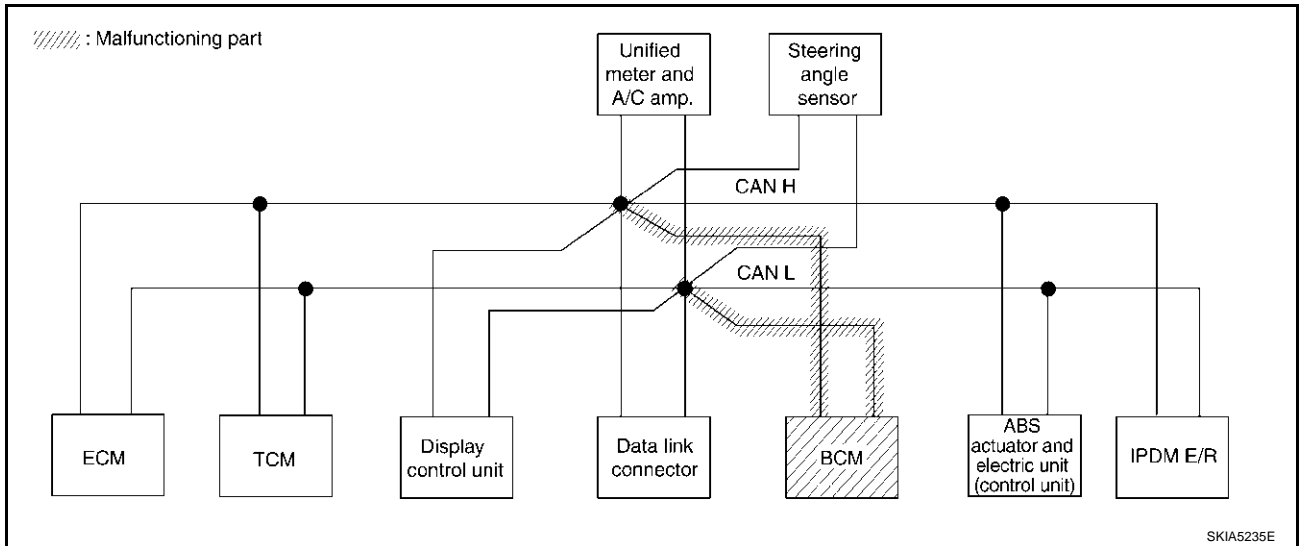
[CAN]

## Case 7

Check BCM circuit. Refer to [LAN-380, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

PKIB0611E



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LAN

# CAN SYSTEM (TYPE 11)

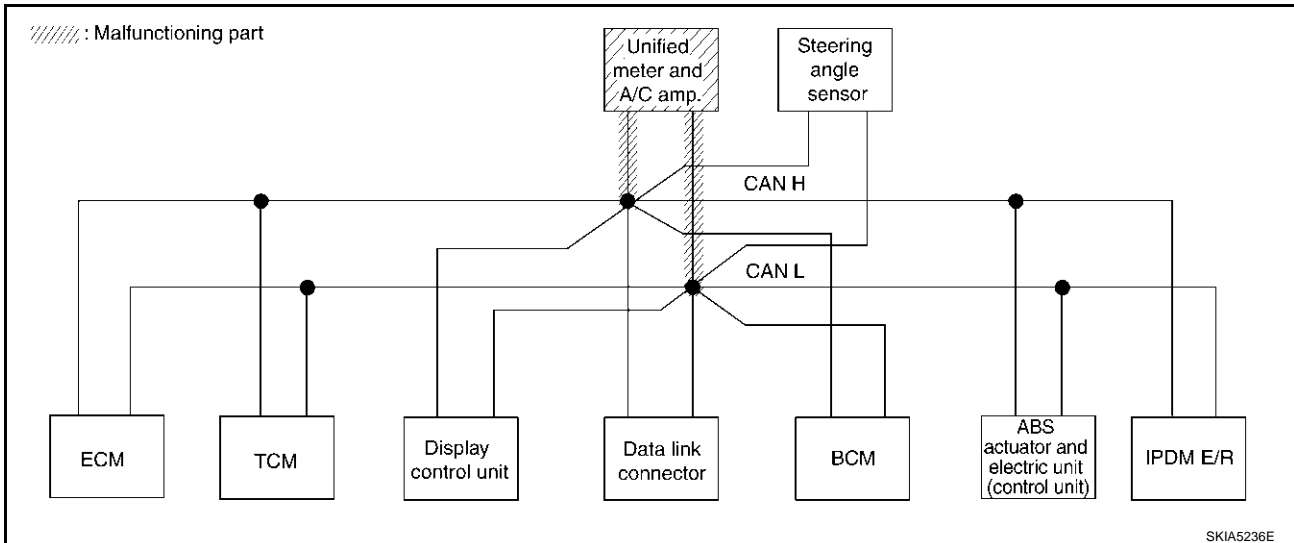
[CAN]

## Case 8

Check unified meter and A/C amp. circuit. Refer to [LAN-381, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

PKIB0612E





# CAN SYSTEM (TYPE 11)

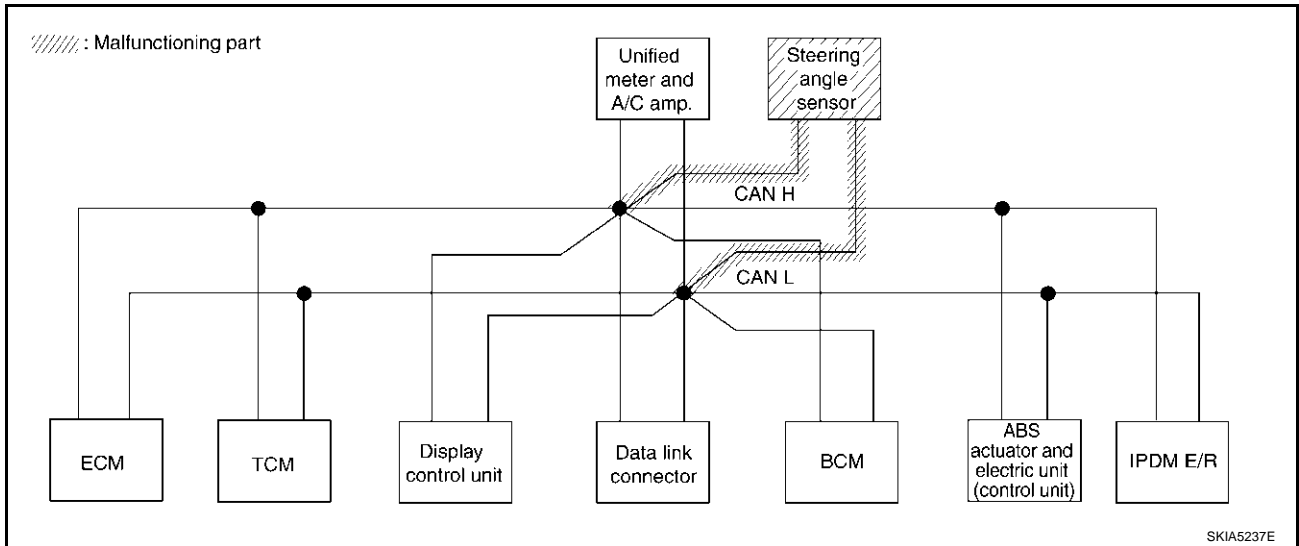
[CAN]

## Case 9

Check steering angle sensor circuit. Refer to [LAN-381, "Steering Angle Sensor Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

PKIB0613E



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# CAN SYSTEM (TYPE 11)

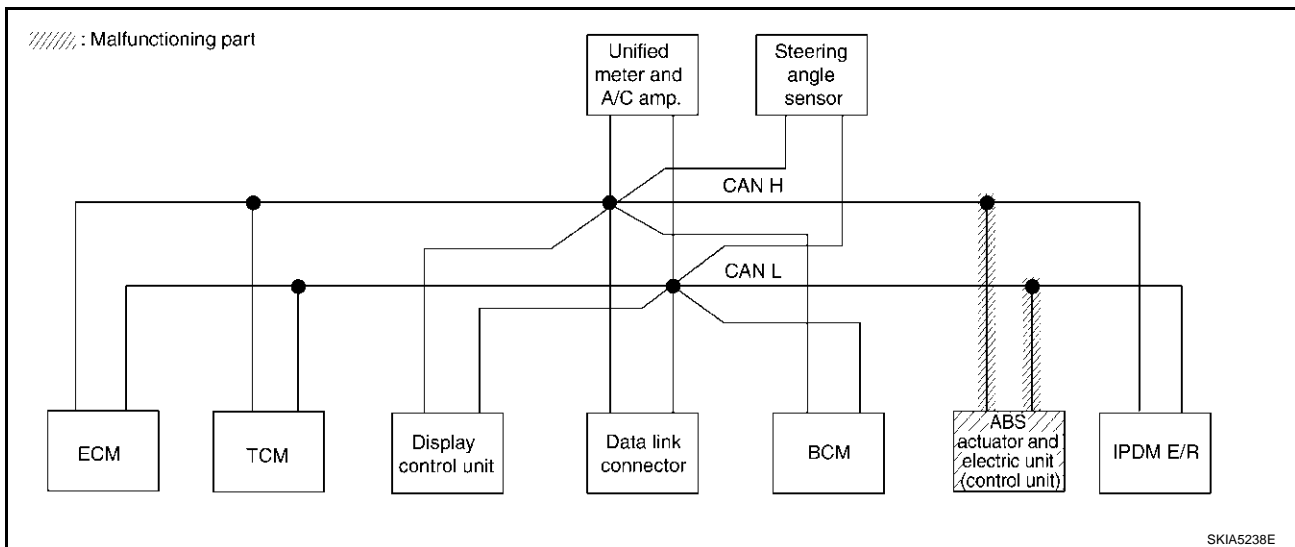
[CAN]

## Case 10

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-382, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

PKIB0614E



# CAN SYSTEM (TYPE 11)

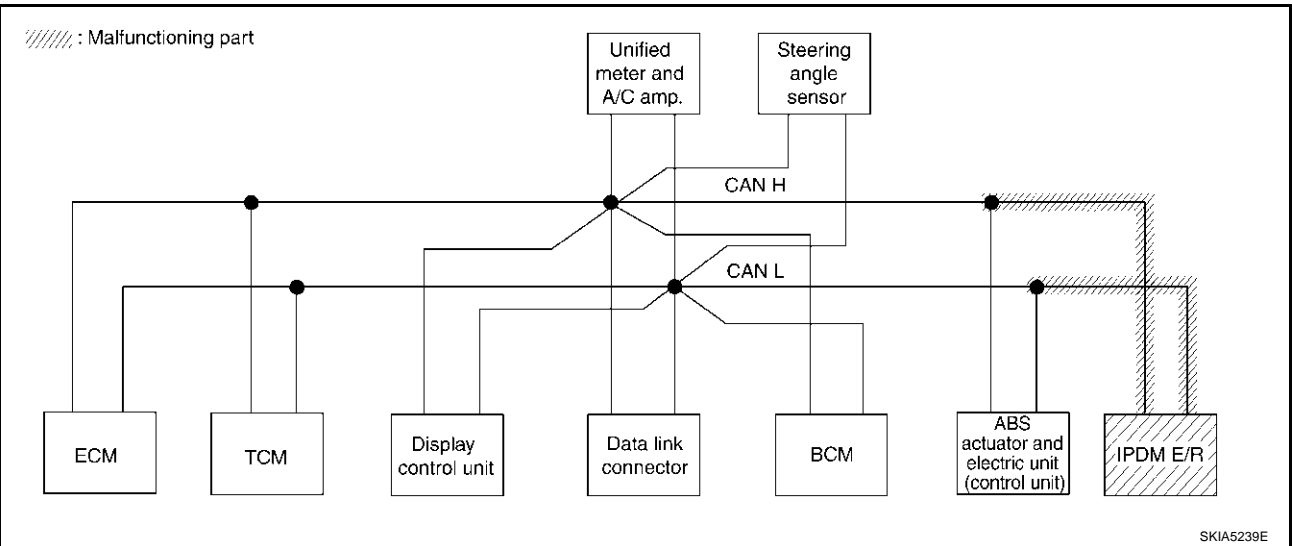
[CAN]

## Case 11

Check IPDM E/R circuit. Refer to [LAN-382, "IPDM E/R Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN ✓
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7 ✓
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN ✓
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

PKIB0615E



## Case 12

Check CAN communication circuit. Refer to [LAN-383, "CAN Communication Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN ✓	—	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	—	UNKWN ✓	UNKWN ✓
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1 ✓	CAN CIRC 3 ✓	—	—	CAN CIRC 2 ✓	CAN CIRC 5 ✓	—	—	CAN CIRC 7 ✓
BCM	—	NG	UNKWN ✓	UNKWN ✓	—	—	—	UNKWN ✓	—	—	UNKWN ✓
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN ✓	UNKWN ✓	UNKWN ✓	—	—	—	UNKWN ✓	—	—

PKIB0616E

# CAN SYSTEM (TYPE 11)

[CAN]

## Case 13

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-386, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								IPDM E/R
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	-	NG	UNKWN	-	UN <del>KN</del> WN	-	UNKWN	UNKWN	-	UN <del>KN</del> WN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	-	UNKWN	-	UNKWN	-	
Display control unit	-	CAN COMM	CAN CIRC 1	CAN CIRC 3	-	-	CAN CIRC 2	CAN CIRC 5	-	-	CAN CIRC 7	
BCM	-	NG	UNKWN	UNKWN	-	-	-	UNKWN	-	-	UNKWN	
METER A/C AMP	No indication	-	UNKWN	UNKWN	UN <del>KN</del> WN	UNKWN	UNKWN	-	-	UN <del>KN</del> WN	-	
ABS	-	NG	UNKWN	UNKWN	UNKWN	-	-	-	UNKWN	-	-	

PKIB0617E

## Case 14

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-386, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								IPDM E/R
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	-	NG	UNKWN	-	UNKWN	-	UNKWN	UNKWN	-	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UN <del>KN</del> WN	-	-	-	UN <del>KN</del> WN	-	UNKWN	-	
Display control unit	-	CAN COMM	CAN CIRC 1	CAN CIRC 3	-	-	CAN CIRC 2	CAN CIRC 5	-	-	CAN CIRC 7	
BCM	-	NG	UNKWN	UNKWN	-	-	-	UNKWN	-	-	UNKWN	
METER A/C AMP	No indication	-	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	-	-	UNKWN	-	
ABS	-	NG	UNKWN	UN <del>KN</del> WN	UNKWN	-	-	-	UN <del>KN</del> WN	-	-	

PKIB0618E

## Circuit Check Between TCM and Data Link Connector

### 1. CHECK HARNESS FOR OPEN CIRCUIT

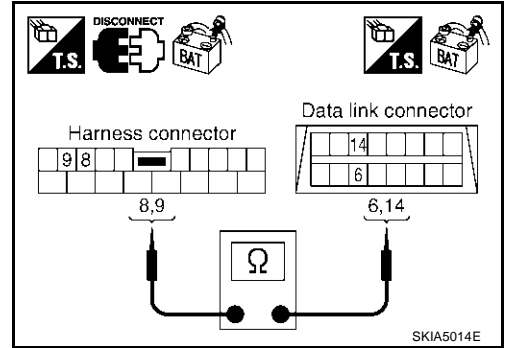
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

**8 (L) - 6 (L) : Continuity should exist.**

**9 (Y) - 14 (Y) : Continuity should exist.**

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-361, "Work Flow"](#).
- NG >> Repair harness.



## Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit)

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector M9
  - Harness connector B2
  - Harness connector B4
  - Harness connector E105

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

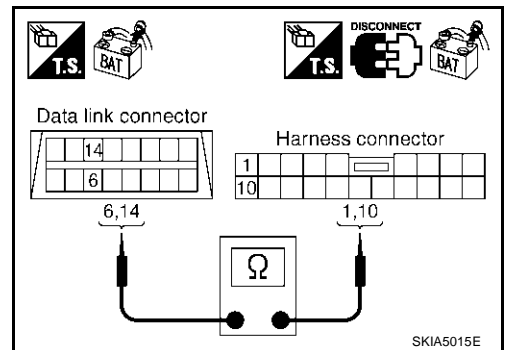
1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

**6 (L) - 1 (L) : Continuity should exist.**

**14 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



## 3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

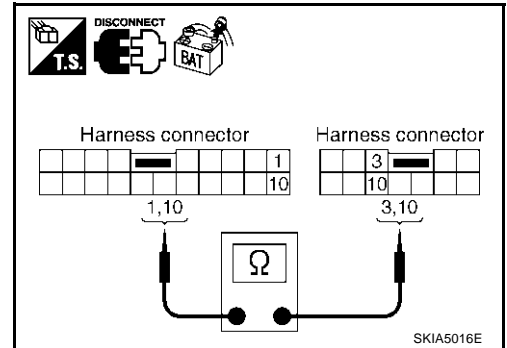
**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

OK >> GO TO 4.

NG >> Repair harness.



## 4. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

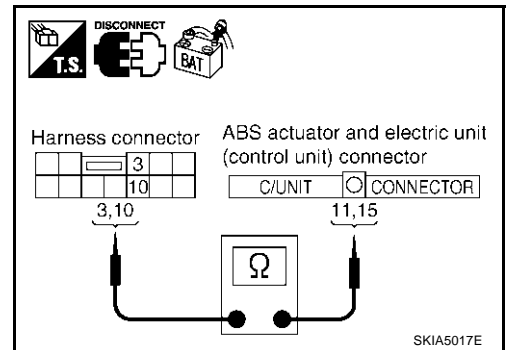
**3 (L) - 11 (L) : Continuity should exist.**

**10 (Y) - 15 (Y) : Continuity should exist.**

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-361, "Work Flow"](#).

NG >> Repair harness.



## ECM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

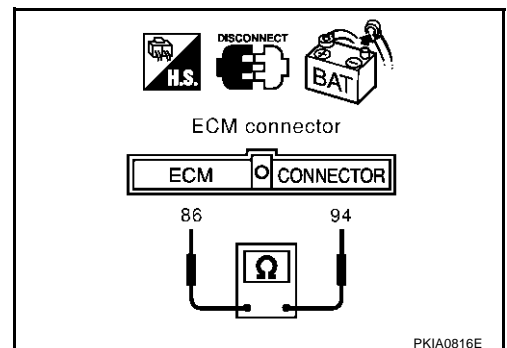
1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

**94 (L) - 86 (Y) : Approx. 108 - 132Ω**

OK or NG

OK >> Replace ECM.

NG >> Repair harness between ECM and TCM.



**TCM Circuit Check**

AKS006UF

**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
  - TCM connector
  - Harness connector F102
  - Harness connector M82

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

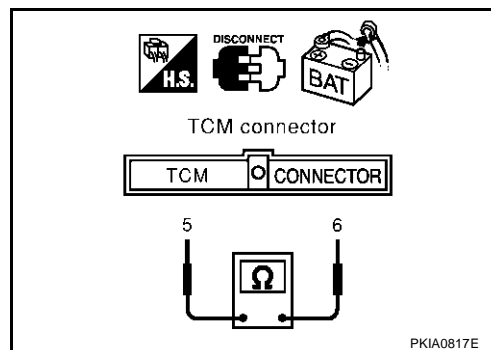
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace TCM.  
 NG >> Repair harness between TCM and ECM.

**Display Control Unit Circuit Check**

AKS006UG

**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display control unit for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

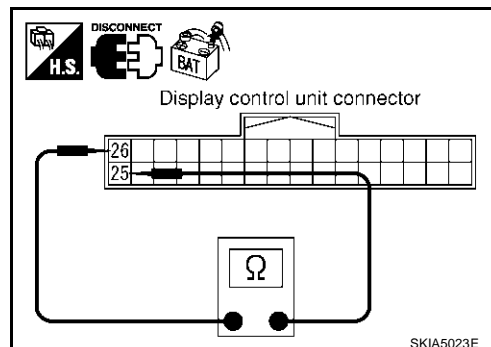
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect display control unit connector.
2. Check resistance between display control unit harness connector M43 terminals 25 (L) and 26 (Y).

**25 (L) - 26 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace display control unit.  
 NG >> Repair harness between display control unit and data link connector.



**Data Link Connector Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

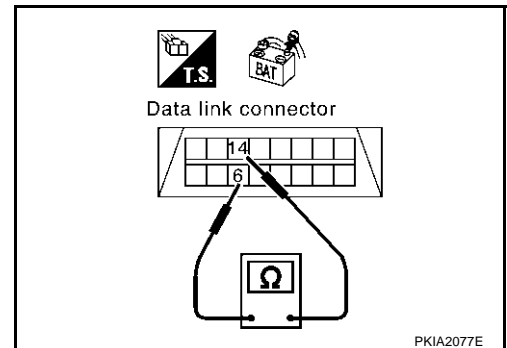
**2. CHECK HARNESS FOR OPEN CIRCUIT**

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Diagnose again. Refer to [LAN-361, "Work Flow"](#) .  
 NG >> Repair harness between data link connector and BCM.



AKS006UI

**BCM Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

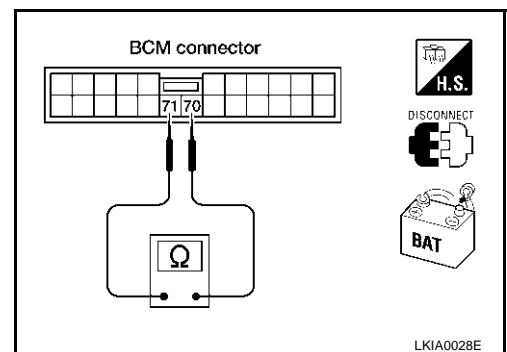
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M37 terminals 70 (L) and 71 (Y).

**70 (L) - 71 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace BCM. Refer to [BCS-36, "Removal and Installation of BCM"](#) .  
 NG >> Repair harness between BCM and data link connector.





**Unified Meter and A/C Amp. Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

**OK or NG**

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

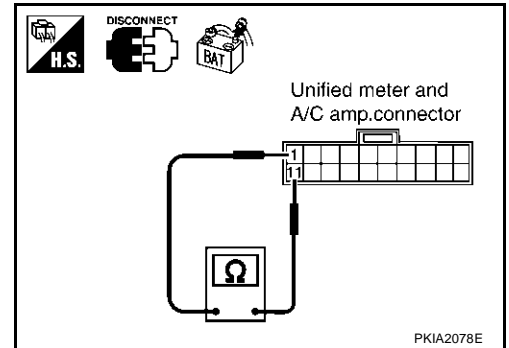
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

**1 (L) - 11 (Y) : Approx. 54 - 66Ω**

**OK or NG**

- OK >> Replace unified meter and A/C amp.  
 NG >> Repair harness between unified meter and A/C amp. and data link connector.

**Steering Angle Sensor Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of steering angle sensor for damage, bend and loose connection (sensor side and harness side).

**OK or NG**

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

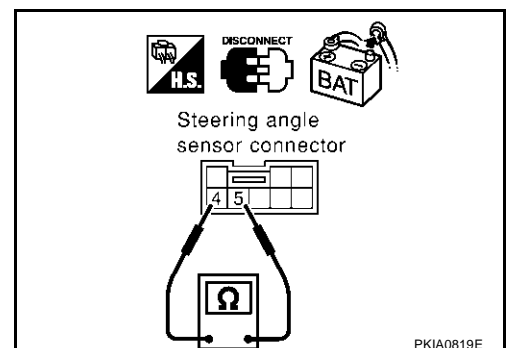
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M33 terminals 4 (L) and 5 (Y).

**4 (L) - 5 (Y) : Approx. 54 - 66Ω**

**OK or NG**

- OK >> Replace steering angle sensor.  
 NG >> Repair harness between steering angle sensor and data link connector.



## ABS Actuator and Electric Unit (Control Unit) Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.  
NG >> Repair terminal or connector.

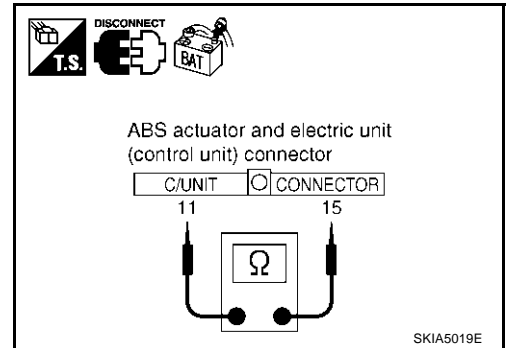
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

**11 (L) - 15 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).  
NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



AKS006UM

## IPDM E/R Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
NG >> Repair terminal or connector.

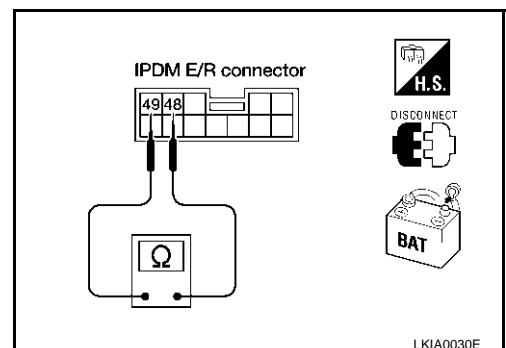
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y) : Approx. 108 - 132Ω**

OK or NG

- OK >> Replace IPDM E/R.  
NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



## CAN Communication Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, meter side, sensor side and harness side).
  - ECM
  - TCM
  - Display control unit
  - BCM
  - Unified meter and A/C amp.
  - Steering angle sensor
  - ABS actuator and electric unit (control unit)
  - IPDM E/R
  - Between ECM and IPDM E/R
  - Between ECM and TCM

#### OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
  - ECM connector
  - Harness connector M82
  - Display control unit connector
  - BCM connector
  - Unified meter and A/C amp. connector
  - Steering angle sensor connector
  - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

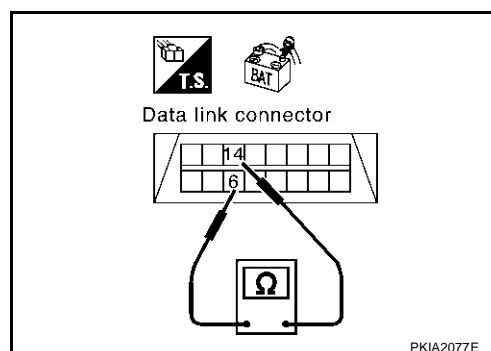
**6 (L) - 14 (Y) : Continuity should not exist.**

#### OK or NG

OK >> GO TO 3.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M9.



### 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

**6 (L) - Ground : Continuity should not exist.**

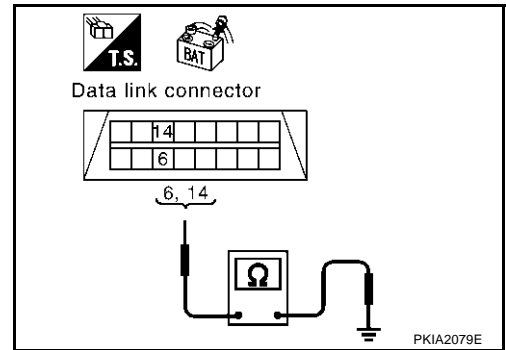
**14 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M9.



### 4. CHECK HARNESS FOR SHORT CIRCUIT

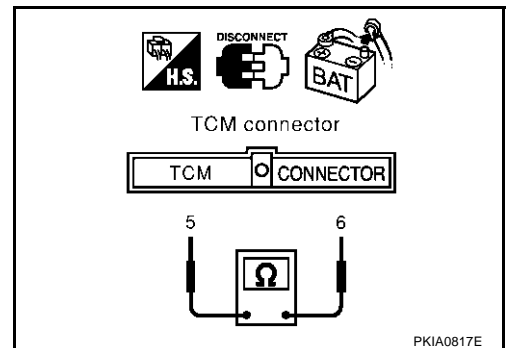
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 5.

NG >> Repair harness between TCM and harness connector F102.



### 5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

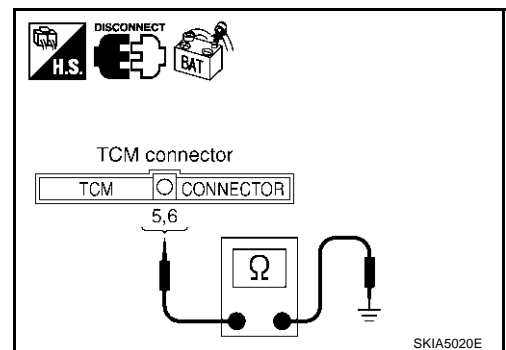
**5 (L) - Ground : Continuity should not exist.**

**6 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 6.

NG >> Repair harness between TCM and harness connector F102.



## 6. CHECK HARNESS FOR SHORT CIRCUIT

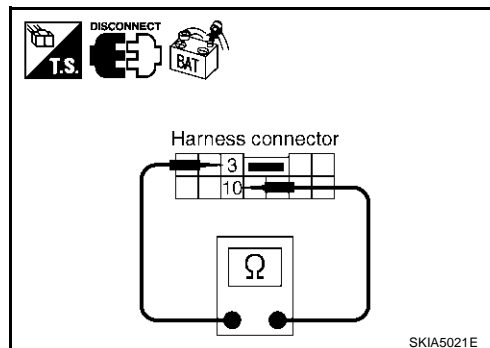
1. Disconnect harness connector B4.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

**3 (L) - 10 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 7.

NG >> Repair harness between harness connector B4 and harness connector B2.



## 7. CHECK HARNESS FOR SHORT CIRCUIT

- Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

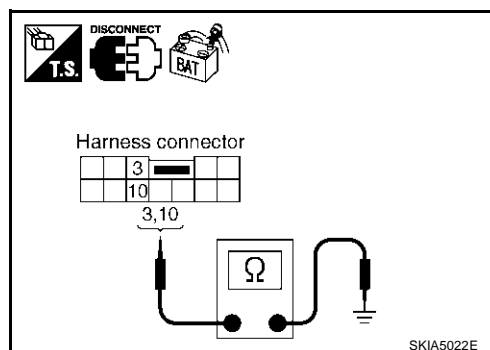
**3 (L) - Ground : Continuity should not exist.**

**10 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 8.

NG >> Repair harness between harness connector B4 and harness connector B2.



## 8. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

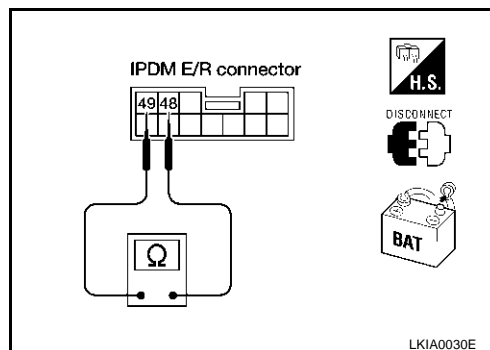
**48 (L) - 49 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 9.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

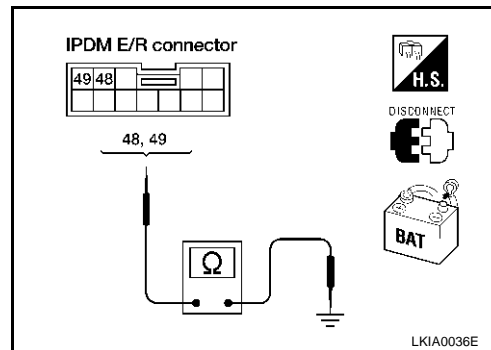
- 48 (L) - Ground : Continuity should not exist.**
- 49 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 10.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 10. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-386, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-361, "Work Flow"](#).

NG >> Replace ECM and/or IPDM E/R.

### IPDM E/R Ignition Relay Circuit Check

AKS006UO

Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-45, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START""](#).

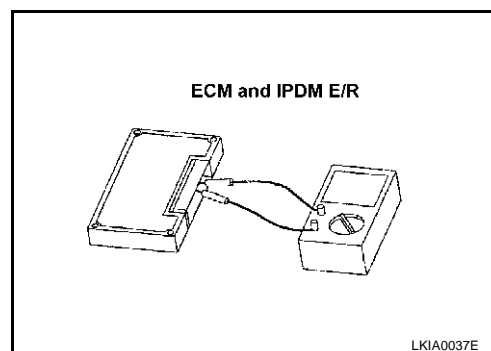
### Component Inspection

#### ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

AKS006UP

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



## CAN SYSTEM (TYPE 12)

PFP:23710

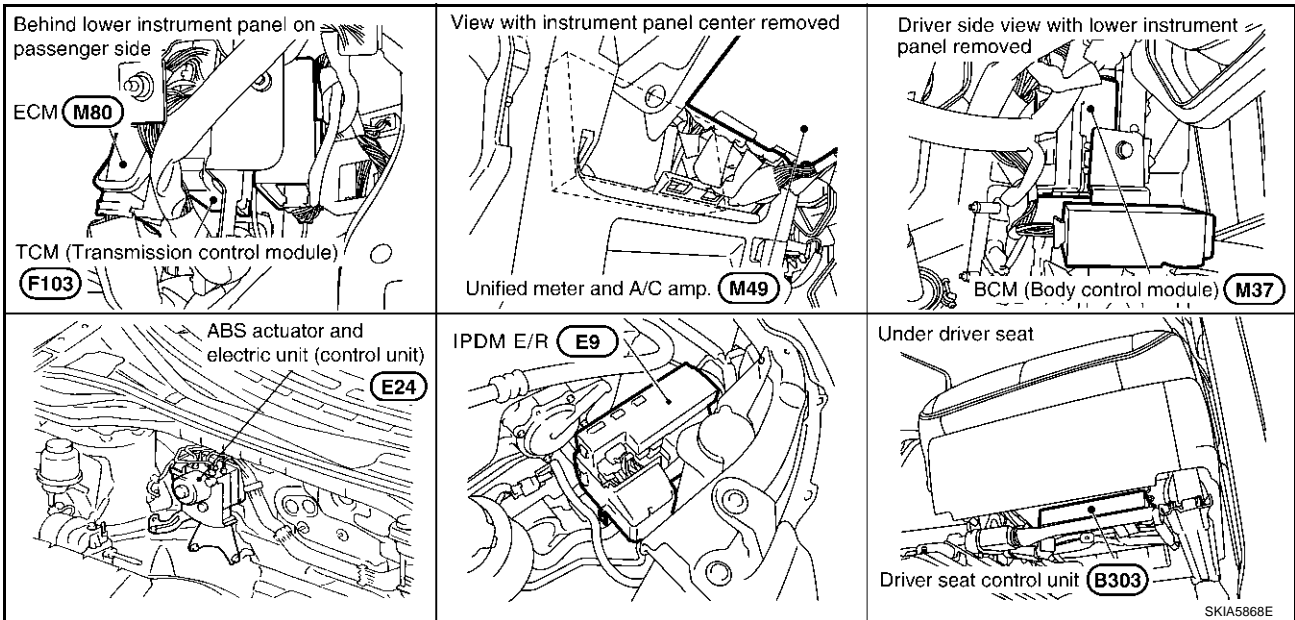
### System Description

AKS006UQ

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

### Component Parts and Harness Connector Location

AKS006UR



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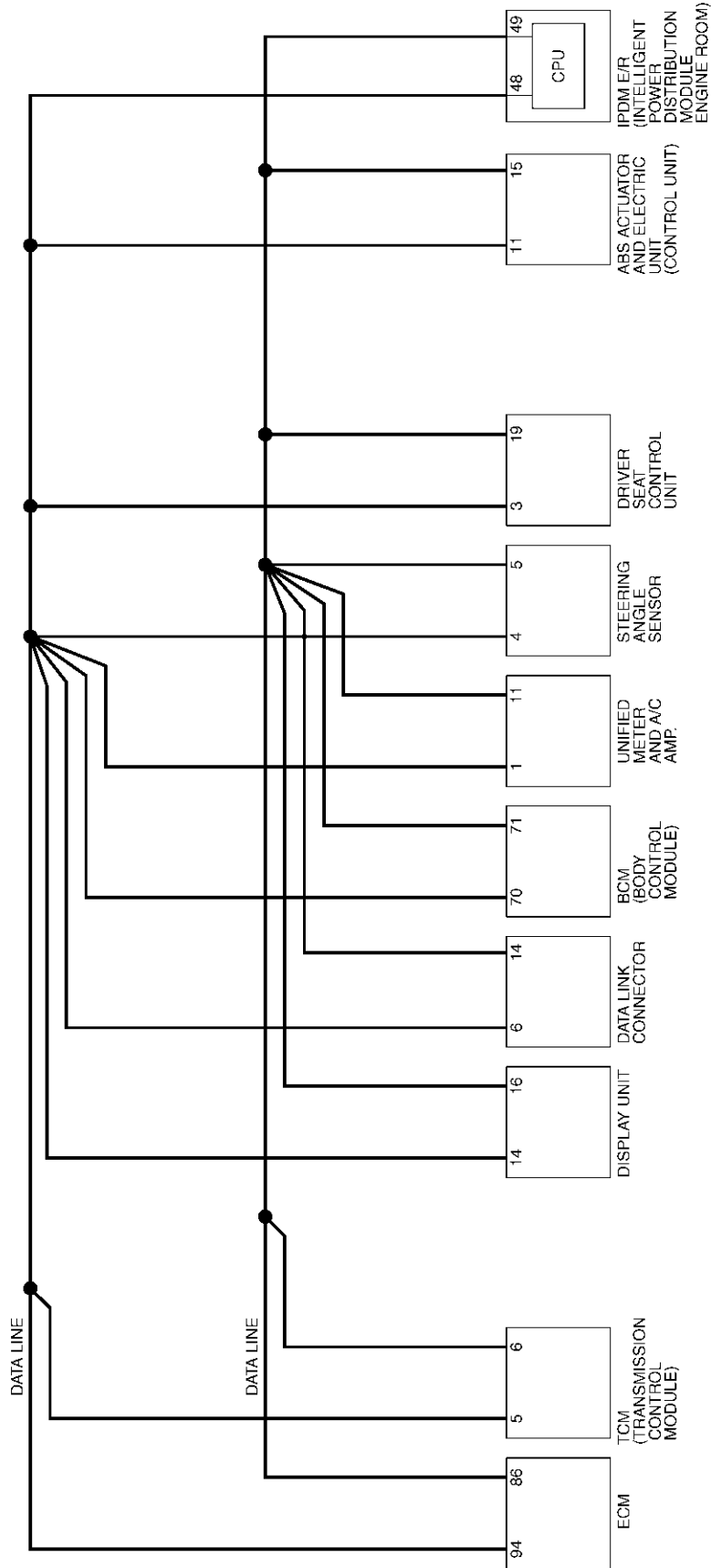
LAN

# CAN SYSTEM (TYPE 12)

[CAN]

## Schematic

AKS006US



TKWA0967E



# CAN SYSTEM (TYPE 12)

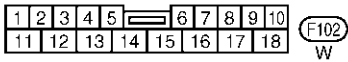
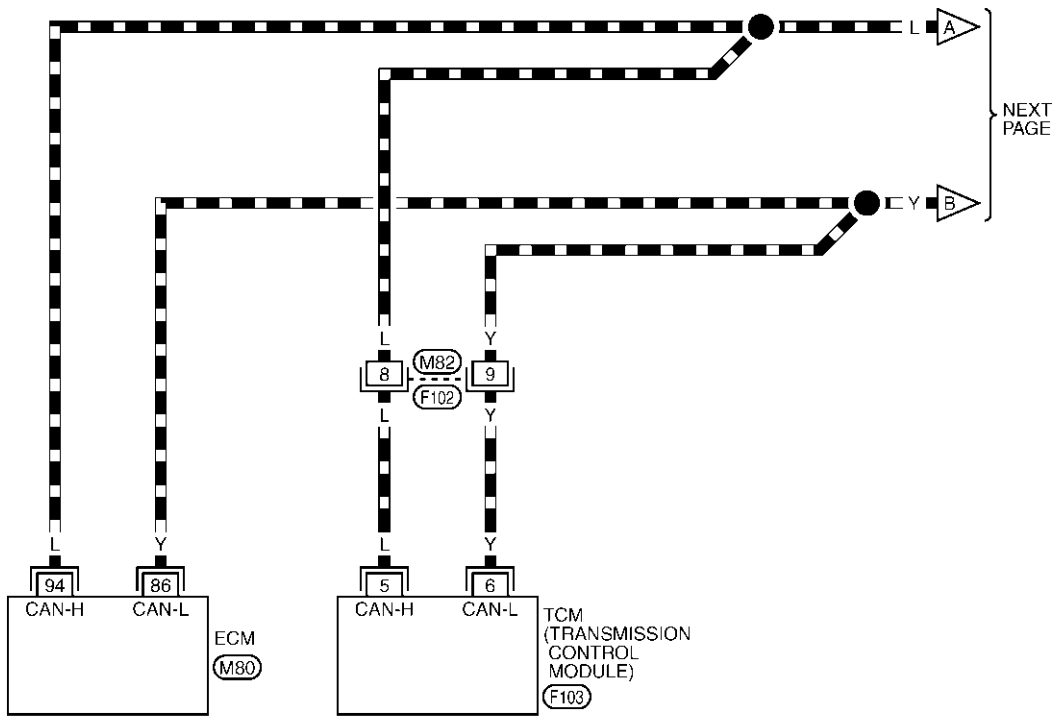
[CAN]

## Wiring Diagram - CAN -

AKS006UT

LAN-CAN-34

▬ : DATA LINE



REFER TO THE FOLLOWING.  
(M80), (F103) -ELECTRICAL  
UNITS

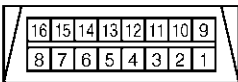
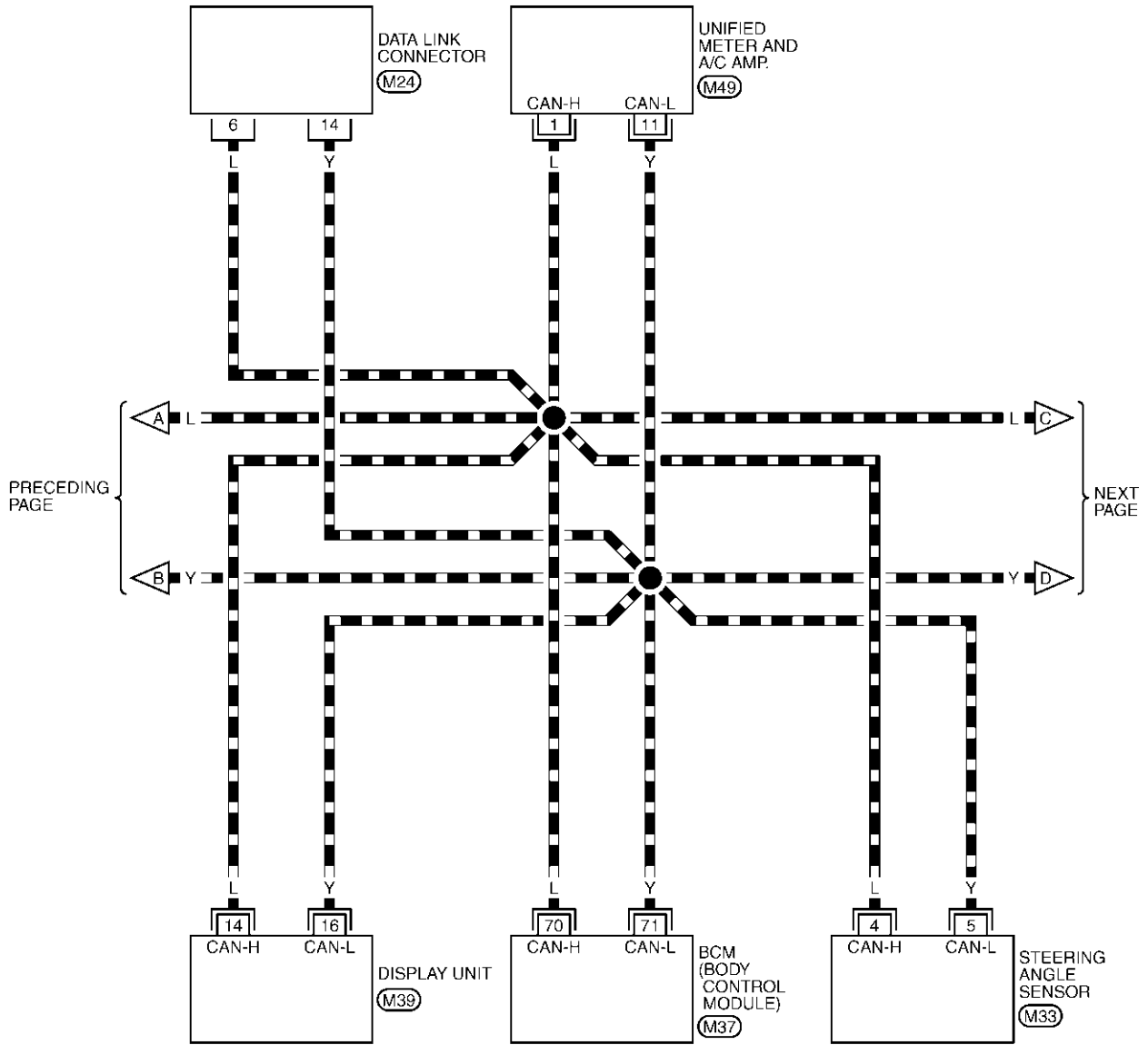
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# CAN SYSTEM (TYPE 12)

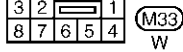
[CAN]

## LAN-CAN-35

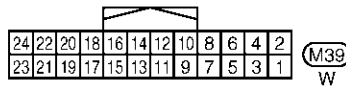
▬ : DATA LINE



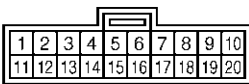
(M24)  
W



(M33)  
W



(M39)  
W



(M49)  
GR



REFER TO THE FOLLOWING.

(M37) -ELECTRICAL UNITS

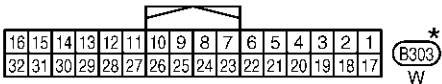
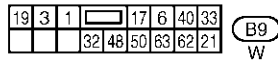
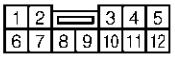
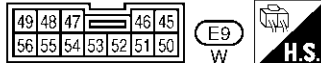
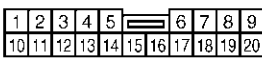
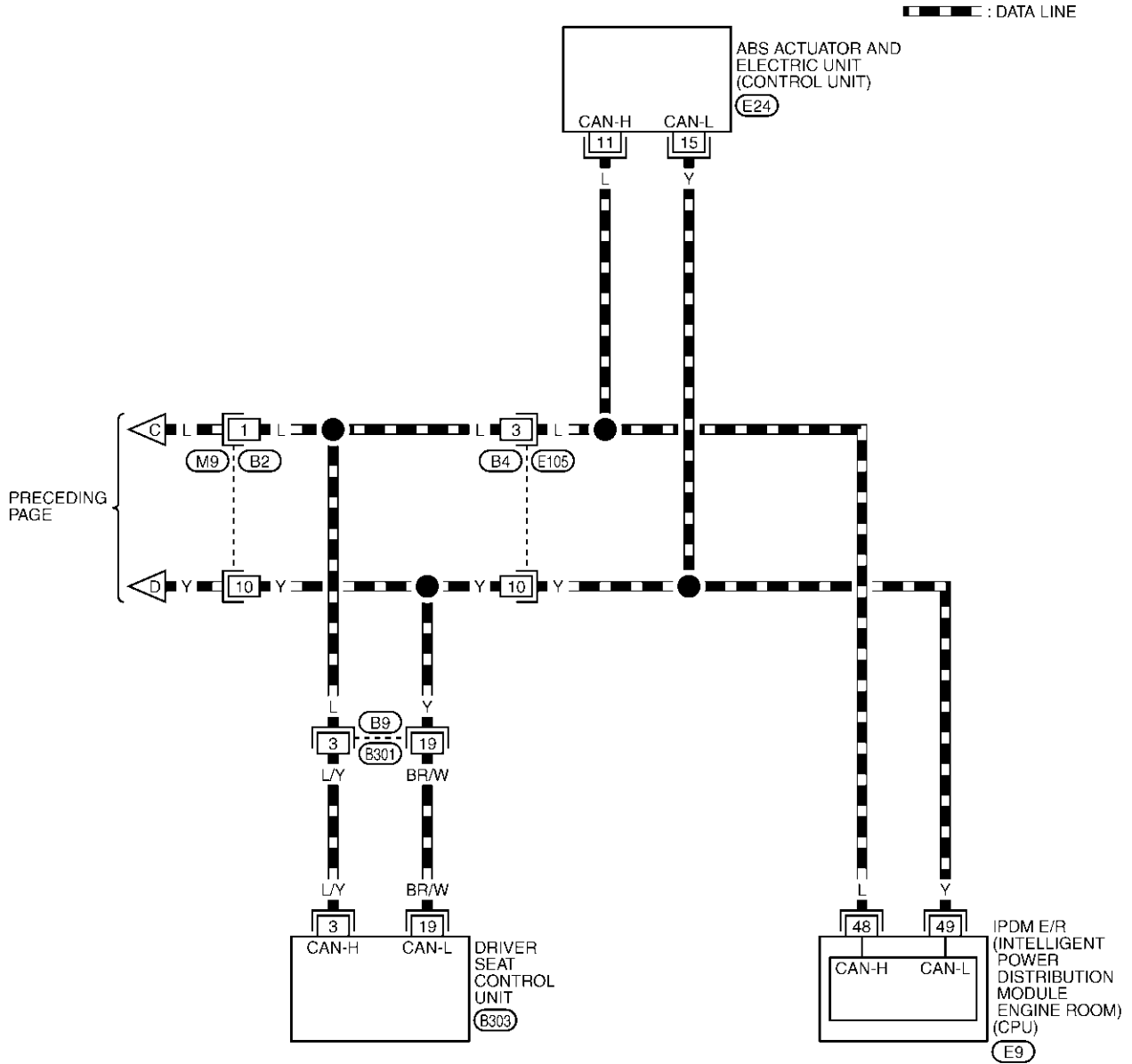
TKWA0969E

# CAN SYSTEM (TYPE 12)

[CAN]

LAN-CAN-36

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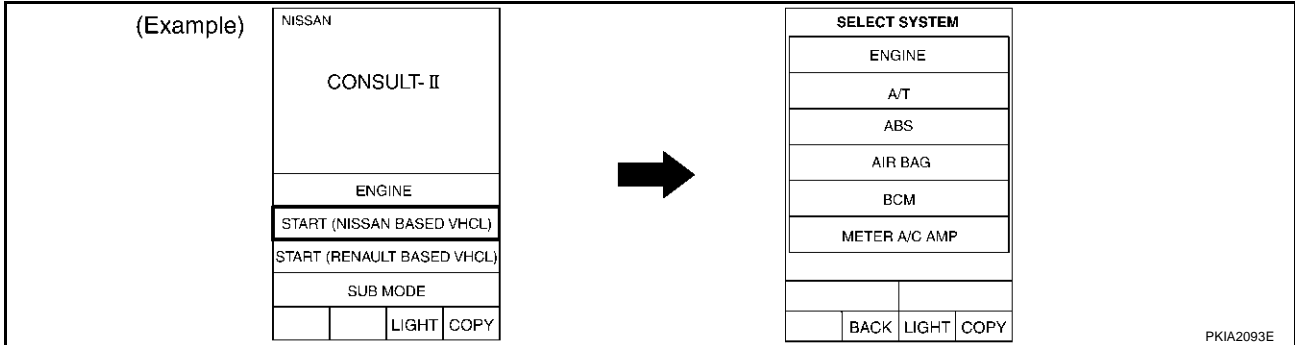
\*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

REFER TO THE FOLLOWING.  
E24 -ELECTRICAL UNITS

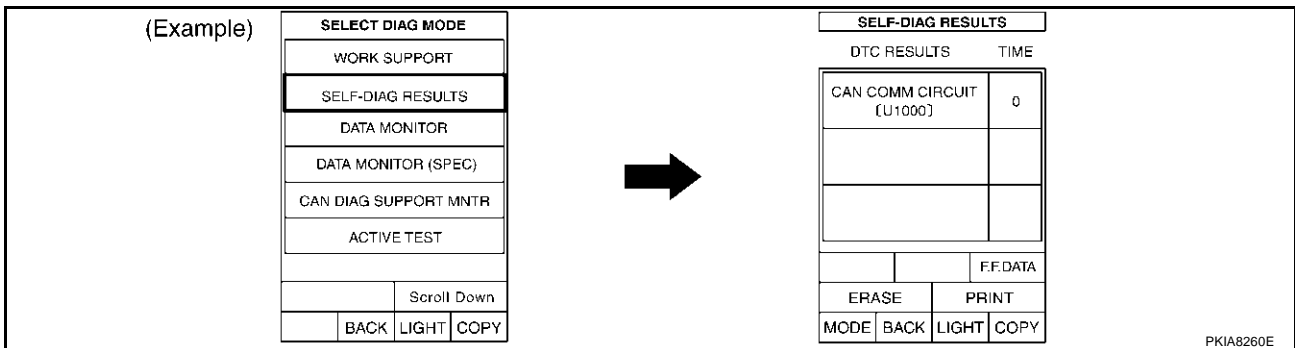
TKWA0970E

## Work Flow

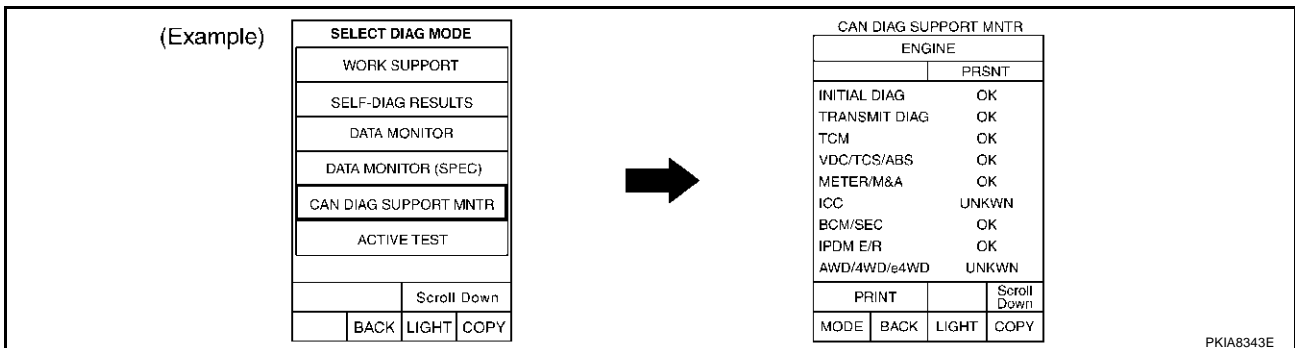
- When there are no indications of "TRANSMISSION", "METER A/C AMP" or "AUTO DRIVE POS." on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP", "AUTO DRIVE POS." and "ABS" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP", "AUTO DRIVE POS." and "ABS" displayed on CONSULT-II.



- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-394, "CHECK SHEET"](#) .
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "v" onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-394, "CHECK SHEET"](#) .

**NOTE:**

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual.  
So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the integrated display system. Refer to [AV-110, "CAN Communication Line Check"](#) .
- Attach the CAN DIAG MONITOR check sheet onto the check sheet. Refer to [LAN-394, "CHECK SHEET"](#) .

## CAN SYSTEM (TYPE 12)

[CAN]

8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG MONITOR check sheet. Refer to [LAN-394, "CHECK SHEET"](#) .

**NOTE:**

If "NG" is displayed on "CAN COMM" as "CAN DIAG MNTR" for the diagnosed control unit, replace the control unit. Refer to [AV-110, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-396, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

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# CAN SYSTEM (TYPE 12)

[CAN]

## CHECK SHEET

### NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

Attach copy of  
display unit  
CAN DIAG MONITOR check sheet

# CAN SYSTEM (TYPE 12)

[CAN]

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Attach copy of  
ENGINE  
SELF-DIAG RESULTS

Attach copy of  
TRANSMISSION  
SELF-DIAG RESULTS

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
METER A/C AMP  
SELF-DIAG RESULTS

Attach copy of  
AUTO DRIVE POS.  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

Attach copy of  
ENGINE  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
TRANSMISSION  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
BCM  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
METER A/C AMP  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
AUTO DRIVE POS.  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ABS  
CAN DIAG SUPPORT  
MNTR

PKIB0467E

## CHECK SHEET RESULTS (EXAMPLE)

### NOTE:

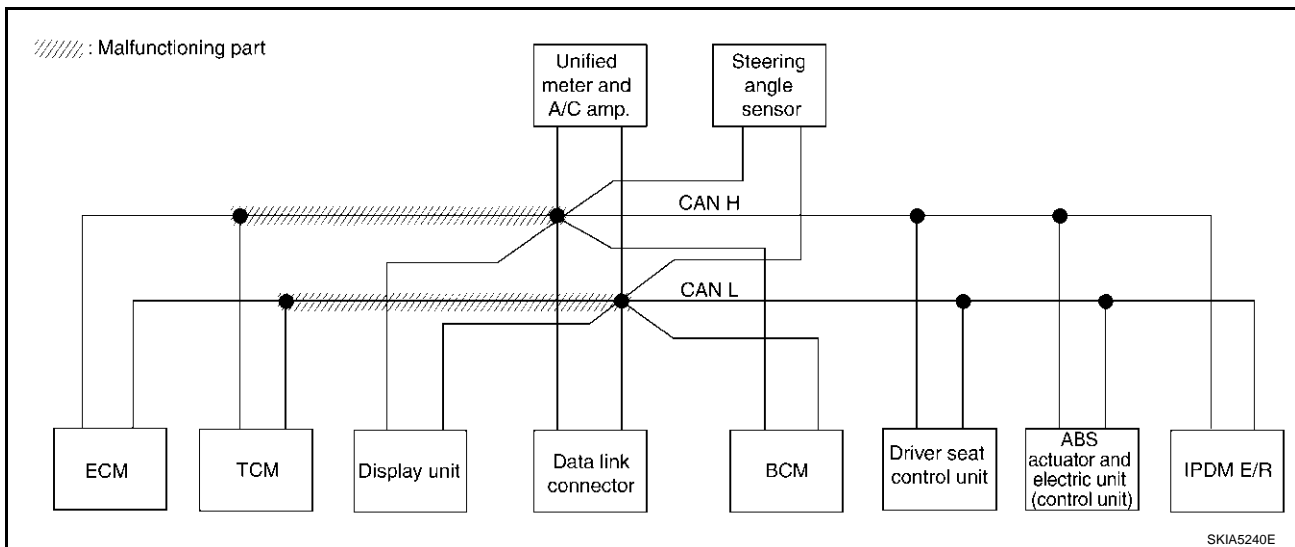
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

### Case 1

Check harness between TCM and data link connector. Refer to [LAN-410, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—	

PKIB0620E





# CAN SYSTEM (TYPE 12)

[CAN]

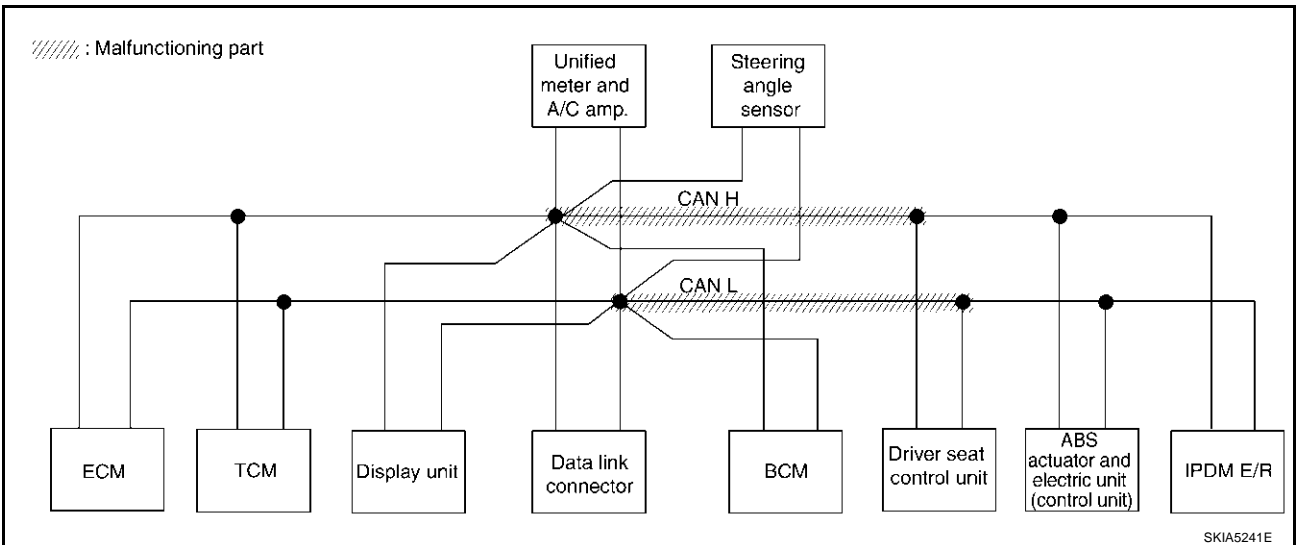
## Case 2

Check harness between data link connector and driver seat control unit. Refer to [LAN-410, "Circuit Check Between Data Link Connector and Driver Seat Control Unit"](#) .

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SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN ✓	UNKWN ✓
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN ✓	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7 ✓
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN ✓
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN ✓	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN ✓	—	—	—	UNKWN ✓	—	—

PKIB0621E



# CAN SYSTEM (TYPE 12)

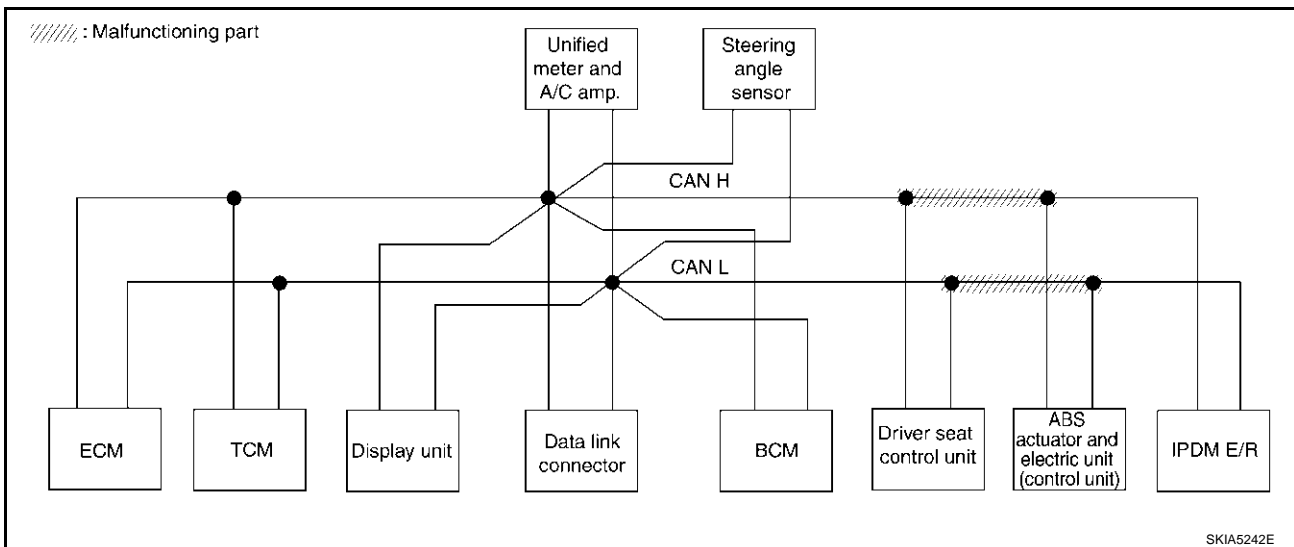
[CAN]

## Case 3

Check harness between driver seat control unit and ABS actuator and electric unit (control unit). Refer to LAN-411, "Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit)".

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

PKIB0622E



# CAN SYSTEM (TYPE 12)

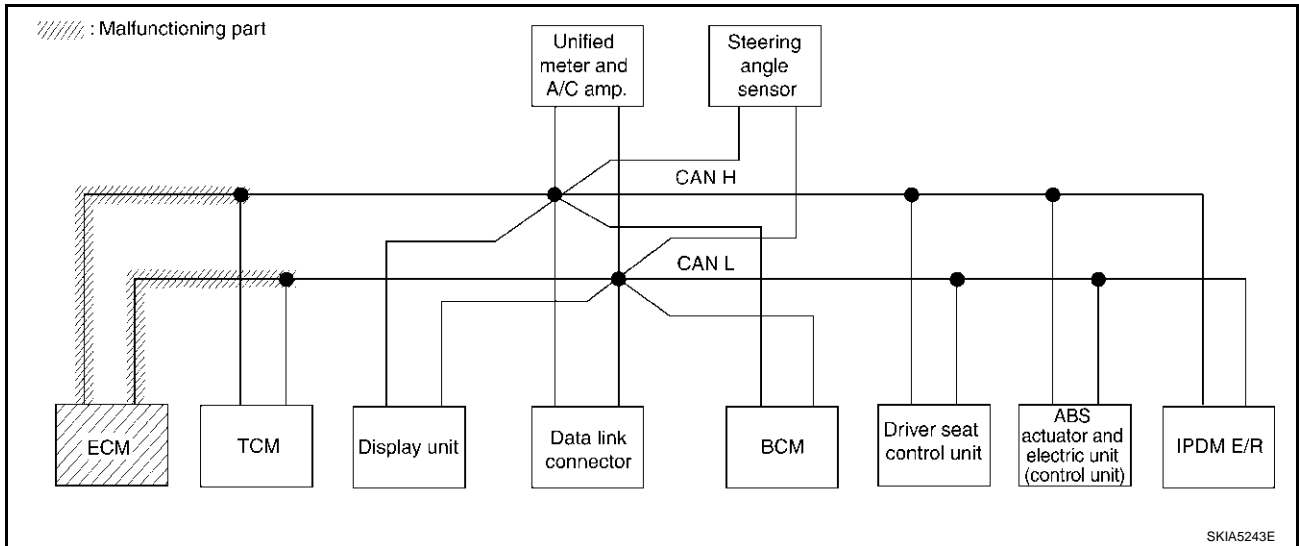
[CAN]

## Case 4

Check ECM circuit. Refer to [LAN-412, "ECM Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

PKIB0623E



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# CAN SYSTEM (TYPE 12)

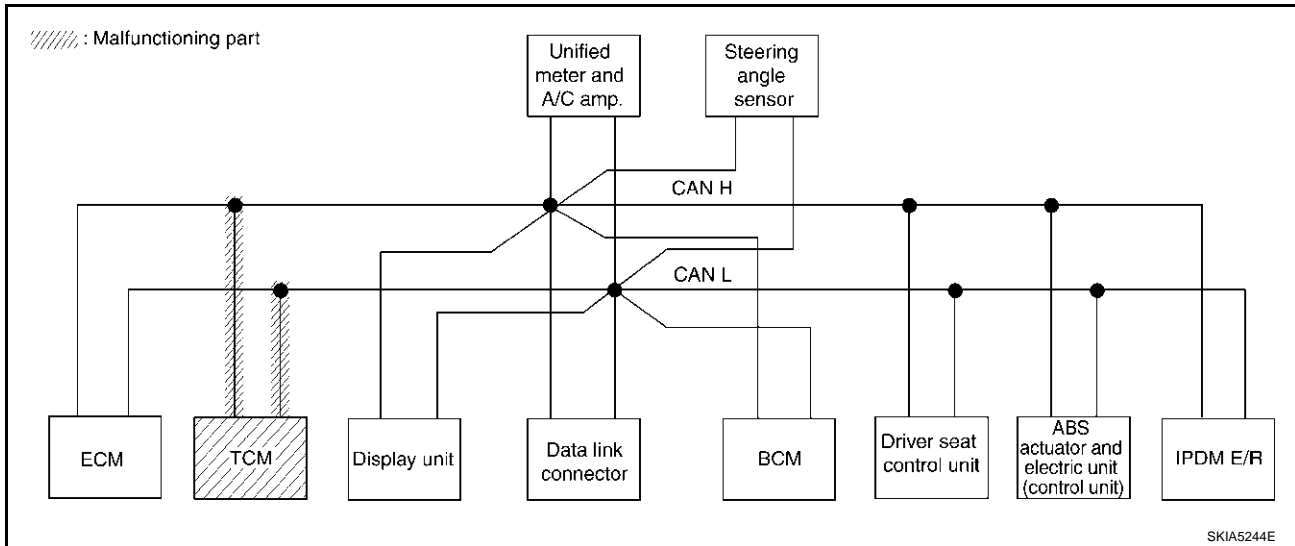
[CAN]

## Case 5

Check TCM circuit. Refer to [LAN-412, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

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# CAN SYSTEM (TYPE 12)

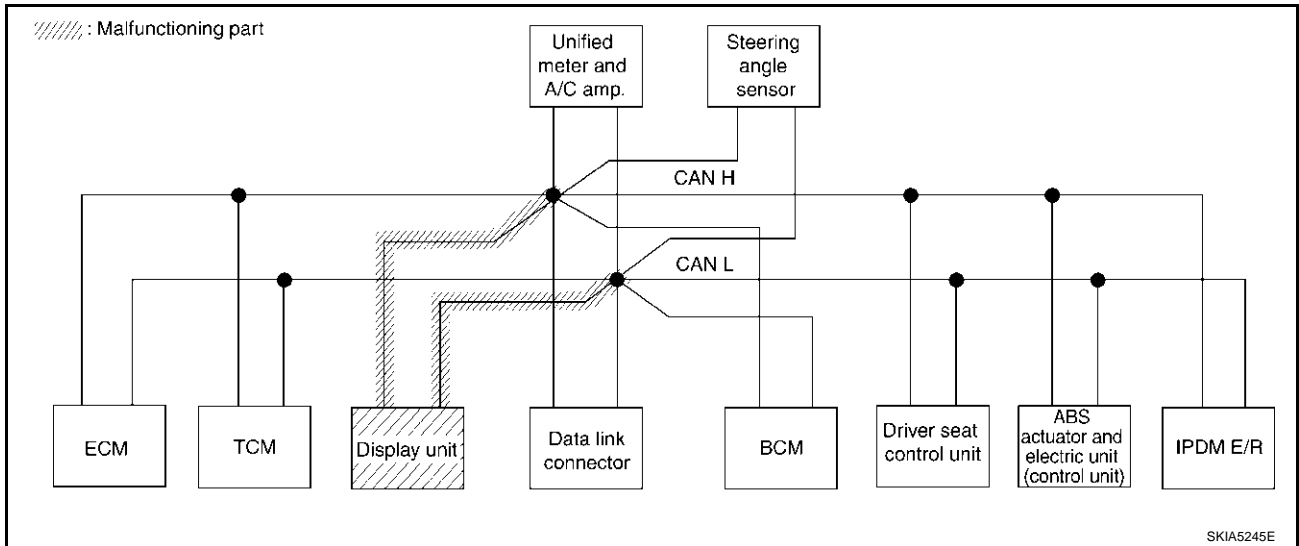
[CAN]

## Case 6

Check display unit circuit. Refer to [LAN-413, "Display Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1 ✓	CAN 3 ✓	—	—	CAN 2 ✓	CAN 5 ✓	—	—	CAN 7 ✓
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

PKIB0625E



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# CAN SYSTEM (TYPE 12)

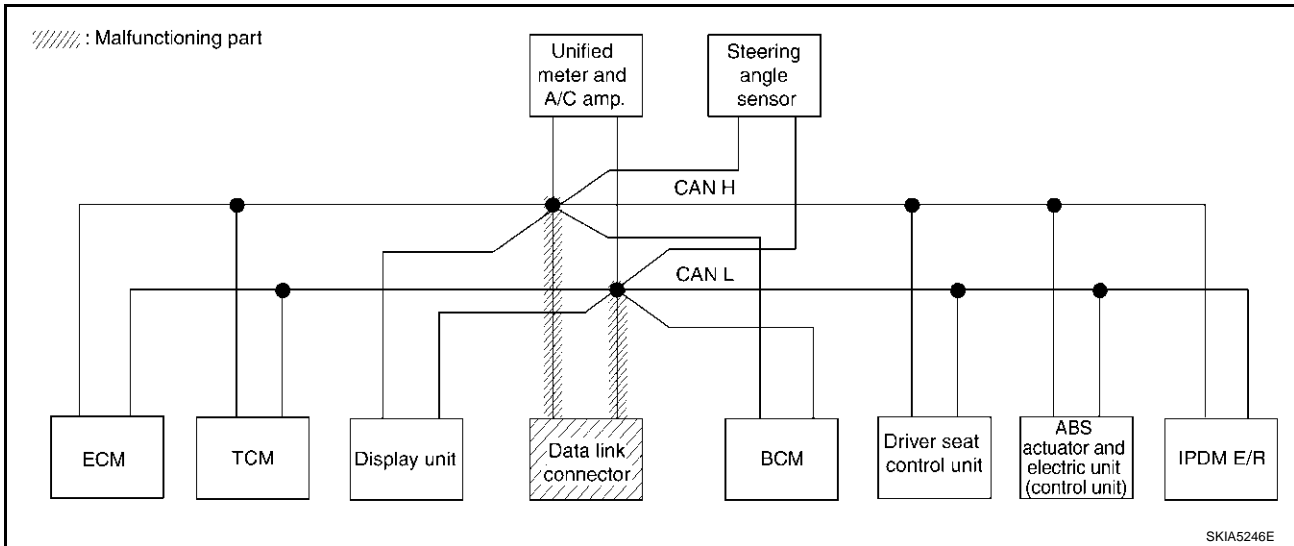
[CAN]

## Case 7

Check data link connector circuit. Refer to [LAN-413, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

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# CAN SYSTEM (TYPE 12)

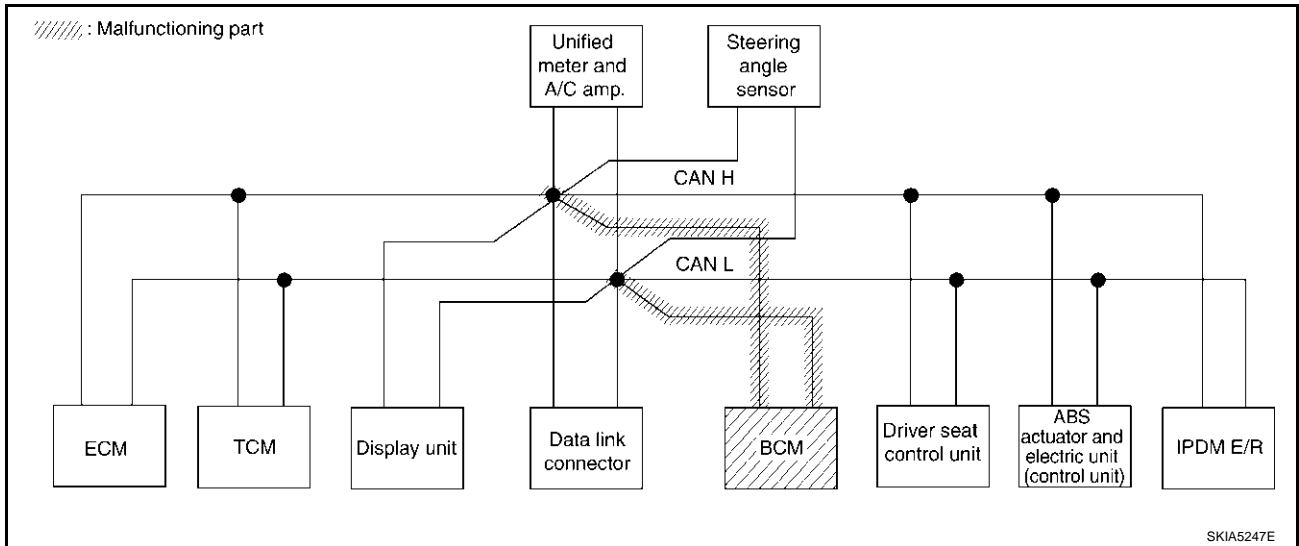
[CAN]

## Case 8

Check BCM circuit. Refer to [LAN-414, "BCM Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

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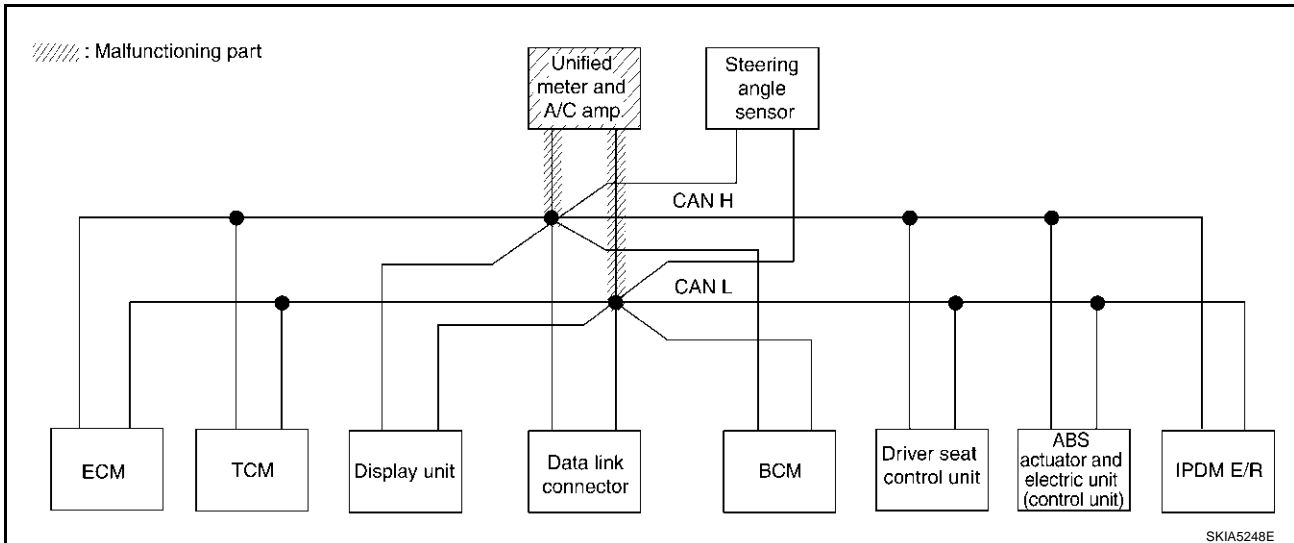
[CAN]

## Case 9

Check unified meter and A/C amp. circuit. Refer to [LAN-414, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—	

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# CAN SYSTEM (TYPE 12)

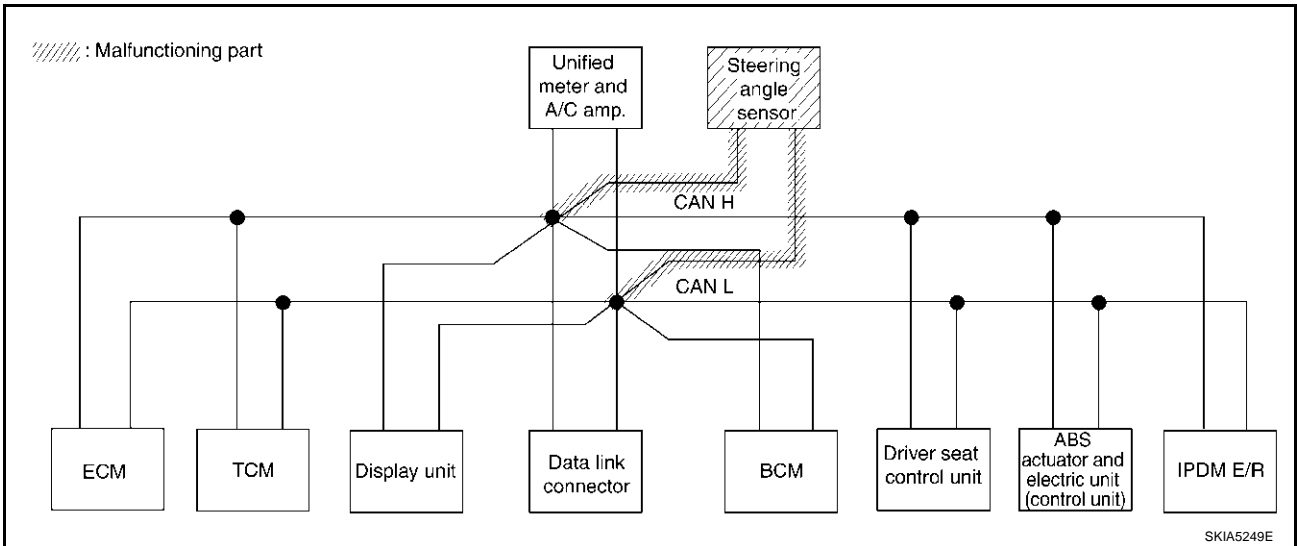
[CAN]

## Case 10

Check steering angle sensor circuit. Refer to [LAN-415, "Steering Angle Sensor Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN ✓	—	—

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# CAN SYSTEM (TYPE 12)

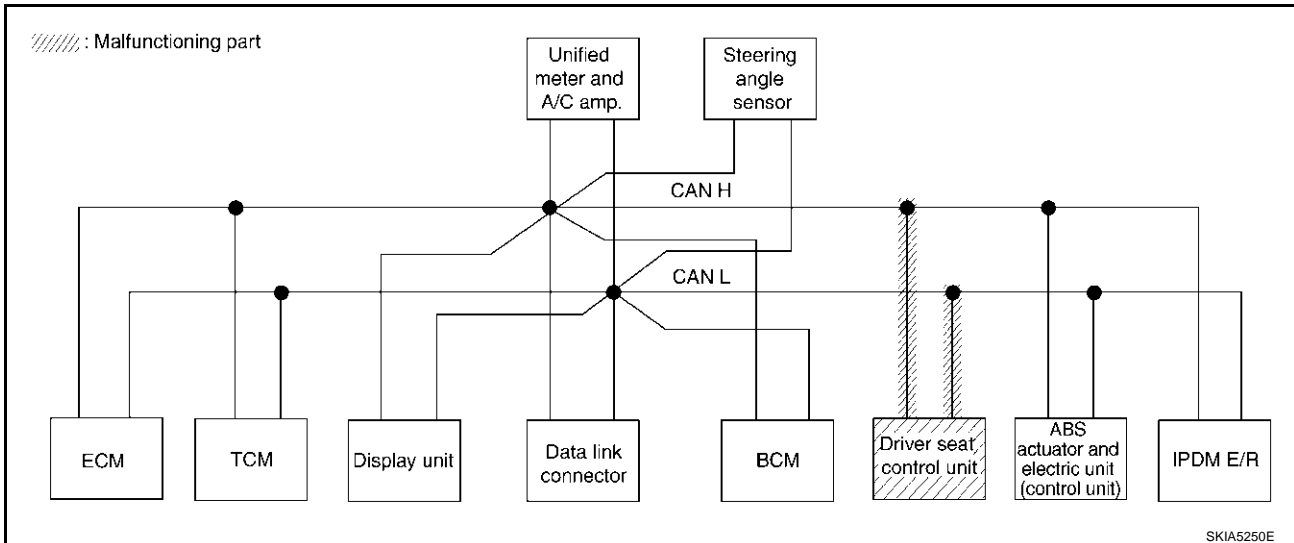
[CAN]

## Case 11

Check driver seat control unit circuit. Refer to [LAN-415, "Driver Seat Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—	

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# CAN SYSTEM (TYPE 12)

[CAN]

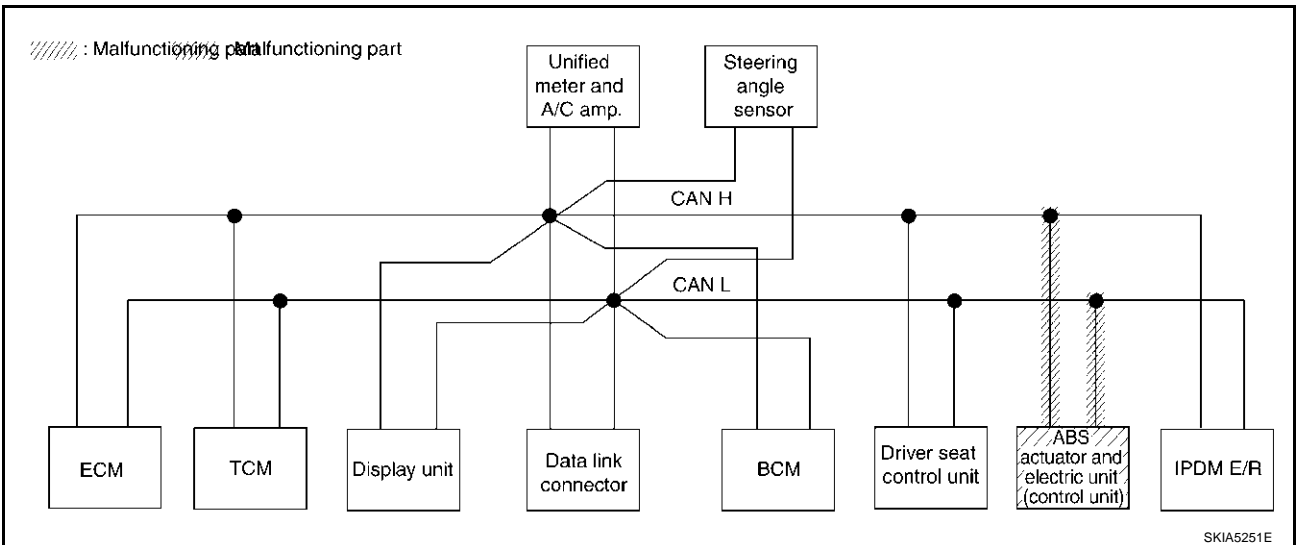
## Case 12

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-416, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

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SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

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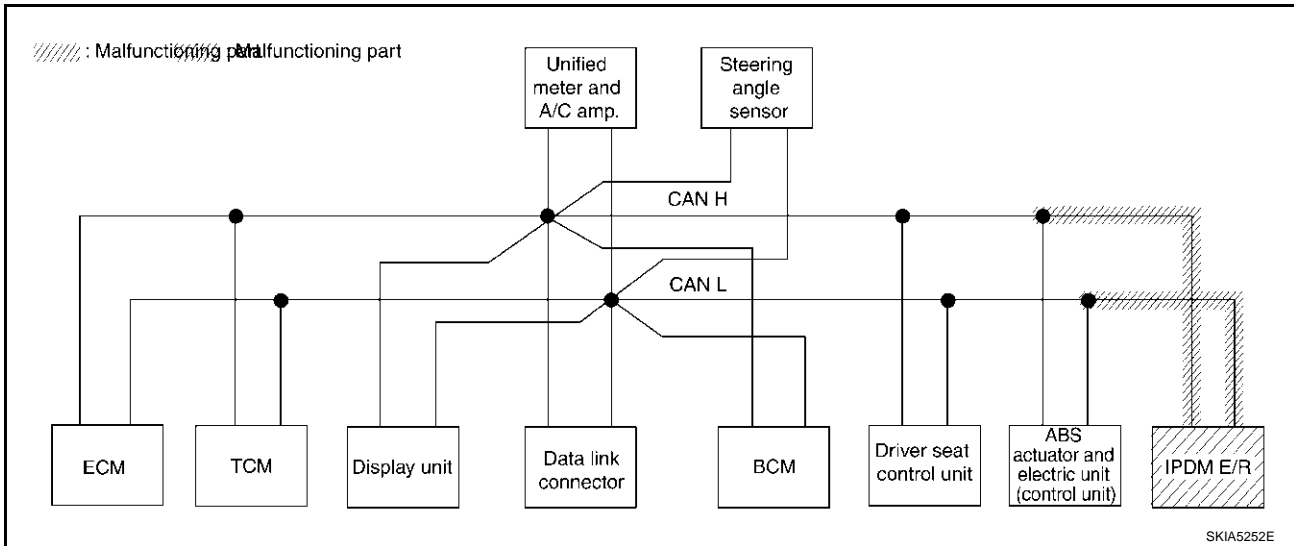


### Case 13

Check IPDM E/R circuit. Refer to [LAN-416, "IPDM E/R Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN ✓
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7 ✓
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN ✓
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

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### Case 14

Check CAN communication circuit. Refer to [LAN-417, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN ✓	—	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	—	UNKWN ✓	UNKWN ✓
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1 ✓	CAN 3 ✓	—	—	CAN 2 ✓	CAN 5 ✓	—	—	CAN 7 ✓
BCM	—	NG	UNKWN ✓	UNKWN ✓	—	—	—	UNKWN ✓	—	—	UNKWN ✓
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN ✓	UNKWN ✓	UNKWN ✓	—	—	—	UNKWN ✓	—	—

PKIB0633E

# CAN SYSTEM (TYPE 12)

[CAN]

## Case 15

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-422, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

PKIB0634E

## Case 16

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-422, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

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## Circuit Check Between TCM and Data Link Connector

### 1. CHECK HARNESS FOR OPEN CIRCUIT

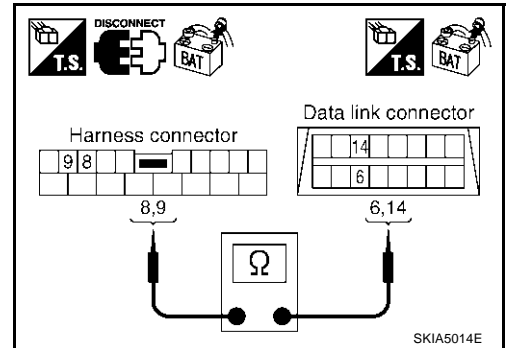
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

**8 (L) - 6 (L) : Continuity should exist.**

**9 (Y) - 14 (Y) : Continuity should exist.**

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-392, "Work Flow"](#) .
- NG >> Repair harness.



## Circuit Check Between Data Link Connector and Driver Seat Control Unit

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector M9
  - Harness connector B2

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

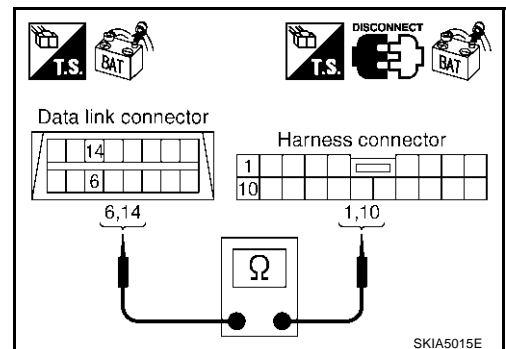
1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

**6 (L) - 1 (L) : Continuity should exist.**

**14 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



### 3. CHECK HARNESS FOR OPEN CIRCUIT

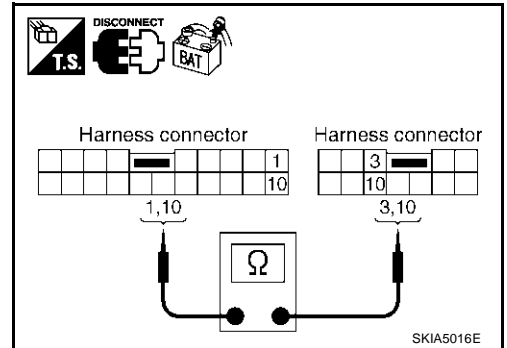
1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-392, "Work Flow"](#).
- NG >> Repair harness.



### Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit)

AKS006UX

#### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector B4
  - Harness connector E105

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

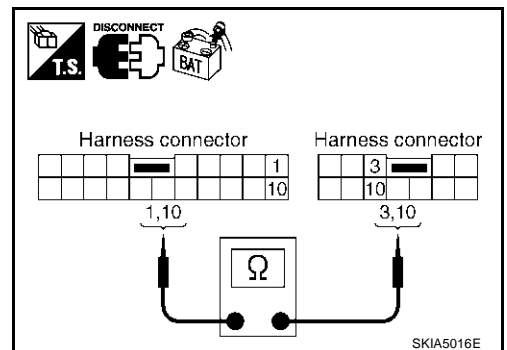
1. Disconnect harness connector B2 and harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



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### 3. CHECK HARNESS FOR OPEN CIRCUIT

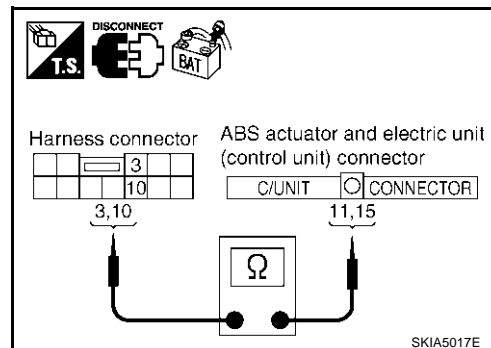
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

**3 (L) - 11 (L) : Continuity should exist.**

**10 (Y) - 15 (Y) : Continuity should exist.**

#### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-392, "Work Flow"](#).
- NG >> Repair harness.



AKS006UY

## ECM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

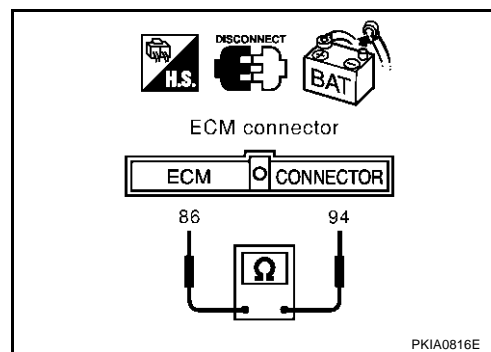
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

**94 (L) - 86 (Y) : Approx. 108 - 132Ω**

#### OK or NG

- OK >> Replace ECM.
- NG >> Repair harness between ECM and TCM.



AKS006UZ

## TCM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
  - TCM connector
  - Harness connector F102
  - Harness connector M82

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.



## 2. CHECK HARNESS FOR OPEN CIRCUIT

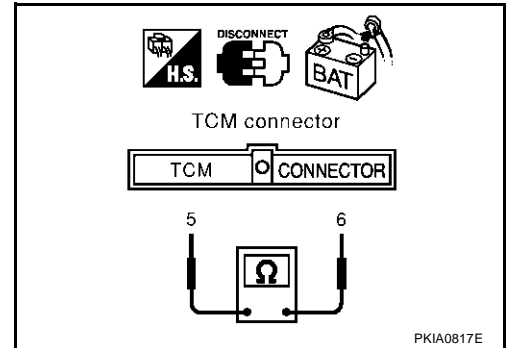
1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace TCM.  
 NG >> Repair harness between TCM and ECM.



## Display Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display unit for damage, bend and loose connection (unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

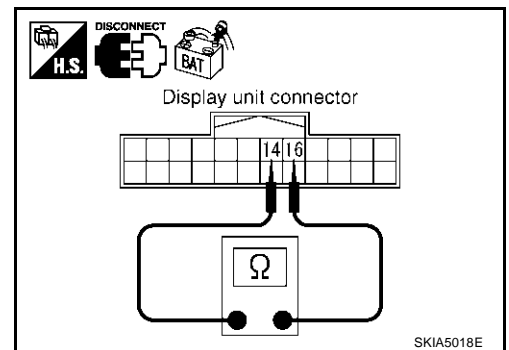
1. Disconnect display unit connector.
2. Check resistance between display unit harness connector M39 terminals 14 (L) and 16 (Y).

**14 (L) - 16 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace display unit.  
 NG >> Repair harness between display unit and data link connector.



## Data Link Connector Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

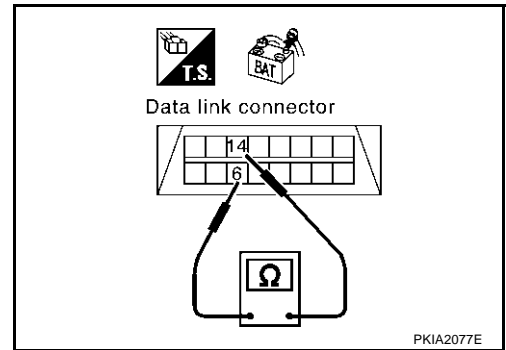
## 2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Diagnose again. Refer to [LAN-392. "Work Flow"](#) .  
 NG >> Repair harness between data link connector and BCM.



AKS006V2

## BCM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

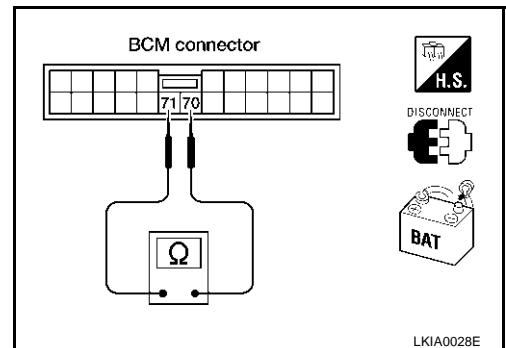
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M37 terminals 70 (L) and 71 (Y).

**70 (L) - 71 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace BCM. Refer to [BCS-36. "Removal and Installation of BCM"](#) .  
 NG >> Repair harness between BCM and data link connector.



AKS006V3

## Unified Meter and A/C Amp. Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

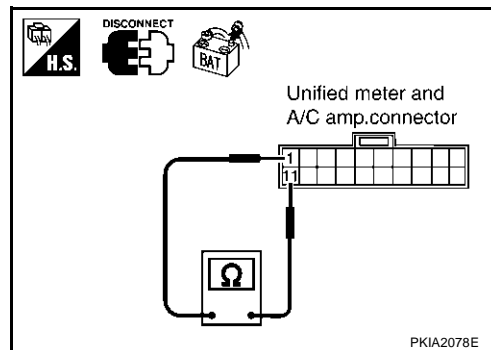
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

**1 (L) - 11 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace unified meter and A/C amp.  
 NG >> Repair harness between unified meter and A/C amp. and data link connector.



AKS006V4

## Steering Angle Sensor Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of steering angle sensor for damage, bend and loose connection (sensor side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

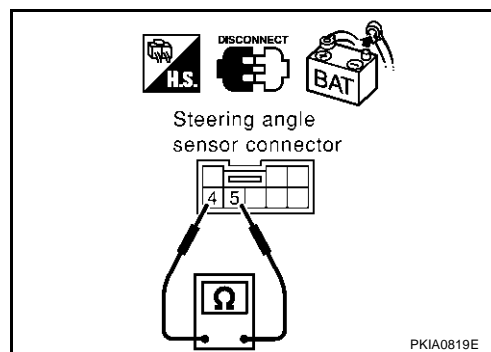
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M33 terminals 4 (L) and 5 (Y).

**4 (L) - 5 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace steering angle sensor.  
 NG >> Repair harness between steering angle sensor and data link connector.



AKS006V5

## Driver Seat Control Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control unit side and harness side).
  - Driver seat control unit connector
  - Harness connector B301
  - Harness connector B9

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

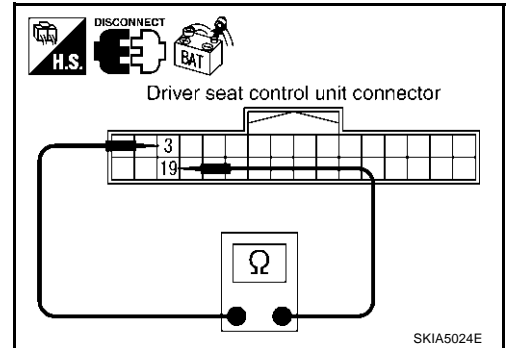
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect driver seat control unit connector.
2. Check resistance between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

**3 (L/Y) - 19 (BR/W) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace driver seat control unit.  
 NG >> Repair harness between driver seat control unit and harness connector B4.



## ABS Actuator and Electric Unit (Control Unit) Circuit Check

AKS006V6

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

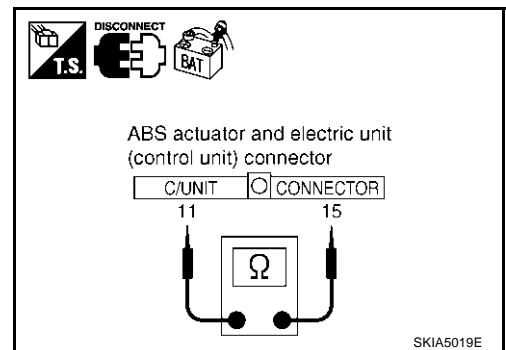
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

**11 (L) - 15 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).  
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



## IPDM E/R Circuit Check

AKS006V7

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

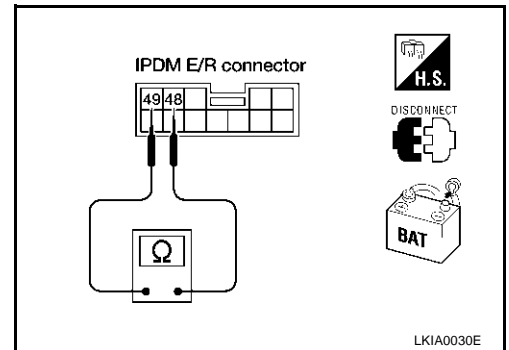
1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y)**

**: Approx. 108 - 132Ω**

### OK or NG

- OK >> Replace IPDM E/R.  
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



AKS006V8

## CAN Communication Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, unit side, meter side, sensor side, control unit side and harness side).
  - ECM
  - TCM
  - Display unit
  - BCM
  - Unified meter and A/C amp.
  - Steering angle sensor
  - Driver seat control unit
  - ABS actuator and electric unit (control unit)
  - IPDM E/R
  - Between ECM and IPDM E/R
  - Between ECM and TCM
  - Between ECM and driver seat control unit

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
L  
M

LAN

## 2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
  - ECM connector
  - Harness connector M82
  - Display unit connector
  - BCM connector
  - Unified meter and A/C amp. connector
  - Steering angle sensor connector
  - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

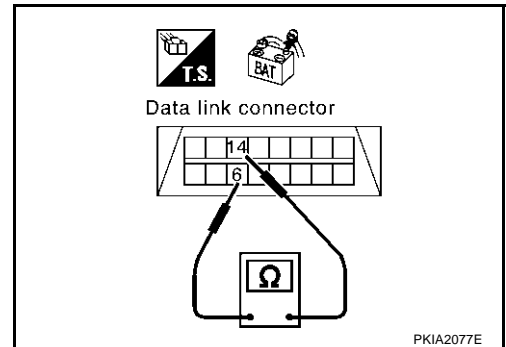
**6 (L) - 14 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 3.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M9.



## 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

**6 (L) - Ground : Continuity should not exist.**

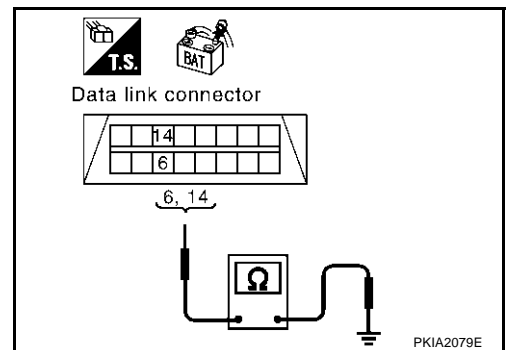
**14 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M9.



#### 4. CHECK HARNESS FOR SHORT CIRCUIT

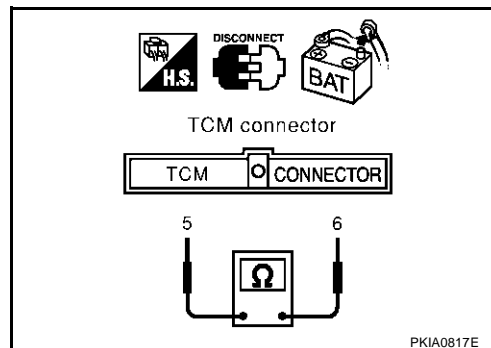
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 5.

NG >> Repair harness between TCM and harness connector F102.



#### 5. CHECK HARNESS FOR SHORT CIRCUIT

- Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

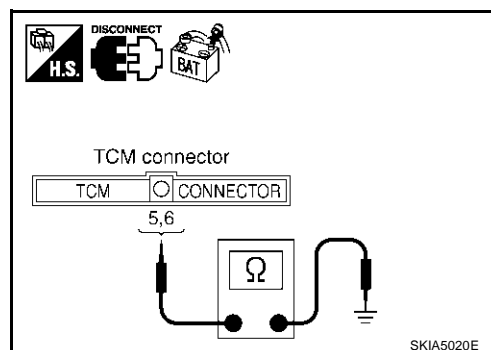
**5 (L) - Ground : Continuity should not exist.**

**6 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 6.

NG >> Repair harness between TCM and harness connector F102.



#### 6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B4 and harness connector B9.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

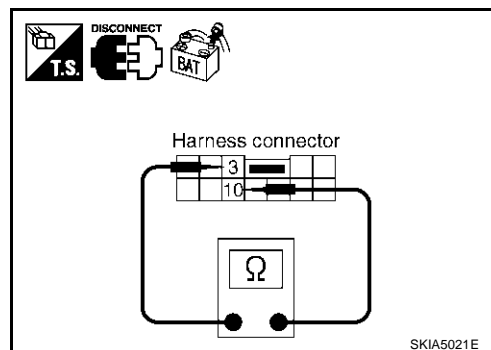
**3 (L) - 10 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 7.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Repair harness between harness connector B4 and harness connector B2.
- Repair harness between harness connector B4 and harness connector B9.



## 7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

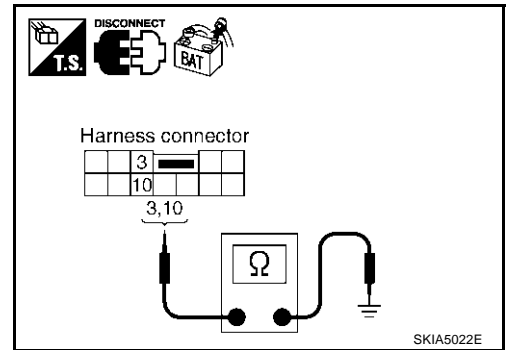
- 3 (L) - Ground : Continuity should not exist.**  
**10 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 8.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Repair harness between harness connector B4 and harness connector B2.
- Repair harness between harness connector B4 and harness connector B9.



## 8. CHECK HARNESS FOR SHORT CIRCUIT

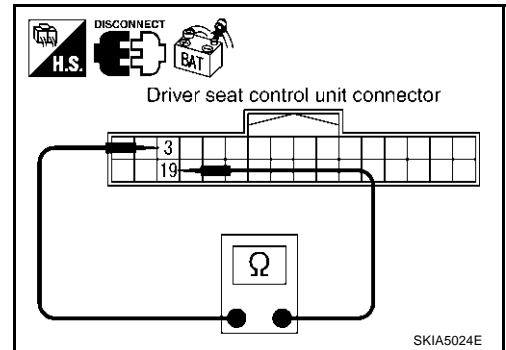
1. Disconnect driver seat control unit connector.
2. Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

- 3 (L/Y) - 19 (BR/W) : Continuity should not exist.**

OK or NG

OK >> GO TO 9.

NG >> Repair harness between driver seat control unit and harness connector B301.



## 9. CHECK HARNESS FOR SHORT CIRCUIT

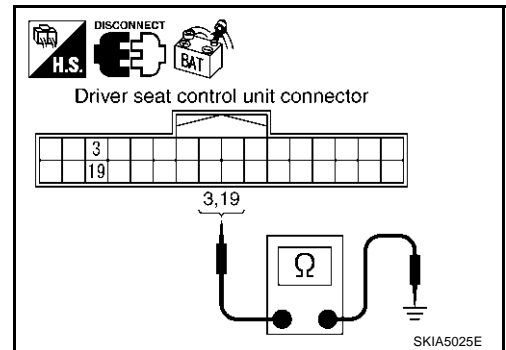
Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y), 19 (BR/W) and ground.

- 3 (L/Y) - Ground : Continuity should not exist.**  
**19 (BR/W) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 10.

NG >> Repair harness between driver seat control unit and harness connector B301.





## 10. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

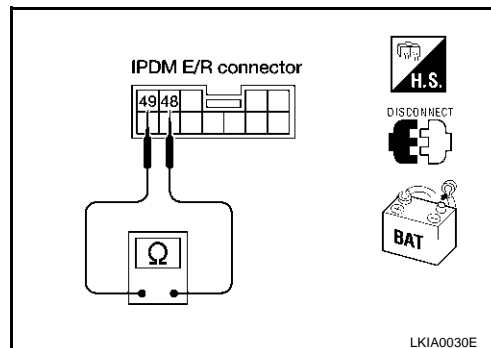
**48 (L) - 49 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 11.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 11. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

**48 (L) - Ground : Continuity should not exist.**

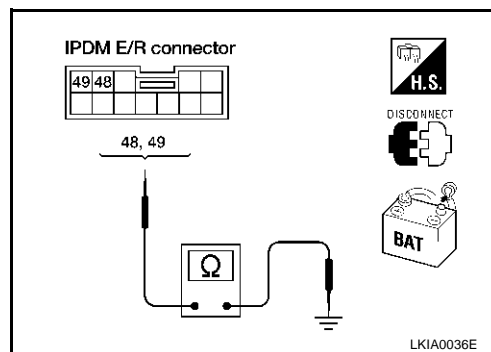
**49 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 12.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 12. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-422, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

### OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-392, "Work Flow"](#).

NG >> Replace ECM and/or IPDM E/R.

## IPDM E/R Ignition Relay Circuit Check

AKS006V9

Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-45, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#).

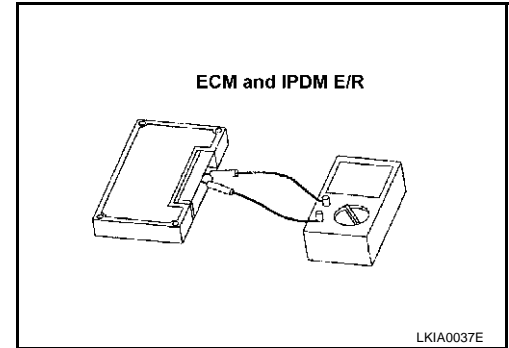
## Component Inspection

AKS006VA

### ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value ( $\Omega$ ) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



## CAN SYSTEM (TYPE 13)

PPF:23710

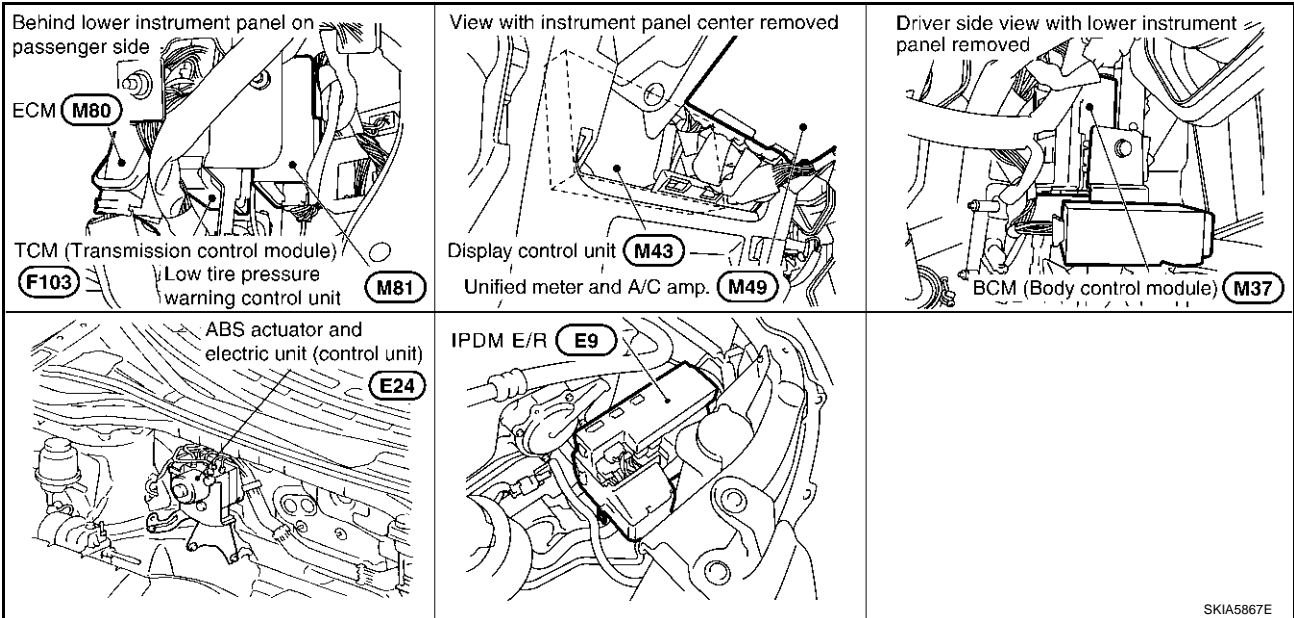
### System Description

AKS006VB

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

### Component Parts and Harness Connector Location

AKS006VC



A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
L  
M

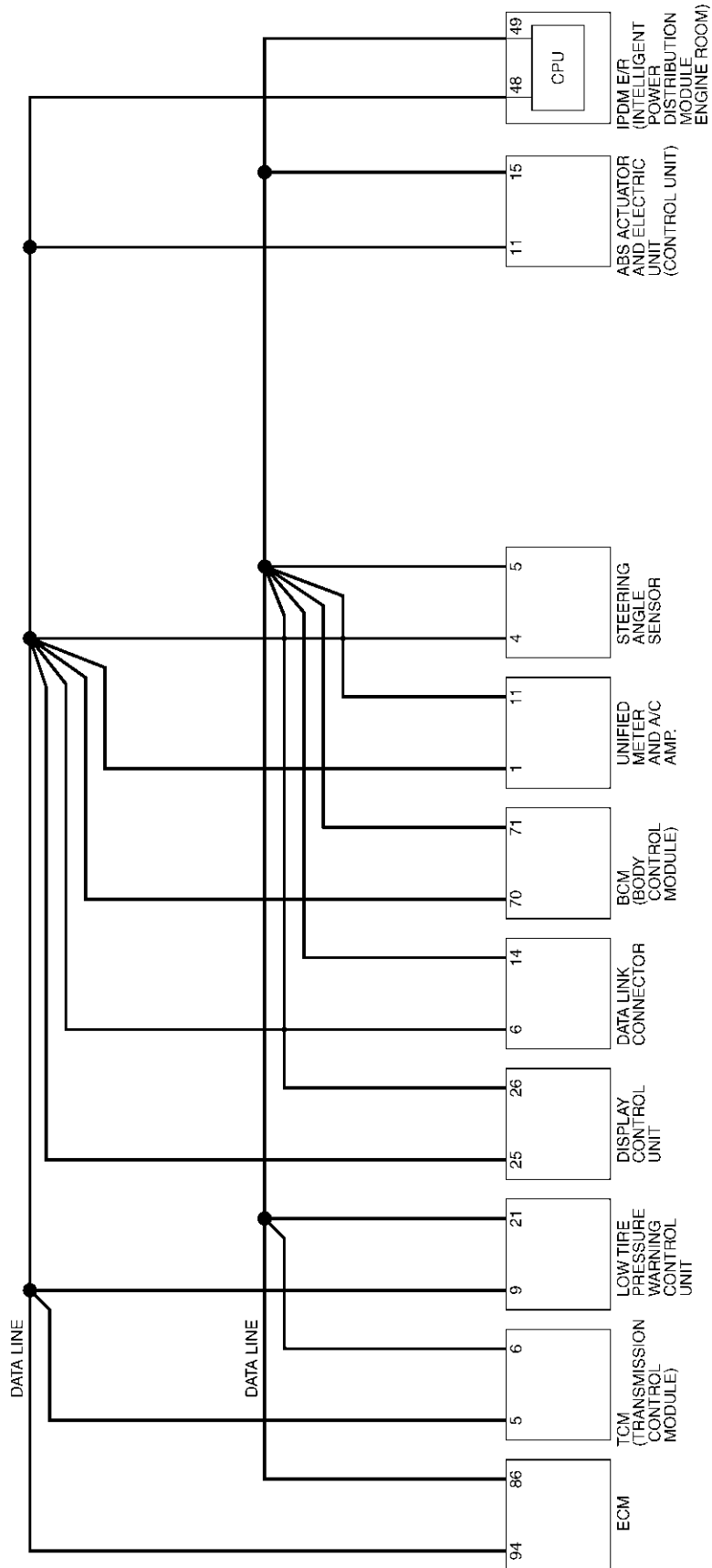
LAN

# CAN SYSTEM (TYPE 13)

[CAN]

## Schematic

AKS006VD



TKWA0971E

# CAN SYSTEM (TYPE 13)

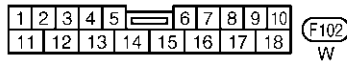
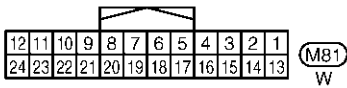
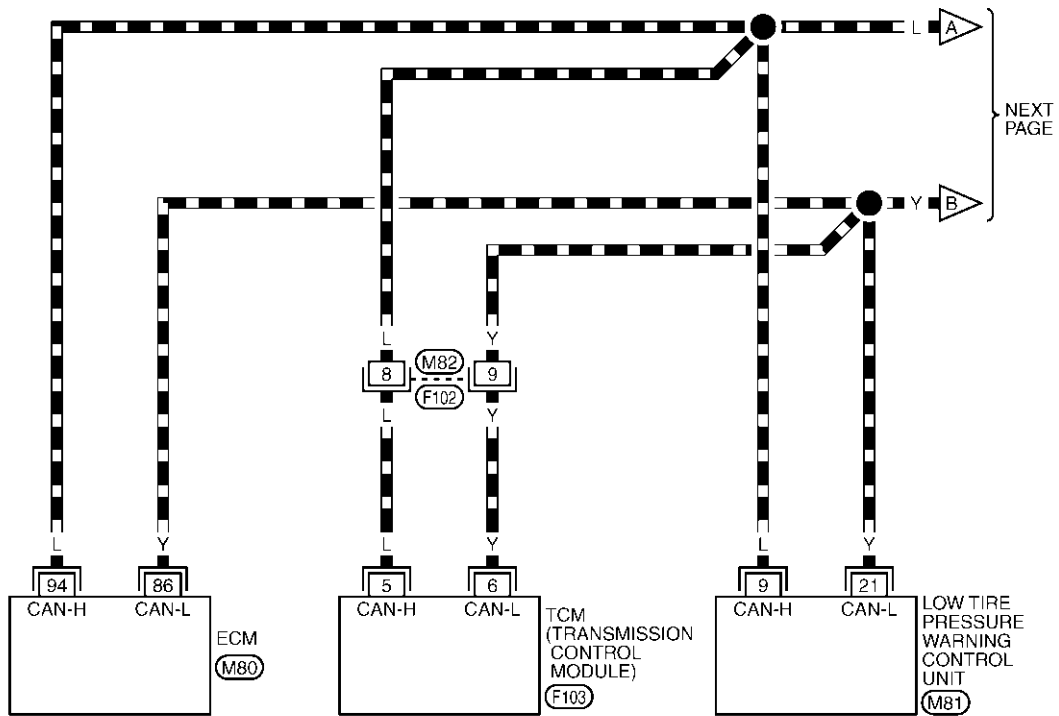
[CAN]

## Wiring Diagram - CAN -

AKS006VE

### LAN-CAN-37

▬ : DATA LINE

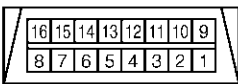
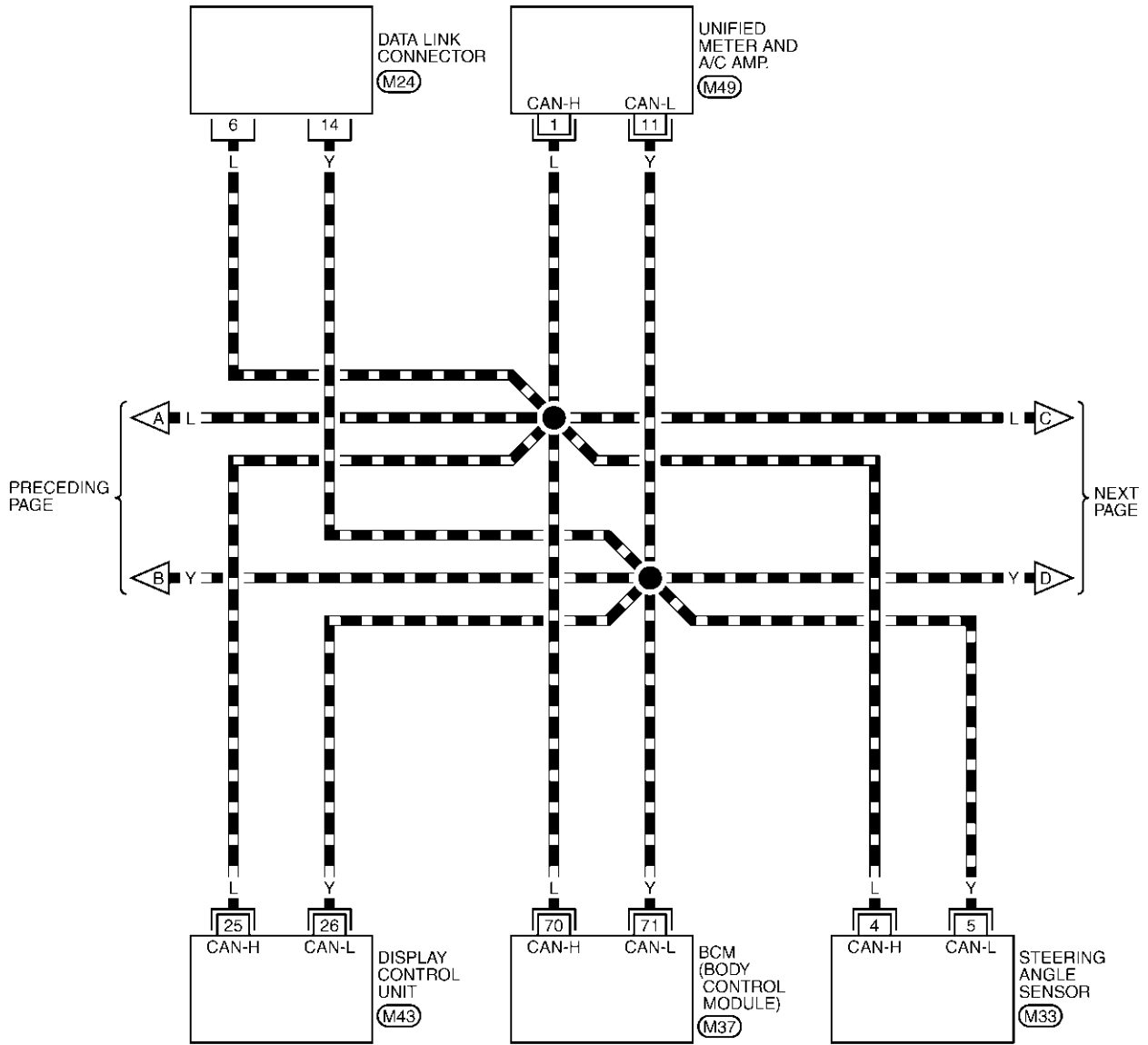


REFER TO THE FOLLOWING.  
 (M80), (F103) -ELECTRICAL  
 UNITS

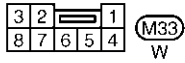
TKWA0972E

## LAN-CAN-38

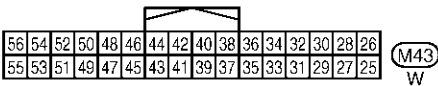
▬ : DATA LINE



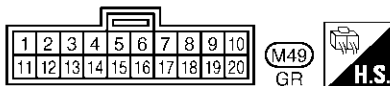
(M24)  
W



(M33)  
W



(M43)  
W



(M49)  
GR

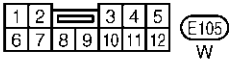
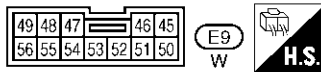
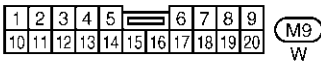
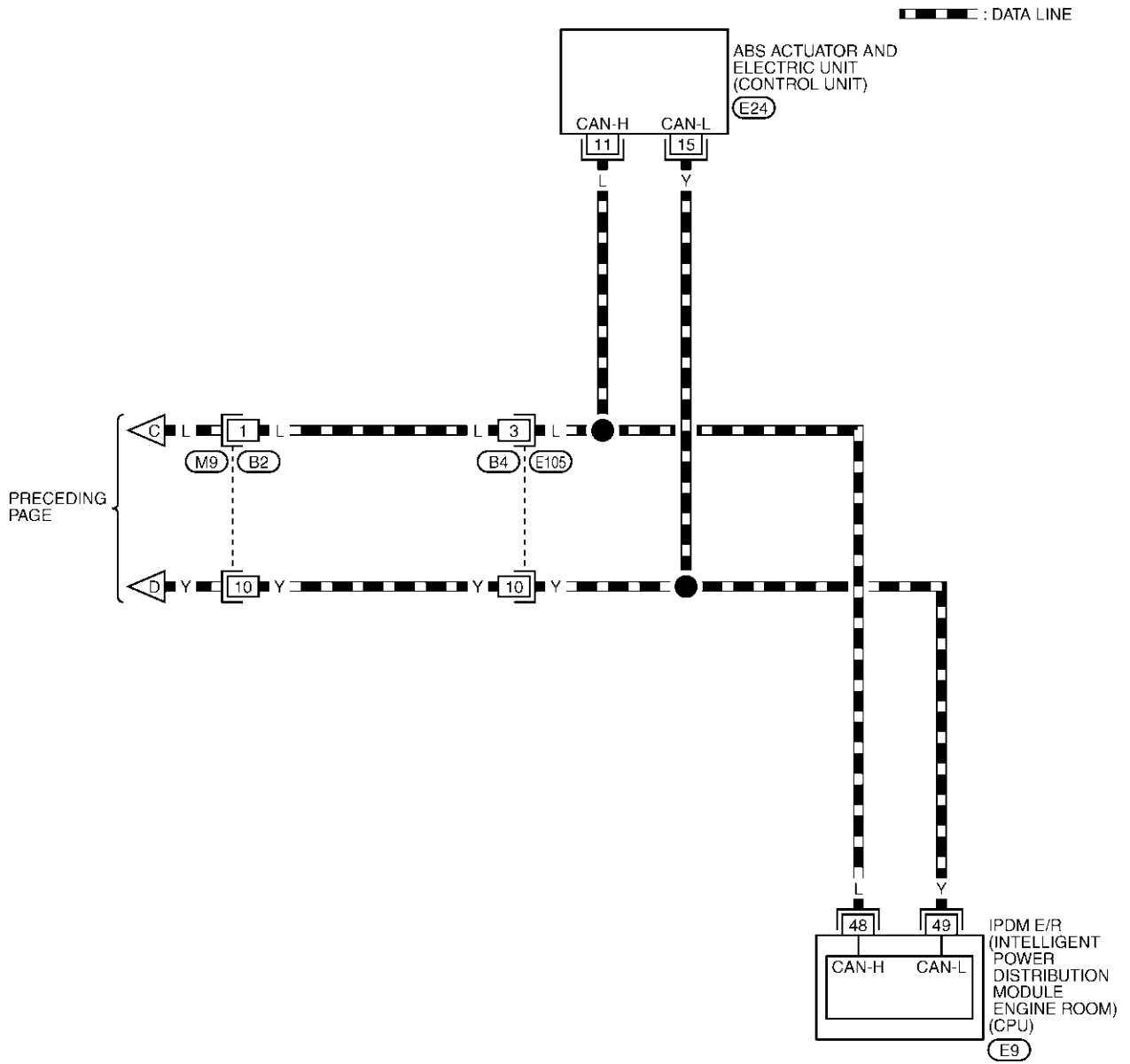


REFER TO THE FOLLOWING.  
(M37) -ELECTRICAL UNITS

# CAN SYSTEM (TYPE 13)

[CAN]

## LAN-CAN-39



REFER TO THE FOLLOWING.  
E24 -ELECTRICAL UNITS

TKWA0974E

## Work Flow

- When there are no indications of "TRANSMISSION", "AIR PRESSURE MONITOR" or "METER A/C AMP" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".

(Example)

	NISSAN  CONSULT-II  ENGINE START (NISSAN BASED VHCL) START (RENAULT BASED VHCL) SUB MODE LIGHT COPY	➔	SELECT SYSTEM ENGINE A/T ABS AIR BAG BCM METER A/C AMP  BACK LIGHT COPY
--	---	---	---

PKIA2093E

- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP" and "ABS" displayed on CONSULT-II.

(Example)

	SELECT DIAG MODE WORK SUPPORT SELF-DIAG RESULTS DATA MONITOR DATA MONITOR (SPEC) CAN DIAG SUPPORT MNTR ACTIVE TEST  Scroll Down BACK LIGHT COPY	➔	SELF-DIAG RESULTS DTC RESULTS      TIME <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%;">CAN COMM CIRCUIT [U1000]</td> <td style="width: 30%;">0</td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td colspan="2" style="text-align: center;">F.F. DATA</td> </tr> <tr> <td>ERASE</td> <td>PRINT</td> </tr> <tr> <td>MODE BACK</td> <td>LIGHT COPY</td> </tr> </table>	CAN COMM CIRCUIT [U1000]	0							F.F. DATA		ERASE	PRINT	MODE BACK	LIGHT COPY
CAN COMM CIRCUIT [U1000]	0																
F.F. DATA																	
ERASE	PRINT																
MODE BACK	LIGHT COPY																

PKIA8260E

- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP" and "ABS" displayed on CONSULT-II.

(Example)

	SELECT DIAG MODE WORK SUPPORT SELF-DIAG RESULTS DATA MONITOR DATA MONITOR (SPEC) CAN DIAG SUPPORT MNTR ACTIVE TEST  Scroll Down BACK LIGHT COPY	➔	CAN DIAG SUPPORT MNTR ENGINE <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;">ENGINE</th> <th style="width: 40%;">PRSNT</th> </tr> </thead> <tbody> <tr><td>INITIAL DIAG</td><td>OK</td></tr> <tr><td>TRANSMIT DIAG</td><td>OK</td></tr> <tr><td>TCM</td><td>OK</td></tr> <tr><td>VDC/TCS/ABS</td><td>OK</td></tr> <tr><td>METER/M&amp;A</td><td>OK</td></tr> <tr><td>ICC</td><td>UNKWN</td></tr> <tr><td>BCM/SEC</td><td>OK</td></tr> <tr><td>IPDM E/R</td><td>OK</td></tr> <tr><td>AWD/4WD/e4WD</td><td>UNKWN</td></tr> <tr> <td style="text-align: center;">PRINT</td> <td style="text-align: center;">Scroll Down</td> </tr> <tr> <td>MODE BACK</td> <td>LIGHT COPY</td> </tr> </tbody> </table>	ENGINE	PRSNT	INITIAL DIAG	OK	TRANSMIT DIAG	OK	TCM	OK	VDC/TCS/ABS	OK	METER/M&A	OK	ICC	UNKWN	BCM/SEC	OK	IPDM E/R	OK	AWD/4WD/e4WD	UNKWN	PRINT	Scroll Down	MODE BACK	LIGHT COPY
ENGINE	PRSNT																										
INITIAL DIAG	OK																										
TRANSMIT DIAG	OK																										
TCM	OK																										
VDC/TCS/ABS	OK																										
METER/M&A	OK																										
ICC	UNKWN																										
BCM/SEC	OK																										
IPDM E/R	OK																										
AWD/4WD/e4WD	UNKWN																										
PRINT	Scroll Down																										
MODE BACK	LIGHT COPY																										

PKIA8343E

- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-430, "CHECK SHEET"](#) .

- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "v" onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-430, "CHECK SHEET"](#) .

**NOTE:**

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual.  
So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the navigation system. Refer to [AV-203, "CAN Communication Line Check"](#) .

- Attach the CAN DIAG SUPPORT MONITOR check sheet onto the check sheet. Refer to [LAN-430, "CHECK SHEET"](#) .



## CAN SYSTEM (TYPE 13)

[CAN]

8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG SUPPORT MONITOR check sheet. Refer to [LAN-430, "CHECK SHEET"](#) .

**NOTE:**

If "NG" is displayed on "CAN COMM" as "CAN DIAG SUPPORT MONITOR" for the diagnosed control unit, replace the control unit. Refer to [AV-203, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-432, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

A

B

C

D

E

F

G

H

I

J

LAN

L

M

# CAN SYSTEM (TYPE 13)

[CAN]

## CHECK SHEET

**NOTE:**

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	

Symptoms :

Attach copy of  
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Attach copy of  
SELECT SYSTEM

Attach copy of  
display control unit  
CAN DIAG SUPPORT MONITOR check sheet

PKIB0641E

# CAN SYSTEM (TYPE 13)

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Attach copy of  
TRANSMISSION  
SELF-DIAG RESULTS

Attach copy of  
AIR PRESSURE  
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SELF-DIAG RESULTS

Attach copy of  
BCM  
SELF-DIAG RESULTS

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SELF-DIAG RESULTS

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PKIB0437E

# CAN SYSTEM (TYPE 13)

[CAN]

## CHECK SHEET RESULTS (EXAMPLE)

### NOTE:

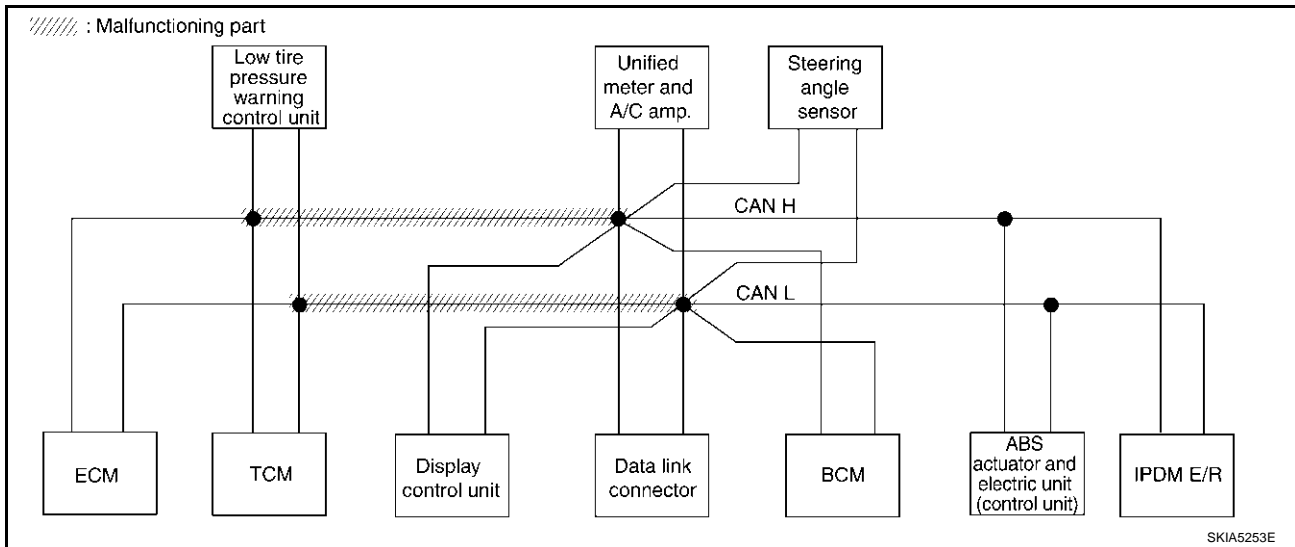
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

### Case 1

Check harness between TCM and data link connector. Refer to [LAN-445, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3 ✓	—	CAN CIRC 6 ✓	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN ✓	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN ✓	UNKWN ✓	UNKWN ✓	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN ✓	—	—	—	—	UNKWN	—	—

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# CAN SYSTEM (TYPE 13)

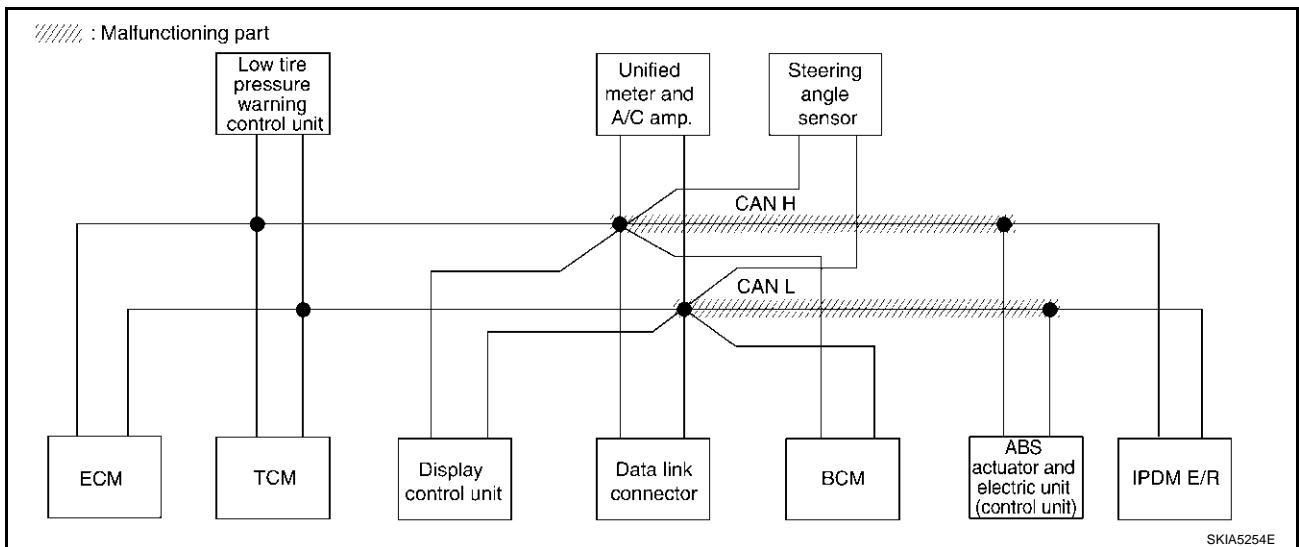
[CAN]

## Case 2

Check harness between data link connector and ABS actuator and electric unit (control unit). Refer to [LAN-445, "Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit \(Control Unit\)"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	

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# CAN SYSTEM (TYPE 13)

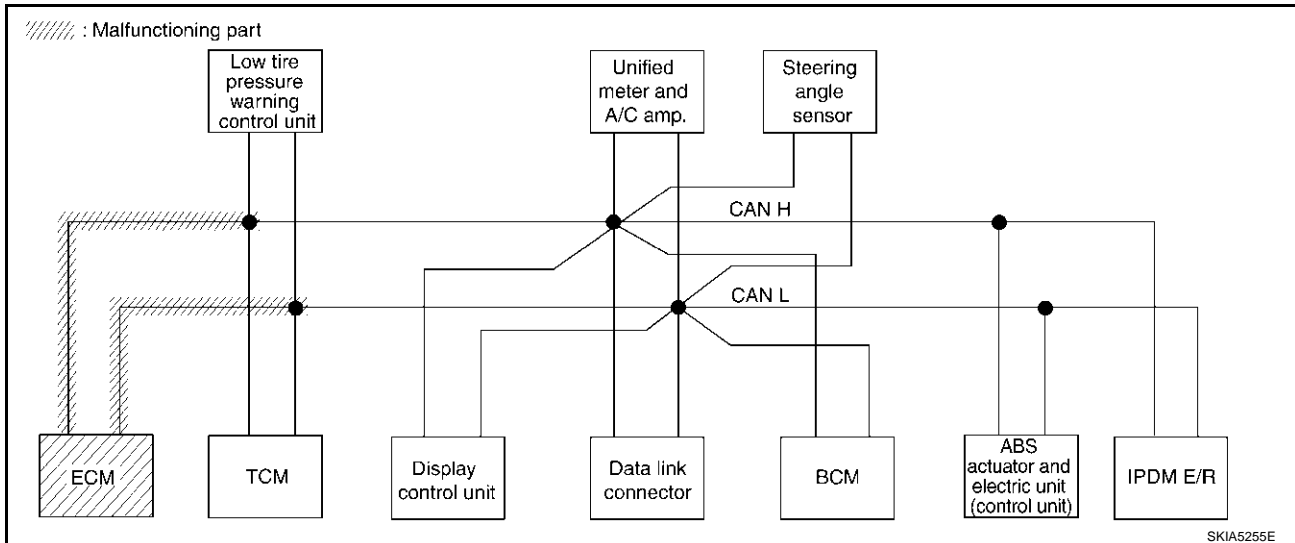
[CAN]

## Case 3

Check ECM circuit. Refer to [LAN-446, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N
TRANSMISSION	No indication	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	—	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—
AIR PRESSURE MONITOR	No indication	NG	UNKW <sup>✓</sup> N	—	—	—	—	—	UNKW <sup>✓</sup> N	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	—	UNKW <sup>✓</sup> N	—	—	UNKW <sup>✓</sup> N
METER A/C AMP	No indication	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	UNKW <sup>✓</sup> N	—
ABS	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	—	UNKW <sup>✓</sup> N	—	—

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# CAN SYSTEM (TYPE 13)

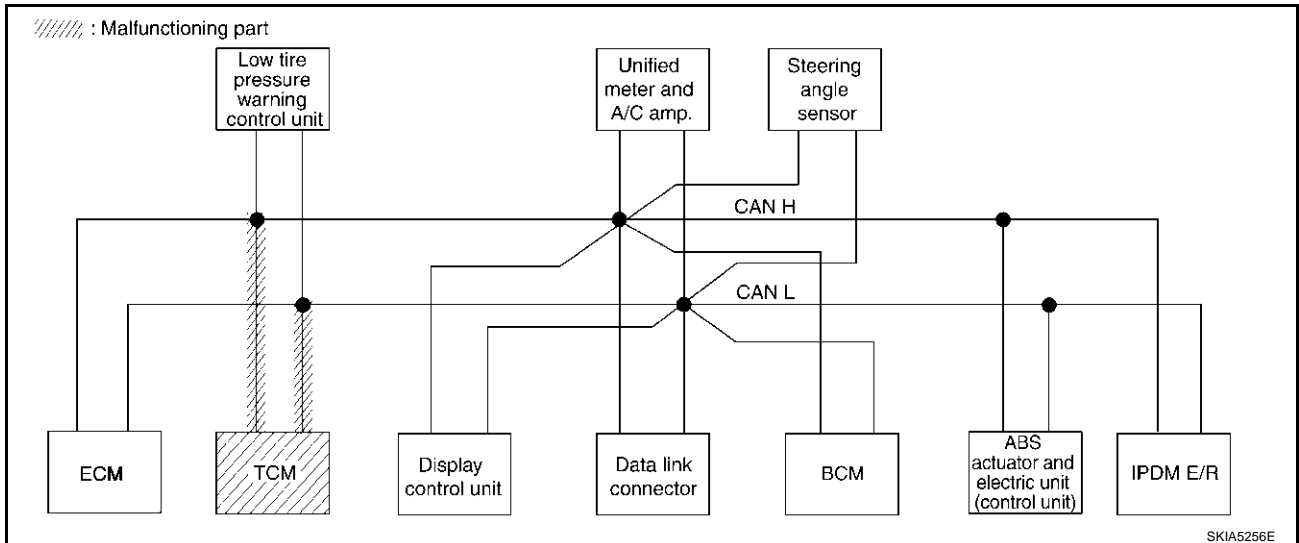
[CAN]

## Case 4

Check TCM circuit. Refer to [LAN-447, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

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# CAN SYSTEM (TYPE 13)

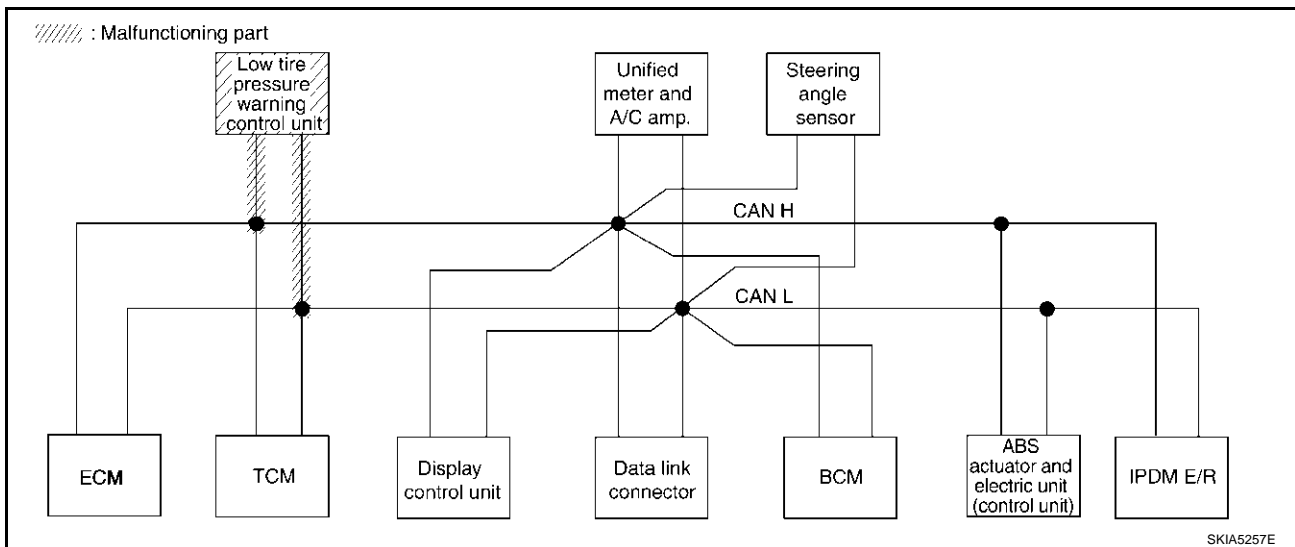
[CAN]

## Case 5

Check low tire pressure warning control unit circuit. Refer to [LAN-447, "Low Tire Pressure Warning Control Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6 ✓	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	UNKWN	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	

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# CAN SYSTEM (TYPE 13)

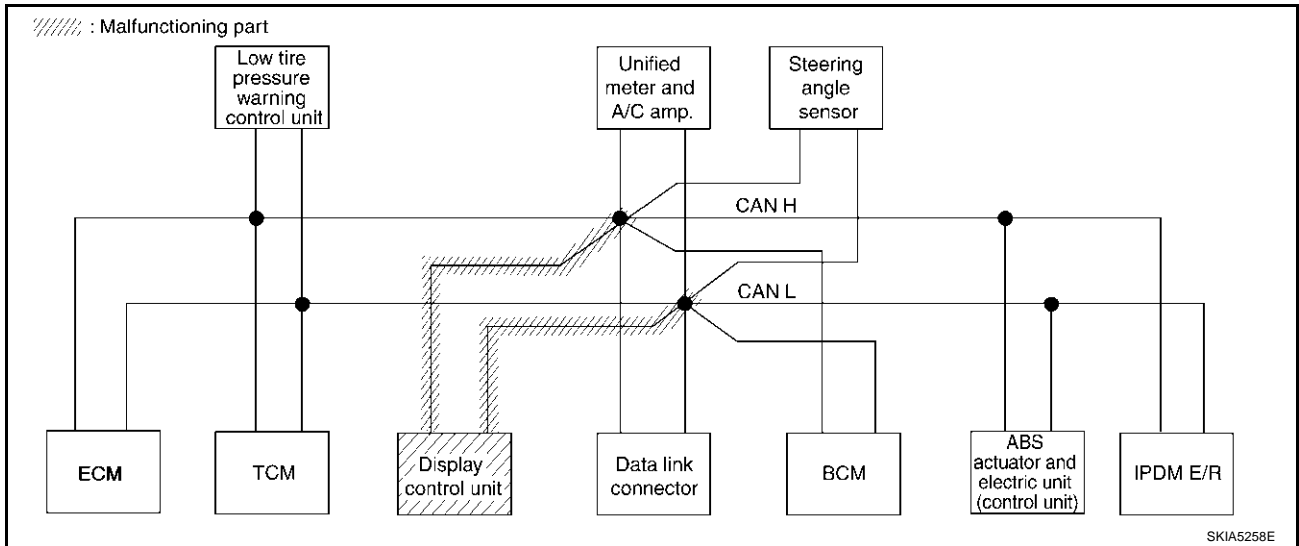
[CAN]

## Case 6

Check display control unit circuit. Refer to [LAN-448, "Display Control Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CRC 1 ✓	CAN CRC 3 ✓	—	CAN CRC 6 ✓	—	CAN CRC 2 ✓	CAN CRC 5 ✓	—	—	CAN CRC 7 ✓
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

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# CAN SYSTEM (TYPE 13)

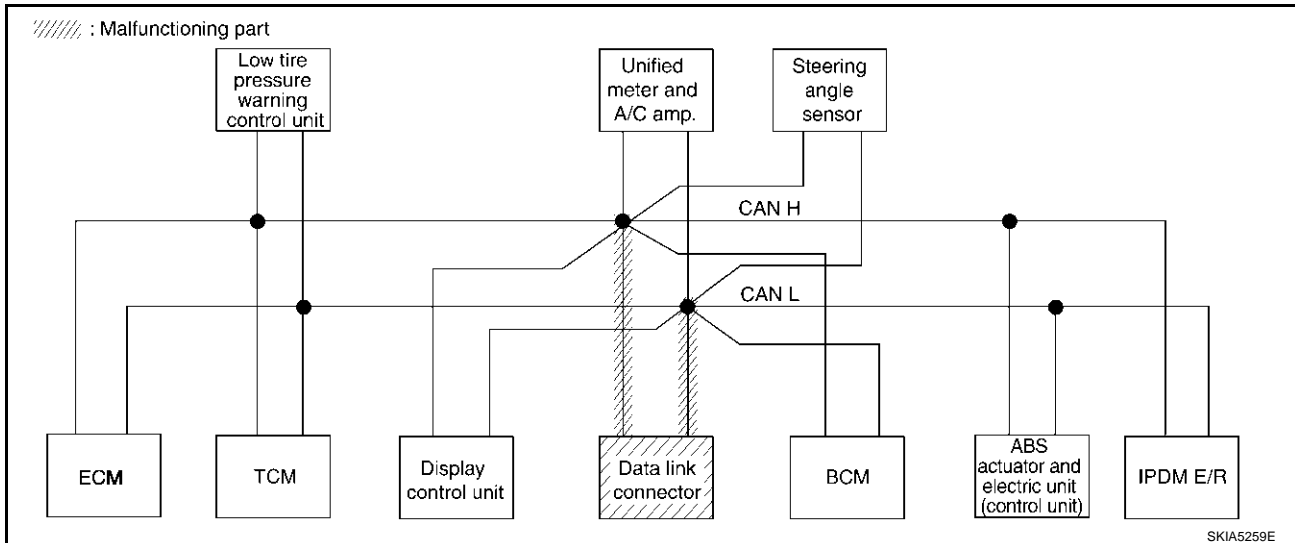
[CAN]

## Case 7

Check data link connector circuit. Refer to [LAN-448, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

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# CAN SYSTEM (TYPE 13)

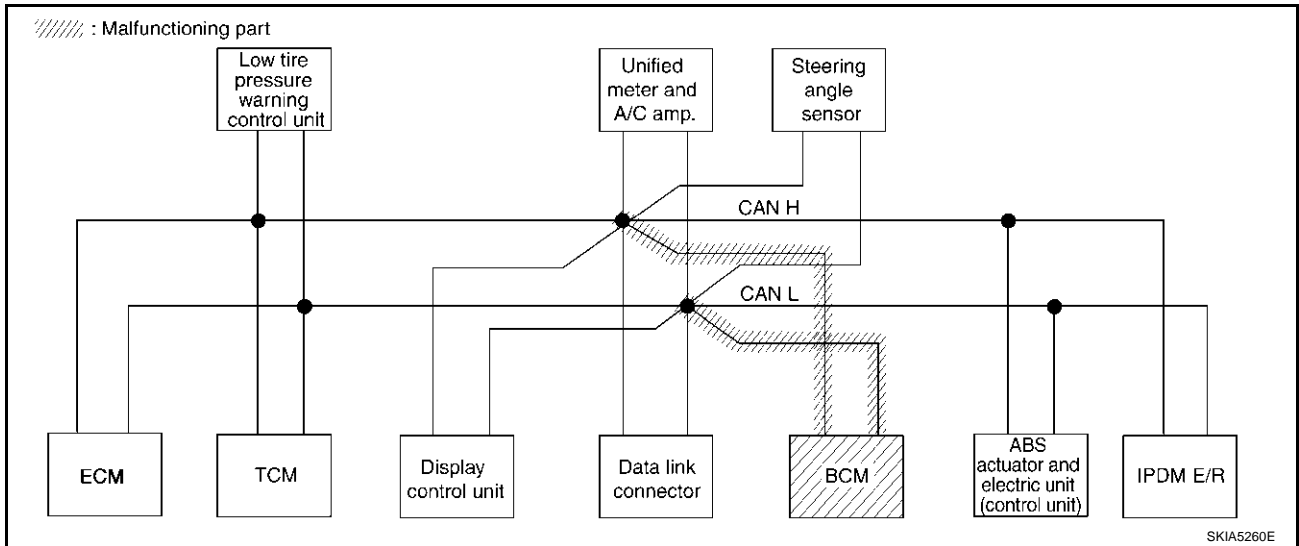
[CAN]

## Case 8

Check BCM circuit. Refer to [LAN-449, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW	—	UNKW	—	—	UNKW	UNKW	—	UNKW	UNKW
TRANSMISSION	No indication	NG	UNKW	UNKW	—	—	—	—	UNKW	—	UNKW	—
AIR PRESSURE MONITOR	No indication	NG	UNKW	—	—	—	—	—	UNKW	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKW	UNKW	—	—	—	—	UNKW	—	—	UNKW
METER A/C AMP	No indication	—	UNKW	UNKW	UNKW	UNKW	UNKW	UNKW	—	—	UNKW	—
ABS	—	NG	UNKW	UNKW	UNKW	—	—	—	—	UNKW	—	—

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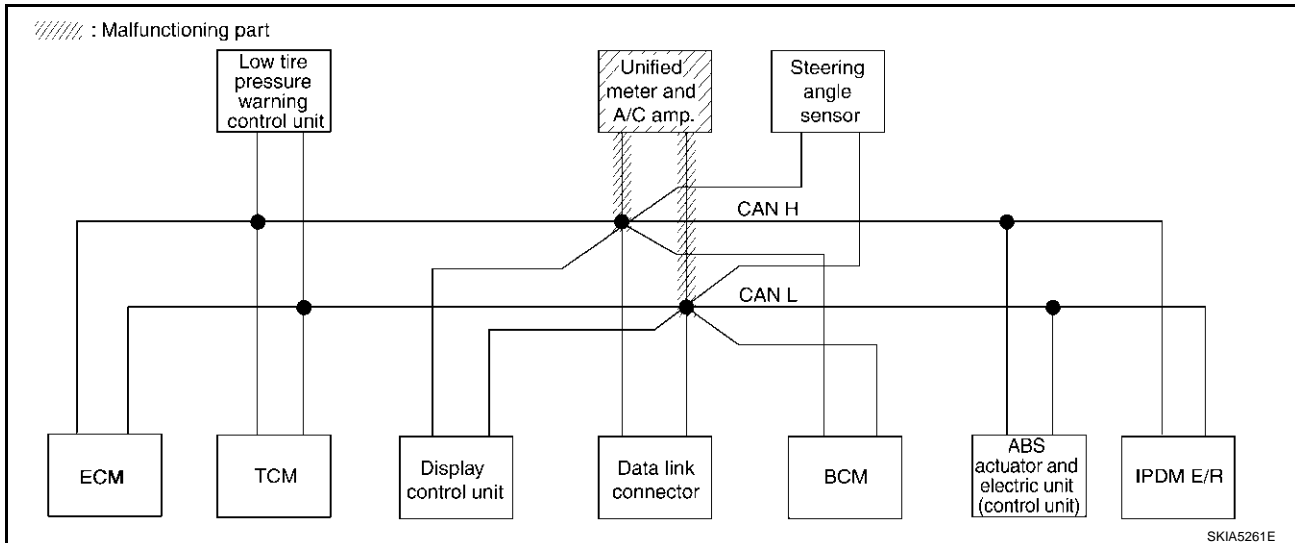
[CAN]

## Case 9

Check unified meter and A/C amp. circuit. Refer to [LAN-449, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN ✓	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN ✓	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN ✓	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5 ✓	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN ✓	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

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# CAN SYSTEM (TYPE 13)

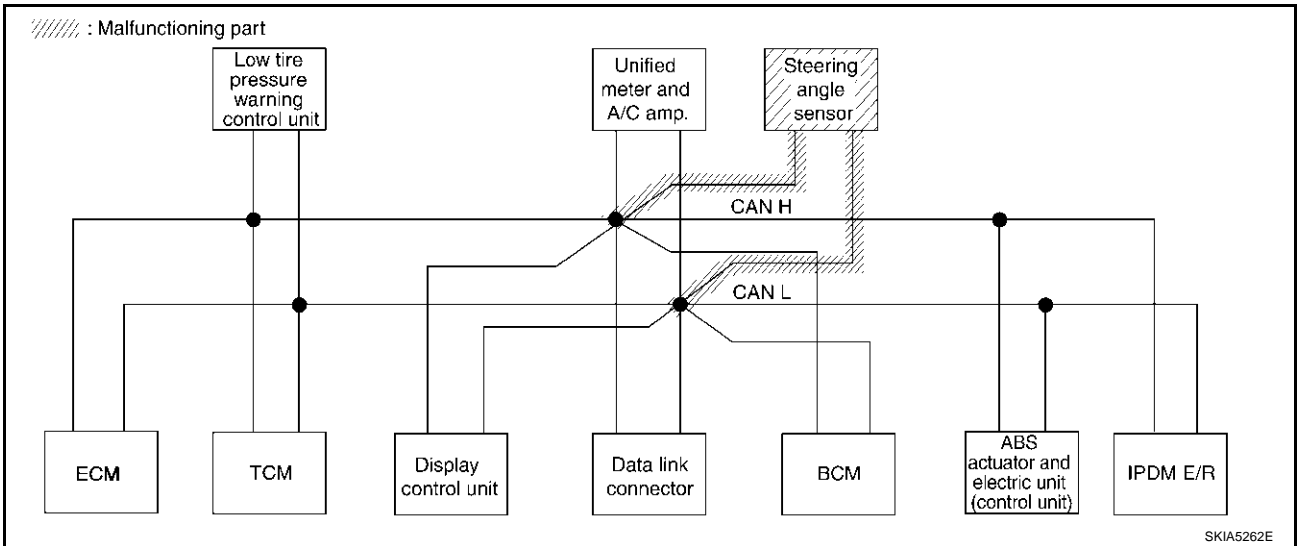
[CAN]

## Case 10

Check steering angle sensor circuit. Refer to [LAN-450, "Steering Angle Sensor Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

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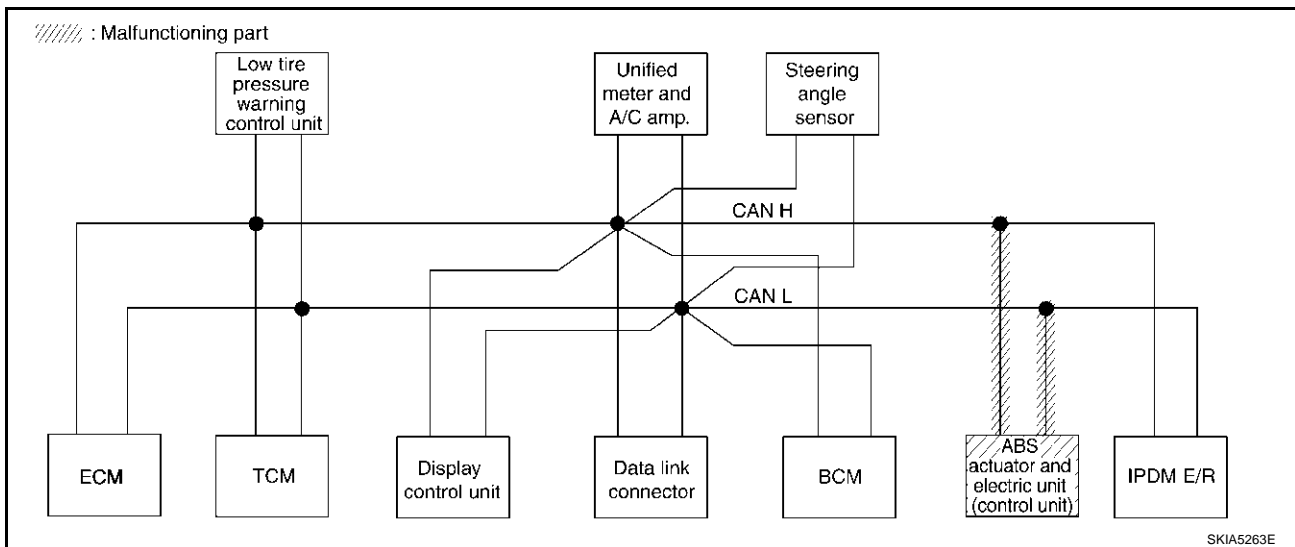
[CAN]

## Case 11

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-450, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

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# CAN SYSTEM (TYPE 13)

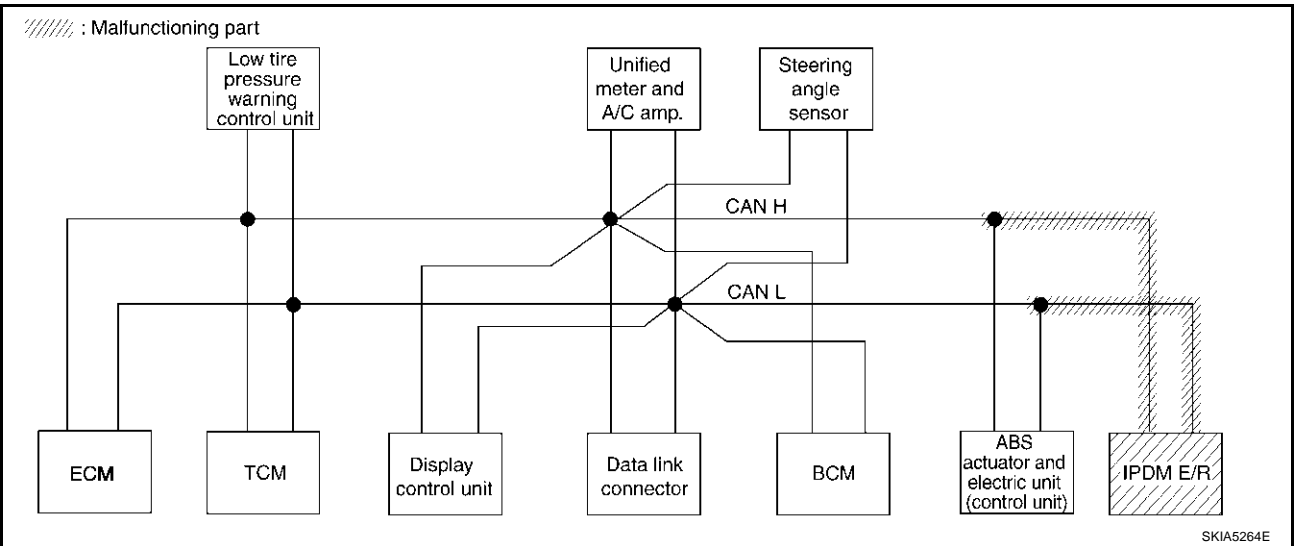
[CAN]

## Case 12

Check IPDM E/R circuit. Refer to [LAN-451, "IPDM E/R Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	

PKIB0653E



## Case 13

Check CAN communication circuit. Refer to [LAN-451, "CAN Communication Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	

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# CAN SYSTEM (TYPE 13)

[CAN]

## Case 14

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-454, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB0655E

## Case 15

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-454, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—

PKIB0656E



## Circuit Check Between TCM and Data Link Connector

### 1. CHECK HARNESS FOR OPEN CIRCUIT

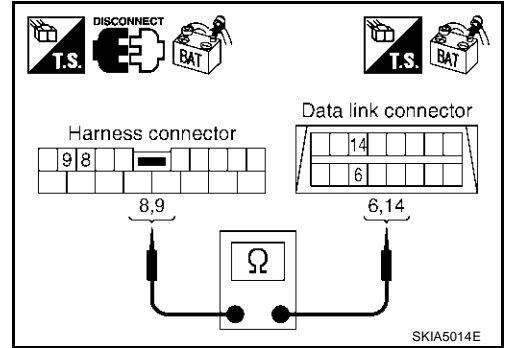
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

**8 (L) - 6 (L) : Continuity should exist.**

**9 (Y) - 14 (Y) : Continuity should exist.**

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-428, "Work Flow"](#).
- NG >> Repair harness.



## Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit)

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector M9
  - Harness connector B2
  - Harness connector B4
  - Harness connector E105

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

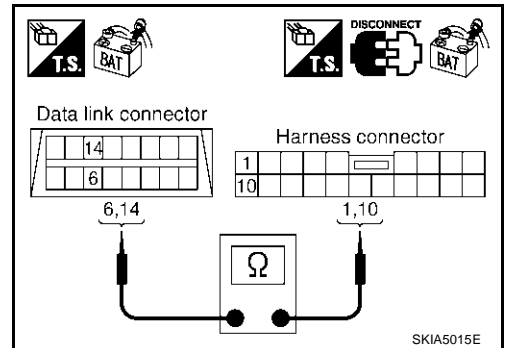
1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

**6 (L) - 1 (L) : Continuity should exist.**

**14 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
L  
M

LAN

## 3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

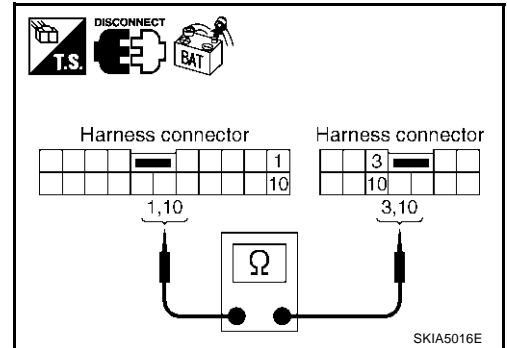
**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

OK >> GO TO 4.

NG >> Repair harness.



## 4. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

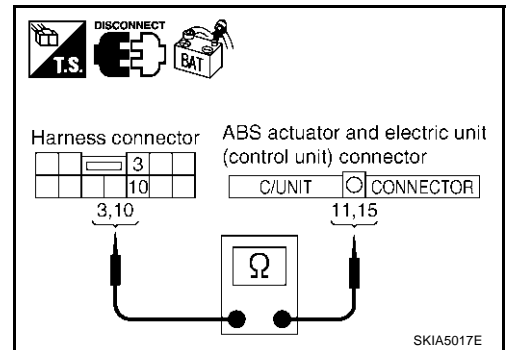
**3 (L) - 11 (L) : Continuity should exist.**

**10 (Y) - 15 (Y) : Continuity should exist.**

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-428, "Work Flow"](#).

NG >> Repair harness.



## ECM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

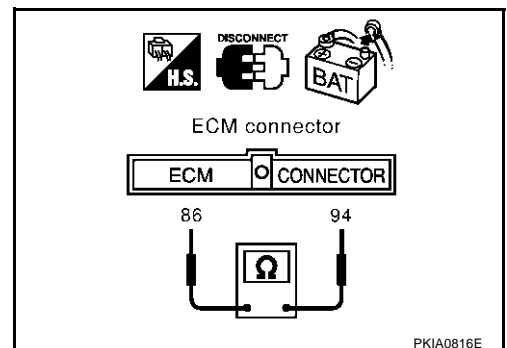
1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

**94 (L) - 86 (Y) : Approx. 108 - 132Ω**

OK or NG

OK >> Replace ECM.

NG >> Repair harness between ECM and TCM.



**TCM Circuit Check**

AKS006VJ

**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
  - TCM connector
  - Harness connector F102
  - Harness connector M82

**OK or NG**

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

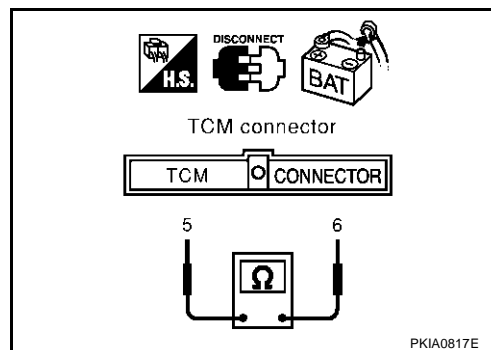
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Approx. 54 - 66Ω**

**OK or NG**

- OK >> Replace TCM.  
 NG >> Repair harness between TCM and low tire pressure warning control unit.

**Low Tire Pressure Warning Control Unit Circuit Check**

AKS006VK

**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of low tire pressure warning control unit for damage, bend and loose connection (control unit side and harness side).

**OK or NG**

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

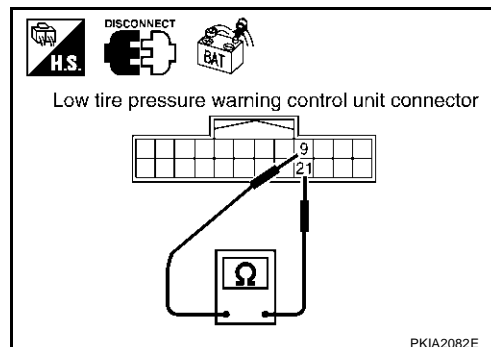
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect low tire pressure warning control unit connector.
2. Check resistance between low tire pressure warning control unit harness connector M81 terminals 9 (L) and 21 (Y).

**9 (L) - 21 (Y) : Approx. 54 - 66Ω**

**OK or NG**

- OK >> Replace low tire pressure warning control unit.  
 NG >> Repair harness between low tire pressure warning control unit and TCM.



## Display Control Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display control unit for damage, bend and loose connection (control unit side and harness side).

#### OK or NG

- OK >> GO TO 2.  
NG >> Repair terminal or connector.

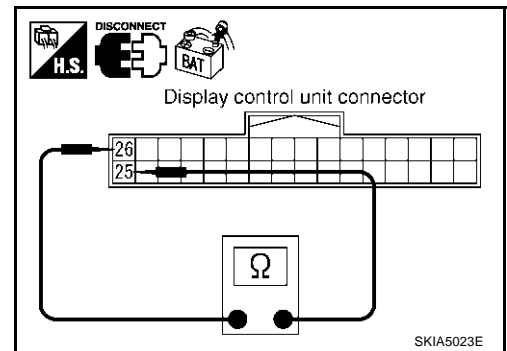
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect display control unit connector.
2. Check resistance between display control unit harness connector M43 terminals 25 (L) and 26 (Y).

**25 (L) - 26 (Y) : Approx. 54 - 66Ω**

#### OK or NG

- OK >> Replace display control unit.  
NG >> Repair harness between display control unit and data link connector.



AKS006VM

## Data Link Connector Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

#### OK or NG

- OK >> GO TO 2.  
NG >> Repair terminal or connector.

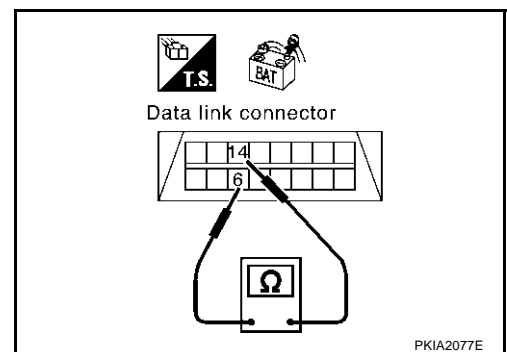
### 2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Approx. 54 - 66Ω**

#### OK or NG

- OK >> Diagnose again. Refer to [LAN-428, "Work Flow"](#).  
NG >> Repair harness between data link connector and BCM.



**BCM Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

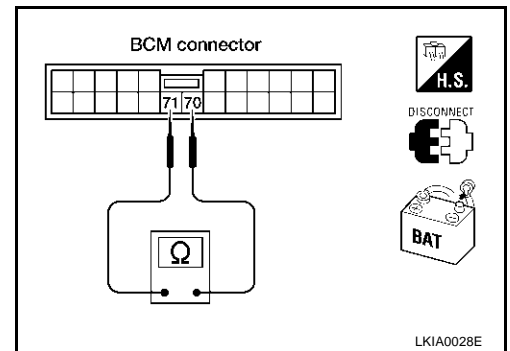
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M37 terminals 70 (L) and 71 (Y).

**70 (L) - 71 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace BCM. Refer to [BCS-36, "Removal and Installation of BCM"](#) .  
 NG >> Repair harness between BCM and data link connector.

**Unified Meter and A/C Amp. Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

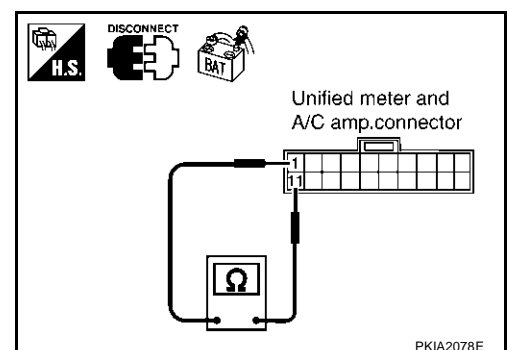
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

**1 (L) - 11 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace unified meter and A/C amp.  
 NG >> Repair harness between unified meter and A/C amp. and data link connector.



## Steering Angle Sensor Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of steering angle sensor for damage, bend and loose connection (sensor side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

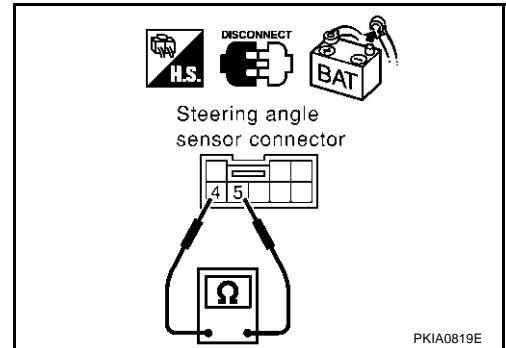
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M33 terminals 4 (L) and 5 (Y).

**4 (L) - 5 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace steering angle sensor.  
 NG >> Repair harness between steering angle sensor and data link connector.



## ABS Actuator and Electric Unit (Control Unit) Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

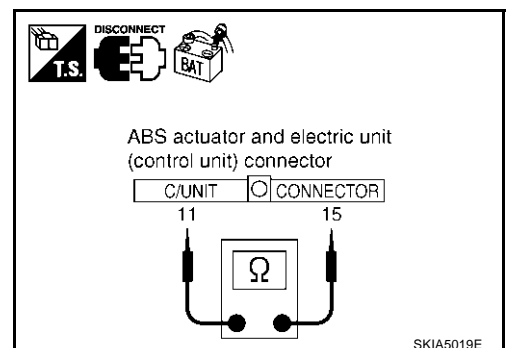
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

**11 (L) - 15 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).  
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



**IPDM E/R Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

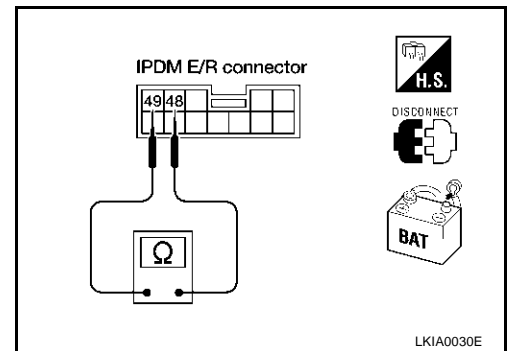
- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y)****: Approx. 108 - 132Ω**OK or NG

- OK >> Replace IPDM E/R.  
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).

**CAN Communication Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, meter side, sensor side and harness side).

- ECM
- TCM
- Low tire pressure warning control unit
- Display control unit
- BCM
- Unified meter and A/C amp.
- Steering angle sensor
- ABS actuator and electric unit (control unit)
- IPDM E/R
- Between ECM and IPDM E/R
- Between ECM and TCM

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
  - ECM connector
  - Low tire pressure warning control unit connector
  - Harness connector M82
  - Display control unit connector
  - BCM connector
  - Unified meter and A/C amp. connector
  - Steering angle sensor connector
  - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

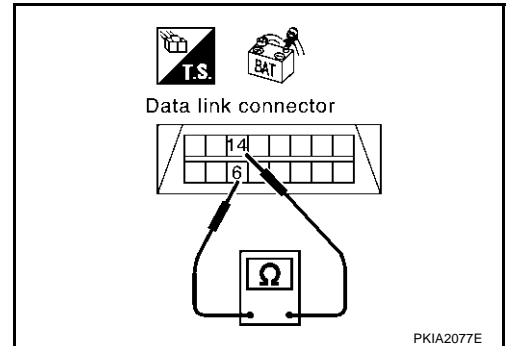
**6 (L) - 14 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 3.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M9.



## 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

**6 (L) - Ground : Continuity should not exist.**

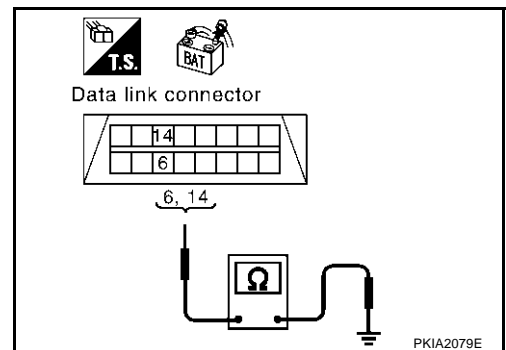
**14 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M9.





**4. CHECK HARNESS FOR SHORT CIRCUIT**

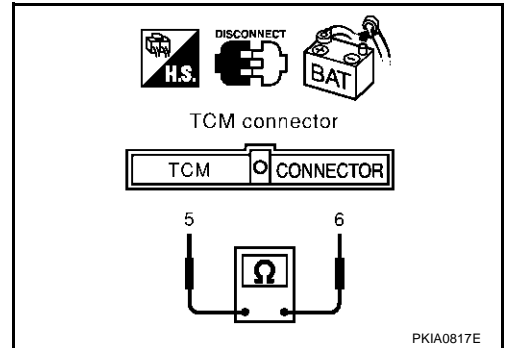
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 5.

NG >> Repair harness between TCM and harness connector F102.



**5. CHECK HARNESS FOR SHORT CIRCUIT**

Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

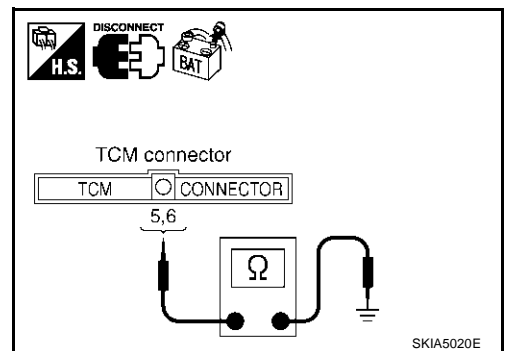
**5 (L) - Ground : Continuity should not exist.**

**6 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 6.

NG >> Repair harness between TCM and harness connector F102.



**6. CHECK HARNESS FOR SHORT CIRCUIT**

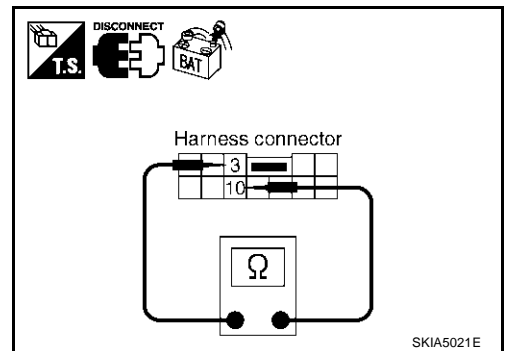
1. Disconnect harness connector B4.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

**3 (L) - 10 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 7.

NG >> Repair harness between harness connector B4 and harness connector B2.



**7. CHECK HARNESS FOR SHORT CIRCUIT**

Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

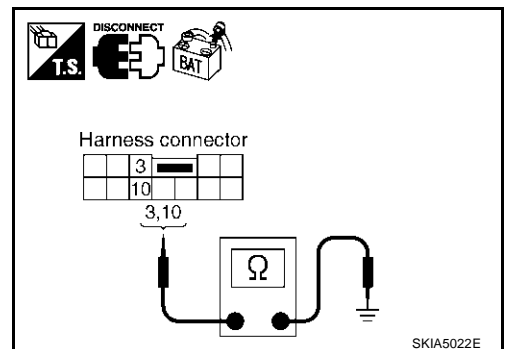
**3 (L) - Ground : Continuity should not exist.**

**10 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 8.

NG >> Repair harness between harness connector B4 and harness connector B2.



## 8. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

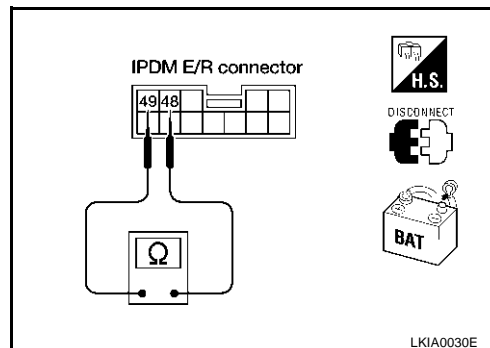
**48 (L) - 49 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 9.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

**48 (L) - Ground : Continuity should not exist.**

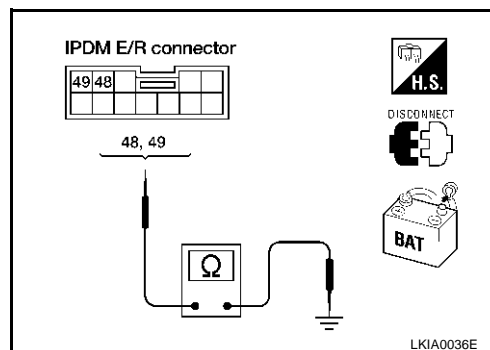
**49 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 10.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 10. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-454, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-428, "Work Flow"](#).

NG >> Replace ECM and/or IPDM E/R.

### IPDM E/R Ignition Relay Circuit Check

AKS006VT

Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-45, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#).

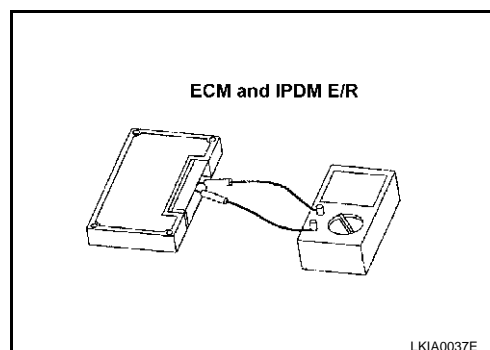
### Component Inspection

#### ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

AKS006VU

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



## CAN SYSTEM (TYPE 14)

PF:23710

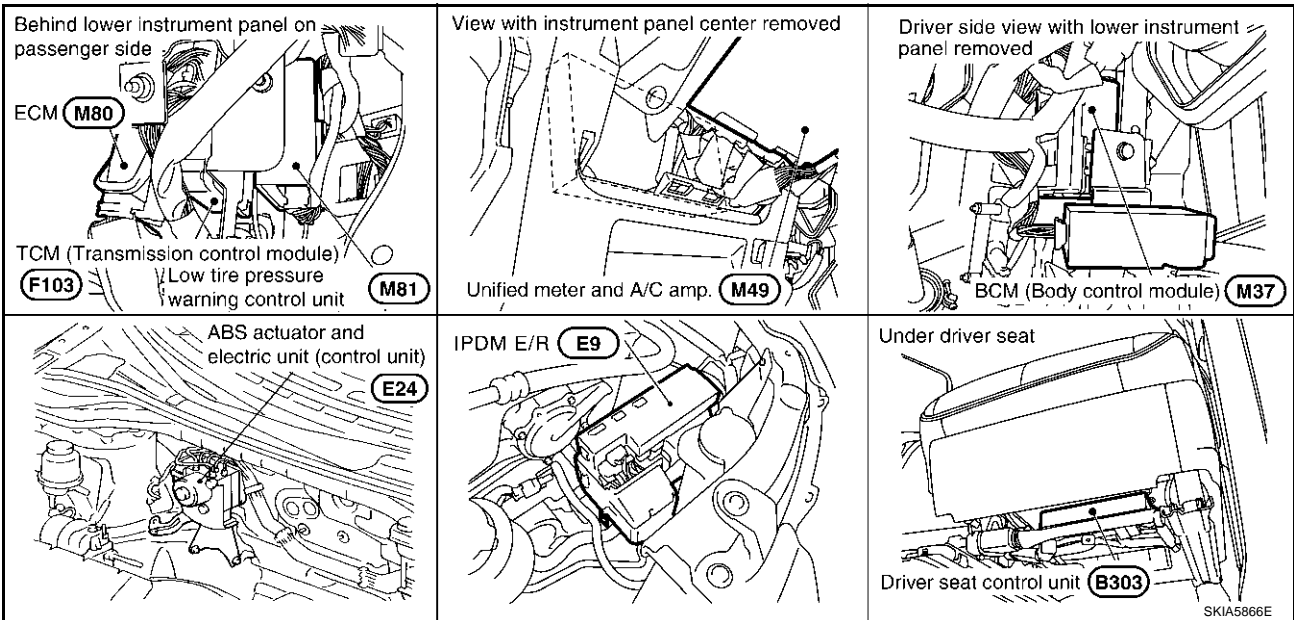
### System Description

AKS006VV

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

### Component Parts and Harness Connector Location

AKS006VV



A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
L  
M

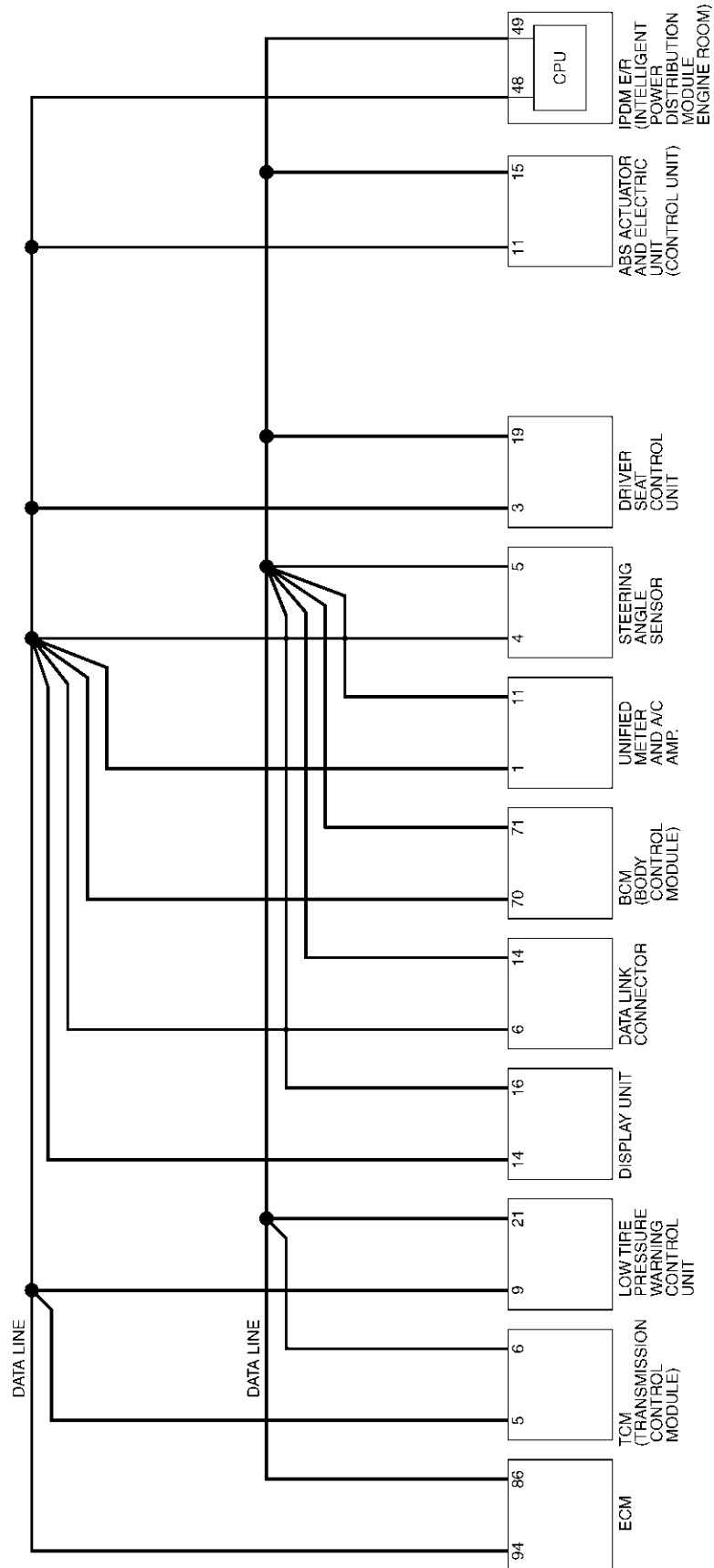
LAN

# CAN SYSTEM (TYPE 14)

[CAN]

## Schematic

AKS006VX



TKWA0975E

# CAN SYSTEM (TYPE 14)

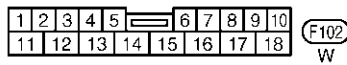
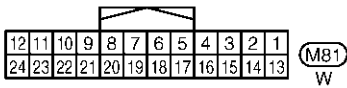
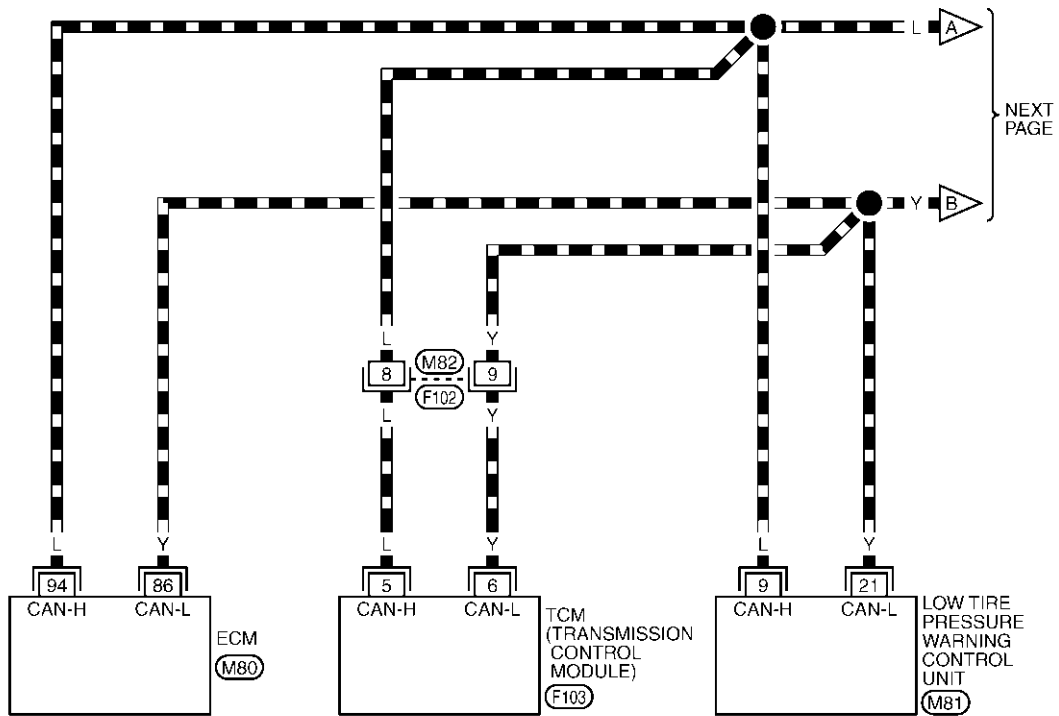
[CAN]

## Wiring Diagram - CAN -

AKS006VY

### LAN-CAN-40

▬ : DATA LINE

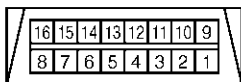
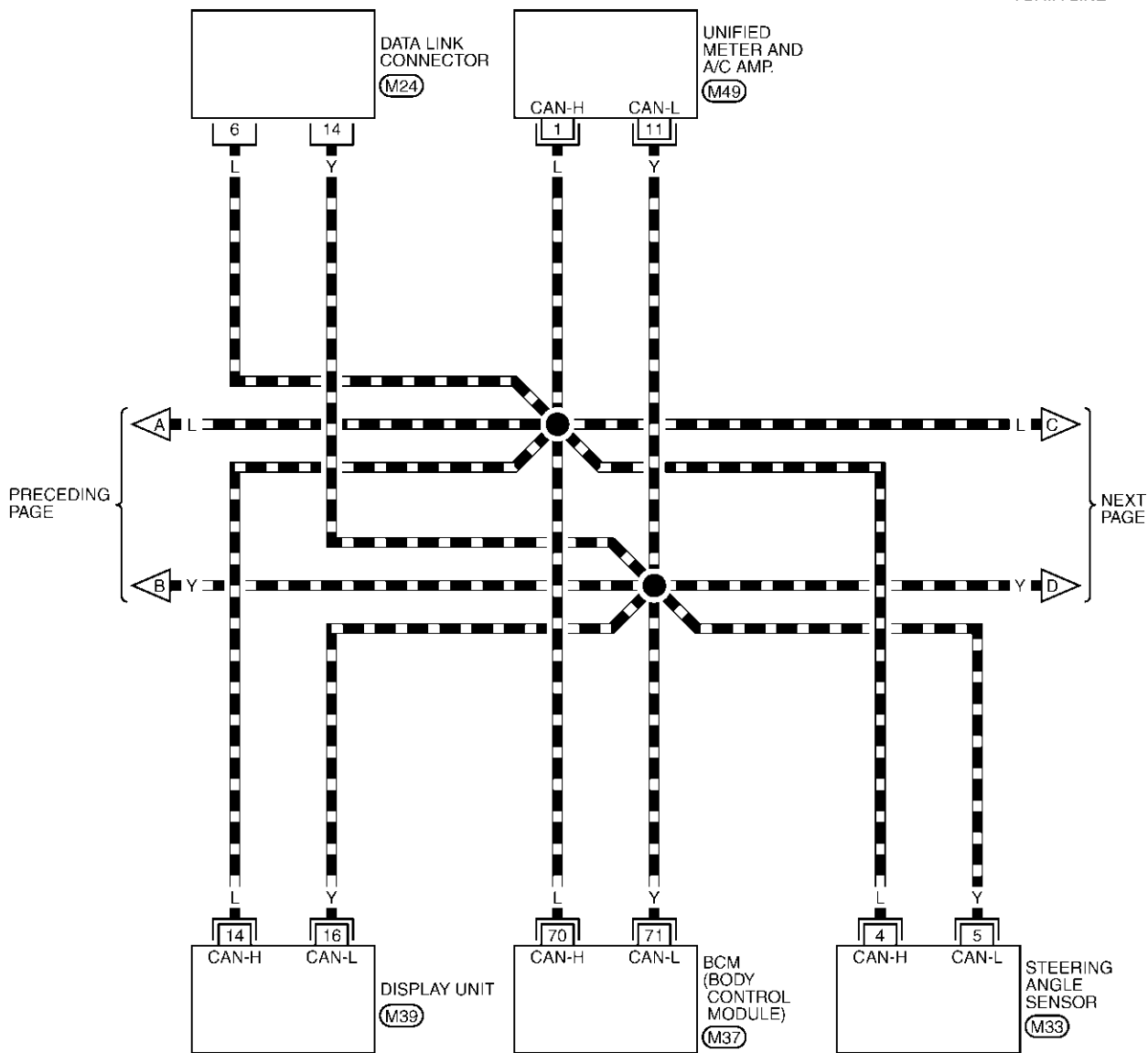


REFER TO THE FOLLOWING.  
 (M80), (F103) -ELECTRICAL UNITS

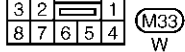
TKWA0976E

LAN-CAN-41

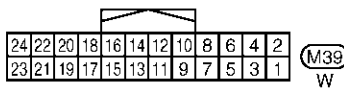
▬ : DATA LINE



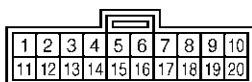
(M24)  
W



(M33)  
W



(M39)  
W



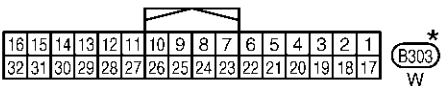
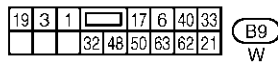
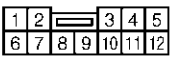
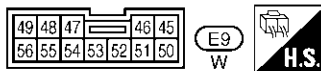
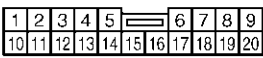
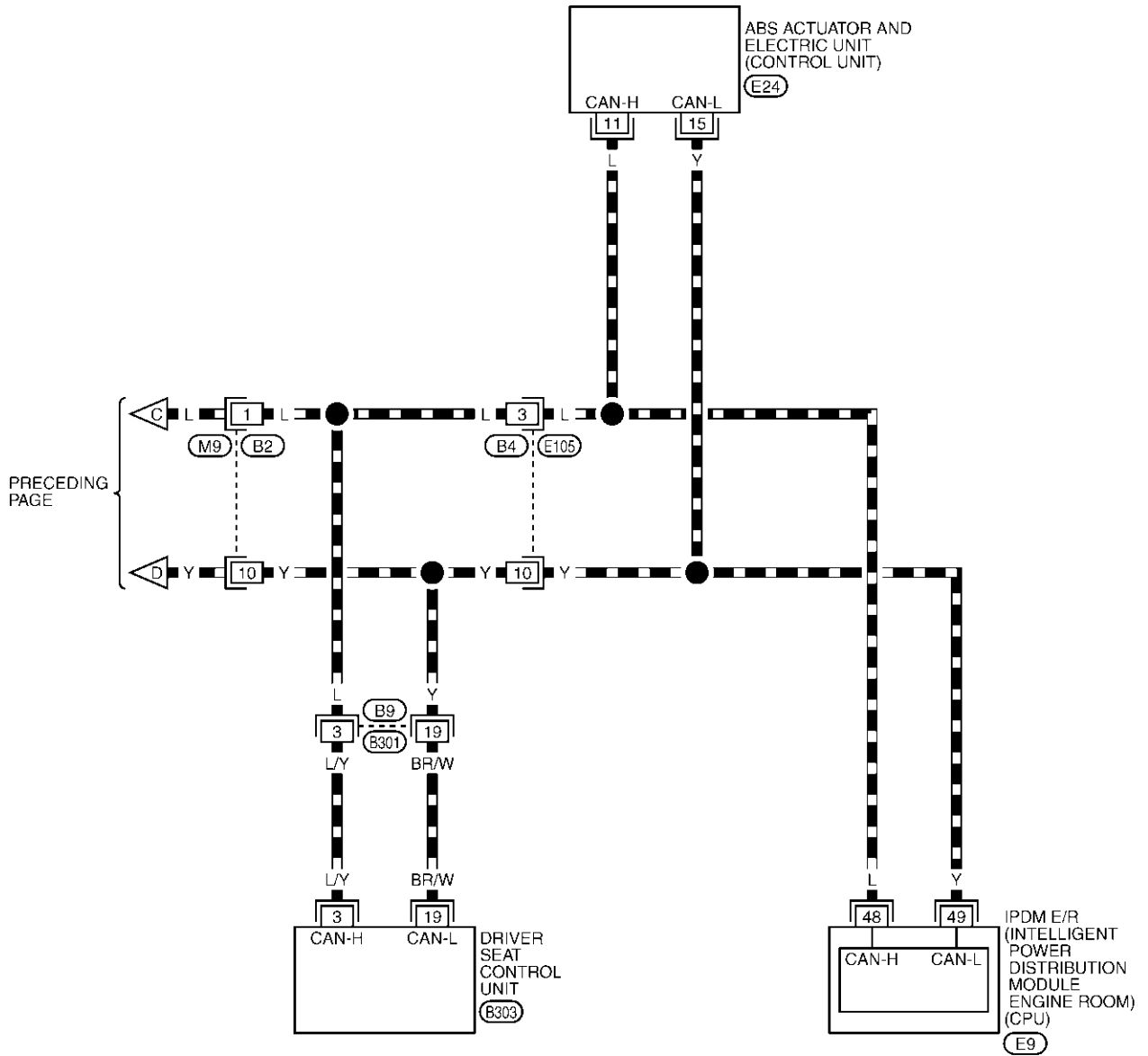
(M49)  
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REFER TO THE FOLLOWING.  
(M37) -ELECTRICAL UNITS

## LAN-CAN-42

▬ : DATA LINE



\*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

REFER TO THE FOLLOWING.  
E24 -ELECTRICAL UNITS

# CAN SYSTEM (TYPE 14)

[CAN]

## Work Flow

AKS00C58

- When there are no indications of "TRANSMISSION", "AIR PRESSURE MONITOR", "METER A/C AMP" or "AUTO DRIVE POS." on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".

(Example)

NISSAN	
CONSULT-II	
ENGINE	
START (NISSAN BASED VHCL)	
START (RENAULT BASED VHCL)	
SUB MODE	
	LIGHT COPY

SELECT SYSTEM			
ENGINE			
A/T			
ABS			
AIR BAG			
BCM			
METER A/C AMP			
	BACK	LIGHT	COPY

PKIA2093E

- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "AUTO DRIVE POS." and "ABS" displayed on CONSULT-II.

(Example)

SELECT DIAG MODE	
WORK SUPPORT	
SELF-DIAG RESULTS	
DATA MONITOR	
DATA MONITOR (SPEC)	
CAN DIAG SUPPORT MNTR	
ACTIVE TEST	
Scroll Down	
	BACK LIGHT COPY

SELF-DIAG RESULTS	
DTC RESULTS TIME	
CAN COMM CIRCUIT [U1000]	0
F.F. DATA	
ERASE	PRINT
MODE BACK	LIGHT COPY

PKIA8260E

- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "AUTO DRIVE POS." and "ABS" displayed on CONSULT-II.

(Example)

SELECT DIAG MODE	
WORK SUPPORT	
SELF-DIAG RESULTS	
DATA MONITOR	
DATA MONITOR (SPEC)	
CAN DIAG SUPPORT MNTR	
ACTIVE TEST	
Scroll Down	
	BACK LIGHT COPY

CAN DIAG SUPPORT MNTR	
ENGINE	
	PRSENT
INITIAL DIAG	OK
TRANSMIT DIAG	OK
TCM	OK
VDC/TCS/ABS	OK
METER/M&A	OK
ICC	UNKWKN
BCM/SEC	OK
IPDM E/R	OK
AWD/4WD/e4WD	UNKWKN
PRINT	Scroll Down
MODE BACK	LIGHT COPY

PKIA8343E

- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-462, "CHECK SHEET"](#).
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "v" onto the items with "No indication", "NG", or "UNKWKN" in the check sheet table. Refer to [LAN-462, "CHECK SHEET"](#).

**NOTE:**

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual. So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the integrated display system. Refer to [AV-110, "CAN Communication Line Check"](#).
- Attach the CAN DIAG MONITOR check sheet onto the check sheet. Refer to [LAN-462, "CHECK SHEET"](#).



# CAN SYSTEM (TYPE 14)

[CAN]

8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG MONITOR check sheet. Refer to [LAN-462, "CHECK SHEET"](#) .

**NOTE:**

If "NG" is displayed on "CAN COMM" as "CAN DIAG MNTR" for the diagnosed control unit, replace the control unit. Refer to [AV-110, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-464, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

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LAN

# CAN SYSTEM (TYPE 14)

[CAN]

## CHECK SHEET

**NOTE:**

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

Attach copy of  
display unit  
CAN DIAG MONITOR check sheet

PKIB0657E

# CAN SYSTEM (TYPE 14)

[CAN]

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Attach copy of  
ENGINE  
SELF-DIAG RESULTS

Attach copy of  
TRANSMISSION  
SELF-DIAG RESULTS

Attach copy of  
AIR PRESSURE  
MONITOR  
SELF-DIAG RESULTS

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
METER A/C AMP  
SELF-DIAG RESULTS

Attach copy of  
AUTO DRIVE POS.  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

Attach copy of  
ENGINE  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
TRANSMISSION  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
AIR PRESSURE  
MONITOR  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
BCM  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
METER A/C AMP  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
AUTO DRIVE POS.  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ABS  
CAN DIAG SUPPORT  
MNTR

PKIB0498E

## CHECK SHEET RESULTS (EXAMPLE)

**NOTE:**

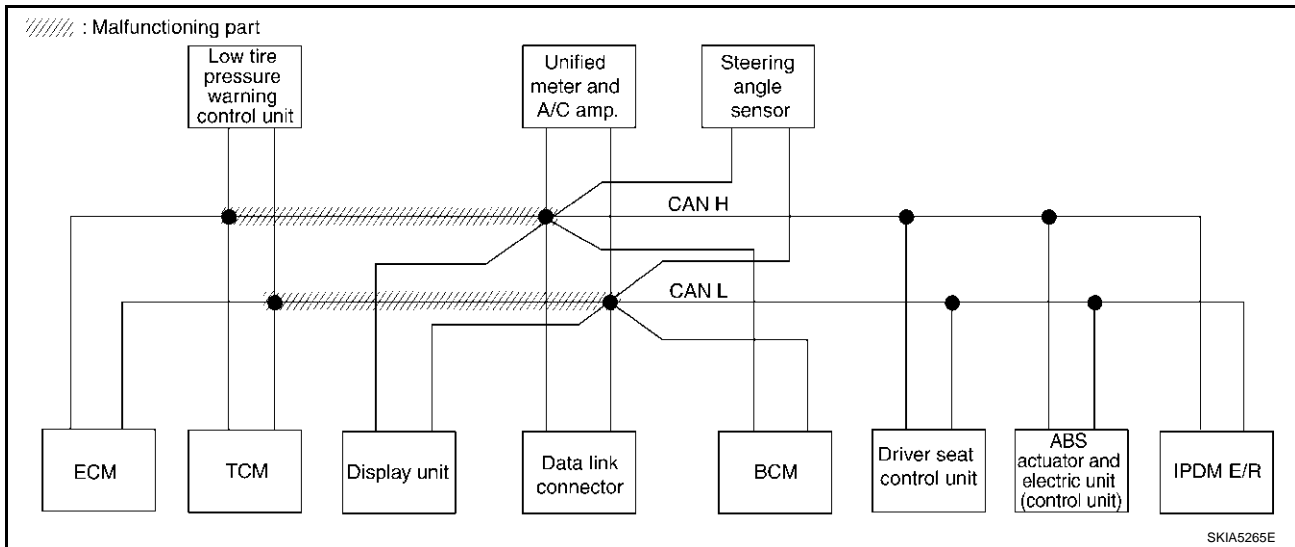
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

**Case 1**

Check harness between TCM and data link connector. Refer to [LAN-479, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN ✓	UNKWN ✓	—	UNKWN ✓	UNKWN ✓
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3 ✓	—	CAN 6 ✓	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN ✓	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN ✓	UNKWN ✓	UNKWN ✓	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN ✓	—	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN ✓	—	—	—	—	UNKWN	—	—

PKIB0658E



# CAN SYSTEM (TYPE 14)

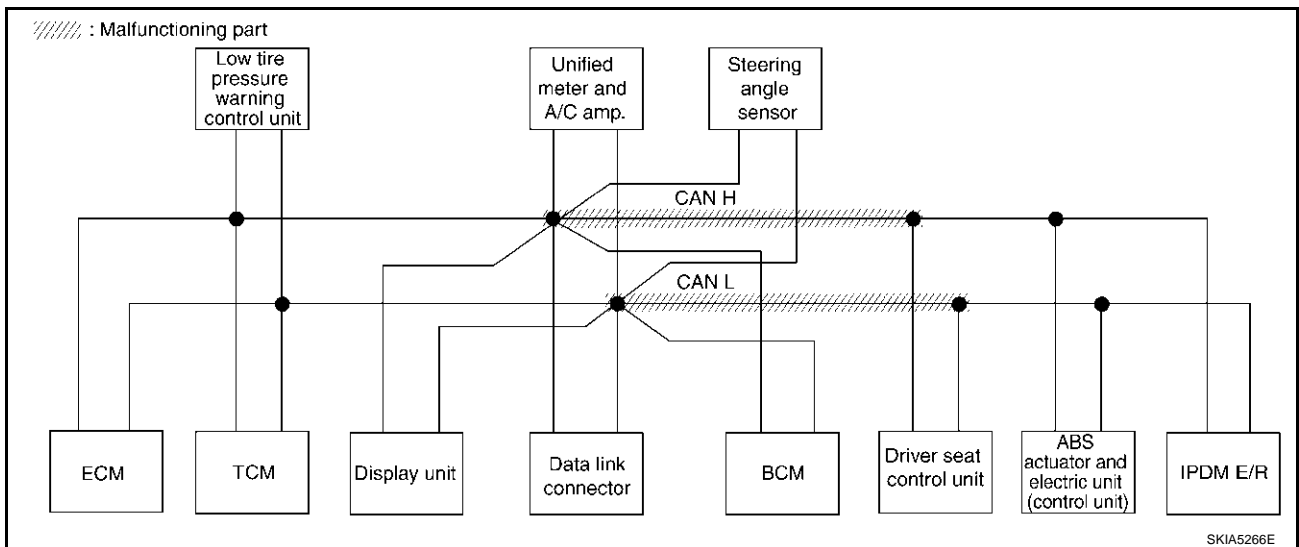
[CAN]

## Case 2

Check harness between data link connector and driver seat control unit. Refer to [LAN-479, "Circuit Check Between Data Link Connector and Driver Seat Control Unit"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	

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# CAN SYSTEM (TYPE 14)

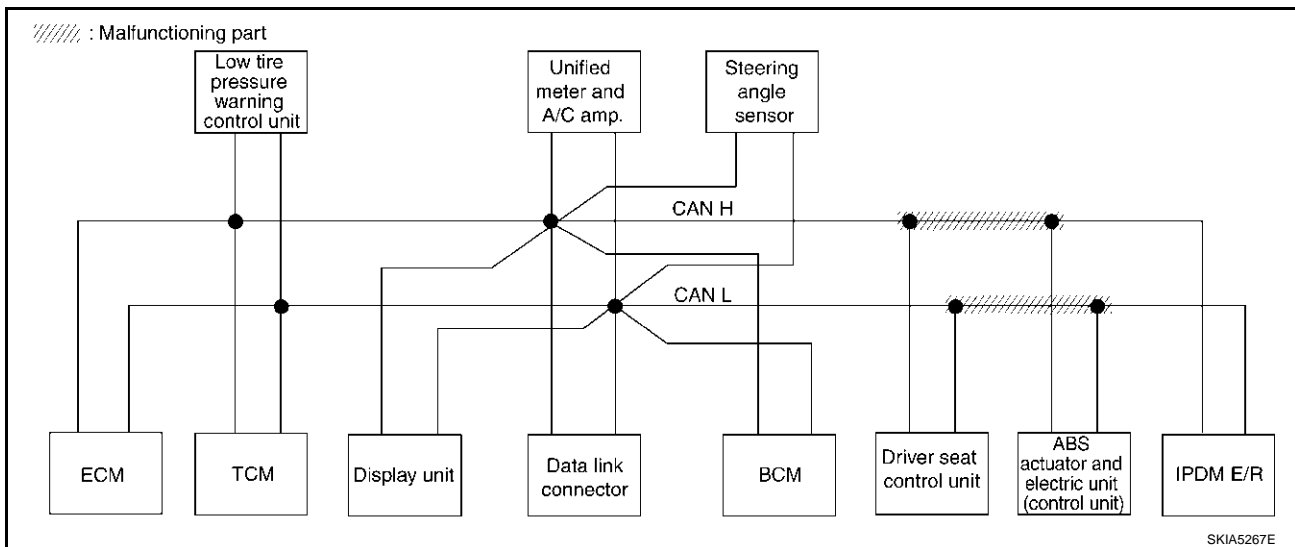
[CAN]

## Case 3

Check harness between driver seat control unit and ABS actuator and electric unit (control unit). Refer to [LAN-480, "Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit \(Control Unit\)"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	

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# CAN SYSTEM (TYPE 14)

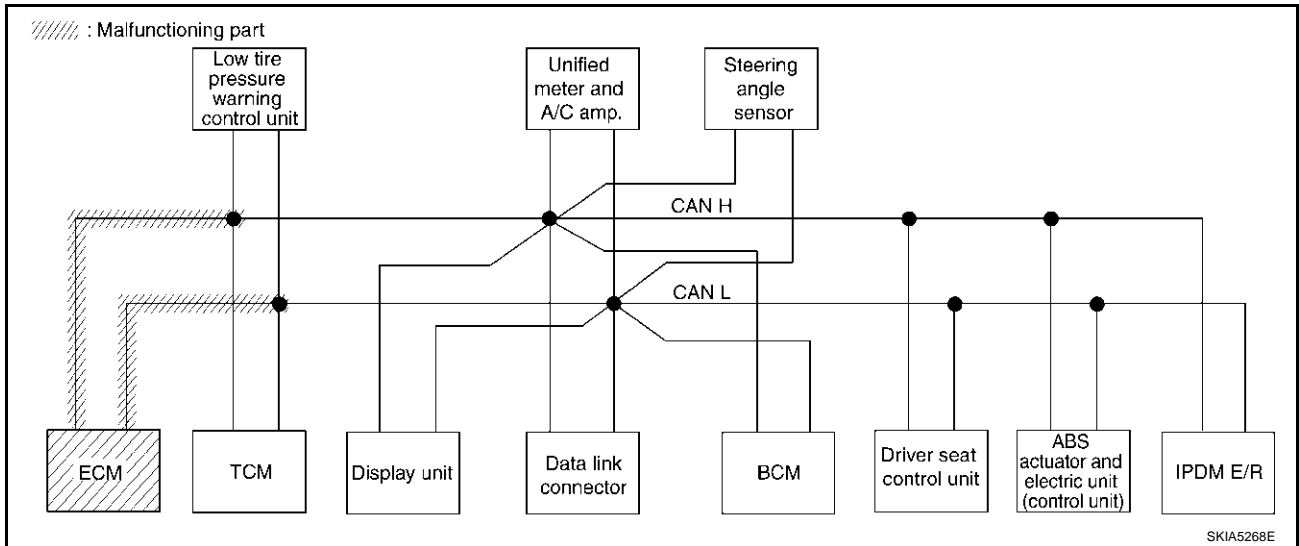
[CAN]

## Case 4

Check ECM circuit. Refer to [LAN-481, "ECM Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N
TRANSMISSION	No indication	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	—	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—
AIR PRESSURE MONITOR	No indication	NG	UNKW <sup>✓</sup> N	—	—	—	—	—	UNKW <sup>✓</sup> N	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	—	UNKW <sup>✓</sup> N	—	—	UNKW <sup>✓</sup> N
METER A/C AMP	No indication	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	UNKW <sup>✓</sup> N	—
AUTO DRIVE POS.	No indication	NG	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—
ABS	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	—	UNKW <sup>✓</sup> N	—	—

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# CAN SYSTEM (TYPE 14)

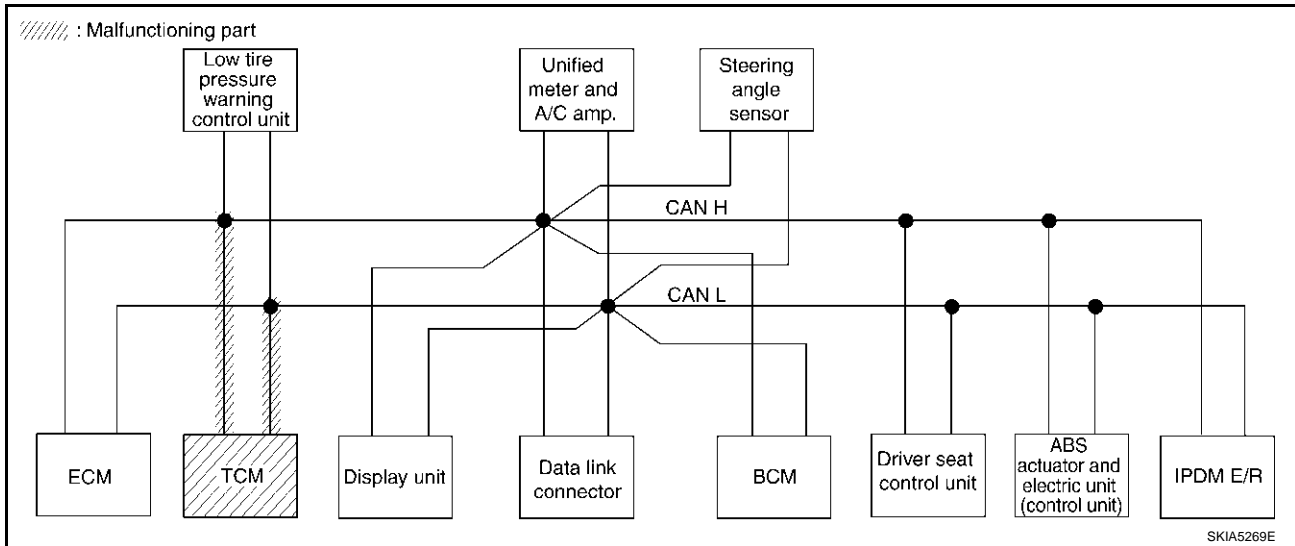
[CAN]

## Case 5

Check TCM circuit. Refer to [LAN-481, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	

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# CAN SYSTEM (TYPE 14)

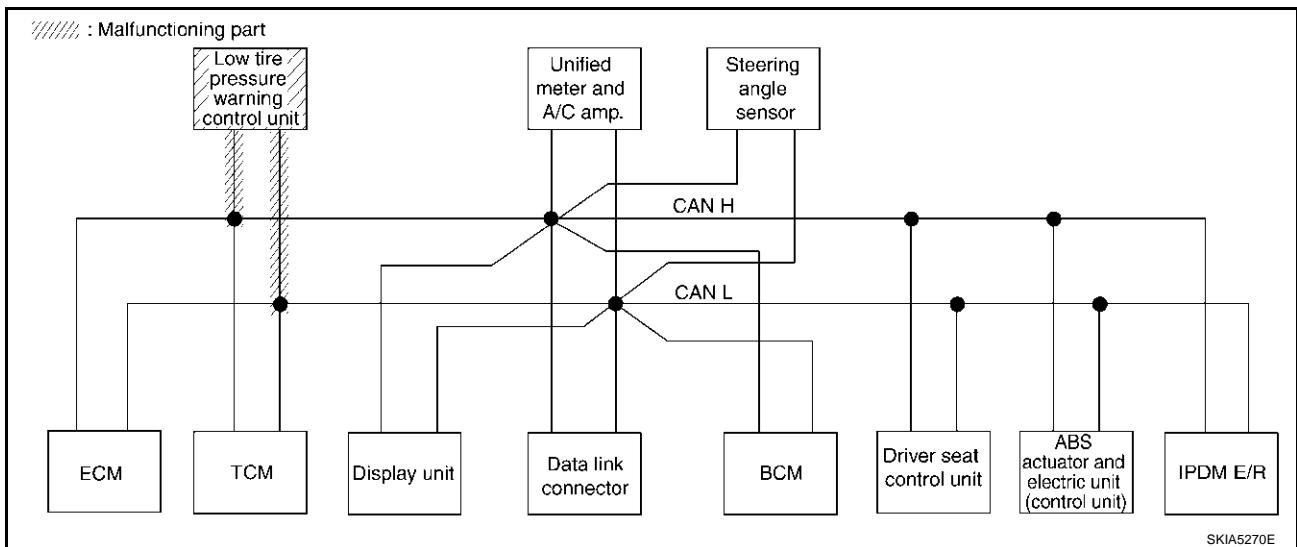
[CAN]

## Case 6

Check low tire pressure warning control unit circuit. Refer to [LAN-482, "Low Tire Pressure Warning Control Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	

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# CAN SYSTEM (TYPE 14)

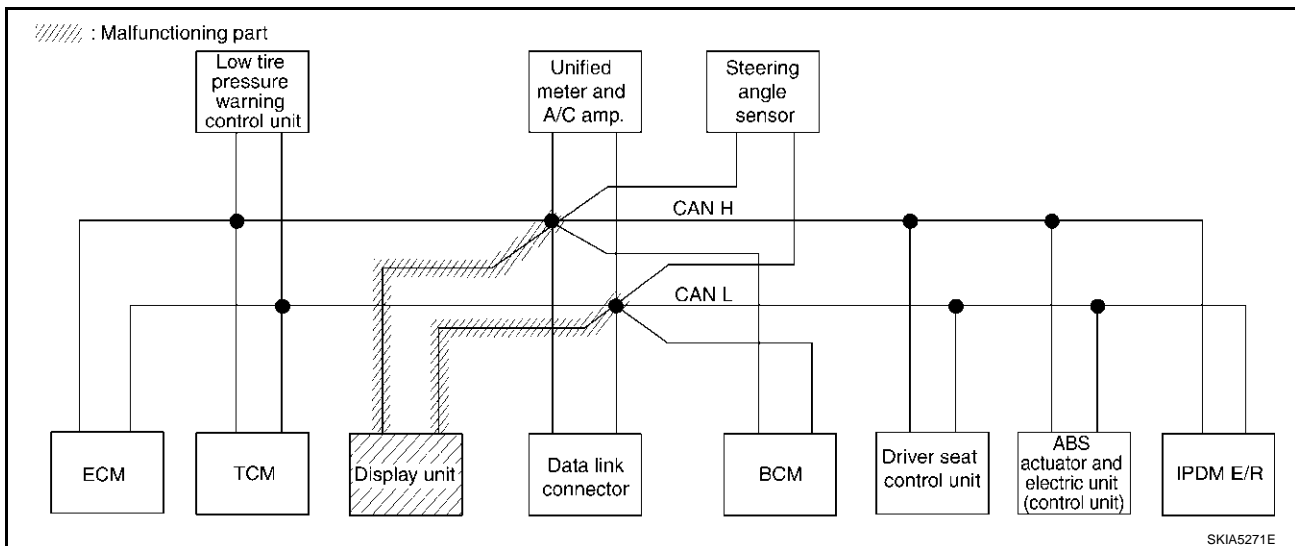
[CAN]

## Case 7

Check display unit circuit. Refer to [LAN-482, "Display Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	

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# CAN SYSTEM (TYPE 14)

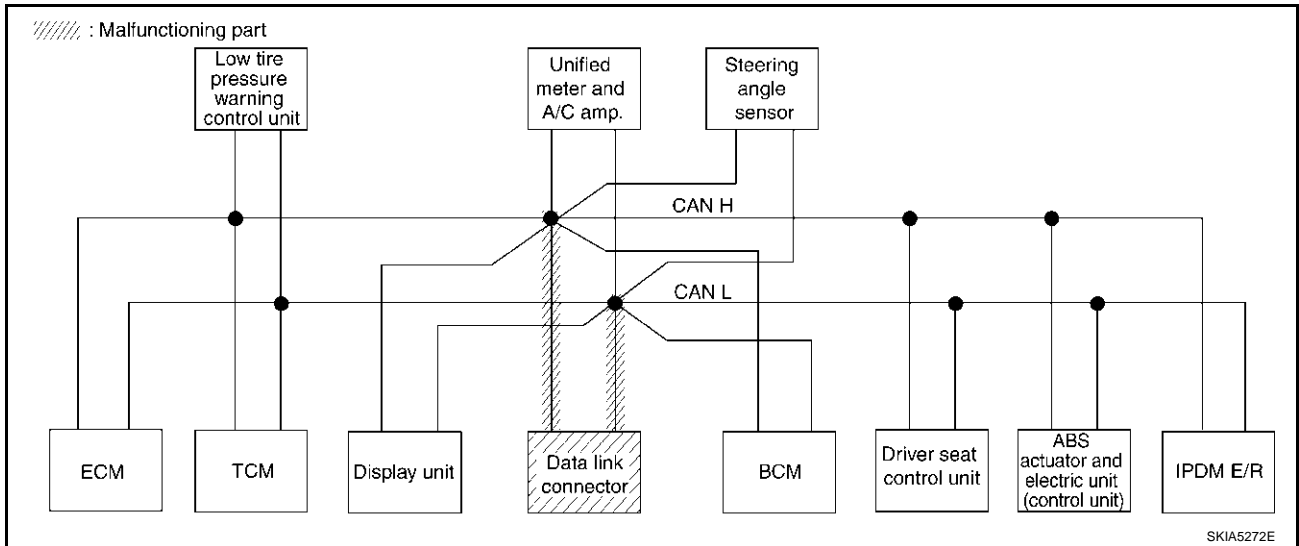
[CAN]

## Case 8

Check data link connector circuit. Refer to [LAN-483, "Data Link Connector Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

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# CAN SYSTEM (TYPE 14)

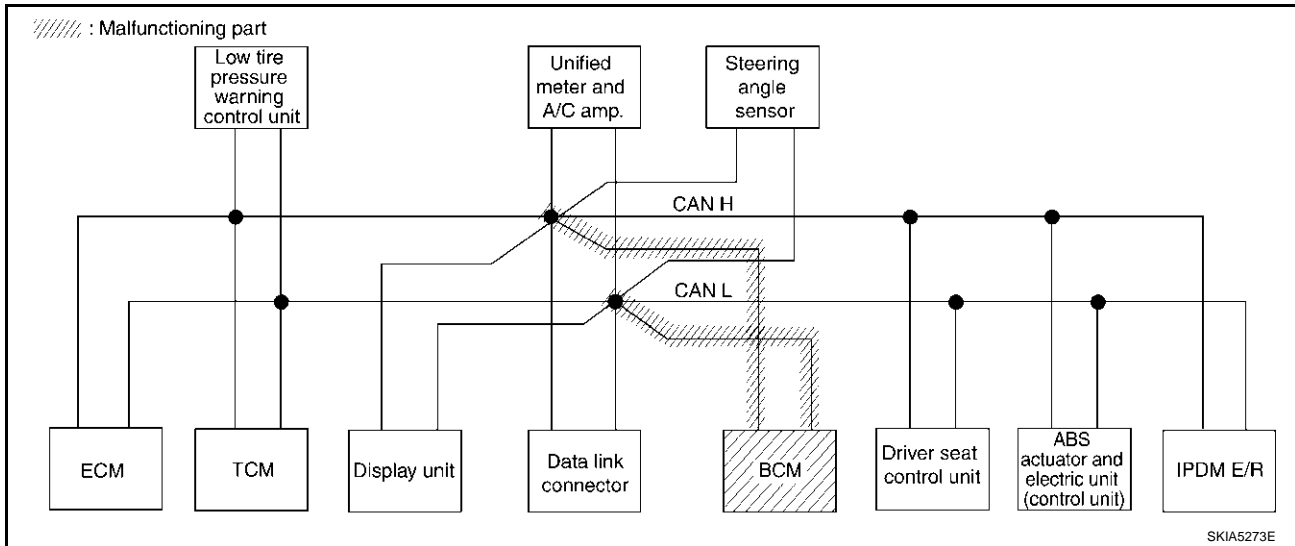
[CAN]

## Case 9

Check BCM circuit. Refer to [LAN-483, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

PKIB0666E



# CAN SYSTEM (TYPE 14)

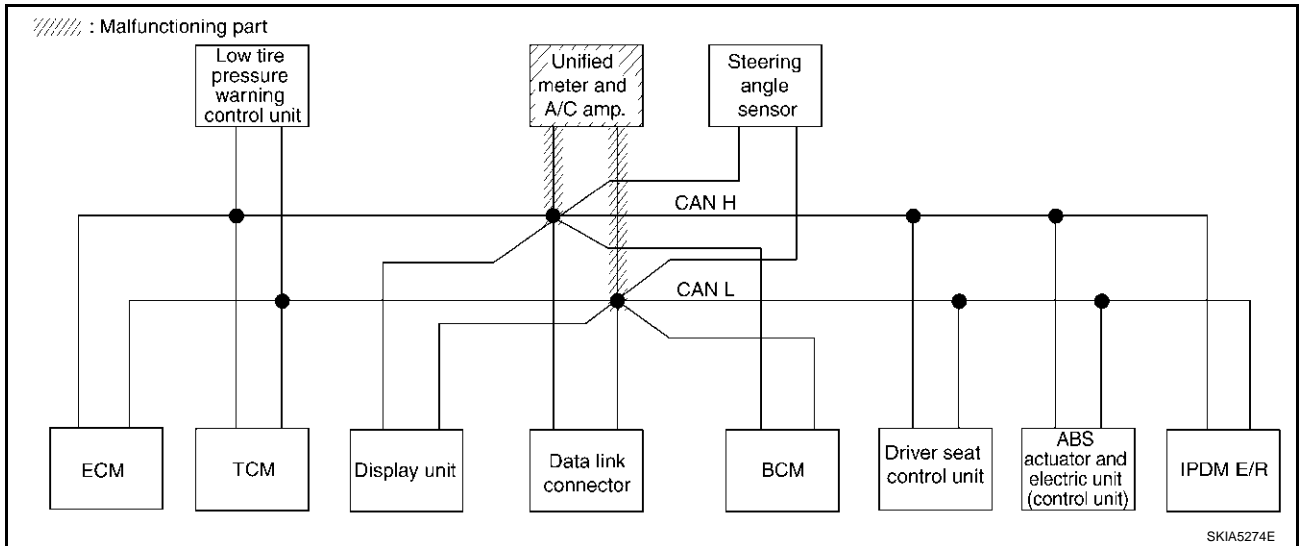
[CAN]

## Case 10

Check unified meter and A/C amp. circuit. Refer to [LAN-484, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UN <del>✓</del> WN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UN <del>✓</del> WN	—	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UN <del>✓</del> WN	—	—	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UN <del>✓</del> WN	—	—	UNKWN	
METER A/C AMP	No indication <del>✓</del>	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UN <del>✓</del> WN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	

PKIB0667E



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# CAN SYSTEM (TYPE 14)

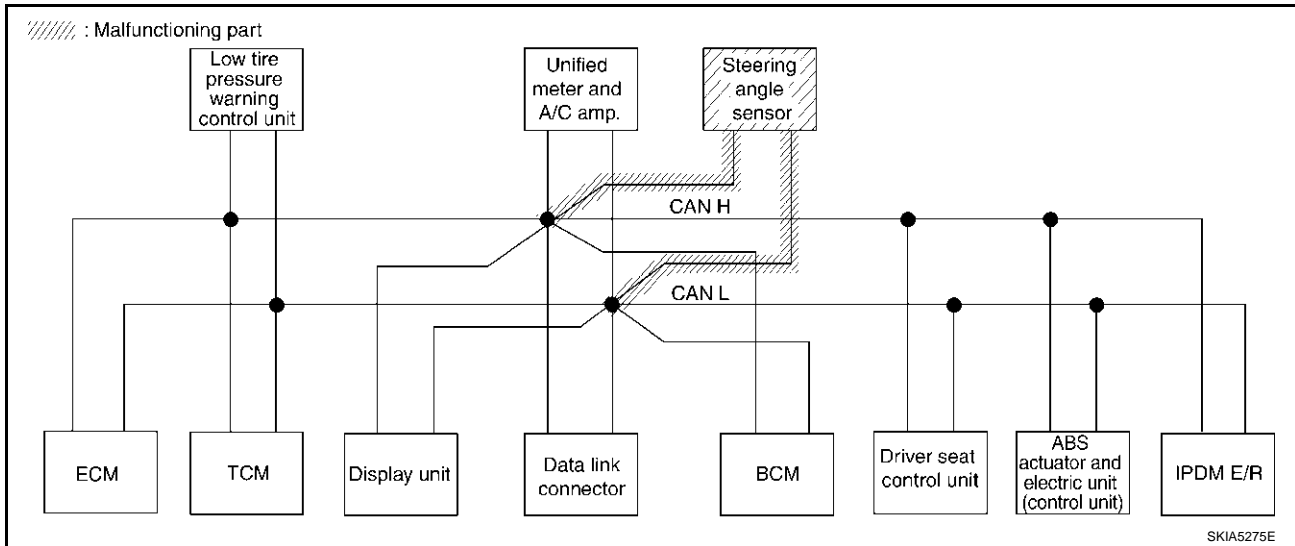
[CAN]

## Case 11

Check steering angle sensor circuit. Refer to [LAN-484, "Steering Angle Sensor Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

PKIB0668E



# CAN SYSTEM (TYPE 14)

[CAN]

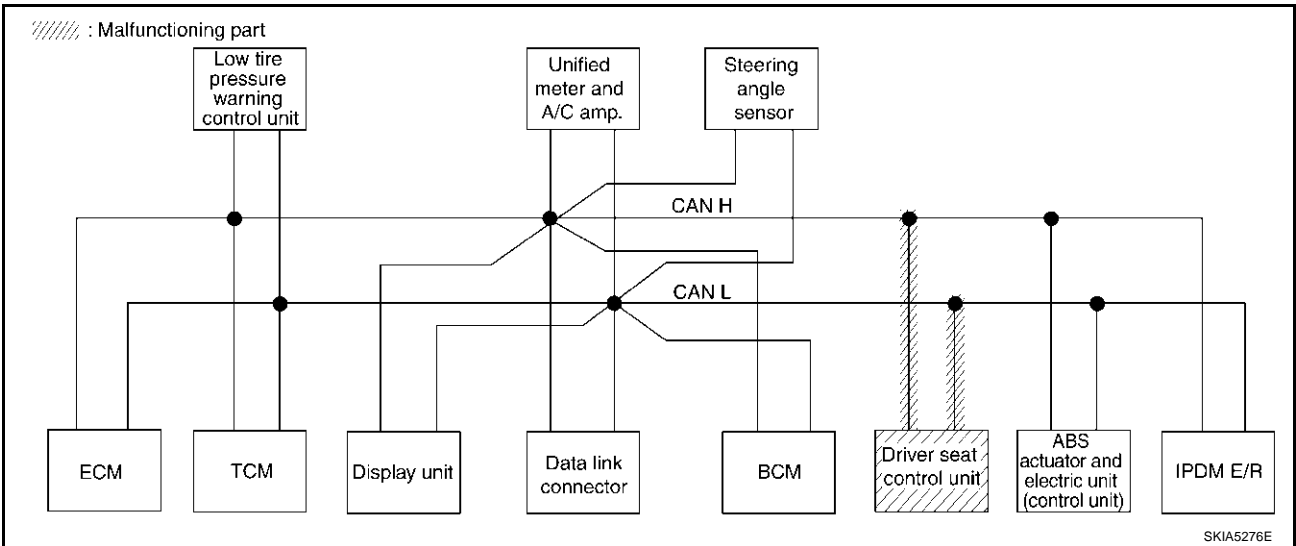
## Case 12

Check driver seat control unit circuit. Refer to [LAN-485, "Driver Seat Control Unit Circuit Check"](#).

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SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

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# CAN SYSTEM (TYPE 14)

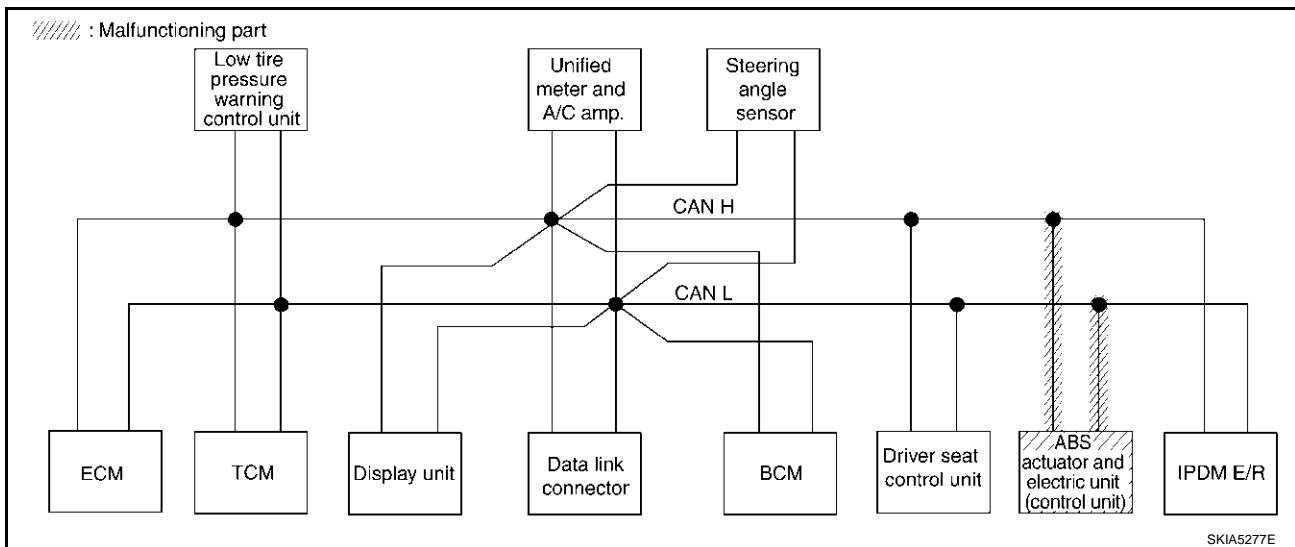
[CAN]

## Case 13

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-485, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	

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# CAN SYSTEM (TYPE 14)

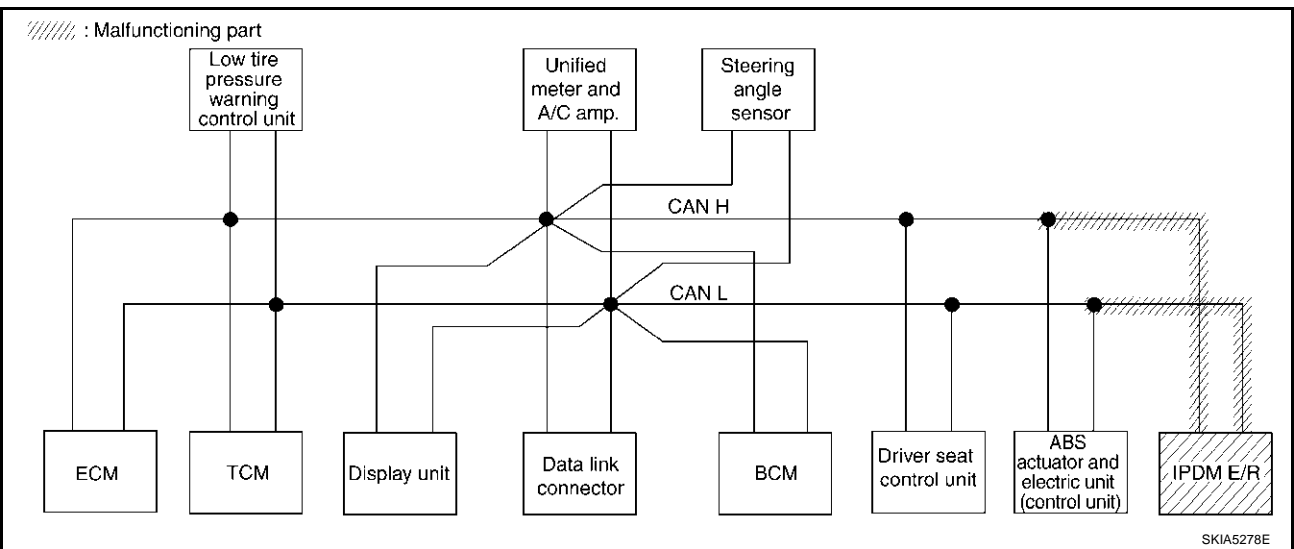
[CAN]

## Case 14

Check IPDM E/R circuit. Refer to [LAN-486, "IPDM E/R Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	

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## Case 15

Check CAN communication circuit. Refer to [LAN-487, "CAN Communication Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	

PKIB0672E

# CAN SYSTEM (TYPE 14)

[CAN]

## Case 16

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-491, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	

PKIB0673E

## Case 17

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-491, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	

PKIB0674E

## Circuit Check Between TCM and Data Link Connector

AKS006W0

### 1. CHECK HARNESS FOR OPEN CIRCUIT

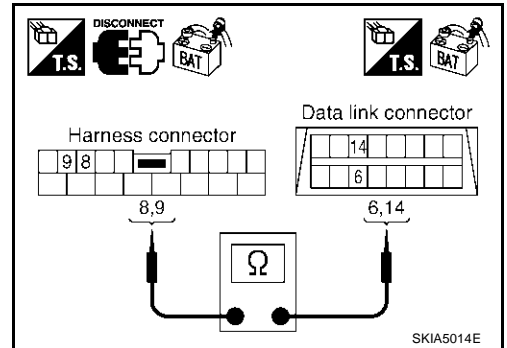
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

**8 (L) - 6 (L) : Continuity should exist.**

**9 (Y) - 14 (Y) : Continuity should exist.**

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-460, "Work Flow"](#).
- NG >> Repair harness.



## Circuit Check Between Data Link Connector and Driver Seat Control Unit

AKS006W1

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).

- Harness connector M9
- Harness connector B2

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

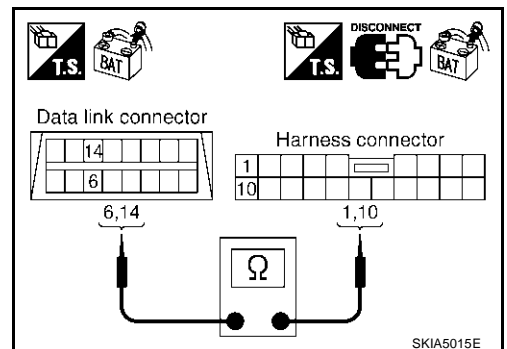
1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

**6 (L) - 1 (L) : Continuity should exist.**

**14 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



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LAN

### 3. CHECK HARNESS FOR OPEN CIRCUIT

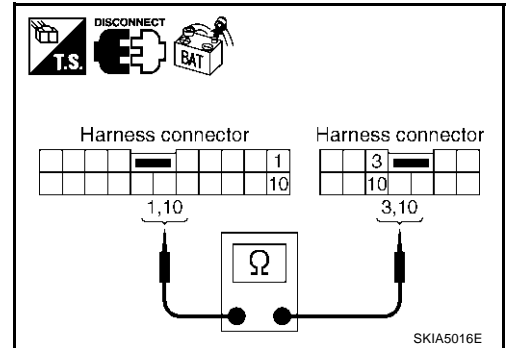
1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-460, "Work Flow"](#).
- NG >> Repair harness.



### Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit)

AKS006W2

#### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector B4
  - Harness connector E105

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

#### 2. CHECK HARNESS FOR OPEN CIRCUIT

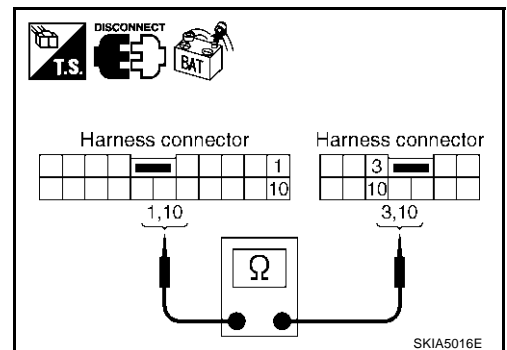
1. Disconnect harness connector B2 and harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



### 3. CHECK HARNESS FOR OPEN CIRCUIT

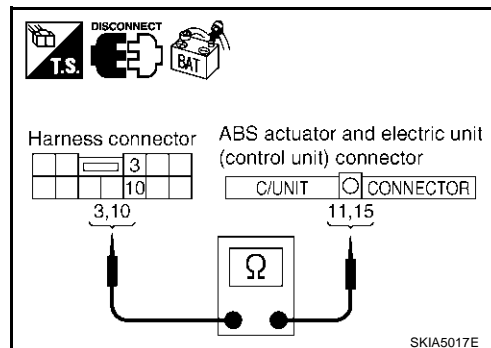
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

**3 (L) - 11 (L) : Continuity should exist.**

**10 (Y) - 15 (Y) : Continuity should exist.**

#### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-460, "Work Flow"](#).
- NG >> Repair harness.



SKIA5017E

AKS006W3

## ECM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

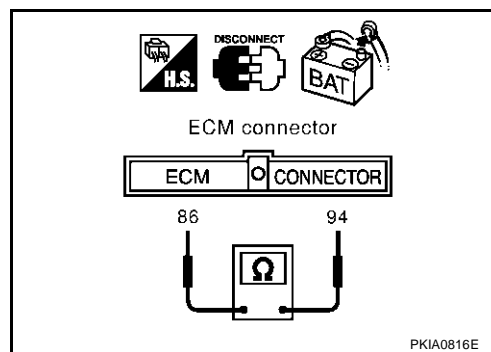
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

**94 (L) - 86 (Y) : Approx. 108 - 132Ω**

#### OK or NG

- OK >> Replace ECM.
- NG >> Repair harness between ECM and TCM.



PKIA0816E

AKS006W4

## TCM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
  - TCM connector
  - Harness connector F102
  - Harness connector M82

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

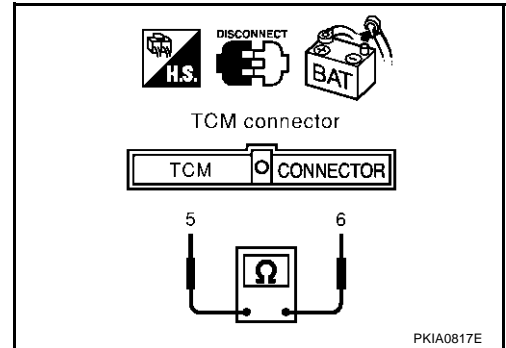
1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace TCM.  
 NG >> Repair harness between TCM and low tire pressure warning control unit.



## Low Tire Pressure Warning Control Unit Circuit Check

AKS006W5

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of low tire pressure warning control unit for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

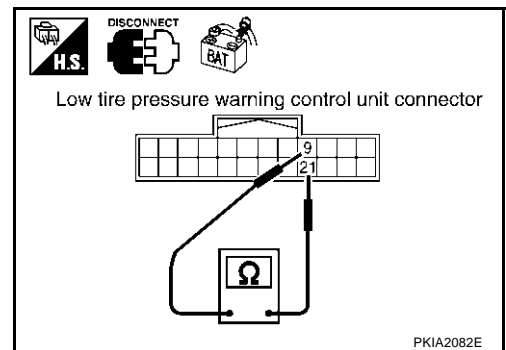
1. Disconnect low tire pressure warning control unit connector.
2. Check resistance between low tire pressure warning control unit harness connector M81 terminals 9 (L) and 21 (Y).

**9 (L) - 21 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace low tire pressure warning control unit.  
 NG >> Repair harness between low tire pressure warning control unit and TCM.



## Display Unit Circuit Check

AKS006W6

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display unit for damage, bend and loose connection (unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

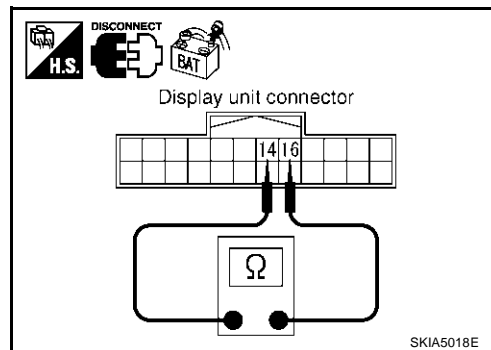
1. Disconnect display unit connector.
2. Check resistance between display unit harness connector M39 terminals 14 (L) and 16 (Y).

**14 (L) - 16 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace display unit.  
 NG >> Repair harness between display unit and data link connector.



SKIA5018E

AKS006W7

## Data Link Connector Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

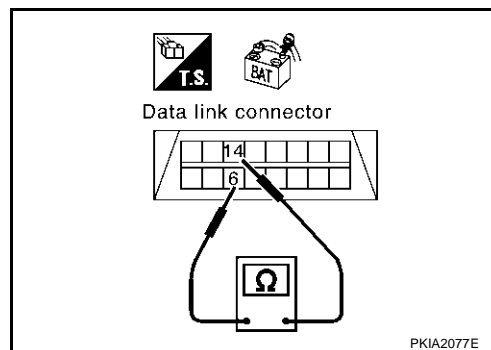
Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Diagnose again. Refer to [LAN-460, "Work Flow"](#) .  
 NG >> Repair harness between data link connector and BCM.



PKIA2077E

AKS006W8

## BCM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

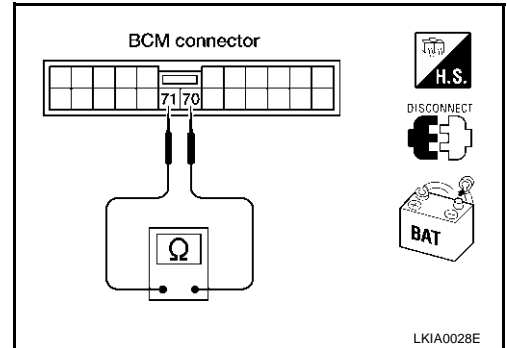
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M37 terminals 70 (L) and 71 (Y).

**70 (L) - 71 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace BCM. Refer to [BCS-36, "Removal and Installation of BCM"](#).
- NG >> Repair harness between BCM and data link connector.



## Unified Meter and A/C Amp. Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

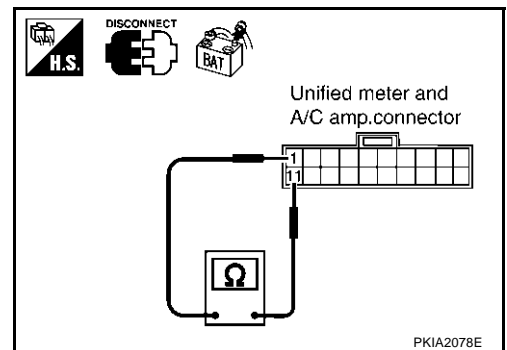
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

**1 (L) - 11 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace unified meter and A/C amp.
- NG >> Repair harness between unified meter and A/C amp. and data link connector.



## Steering Angle Sensor Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of steering angle sensor for damage, bend and loose connection (sensor side and harness side).

### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.



## 2. CHECK HARNESS FOR OPEN CIRCUIT

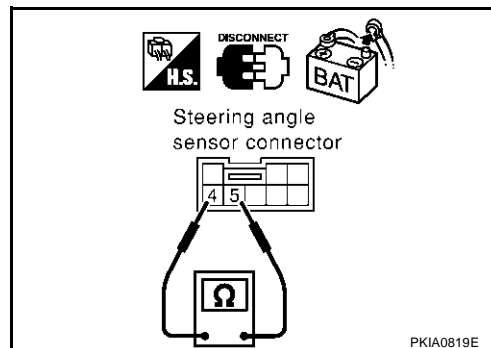
1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M33 terminals 4 (L) and 5 (Y).

**4 (L) - 5 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace steering angle sensor.  
 NG >> Repair harness between steering angle sensor and data link connector.



## Driver Seat Control Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control unit side and harness side).
  - Driver seat control unit connector
  - Harness connector B301
  - Harness connector B9

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

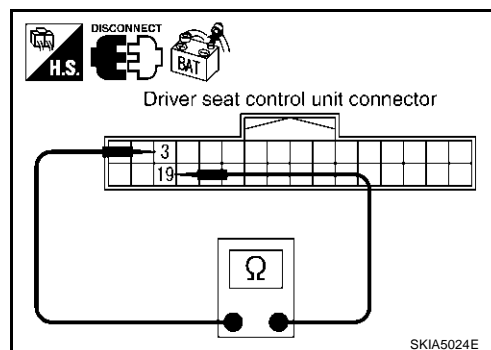
1. Disconnect driver seat control unit connector.
2. Check resistance between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

**3 (L/Y) - 19 (BR/W)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace driver seat control unit.  
 NG >> Repair harness between driver seat control unit and harness connector B4.



## ABS Actuator and Electric Unit (Control Unit) Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

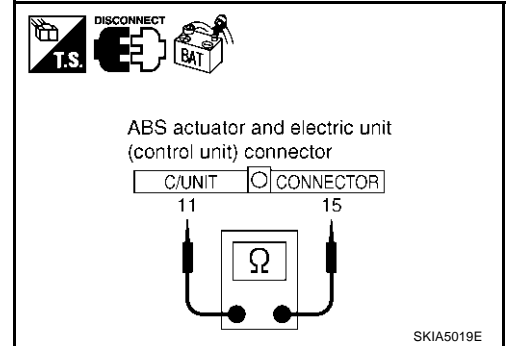
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

**11 (L) - 15 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).  
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



AKS006WD

## IPDM E/R Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

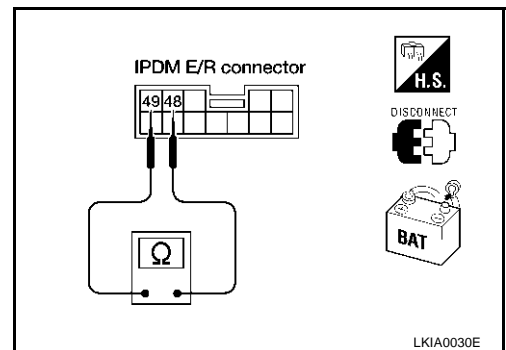
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y) : Approx. 108 - 132Ω**

### OK or NG

- OK >> Replace IPDM E/R.  
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



**CAN Communication Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, unit side, meter side, sensor side and harness side).
  - ECM
  - TCM
  - Low tire pressure warning control unit
  - Display unit
  - BCM
  - Unified meter and A/C amp.
  - Steering angle sensor
  - Driver seat control unit
  - ABS actuator and electric unit (control unit)
  - IPDM E/R
  - Between ECM and IPDM E/R
  - Between ECM and TCM
  - Between ECM and driver seat control unit

OK or NG

OK &gt;&gt; GO TO 2.

NG &gt;&gt; Repair terminal or connector.

A

B

C

D

E

F

G

H

I

J

LAN

L

M

## 2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
  - ECM connector
  - Low tire pressure warning control unit connector
  - Harness connector M82
  - Display unit connector
  - BCM connector
  - Unified meter and A/C amp. connector
  - Steering angle sensor connector
  - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

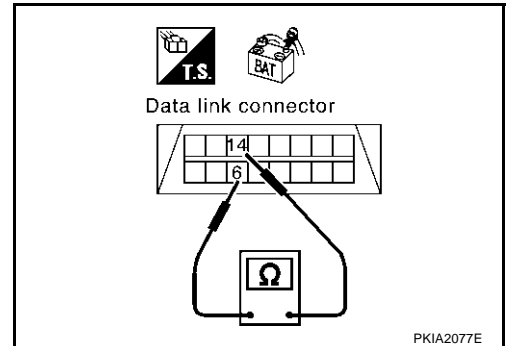
**6 (L) - 14 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 3.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M9.



## 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

**6 (L) - Ground : Continuity should not exist.**

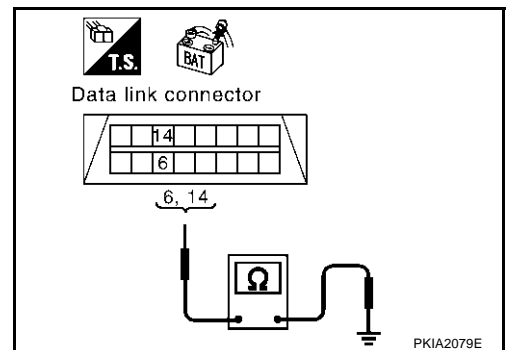
**14 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M9.



#### 4. CHECK HARNESS FOR SHORT CIRCUIT

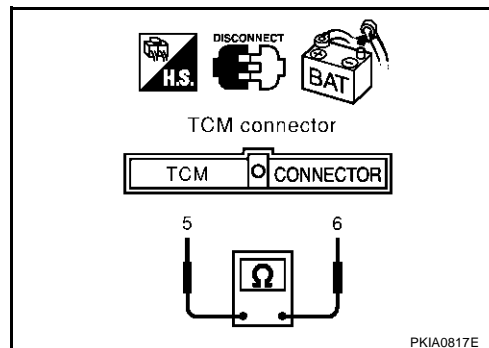
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 5.

NG >> Repair harness between TCM and harness connector F102.



#### 5. CHECK HARNESS FOR SHORT CIRCUIT

- Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

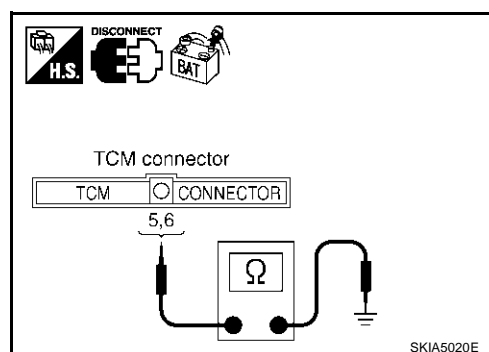
**5 (L) - Ground : Continuity should not exist.**

**6 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 6.

NG >> Repair harness between TCM and harness connector F102.



#### 6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B4 and harness connector B9.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

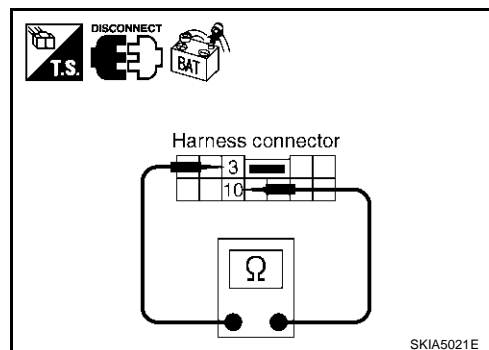
**3 (L) - 10 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 7.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Repair harness between harness connector B4 and harness connector B2.
- Repair harness between harness connector B4 and harness connector B9.



## 7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

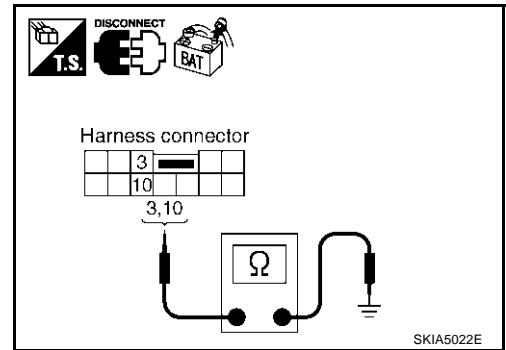
- 3 (L) - Ground : Continuity should not exist.**  
**10 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 8.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Repair harness between harness connector B4 and harness connector B2.
- Repair harness between harness connector B4 and harness connector B9.



## 8. CHECK HARNESS FOR SHORT CIRCUIT

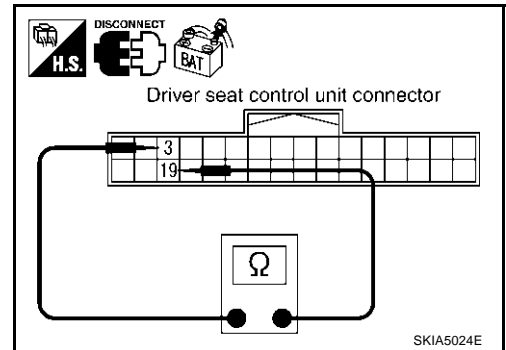
1. Disconnect driver seat control unit connector.
2. Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

- 3 (L/Y) - 19 (BR/W) : Continuity should not exist.**

OK or NG

OK >> GO TO 9.

NG >> Repair harness between driver seat control unit and harness connector B301.



## 9. CHECK HARNESS FOR SHORT CIRCUIT

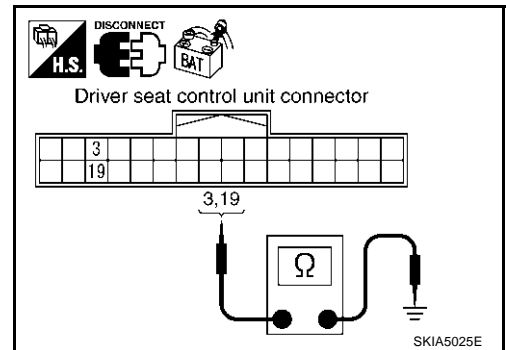
Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y), 19 (BR/W) and ground.

- 3 (L/Y) - Ground : Continuity should not exist.**  
**19 (BR/W) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 10.

NG >> Repair harness between driver seat control unit and harness connector B301.



## 10. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

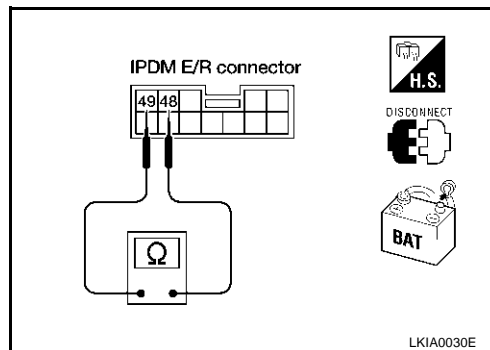
**48 (L) - 49 (Y) : Continuity should not exist.**

**OK or NG**

OK >> GO TO 11.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 11. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

**48 (L) - Ground : Continuity should not exist.**

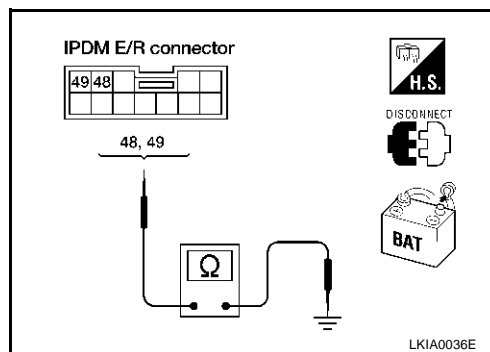
**49 (Y) - Ground : Continuity should not exist.**

**OK or NG**

OK >> GO TO 12.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 12. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-491, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

**OK or NG**

OK >> Connect all the connectors and diagnose again. Refer to [LAN-460, "Work Flow"](#).

NG >> Replace ECM and/or IPDM E/R.

### IPDM E/R Ignition Relay Circuit Check

AKS006WF

Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-45, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#).

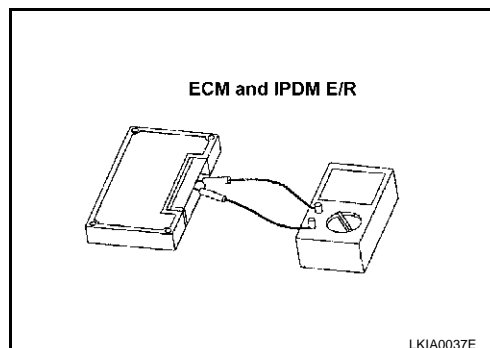
### Component Inspection

#### ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

AKS006WG

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



## CAN SYSTEM (TYPE 15)

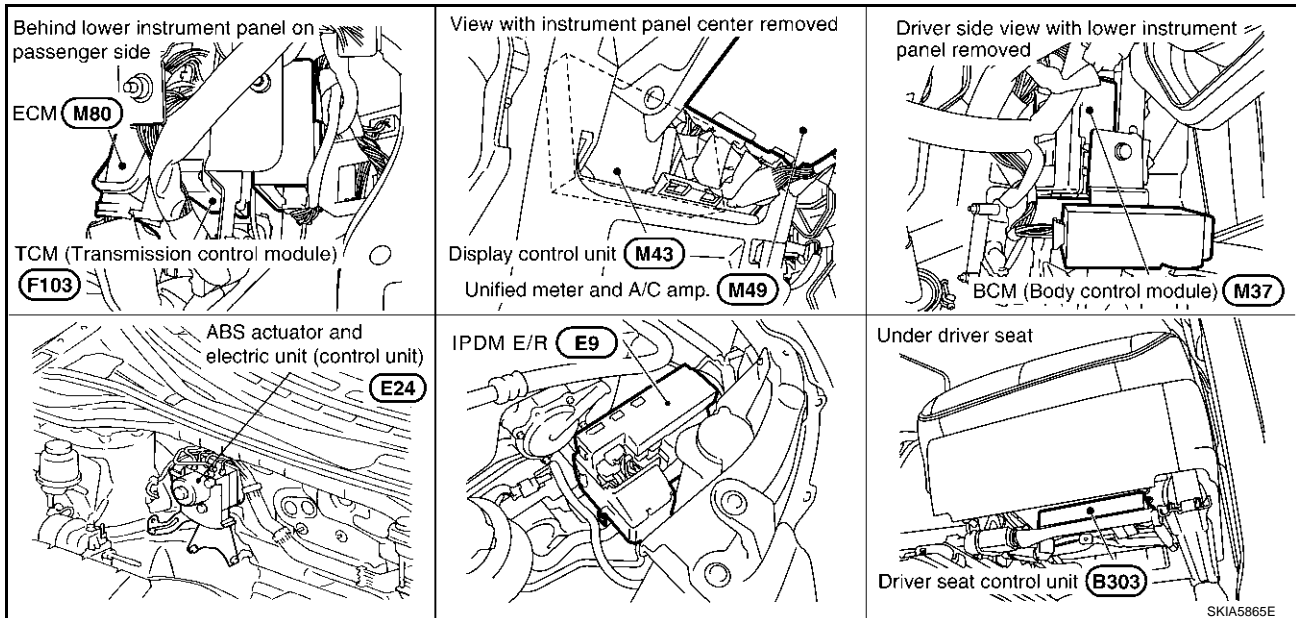
### System Description

AKS006WH

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

### Component Parts and Harness Connector Location

AKS006WI



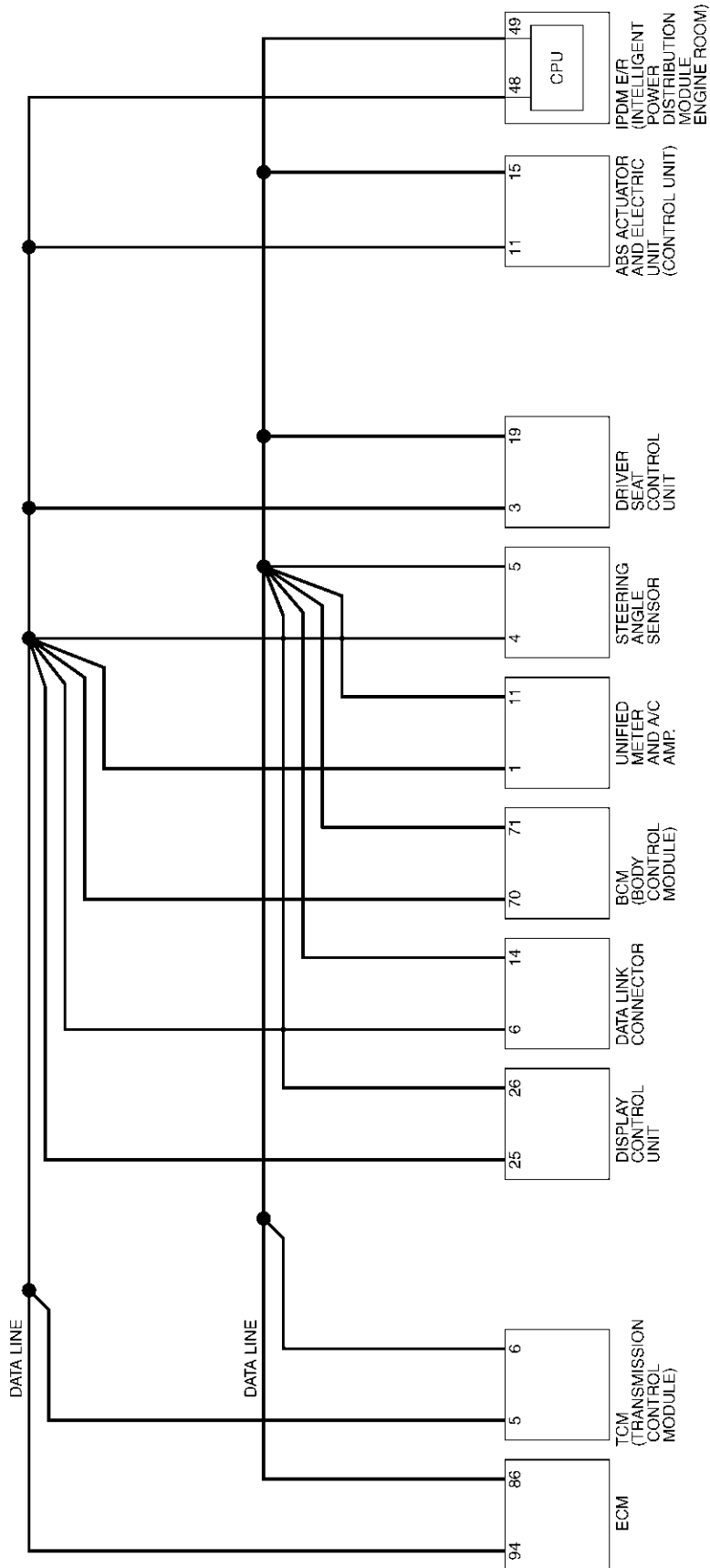


# CAN SYSTEM (TYPE 15)

[CAN]

## Schematic

AKS006WJ



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TKWA0979E

# CAN SYSTEM (TYPE 15)

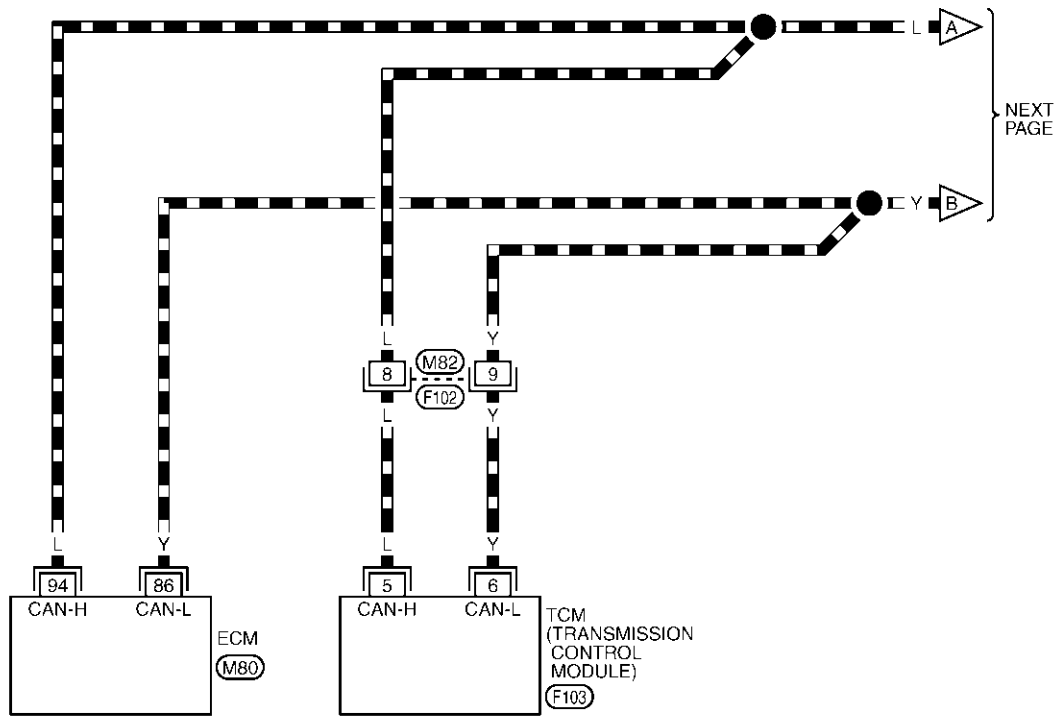
[CAN]

## Wiring Diagram - CAN -

AKS006WK

### LAN-CAN-43

▬ : DATA LINE



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18		

(F102)  
W

REFER TO THE FOLLOWING.  
(M80), (F103) -ELECTRICAL  
UNITS

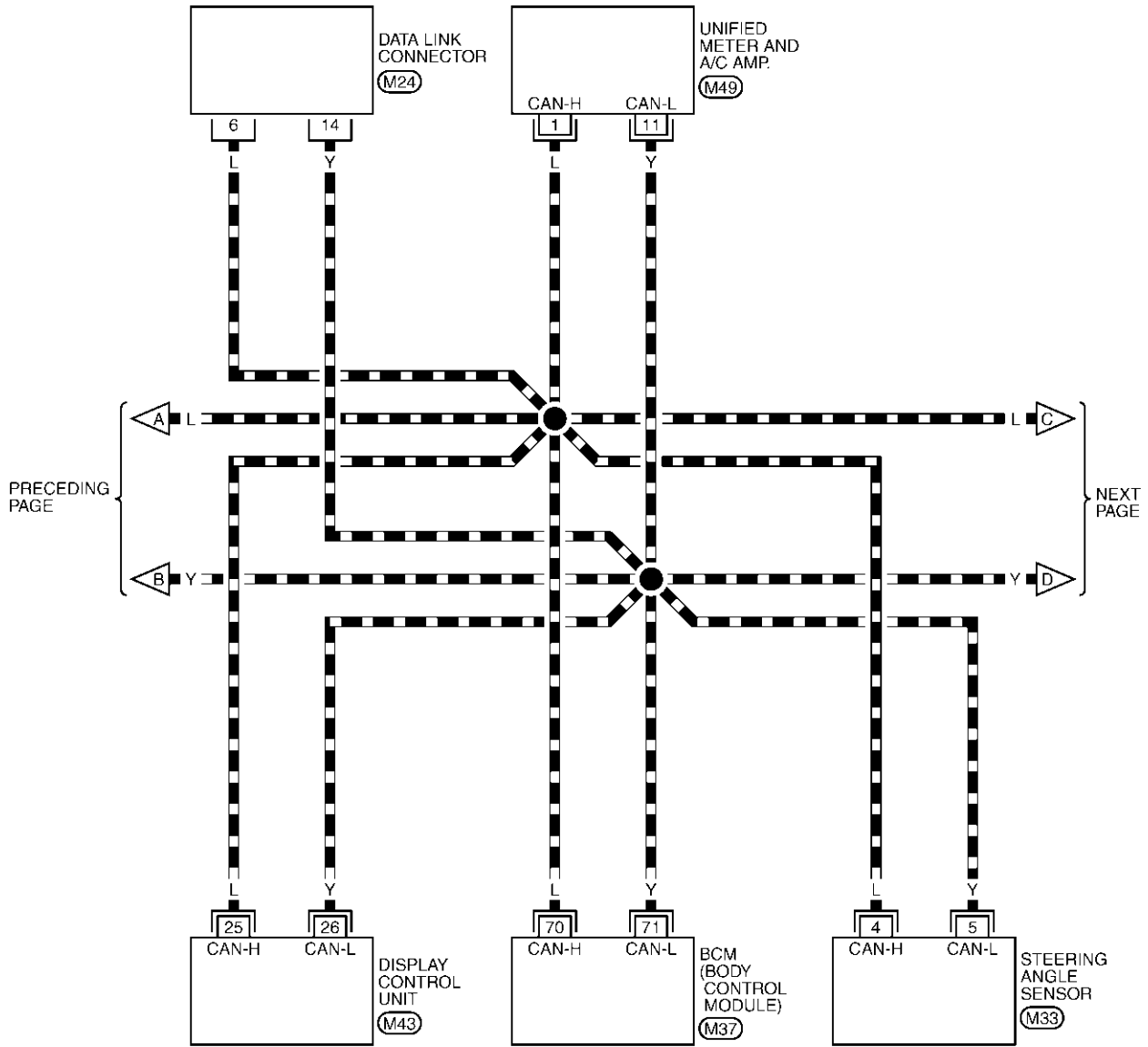
TKWA0980E

# CAN SYSTEM (TYPE 15)

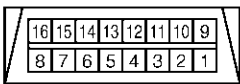
[CAN]

## LAN-CAN-44

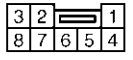
▬ : DATA LINE



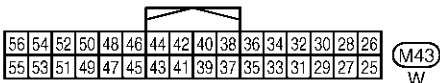
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LAN  
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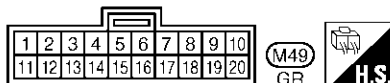
(M24)  
W



(M33)  
W



(M43)  
W



(M49)  
GR

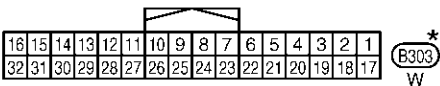
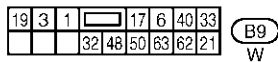
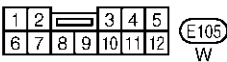
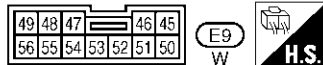
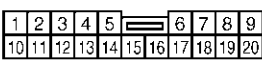
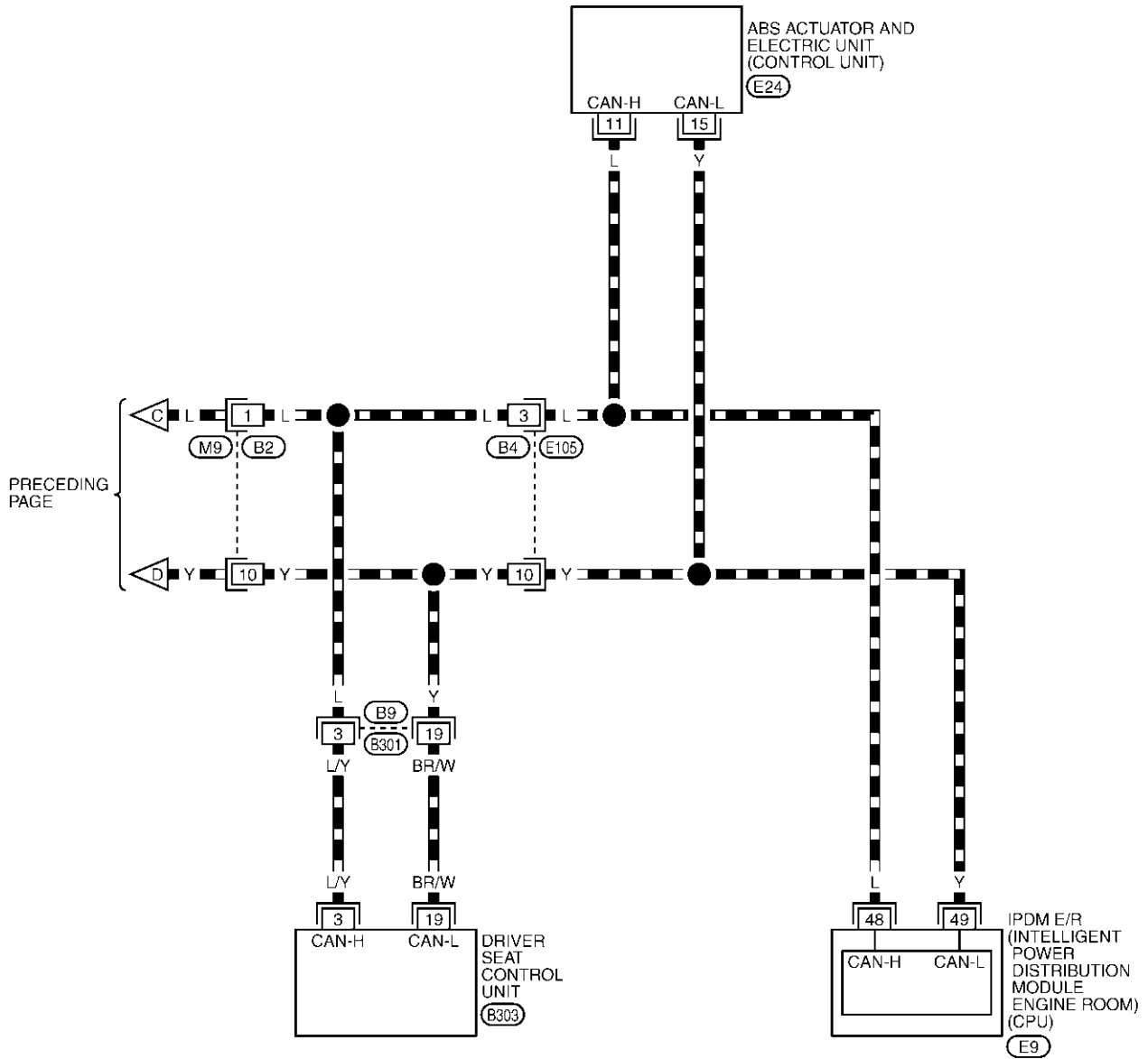


REFER TO THE FOLLOWING.  
(M37) -ELECTRICAL UNITS

TKWA0981E

## LAN-CAN-45

▬ : DATA LINE



\*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

REFER TO THE FOLLOWING.  
E24 -ELECTRICAL UNITS



- 
8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG SUPPORT MONITOR check sheet. Refer to [LAN-499, "CHECK SHEET"](#) .  
**NOTE:**  
If "NG" is displayed on "CAN COMM" as "CAN DIAG SUPPORT MONITOR" for the diagnosed control unit, replace the control unit. Refer to [AV-203, "CAN Communication Line Check"](#) .
  9. According to the check sheet results (example), start inspection. Refer to [LAN-501, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

# CAN SYSTEM (TYPE 15)

[CAN]

## CHECK SHEET

### NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

A  
B  
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SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

Attach copy of  
display control unit  
CAN DIAG SUPPORT MONITOR check sheet

PKIB0676E

# CAN SYSTEM (TYPE 15)

[CAN]

Attach copy of  
ENGINE  
SELF-DIAG RESULTS

Attach copy of  
TRANSMISSION  
SELF-DIAG RESULTS

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
METER A/C AMP  
SELF-DIAG RESULTS

Attach copy of  
AUTO DRIVE POS.  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

Attach copy of  
ENGINE  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
TRANSMISSION  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
BCM  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
METER A/C AMP  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
AUTO DRIVE POS.  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ABS  
CAN DIAG SUPPORT  
MNTR

PKIB0467E



# CAN SYSTEM (TYPE 15)

[CAN]

## CHECK SHEET RESULTS (EXAMPLE)

### NOTE:

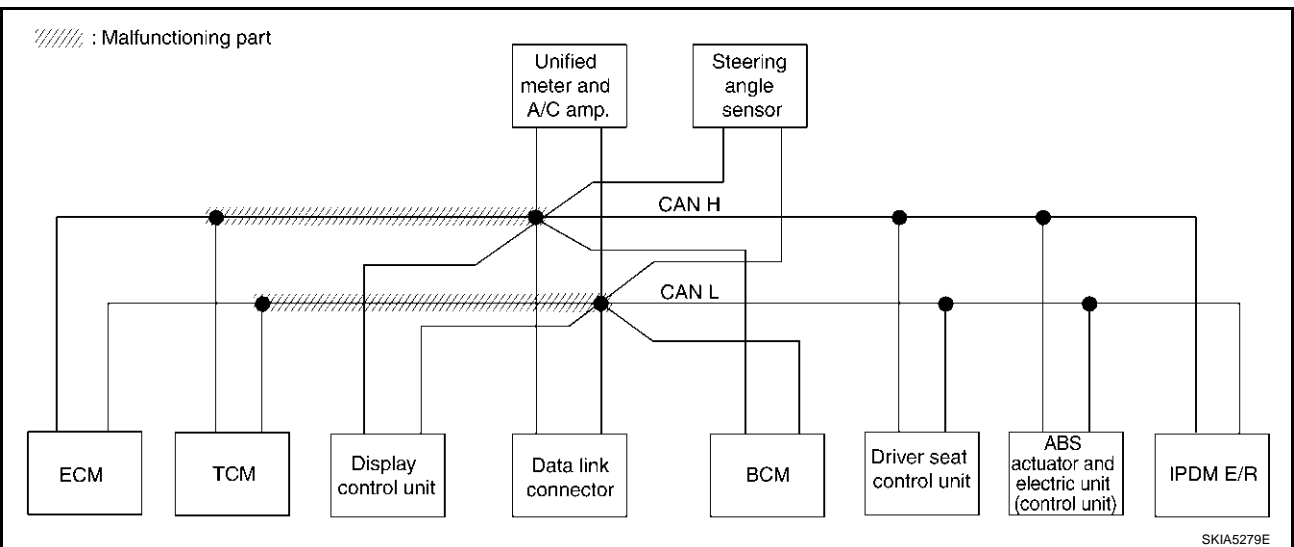
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

### Case 1

Check harness between TCM and data link connector. Refer to [LAN-515, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	✓ CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

PKIB0677E



LAN

# CAN SYSTEM (TYPE 15)

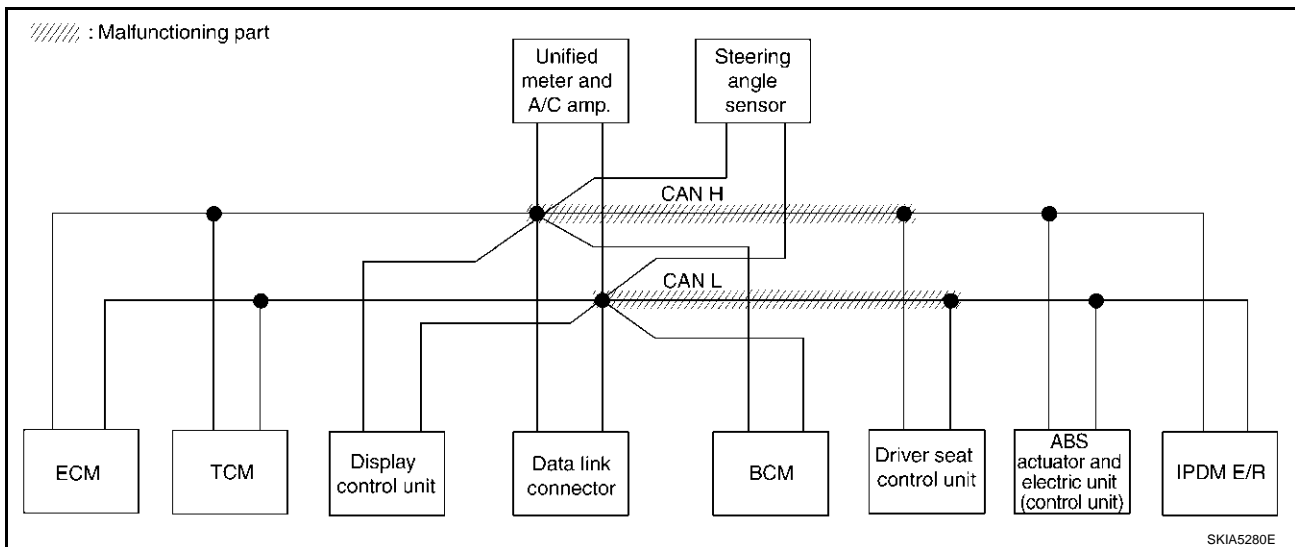
[CAN]

## Case 2

Check harness between data link connector and driver seat control unit. Refer to [LAN-515, "Circuit Check Between Data Link Connector and Driver Seat Control Unit"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

PKIB0678E



# CAN SYSTEM (TYPE 15)

[CAN]

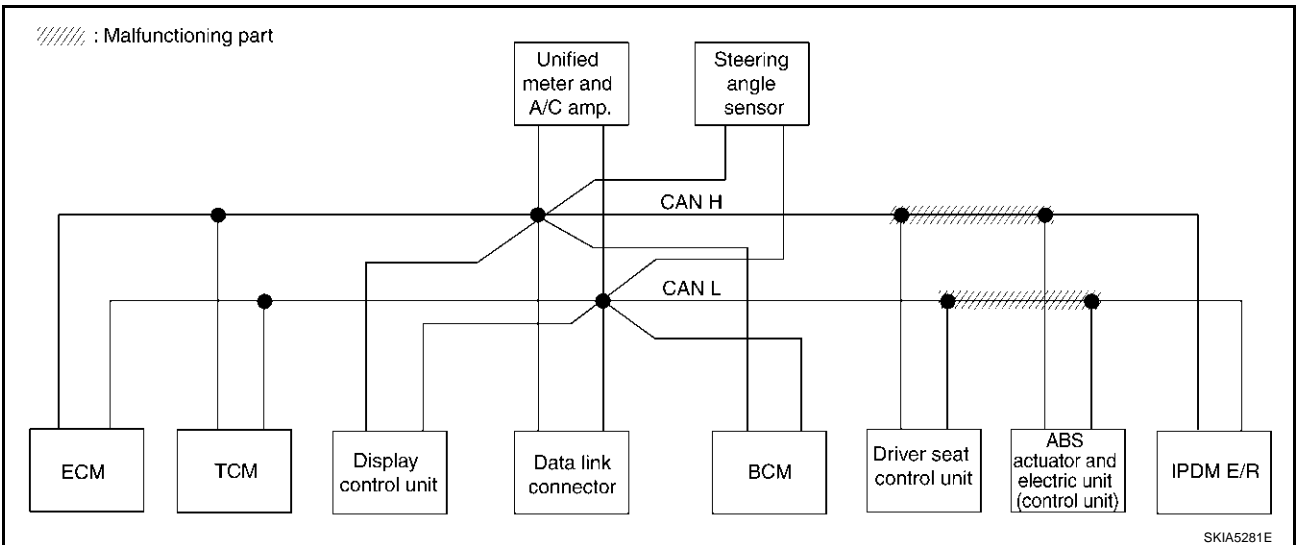
## Case 3

Check harness between driver seat control unit and ABS actuator and electric unit (control unit). Refer to LAN-516, "Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit)".

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SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

PKIB0679E



LAN

# CAN SYSTEM (TYPE 15)

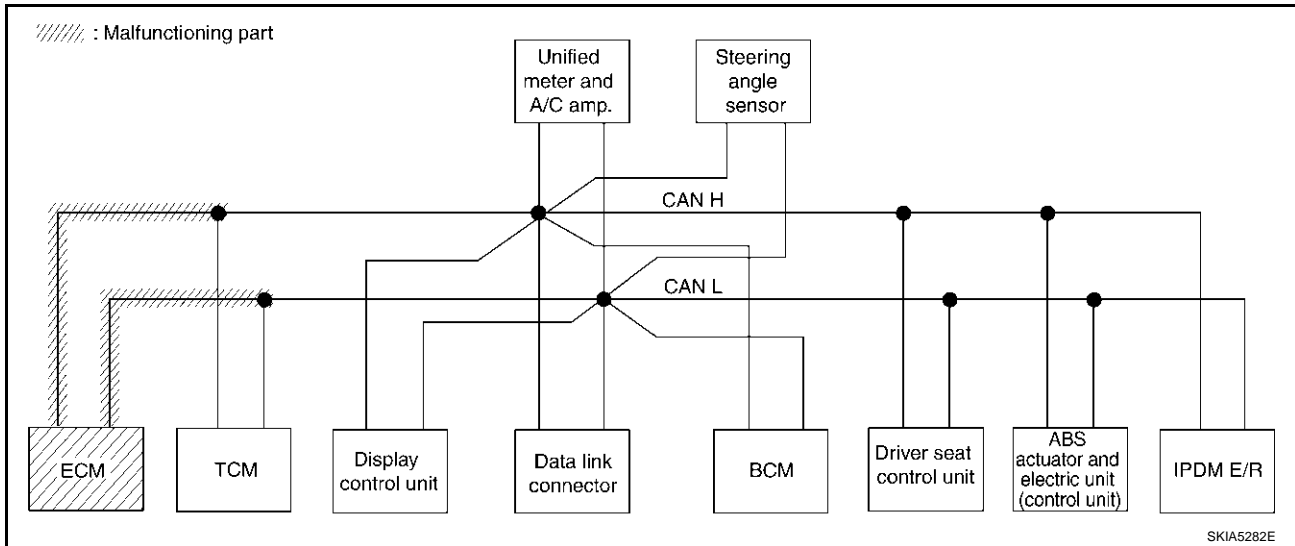
[CAN]

## Case 4

Check ECM circuit. Refer to [LAN-517, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N
TRANSMISSION	No indication	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	UNKW <sup>✓</sup> N	—	—	UNKW <sup>✓</sup> N
METER A/C AMP	No indication	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	UNKW <sup>✓</sup> N	—
AUTO DRIVE POS.	No indication	NG	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—
ABS	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	UNKW <sup>✓</sup> N	—	—

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# CAN SYSTEM (TYPE 15)

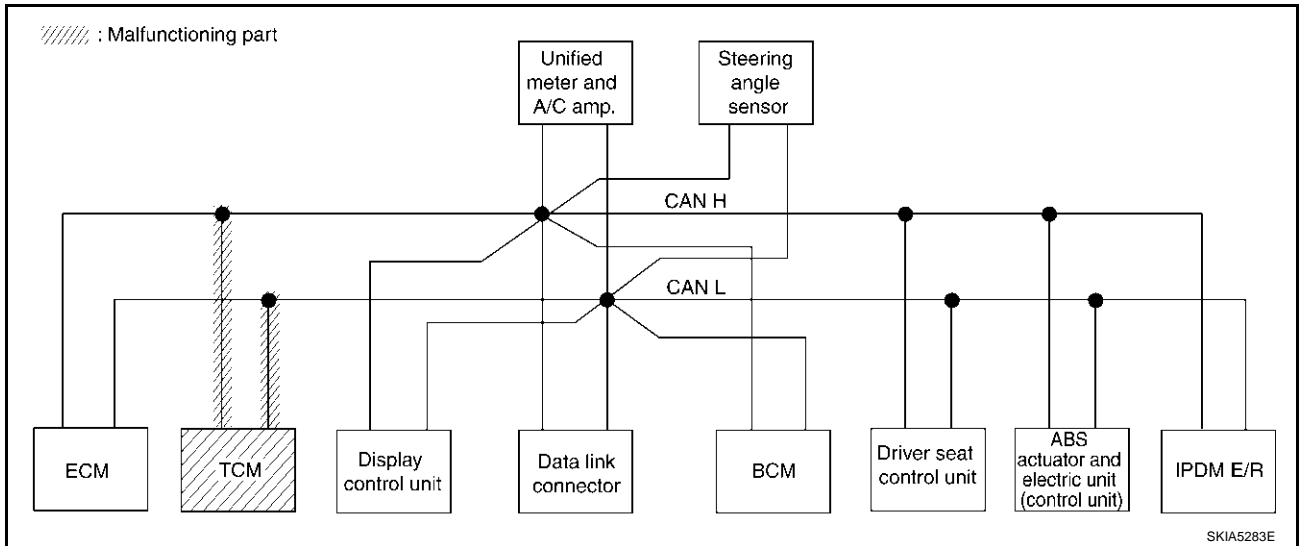
[CAN]

## Case 5

Check TCM circuit. Refer to [LAN-517, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN ✓	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN ✓	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN ✓	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN ✓	—	—	—	UNKWN	—	—

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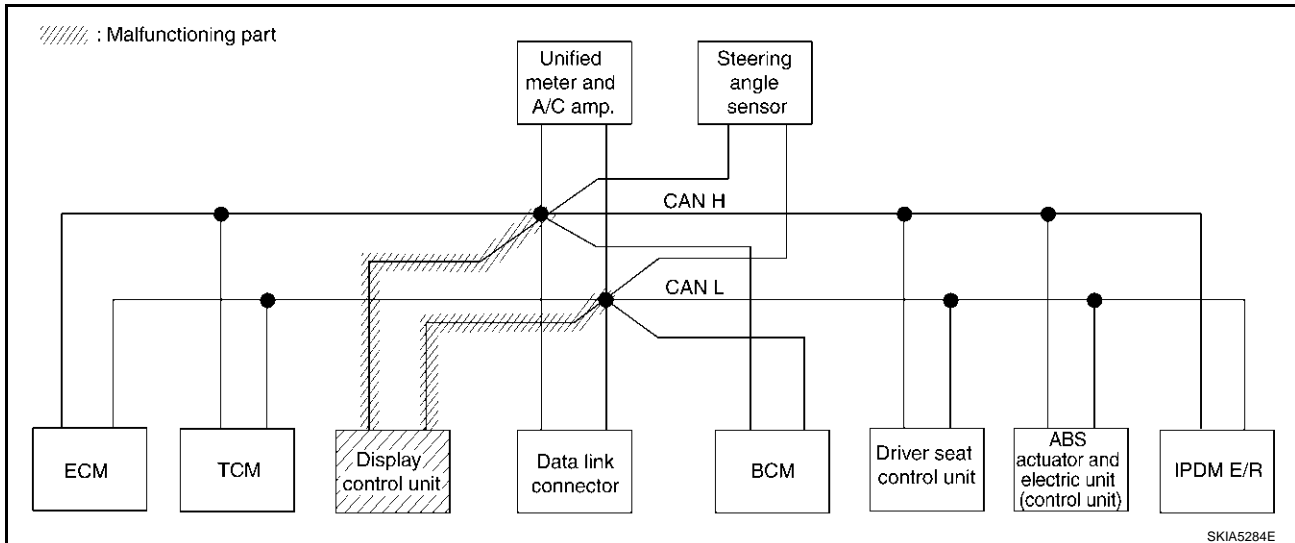
[CAN]

## Case 6

Check display control unit circuit. Refer to [LAN-518, "Display Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CRC 1 ✓	CAN CRC 3 ✓	—	—	CAN CRC 2 ✓	CAN CRC 5 ✓	—	—	CAN CRC 7 ✓
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
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# CAN SYSTEM (TYPE 15)

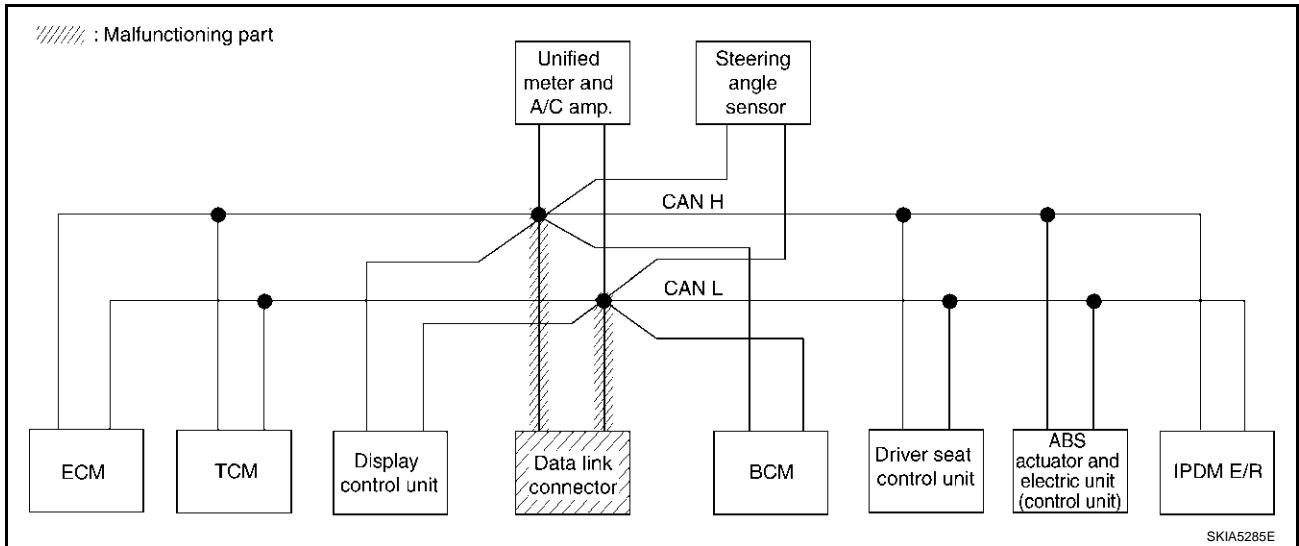
[CAN]

## Case 7

Check data link connector circuit. Refer to [LAN-518, "Data Link Connector Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

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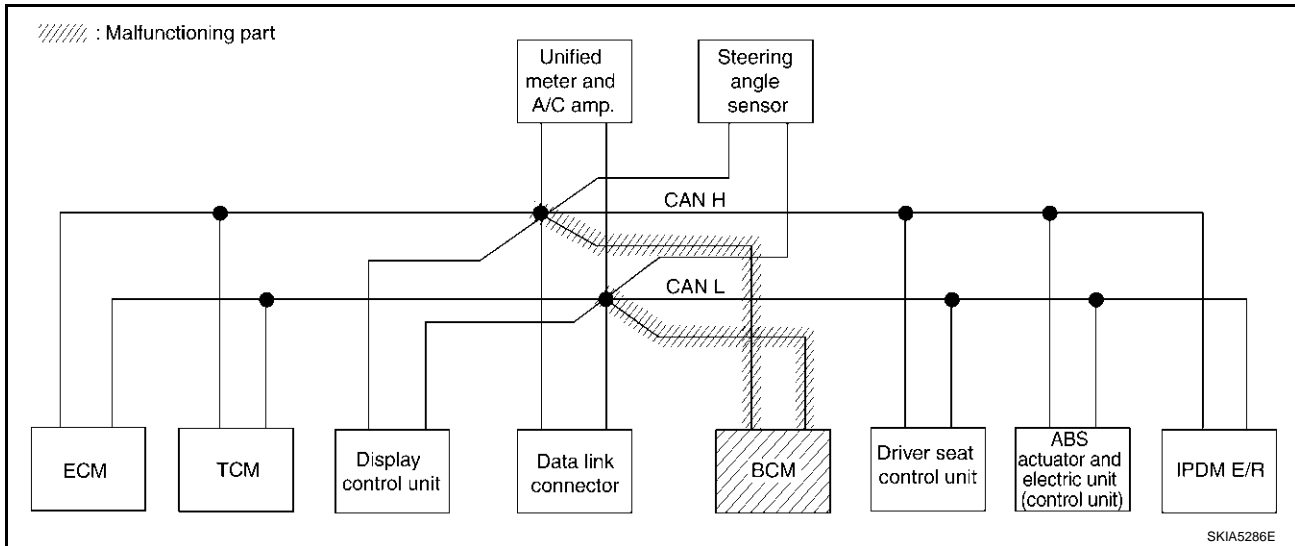
[CAN]

## Case 8

Check BCM circuit. Refer to [LAN-519, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

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# CAN SYSTEM (TYPE 15)

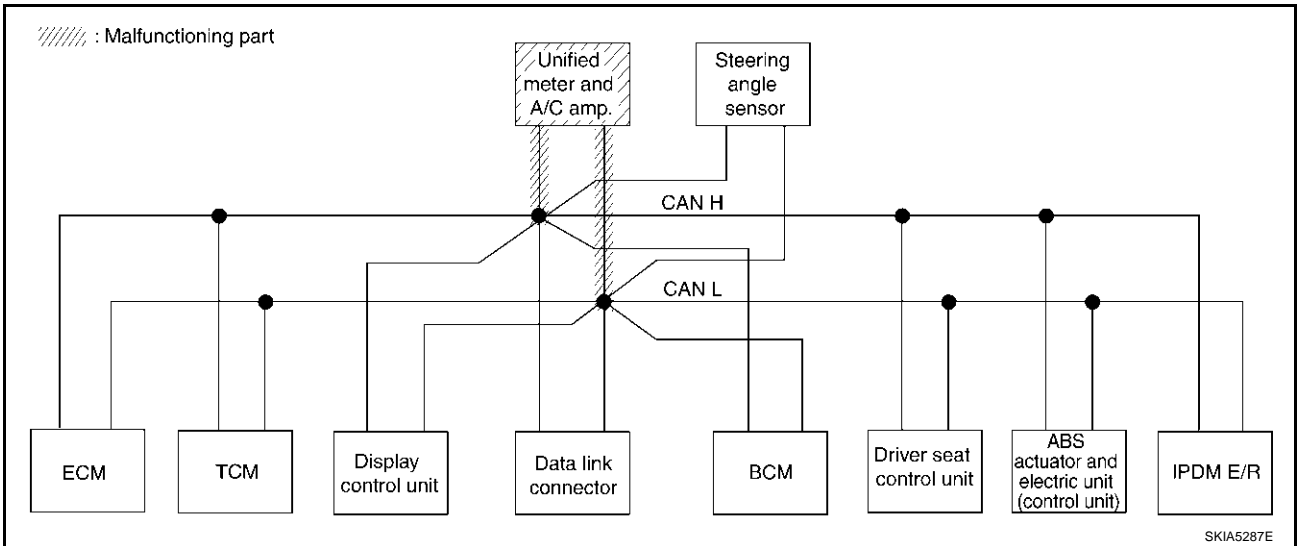
[CAN]

## Case 9

Check unified meter and A/C amp. circuit. Refer to [LAN-519, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—	

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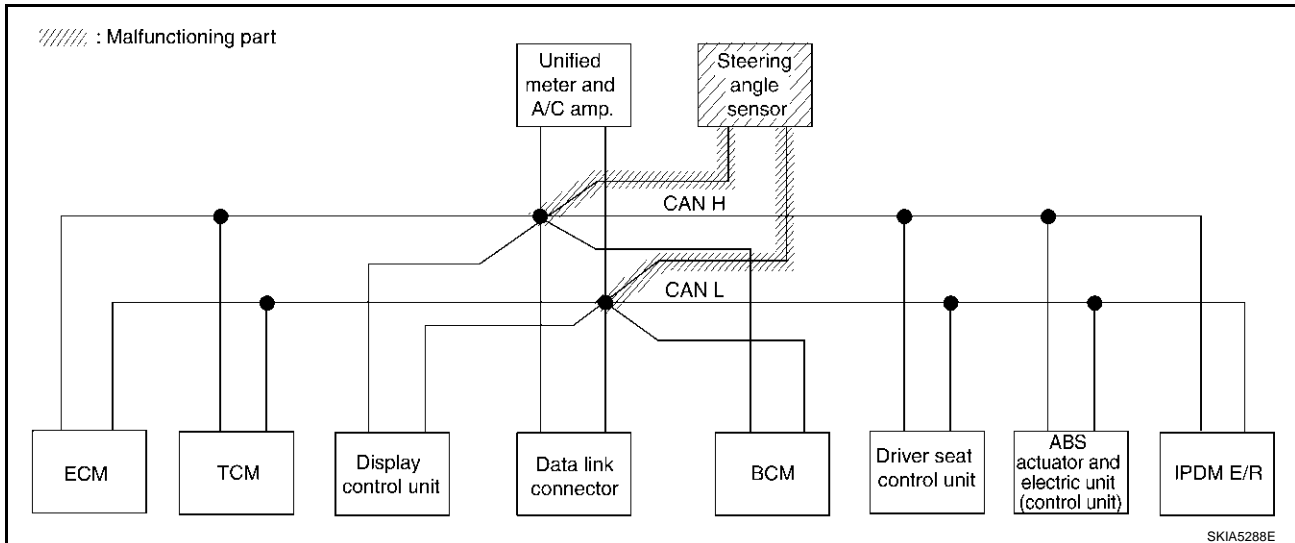
[CAN]

## Case 10

Check steering angle sensor circuit. Refer to [LAN-520, "Steering Angle Sensor Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

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# CAN SYSTEM (TYPE 15)

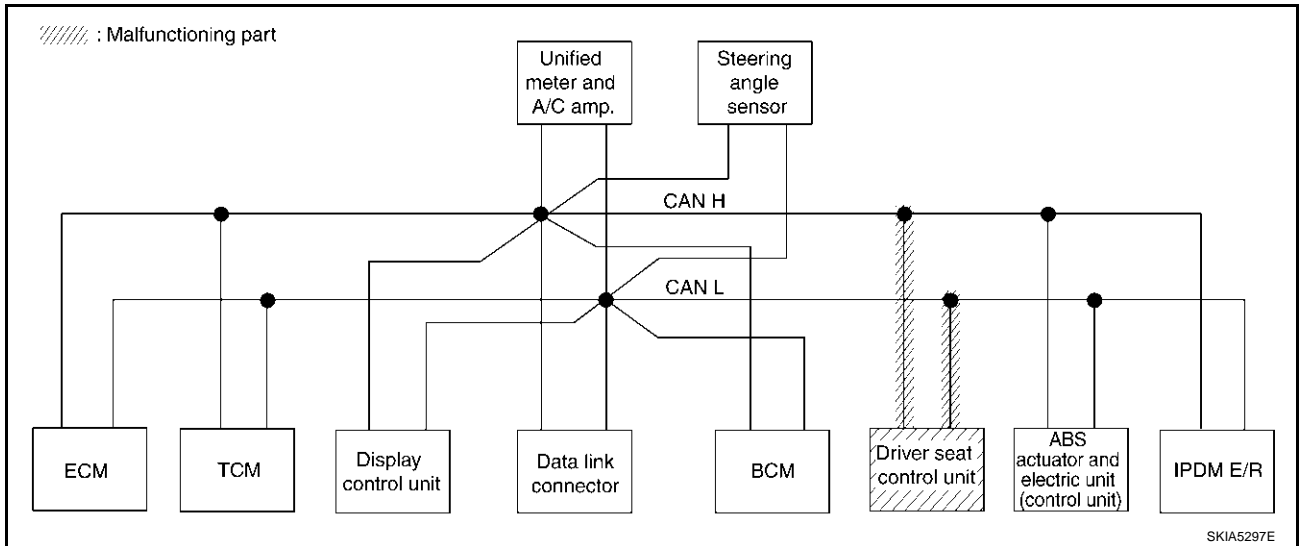
[CAN]

## Case 11

Check driver seat control unit circuit. Refer to [LAN-520, "Driver Seat Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—	

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# CAN SYSTEM (TYPE 15)

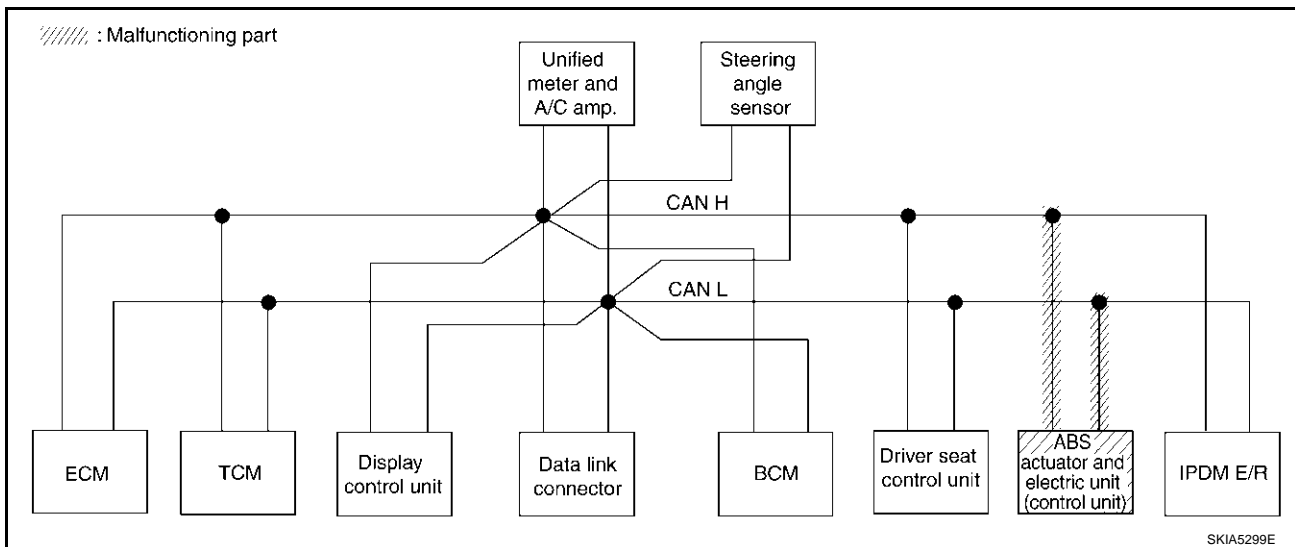
[CAN]

## Case 12

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-521, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—

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# CAN SYSTEM (TYPE 15)

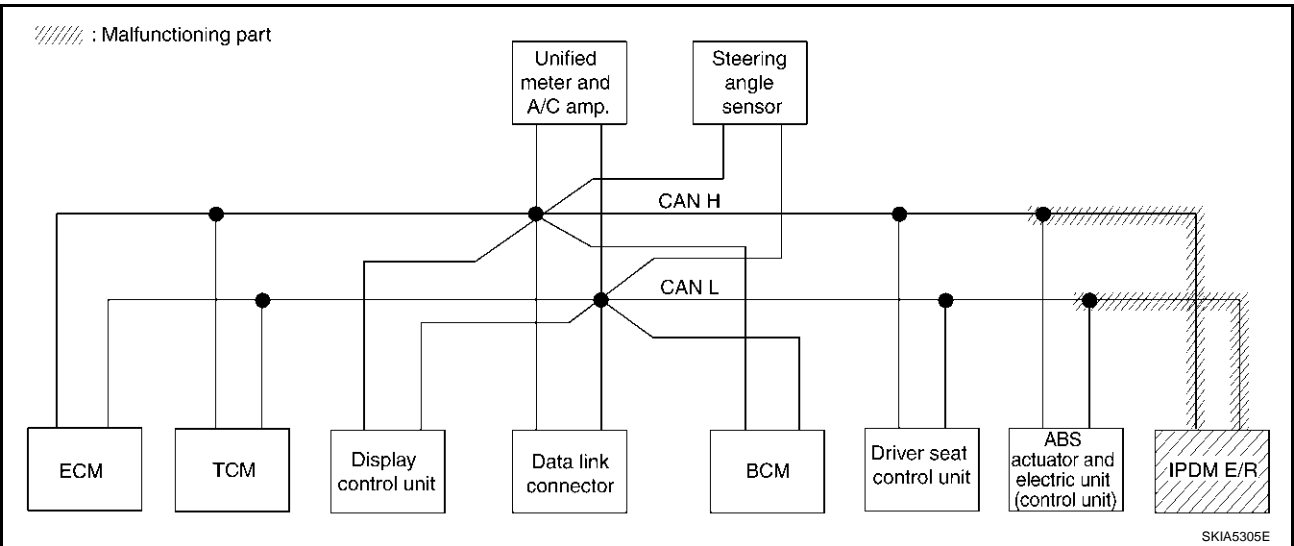
[CAN]

## Case 13

Check IPDM E/R circuit. Refer to [LAN-521, "IPDM E/R Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW	—	UNKW	—	UNKW	UNKW	—	UNKW	UNKW ✓
TRANSMISSION	No indication	NG	UNKW	UNKW	—	—	—	UNKW	—	UNKW	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7 ✓
BCM	—	NG	UNKW	UNKW	—	—	—	UNKW	—	—	UNKW ✓
METER A/C AMP	No indication	—	UNKW	UNKW	UNKW	UNKW	UNKW	—	—	UNKW	—
AUTO DRIVE POS.	No indication	NG	UNKW	—	UNKW	—	UNKW	UNKW	—	—	—
ABS	—	NG	UNKW	UNKW	UNKW	—	—	—	UNKW	—	—

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## Case 14

Check CAN communication circuit. Refer to [LAN-522, "CAN Communication Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW ✓	—	UNKW ✓	—	UNKW ✓	UNKW ✓	—	UNKW ✓	UNKW ✓
TRANSMISSION	No indication ✓	NG	UNKW	UNKW	—	—	—	UNKW	—	UNKW	—
Display control unit	—	CAN COMM	CAN CIRC 1 ✓	CAN CIRC 3 ✓	—	—	CAN CIRC 2 ✓	CAN CIRC 5 ✓	—	—	CAN CIRC 7 ✓
BCM	—	NG	UNKW ✓	UNKW ✓	—	—	—	UNKW ✓	—	—	UNKW ✓
METER A/C AMP	No indication ✓	—	UNKW	UNKW	UNKW	UNKW	UNKW	—	—	UNKW	—
AUTO DRIVE POS.	No indication ✓	NG	UNKW	—	UNKW	—	UNKW	UNKW	—	—	—
ABS	—	NG	UNKW ✓	UNKW ✓	UNKW ✓	—	—	—	UNKW ✓	—	—

PKIB0690E

# CAN SYSTEM (TYPE 15)

[CAN]

## Case 15

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-526, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW	—	UNKW	—	UNKW	UNKW	—	UNKW	UNKW
TRANSMISSION	No indication ✓	NG	UNKW	UNKW	—	—	—	UNKW	—	UNKW	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKW	UNKW	—	—	—	UNKW	—	—	UNKW
METER A/C AMP	No indication	—	UNKW	UNKW	UNKW	UNKW	UNKW	—	—	UNKW	—
AUTO DRIVE POS.	No indication	NG	UNKW	—	UNKW	—	UNKW	UNKW	—	—	—
ABS	—	NG	UNKW	UNKW	UNKW	—	—	—	UNKW	—	—

PKIB0691E

## Case 16

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-526, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW	—	UNKW	—	UNKW	UNKW	—	UNKW	UNKW
TRANSMISSION	No indication	NG	UNKW	UNKW	—	—	—	UNKW	—	UNKW	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKW	UNKW	—	—	—	UNKW	—	—	UNKW
METER A/C AMP	No indication	—	UNKW	UNKW	UNKW	UNKW	UNKW	—	—	UNKW	—
AUTO DRIVE POS.	No indication	NG	UNKW	—	UNKW	—	UNKW	UNKW	—	—	—
ABS	—	NG	UNKW	UNKW	UNKW	—	—	—	UNKW	—	—

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## Circuit Check Between TCM and Data Link Connector

AKS006WM

### 1. CHECK HARNESS FOR OPEN CIRCUIT

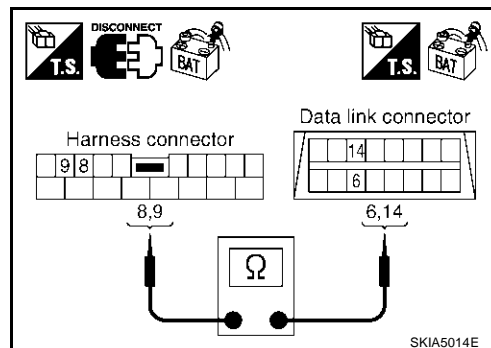
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

**8 (L) - 6 (L) : Continuity should exist.**

**9 (Y) - 14 (Y) : Continuity should exist.**

#### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-497, "Work Flow"](#).
- NG >> Repair harness.



## Circuit Check Between Data Link Connector and Driver Seat Control Unit

AKS006WN

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector M9
  - Harness connector B2

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

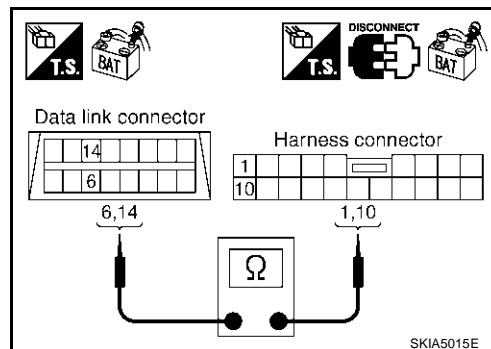
1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

**6 (L) - 1 (L) : Continuity should exist.**

**14 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



### 3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

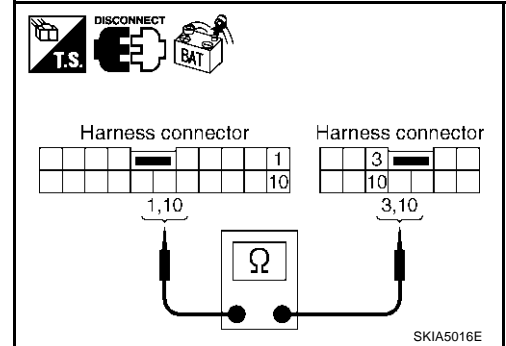
**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-497, "Work Flow"](#).

NG >> Repair harness.



## Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit)

AKS006WO

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector B4
  - Harness connector E105

#### OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B2 and harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

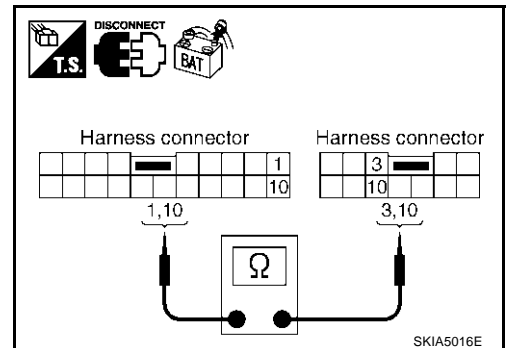
**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

OK >> GO TO 3.

NG >> Repair harness.





### 3. CHECK HARNESS FOR OPEN CIRCUIT

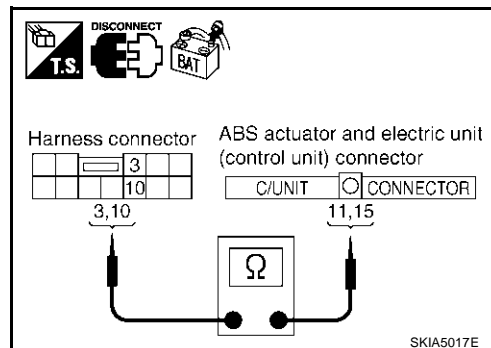
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

**3 (L) - 11 (L) : Continuity should exist.**

**10 (Y) - 15 (Y) : Continuity should exist.**

#### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-497, "Work Flow"](#).
- NG >> Repair harness.



AKS006WP

## ECM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

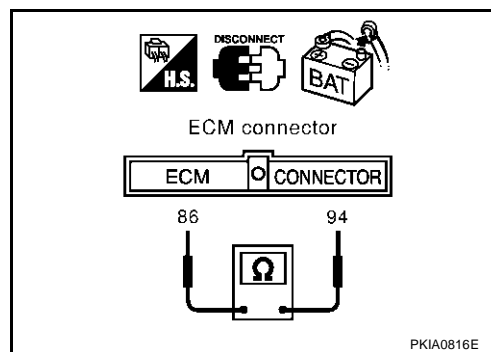
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

**94 (L) - 86 (Y) : Approx. 108 - 132Ω**

#### OK or NG

- OK >> Replace ECM.
- NG >> Repair harness between ECM and TCM.



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## TCM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
  - TCM connector
  - Harness connector F102
  - Harness connector M82

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

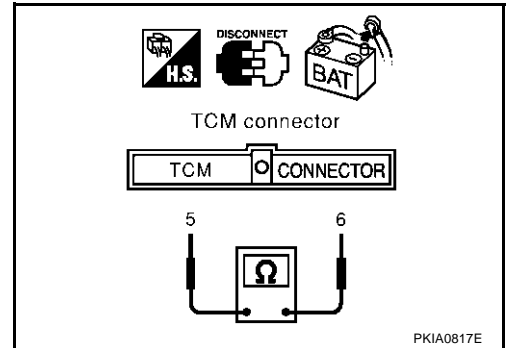
1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y)**

**: Approx. 54 - 66Ω**

OK or NG

- OK >> Replace TCM.  
 NG >> Repair harness between TCM and ECM.



## Display Control Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display control unit for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

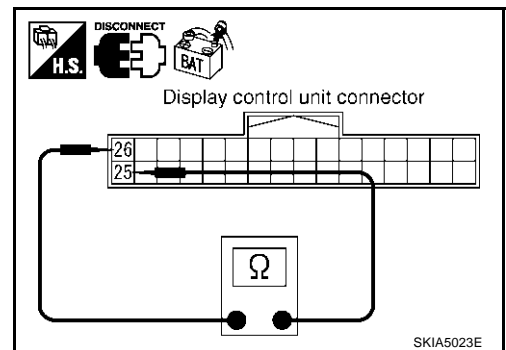
1. Disconnect display control unit connector.
2. Check resistance between display control unit harness connector M43 terminals 25 (L) and 26 (Y).

**25 (L) - 26 (Y)**

**: Approx. 54 - 66Ω**

OK or NG

- OK >> Replace display control unit.  
 NG >> Repair harness between display control unit and data link connector.



## Data Link Connector Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

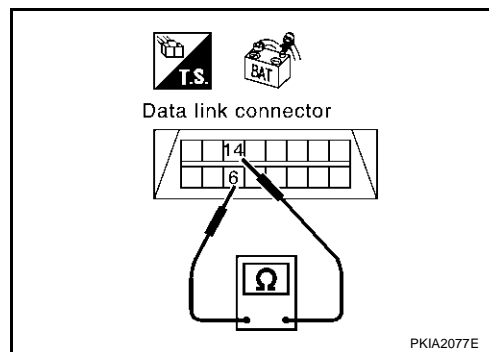
## 2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Diagnose again. Refer to [LAN-497, "Work Flow"](#).  
 NG >> Repair harness between data link connector and BCM.



### BCM Circuit Check

#### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

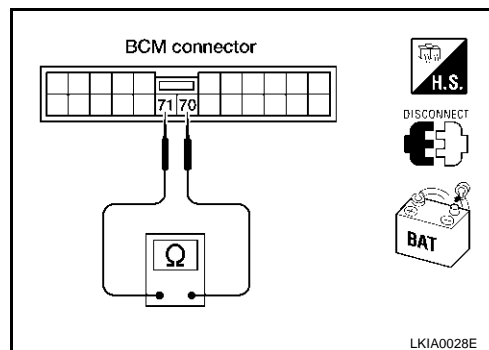
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M37 terminals 70 (L) and 71 (Y).

**70 (L) - 71 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace BCM. Refer to [BCS-36, "Removal and Installation of BCM"](#).  
 NG >> Repair harness between BCM and data link connector.



### Unified Meter and A/C Amp. Circuit Check

#### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

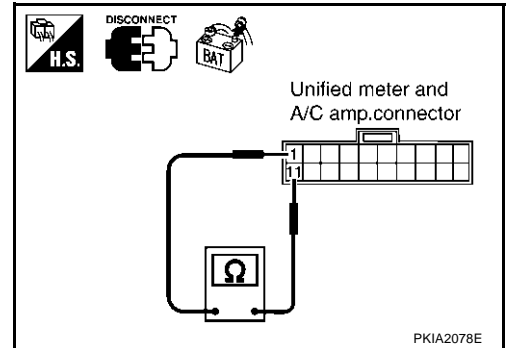
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

**1 (L) - 11 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace unified meter and A/C amp.  
 NG >> Repair harness between unified meter and A/C amp. and data link connector.



## Steering Angle Sensor Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of steering angle sensor for damage, bend and loose connection (sensor side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

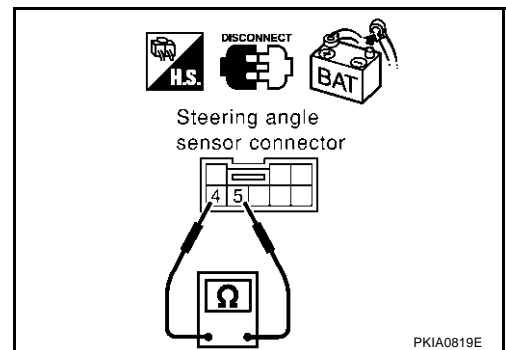
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M33 terminals 4 (L) and 5 (Y).

**4 (L) - 5 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace steering angle sensor.  
 NG >> Repair harness between steering angle sensor and data link connector.



## Driver Seat Control Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control unit side and harness side).
  - Driver seat control unit connector
  - Harness connector B301
  - Harness connector B9

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

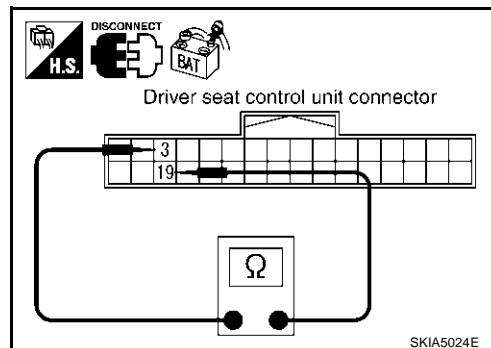
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect driver seat control unit connector.
2. Check resistance between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

**3 (L/Y) - 19 (BR/W) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace driver seat control unit.  
 NG >> Repair harness between driver seat control unit and harness connector B4.



## ABS Actuator and Electric Unit (Control Unit) Circuit Check

AKS006WX

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

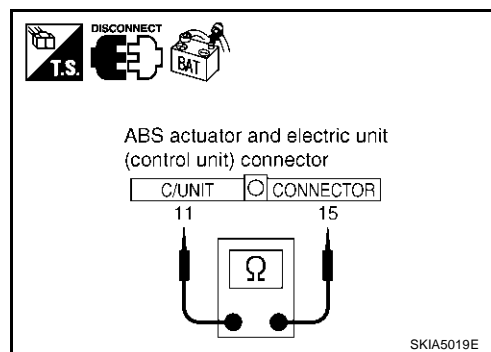
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

**11 (L) - 15 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).  
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



## IPDM E/R Circuit Check

AKS006WY

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

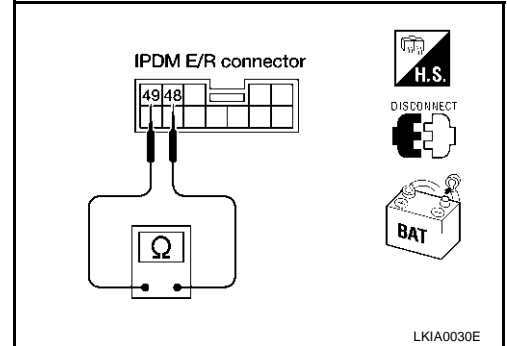
1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y)**

**: Approx. 108 - 132Ω**

### OK or NG

- OK >> Replace IPDM E/R.  
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



AKS006WZ

## CAN Communication Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, meter side, sensor side, and harness side).
  - ECM
  - TCM
  - Display control unit
  - BCM
  - Unified meter and A/C amp.
  - Steering angle sensor
  - Driver seat control unit
  - ABS actuator and electric unit (control unit)
  - IPDM E/R
  - Between ECM and IPDM E/R
  - Between ECM and TCM
  - Between ECM and driver seat control unit

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
  - ECM connector
  - Harness connector M82
  - Display control unit connector
  - BCM connector
  - Unified meter and A/C amp. connector
  - Steering angle sensor connector
  - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

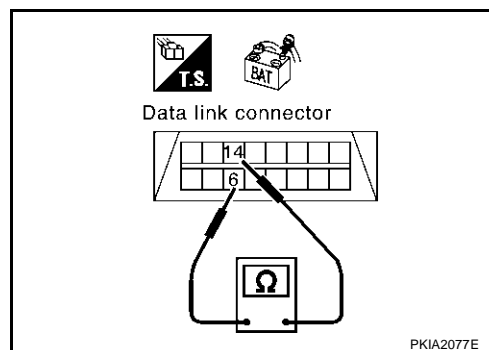
**6 (L) - 14 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 3.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M9.



## 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

**6 (L) - Ground : Continuity should not exist.**

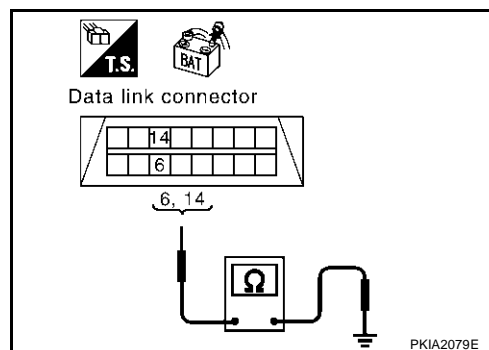
**14 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M9.



#### 4. CHECK HARNESS FOR SHORT CIRCUIT

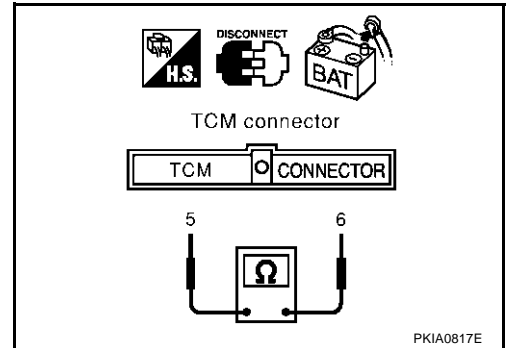
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Continuity should not exist.**

##### OK or NG

OK >> GO TO 5.

NG >> Repair harness between TCM and harness connector F102.



#### 5. CHECK HARNESS FOR SHORT CIRCUIT

- Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

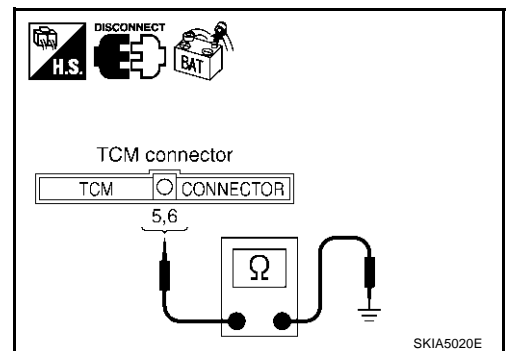
**5 (L) - Ground : Continuity should not exist.**

**6 (Y) - Ground : Continuity should not exist.**

##### OK or NG

OK >> GO TO 6.

NG >> Repair harness between TCM and harness connector F102.



#### 6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B4 and harness connector B9.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

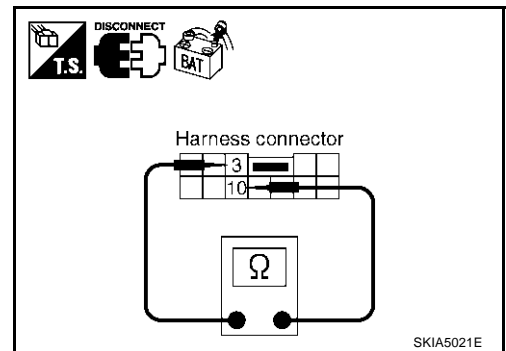
**3 (L) - 10 (Y) : Continuity should not exist.**

##### OK or NG

OK >> GO TO 7.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Repair harness between harness connector B4 and harness connector B2.
- Repair harness between harness connector B4 and harness connector B9.





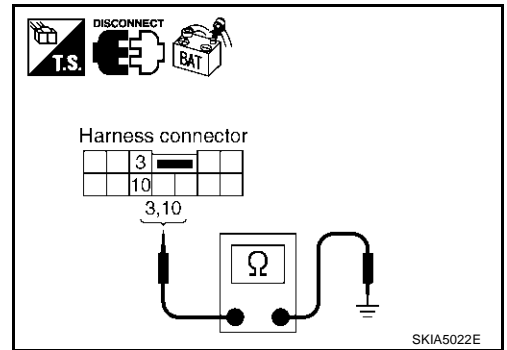
## 7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

- 3 (L) - Ground : Continuity should not exist.**
- 10 (Y) - Ground : Continuity should not exist.**

OK or NG

- OK >> GO TO 8.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Repair harness between harness connector B4 and harness connector B2.
  - Repair harness between harness connector B4 and harness connector B9.



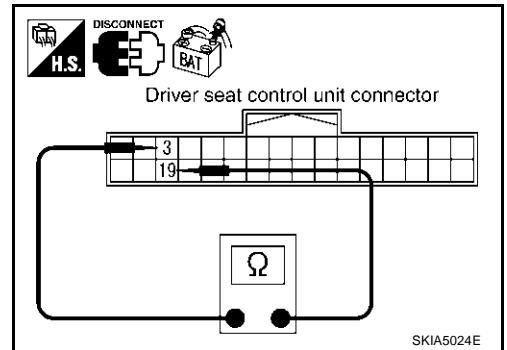
## 8. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect driver seat control unit connector.
2. Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

- 3 (L/Y) - 19 (BR/W) : Continuity should not exist.**

OK or NG

- OK >> GO TO 9.
- NG >> Repair harness between driver seat control unit and harness connector B301.



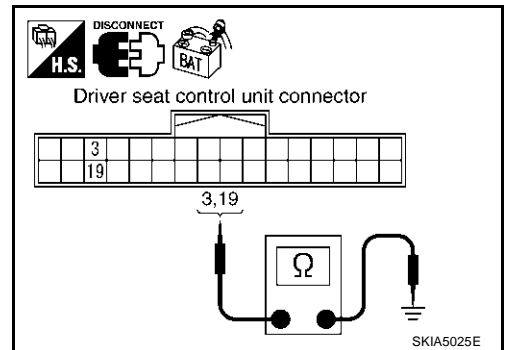
## 9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y), 19 (BR/W) and ground.

- 3 (L/Y) - Ground : Continuity should not exist.**
- 19 (BR/W) - Ground : Continuity should not exist.**

OK or NG

- OK >> GO TO 10.
- NG >> Repair harness between driver seat control unit and harness connector B301.



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M

LAN

## 10. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

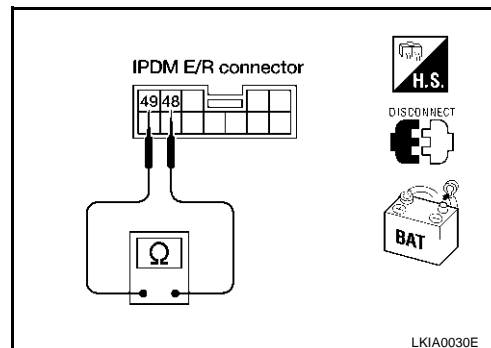
**48 (L) - 49 (Y) : Continuity should not exist.**

**OK or NG**

OK >> GO TO 11.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 11. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

**48 (L) - Ground : Continuity should not exist.**

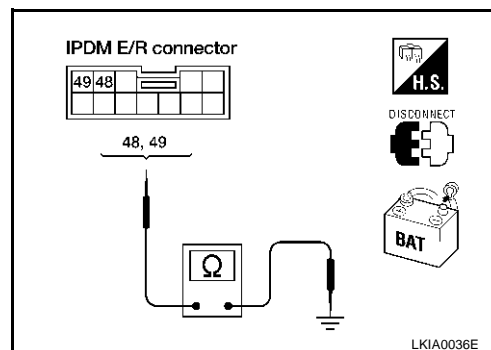
**49 (Y) - Ground : Continuity should not exist.**

**OK or NG**

OK >> GO TO 12.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 12. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-526, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

**OK or NG**

OK >> Connect all the connectors and diagnose again. Refer to [LAN-497, "Work Flow"](#).

NG >> Replace ECM and/or IPDM E/R.

### IPDM E/R Ignition Relay Circuit Check

AKS006X0

Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-45, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#).

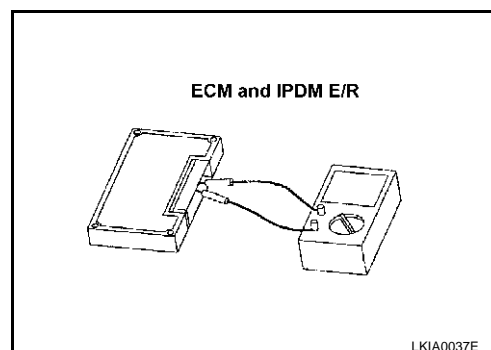
### Component Inspection

#### ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

AKS006X1

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



## CAN SYSTEM (TYPE 16)

PFP:23710

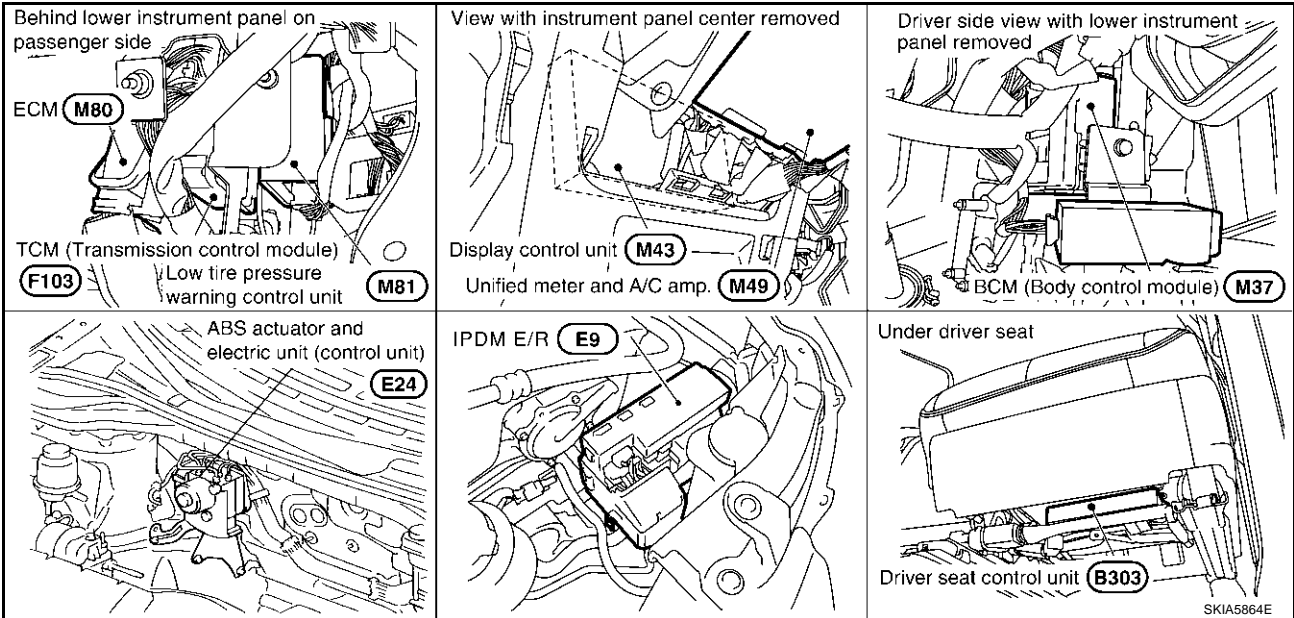
### System Description

AKS006X2

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

### Component Parts and Harness Connector Location

AKS006X3



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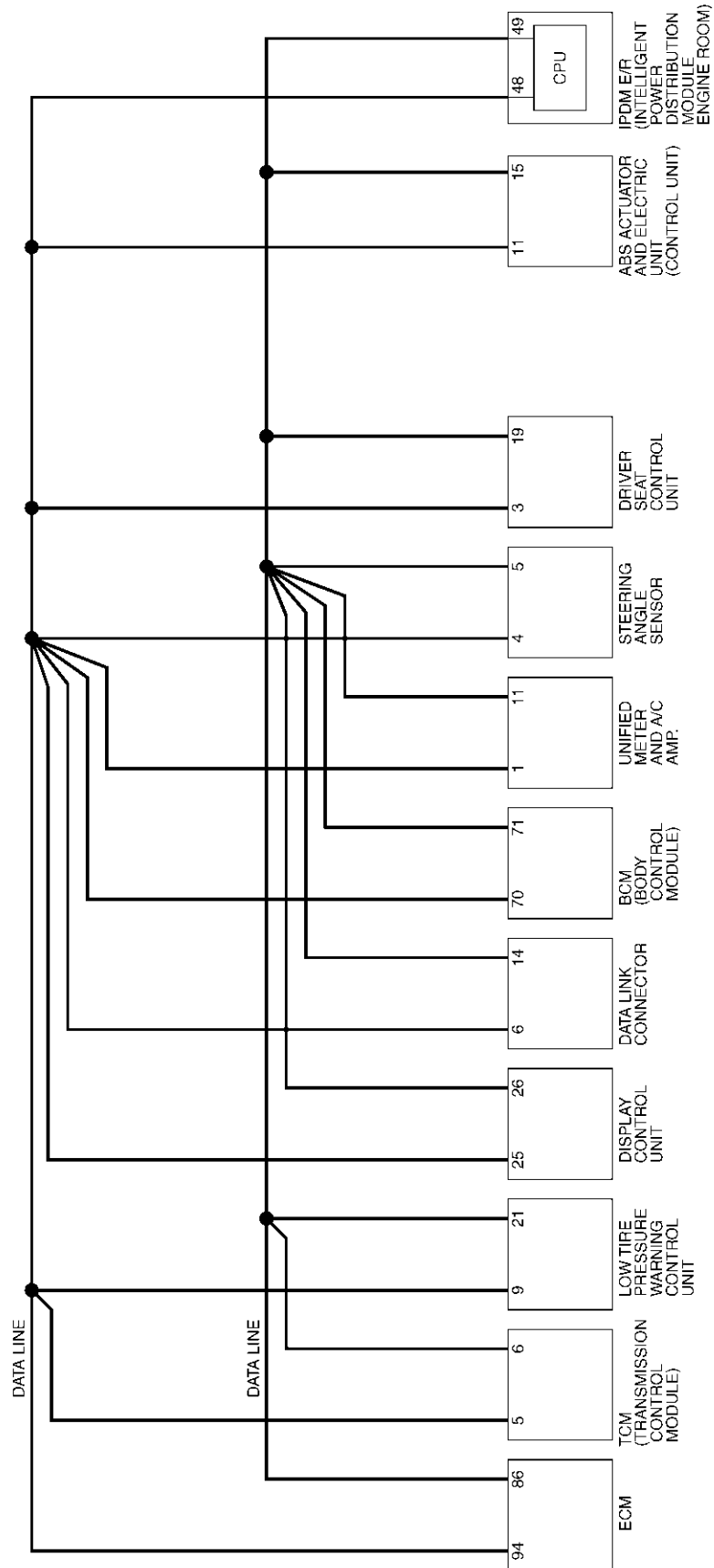
LAN

# CAN SYSTEM (TYPE 16)

[CAN]

## Schematic

AKS006X4



TKWA0983E

# CAN SYSTEM (TYPE 16)

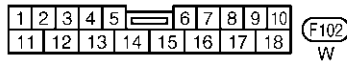
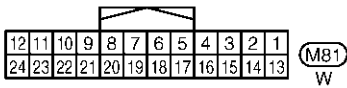
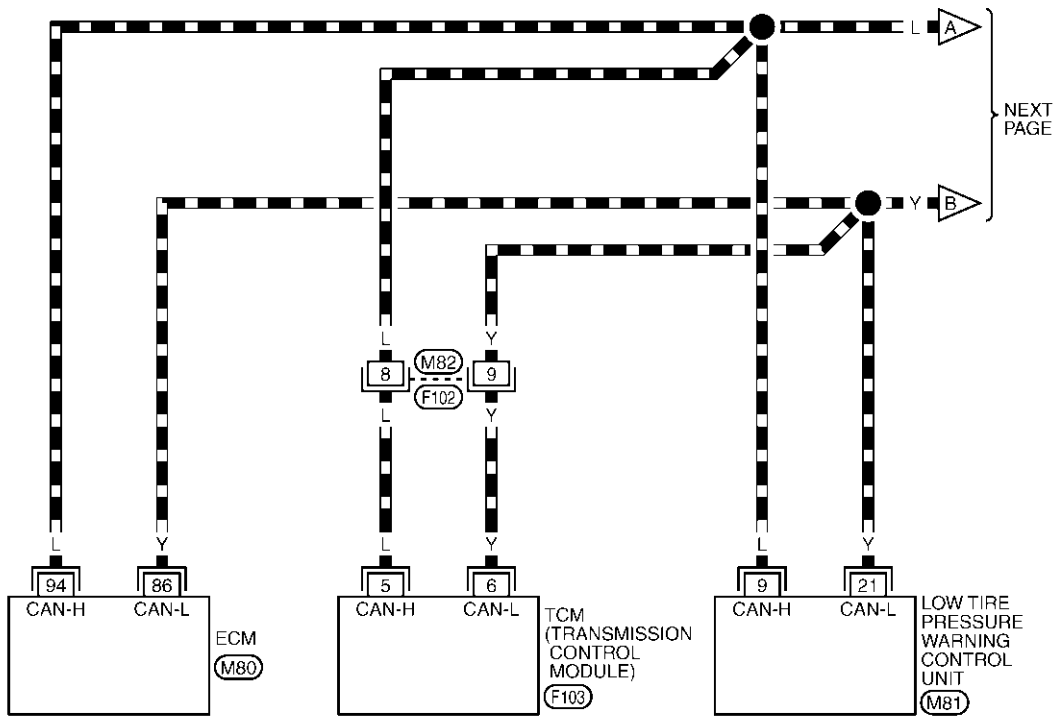
[CAN]

## Wiring Diagram - CAN -

AKS006X5

LAN-CAN-46

▬ : DATA LINE

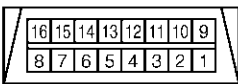
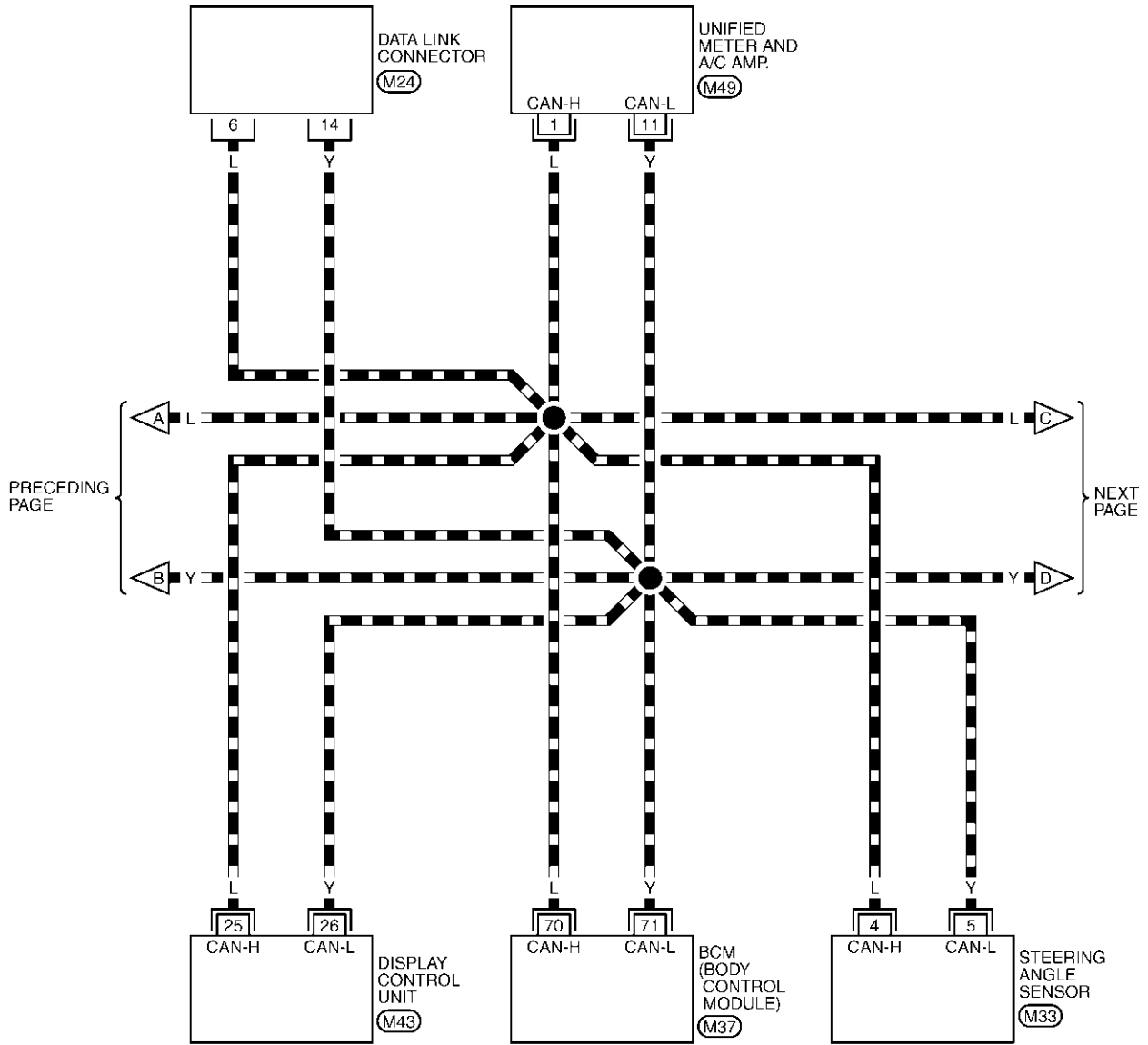


REFER TO THE FOLLOWING.  
 (M80), (F103) -ELECTRICAL  
 UNITS

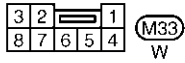
TKWA0984E

## LAN-CAN-47

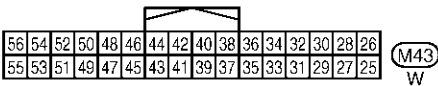
▬ : DATA LINE



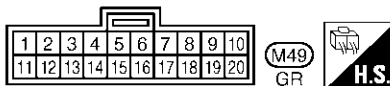
(M24)  
W



(M33)  
W



(M43)  
W



(M49)  
GR



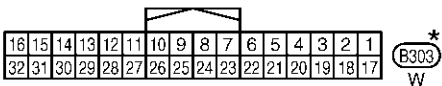
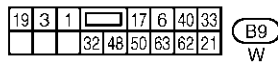
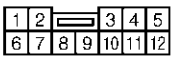
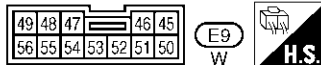
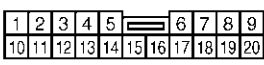
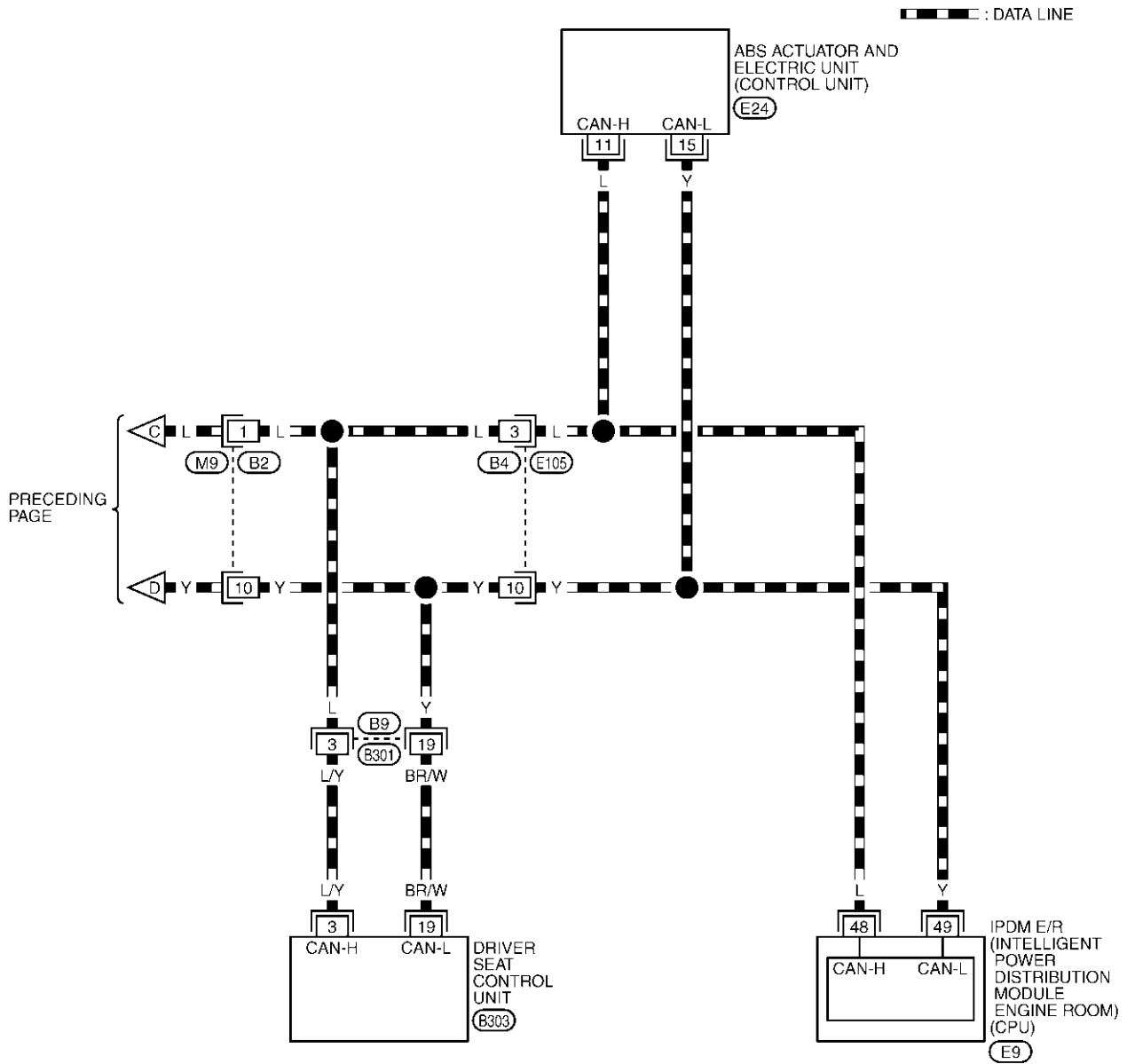
REFER TO THE FOLLOWING.  
(M37) -ELECTRICAL UNITS

# CAN SYSTEM (TYPE 16)

[CAN]

LAN-CAN-48

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LAN  
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\*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

REFER TO THE FOLLOWING.  
E24 -ELECTRICAL UNITS

TKWA0986E

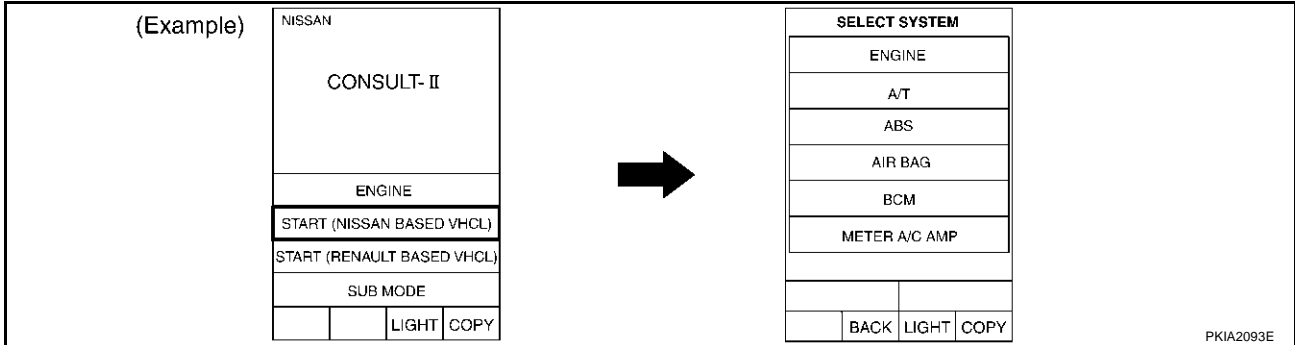
# CAN SYSTEM (TYPE 16)

[CAN]

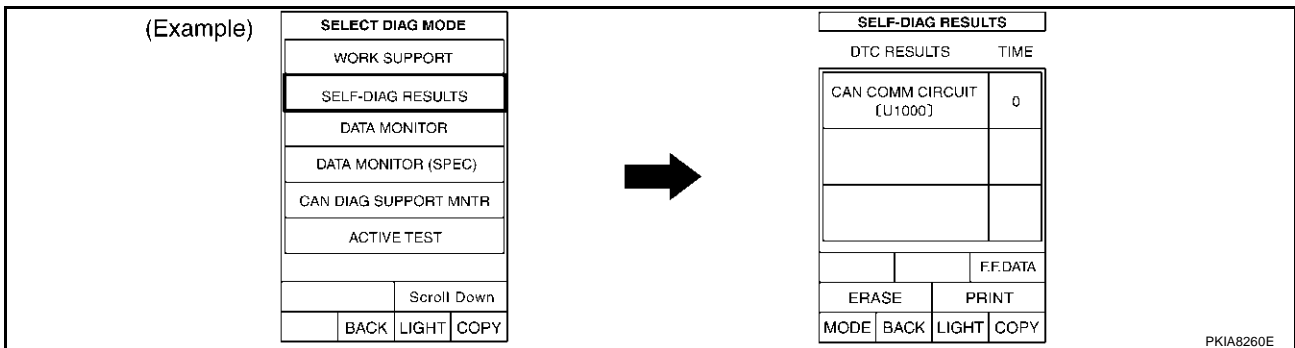
AKS00C5A

## Work Flow

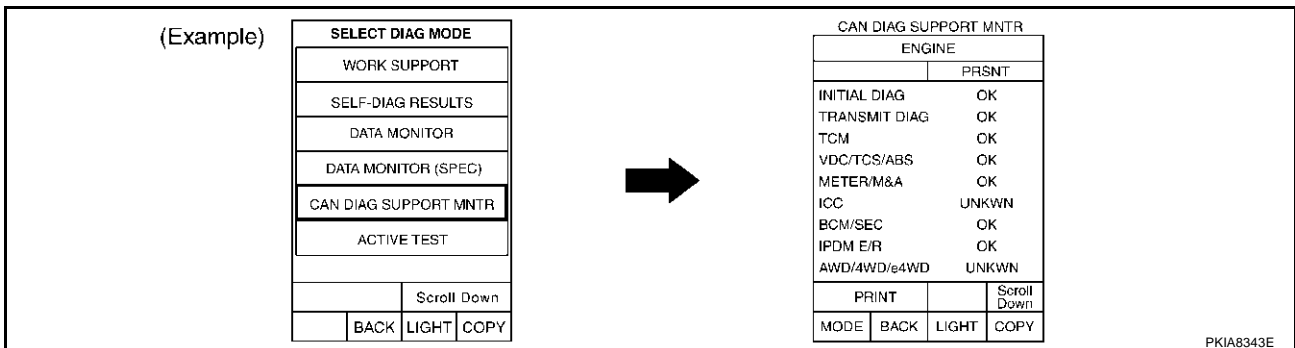
- When there are no indications of "TRANSMISSION", "AIR PRESSURE MONITOR", "METER A/C AMP" or "AUTO DRIVE POS." on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "AUTO DRIVE POS." and "ABS" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "AUTO DRIVE POS." and "ABS" displayed on CONSULT-II.



- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-534, "CHECK SHEET"](#) .
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "v" onto the items with "No indication", "NG", or "UNKWVN" in the check sheet table. Refer to [LAN-534, "CHECK SHEET"](#) .

**NOTE:**

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual. So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the navigation system. Refer to [AV-203, "CAN Communication Line Check"](#) .
- Attach the CAN DIAG SUPPORT MONITOR check sheet onto the check sheet. Refer to [LAN-534, "CHECK SHEET"](#) .



# CAN SYSTEM (TYPE 16)

[CAN]

8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG SUPPORT MONITOR check sheet. Refer to [LAN-534, "CHECK SHEET"](#) .

**NOTE:**

If "NG" is displayed on "CAN COMM" as "CAN DIAG SUPPORT MONITOR" for the diagnosed control unit, replace the control unit. Refer to [AV-203, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-536, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

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# CAN SYSTEM (TYPE 16)

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## CHECK SHEET

**NOTE:**

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	

Symptoms :

Attach copy of  
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Attach copy of  
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Attach copy of  
display control unit  
CAN DIAG SUPPORT MONITOR check sheet

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# CAN SYSTEM (TYPE 16)

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SELF-DIAG RESULTS

Attach copy of  
TRANSMISSION  
SELF-DIAG RESULTS

Attach copy of  
AIR PRESSURE  
MONITOR  
SELF-DIAG RESULTS

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
METER A/C AMP  
SELF-DIAG RESULTS

Attach copy of  
AUTO DRIVE POS.  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

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Attach copy of  
TRANSMISSION  
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AIR PRESSURE  
MONITOR  
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MNTR

Attach copy of  
BCM  
CAN DIAG SUPPORT  
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METER A/C AMP  
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AUTO DRIVE POS.  
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ABS  
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## CHECK SHEET RESULTS (EXAMPLE)

### NOTE:

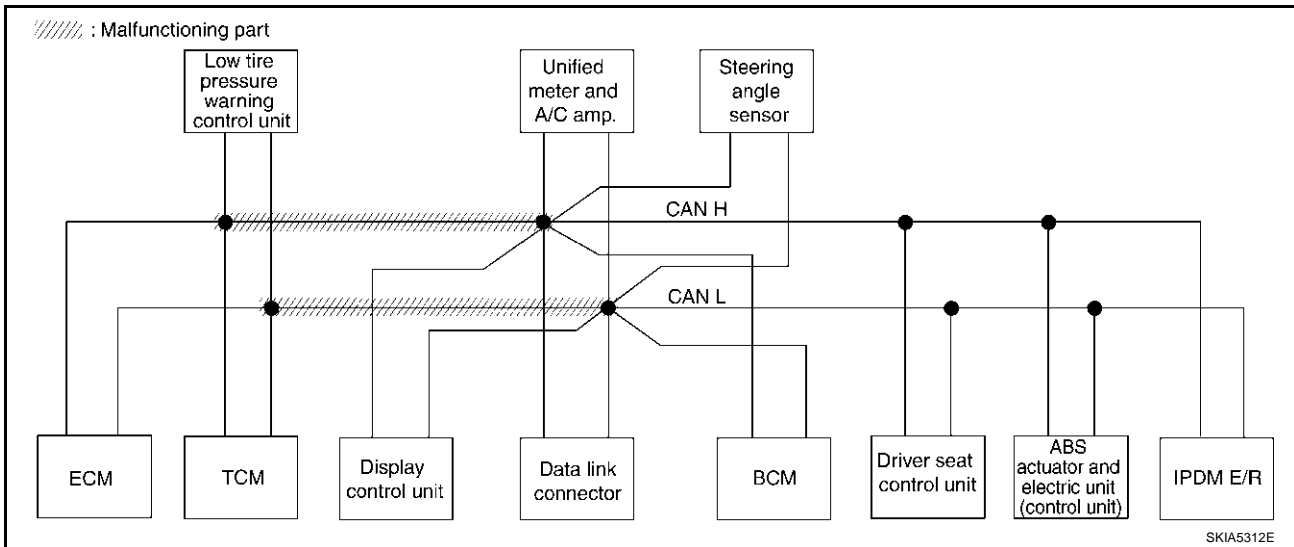
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

### Case 1

Check harness between TCM and data link connector. Refer to [LAN-551, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3 ✓	—	CAN CIRC 6 ✓	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

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# CAN SYSTEM (TYPE 16)

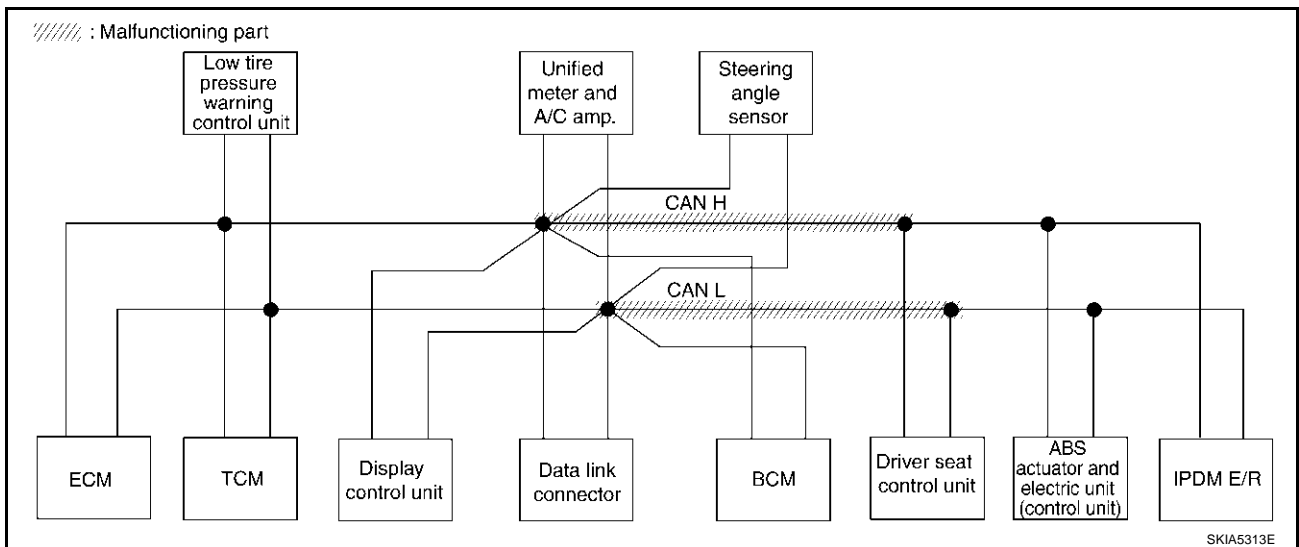
[CAN]

## Case 2

Check harness between data link connector and driver seat control unit. Refer to [LAN-551, "Circuit Check Between Data Link Connector and Driver Seat Control Unit"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

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# CAN SYSTEM (TYPE 16)

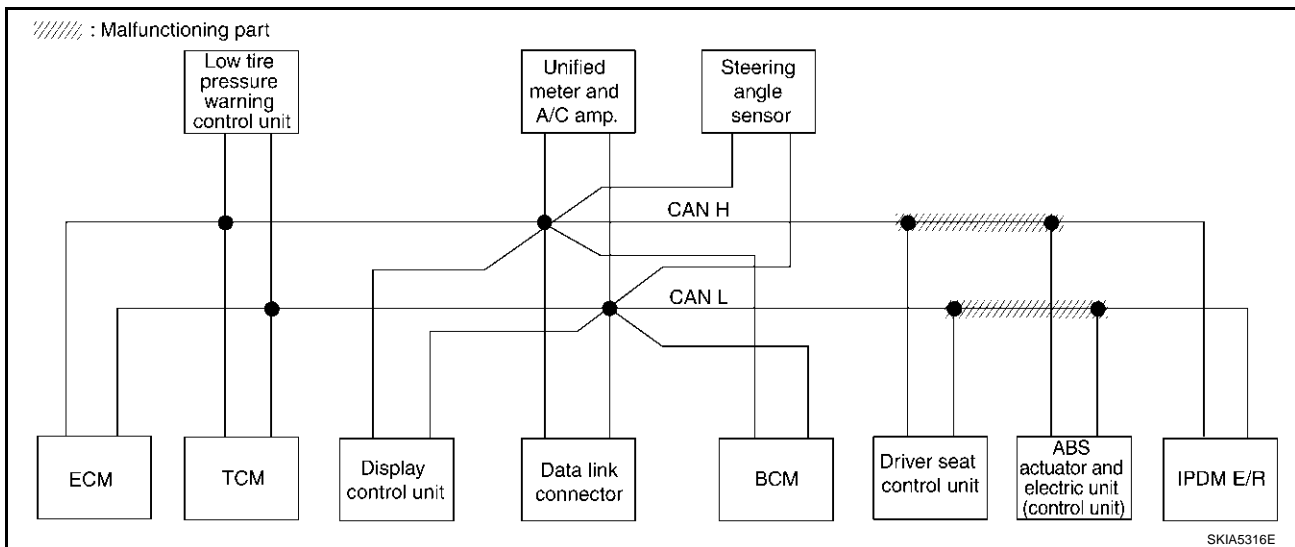
[CAN]

## Case 3

Check harness between driver seat control unit and ABS actuator and electric unit (control unit). Refer to [LAN-552, "Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit \(Control Unit\)"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	

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# CAN SYSTEM (TYPE 16)

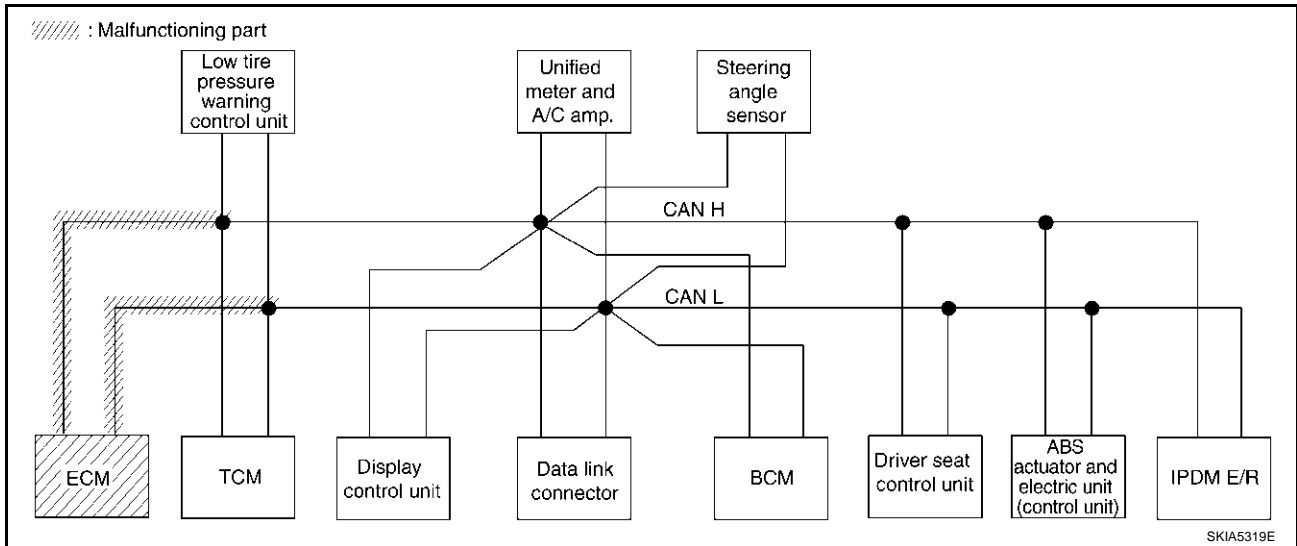
[CAN]

## Case 4

Check ECM circuit. Refer to [LAN-553, "ECM Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N
TRANSMISSION	No indication	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	—	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—
AIR PRESSURE MONITOR	No indication	NG	UNKW <sup>✓</sup> N	—	—	—	—	—	UNKW <sup>✓</sup> N	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	—	UNKW <sup>✓</sup> N	—	—	UNKW <sup>✓</sup> N
METER A/C AMP	No indication	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	UNKW <sup>✓</sup> N	—
AUTO DRIVE POS.	No indication	NG	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—
ABS	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	—	UNKW <sup>✓</sup> N	—	—

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# CAN SYSTEM (TYPE 16)

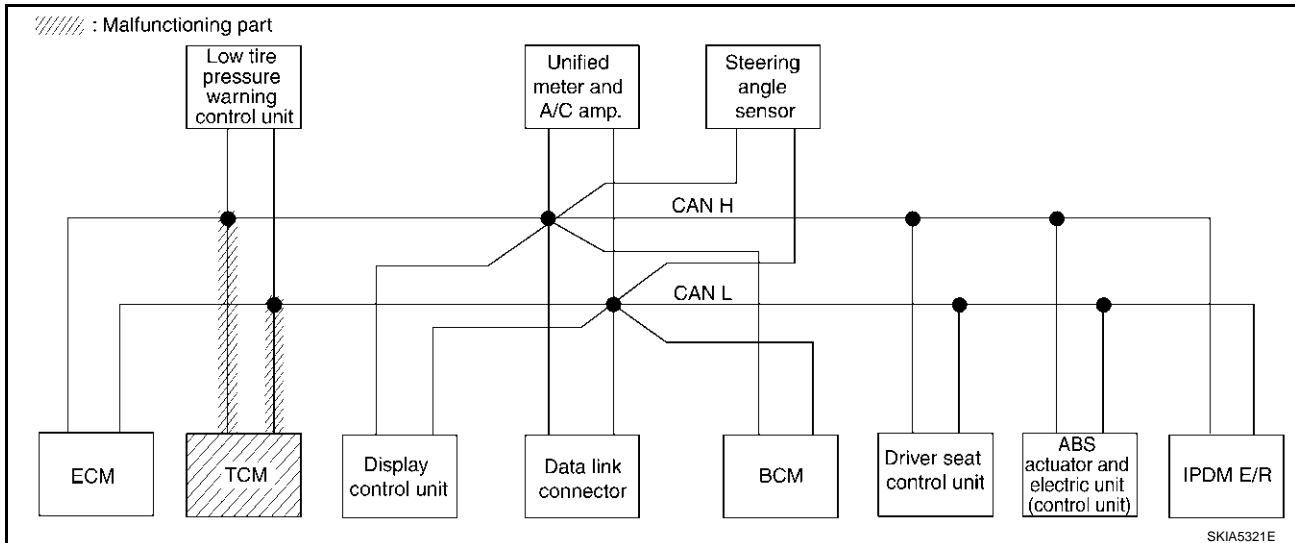
[CAN]

## Case 5

Check TCM circuit. Refer to [LAN-553, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

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# CAN SYSTEM (TYPE 16)

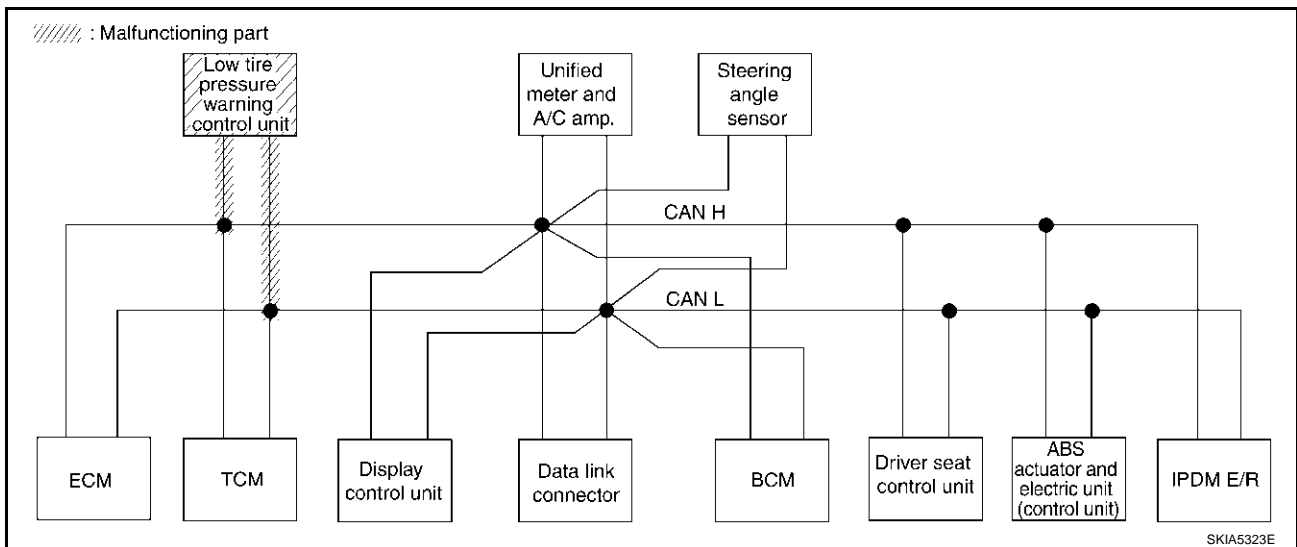
[CAN]

## Case 6

Check low tire pressure warning control unit circuit. Refer to [LAN-554, "Low Tire Pressure Warning Control Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

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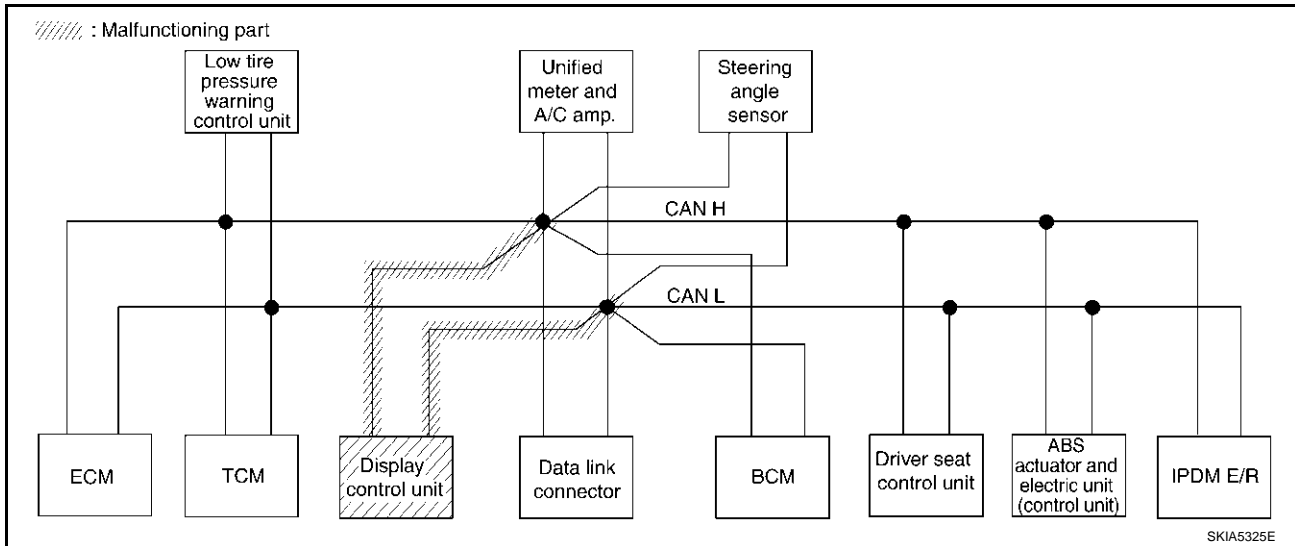
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## Case 7

Check display control unit circuit. Refer to [LAN-554, "Display Control Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CRC 1 ✓	CAN CRC 3 ✓	—	CAN CRC 6 ✓	—	CAN CRC 2 ✓	CAN CRC 5 ✓	—	—	CAN CRC 7 ✓
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

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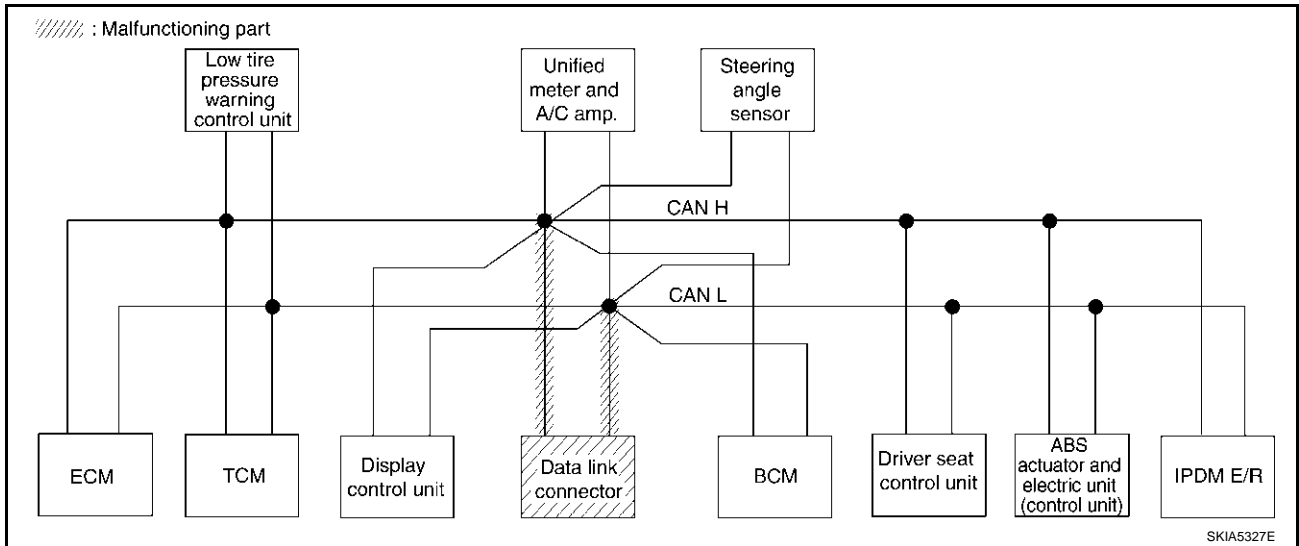
[CAN]

## Case 8

Check data link connector circuit. Refer to [LAN-555, "Data Link Connector Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

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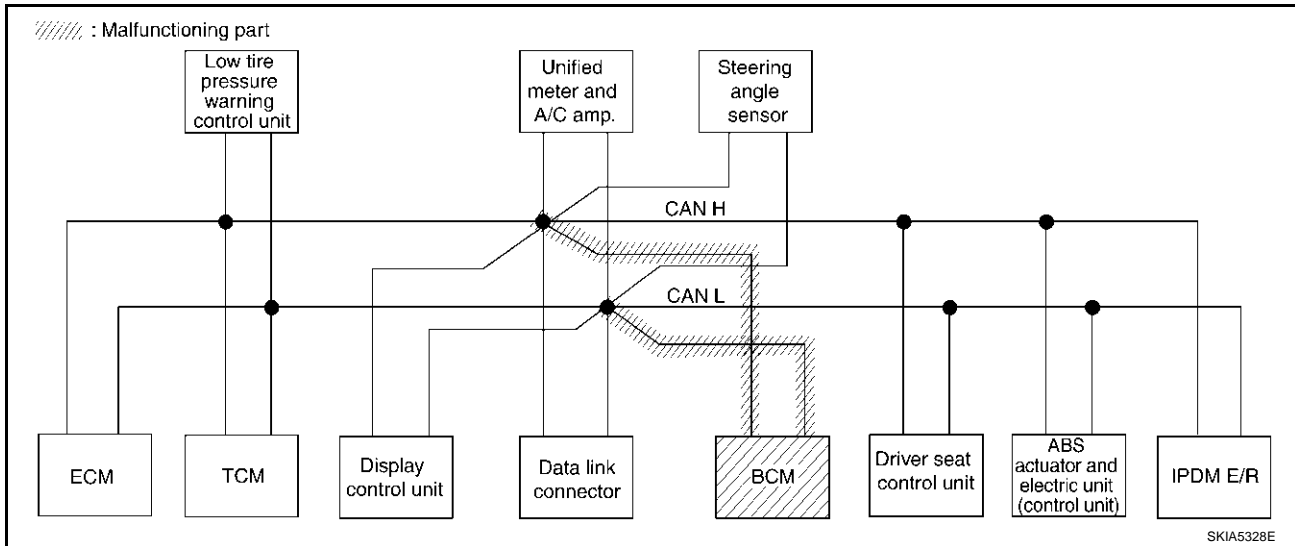
[CAN]

## Case 9

Check BCM circuit. Refer to [LAN-555, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	✓	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	✓	✓	—	—	—	—	✓	—	—	✓
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	✓	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	✓	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

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# CAN SYSTEM (TYPE 16)

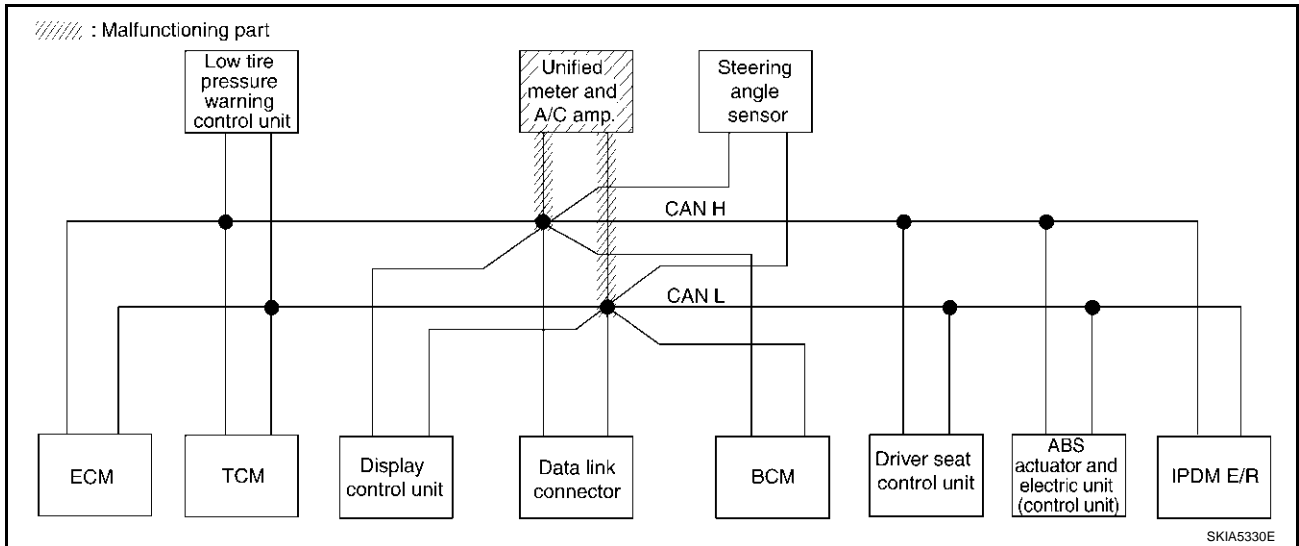
[CAN]

## Case 10

Check unified meter and A/C amp. circuit. Refer to [LAN-556, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	✓	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

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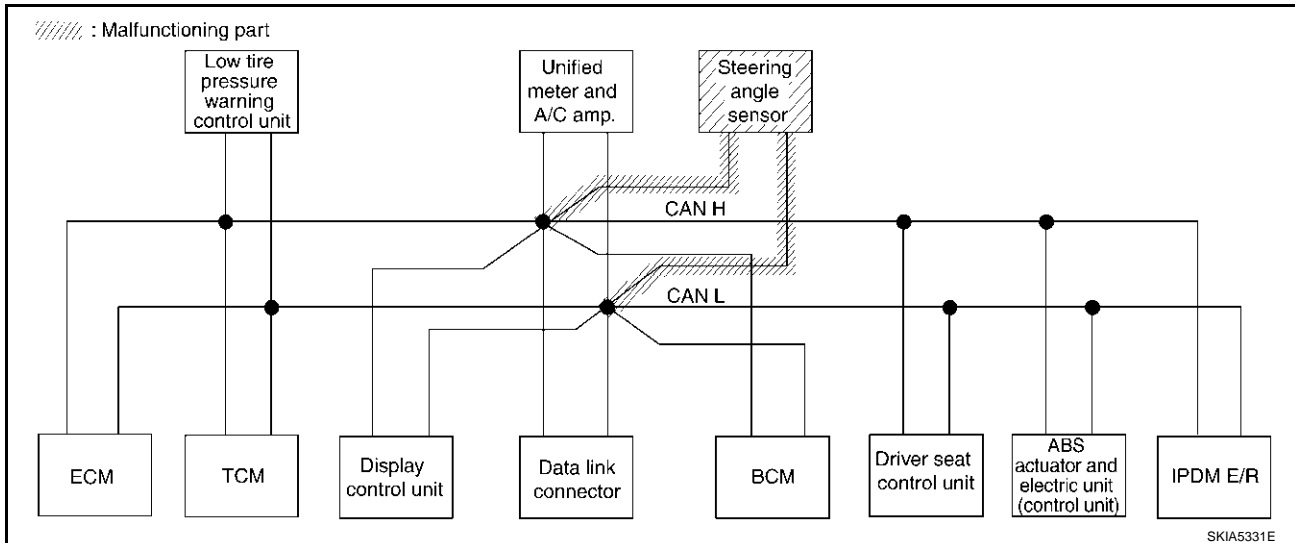
[CAN]

## Case 11

Check steering angle sensor circuit. Refer to [LAN-556, "Steering Angle Sensor Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

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# CAN SYSTEM (TYPE 16)

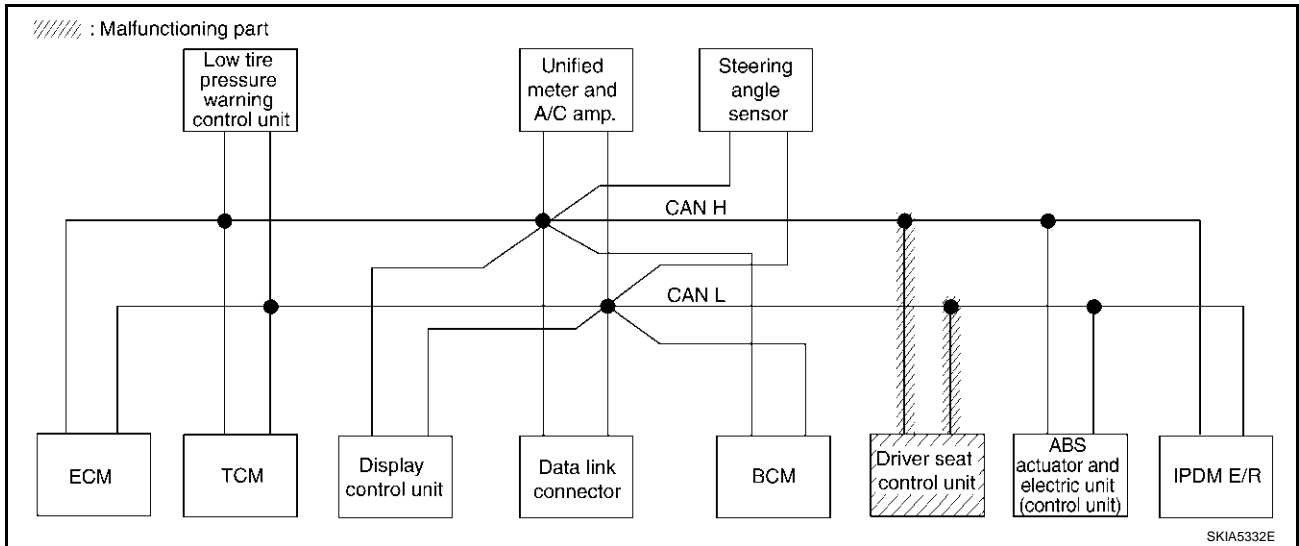
[CAN]

## Case 12

Check driver seat control unit circuit. Refer to [LAN-557, "Driver Seat Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

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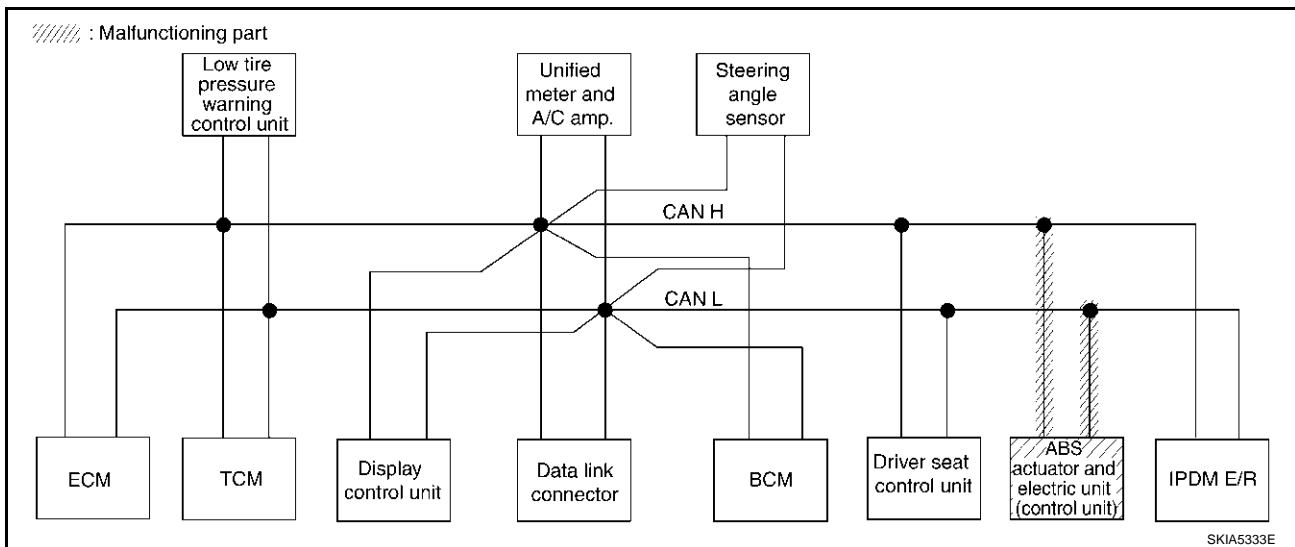
[CAN]

## Case 13

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-557, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—

PKIB0706E



SKIA5333E



# CAN SYSTEM (TYPE 16)

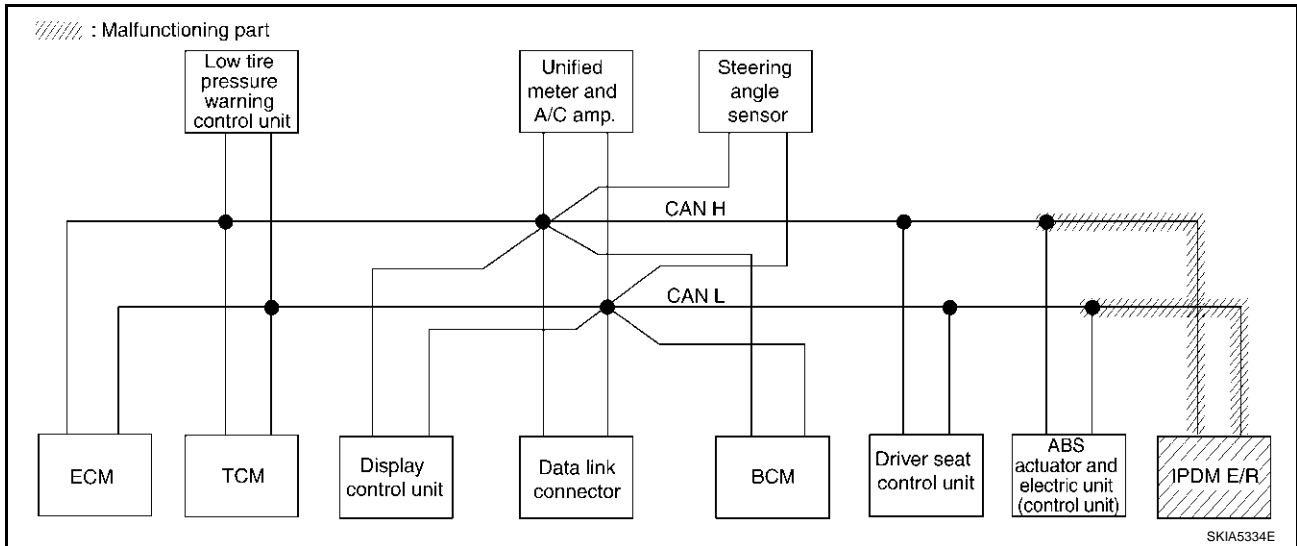
[CAN]

## Case 14

Check IPDM E/R circuit. Refer to [LAN-558, "IPDM E/R Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN ✓	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7 ✓	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN ✓	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	

PKIB0707E



## Case 15

Check CAN communication circuit. Refer to [LAN-559, "CAN Communication Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN ✓	—	UNKWN ✓	—	—	UNKWN ✓	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1 ✓	CAN CIRC 3 ✓	—	CAN CIRC 6 ✓	—	CAN CIRC 2 ✓	CAN CIRC 5 ✓	—	—	CAN CIRC 7 ✓	
BCM	—	NG	UNKWN ✓	UNKWN ✓	—	—	—	—	UNKWN ✓	—	—	UNKWN ✓	
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	
ABS	—	NG	UNKWN ✓	UNKWN ✓	UNKWN ✓	—	—	—	—	UNKWN ✓	—	—	

PKIB0708E

# CAN SYSTEM (TYPE 16)

[CAN]

## Case 16

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-563, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—

PKIB0709E

## Case 17

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-563, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—

PKIB0710E

## Circuit Check Between TCM and Data Link Connector

AKS006X7

### 1. CHECK HARNESS FOR OPEN CIRCUIT

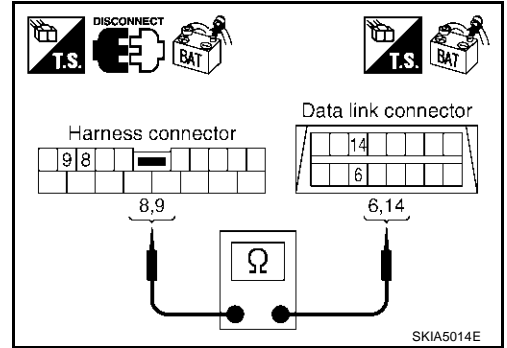
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

**8 (L) - 6 (L) : Continuity should exist.**

**9 (Y) - 14 (Y) : Continuity should exist.**

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-532, "Work Flow"](#).
- NG >> Repair harness.



## Circuit Check Between Data Link Connector and Driver Seat Control Unit

AKS006X8

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector M9
  - Harness connector B2

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

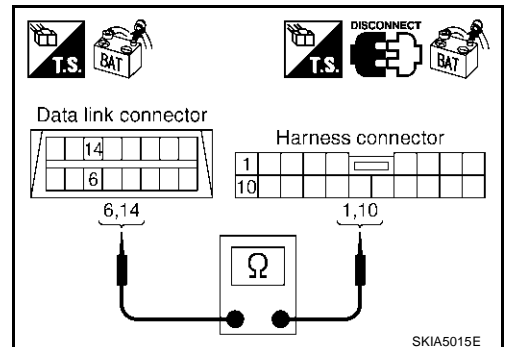
1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

**6 (L) - 1 (L) : Continuity should exist.**

**14 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



### 3. CHECK HARNESS FOR OPEN CIRCUIT

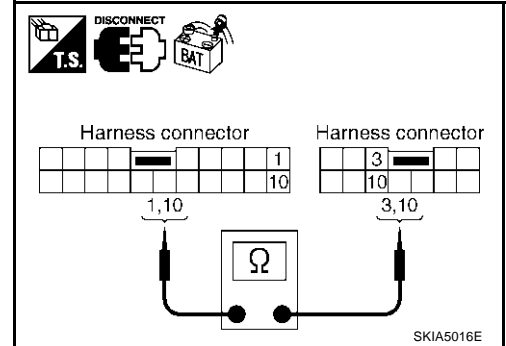
1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-532, "Work Flow"](#).
- NG >> Repair harness.



## Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit)

AKS006X9

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector B4
  - Harness connector E105

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

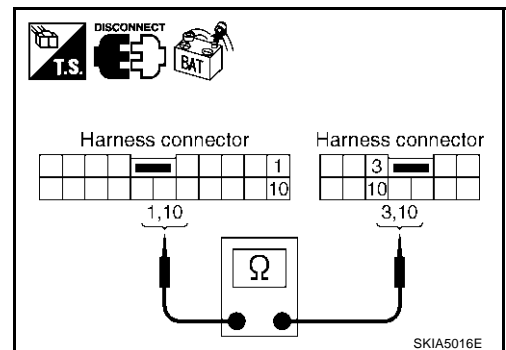
1. Disconnect harness connector B2 and harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



### 3. CHECK HARNESS FOR OPEN CIRCUIT

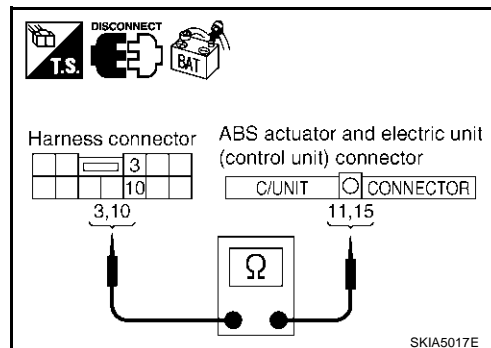
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

**3 (L) - 11 (L) : Continuity should exist.**

**10 (Y) - 15 (Y) : Continuity should exist.**

#### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-532, "Work Flow"](#).
- NG >> Repair harness.



## ECM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

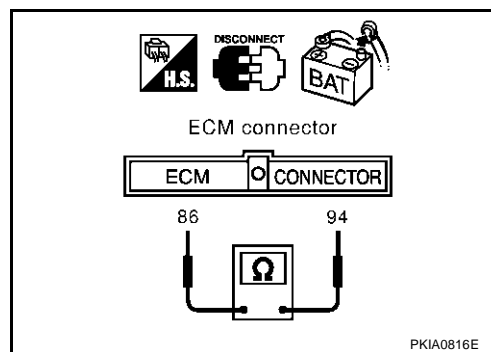
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

**94 (L) - 86 (Y) : Approx. 108 - 132Ω**

#### OK or NG

- OK >> Replace ECM.
- NG >> Repair harness between ECM and TCM.



## TCM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
  - TCM connector
  - Harness connector F102
  - Harness connector M82

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

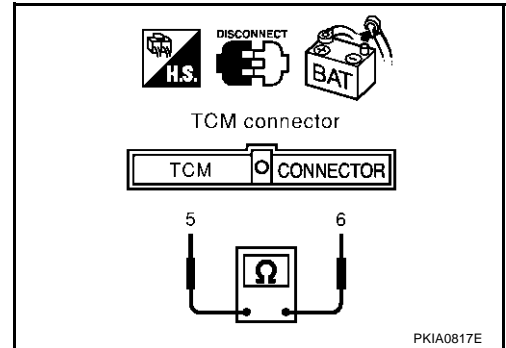
1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace TCM.  
 NG >> Repair harness between TCM and low tire pressure warning control unit.



## Low Tire Pressure Warning Control Unit Circuit Check

AKS006XC

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of low tire pressure warning control unit for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

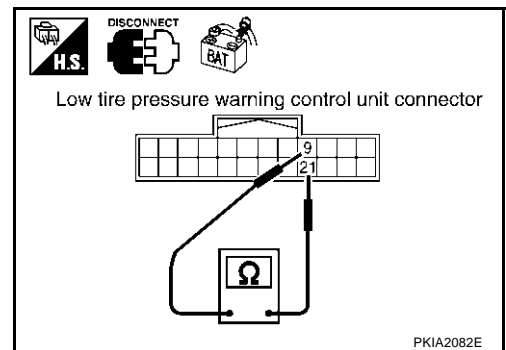
1. Disconnect low tire pressure warning control unit connector.
2. Check resistance between low tire pressure warning control unit harness connector M81 terminals 9 (L) and 21 (Y).

**9 (L) - 21 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace low tire pressure warning control unit.  
 NG >> Repair harness between low tire pressure warning control unit and TCM.



## Display Control Unit Circuit Check

AKS006XD

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display control unit for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

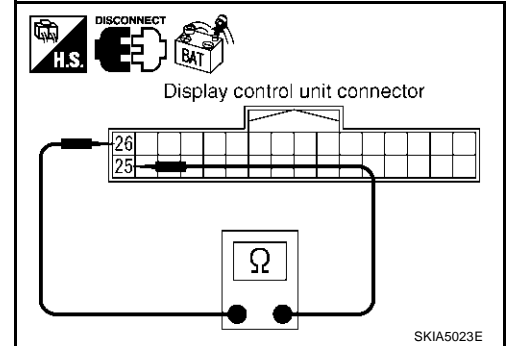
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect display control unit connector.
2. Check resistance between display control unit harness connector M43 terminals 25 (L) and 26 (Y).

**25 (L) - 26 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace display control unit.  
 NG >> Repair harness between display control unit and data link connector.



## Data Link Connector Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

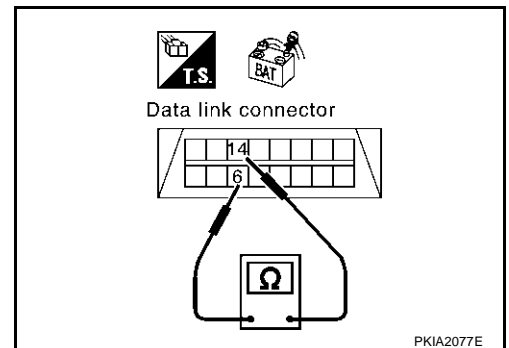
## 2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Diagnose again. Refer to [LAN-532, "Work Flow"](#) .  
 NG >> Repair harness between data link connector and BCM.



## BCM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

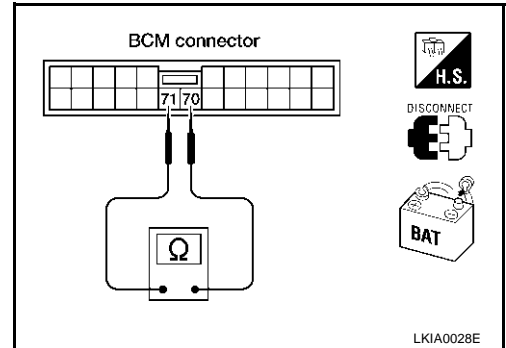
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M37 terminals 70 (L) and 71 (Y).

**70 (L) - 71 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace BCM. Refer to [BCS-36, "Removal and Installation of BCM"](#).
- NG >> Repair harness between BCM and data link connector.



## Unified Meter and A/C Amp. Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

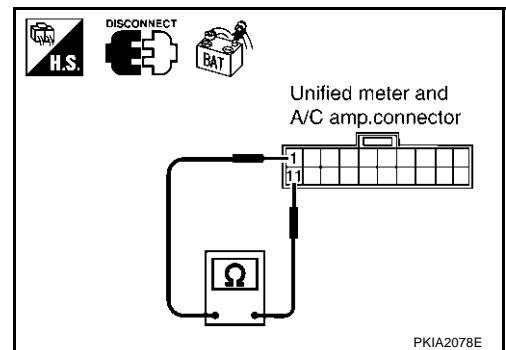
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

**1 (L) - 11 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace unified meter and A/C amp.
- NG >> Repair harness between unified meter and A/C amp. and data link connector.



## Steering Angle Sensor Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of steering angle sensor for damage, bend and loose connection (sensor side and harness side).

### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.



## 2. CHECK HARNESS FOR OPEN CIRCUIT

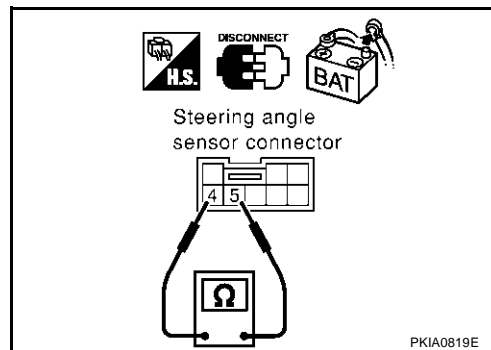
1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M33 terminals 4 (L) and 5 (Y).

**4 (L) - 5 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace steering angle sensor.  
 NG >> Repair harness between steering angle sensor and data link connector.



## Driver Seat Control Unit Circuit Check

AKS006XI

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control unit side and harness side).
  - Driver seat control unit connector
  - Harness connector B301
  - Harness connector B9

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

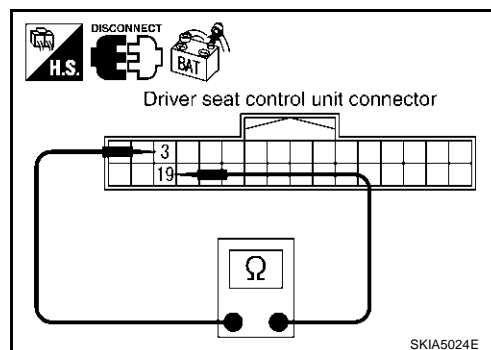
1. Disconnect driver seat control unit connector.
2. Check resistance between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

**3 (L/Y) - 19 (BR/W)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace driver seat control unit.  
 NG >> Repair harness between driver seat control unit and harness connector B4.



## ABS Actuator and Electric Unit (Control Unit) Circuit Check

AKS006XJ

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

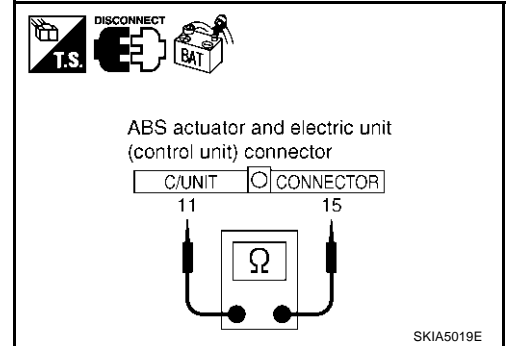
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

**11 (L) - 15 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).  
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



AKS006XK

## IPDM E/R Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

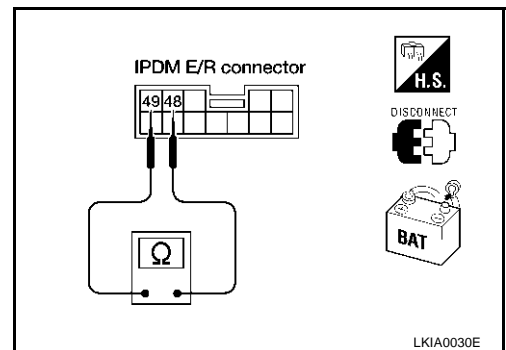
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y) : Approx. 108 - 132Ω**

### OK or NG

- OK >> Replace IPDM E/R.  
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



**CAN Communication Circuit Check**

AKS006XL

**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, meter side, sensor side and harness side).
  - ECM
  - TCM
  - Low tire pressure warning control unit
  - Display control unit
  - BCM
  - Unified meter and A/C amp.
  - Steering angle sensor
  - Driver seat control unit
  - ABS actuator and electric unit (control unit)
  - IPDM E/R
  - Between ECM and IPDM E/R
  - Between ECM and TCM
  - Between ECM and driver seat control unit

**OK or NG**

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
L  
M

LAN

## 2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
  - ECM connector
  - Low tire pressure warning control unit connector
  - Harness connector M82
  - Display control unit connector
  - BCM connector
  - Unified meter and A/C amp. connector
  - Steering angle sensor connector
  - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

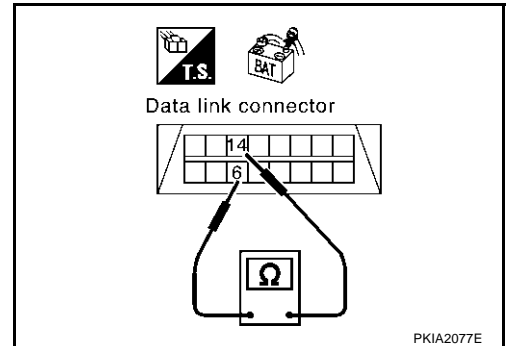
**6 (L) - 14 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 3.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M9.



## 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

**6 (L) - Ground : Continuity should not exist.**

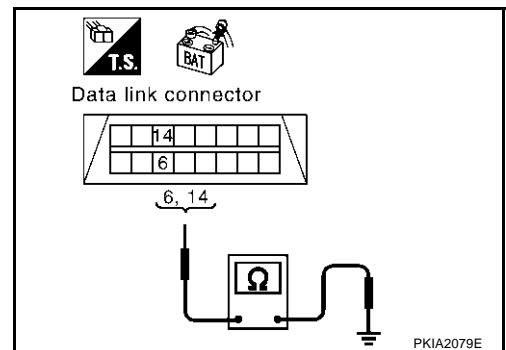
**14 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M9.



#### 4. CHECK HARNESS FOR SHORT CIRCUIT

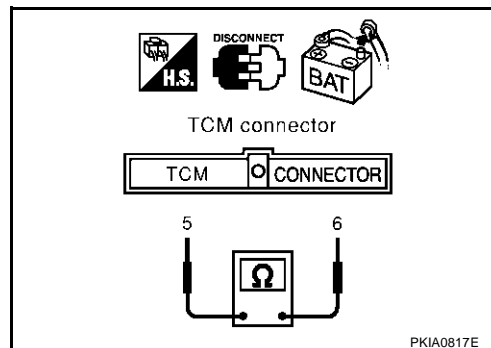
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Continuity should not exist.**

##### OK or NG

OK >> GO TO 5.

NG >> Repair harness between TCM and harness connector F102.



#### 5. CHECK HARNESS FOR SHORT CIRCUIT

- Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

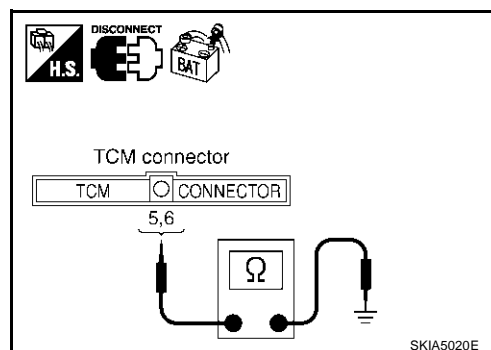
**5 (L) - Ground : Continuity should not exist.**

**6 (Y) - Ground : Continuity should not exist.**

##### OK or NG

OK >> GO TO 6.

NG >> Repair harness between TCM and harness connector F102.



#### 6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B4 and harness connector B9.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

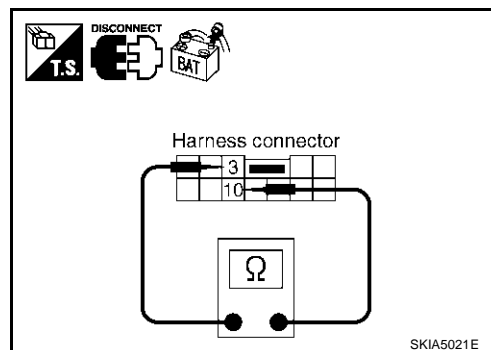
**3 (L) - 10 (Y) : Continuity should not exist.**

##### OK or NG

OK >> GO TO 7.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Repair harness between harness connector B4 and harness connector B2.
- Repair harness between harness connector B4 and harness connector B9.



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## 7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

**3 (L) - Ground : Continuity should not exist.**

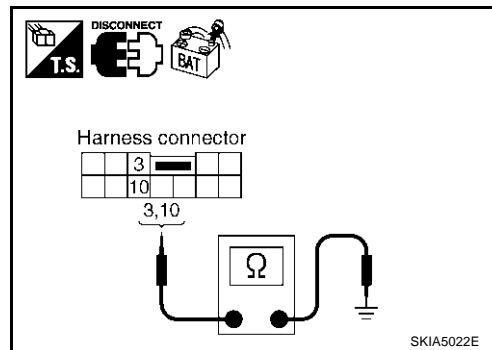
**10 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 8.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Repair harness between harness connector B4 and harness connector B2.
- Repair harness between harness connector B4 and harness connector B9.



## 8. CHECK HARNESS FOR SHORT CIRCUIT

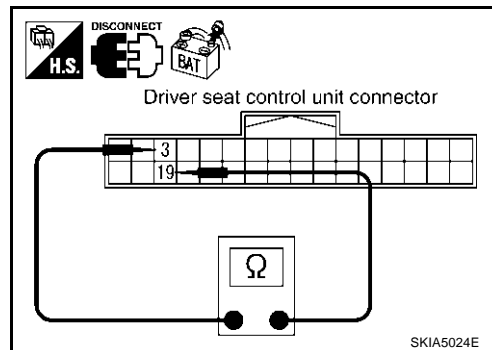
1. Disconnect driver seat control unit connector.
2. Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

**3 (L/Y) - 19 (BR/W) : Continuity should not exist.**

OK or NG

OK >> GO TO 9.

NG >> Repair harness between driver seat control unit and harness connector B301.



## 9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y), 19 (BR/W) and ground.

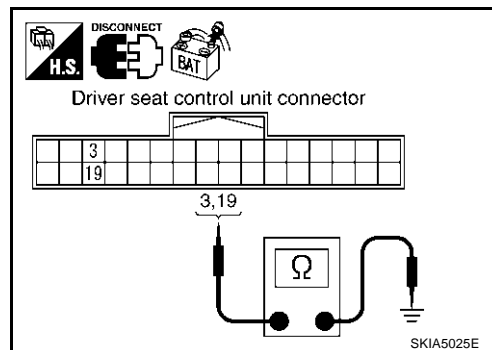
**3 (L/Y) - Ground : Continuity should not exist.**

**19 (BR/W) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 10.

NG >> Repair harness between driver seat control unit and harness connector B301.



10. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

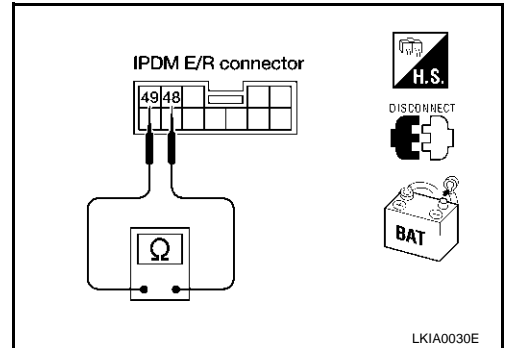
**48 (L) - 49 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 11.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



11. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

**48 (L) - Ground : Continuity should not exist.**

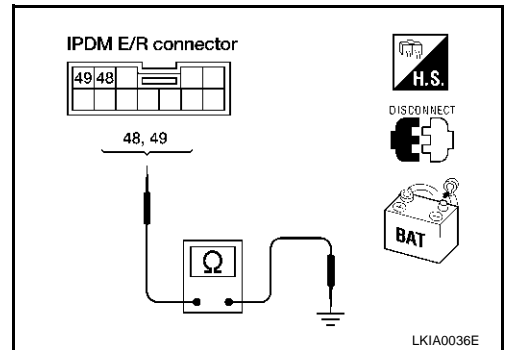
**49 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 12.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



12. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-563, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#) .

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-532, "Work Flow"](#) .

NG >> Replace ECM and/or IPDM E/R.

IPDM E/R Ignition Relay Circuit Check

AKS006XM

Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-45, "IPDM E/R Power/Ground Circuit Inspection"](#) .
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#) .

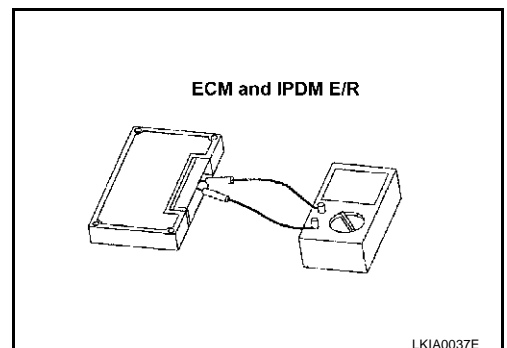
Component Inspection

ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

AKS006XM

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



## CAN SYSTEM (TYPE 17)

PFP:23710

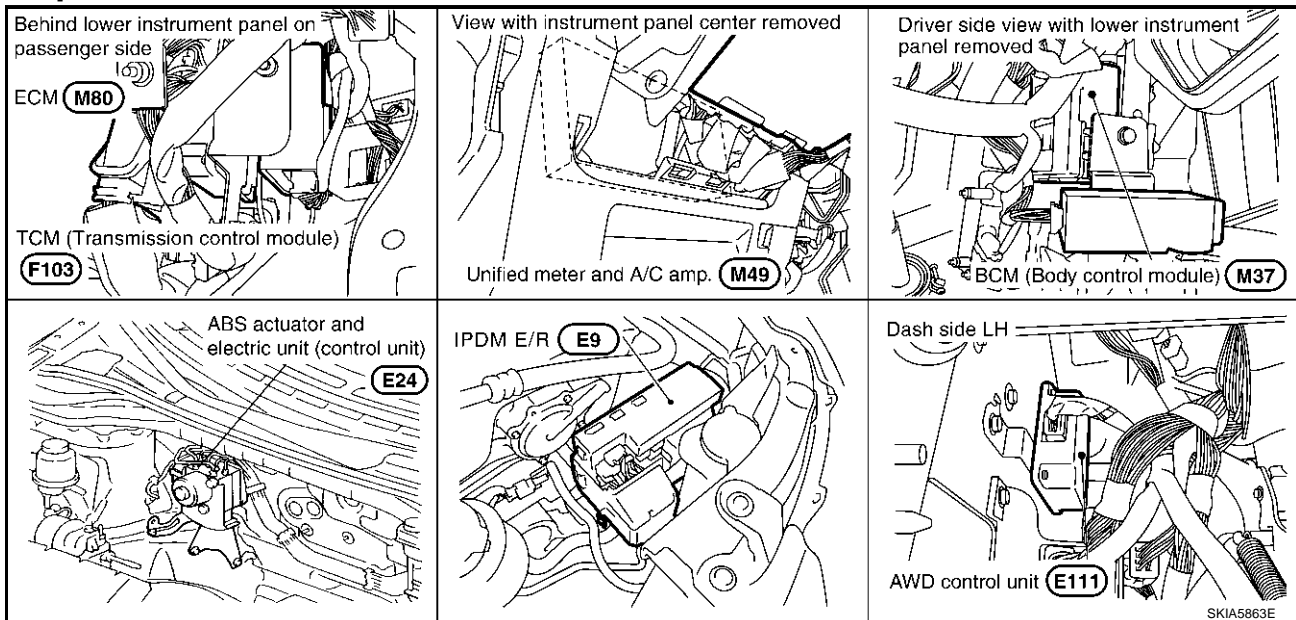
### System Description

AKS006X0

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

### Component Parts and Harness Connector Location

AKS006XP



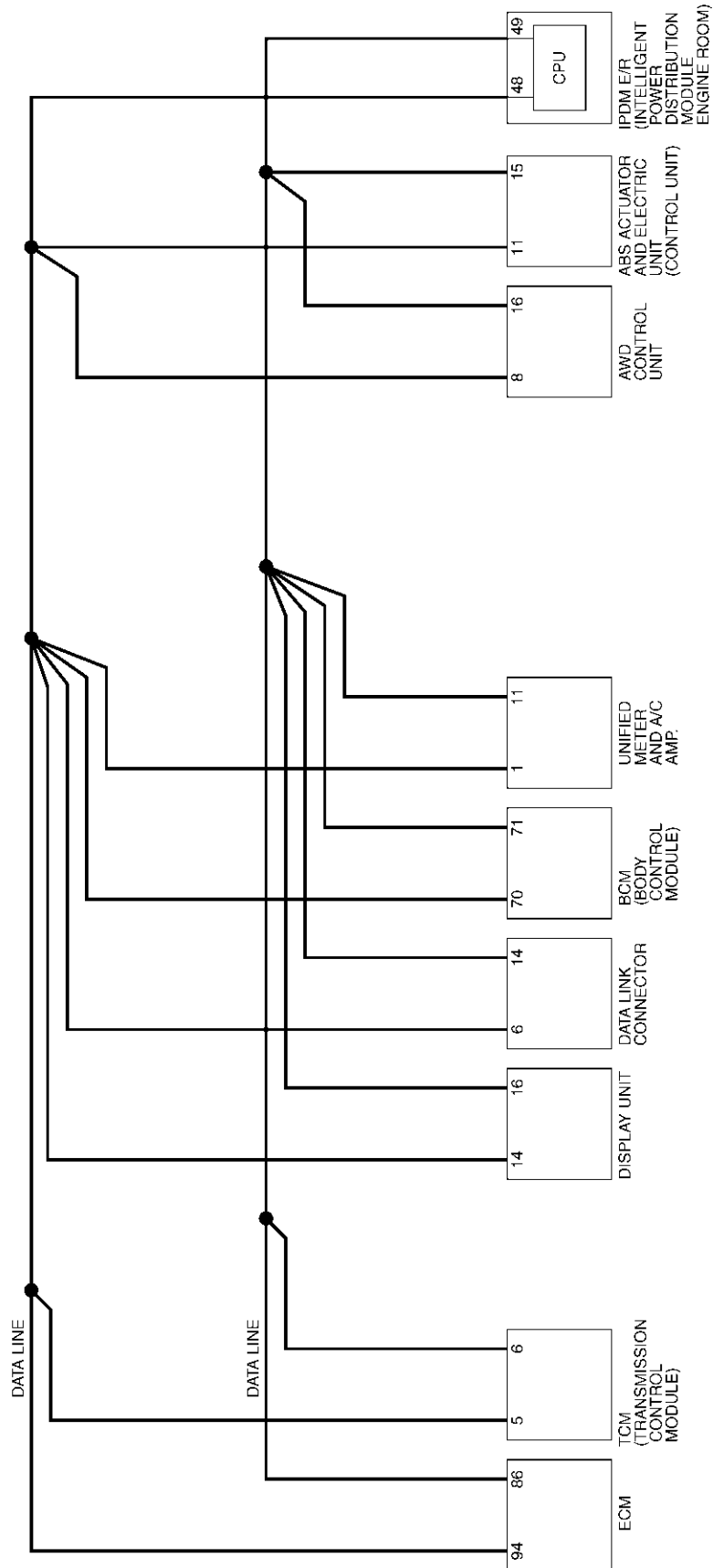


# CAN SYSTEM (TYPE 17)

[CAN]

## Schematic

AKS006XQ



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LAN

TKWA0987E

# CAN SYSTEM (TYPE 17)

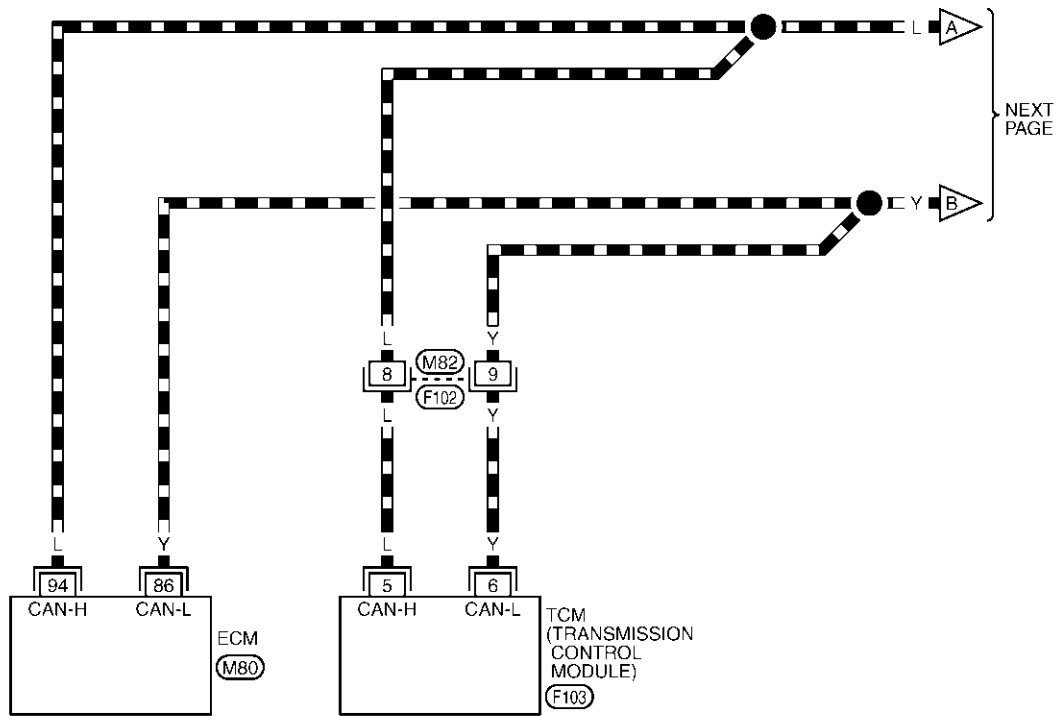
[CAN]

## Wiring Diagram - CAN -

AKS006XR

### LAN-CAN-49

▬ : DATA LINE



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18		

(F102)  
W

REFER TO THE FOLLOWING.  
(M80), (F103) -ELECTRICAL  
UNITS

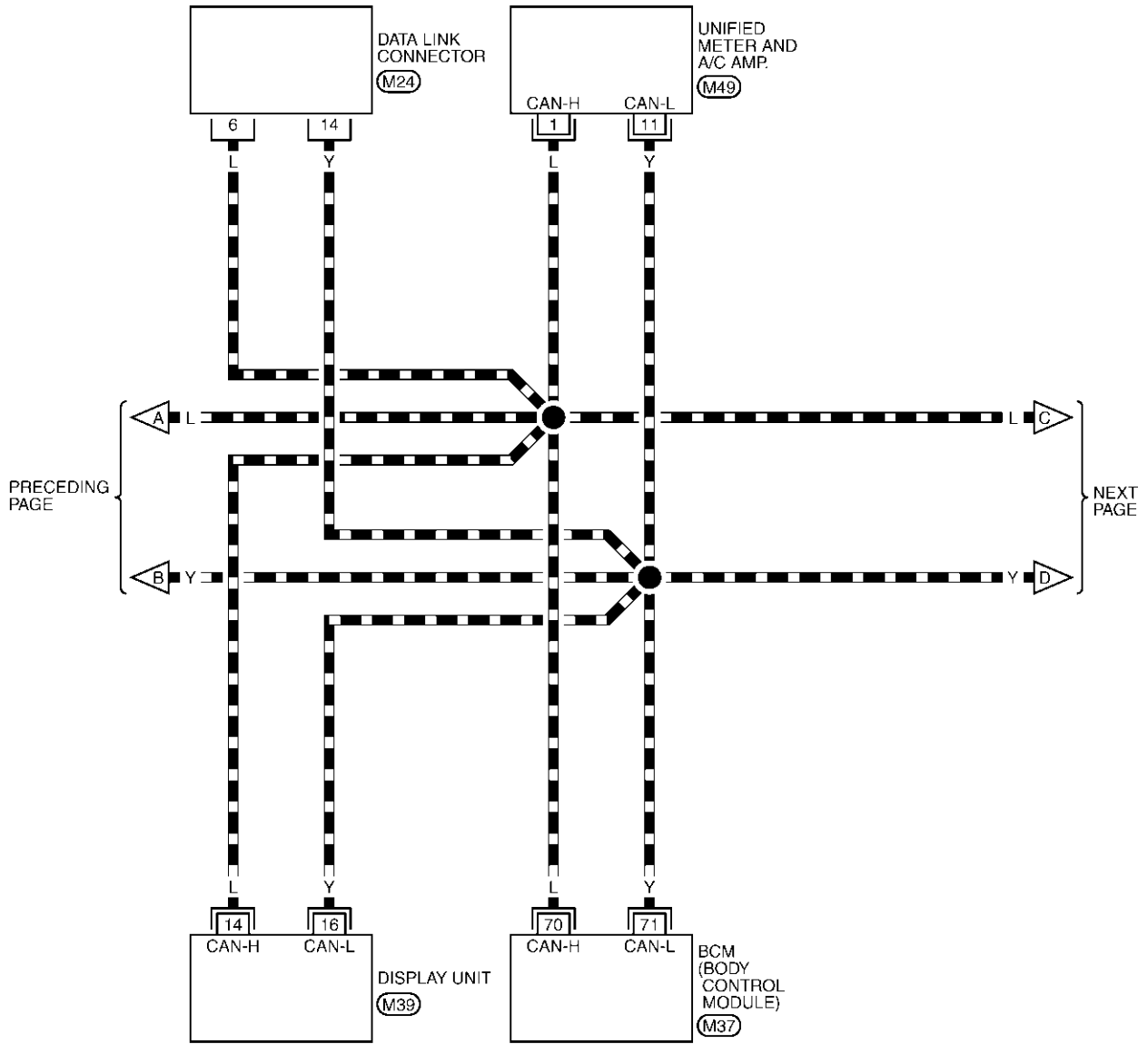
TKWA0988E

# CAN SYSTEM (TYPE 17)

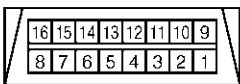
[CAN]

## LAN-CAN-50

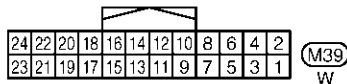
▬ : DATA LINE



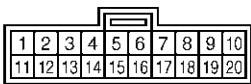
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(M24)  
W



(M39)  
W



(M49)  
GR

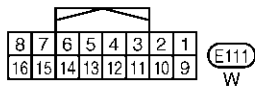
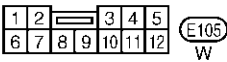
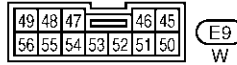
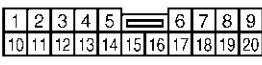
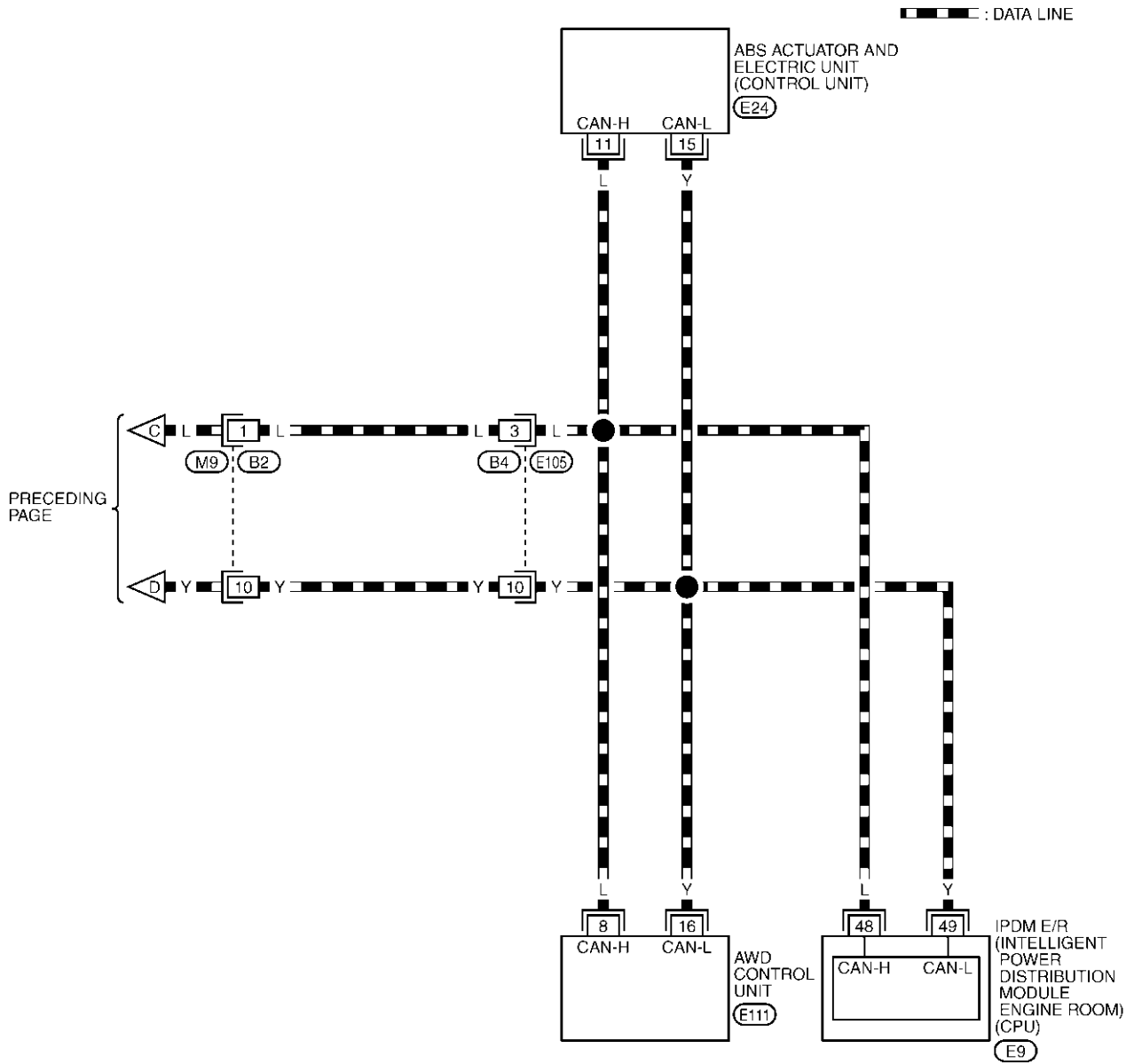


REFER TO THE FOLLOWING.

(M37) -ELECTRICAL UNITS

TKWA0989E

## LAN-CAN-51



REFER TO THE FOLLOWING.  
(E24) -ELECTRICAL UNITS

# CAN SYSTEM (TYPE 17)

[CAN]

AKS00C5I

## Work Flow

- When there are no indications of "TRANSMISSION" or "METER A/C AMP" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".

(Example)

NISSAN			
CONSULT-II			
ENGINE			
START (NISSAN BASED VHCL)			
START (RENAULT BASED VHCL)			
SUB MODE			
		LIGHT	COPY

SELECT SYSTEM			
ENGINE			
A/T			
ABS			
AIR BAG			
BCM			
METER A/C AMP			
		BACK	LIGHT COPY

PKIA2093E

- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP", "ALL MODE AWD/4WD" and "ABS" displayed on CONSULT-II.

(Example)

SELECT DIAG MODE			
WORK SUPPORT			
SELF-DIAG RESULTS			
DATA MONITOR			
DATA MONITOR (SPEC)			
CAN DIAG SUPPORT MNTR			
ACTIVE TEST			
Scroll Down			
		BACK	LIGHT COPY

SELF-DIAG RESULTS			
DTC RESULTS		TIME	
CAN COMM CIRCUIT [U1000]		0	
F.F.DATA			
ERASE		PRINT	
MODE	BACK	LIGHT	COPY

PKIA8260E

- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP", "ALL MODE AWD/4WD" and "ABS" displayed on CONSULT-II.

(Example)

SELECT DIAG MODE			
WORK SUPPORT			
SELF-DIAG RESULTS			
DATA MONITOR			
DATA MONITOR (SPEC)			
CAN DIAG SUPPORT MNTR			
ACTIVE TEST			
Scroll Down			
		BACK	LIGHT COPY

CAN DIAG SUPPORT MNTR			
ENGINE			
		PRNT	
INITIAL DIAG		OK	
TRANSMIT DIAG		OK	
TCM		OK	
VDC/TCS/ABS		OK	
METER/M&A		OK	
ICC		UNKWVN	
BCM/SEC		OK	
IPDM E/R		OK	
AWD/4WD/e4WD		UNKWVN	
PRINT			Scroll Down
MODE	BACK	LIGHT	COPY

PKIA8343E

- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-571, "CHECK SHEET"](#).
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "v" onto the items with "No indication", "NG", or "UNKWVN" in the check sheet table. Refer to [LAN-571, "CHECK SHEET"](#).

**NOTE:**

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual. So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the integrated display system. Refer to [AV-110, "CAN Communication Line Check"](#).
- Attach the CAN DIAG MONITOR check sheet onto the check sheet. Refer to [LAN-571, "CHECK SHEET"](#).

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LAN

- 
8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG MONITOR check sheet. Refer to [LAN-569, "Work Flow"](#) .

**NOTE:**

If "NG" is displayed on "CAN COMM" as "CAN DIAG MNTR" for the diagnosed control unit, replace the control unit. Refer to [AV-110, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-573, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

# CAN SYSTEM (TYPE 17)

[CAN]

## CHECK SHEET

**NOTE:**

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

A  
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SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

Attach copy of  
display unit  
CAN DIAG MONITOR check sheet

PKIB0714E

# CAN SYSTEM (TYPE 17)

[CAN]

Attach copy of  
ENGINE  
SELF-DIAG RESULTS

Attach copy of  
TRANSMISSION  
SELF-DIAG RESULTS

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
METER A/C AMP  
SELF-DIAG RESULTS

Attach copy of  
ALL MODE AWD/4WD  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

Attach copy of  
ENGINE  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
TRANSMISSION  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
BCM  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
METER A/C AMP  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ALL MODE AWD/4WD  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ABS  
CAN DIAG SUPPORT  
MNTR

PKIB0715E



# CAN SYSTEM (TYPE 17)

[CAN]

## CHECK SHEET RESULTS (EXAMPLE)

### NOTE:

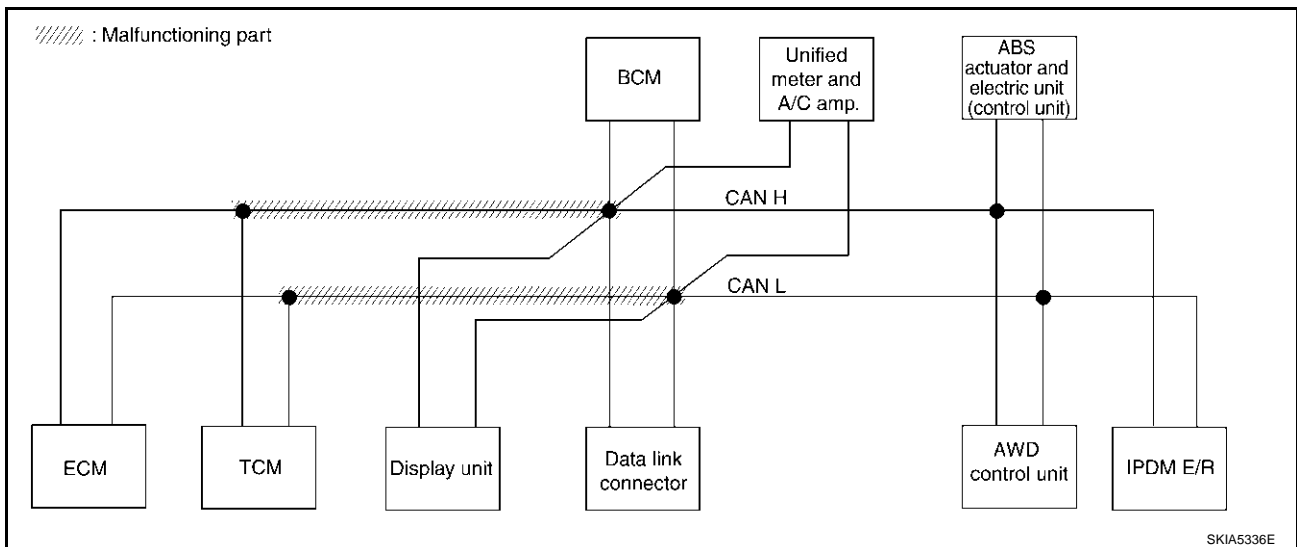
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

### Case 1

Check harness between TCM and data link connector. Refer to [LAN-585, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3 ✓	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

PKIB0716E



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# CAN SYSTEM (TYPE 17)

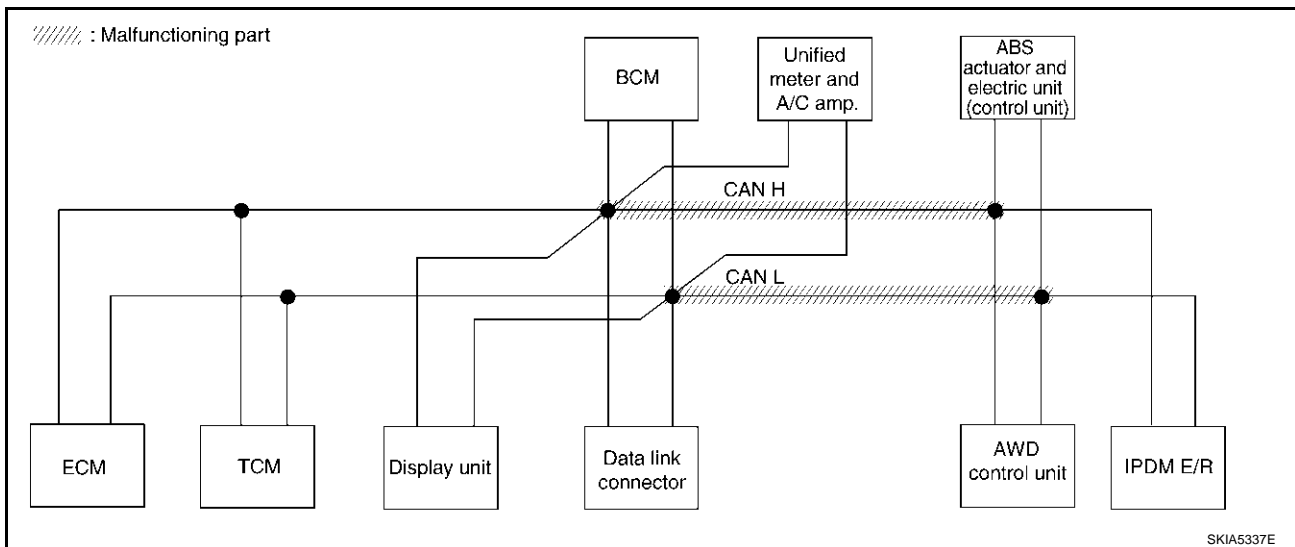
[CAN]

## Case 2

Check harness between data link connector and ABS actuator and electric unit (control unit). Refer to [LAN-585, "Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit \(Control Unit\)"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

PKIB0717E



# CAN SYSTEM (TYPE 17)

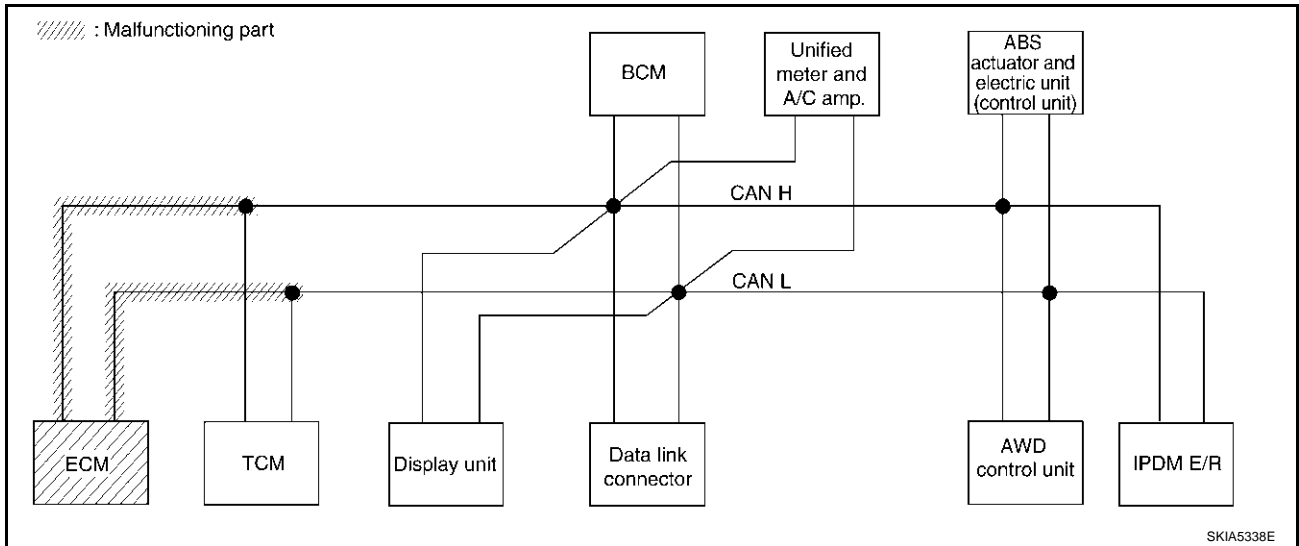
[CAN]

## Case 3

Check ECM circuit. Refer to [LAN-586, "ECM Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

PKIB0718E



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# CAN SYSTEM (TYPE 17)

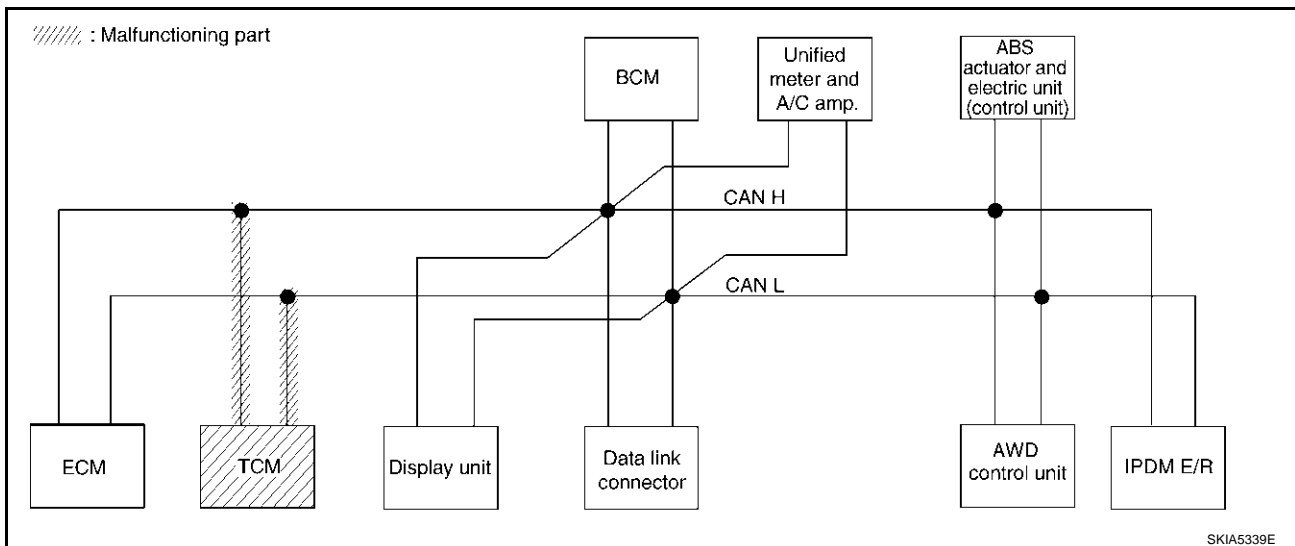
[CAN]

## Case 4

Check TCM circuit. Refer to [LAN-587, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

PKIB0719E



# CAN SYSTEM (TYPE 17)

[CAN]

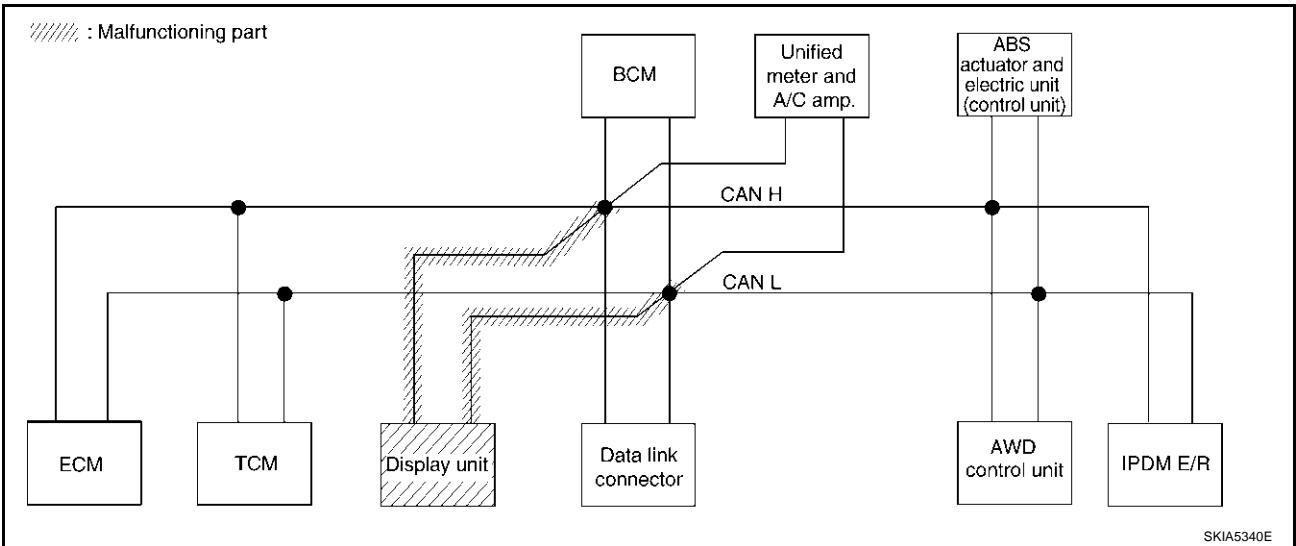
## Case 5

Check display unit circuit. Refer to [LAN-587, "Display Unit Circuit Check"](#).

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SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CA <del>N</del> 1	CA <del>N</del> 3	—	—	CA <del>N</del> 2	CA <del>N</del> 5	—	—	CA <del>N</del> 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UN <del>K</del> WN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

PKIB0720E



# CAN SYSTEM (TYPE 17)

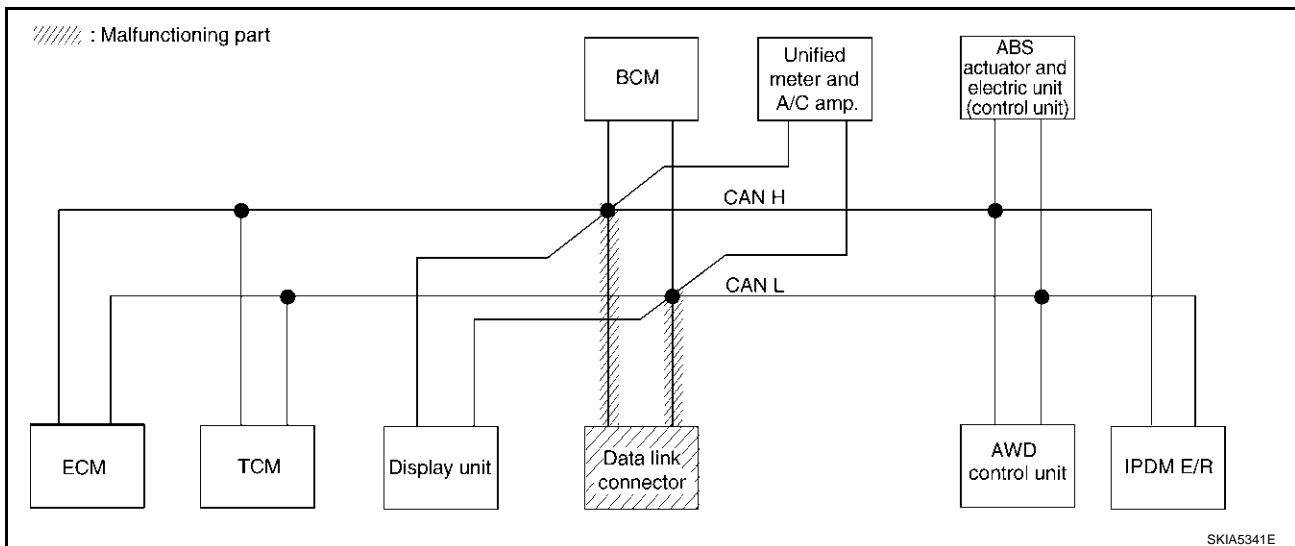
[CAN]

## Case 6

Check data link connector circuit. Refer to [LAN-588, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

PKIB0721E



# CAN SYSTEM (TYPE 17)

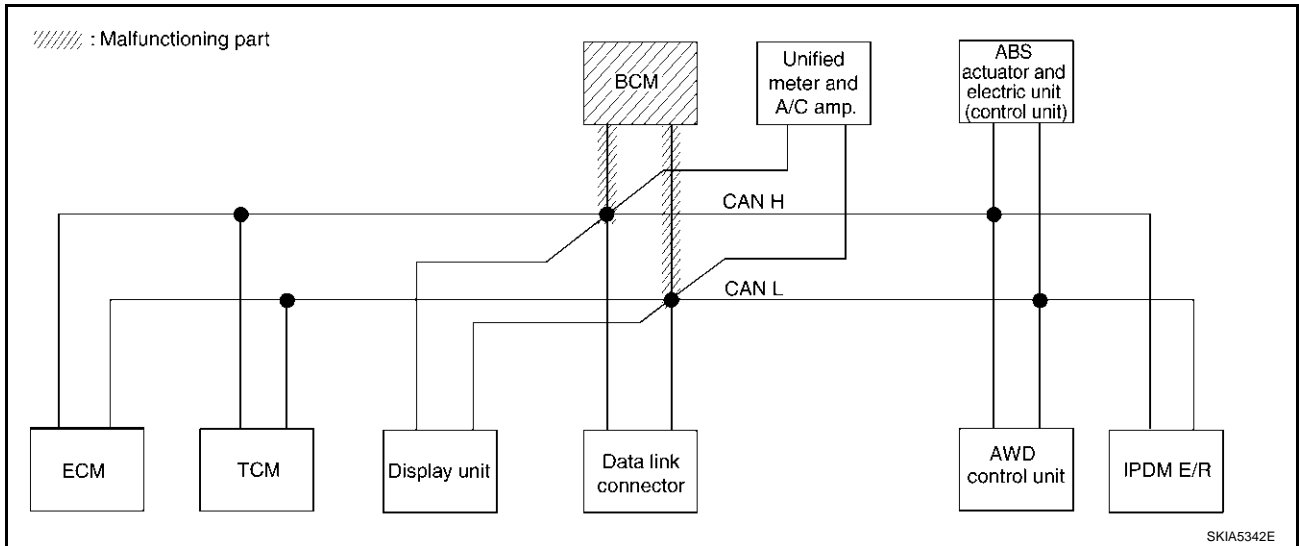
[CAN]

## Case 7

Check BCM circuit. Refer to [LAN-588, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN ✓	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2 ✓	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN ✓	UNKWN ✓	—	—	—	UNKWN ✓	—	—	UNKWN ✓
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN ✓	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

PKIB0722E



# CAN SYSTEM (TYPE 17)

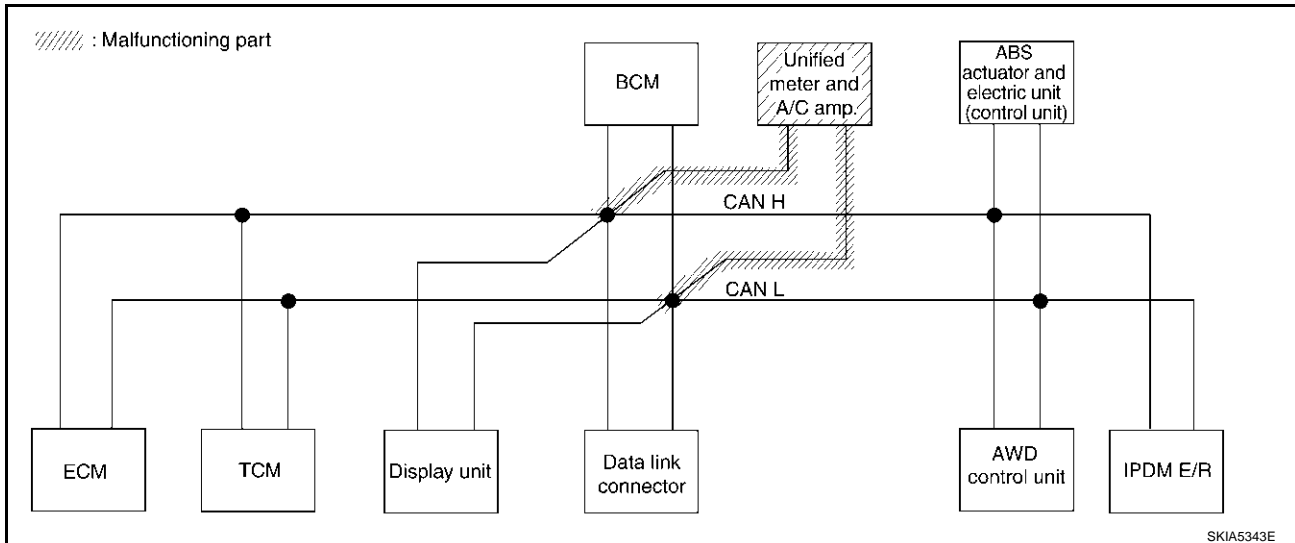
[CAN]

## Case 8

Check unified meter and A/C amp. circuit. Refer to [LAN-589, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	

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# CAN SYSTEM (TYPE 17)

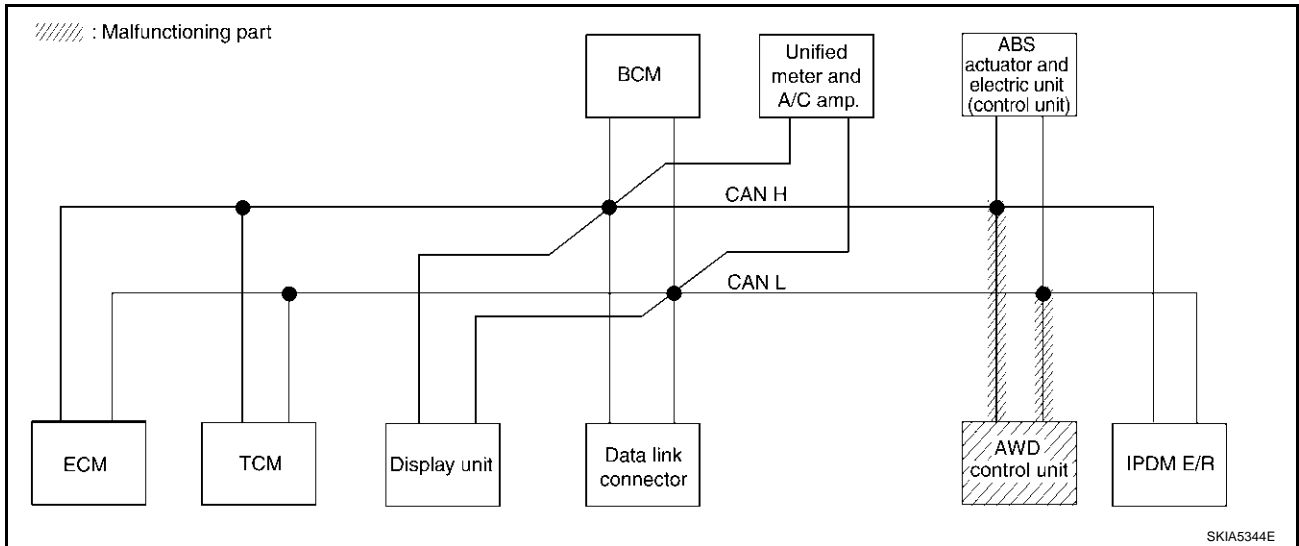
[CAN]

## Case 9

Check AWD control unit circuit. Refer to [LAN-589, "AWD Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

PKIB0724E



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# CAN SYSTEM (TYPE 17)

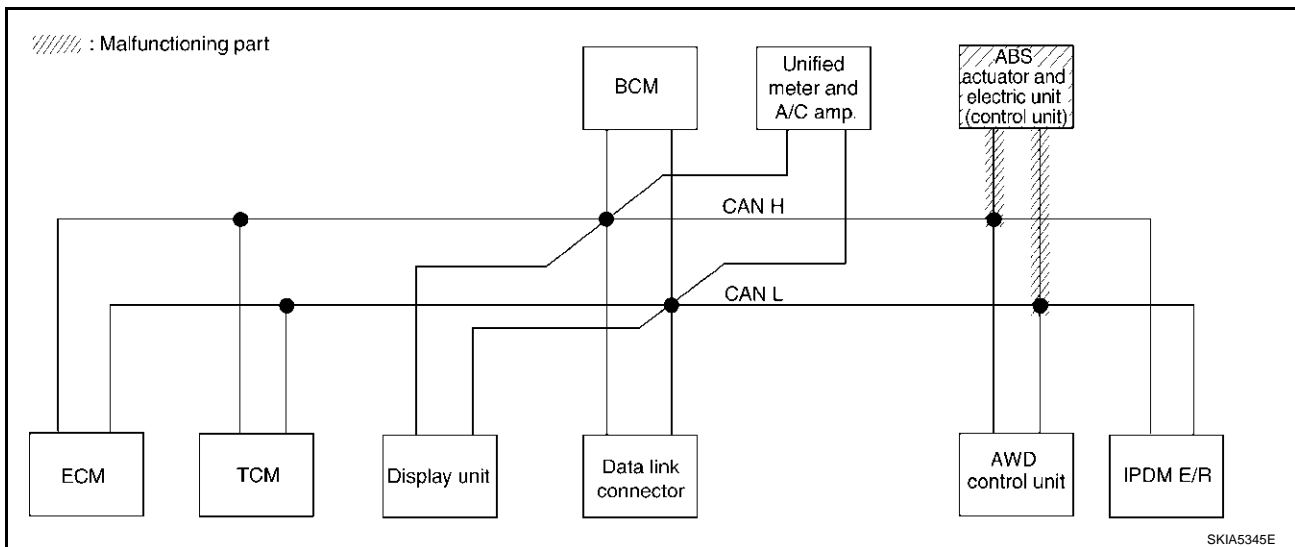
[CAN]

## Case 10

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-590, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

PKIB0725E



# CAN SYSTEM (TYPE 17)

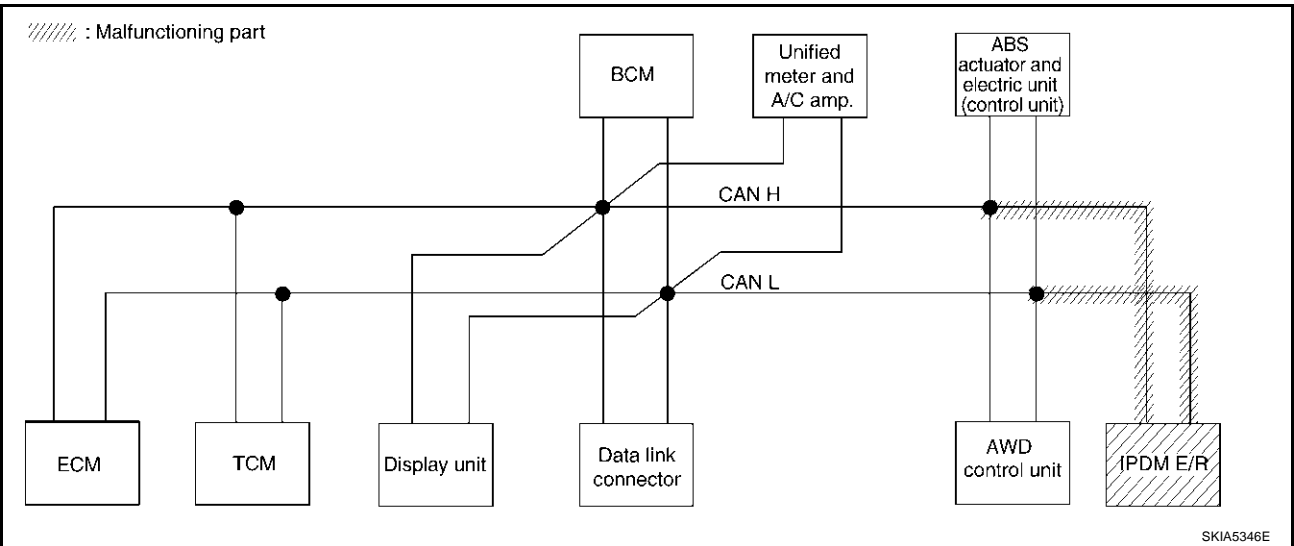
[CAN]

## Case 11

Check IPDM E/R circuit. Refer to [LAN-590, "IPDM E/R Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

PKIB0726E



## Case 12

Check CAN communication circuit. Refer to [LAN-591, "CAN Communication Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

PKIB0727E

# CAN SYSTEM (TYPE 17)

[CAN]

## Case 13

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-594, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

PKIB0728E

## Case 14

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-594, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

PKIB0729E

## Circuit Check Between TCM and Data Link Connector

### 1. CHECK HARNESS FOR OPEN CIRCUIT

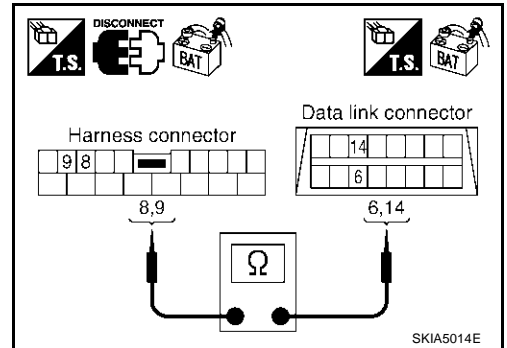
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

**8 (L) - 6 (L) : Continuity should exist.**

**9 (Y) - 14 (Y) : Continuity should exist.**

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-569, "Work Flow"](#).
- NG >> Repair harness.



## Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit)

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector M9
  - Harness connector B2
  - Harness connector B4
  - Harness connector E105

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

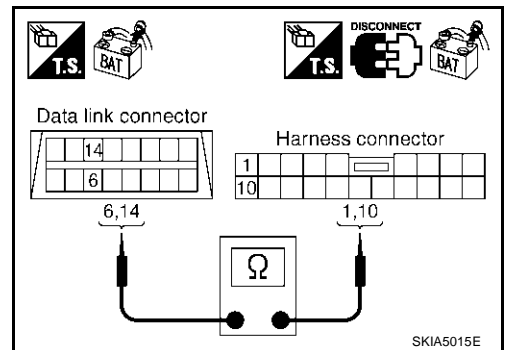
1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

**6 (L) - 1 (L) : Continuity should exist.**

**14 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



## 3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

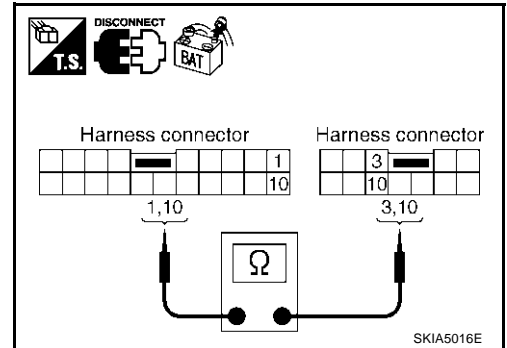
**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

OK >> GO TO 4.

NG >> Repair harness.



## 4. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

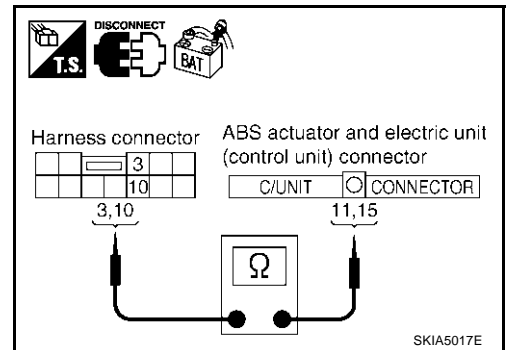
**3 (L) - 11 (L) : Continuity should exist.**

**10 (Y) - 15 (Y) : Continuity should exist.**

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-569, "Work Flow"](#).

NG >> Repair harness.



## ECM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

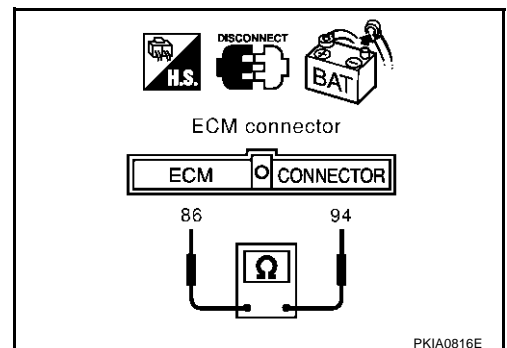
1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

**94 (L) - 86 (Y) : Approx. 108 - 132Ω**

OK or NG

OK >> Replace ECM.

NG >> Repair harness between ECM and TCM.



**TCM Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
  - TCM connector
  - Harness connector F102
  - Harness connector M82

OK or NG

OK &gt;&gt; GO TO 2.

NG &gt;&gt; Repair terminal or connector.

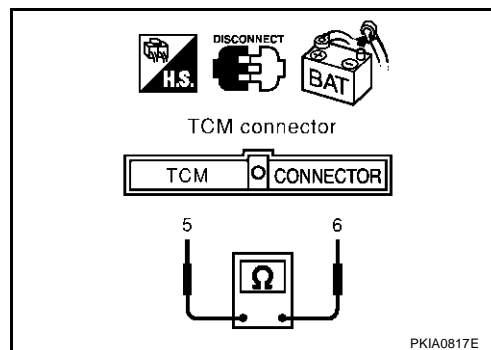
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y)****: Approx. 54 - 66Ω**OK or NG

OK &gt;&gt; Replace TCM.

NG &gt;&gt; Repair harness between TCM and ECM.

**Display Unit Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display unit for damage, bend and loose connection (unit side and harness side).

OK or NG

OK &gt;&gt; GO TO 2.

NG &gt;&gt; Repair terminal or connector.

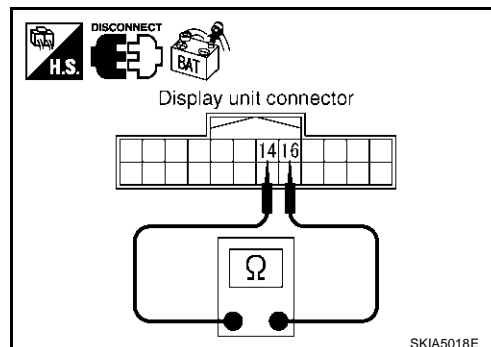
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect display unit connector.
2. Check resistance between display unit harness connector M39 terminals 14 (L) and 16 (Y).

**14 (L) - 16 (Y)****: Approx. 54 - 66Ω**OK or NG

OK &gt;&gt; Replace display unit.

NG &gt;&gt; Repair harness between display unit and data link connector.



## Data Link Connector Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

#### OK or NG

- OK >> GO TO 2.  
NG >> Repair terminal or connector.

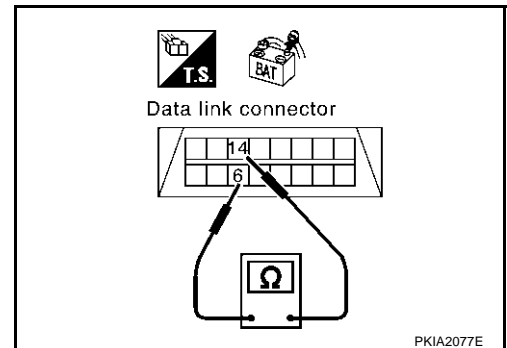
### 2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Approx. 54 - 66Ω**

#### OK or NG

- OK >> Diagnose again. Refer to [LAN-569, "Work Flow"](#) .  
NG >> Repair harness between data link connector and BCM.



## BCM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

#### OK or NG

- OK >> GO TO 2.  
NG >> Repair terminal or connector.

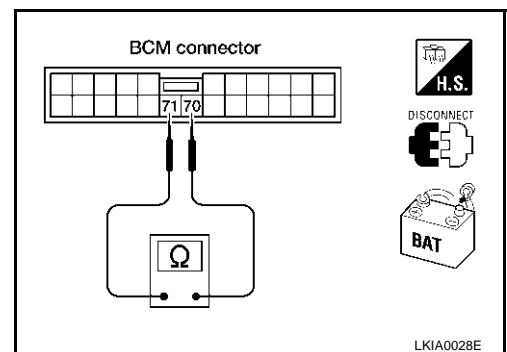
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M37 terminals 70 (L) and 71 (Y).

**70 (L) - 71 (Y) : Approx. 54 - 66Ω**

#### OK or NG

- OK >> Replace BCM. Refer to [BCS-36, "Removal and Installation of BCM"](#) .  
NG >> Repair harness between BCM and data link connector.





**Unified Meter and A/C Amp. Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

**OK or NG**

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

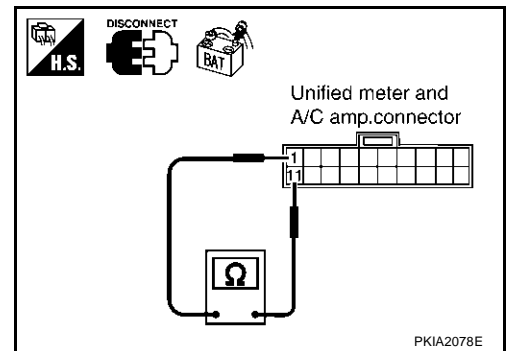
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

**1 (L) - 11 (Y) : Approx. 54 - 66Ω**

**OK or NG**

- OK >> Replace unified meter and A/C amp.  
 NG >> Repair harness between unified meter and A/C amp. and data link connector.

**AWD Control Unit Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of AWD control unit for damage, bend and loose connection (control unit side and harness side).

**OK or NG**

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

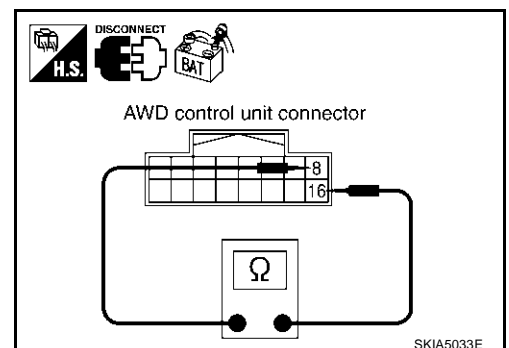
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect AWD control unit connector.
2. Check resistance between AWD control unit harness connector E111 terminals 8 (L) and 16 (Y).

**8 (L) - 16 (Y) : Approx. 54 - 66Ω**

**OK or NG**

- OK >> Replace AWD control unit.  
 NG >> Repair harness between AWD control unit and IPDM E/R.



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## ABS Actuator and Electric Unit (Control Unit) Circuit Check

AKS006Y2

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

#### OK or NG

- OK >> GO TO 2.  
NG >> Repair terminal or connector.

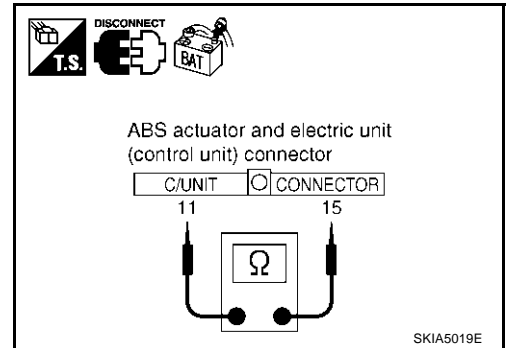
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

**11 (L) - 15 (Y) : Approx. 54 - 66Ω**

#### OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).  
NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



AKS006Y3

## IPDM E/R Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

#### OK or NG

- OK >> GO TO 2.  
NG >> Repair terminal or connector.

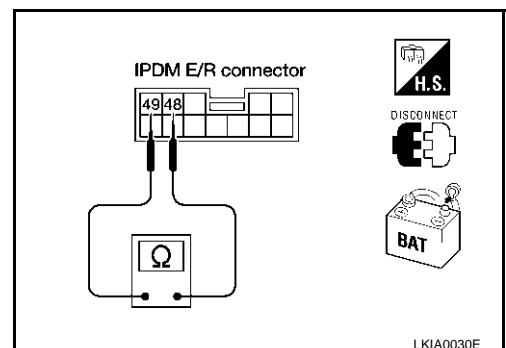
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y) : Approx. 108 - 132Ω**

#### OK or NG

- OK >> Replace IPDM E/R.  
NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



## CAN Communication Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, unit side, meter side, control unit side and harness side).
  - ECM
  - TCM
  - Display unit
  - BCM
  - Unified meter and A/C amp.
  - AWD control unit
  - ABS actuator and electric unit (control unit)
  - IPDM E/R
  - Between ECM and IPDM E/R
  - Between ECM and TCM

#### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

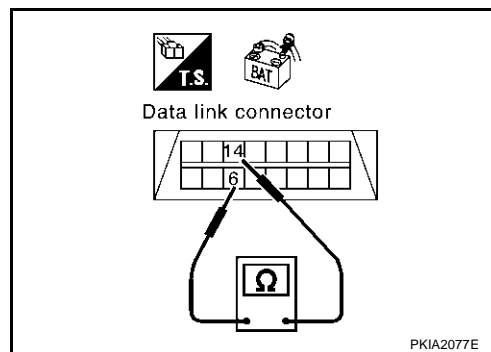
### 2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
  - ECM connector
  - Harness connector M82
  - Display unit connector
  - BCM connector
  - Unified meter and A/C amp. connector
  - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Continuity should not exist.**

#### OK or NG

- OK >> GO TO 3.  
 NG >> Check the following harnesses. If any harness is damaged, repair the harness.
- Harness between data link connector and ECM.
  - Harness between data link connector and harness connector M82.
  - Harness between data link connector and display unit.
  - Harness between data link connector and BCM.
  - Harness between data link connector and unified meter and A/C amp.
  - Harness between data link connector and harness connector M9.



### 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

**6 (L) - Ground : Continuity should not exist.**

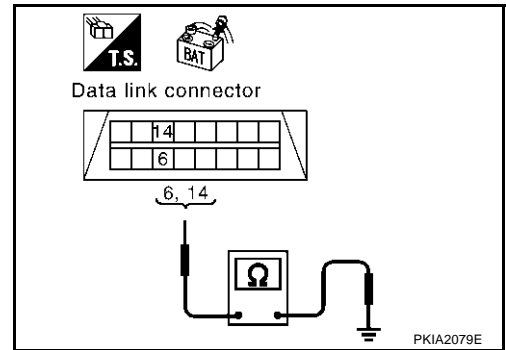
**14 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9.



### 4. CHECK HARNESS FOR SHORT CIRCUIT

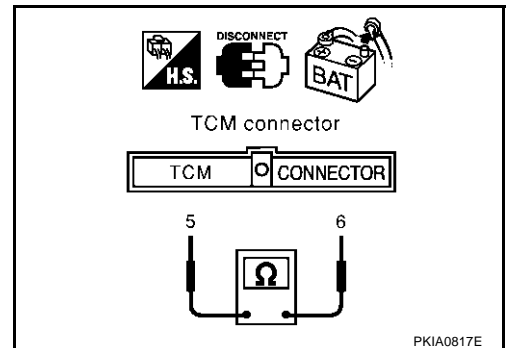
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 5.

NG >> Repair harness between TCM and harness connector F102.



### 5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

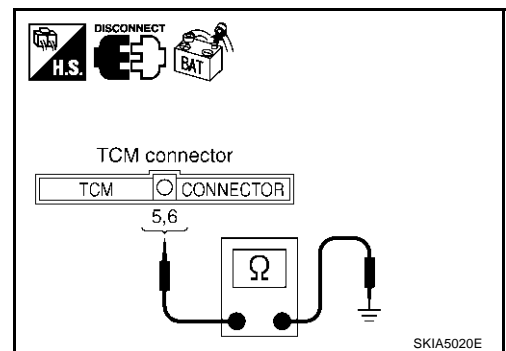
**5 (L) - Ground : Continuity should not exist.**

**6 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 6.

NG >> Repair harness between TCM and harness connector F102.



## 6. CHECK HARNESS FOR SHORT CIRCUIT

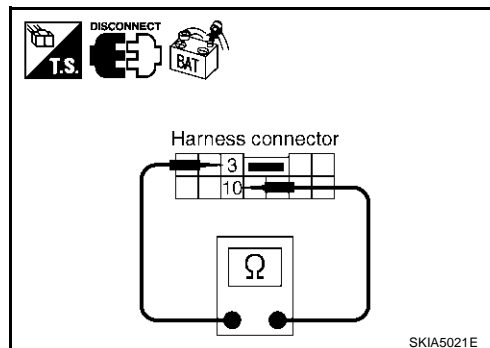
1. Disconnect harness connector B4.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

**3 (L) - 10 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 7.

NG >> Repair harness between harness connector B4 and harness connector B2.



## 7. CHECK HARNESS FOR SHORT CIRCUIT

- Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

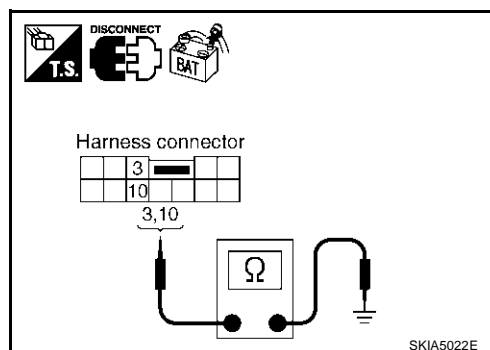
**3 (L) - Ground : Continuity should not exist.**

**10 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 8.

NG >> Repair harness between harness connector B4 and harness connector B2.



## 8. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect AWD control unit connector, ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

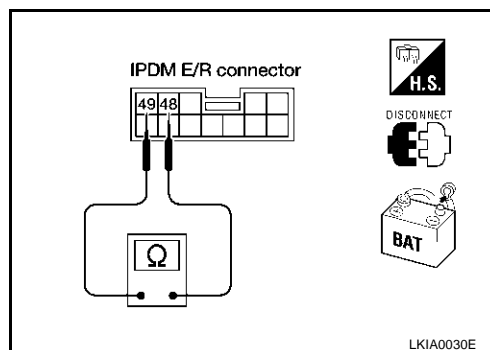
**48 (L) - 49 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 9.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

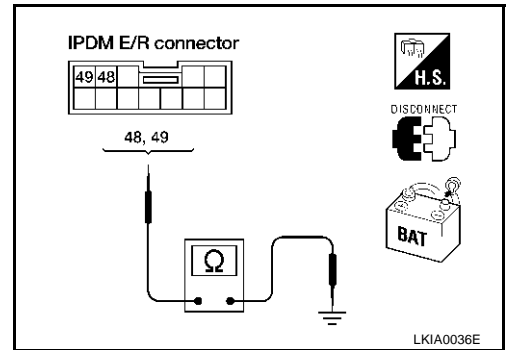
- 48 (L) - Ground : Continuity should not exist.**
- 49 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 10.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 10. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-594, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#) .

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-569, "Work Flow"](#) .

NG >> Replace ECM and/or IPDM E/R.

### IPDM E/R Ignition Relay Circuit Check

AKS006Y5

Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-45, "IPDM E/R Power/Ground Circuit Inspection"](#) .
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#) .

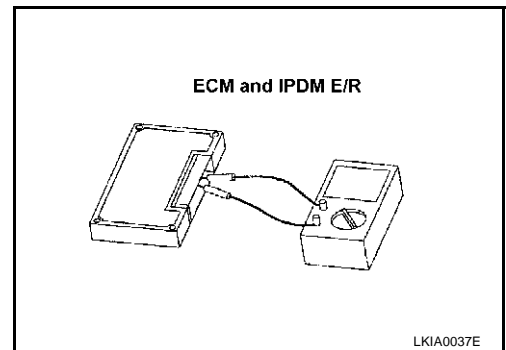
### Component Inspection

#### ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

AKS006Y6

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



## CAN SYSTEM (TYPE 18)

PF:23710

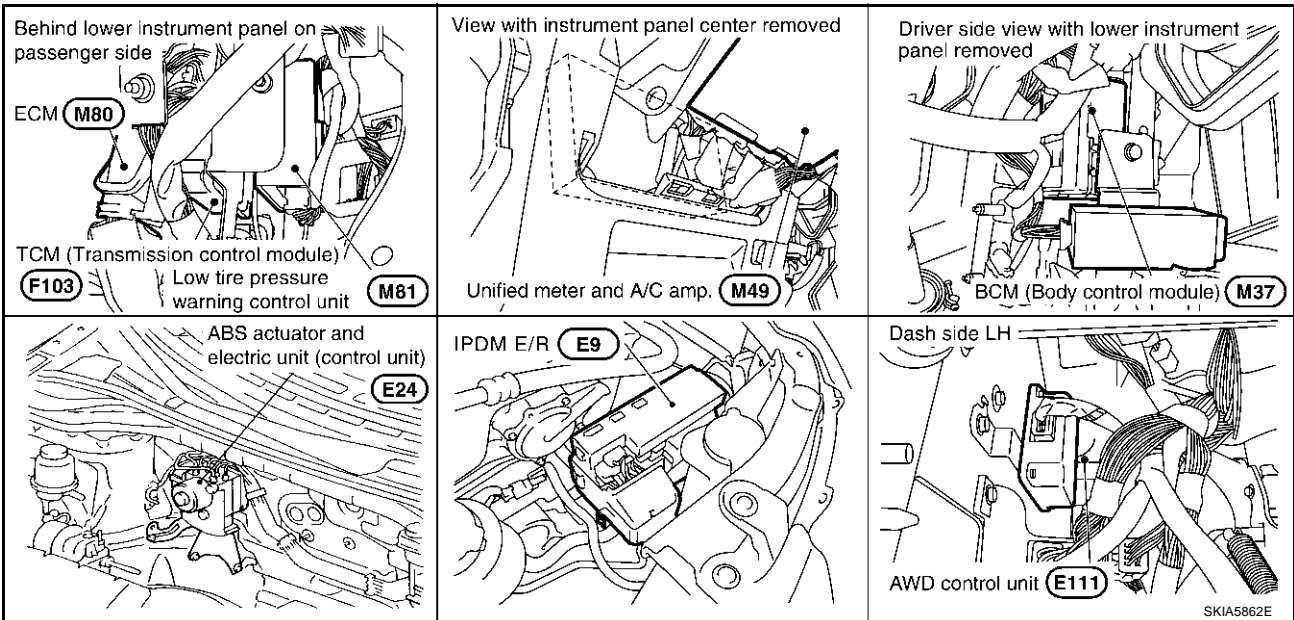
### System Description

AKS0070B

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

### Component Parts and Harness Connector Location

AKS0070C



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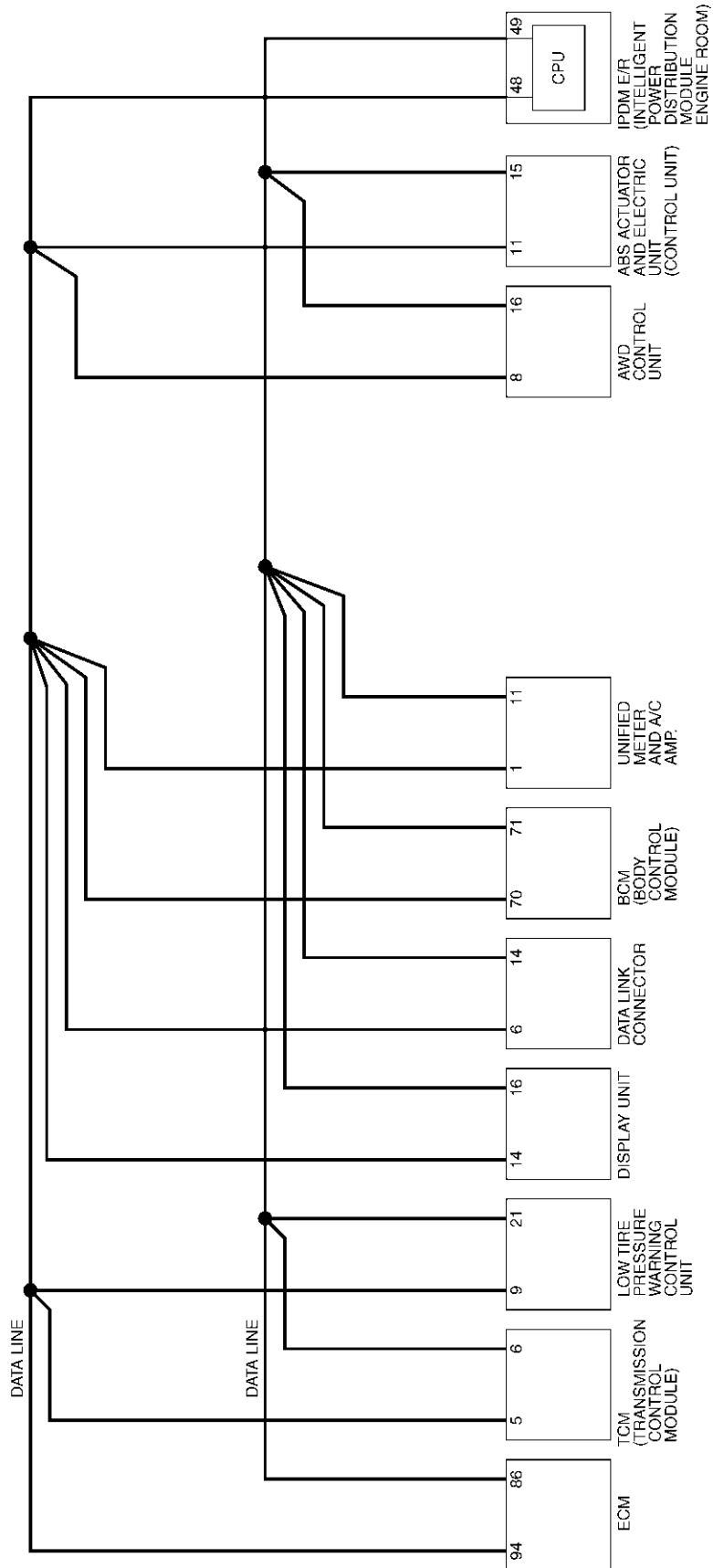
L  
M

# CAN SYSTEM (TYPE 18)

[CAN]

## Schematic

AKS0070D



TKWA0991E



# CAN SYSTEM (TYPE 18)

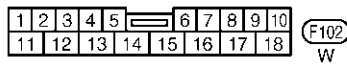
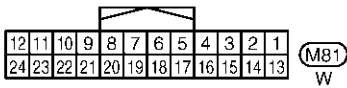
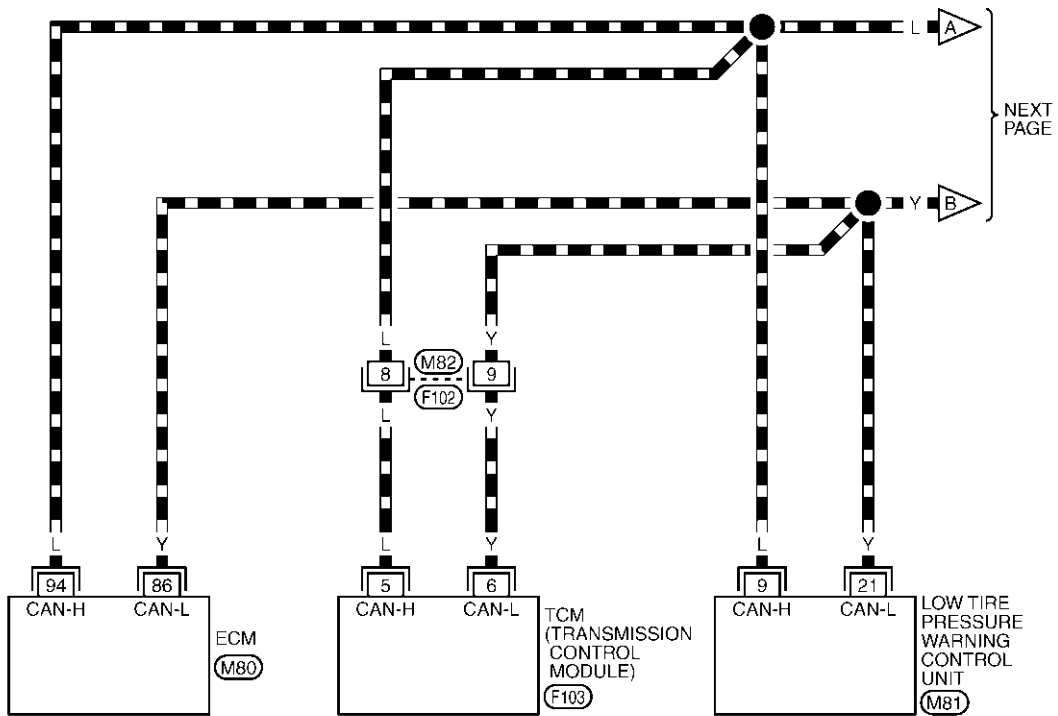
[CAN]

## Wiring Diagram - CAN -

AKS0070E

### LAN-CAN-52

▬ : DATA LINE

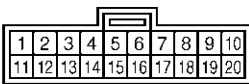
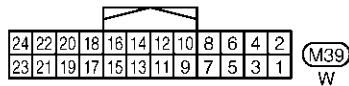
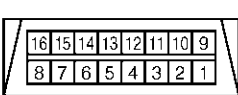
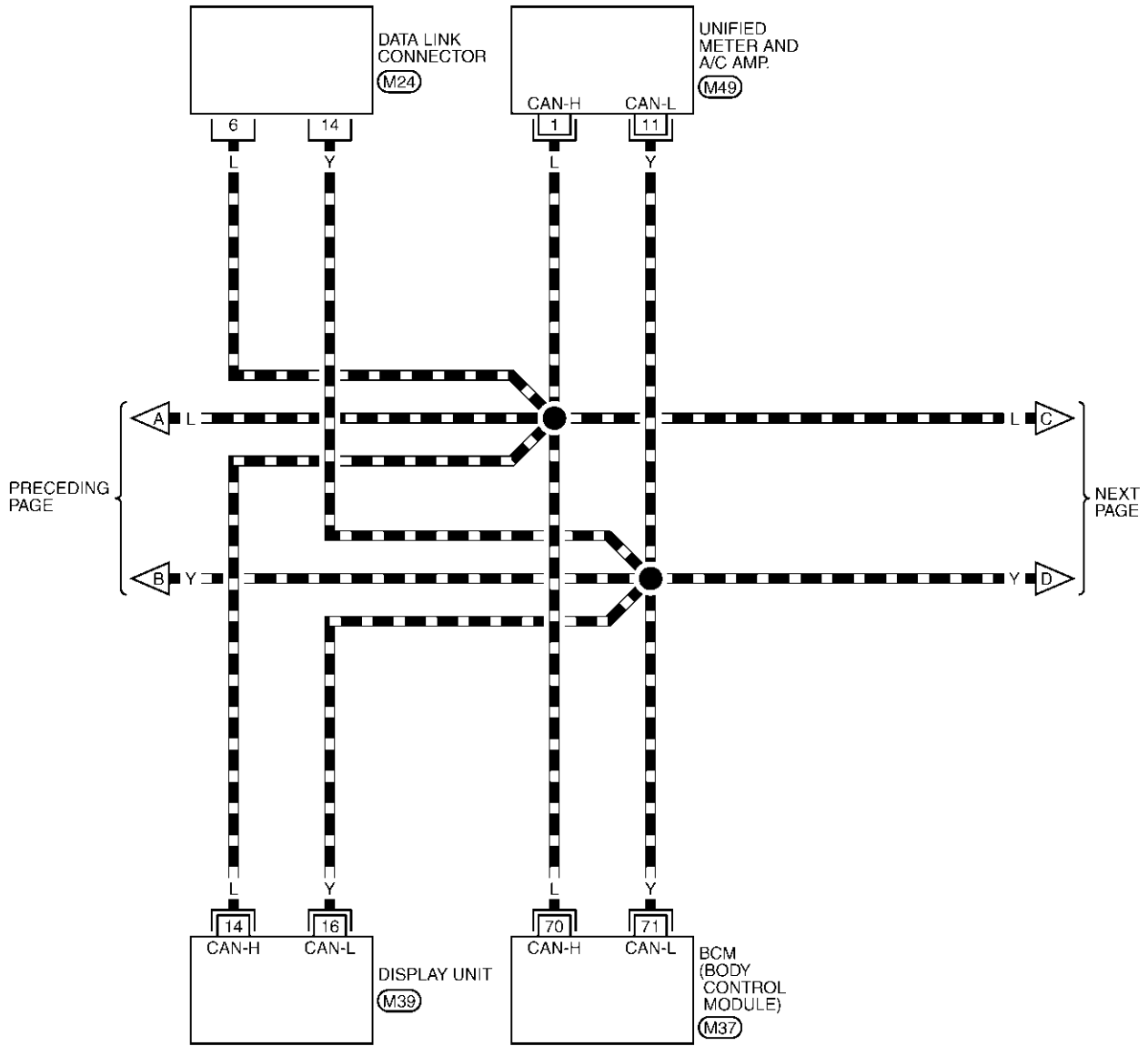


REFER TO THE FOLLOWING.  
 (M80), (F103) -ELECTRICAL UNITS

TKWA0992E

## LAN-CAN-53

▬ : DATA LINE

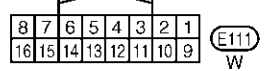
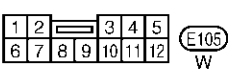
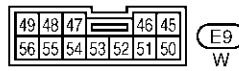
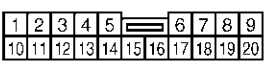
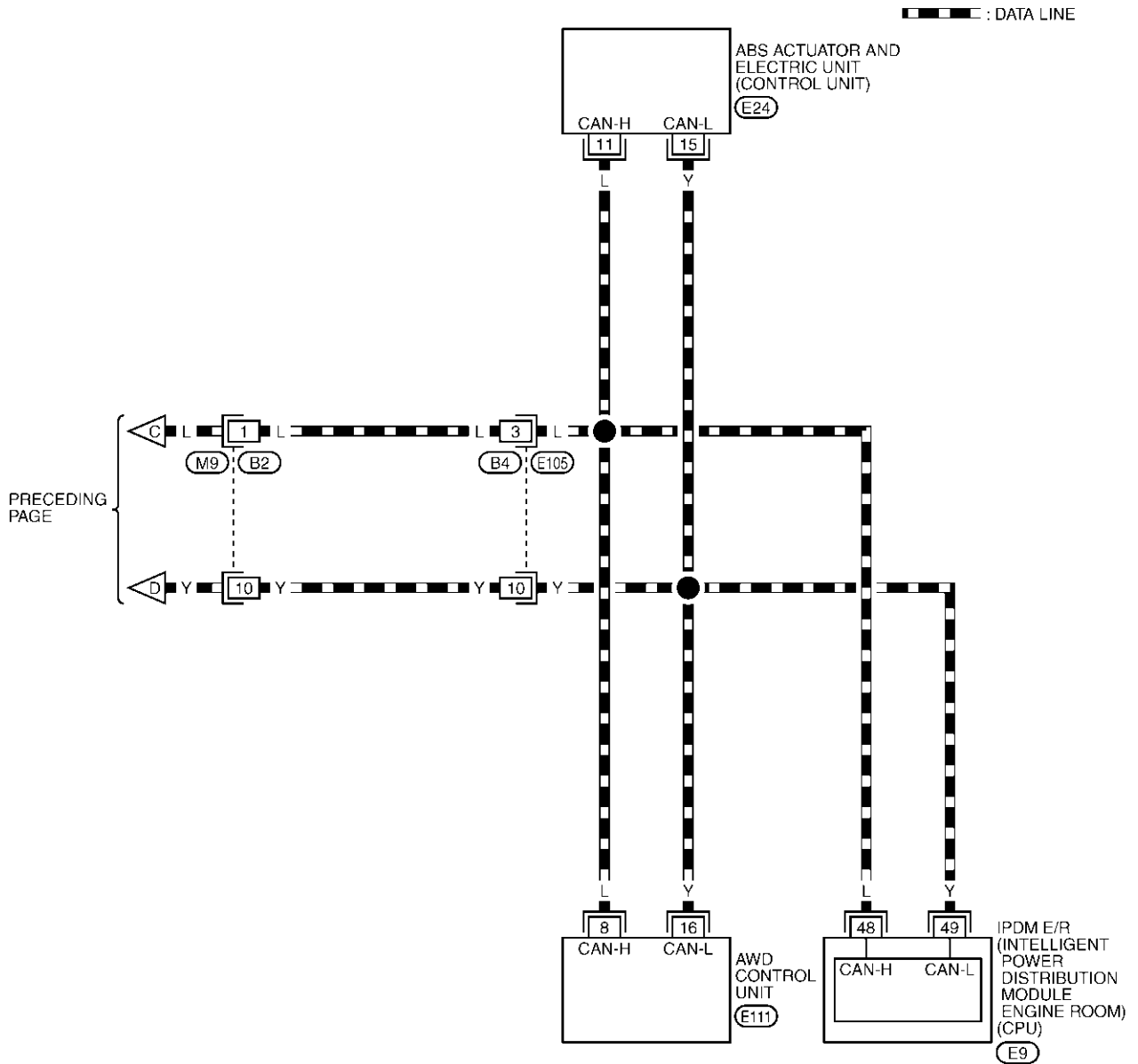


REFER TO THE FOLLOWING.

(M37) -ELECTRICAL UNITS

## LAN-CAN-54

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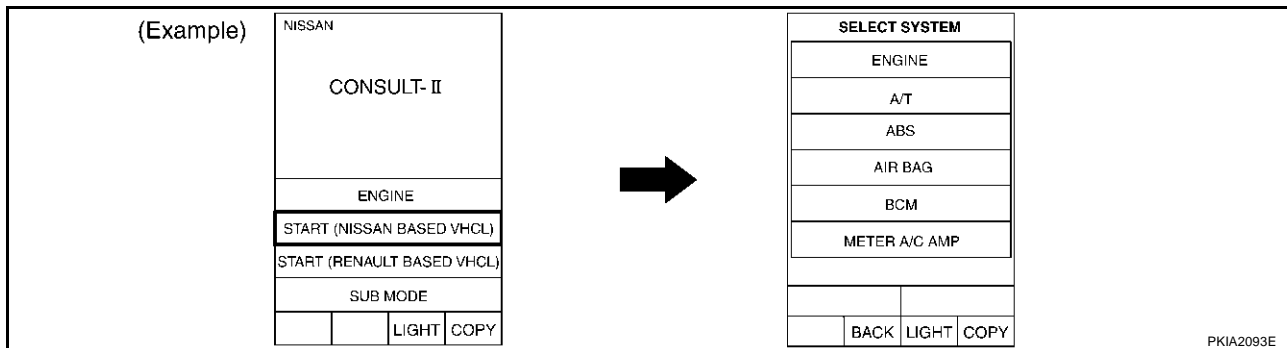


REFER TO THE FOLLOWING.  
E24 -ELECTRICAL UNITS

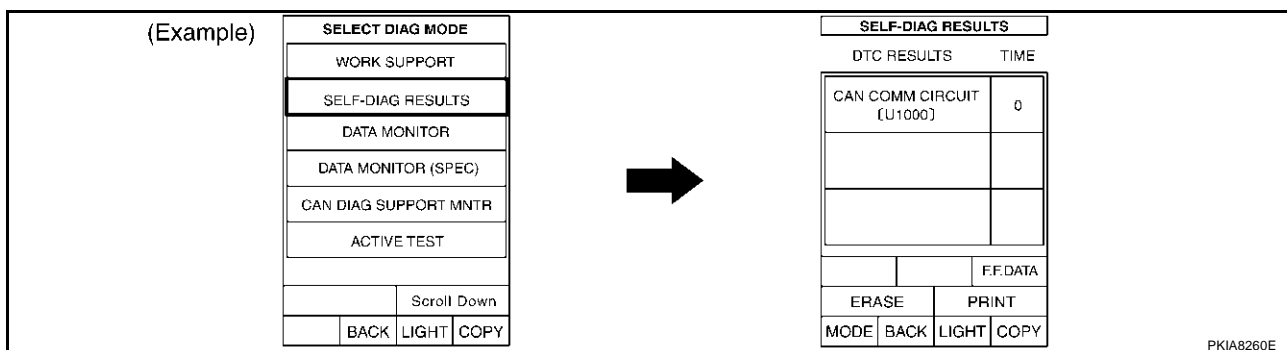
## Work Flow

AKS00C5J

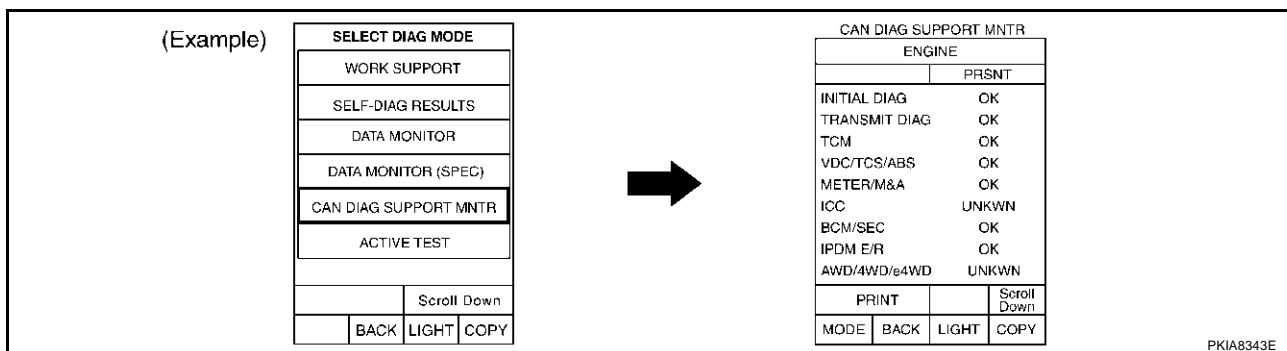
- When there are no indications of "TRANSMISSION", "AIR PRESSURE MONITOR" or "METER A/C AMP" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "ALL MODE AWD/4WD" and "ABS" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "ALL MODE AWD/4WD" and "ABS" displayed on CONSULT-II.



- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-602. "CHECK SHEET"](#) .
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "v" onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-602. "CHECK SHEET"](#) .

**NOTE:**

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual. So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the integrated display system. Refer to [AV-110. "CAN Communication Line Check"](#) .
- Attach the CAN DIAG MONITOR check sheet onto the check sheet. Refer to [LAN-602. "CHECK SHEET"](#) .

## CAN SYSTEM (TYPE 18)

[CAN]

8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG MONITOR check sheet. Refer to [LAN-602, "CHECK SHEET"](#) .

**NOTE:**

If "NG" is displayed on "CAN COMM" as "CAN DIAG MNTR" for the diagnosed control unit, replace the control unit. Refer to [AV-110, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-604, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

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# CAN SYSTEM (TYPE 18)

[CAN]

## CHECK SHEET

**NOTE:**

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

Check sheet table

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

Attach copy of  
display unit  
CAN DIAG MONITOR check sheet

# CAN SYSTEM (TYPE 18)

[CAN]

Attach copy of ENGINE SELF-DIAG RESULTS	Attach copy of TRANSMISSION SELF-DIAG RESULTS	Attach copy of AIR PRESSURE MONITOR SELF-DIAG RESULTS	Attach copy of BCM SELF-DIAG RESULTS
Attach copy of METER A/C AMP SELF-DIAG RESULTS	Attach copy of ALL MODE AWD/4WD SELF-DIAG RESULTS	Attach copy of ABS SELF-DIAG RESULTS	
Attach copy of ENGINE CAN DIAG SUPPORT MNTR	Attach copy of TRANSMISSION CAN DIAG SUPPORT MNTR	Attach copy of AIR PRESSURE MONITOR CAN DIAG SUPPORT MNTR	Attach copy of BCM CAN DIAG SUPPORT MNTR
Attach copy of METER A/C AMP CAN DIAG SUPPORT MNTR	Attach copy of ALL MODE AWD/4WD CAN DIAG SUPPORT MNTR	Attach copy of ABS CAN DIAG SUPPORT MNTR	

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# CAN SYSTEM (TYPE 18)

[CAN]

## CHECK SHEET RESULTS (EXAMPLE)

### NOTE:

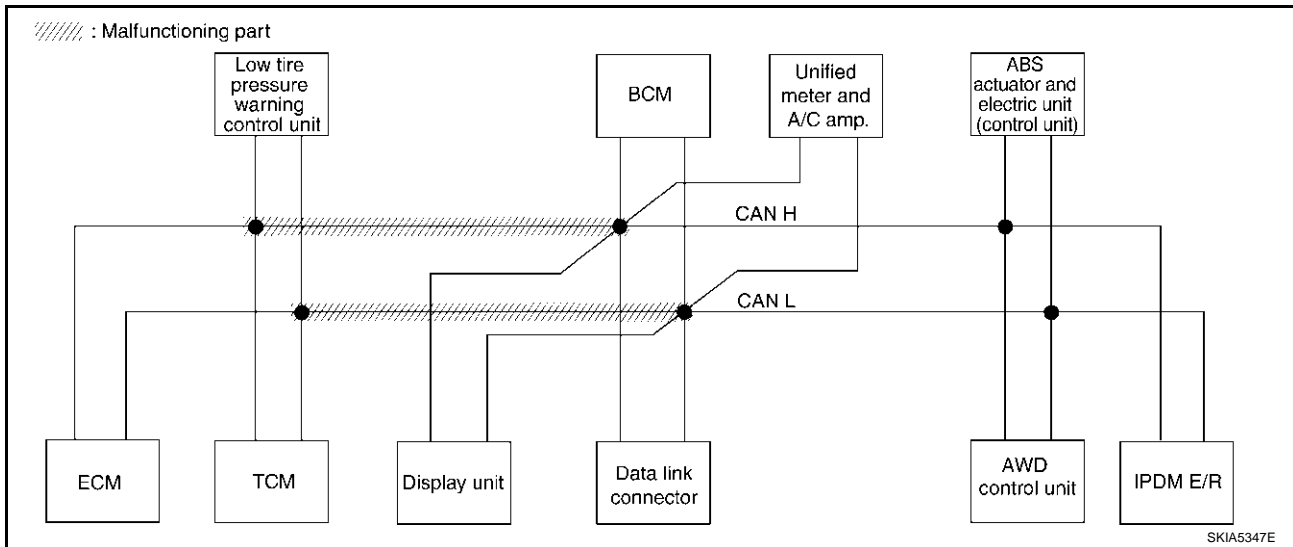
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

### Case 1

Check harness between TCM and data link connector. Refer to [LAN-617, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3 ✓	—	CAN 6 ✓	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

PKIB0732E





# CAN SYSTEM (TYPE 18)

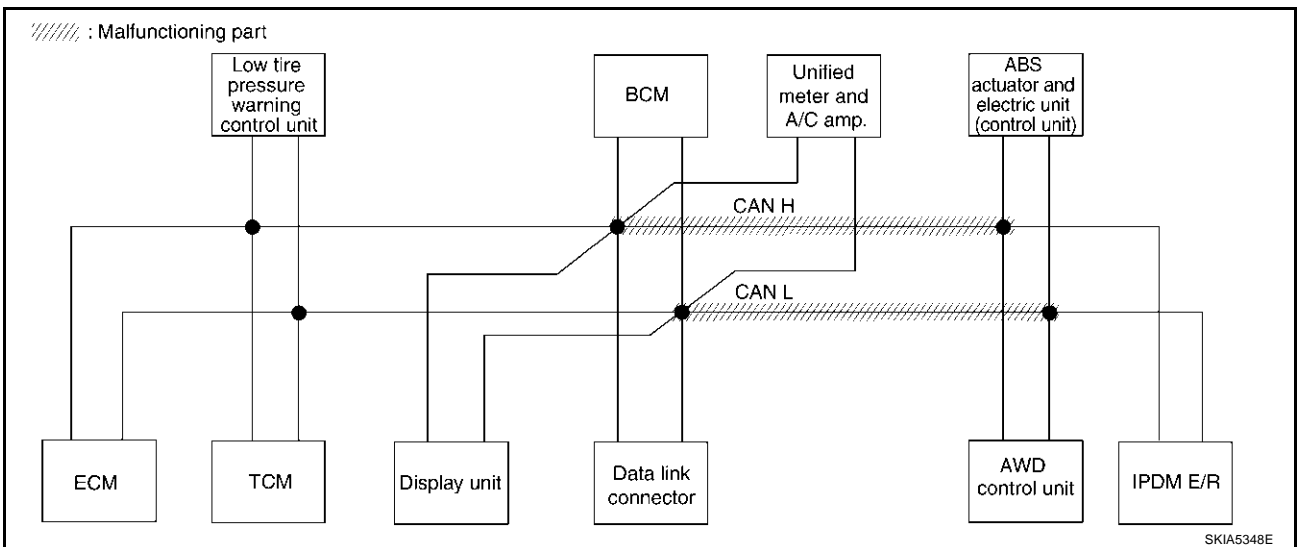
[CAN]

## Case 2

Check harness between data link connector and ABS actuator and electric unit (control unit). Refer to [LAN-617, "Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit \(Control Unit\)"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	UNKWN	UNKWN ✓	—	UNKWN ✓
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN ✓	—	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7 ✓
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN ✓
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN ✓	UNKWN ✓	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN ✓	—	—	—	—	UNKWN ✓	—	—	—	—
ABS	—	NG	UNKWN	UNKWN ✓	—	—	—	—	—	—	—	—	—

PKIB0733E



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# CAN SYSTEM (TYPE 18)

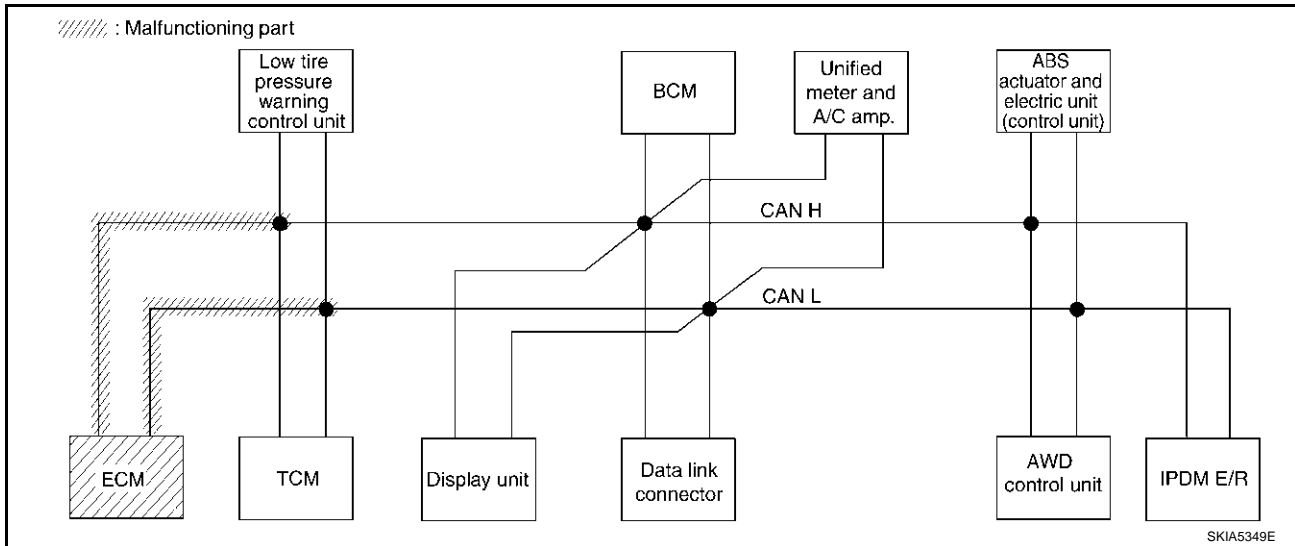
[CAN]

## Case 3

Check ECM circuit. Refer to [LAN-618, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN ✓	—	UNKWN ✓	—	—	UNKWN ✓	UNKWN ✓	UNKWN ✓	—	UNKWN ✓
TRANSMISSION	No indication	NG	UNKWN	UNKWN ✓	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3 ✓	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN ✓	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN ✓	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN ✓	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN ✓	—	—	—	—	—	—	—	—

PKIB0734E



# CAN SYSTEM (TYPE 18)

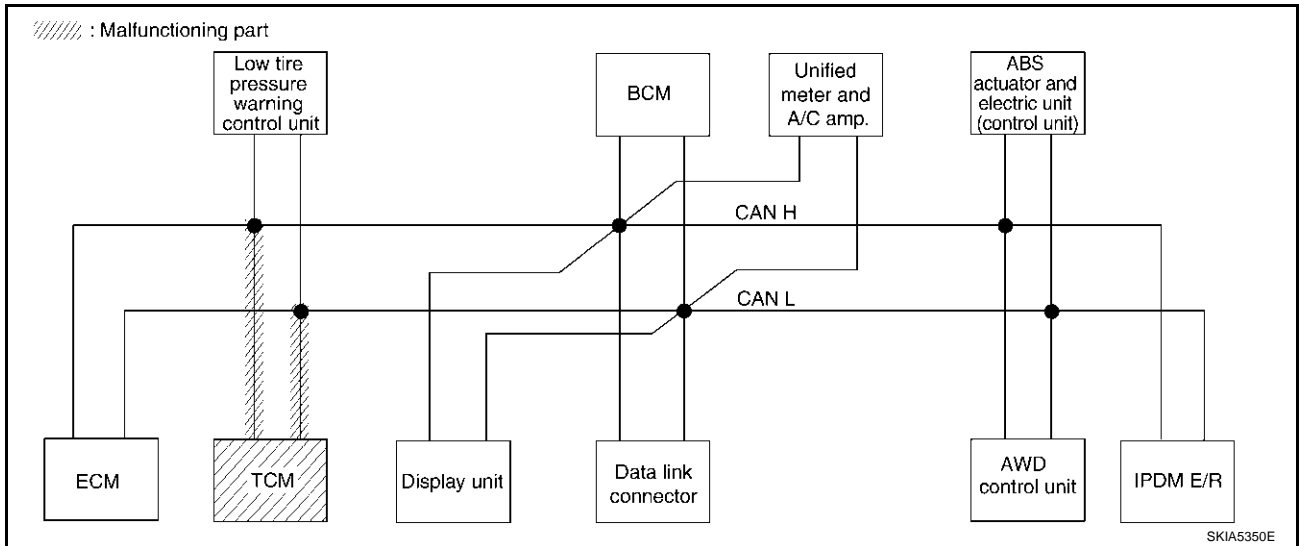
[CAN]

## Case 4

Check TCM circuit. Refer to [LAN-619, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—	

PKIB0735E



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# CAN SYSTEM (TYPE 18)

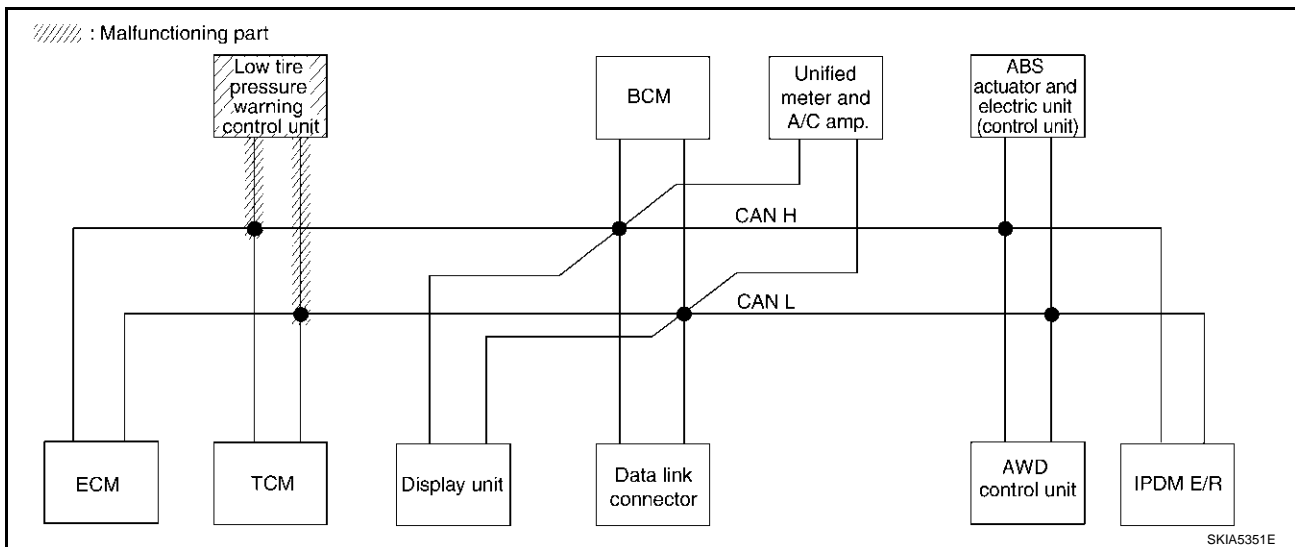
[CAN]

## Case 5

Check low tire pressure warning control unit circuit. Refer to [LAN-619, "Low Tire Pressure Warning Control Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6 ✓	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

PKIB0736E



# CAN SYSTEM (TYPE 18)

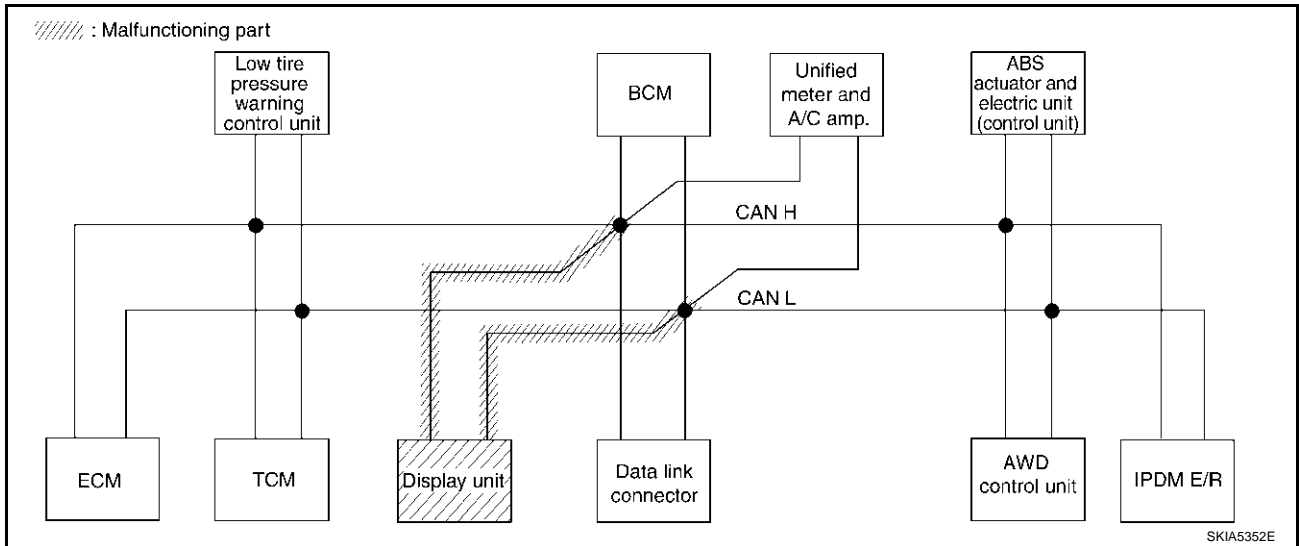
[CAN]

## Case 6

Check display unit circuit. Refer to [LAN-620, "Display Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1 ✓	CAN 3 ✓	—	CAN 6 ✓	—	CAN 2 ✓	CAN 5 ✓	—	—	CAN 7 ✓
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

PKIB0737E



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# CAN SYSTEM (TYPE 18)

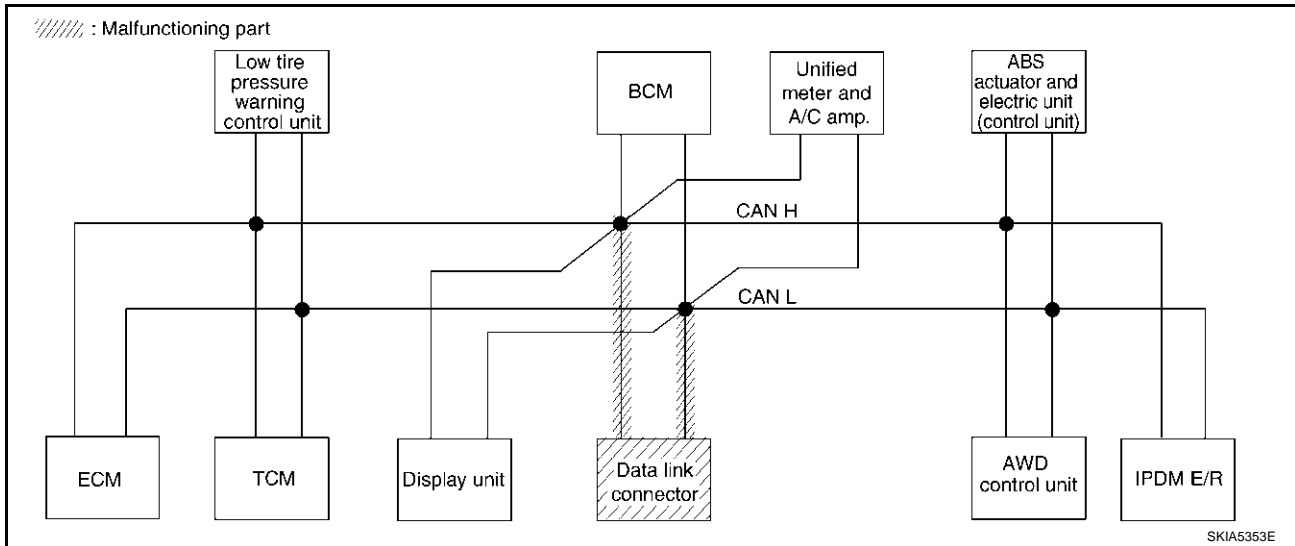
[CAN]

## Case 7

Check data link connector circuit. Refer to [LAN-620, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

PKIB0738E



# CAN SYSTEM (TYPE 18)

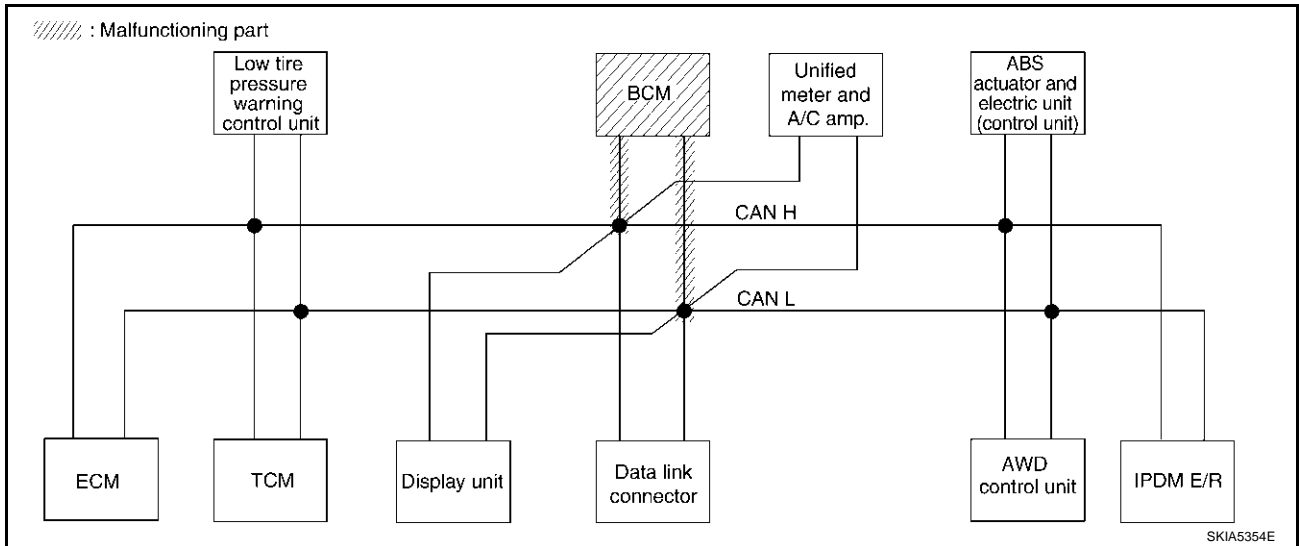
[CAN]

## Case 8

Check BCM circuit. Refer to [LAN-621, "BCM Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

PKIB0739E



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# CAN SYSTEM (TYPE 18)

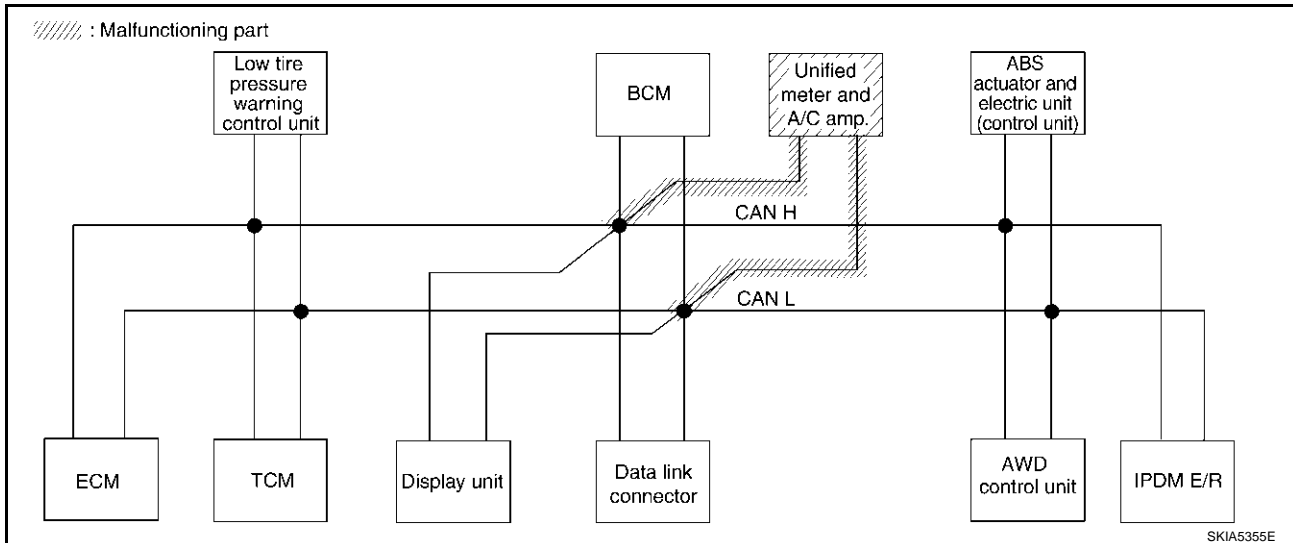
[CAN]

## Case 9

Check unified meter and A/C amp. circuit. Refer to [LAN-621, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 18)

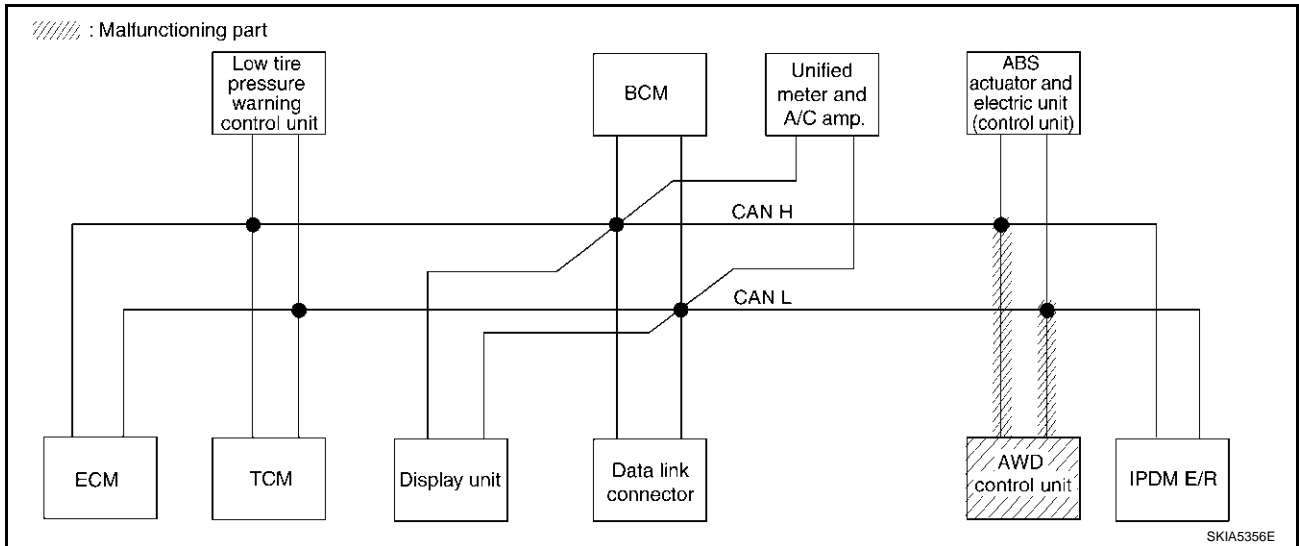
[CAN]

## Case 10

Check AWD control unit circuit. Refer to [LAN-622, "AWD Control Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

PKIB0741E



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# CAN SYSTEM (TYPE 18)

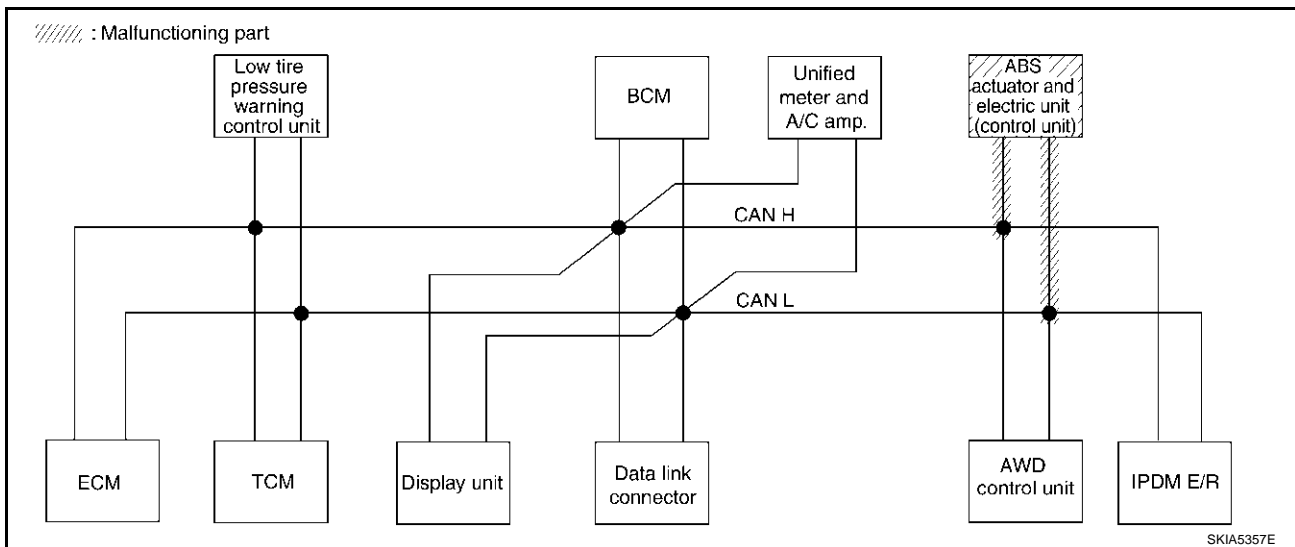
[CAN]

## Case 11

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-622, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 18)

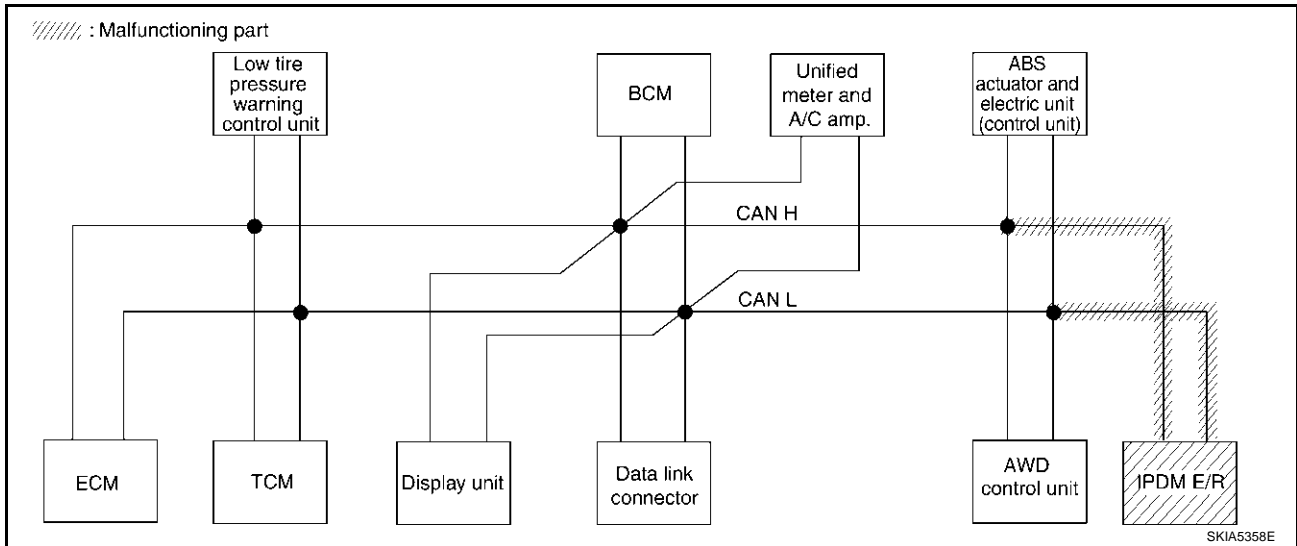
[CAN]

## Case 12

Check IPDM E/R circuit. Refer to [LAN-623, "IPDM E/R Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—	

PKIB0743E



## Case 13

Check CAN communication circuit. Refer to [LAN-623, "CAN Communication Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—	

PKIB0744E

# CAN SYSTEM (TYPE 18)

[CAN]

## Case 14

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-626, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	✓	—	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	✓	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	✓	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN

PKIB0745E

## Case 15

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-626, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	✓	—	—	—	—	UNKWN	✓	UNKWN	—	UNKWN
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
ABS	—	NG	UNKWN	✓	—	—	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN

PKIB0746E

## Circuit Check Between TCM and Data Link Connector

AKS0070G

### 1. CHECK HARNESS FOR OPEN CIRCUIT

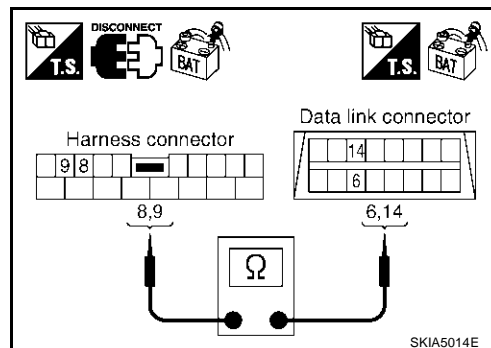
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

**8 (L) - 6 (L) : Continuity should exist.**

**9 (Y) - 14 (Y) : Continuity should exist.**

#### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-600, "Work Flow"](#).
- NG >> Repair harness.



## Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit)

AKS0070H

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector M9
  - Harness connector B2
  - Harness connector B4
  - Harness connector E105

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

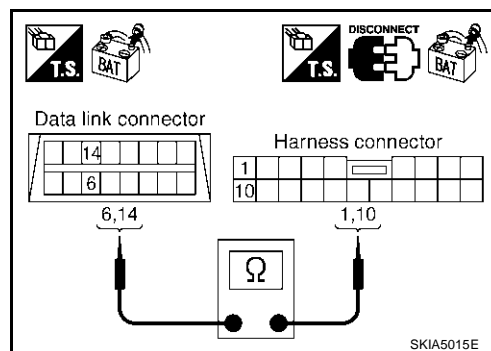
1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

**6 (L) - 1 (L) : Continuity should exist.**

**14 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



## 3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

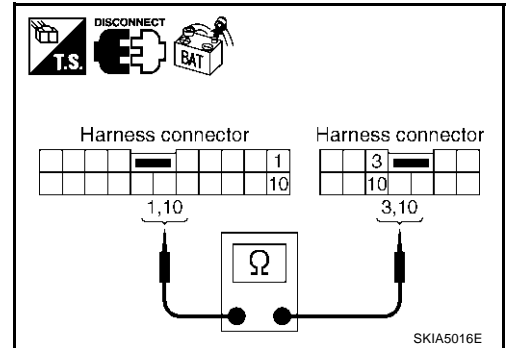
**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

OK >> GO TO 4.

NG >> Repair harness.



## 4. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

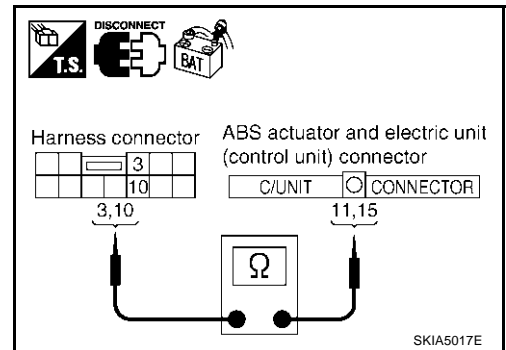
**3 (L) - 11 (L) : Continuity should exist.**

**10 (Y) - 15 (Y) : Continuity should exist.**

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-600, "Work Flow"](#).

NG >> Repair harness.



## ECM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

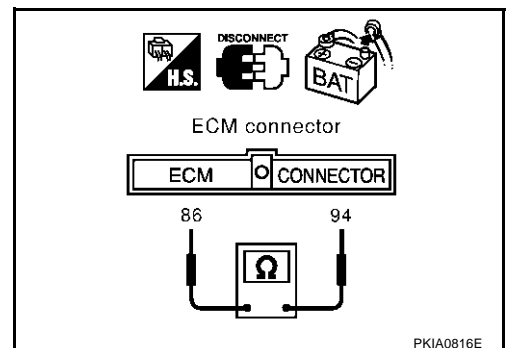
1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

**94 (L) - 86 (Y) : Approx. 108 - 132Ω**

OK or NG

OK >> Replace ECM.

NG >> Repair harness between ECM and TCM.



**TCM Circuit Check**

AKS0070J

**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
  - TCM connector
  - Harness connector F102
  - Harness connector M82

**OK or NG**

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

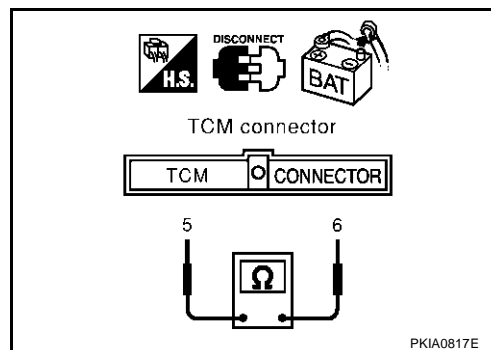
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Approx. 54 - 66Ω**

**OK or NG**

- OK >> Replace TCM.  
 NG >> Repair harness between TCM and low tire pressure warning control unit.

**Low Tire Pressure Warning Control Unit Circuit Check**

AKS0070K

**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of low tire pressure warning control unit for damage, bend and loose connection (control unit side and harness side).

**OK or NG**

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

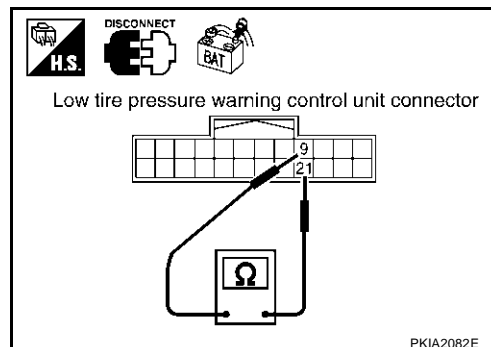
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect low tire pressure warning control unit connector.
2. Check resistance between low tire pressure warning control unit harness connector M81 terminals 9 (L) and 21 (Y).

**9 (L) - 21 (Y) : Approx. 54 - 66Ω**

**OK or NG**

- OK >> Replace low tire pressure warning control unit.  
 NG >> Repair harness between low tire pressure warning control unit and TCM.



## Display Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display unit for damage, bend and loose connection (unit side and harness side).

#### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

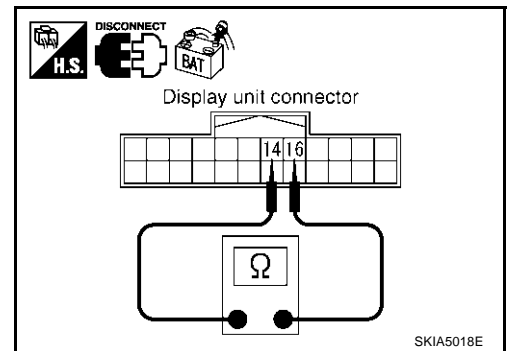
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect display unit connector.
2. Check resistance between display unit harness connector M39 terminals 14 (L) and 16 (Y).

**14 (L) - 16 (Y) : Approx. 54 - 66Ω**

#### OK or NG

- OK >> Replace display unit.  
 NG >> Repair harness between display unit and data link connector.



## Data Link Connector Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

#### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

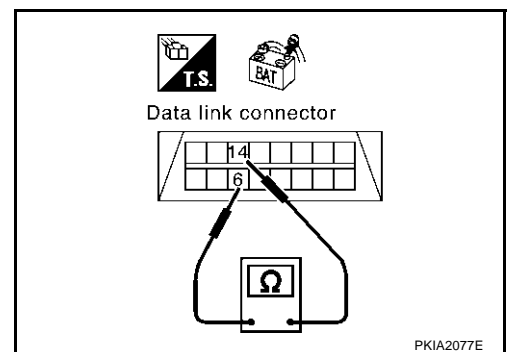
### 2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Approx. 54 - 66Ω**

#### OK or NG

- OK >> Diagnose again. Refer to [LAN-600, "Work Flow"](#).  
 NG >> Repair harness between data link connector and BCM.





**BCM Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

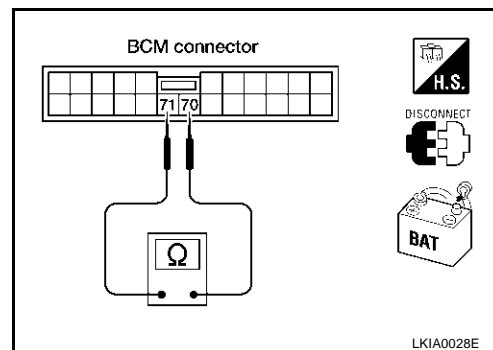
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M37 terminals 70 (L) and 71 (Y).

**70 (L) - 71 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace BCM. Refer to [BCS-36, "Removal and Installation of BCM"](#) .  
 NG >> Repair harness between BCM and data link connector.

**Unified Meter and A/C Amp. Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

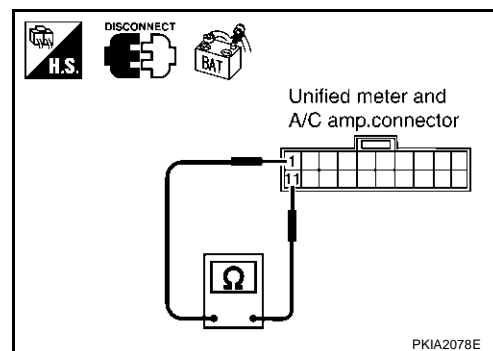
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

**1 (L) - 11 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace unified meter and A/C amp.  
 NG >> Repair harness between unified meter and A/C amp. and data link connector.



**AWD Control Unit Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of AWD control unit for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

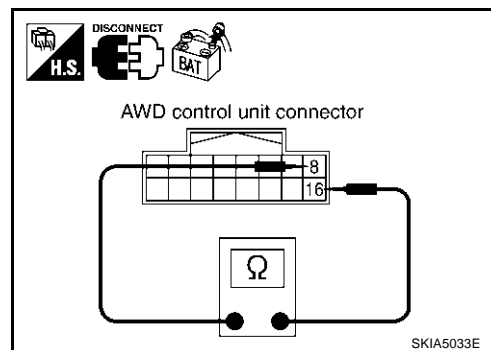
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect AWD control unit connector.
2. Check resistance between AWD control unit harness connector E111 terminals 8 (L) and 16 (Y).

**8 (L) - 16 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace AWD control unit.  
 NG >> Repair harness between AWD control unit and IPDM E/R.

**ABS Actuator and Electric Unit (Control Unit) Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

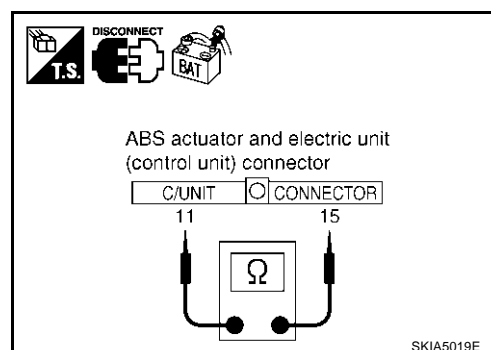
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

**11 (L) - 15 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).  
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



**IPDM E/R Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

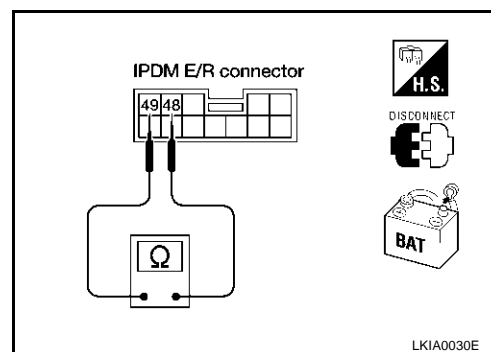
- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y)****: Approx. 108 - 132Ω**OK or NG

- OK >> Replace IPDM E/R.  
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).

**CAN Communication Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, unit side, meter side and harness side).

- ECM
- TCM
- Low tire pressure warning control unit
- Display unit
- BCM
- Unified meter and A/C amp.
- AWD control unit
- ABS actuator and electric unit (control unit)
- IPDM E/R
- Between ECM and IPDM E/R
- Between ECM and TCM

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
  - ECM connector
  - Low tire pressure warning control unit connector
  - Harness connector M82
  - Display unit connector
  - BCM connector
  - Unified meter and A/C amp. connector
  - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

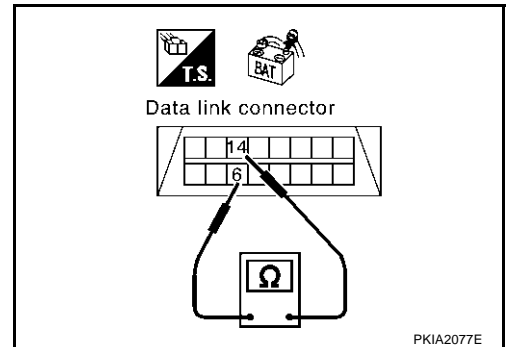
**6 (L) - 14 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 3.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9.



## 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

**6 (L) - Ground : Continuity should not exist.**

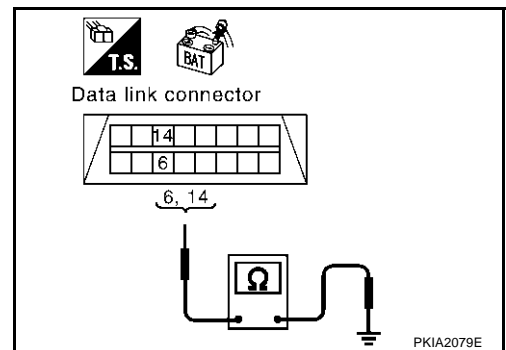
**14 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9.



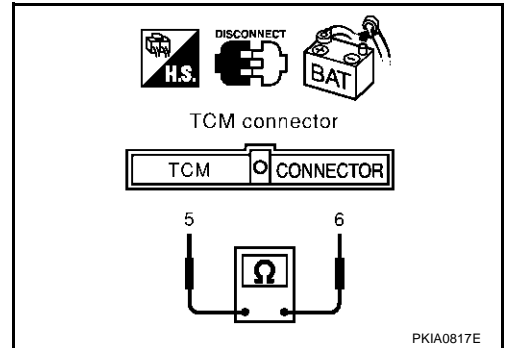
**4. CHECK HARNESS FOR SHORT CIRCUIT**

1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Continuity should not exist.**

OK or NG

- OK >> GO TO 5.
- NG >> Repair harness between TCM and harness connector F102.



**5. CHECK HARNESS FOR SHORT CIRCUIT**

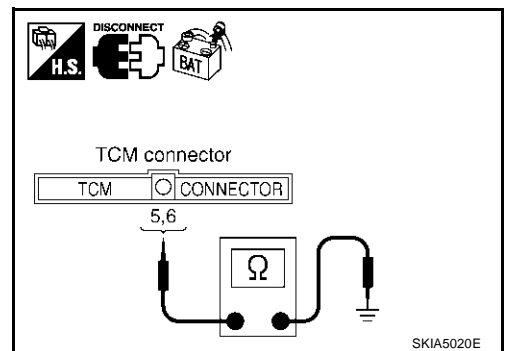
Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

**5 (L) - Ground : Continuity should not exist.**

**6 (Y) - Ground : Continuity should not exist.**

OK or NG

- OK >> GO TO 6.
- NG >> Repair harness between TCM and harness connector F102.



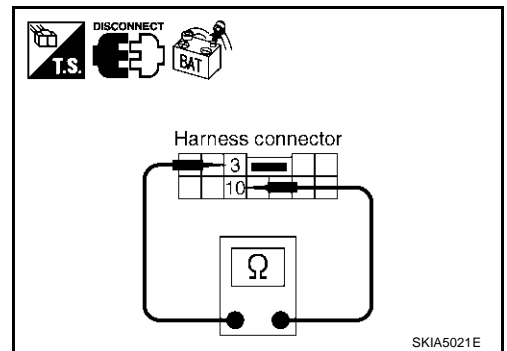
**6. CHECK HARNESS FOR SHORT CIRCUIT**

1. Disconnect harness connector B4.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

**3 (L) - 10 (Y) : Continuity should not exist.**

OK or NG

- OK >> GO TO 7.
- NG >> Repair harness between harness connector B4 and harness connector B2.



**7. CHECK HARNESS FOR SHORT CIRCUIT**

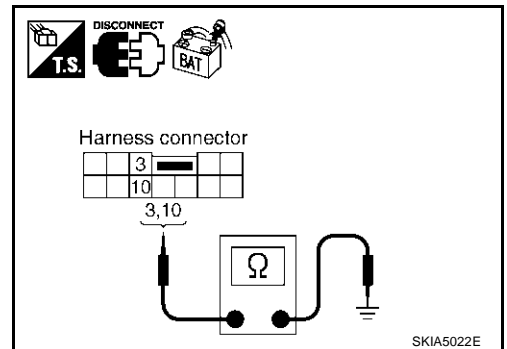
Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

**3 (L) - Ground : Continuity should not exist.**

**10 (Y) - Ground : Continuity should not exist.**

OK or NG

- OK >> GO TO 8.
- NG >> Repair harness between harness connector B4 and harness connector B2.



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## 8. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect AWD control unit connector, ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

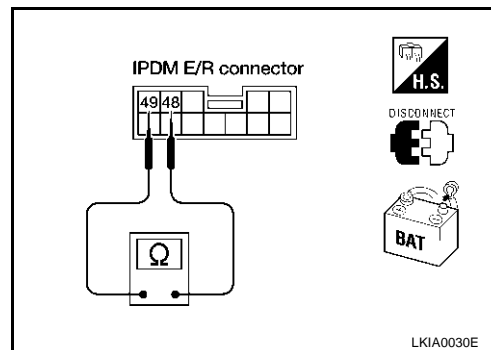
**48 (L) - 49 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 9.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

**48 (L) - Ground : Continuity should not exist.**

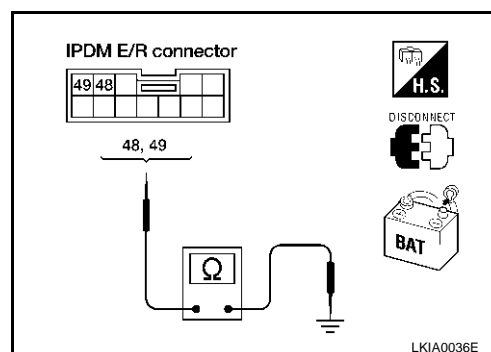
**49 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 10.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 10. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-627, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

### OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-600, "Work Flow"](#).

NG >> Replace ECM and/or IPDM E/R.

### IPDM E/R Ignition Relay Circuit Check

AKS0070T

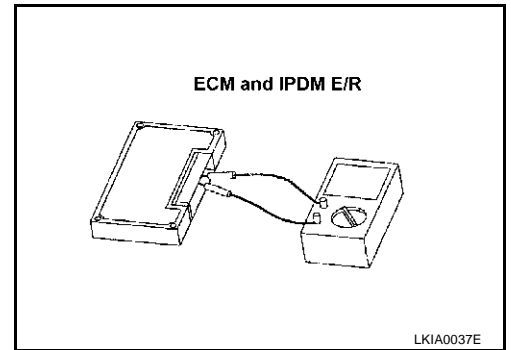
Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-45, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#).

## Component Inspection ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value ( $\Omega$ ) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



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LAN

## CAN SYSTEM (TYPE 19)

PFP:23710

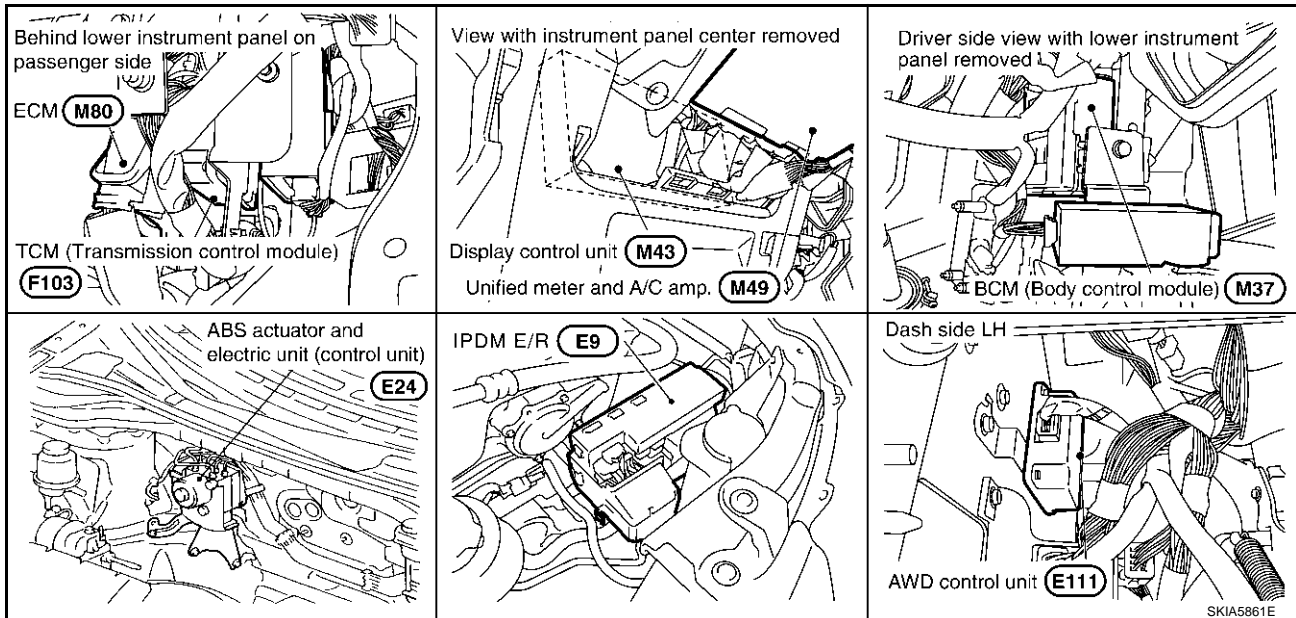
### System Description

AKS0070V

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

### Component Parts and Harness Connector Location

AKS0070W



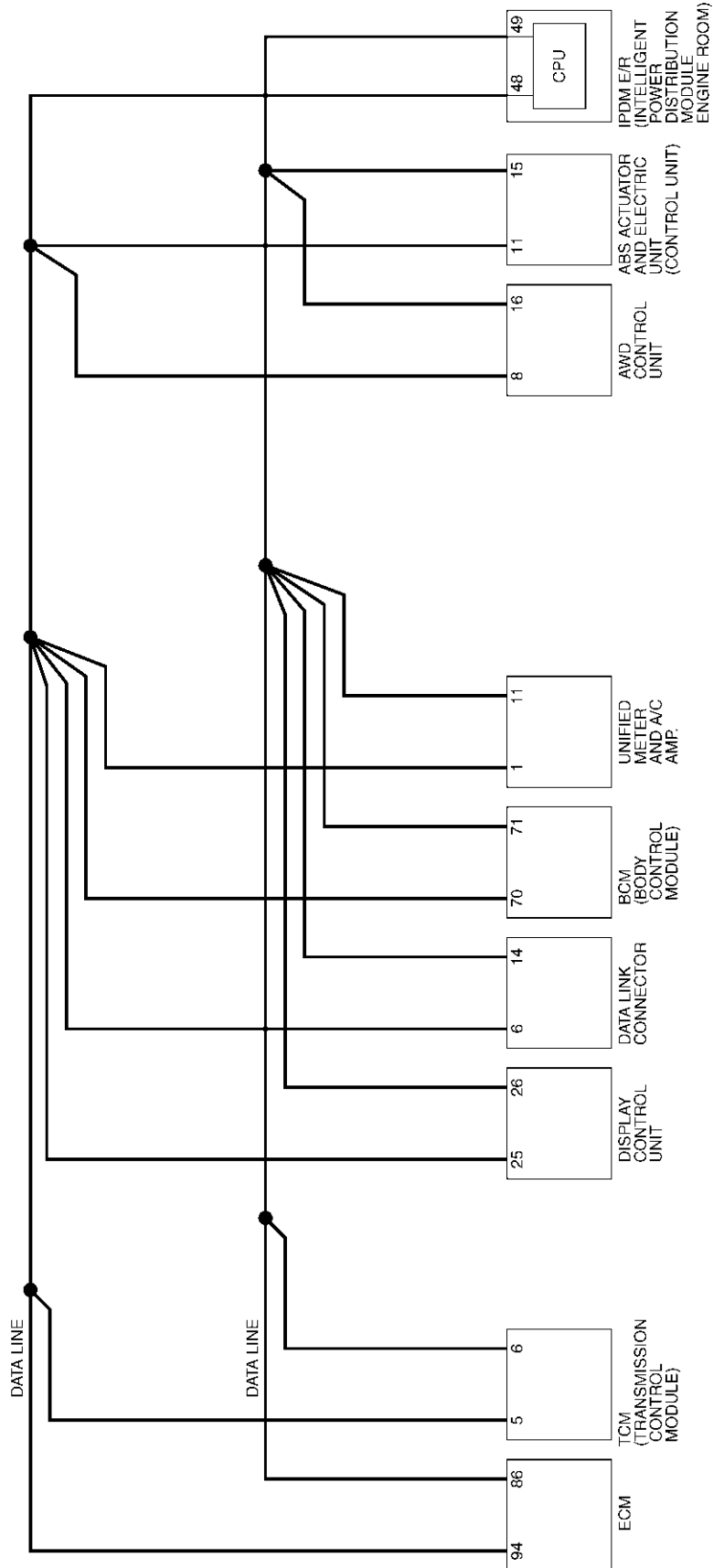


# CAN SYSTEM (TYPE 19)

[CAN]

## Schematic

AKS0070X



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TKWA0995E

# CAN SYSTEM (TYPE 19)

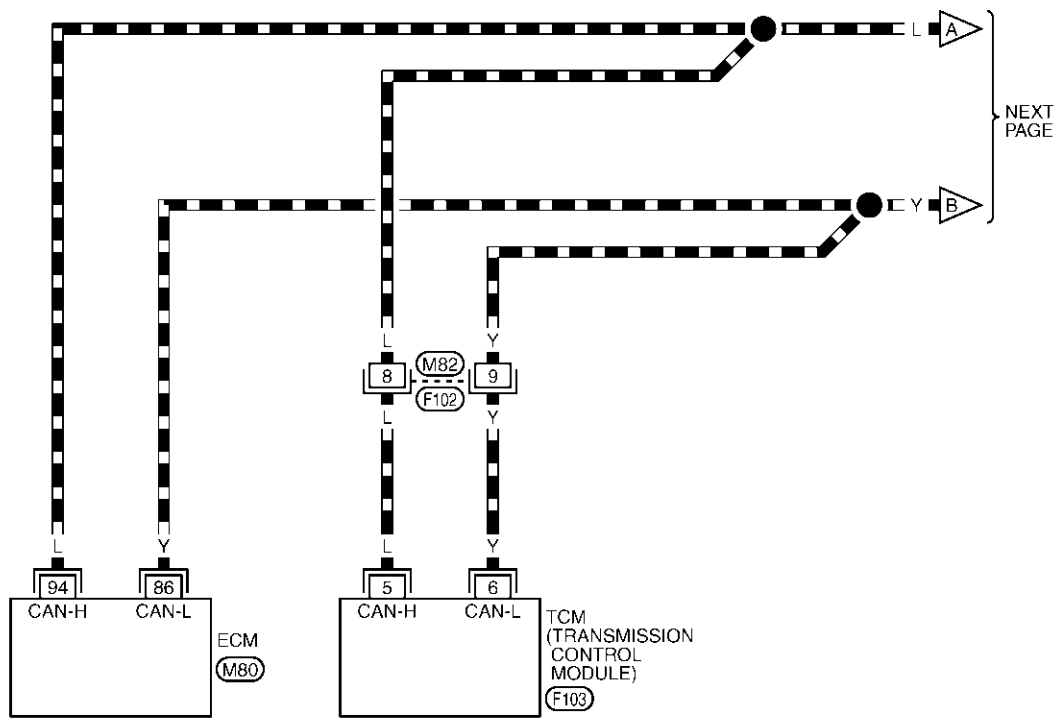
[CAN]

## Wiring Diagram - CAN -

AKS0070Y

### LAN-CAN-55

▬ : DATA LINE



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18		

(F102)  
W

REFER TO THE FOLLOWING.  
(M80), (F103) -ELECTRICAL  
UNITS

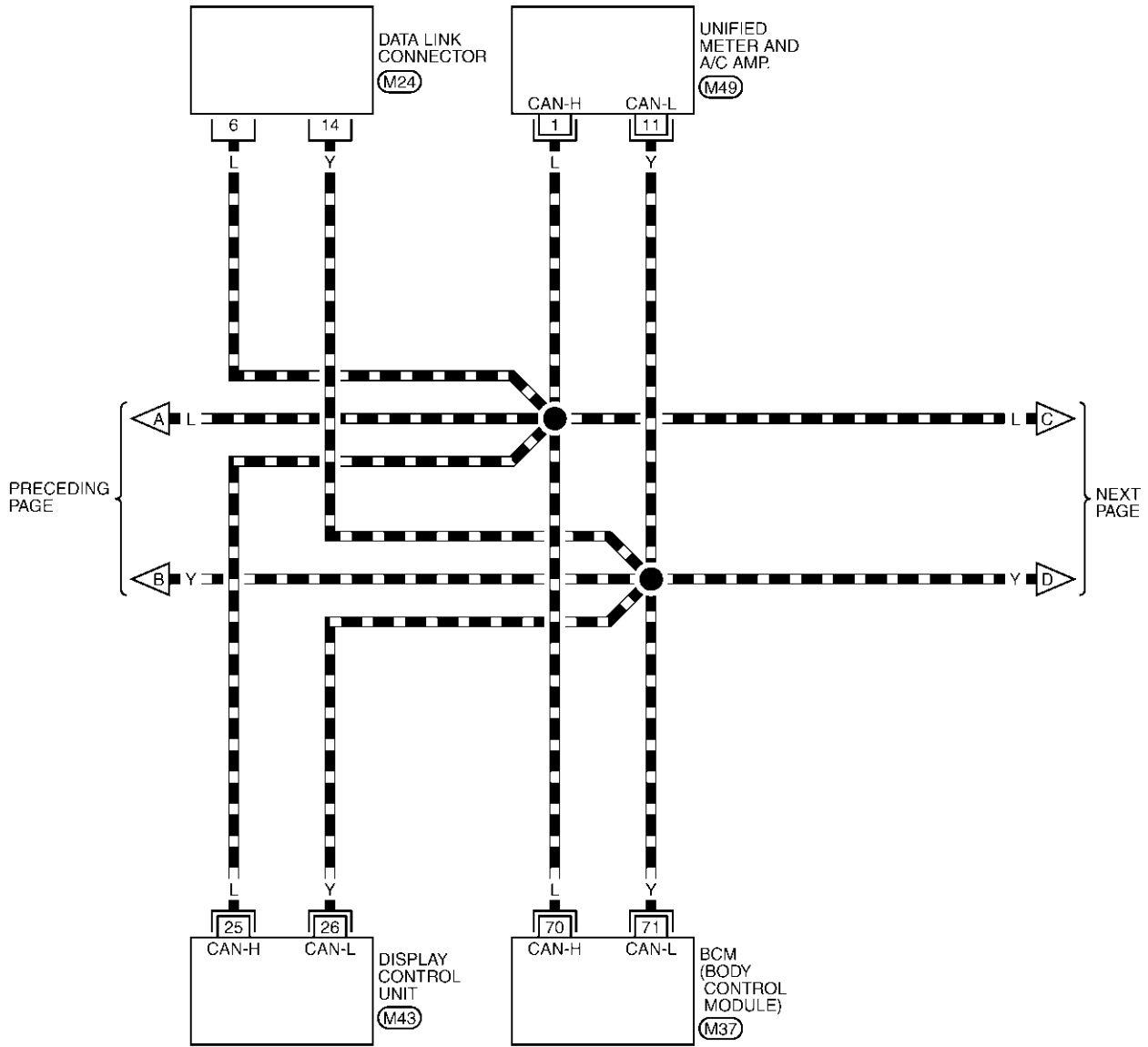
TKWA0996E

# CAN SYSTEM (TYPE 19)

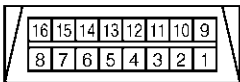
[CAN]

## LAN-CAN-56

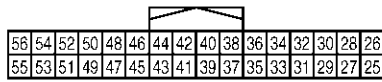
▬ : DATA LINE



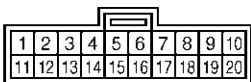
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LAN  
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(M24)  
W



(M43)  
W



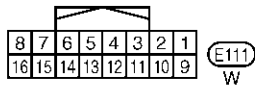
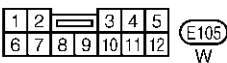
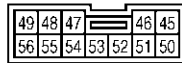
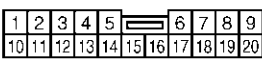
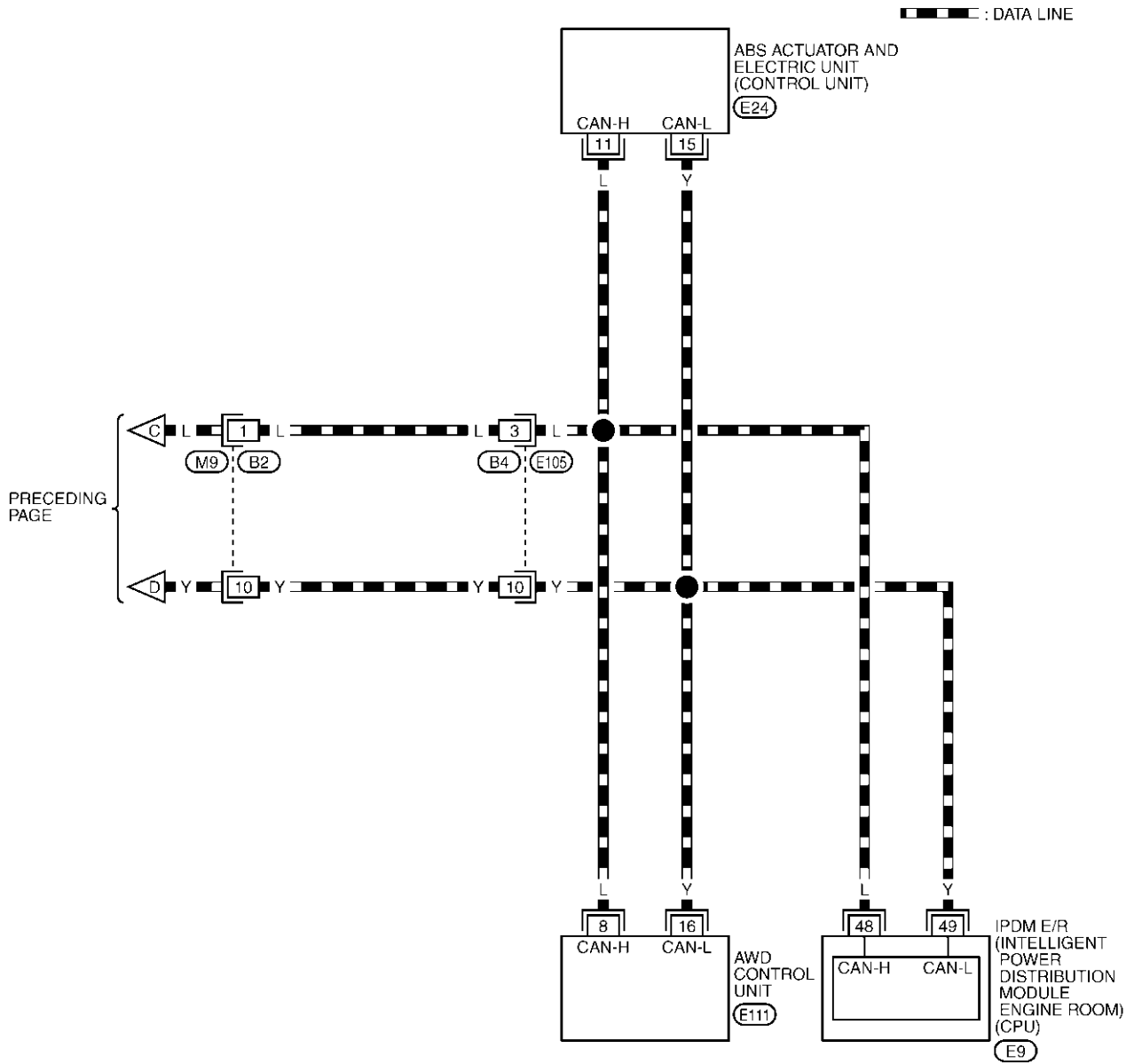
(M49)  
GR



REFER TO THE FOLLOWING.  
(M37) -ELECTRICAL UNITS

TKWA0997E

## LAN-CAN-57



REFER TO THE FOLLOWING.  
(E24) -ELECTRICAL UNITS

# CAN SYSTEM (TYPE 19)

[CAN]


AKS00C5K

## Work Flow

- When there are no indications of "TRANSMISSION" or "METER A/C AMP" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".

(Example)

NISSAN			
CONSULT-II			
ENGINE			
START (NISSAN BASED VHCL)			
START (RENAULT BASED VHCL)			
SUB MODE			
		LIGHT	COPY




SELECT SYSTEM				
ENGINE				
A/T				
ABS				
AIR BAG				
BCM				
METER A/C AMP				
		BACK	LIGHT	COPY

PKIA2093E

- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP", "ALL MODE AWD/4WD" and "ABS" displayed on CONSULT-II.

(Example)

SELECT DIAG MODE				
WORK SUPPORT				
SELF-DIAG RESULTS				
DATA MONITOR				
DATA MONITOR (SPEC)				
CAN DIAG SUPPORT MNTR				
ACTIVE TEST				
Scroll Down				
		BACK	LIGHT	COPY




SELF-DIAG RESULTS			
DTC RESULTS		TIME	
CAN COMM CIRCUIT [U1000]		0	
F.F.DATA			
ERASE		PRINT	
MODE	BACK	LIGHT	COPY

PKIA8260E

- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP", "ALL MODE AWD/4WD" and "ABS" displayed on CONSULT-II.

(Example)

SELECT DIAG MODE				
WORK SUPPORT				
SELF-DIAG RESULTS				
DATA MONITOR				
DATA MONITOR (SPEC)				
CAN DIAG SUPPORT MNTR				
ACTIVE TEST				
Scroll Down				
		BACK	LIGHT	COPY



CAN DIAG SUPPORT MNTR			
ENGINE			
		PRNT	
INITIAL DIAG		OK	
TRANSMIT DIAG		OK	
TCM		OK	
VDC/TCS/ABS		OK	
METER/M&A		OK	
ICC		UNKWVN	
BCM/SEC		OK	
IPDM E/R		OK	
AWD/4WD/e4WD		UNKWVN	
PRINT			Scroll Down
MODE	BACK	LIGHT	COPY

PKIA8343E

- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-635, "CHECK SHEET"](#).
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "v" onto the items with "No indication", "NG", or "UNKWVN" in the check sheet table. Refer to [LAN-635, "CHECK SHEET"](#).

**NOTE:**

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual. So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the navigation system. Refer to [AV-203, "CAN Communication Line Check"](#).
- Attach the CAN DIAG SUPPORT MONITOR check sheet onto the check sheet. Refer to [LAN-635, "CHECK SHEET"](#).

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- 
8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG SUPPORT MONITOR check sheet. Refer to [LAN-635, "CHECK SHEET"](#) .  
**NOTE:**  
If "NG" is displayed on "CAN COMM" as "CAN DIAG SUPPORT MONITOR" for the diagnosed control unit, replace the control unit. Refer to [AV-203, "CAN Communication Line Check"](#) .
  9. According to the check sheet results (example), start inspection. Refer to [LAN-637, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

# CAN SYSTEM (TYPE 19)

**[CAN]**

## CHECK SHEET

**NOTE:**

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

A  
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SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

Attach copy of  
display control unit  
CAN DIAG SUPPORT MONITOR check sheet

PKIB0849E

# CAN SYSTEM (TYPE 19)

[CAN]

Attach copy of  
ENGINE  
SELF-DIAG RESULTS

Attach copy of  
TRANSMISSION  
SELF-DIAG RESULTS

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
METER A/C AMP  
SELF-DIAG RESULTS

Attach copy of  
ALL MODE AWD/4WD  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

Attach copy of  
ENGINE  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
TRANSMISSION  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
BCM  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
METER A/C AMP  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ALL MODE AWD/4WD  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ABS  
CAN DIAG SUPPORT  
MNTR

PKIB0715E



# CAN SYSTEM (TYPE 19)

[CAN]

## CHECK SHEET RESULTS (EXAMPLE)

### NOTE:

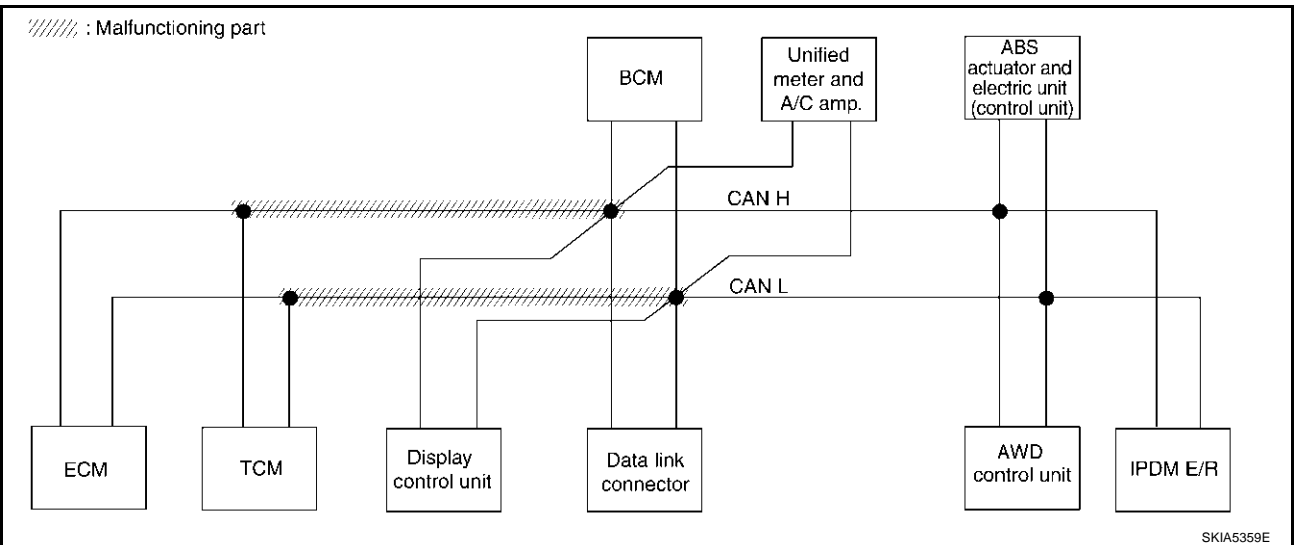
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

### Case 1

Check harness between TCM and data link connector. Refer to [LAN-649, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

PKIB0850E



LAN

# CAN SYSTEM (TYPE 19)

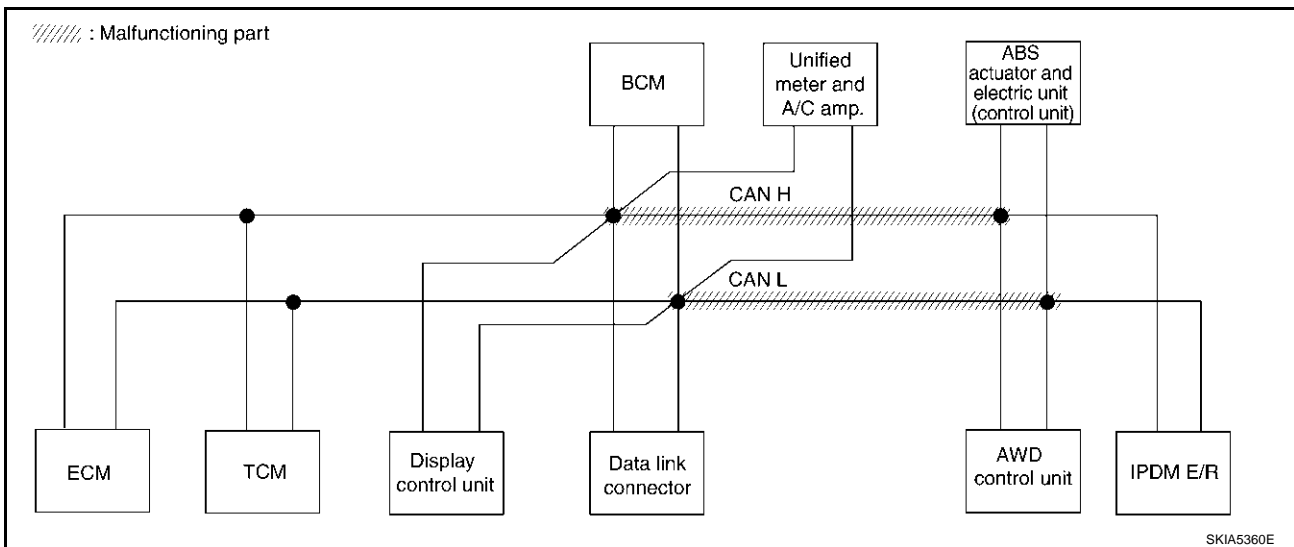
[CAN]

## Case 2

Check harness between data link connector and ABS actuator and electric unit (control unit). Refer to [LAN-649, "Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit \(Control Unit\)"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R		
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7	—
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 19)

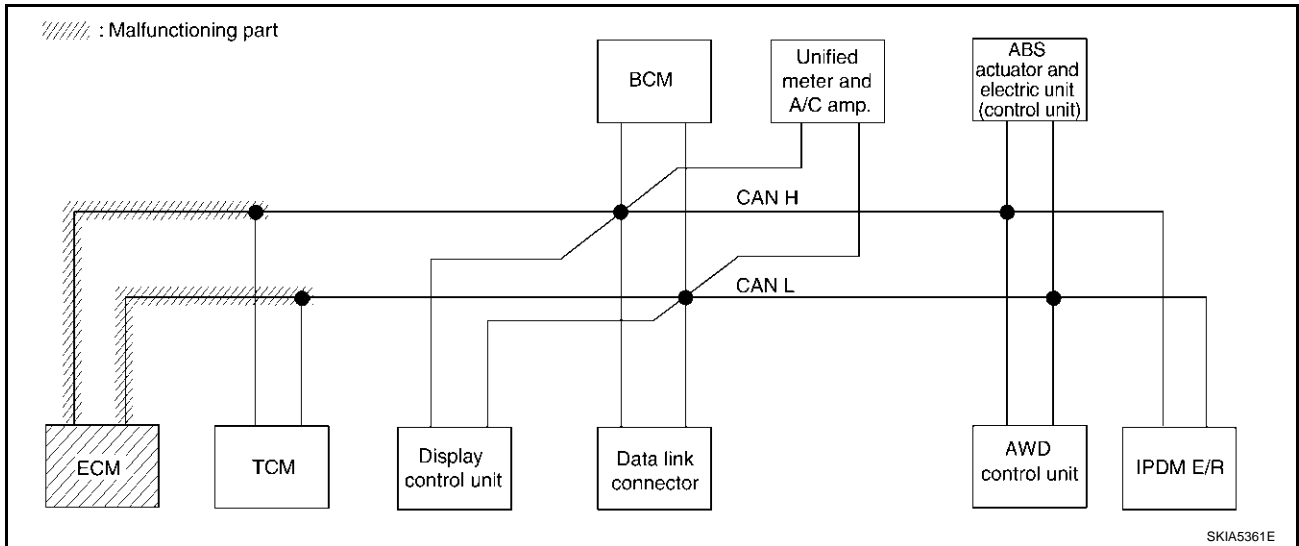
[CAN]

## Case 3

Check ECM circuit. Refer to [LAN-650, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW <del>N</del>	—	UNKW <del>N</del>	—	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	—	UNKW <del>N</del>
TRANSMISSION	No indication	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	UNKW <del>N</del>	—	UNKW <del>N</del>	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	UNKW <del>N</del>	—	—	UNKW <del>N</del>
METER A/C AMP	No indication	—	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	—	UNKW <del>N</del>	UNKW <del>N</del>	—
ALL MODE AWD/4WD	—	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	UNKW <del>N</del>	—	—	—
ABS	—	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	—	—	—	—

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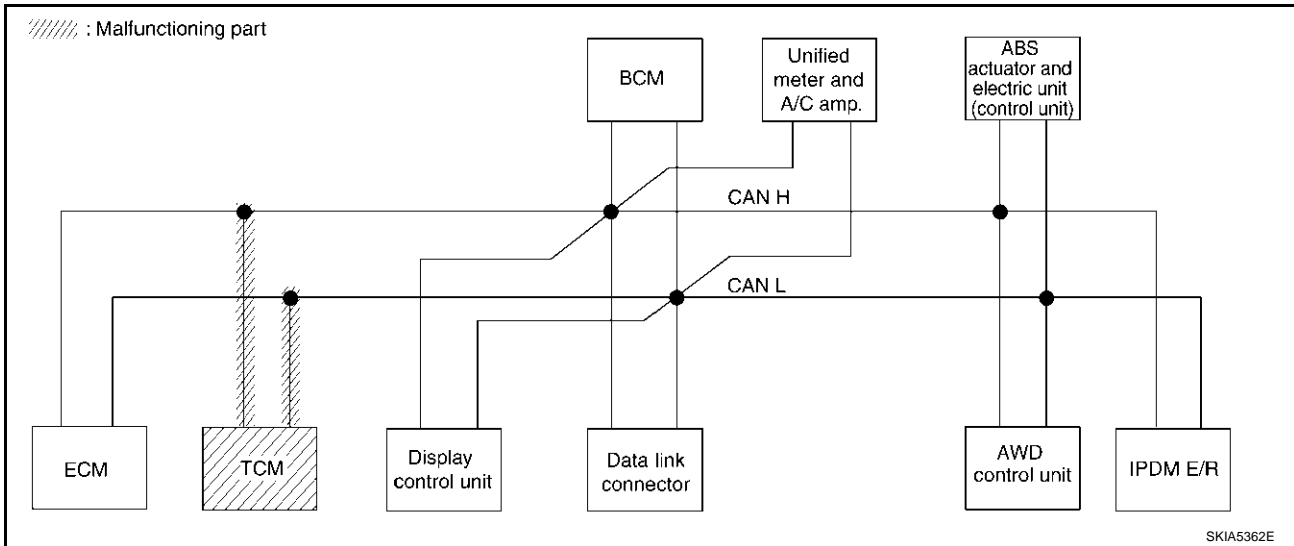
[CAN]

## Case 4

Check TCM circuit. Refer to [LAN-651, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW N	—	UNKW N	—	UNKW N	UNKW N	UNKW N	—	UNKW N
TRANSMISSION	No indication ✓	NG	UNKW N	UNKW N	—	—	—	UNKW N	—	UNKW N	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKW N	UNKW N	—	—	—	UNKW N	—	—	UNKW N
METER A/C AMP	No indication	—	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N	—	UNKW N	UNKW N	—
ALL MODE AWD/4WD	—	NG	UNKW N	UNKW N	—	—	—	UNKW N	—	—	—
ABS	—	NG	UNKW N	UNKW N	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 19)

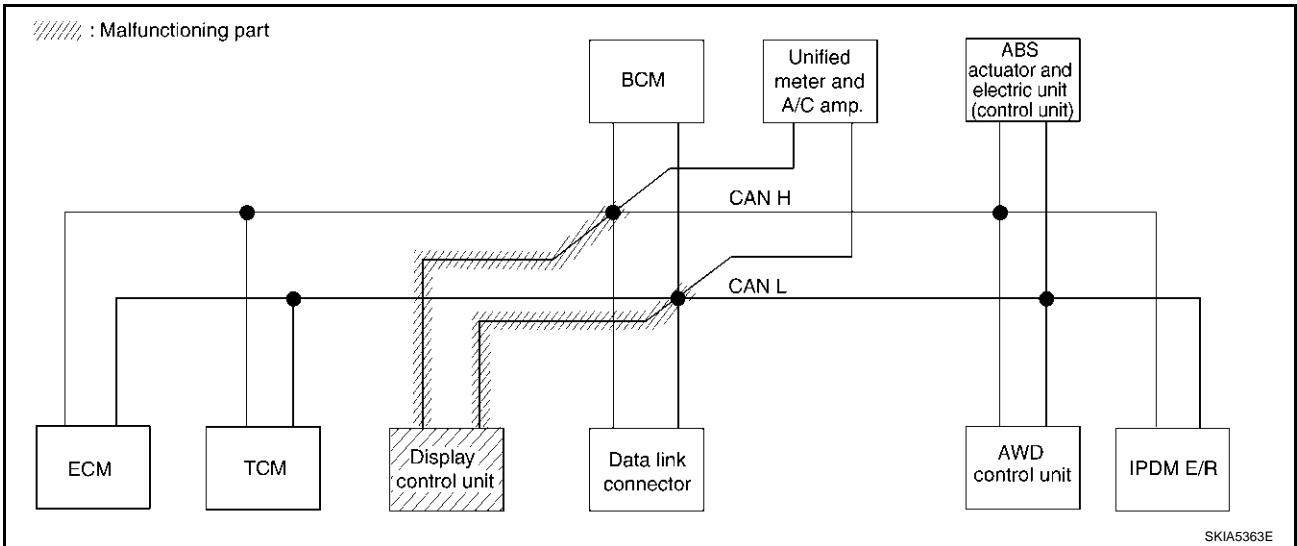
[CAN]

## Case 5

Check display control unit circuit. Refer to [LAN-651, "Display Control Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display control unit	—	CAN COMM	CAN CRC 1 ✓	CAN CRC 3 ✓	—	—	CAN CRC 2 ✓	CAN CRC 5 ✓	—	—	CAN CRC 7 ✓	
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	—	UNKWN	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	

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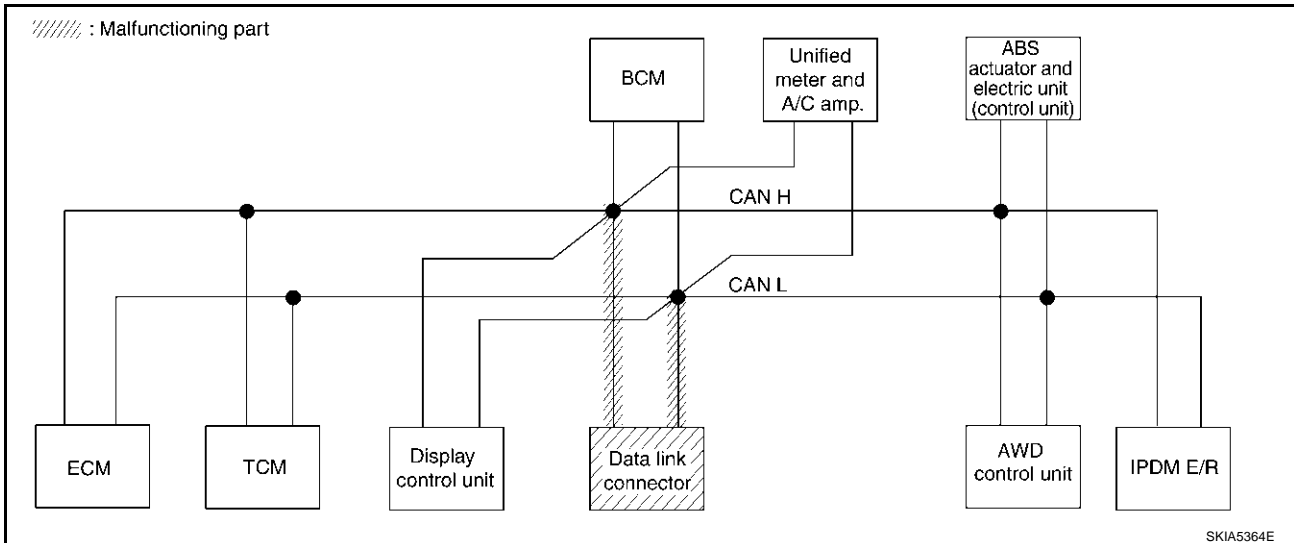
[CAN]

## Case 6

Check data link connector circuit. Refer to [LAN-652, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 19)

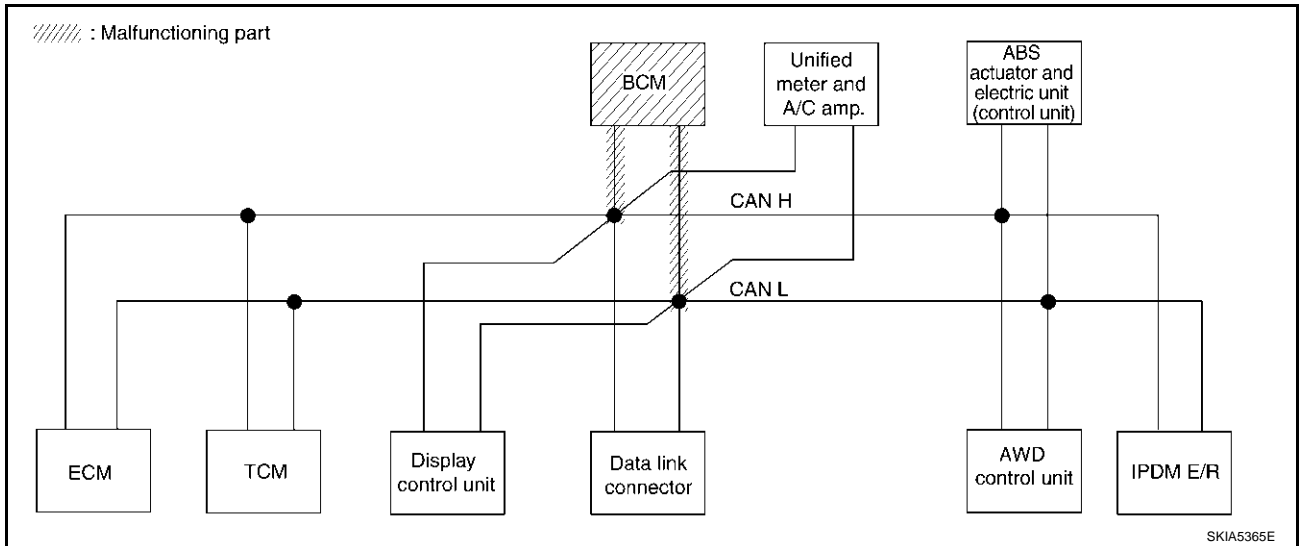
[CAN]

## Case 7

Check BCM circuit. Refer to [LAN-652, "BCM Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 19)

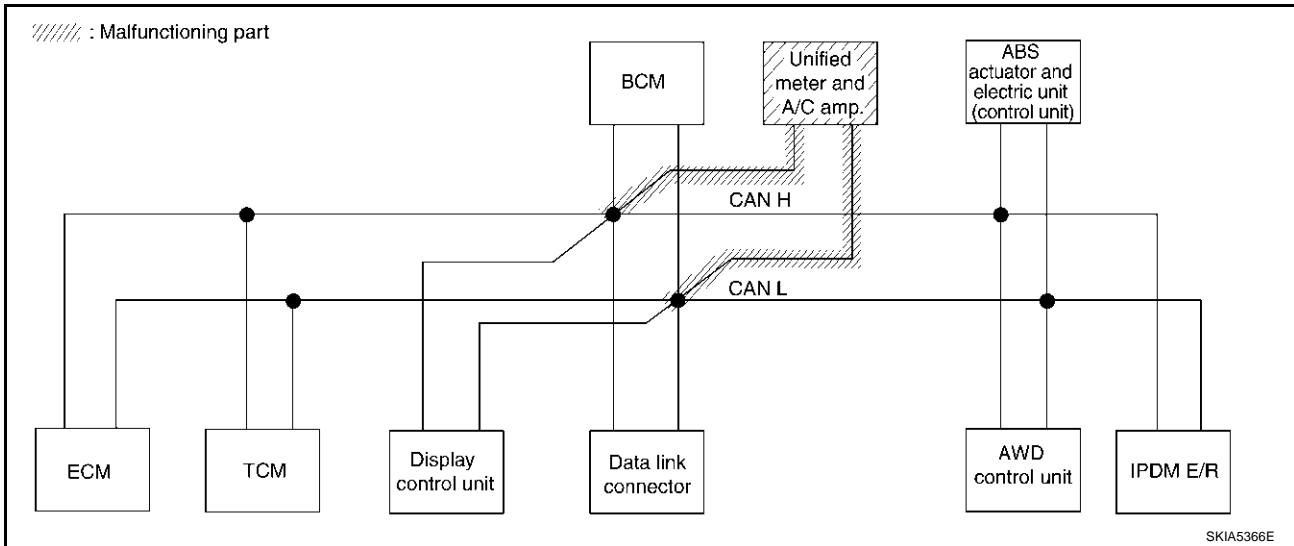
[CAN]

## Case 8

Check unified meter and A/C amp. circuit. Refer to [LAN-653, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 19)

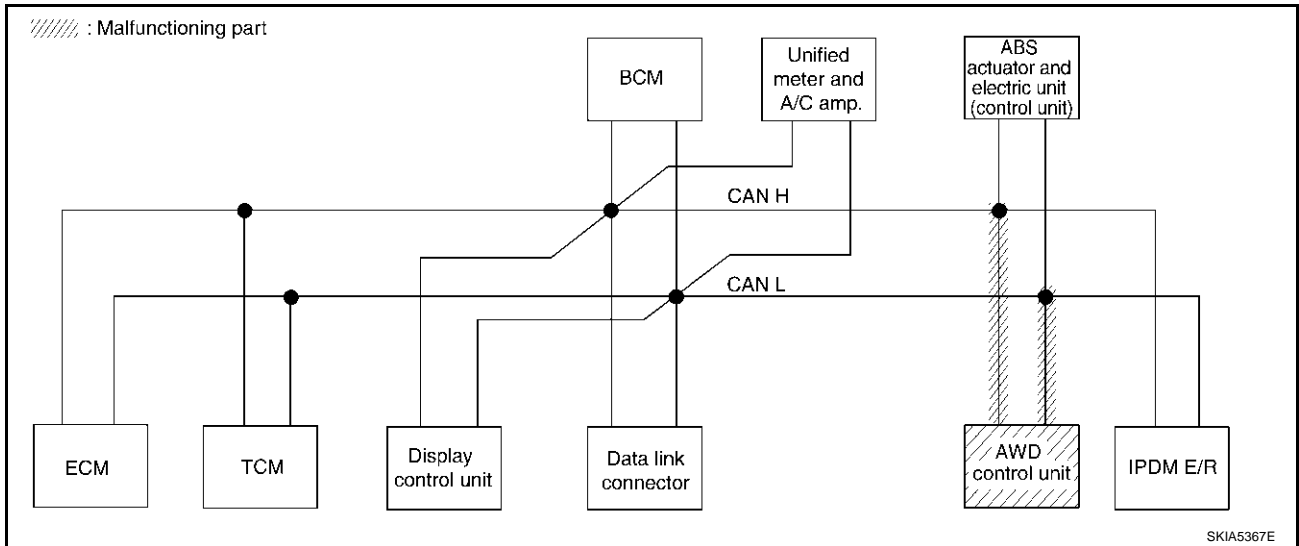
[CAN]

## Case 9

Check AWD control unit circuit. Refer to [LAN-653, "AWD Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	

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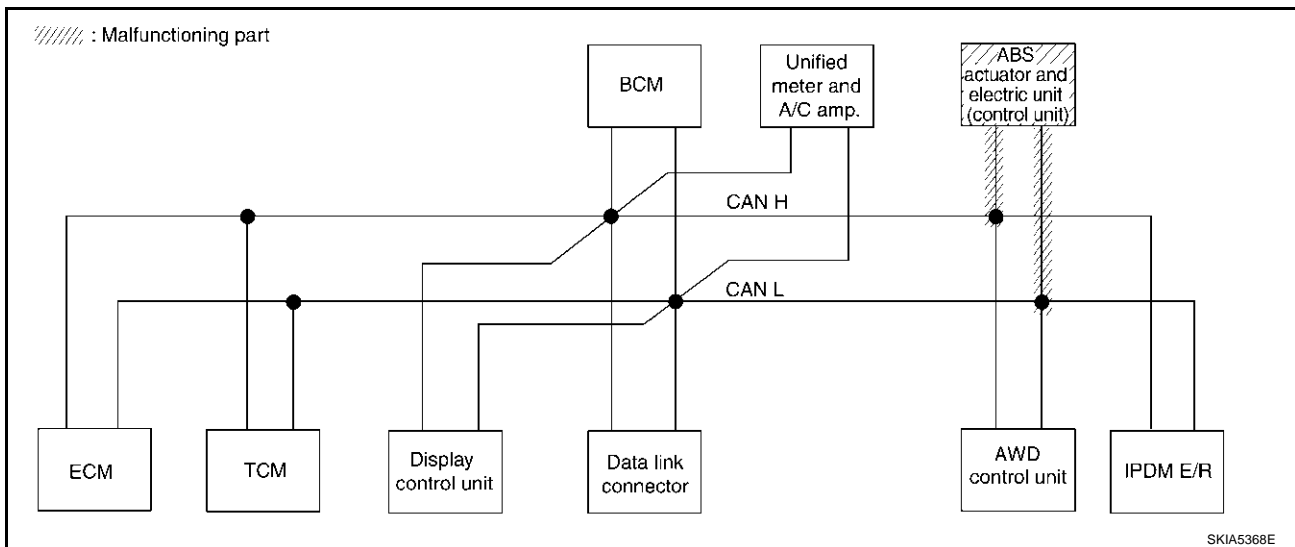
[CAN]

## Case 10

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-654, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 19)

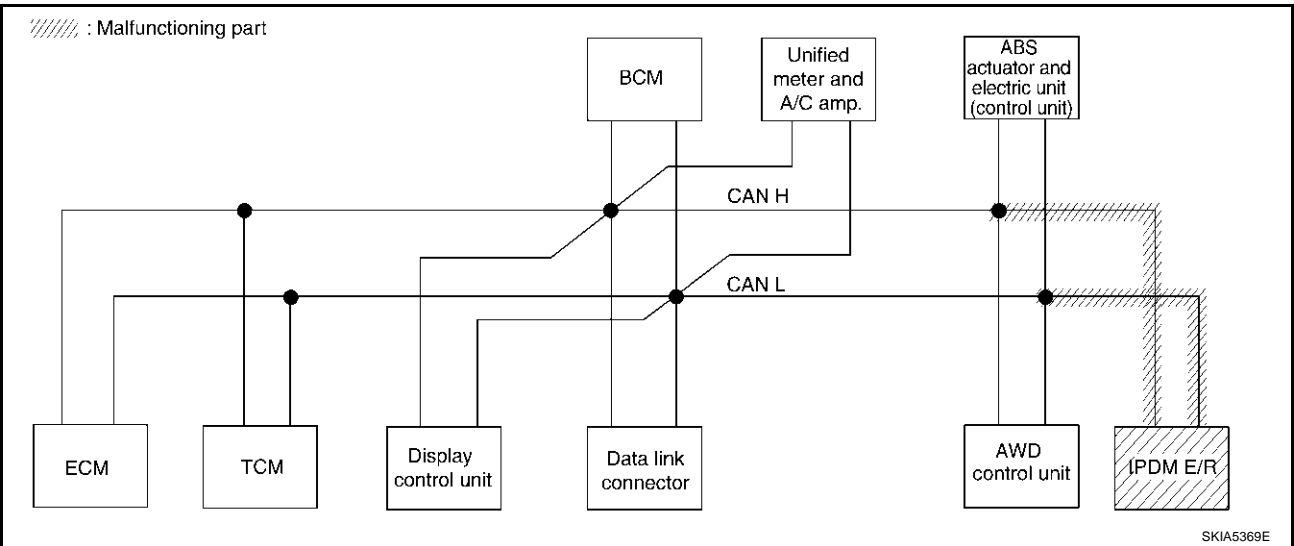
[CAN]

## Case 11

Check IPDM E/R circuit. Refer to [LAN-654, "IPDM E/R Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

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## Case 12

Check CAN communication circuit. Refer to [LAN-655, "CAN Communication Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 19)

[CAN]

## Case 13

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-658, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

PKIB0862E

## Case 14

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-658, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

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## Circuit Check Between TCM and Data Link Connector

AKS00710

### 1. CHECK HARNESS FOR OPEN CIRCUIT

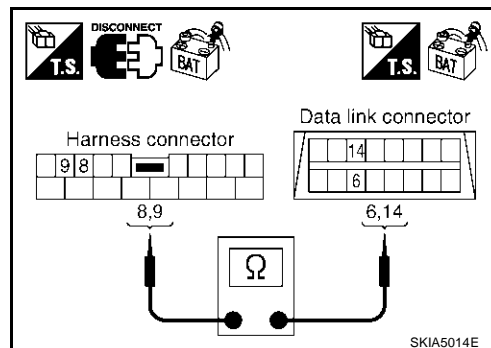
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

**8 (L) - 6 (L) : Continuity should exist.**

**9 (Y) - 14 (Y) : Continuity should exist.**

#### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-633, "Work Flow"](#).
- NG >> Repair harness.



## Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit)

AKS00711

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector M9
  - Harness connector B2
  - Harness connector B4
  - Harness connector E105

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

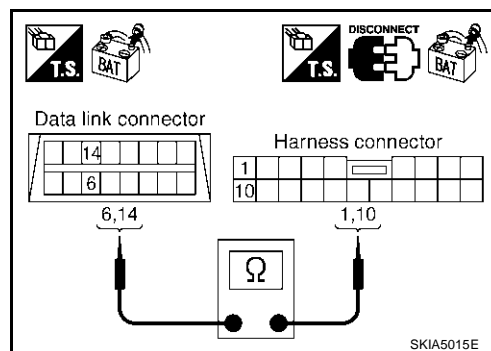
1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

**6 (L) - 1 (L) : Continuity should exist.**

**14 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



## 3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

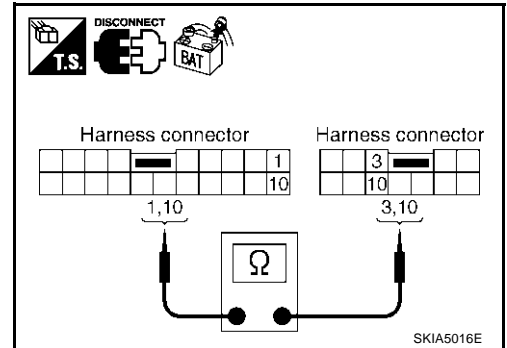
**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

OK >> GO TO 4.

NG >> Repair harness.



## 4. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

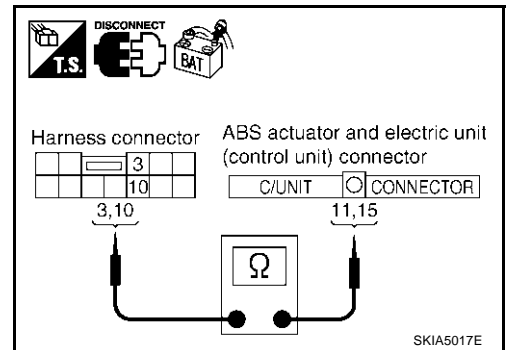
**3 (L) - 11 (L) : Continuity should exist.**

**10 (Y) - 15 (Y) : Continuity should exist.**

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-633, "Work Flow"](#).

NG >> Repair harness.



## ECM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

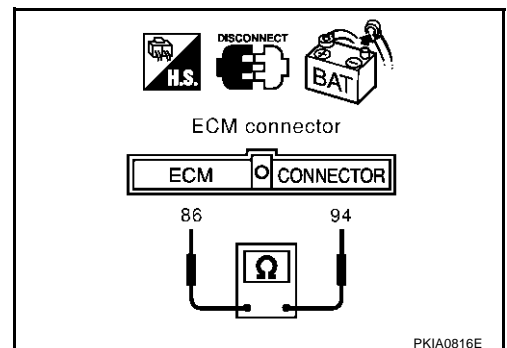
1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

**94 (L) - 86 (Y) : Approx. 108 - 132Ω**

OK or NG

OK >> Replace ECM.

NG >> Repair harness between ECM and TCM.



**TCM Circuit Check**

AKS00713

**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
  - TCM connector
  - Harness connector F102
  - Harness connector M82

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

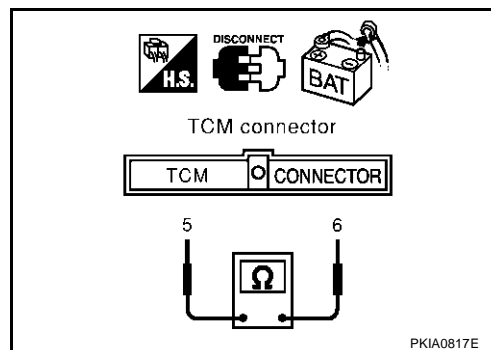
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace TCM.  
 NG >> Repair harness between TCM and ECM.

**Display Control Unit Circuit Check**

AKS00714

**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display control unit for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

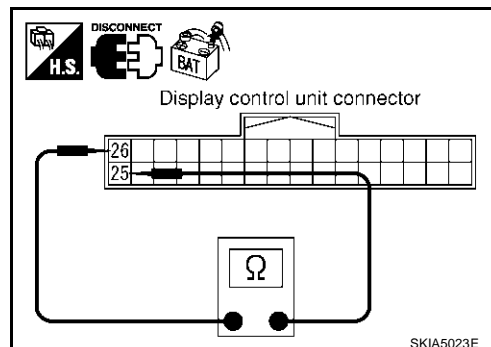
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect display control unit connector.
2. Check resistance between display control unit harness connector M43 terminals 25 (L) and 26 (Y).

**25 (L) - 26 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace display control unit.  
 NG >> Repair harness between display control unit and data link connector.



## Data Link Connector Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

#### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

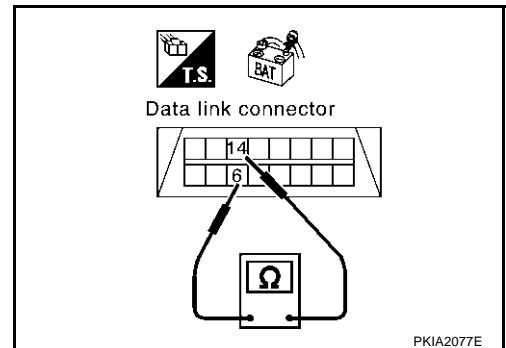
### 2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Approx. 54 - 66Ω**

#### OK or NG

- OK >> Diagnose again. Refer to [LAN-633, "Work Flow"](#) .  
 NG >> Repair harness between data link connector and BCM.



## BCM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

#### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

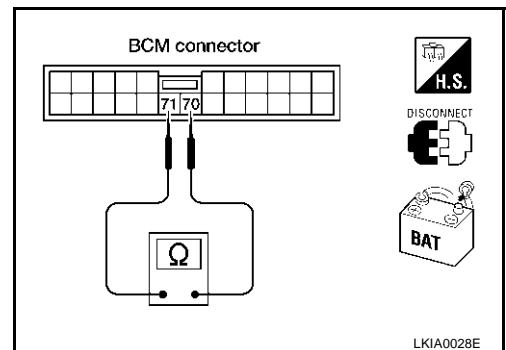
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M37 terminals 70 (L) and 71 (Y).

**70 (L) - 71 (Y) : Approx. 54 - 66Ω**

#### OK or NG

- OK >> Replace BCM. Refer to [BCS-36, "Removal and Installation of BCM"](#) .  
 NG >> Repair harness between BCM and data link connector.





**Unified Meter and A/C Amp. Circuit Check**

AKS00717

**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

**OK or NG**

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

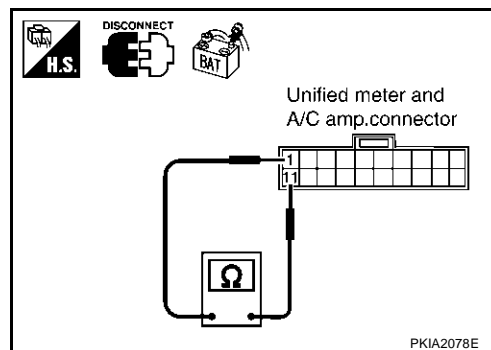
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

**1 (L) - 11 (Y) : Approx. 54 - 66Ω**

**OK or NG**

- OK >> Replace unified meter and A/C amp.  
 NG >> Repair harness between unified meter and A/C amp. and data link connector.



AKS00718

**AWD Control Unit Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of AWD control unit for damage, bend and loose connection (control unit side and harness side).

**OK or NG**

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

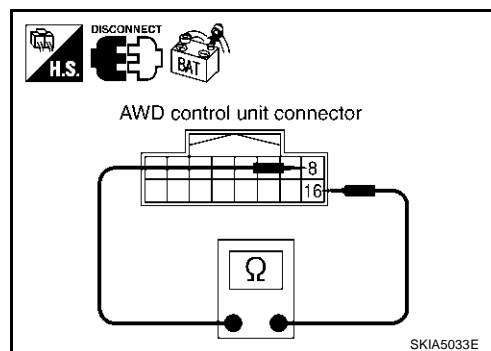
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect AWD control unit connector.
2. Check resistance between AWD control unit harness connector E111 terminals 8 (L) and 16 (Y).

**8 (L) - 16 (Y) : Approx. 54 - 66Ω**

**OK or NG**

- OK >> Replace AWD control unit.  
 NG >> Repair harness between AWD control unit and IPDM E/R.



**ABS Actuator and Electric Unit (Control Unit) Circuit Check**

AKS00719

**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

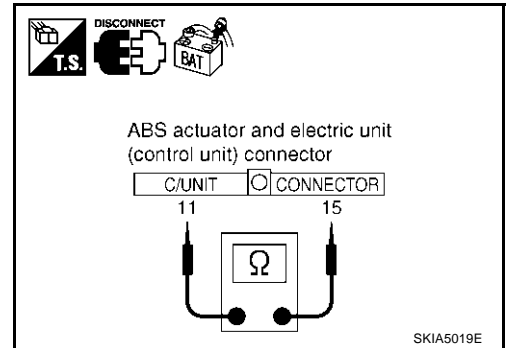
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

**11 (L) - 15 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).  
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



SKIA5019E

**IPDM E/R Circuit Check**

AKS0071A

**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

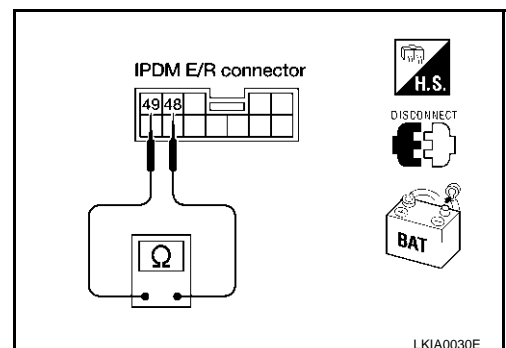
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y) : Approx. 108 - 132Ω**

OK or NG

- OK >> Replace IPDM E/R.  
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



LKIA0030E

## CAN Communication Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, meter side and harness side).
  - ECM
  - TCM
  - Display control unit
  - BCM
  - Unified meter and A/C amp.
  - AWD control unit
  - ABS actuator and electric unit (control unit)
  - IPDM E/R
  - Between ECM and IPDM E/R
  - Between ECM and TCM

#### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

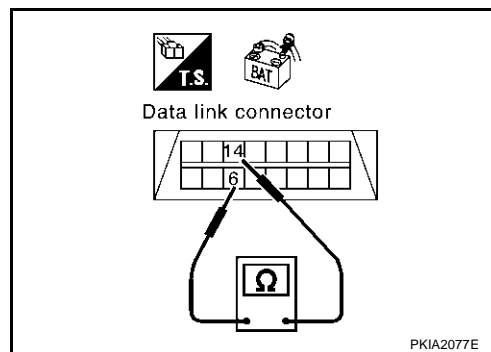
### 2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
  - ECM connector
  - Harness connector M82
  - Display control unit connector
  - BCM connector
  - Unified meter and A/C amp. connector
  - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Continuity should not exist.**

#### OK or NG

- OK >> GO TO 3.  
 NG >> Check the following harnesses. If any harness is damaged, repair the harness.
- Harness between data link connector and ECM.
  - Harness between data link connector and harness connector M82.
  - Harness between data link connector and display control unit.
  - Harness between data link connector and BCM.
  - Harness between data link connector and unified meter and A/C amp.
  - Harness between data link connector and harness connector M9.



### 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

**6 (L) - Ground : Continuity should not exist.**

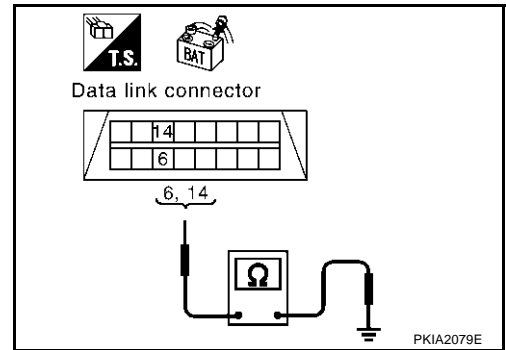
**14 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9.



### 4. CHECK HARNESS FOR SHORT CIRCUIT

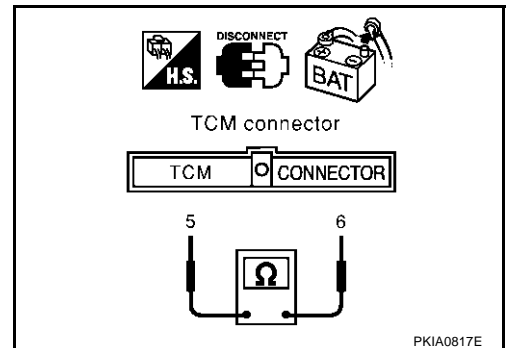
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 5.

NG >> Repair harness between TCM and harness connector F102.



### 5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

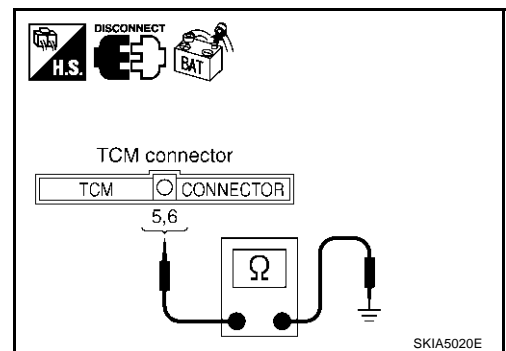
**5 (L) - Ground : Continuity should not exist.**

**6 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 6.

NG >> Repair harness between TCM and harness connector F102.



## 6. CHECK HARNESS FOR SHORT CIRCUIT

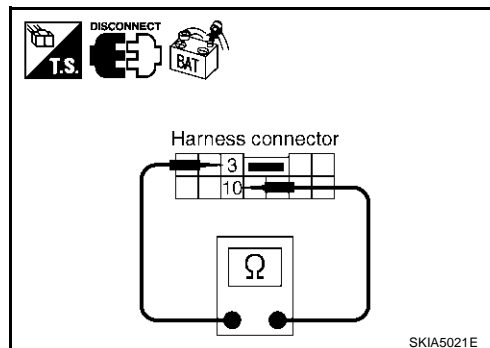
1. Disconnect harness connector B4.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

**3 (L) - 10 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 7.

NG >> Repair harness between harness connector B4 and harness connector B2.



## 7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

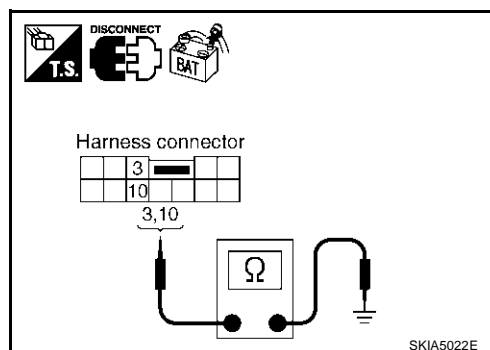
**3 (L) - Ground : Continuity should not exist.**

**10 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 8.

NG >> Repair harness between harness connector B4 and harness connector B2.



## 8. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect AWD control unit connector, ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

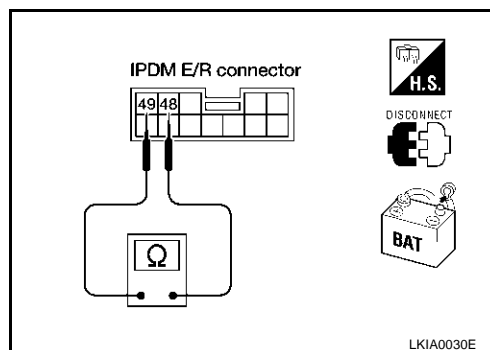
**48 (L) - 49 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 9.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

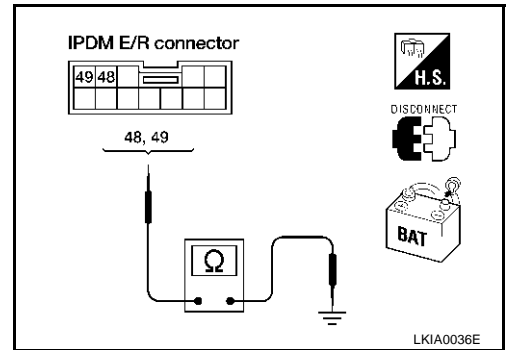
- 48 (L) - Ground : Continuity should not exist.**
- 49 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 10.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 10. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-658, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#) .

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-633, "Work Flow"](#) .

NG >> Replace ECM and/or IPDM E/R.

### IPDM E/R Ignition Relay Circuit Check

AKS0071C

Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-45, "IPDM E/R Power/Ground Circuit Inspection"](#) .
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START""](#) .

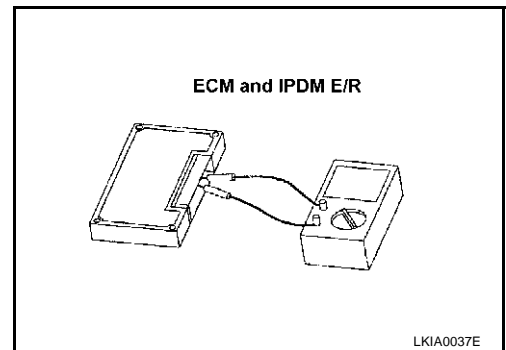
### Component Inspection

#### ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

AKS0071D

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



## CAN SYSTEM (TYPE 20)

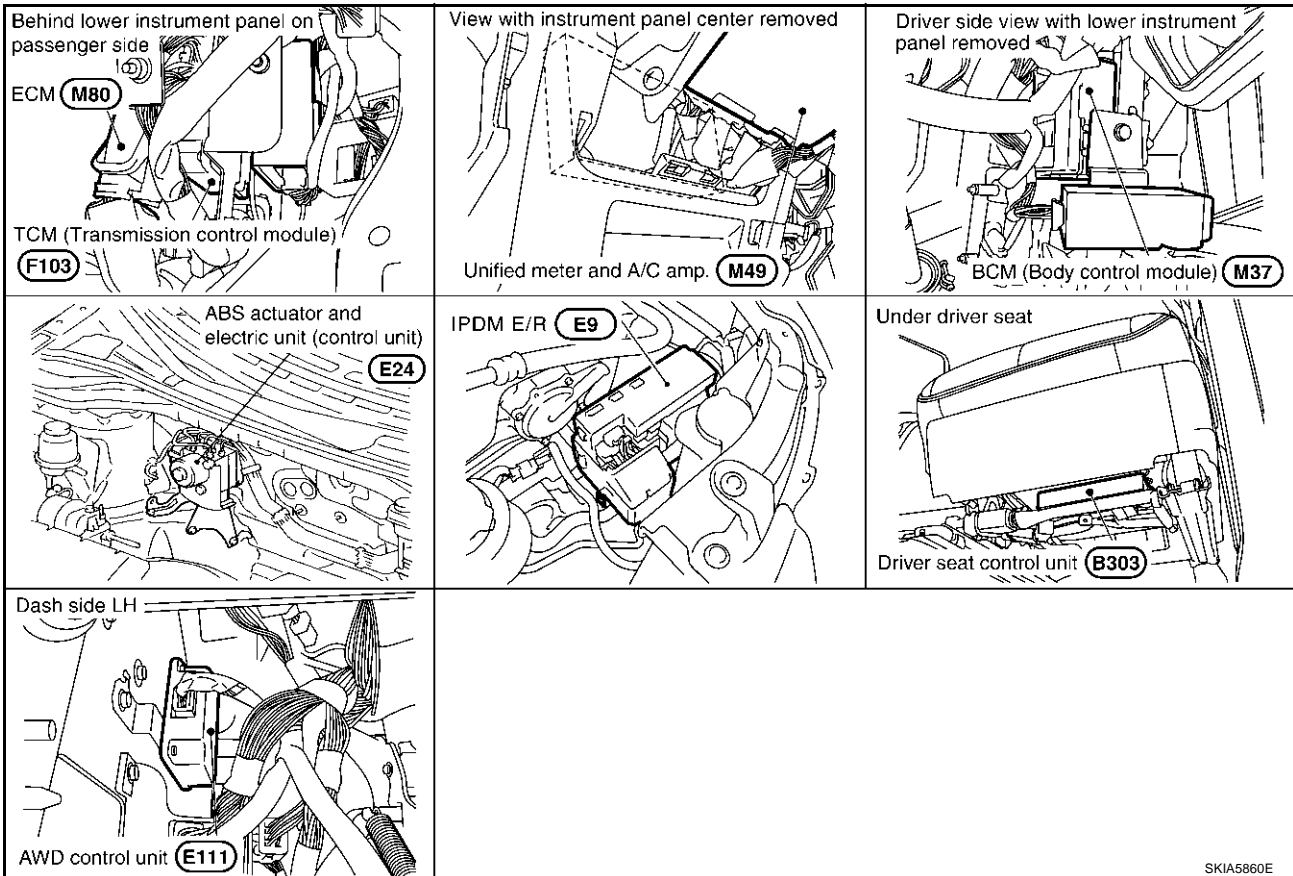
### System Description

AKS0071E

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

### Component Parts and Harness Connector Location

AKS0071F



SKIA5860E

A  
B  
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H  
I  
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M

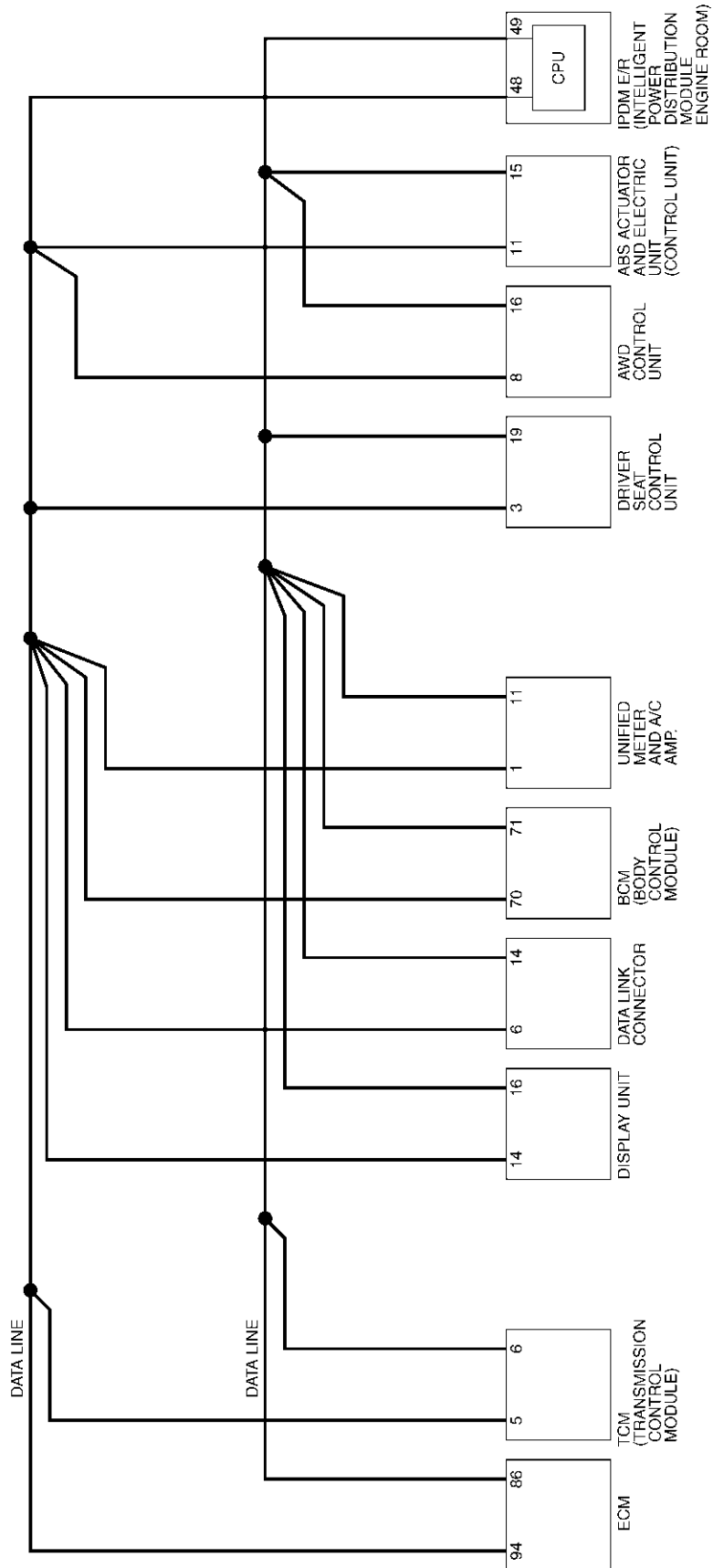
LAN

# CAN SYSTEM (TYPE 20)

[CAN]

## Schematic

AKS0071G



TKWA0999E



# CAN SYSTEM (TYPE 20)

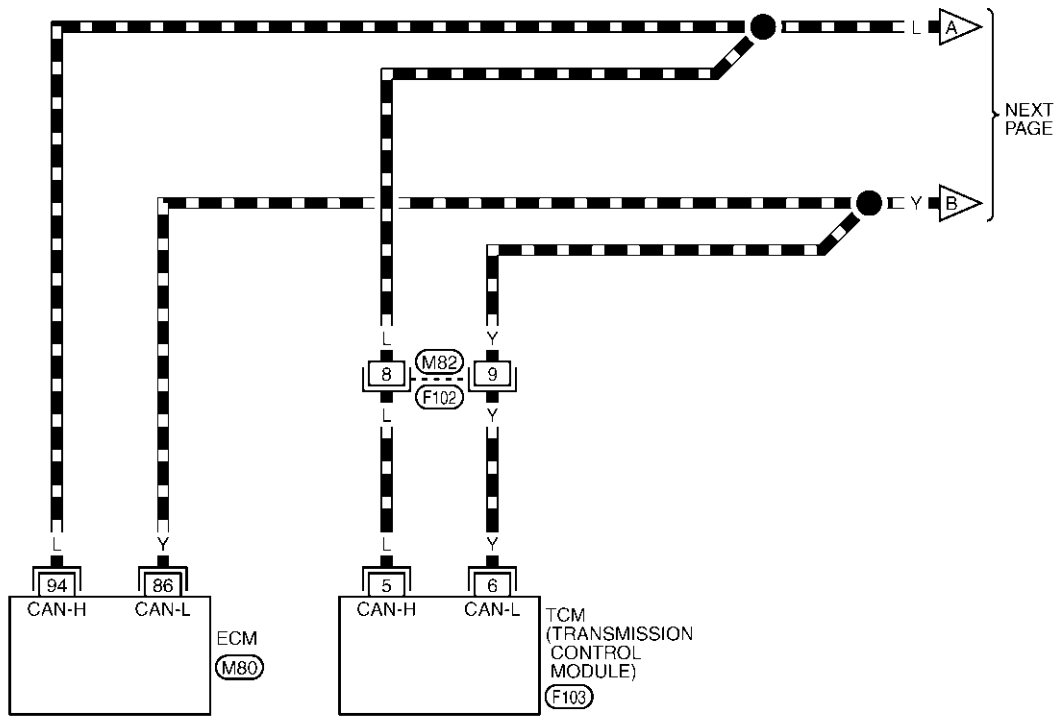
[CAN]

## Wiring Diagram - CAN -

AKS0071H

### LAN-CAN-58

▬ : DATA LINE



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18		

F102  
W

REFER TO THE FOLLOWING.  
 (M80), (F103) -ELECTRICAL  
 UNITS

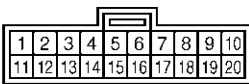
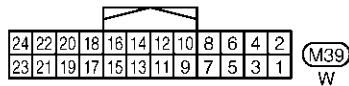
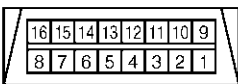
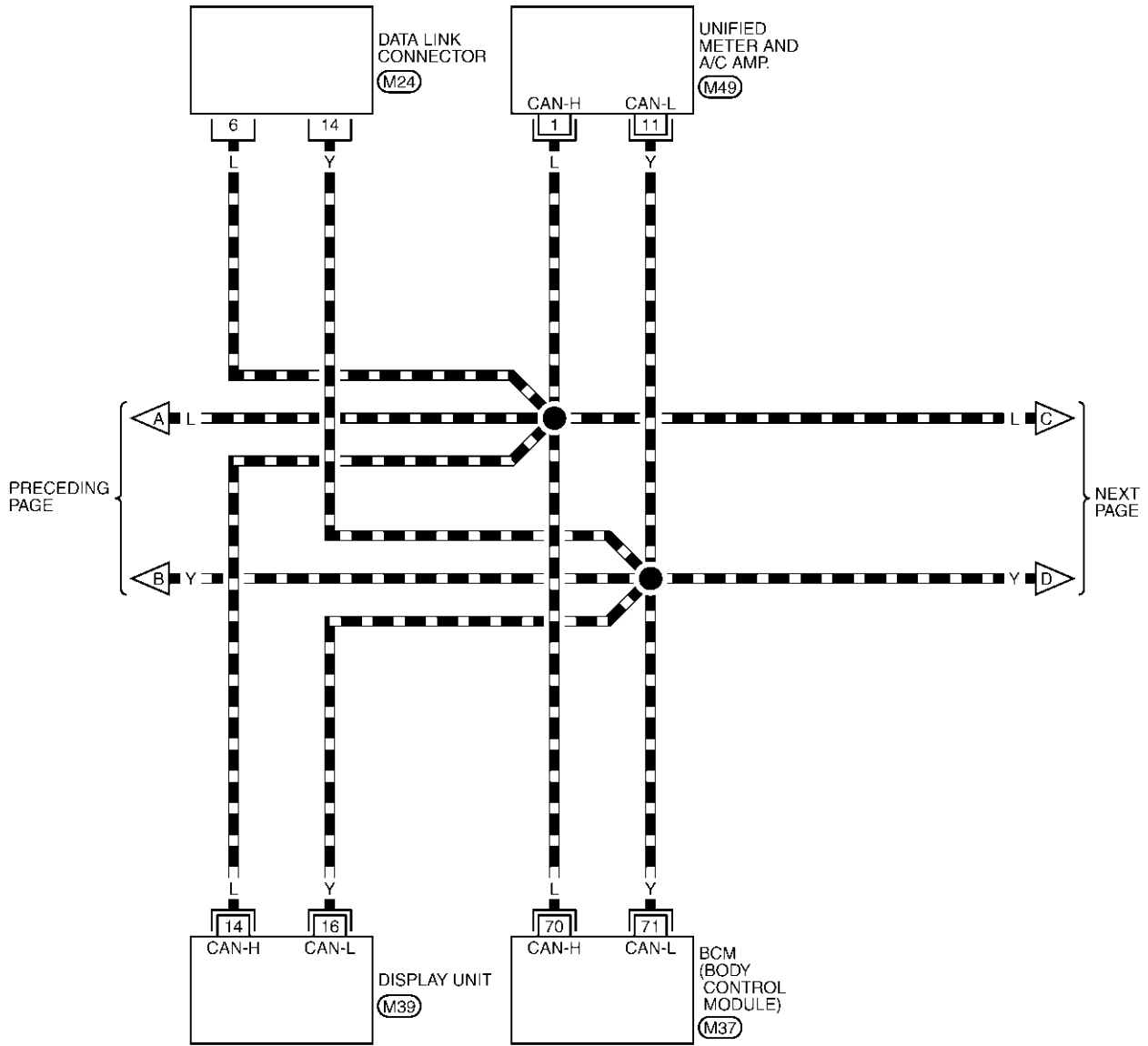
TKWA1000E

# CAN SYSTEM (TYPE 20)

[CAN]

## LAN-CAN-59

▬ : DATA LINE



REFER TO THE FOLLOWING.  
(M37) -ELECTRICAL UNITS

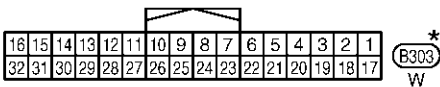
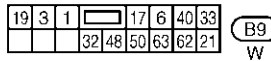
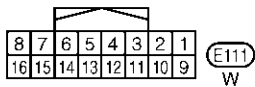
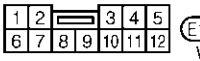
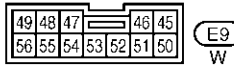
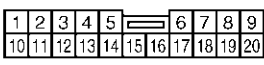
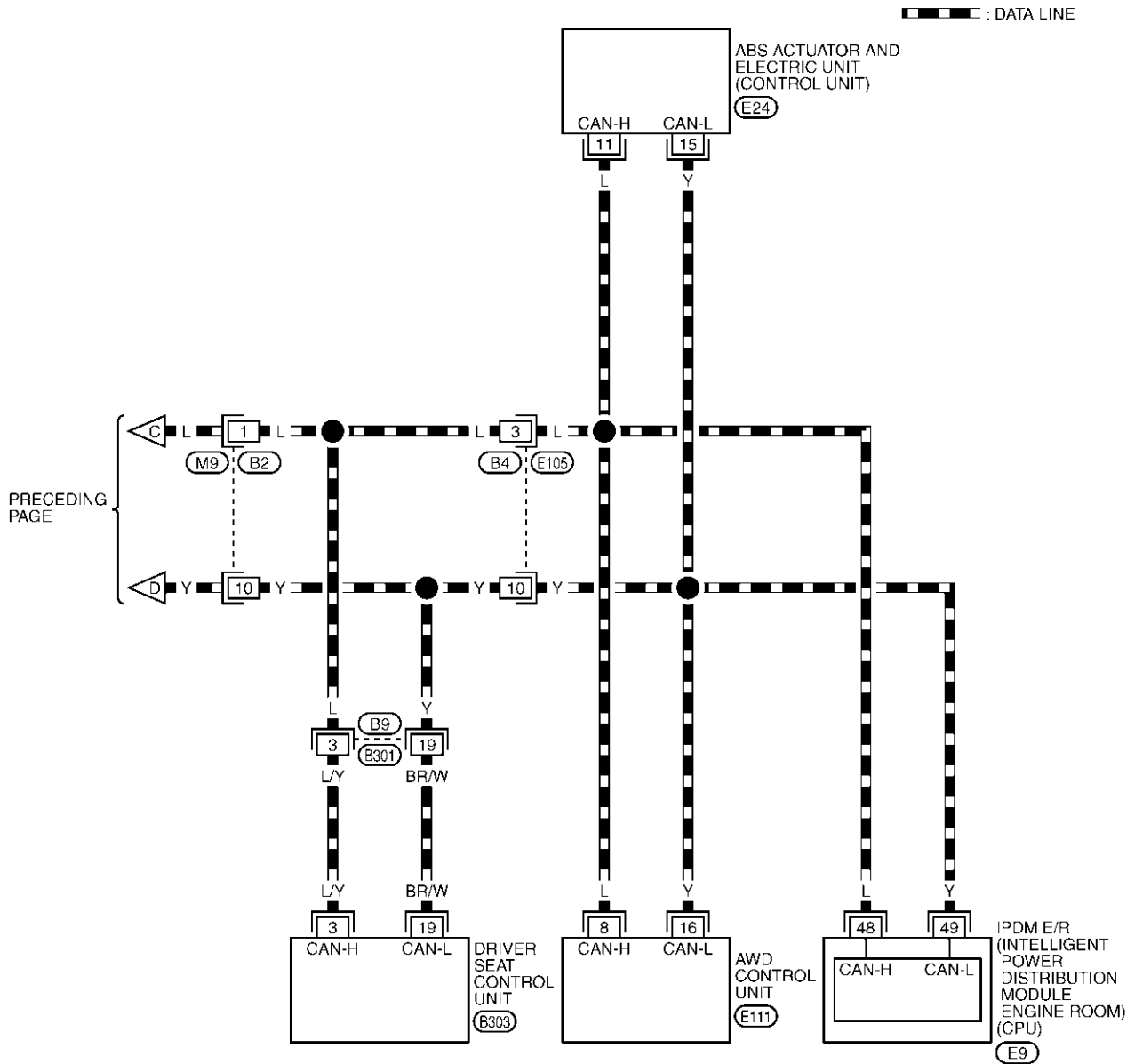
TKWA1001E

# CAN SYSTEM (TYPE 20)

[CAN]

## LAN-CAN-60

A  
B  
C  
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G  
H  
I  
J  
LAN  
L  
M



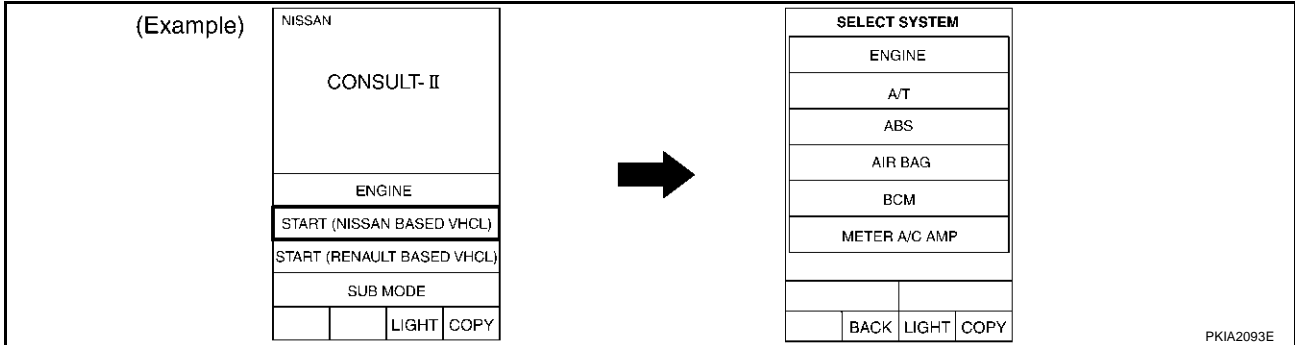
\*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

REFER TO THE FOLLOWING.  
(E24) -ELECTRICAL UNITS

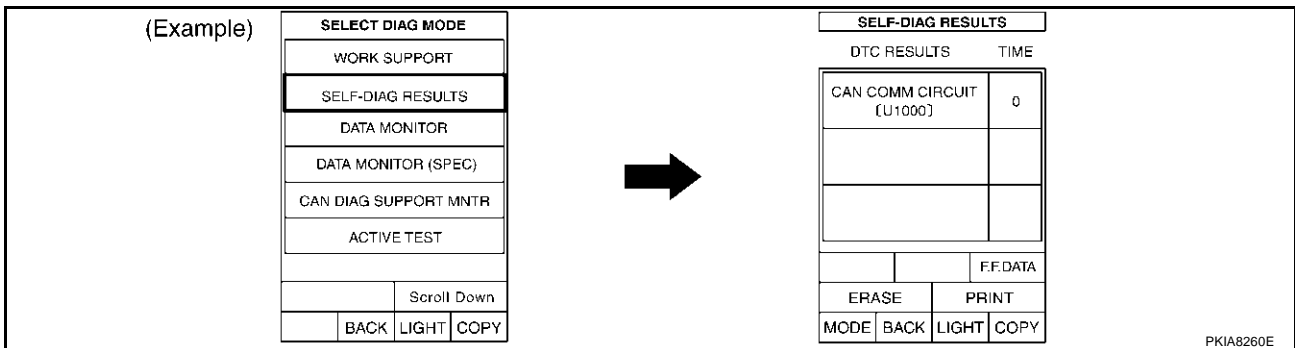
TKWA1002E

## Work Flow

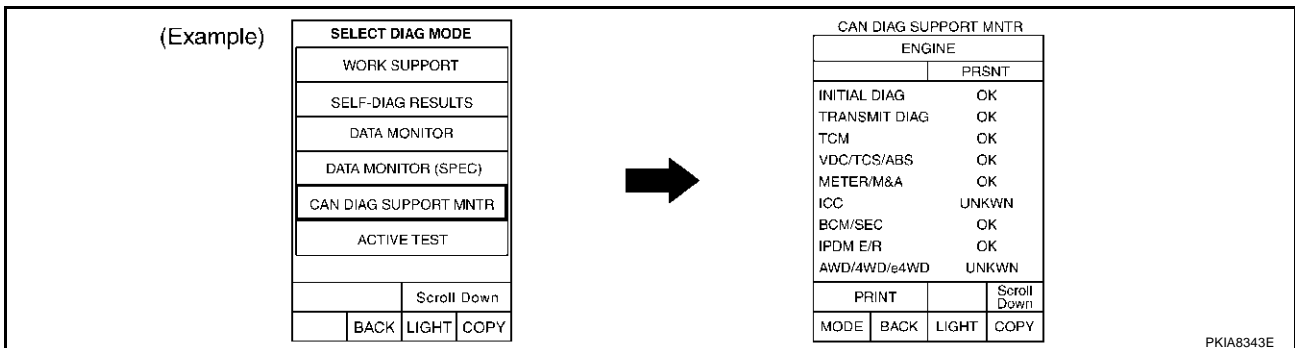
- When there are no indications of "TRANSMISSION", "METER A/C AMP" or "AUTO DRIVE POS." on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP", "AUTO DRIVE POS.", "ALL MODE AWD/4WD" and "ABS" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP", "AUTO DRIVE POS.", "ALL MODE AWD/4WD" and "ABS" displayed on CONSULT-II.



- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-666, "CHECK SHEET"](#) .
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "v" onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-666, "CHECK SHEET"](#) .

**NOTE:**

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual.  
So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the integrated display system. Refer to [AV-110, "CAN Communication Line Check"](#) .
- Attach the CAN DIAG MONITOR check sheet onto the check sheet. Refer to [LAN-666, "CHECK SHEET"](#) .

## CAN SYSTEM (TYPE 20)

[CAN]

8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG MONITOR check sheet. Refer to [LAN-666, "CHECK SHEET"](#) .

**NOTE:**

If "NG" is displayed on "CAN COMM" as "CAN DIAG MNTR" for the diagnosed control unit, replace the control unit. Refer to [AV-110, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-668, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

A

B

C

D

E

F

G

H

I

J

LAN

L

M

# CAN SYSTEM (TYPE 20)

[CAN]

## CHECK SHEET

**NOTE:**

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

Attach copy of  
display unit  
CAN DIAG MONITOR check sheet

PKIB0864E

# CAN SYSTEM (TYPE 20)

[CAN]

A

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Attach copy of  
ENGINE  
SELF-DIAG RESULTS

Attach copy of  
TRANSMISSION  
SELF-DIAG RESULTS

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
METER A/C AMP  
SELF-DIAG RESULTS

Attach copy of  
AUTO DRIVE POS.  
SELF-DIAG RESULTS

Attach copy of  
ALL MODE AWD/4WD  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

Attach copy of  
ENGINE  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
TRANSMISSION  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
BCM  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
METER A/C AMP  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
AUTO DRIVE POS.  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ALL MODE AWD/4WD  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ABS  
CAN DIAG SUPPORT  
MNTR

PKIB0865E

## CHECK SHEET RESULTS (EXAMPLE)

### NOTE:

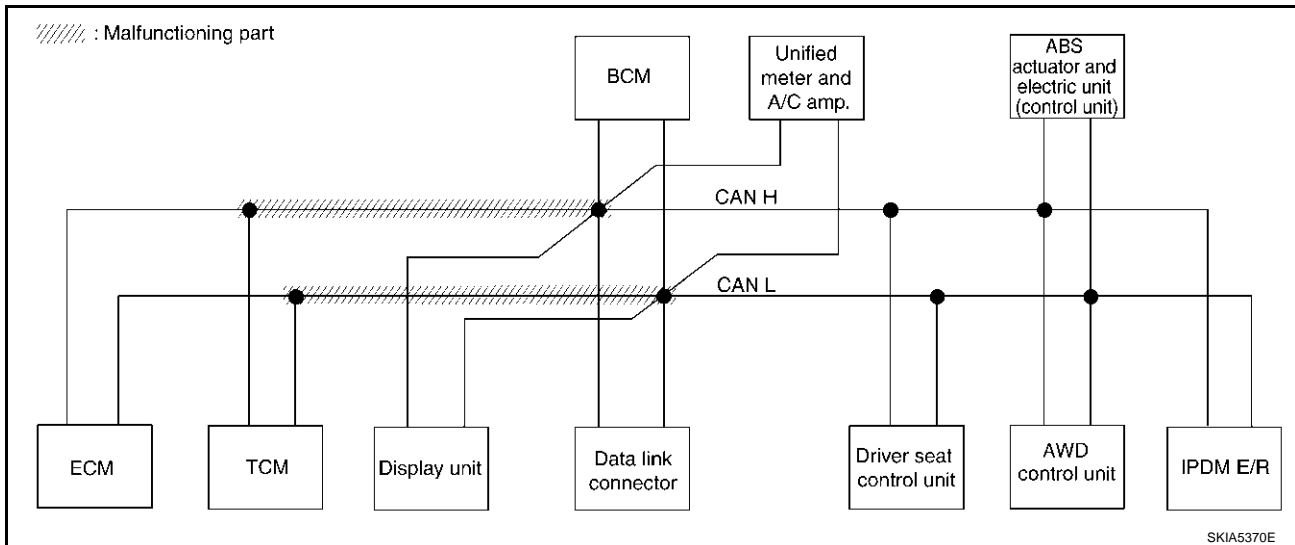
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

### Case 1

Check harness between TCM and data link connector. Refer to [LAN-682, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 20)

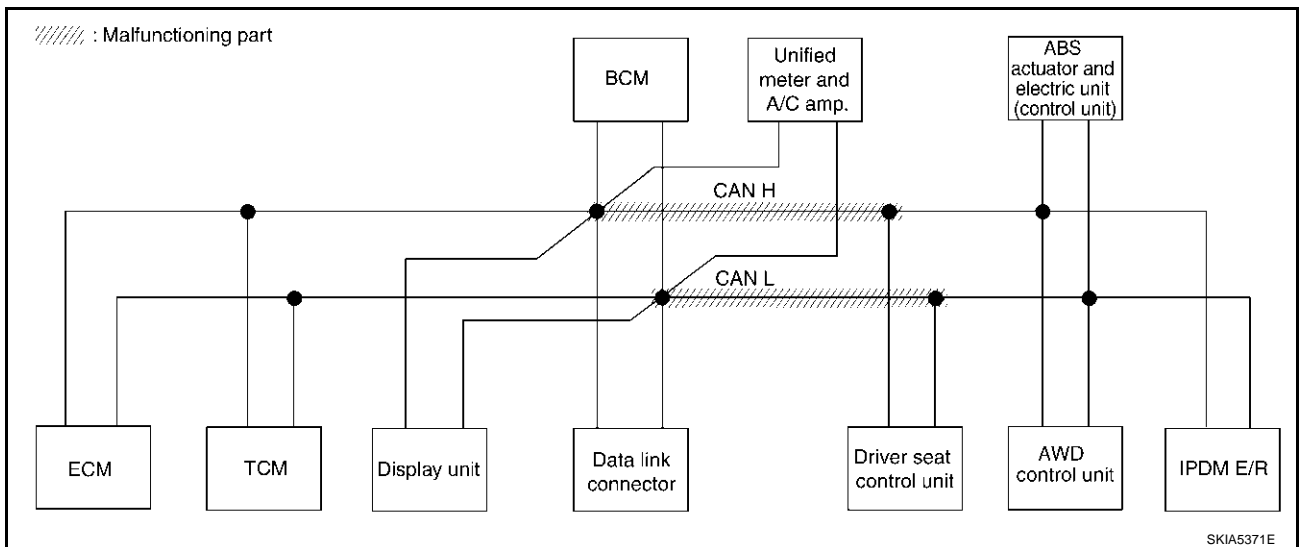
[CAN]

## Case 2

Check harness between data link connector and driver seat control unit. Refer to [LAN-682, "Circuit Check Between Data Link Connector and Driver Seat Control Unit"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	✓	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 20)

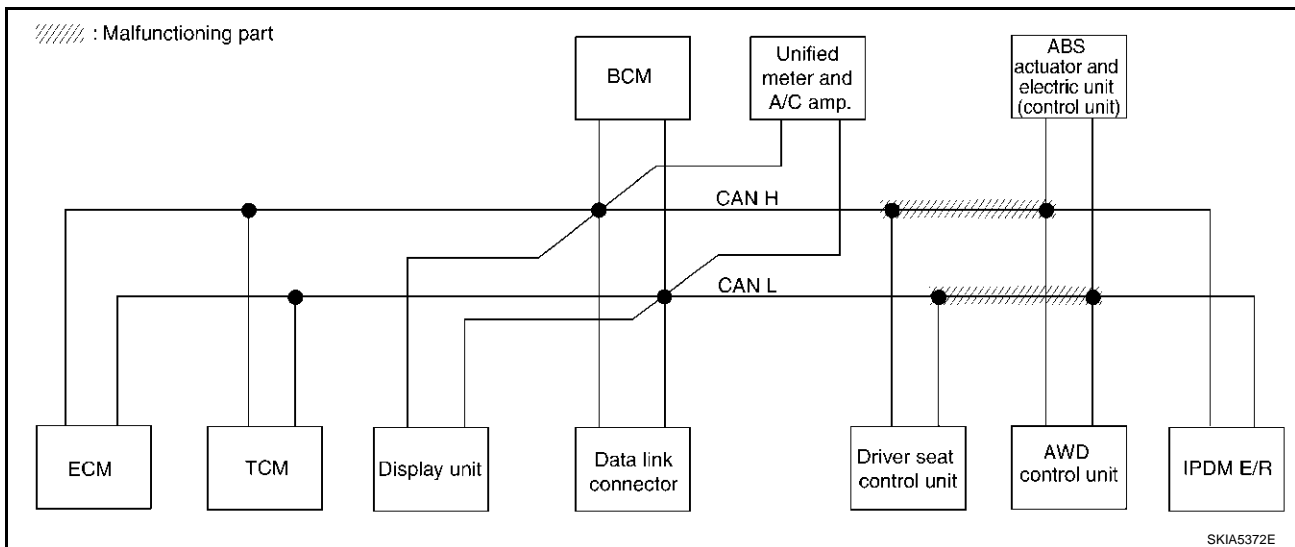
[CAN]

## Case 3

Check harness between driver seat control unit and ABS actuator and electric unit (control unit). Refer to [LAN-683, "Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit \(Control Unit\)"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

PKIB0868E



# CAN SYSTEM (TYPE 20)

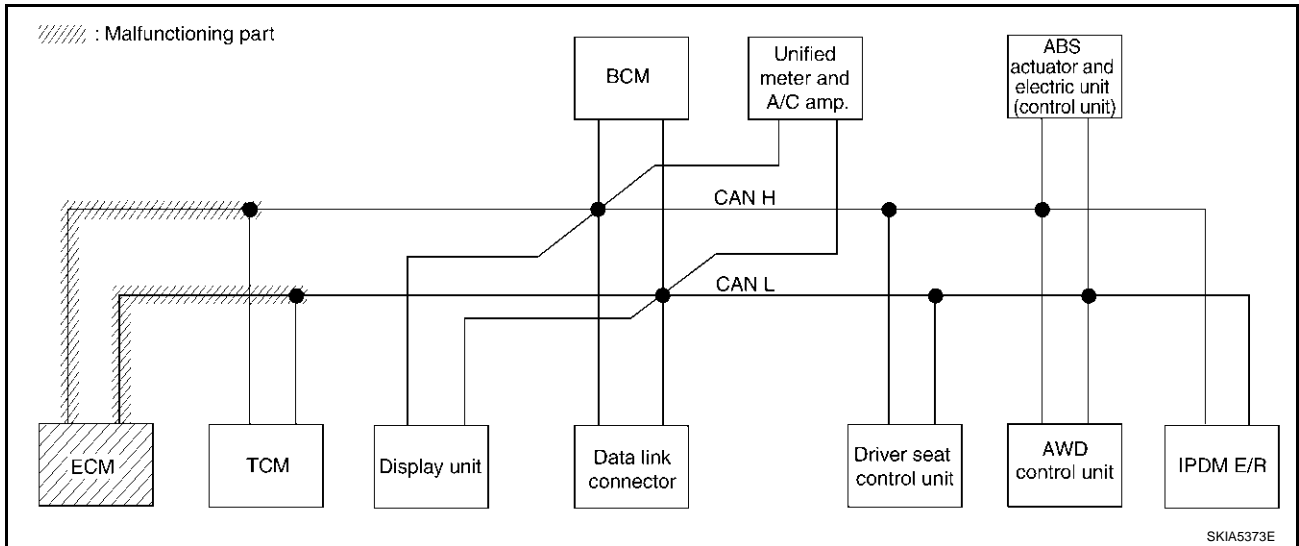
[CAN]

## Case 4

Check ECM circuit. Refer to [LAN-684, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	
TRANSMISSION	No indication	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	UNKW <sup>✓</sup> N	—	—	UNKW <sup>✓</sup> N	
METER A/C AMP	No indication	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	
AUTO DRIVE POS.	No indication	NG	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	
ALL MODE AWD/4WD	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	UNKW <sup>✓</sup> N	—	—	—	
ABS	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	—	—	—	—	

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# CAN SYSTEM (TYPE 20)

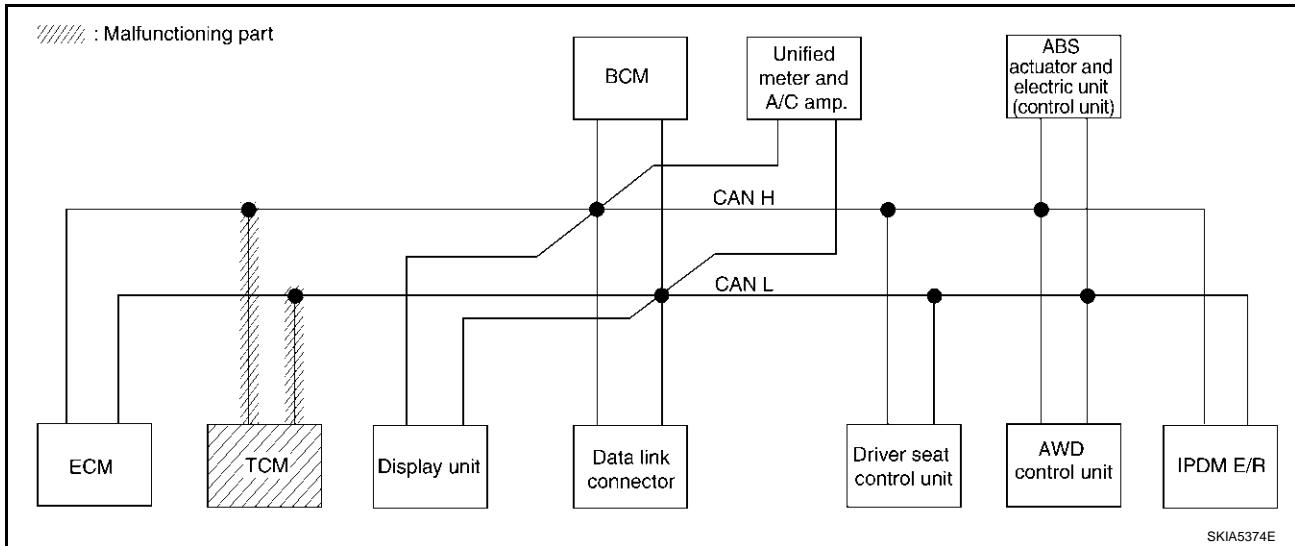
[CAN]

## Case 5

Check TCM circuit. Refer to [LAN-684, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN ✓	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN ✓	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN ✓	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

PKIB0870E



# CAN SYSTEM (TYPE 20)

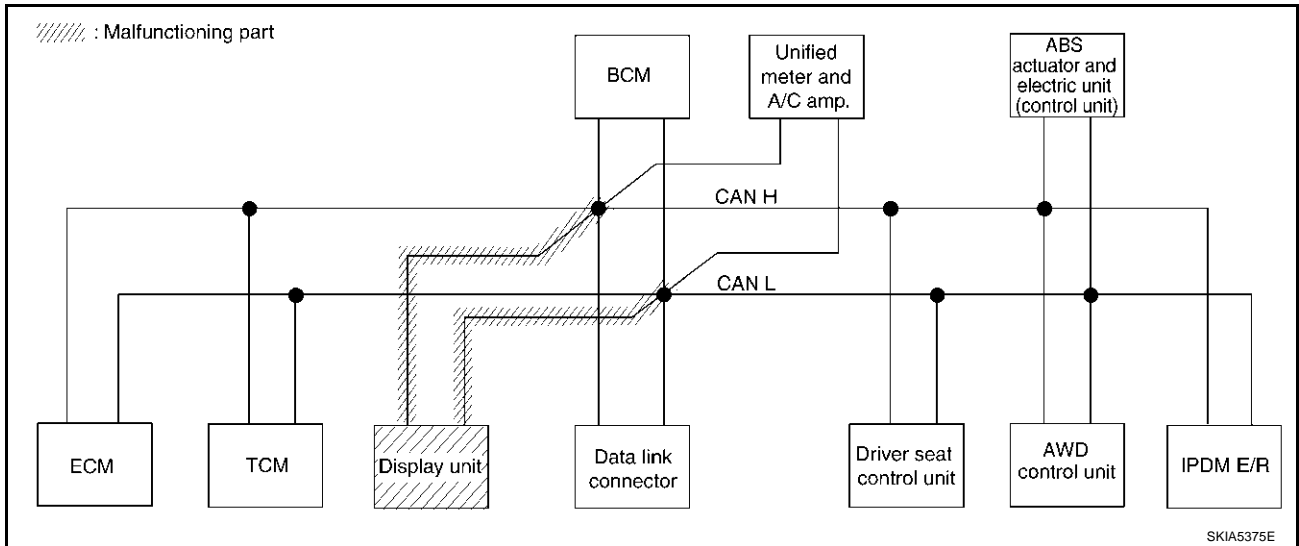
[CAN]

## Case 6

Check display unit circuit. Refer to [LAN-685, "Display Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CA <sup>✓</sup> 1	CA <sup>✓</sup> 3	—	—	CA <sup>✓</sup> 2	CA <sup>✓</sup> 5	—	—	CA <sup>✓</sup> 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

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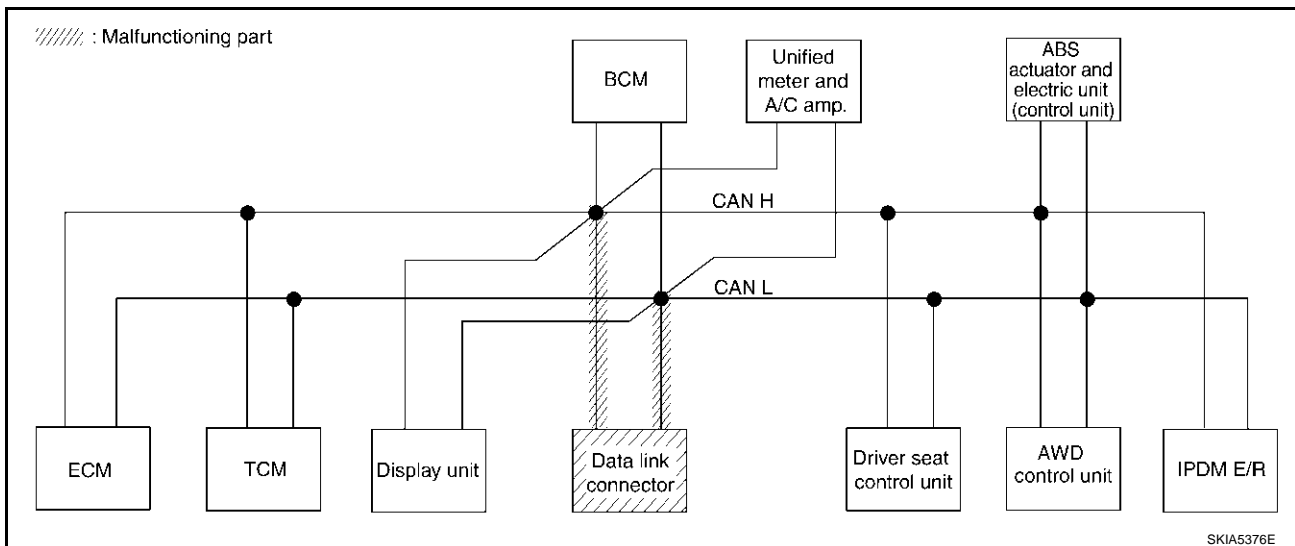
[CAN]

## Case 7

Check data link connector circuit. Refer to [LAN-685, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 20)

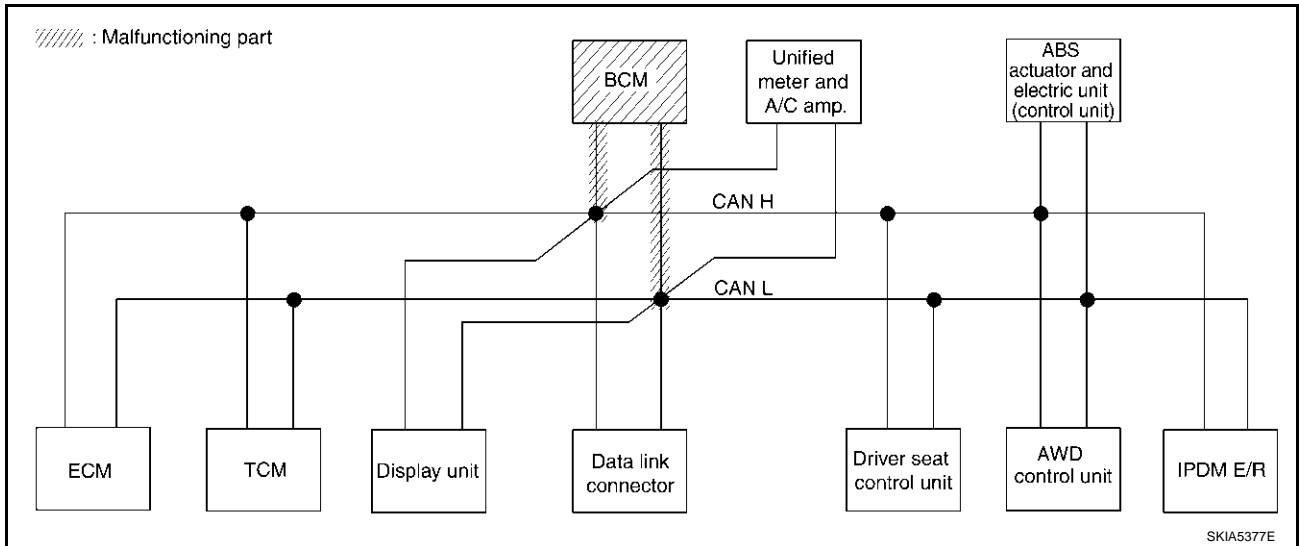
[CAN]

## Case 8

Check BCM circuit. Refer to [LAN-686, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	

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# CAN SYSTEM (TYPE 20)

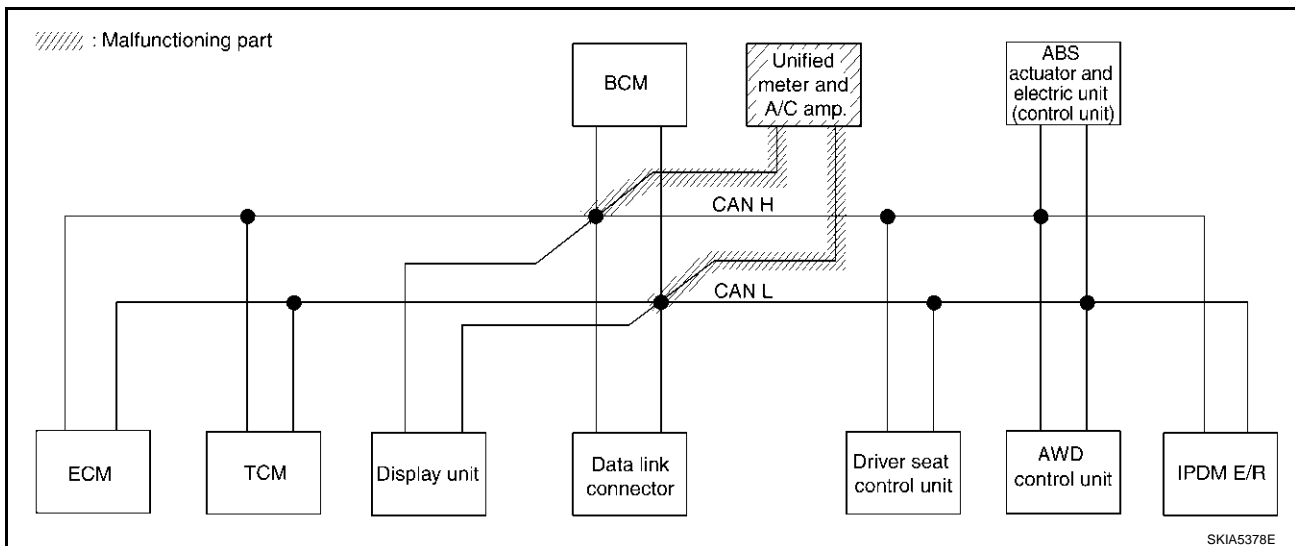
[CAN]

## Case 9

Check unified meter and A/C amp. circuit. Refer to [LAN-686, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

PKIB0874E





# CAN SYSTEM (TYPE 20)

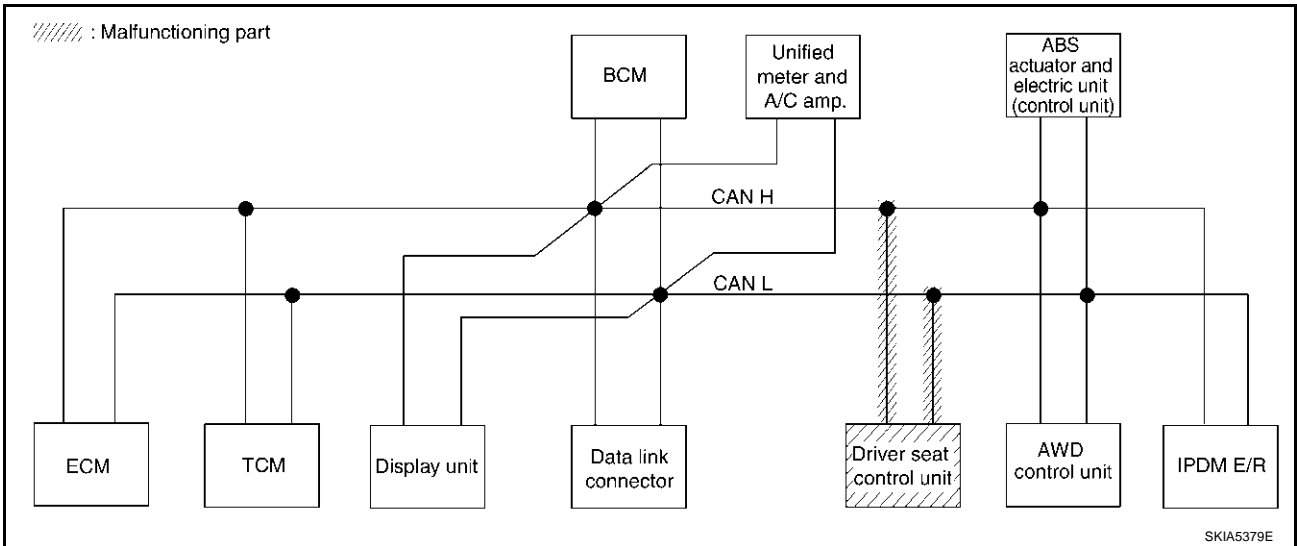
[CAN]

## Case 10

Check driver seat control unit circuit. Refer to [LAN-687, "Driver Seat Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	

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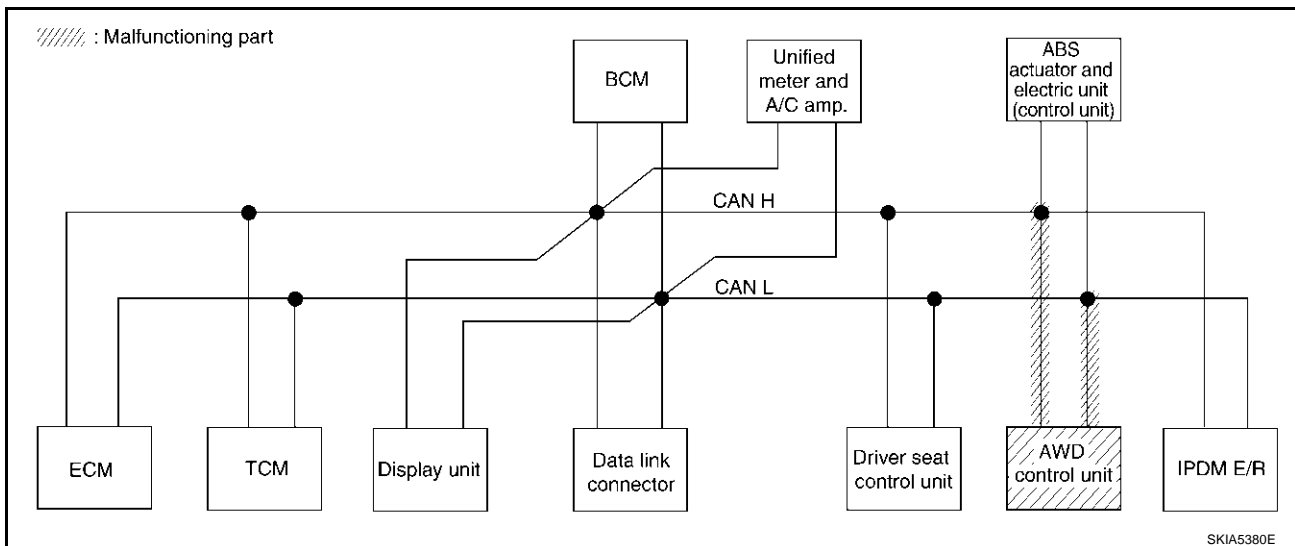
[CAN]

## Case 11

Check AWD control unit circuit. Refer to [LAN-687, "AWD Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 20)

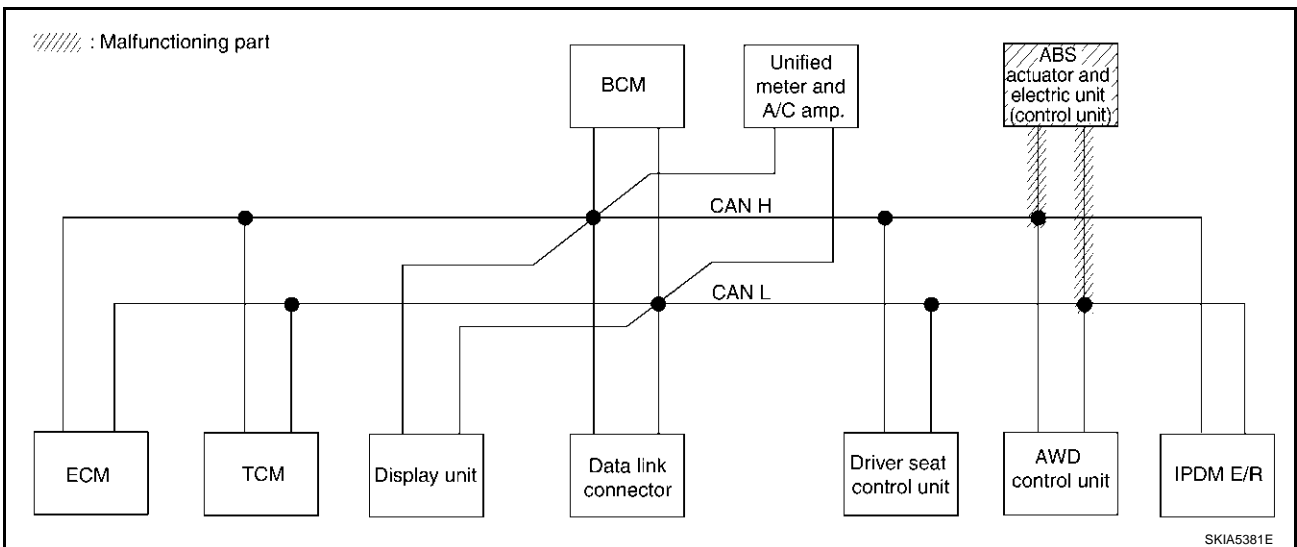
[CAN]

## Case 12

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-688, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	

PKIB0877E



# CAN SYSTEM (TYPE 20)

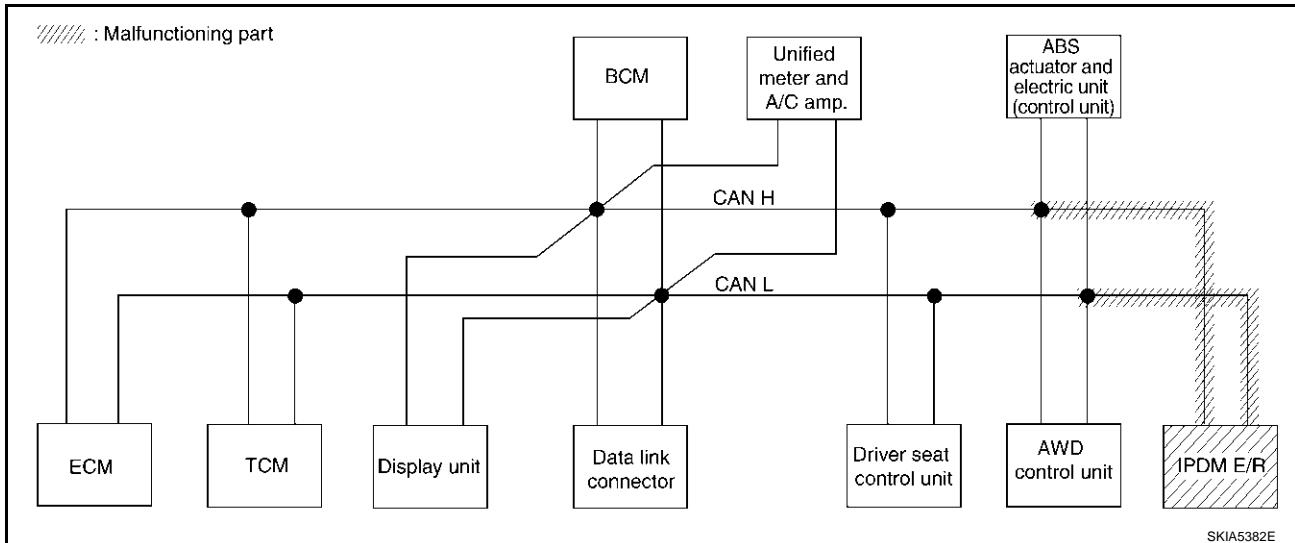
[CAN]

## Case 13

Check IPDM E/R circuit. Refer to [LAN-688, "IPDM E/R Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

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## Case 14

Check CAN communication circuit. Refer to [LAN-689, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 20)

[CAN]

## Case 15

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-693, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UN <del>KN</del> W <del>N</del>	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UN <del>KN</del> W <del>N</del>	UNKWN	UNKWN	—	UNKWN	UN <del>KN</del> W <del>N</del>	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UN <del>KN</del> W <del>N</del>	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

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## Case 16

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-693, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UN <del>KN</del> W <del>N</del>	—	—	—	UN <del>KN</del> W <del>N</del>	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UN <del>KN</del> W <del>N</del>	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

PKIB0881E

## Circuit Check Between TCM and Data Link Connector

AKS0071J

### 1. CHECK HARNESS FOR OPEN CIRCUIT

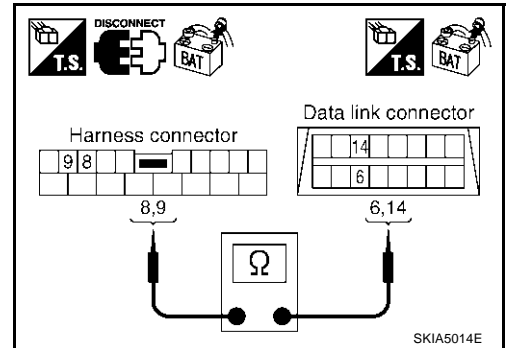
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

**8 (L) - 6 (L) : Continuity should exist.**

**9 (Y) - 14 (Y) : Continuity should exist.**

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-664, "Work Flow"](#).
- NG >> Repair harness.



## Circuit Check Between Data Link Connector and Driver Seat Control Unit

AKS0071K

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).

- Harness connector M9
- Harness connector B2

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

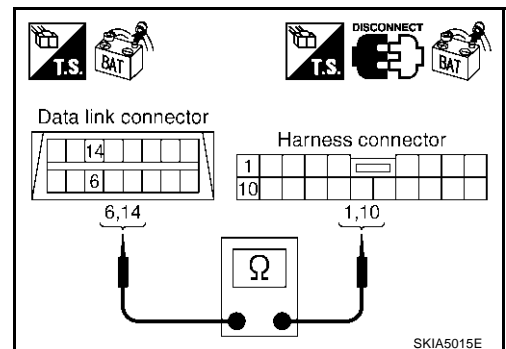
1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

**6 (L) - 1 (L) : Continuity should exist.**

**14 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



### 3. CHECK HARNESS FOR OPEN CIRCUIT

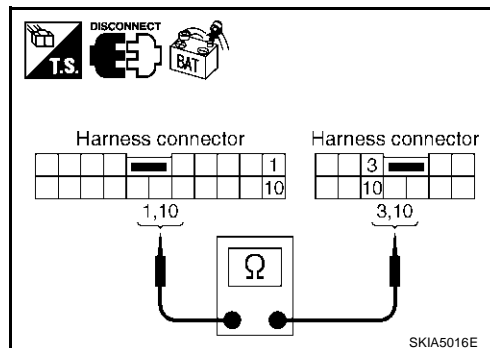
1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-664, "Work Flow"](#).
- NG >> Repair harness.



## Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit)

AKS0071L

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector B4
  - Harness connector E105

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

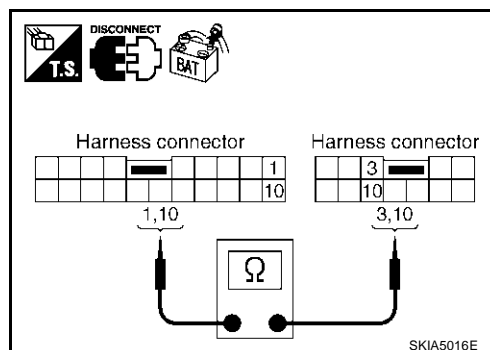
1. Disconnect harness connector B2 and harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



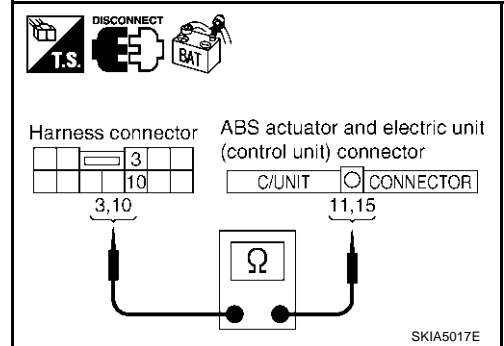
LAN

## 3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

**3 (L) - 11 (L) : Continuity should exist.**

**10 (Y) - 15 (Y) : Continuity should exist.**



**OK or NG**

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-664, "Work Flow"](#) .
- NG >> Repair harness.

## ECM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

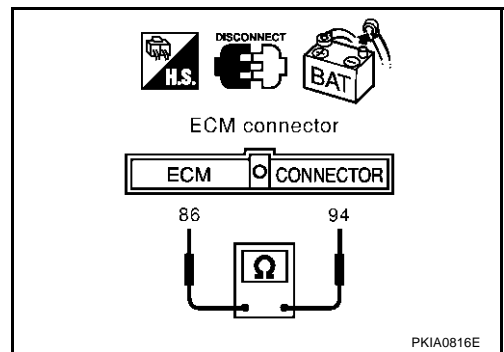
**OK or NG**

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

**94 (L) - 86 (Y) : Approx. 108 - 132Ω**



**OK or NG**

- OK >> Replace ECM.
- NG >> Repair harness between ECM and TCM.

## TCM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
  - TCM connector
  - Harness connector F102
  - Harness connector M82

**OK or NG**

- OK >> GO TO 2.
- NG >> Repair terminal or connector.



## 2. CHECK HARNESS FOR OPEN CIRCUIT

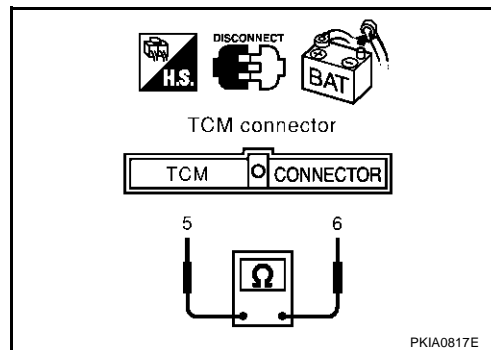
1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace TCM.  
 NG >> Repair harness between TCM and ECM.



## Display Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display unit for damage, bend and loose connection (unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

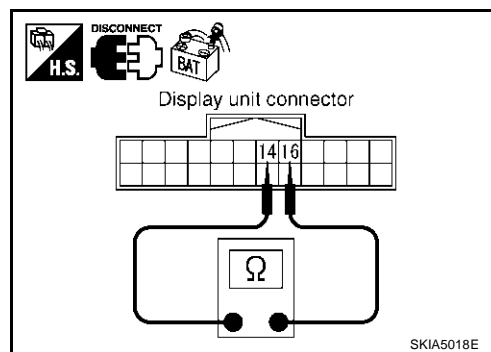
1. Disconnect display unit connector.
2. Check resistance between display unit harness connector M39 terminals 14 (L) and 16 (Y).

**14 (L) - 16 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace display unit.  
 NG >> Repair harness between display unit and data link connector.



## Data Link Connector Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

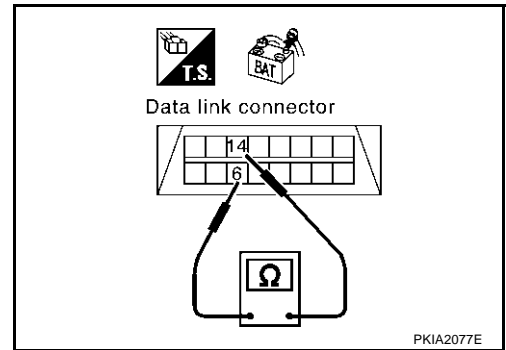
## 2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Diagnose again. Refer to [LAN-664, "Work Flow"](#) .  
 NG >> Repair harness between data link connector and BCM.



AKS0071Q

## BCM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

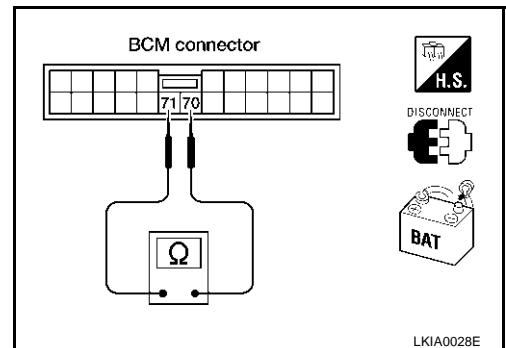
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M37 terminals 70 (L) and 71 (Y).

**70 (L) - 71 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace BCM. Refer to [BCS-36, "Removal and Installation of BCM"](#) .  
 NG >> Repair harness between BCM and data link connector.



AKS0071R

## Unified Meter and A/C Amp. Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

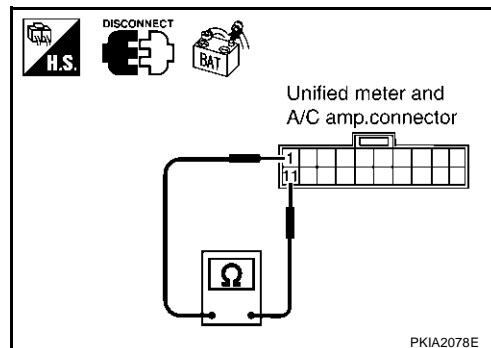
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

**1 (L) - 11 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace unified meter and A/C amp.  
 NG >> Repair harness between unified meter and A/C amp. and data link connector.



AKS0071S

## Driver Seat Control Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control unit side and harness side).
  - Driver seat control unit connector
  - Harness connector B301
  - Harness connector B9

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

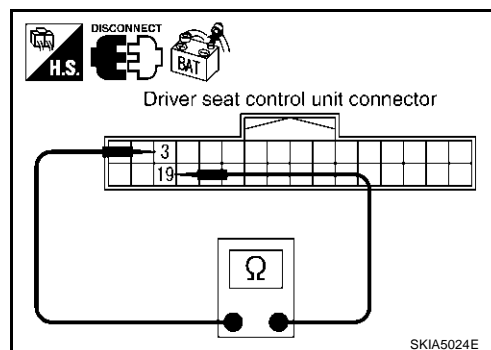
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect driver seat control unit connector.
2. Check resistance between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

**3 (L/Y) - 19 (BR/W) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace driver seat control unit.  
 NG >> Repair harness between driver seat control unit and harness connector B4.



AKS0071T

## AWD Control Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of AWD control unit for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

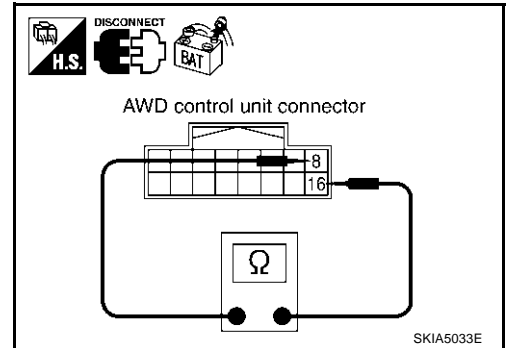
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect AWD control unit connector.
2. Check resistance between AWD control unit harness connector E111 terminals 8 (L) and 16 (Y).

**8 (L) - 16 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace AWD control unit.  
 NG >> Repair harness between AWD control unit and IPDM E/R.



## ABS Actuator and Electric Unit (Control Unit) Circuit Check

AKS0071U

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

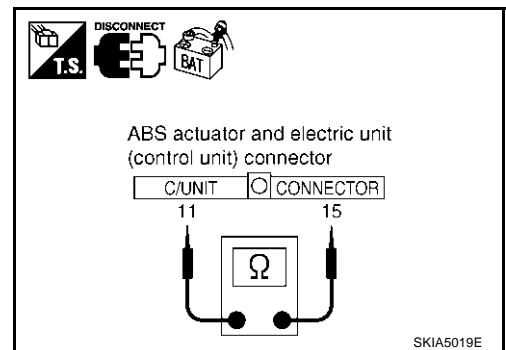
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

**11 (L) - 15 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).  
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



## IPDM E/R Circuit Check

AKS0071V

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

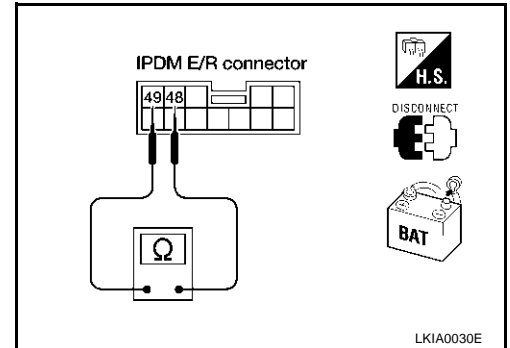
1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y)**

**: Approx. 108 - 132Ω**

### OK or NG

- OK >> Replace IPDM E/R.  
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



AKS0071W

## CAN Communication Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, unit side, meter side, control unit side and harness side).
  - ECM
  - TCM
  - Display unit
  - BCM
  - Unified meter and A/C amp.
  - Driver seat control unit
  - AWD control unit
  - ABS actuator and electric unit (control unit)
  - IPDM E/R
  - Between ECM and IPDM E/R
  - Between ECM and TCM
  - Between ECM and driver seat control unit

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
  - ECM connector
  - Harness connector M82
  - Display unit connector
  - BCM connector
  - Unified meter and A/C amp. connector
  - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

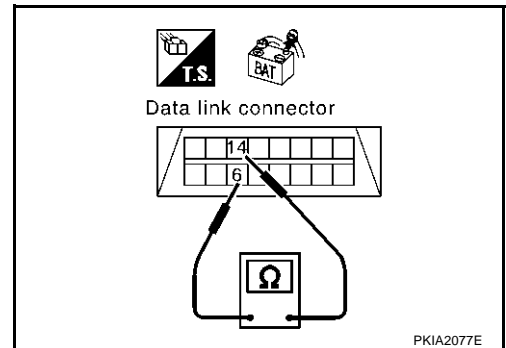
**6 (L) - 14 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 3.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9.



## 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

**6 (L) - Ground : Continuity should not exist.**

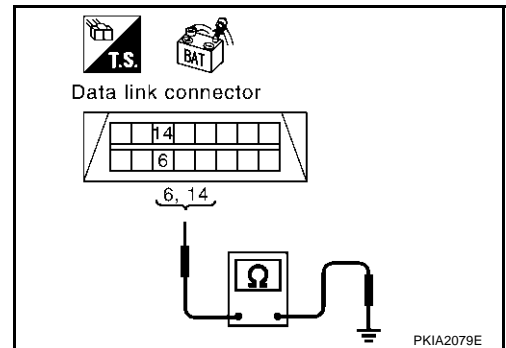
**14 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9.



#### 4. CHECK HARNESS FOR SHORT CIRCUIT

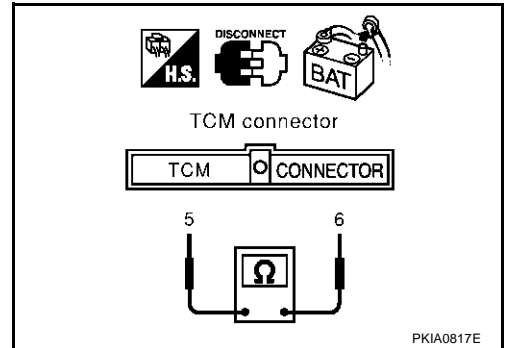
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 5.

NG >> Repair harness between TCM and harness connector F102.



#### 5. CHECK HARNESS FOR SHORT CIRCUIT

- Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

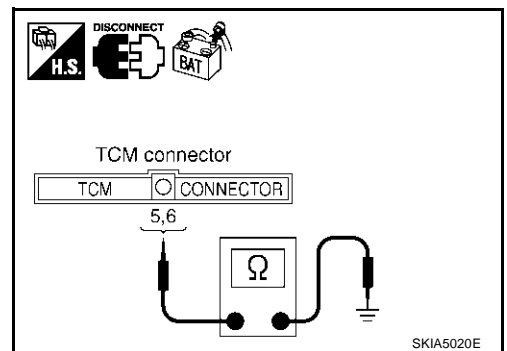
**5 (L) - Ground : Continuity should not exist.**

**6 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 6.

NG >> Repair harness between TCM and harness connector F102.



#### 6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B4 and harness connector B9.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

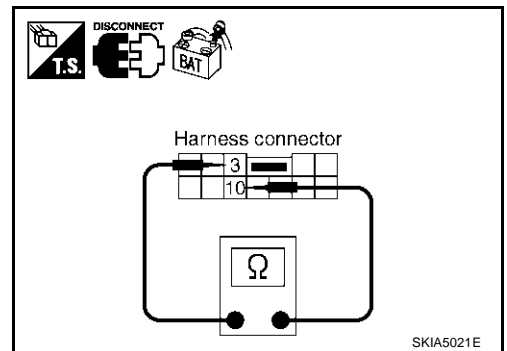
**3 (L) - 10 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 7.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Repair harness between harness connector B4 and harness connector B2.
- Repair harness between harness connector B4 and harness connector B9.



A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
LAN  
L  
M

## 7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

**3 (L) - Ground : Continuity should not exist.**

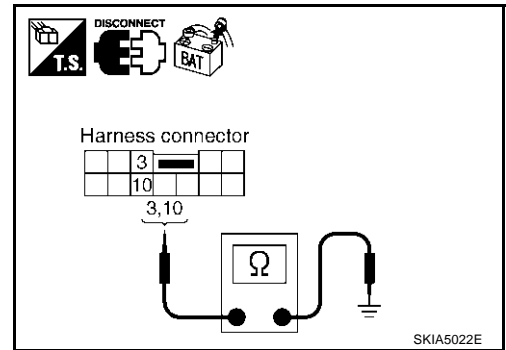
**10 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 8.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Repair harness between harness connector B4 and harness connector B2.
- Repair harness between harness connector B4 and harness connector B9.



## 8. CHECK HARNESS FOR SHORT CIRCUIT

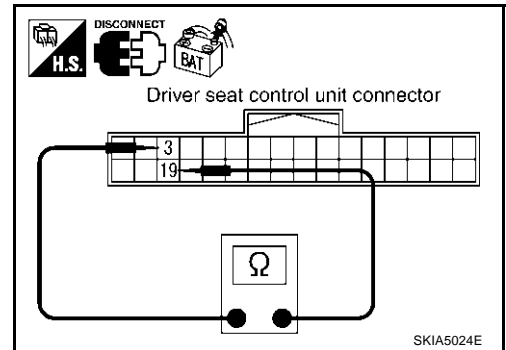
1. Disconnect driver seat control unit connector.
2. Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

**3 (L/Y) - 19 (BR/W) : Continuity should not exist.**

OK or NG

OK >> GO TO 9.

NG >> Repair harness between driver seat control unit and harness connector B301.



## 9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y), 19 (BR/W) and ground.

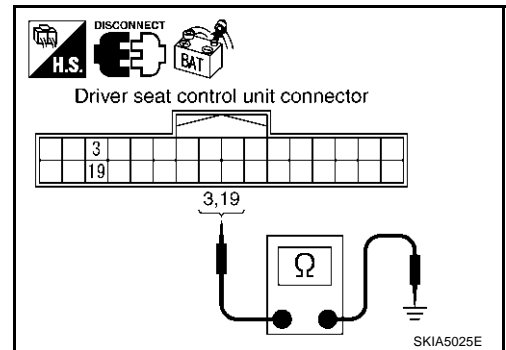
**3 (L/Y) - Ground : Continuity should not exist.**

**19 (BR/W) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 10.

NG >> Repair harness between driver seat control unit and harness connector B301.





## 10. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect AWD control unit connector, ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

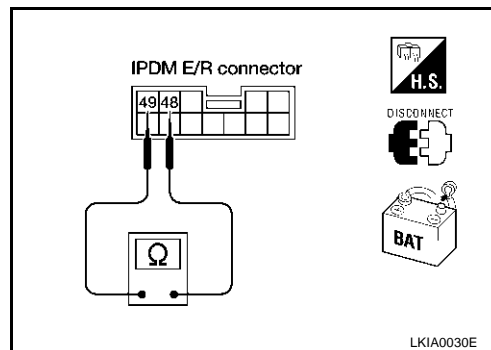
**48 (L) - 49 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 11.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 11. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

**48 (L) - Ground : Continuity should not exist.**

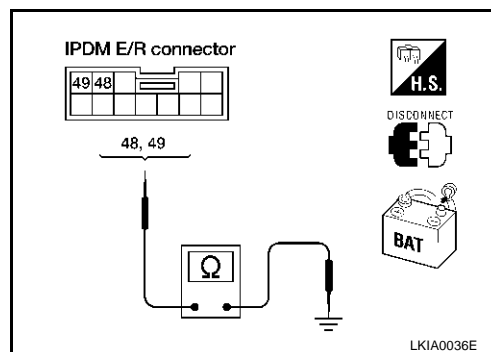
**49 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 12.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 12. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-694, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

### OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-664, "Work Flow"](#).

NG >> Replace ECM and/or IPDM E/R.

### IPDM E/R Ignition Relay Circuit Check

AKS0071X

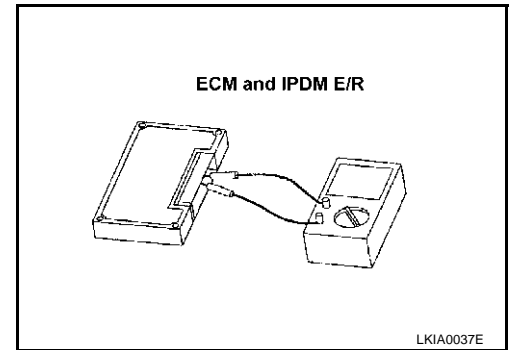
Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-45, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#).

**Component Inspection****ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION**

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value ( $\Omega$ ) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



## CAN SYSTEM (TYPE 21)

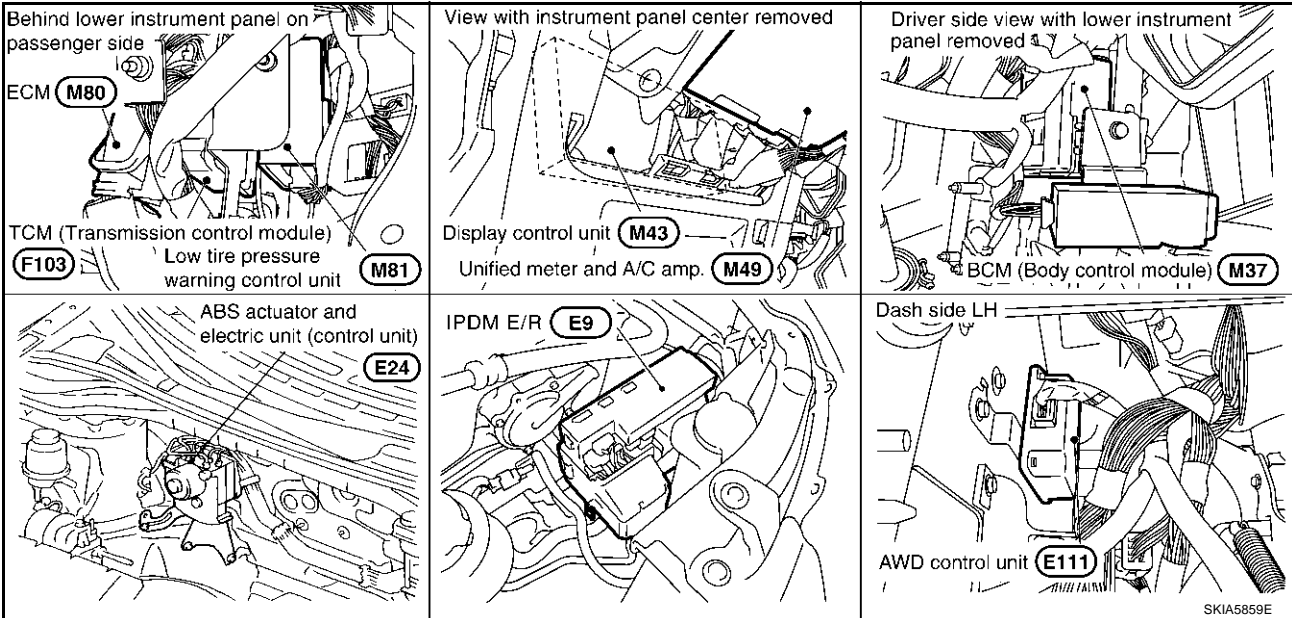
### System Description

AKS0071Z

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

### Component Parts and Harness Connector Location

AKS00720



A  
B  
C  
D  
E  
F  
G  
H  
I  
J

LAN

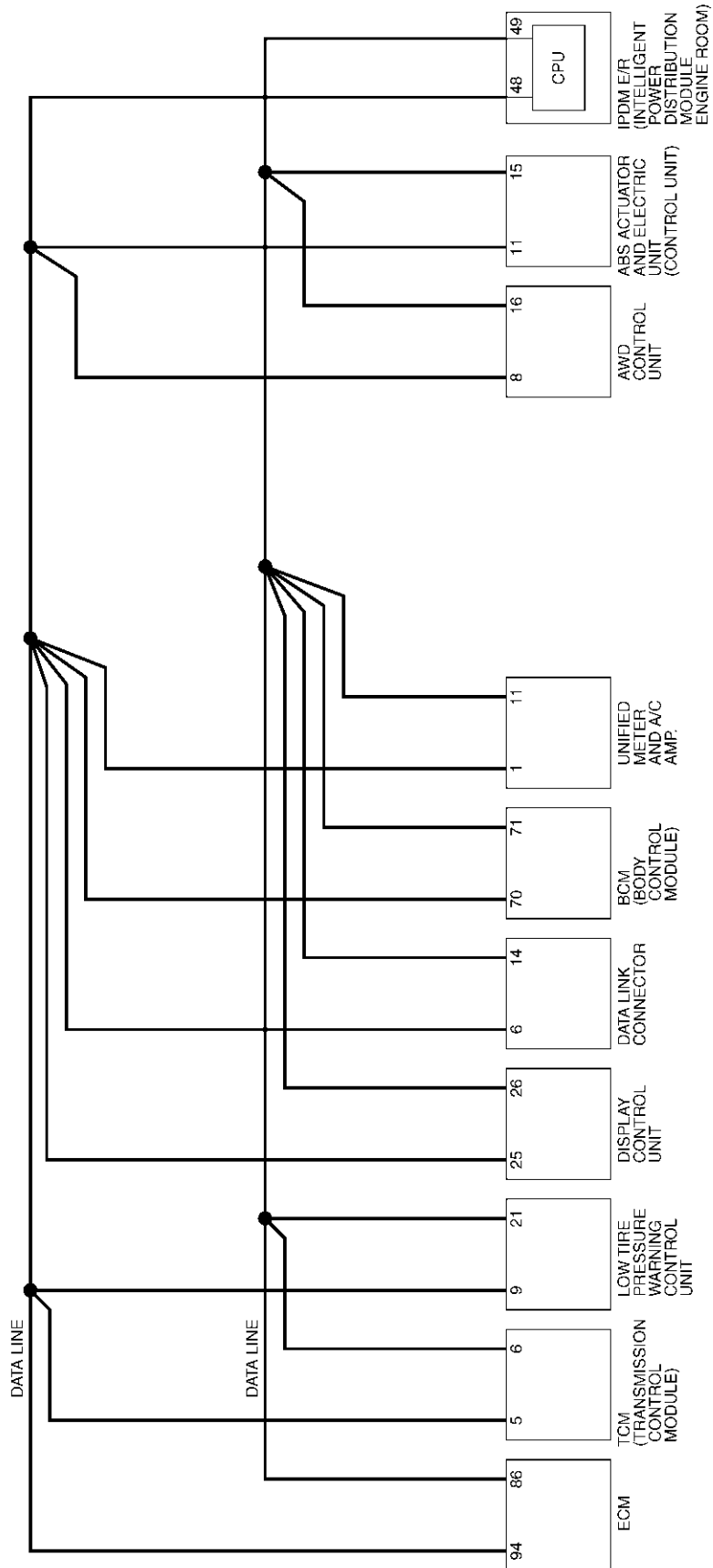
L  
M

# CAN SYSTEM (TYPE 21)

[CAN]

## Schematic

AKS00721



TKWA1003E

# CAN SYSTEM (TYPE 21)

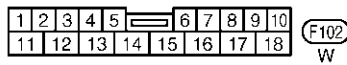
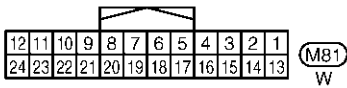
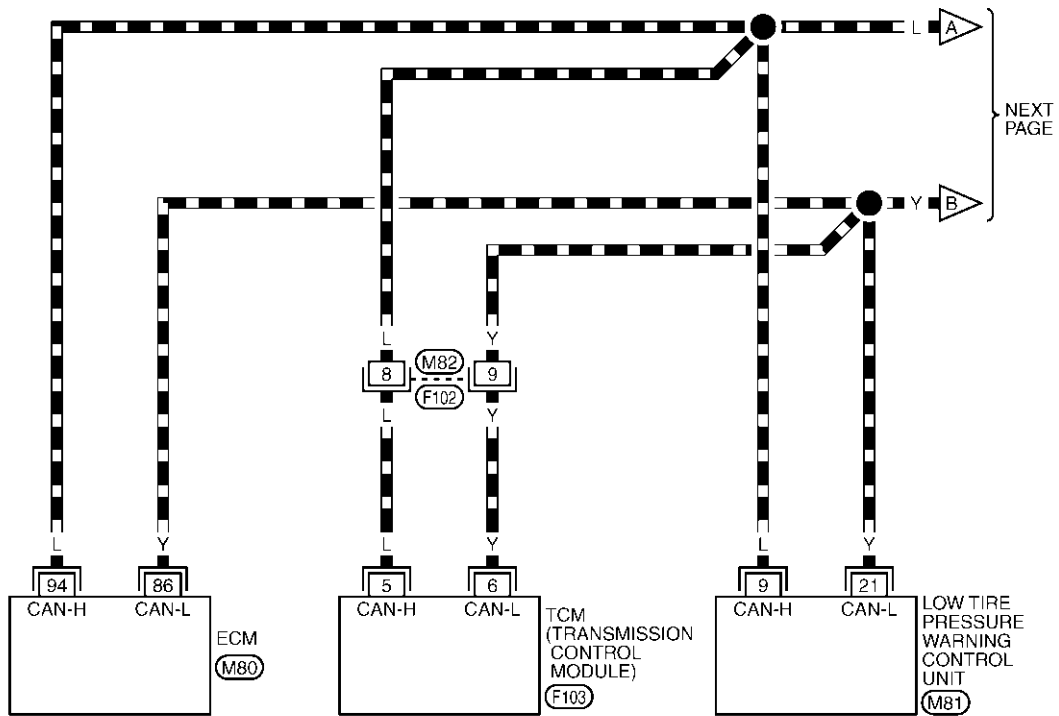
[CAN]

## Wiring Diagram - CAN -

AKS00722

### LAN-CAN-61

▬ : DATA LINE

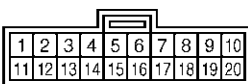
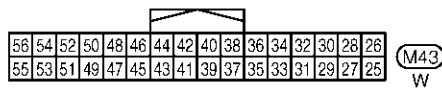
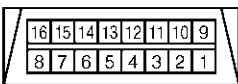
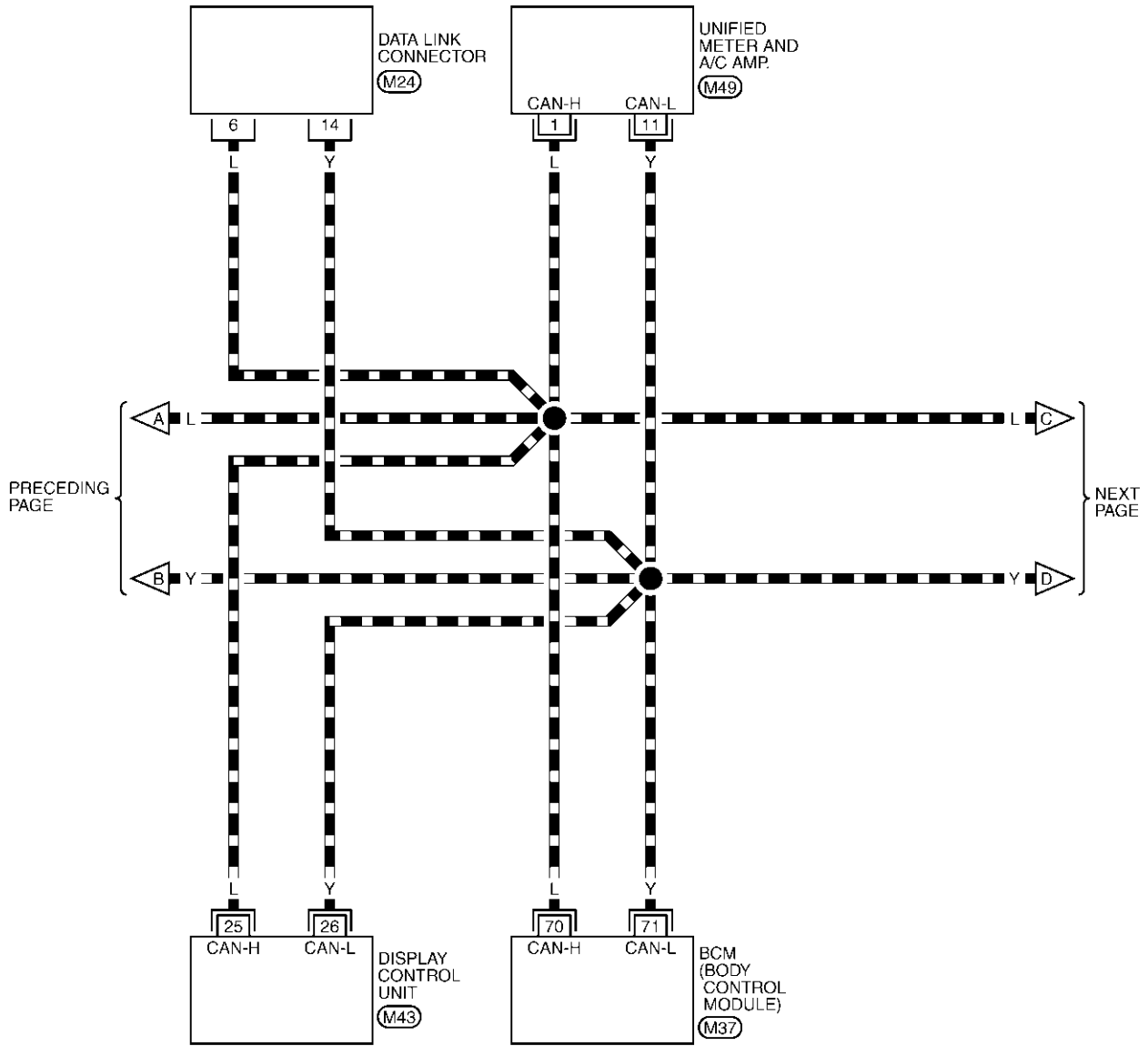


REFER TO THE FOLLOWING.  
 (M80), (F103) -ELECTRICAL  
 UNITS

TKWA1004E

## LAN-CAN-62

▬ : DATA LINE

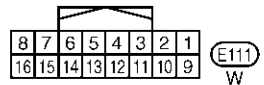
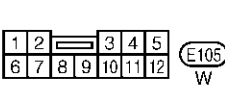
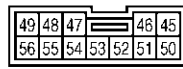
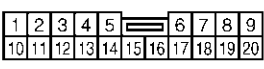
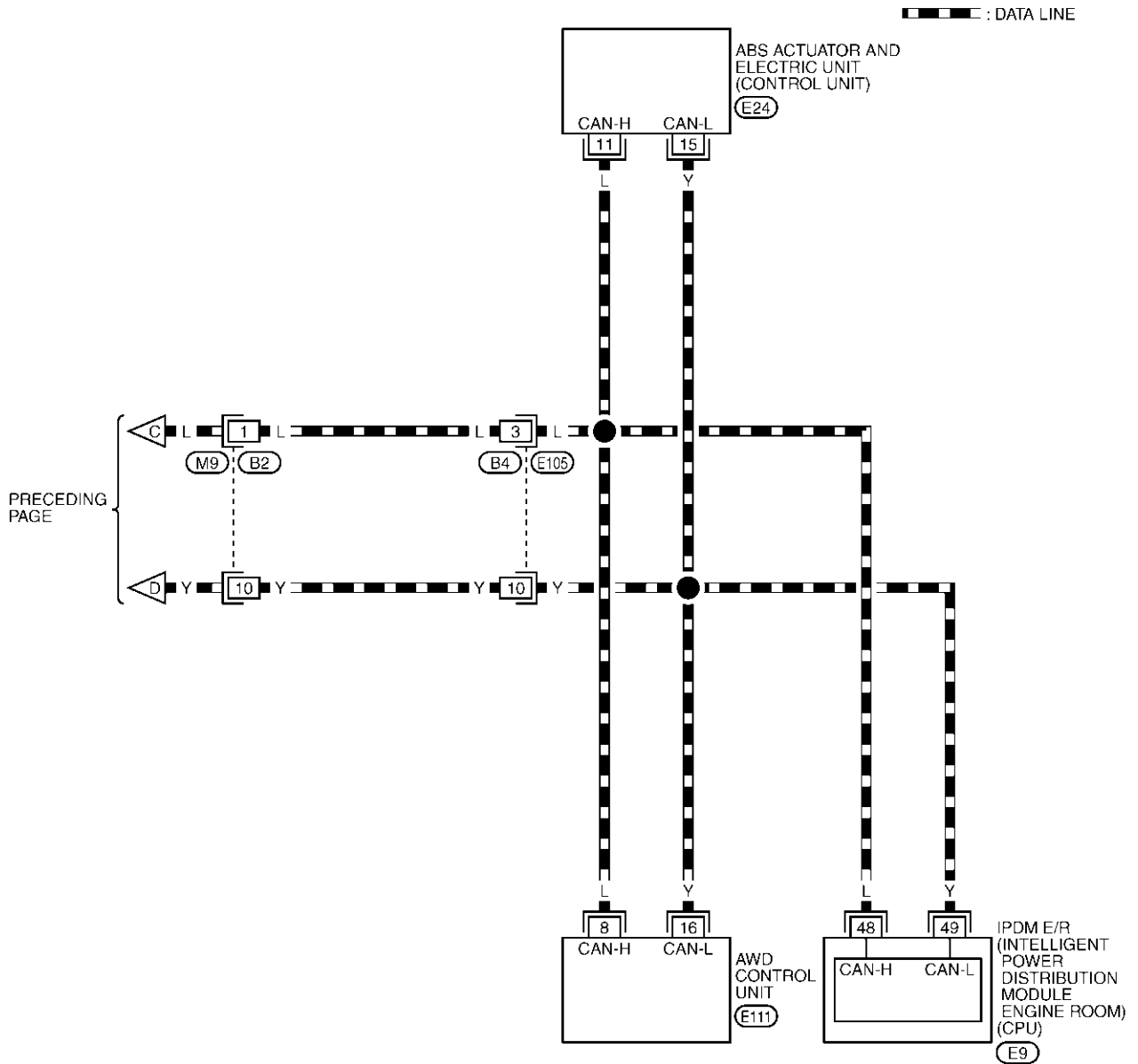


REFER TO THE FOLLOWING.  
(M37) -ELECTRICAL UNITS

# CAN SYSTEM (TYPE 21)

[CAN]

## LAN-CAN-63



REFER TO THE FOLLOWING.  
 (E24) -ELECTRICAL UNITS

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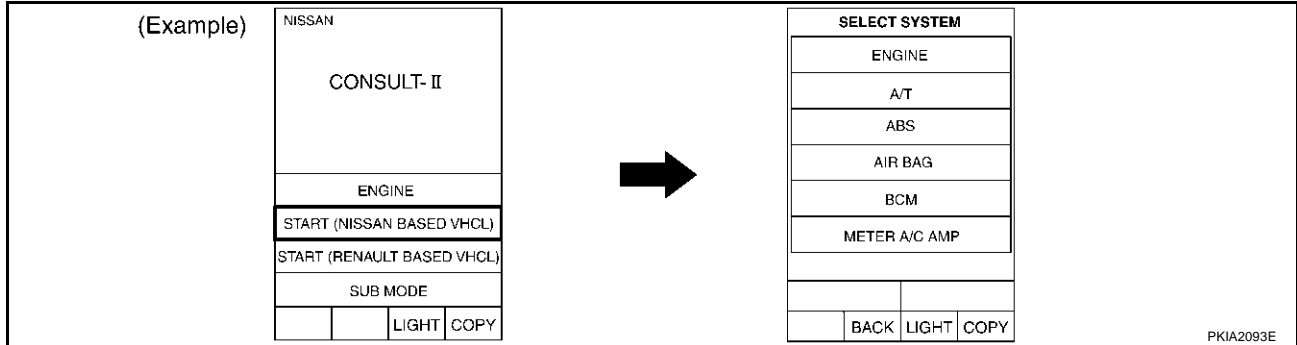
# CAN SYSTEM (TYPE 21)

[CAN]

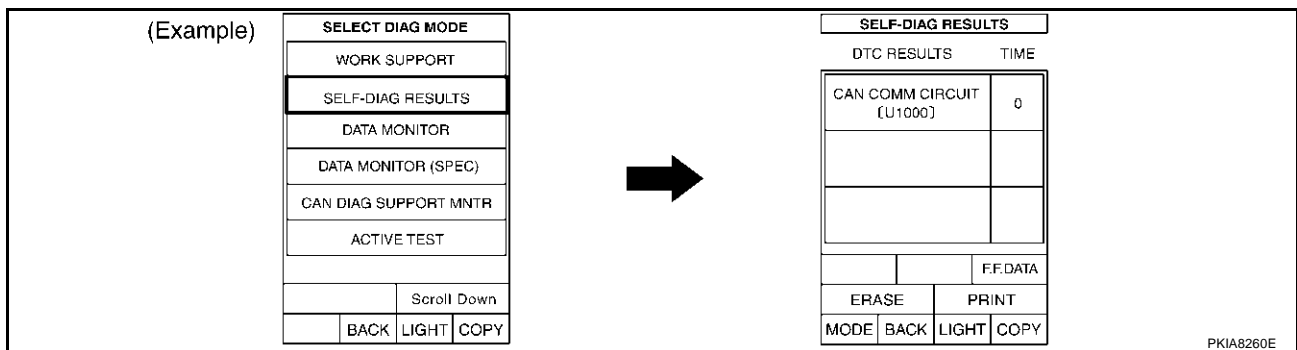
AKS00C5M

## Work Flow

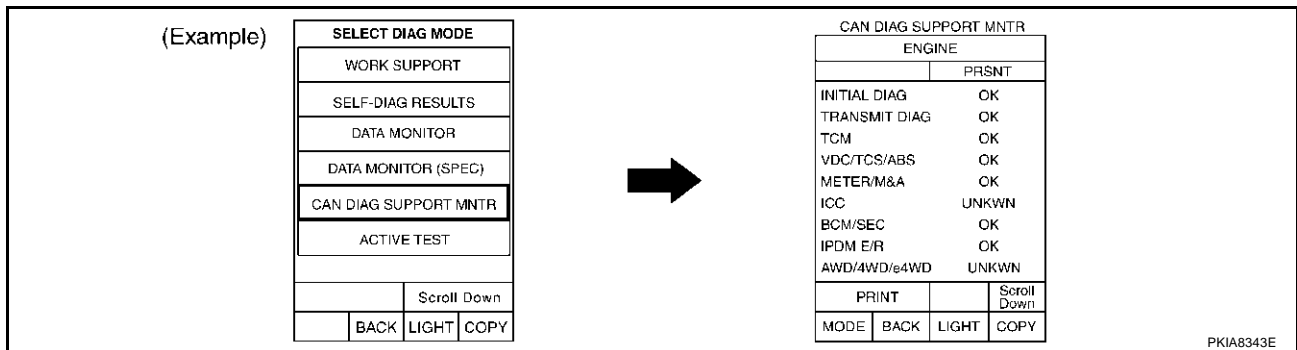
- When there are no indications of "TRANSMISSION", "AIR PRESSURE MONITOR" or "METER A/C AMP" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "ALL MODE AWD/4WD" and "ABS" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "ALL MODE AWD/4WD" and "ABS" displayed on CONSULT-II.



- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-702, "CHECK SHEET"](#).
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "v" onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-702, "CHECK SHEET"](#).

**NOTE:**

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual. So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the navigation system. Refer to [AV-203, "CAN Communication Line Check"](#).
- Attach the CAN DIAG SUPPORT MONITOR check sheet onto the check sheet. Refer to [LAN-702, "CHECK SHEET"](#).



# CAN SYSTEM (TYPE 21)

[CAN]

8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG SUPPORT MONITOR check sheet. Refer to [LAN-702, "CHECK SHEET"](#) .

**NOTE:**

If "NG" is displayed on "CAN COMM" as "CAN DIAG SUPPORT MONITOR" for the diagnosed control unit, replace the control unit. Refer to [AV-203, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-704, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

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# CAN SYSTEM (TYPE 21)

[CAN]

## CHECK SHEET

**NOTE:**

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

Check sheet table

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

Attach copy of  
display control unit  
CAN DIAG SUPPORT MONITOR check sheet

# CAN SYSTEM (TYPE 21)

[CAN]

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Attach copy of  
ENGINE  
SELF-DIAG RESULTS

Attach copy of  
TRANSMISSION  
SELF-DIAG RESULTS

Attach copy of  
AIR PRESSURE  
MONITOR  
SELF-DIAG RESULTS

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
METER A/C AMP  
SELF-DIAG RESULTS

Attach copy of  
ALL MODE AWD/4WD  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

Attach copy of  
ENGINE  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
TRANSMISSION  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
AIR PRESSURE  
MONITOR  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
BCM  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
METER A/C AMP  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ALL MODE AWD/4WD  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ABS  
CAN DIAG SUPPORT  
MNTR

PKIB0731E

# CAN SYSTEM (TYPE 21)

[CAN]

## CHECK SHEET RESULTS (EXAMPLE)

### NOTE:

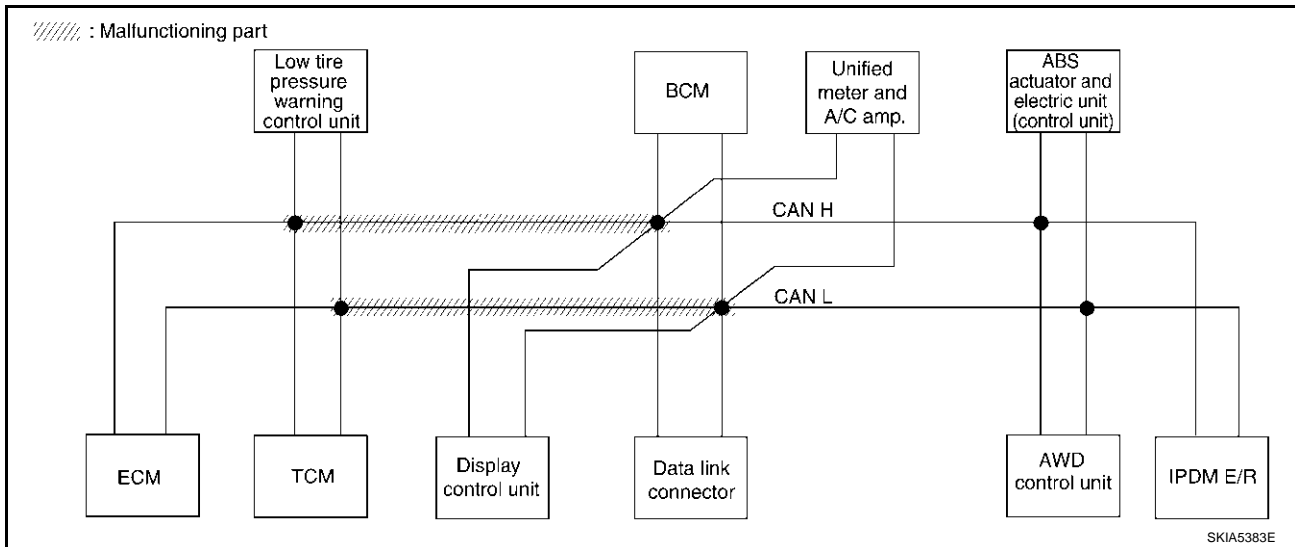
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

### Case 1

Check harness between TCM and data link connector. Refer to [LAN-717, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW N	—	UNKW N	—	—	UNKW N	UNKW N	UNKW N	—	UNKW N
TRANSMISSION	No indication ✓	NG	UNKW N	UNKW N	—	—	—	—	UNKW N	—	UNKW N	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKW N	—	—	—	—	—	UNKW N	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3 ✓	—	CAN CIRC 6 ✓	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKW N	UNKW N	—	—	—	—	UNKW N	—	—	UNKW N
METER A/C AMP	No indication	—	UNKW N	UNKW N ✓	UNKW N ✓	UNKW N ✓	UNKW N	UNKW N	—	UNKW N	UNKW N	—
ALL MODE AWD/4WD	—	NG	UNKW N	UNKW N ✓	—	—	—	—	UNKW N	—	—	—
ABS	—	NG	UNKW N	UNKW N ✓	—	—	—	—	—	—	—	—

PKIB0883E



# CAN SYSTEM (TYPE 21)

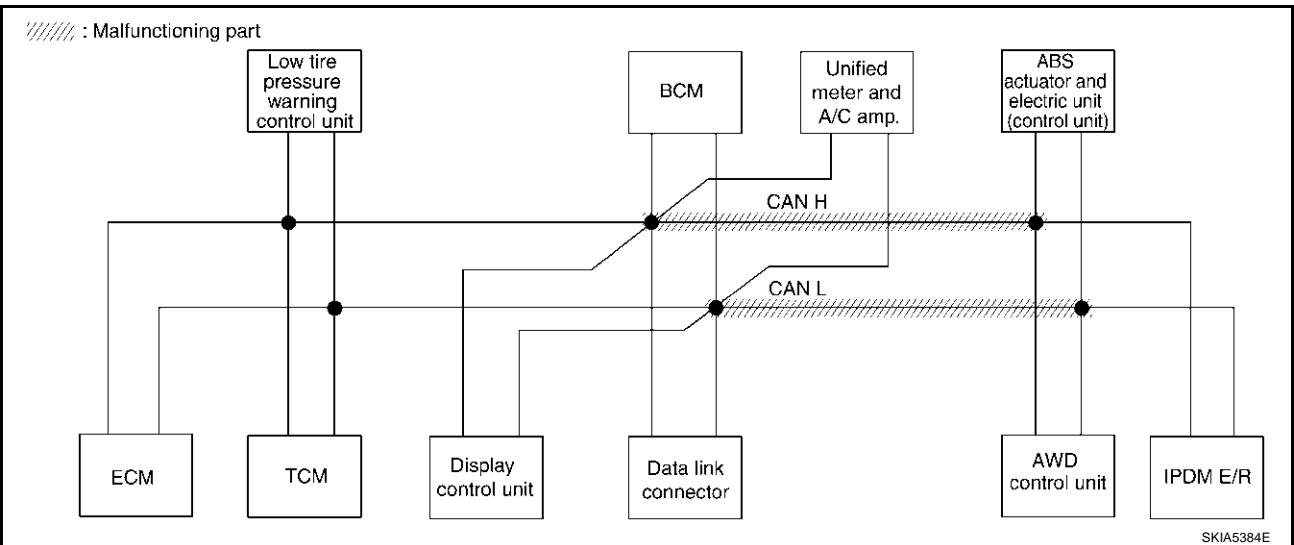
[CAN]

## Case 2

Check harness between data link connector and ABS actuator and electric unit (control unit). Refer to [LAN-717, "Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit \(Control Unit\)"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

PKIB0884E



# CAN SYSTEM (TYPE 21)

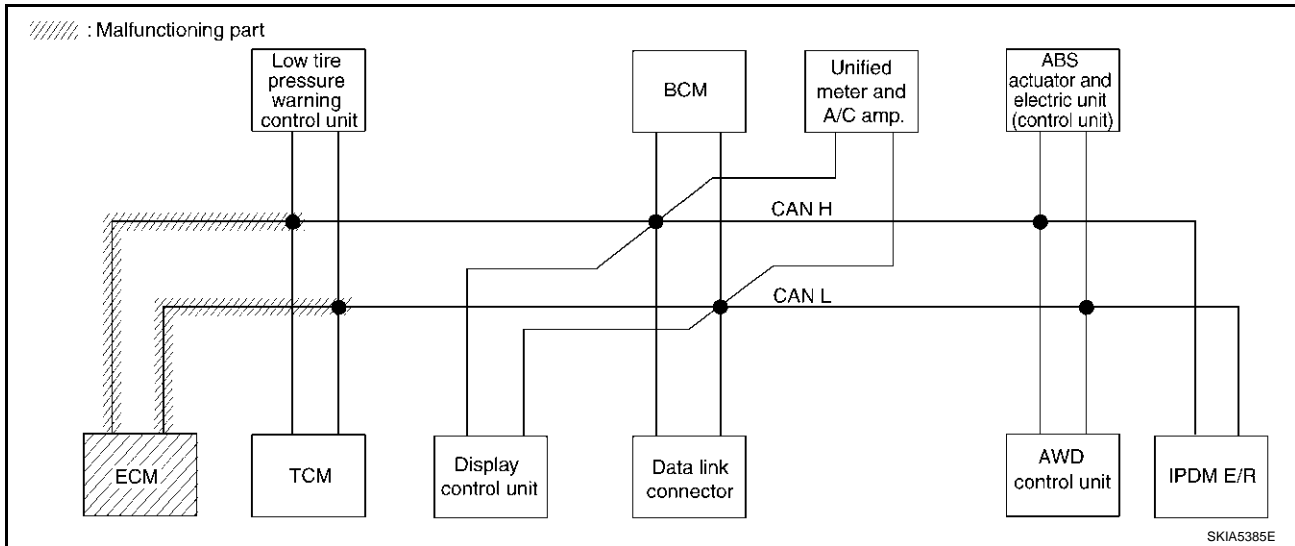
[CAN]

## Case 3

Check ECM circuit. Refer to [LAN-718, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN ✓	—	UNKWN ✓	—	—	UNKWN ✓	UNKWN ✓	UNKWN ✓	—	UNKWN ✓
TRANSMISSION	No indication	NG	UNKWN	UNKWN ✓	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3 ✓	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN ✓	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN ✓	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN ✓	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN ✓	—	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 21)

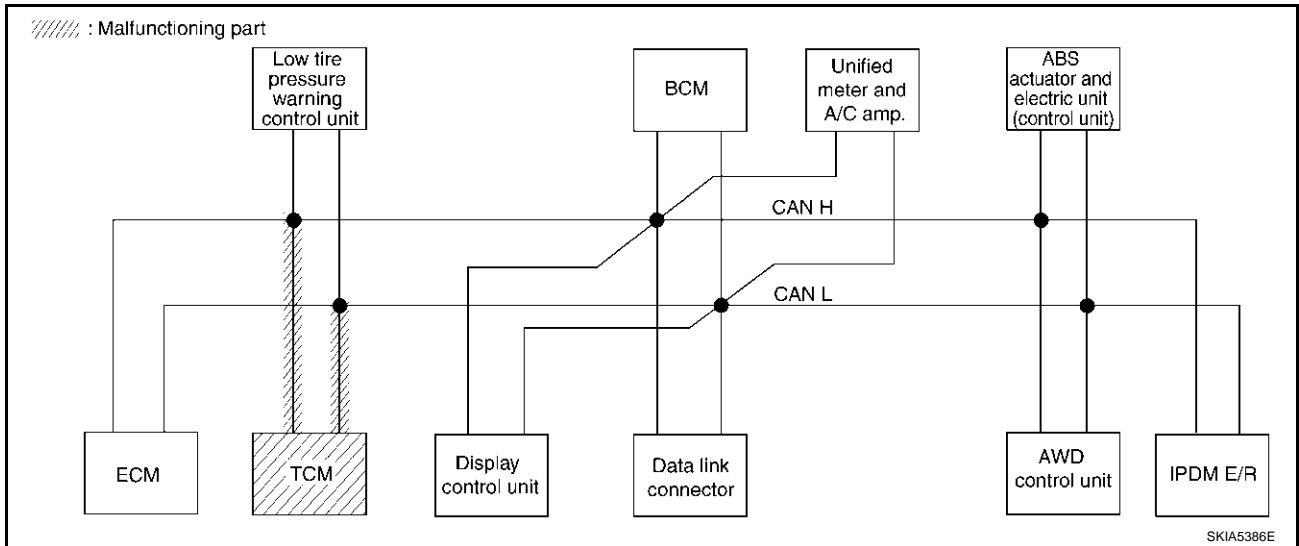
[CAN]

## Case 4

Check TCM circuit. Refer to [LAN-719, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 21)

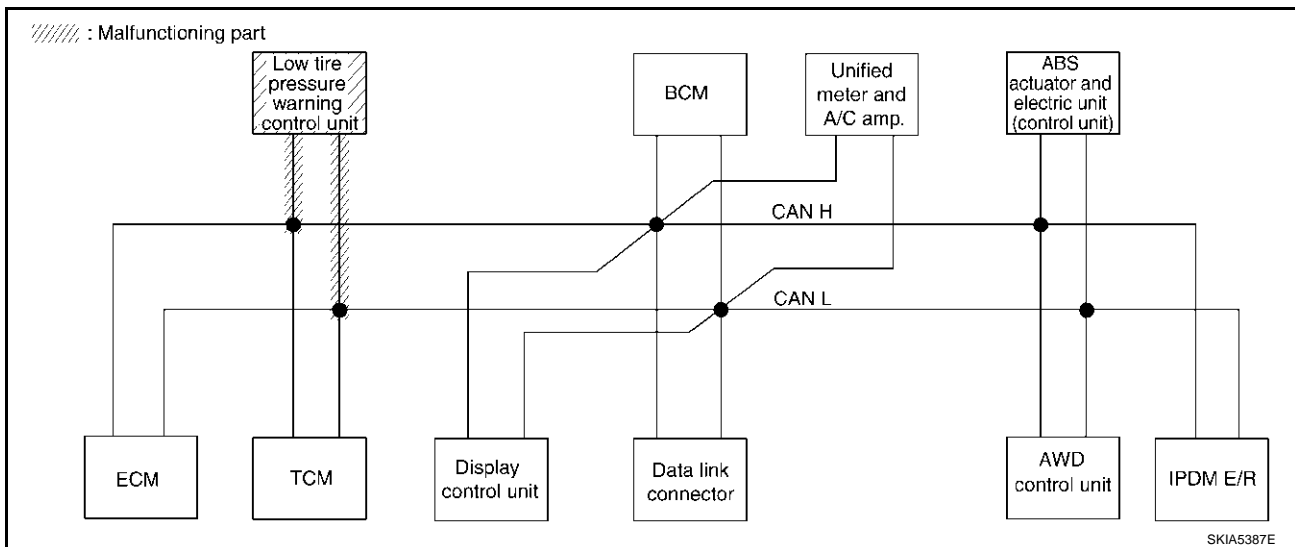
[CAN]

## Case 5

Check low tire pressure warning control unit circuit. Refer to [LAN-719, "Low Tire Pressure Warning Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6 ✓	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	UNKWN	—	UNKWN	UNKWN	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 21)

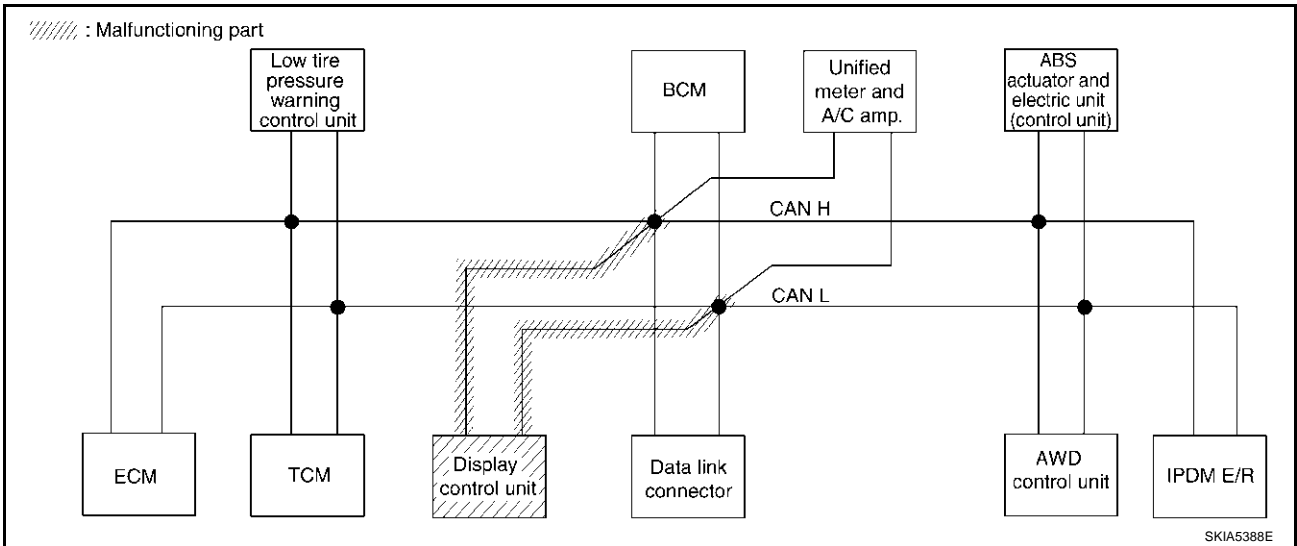
[CAN]

## Case 6

Check display control unit circuit. Refer to [LAN-720, "Display Control Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN DTC 1 ✓	CAN DTC 3 ✓	—	CAN DTC 6 ✓	—	CAN DTC 2 ✓	CAN DTC 5 ✓	—	—	CAN DTC 7 ✓
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 21)

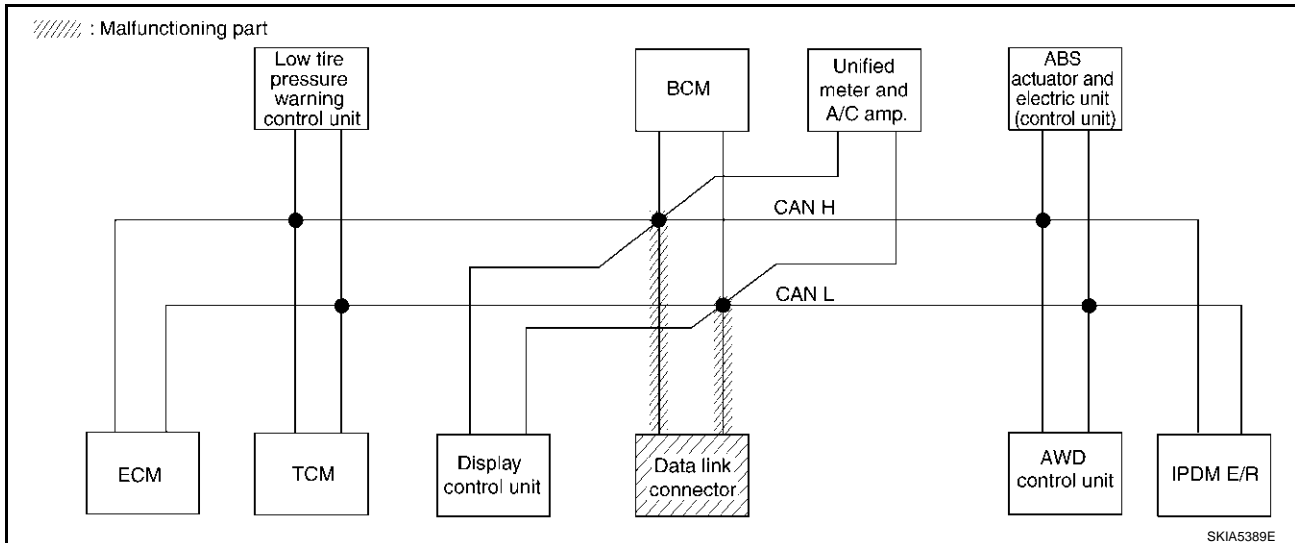
[CAN]

## Case 7

Check data link connector circuit. Refer to [LAN-720, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 21)

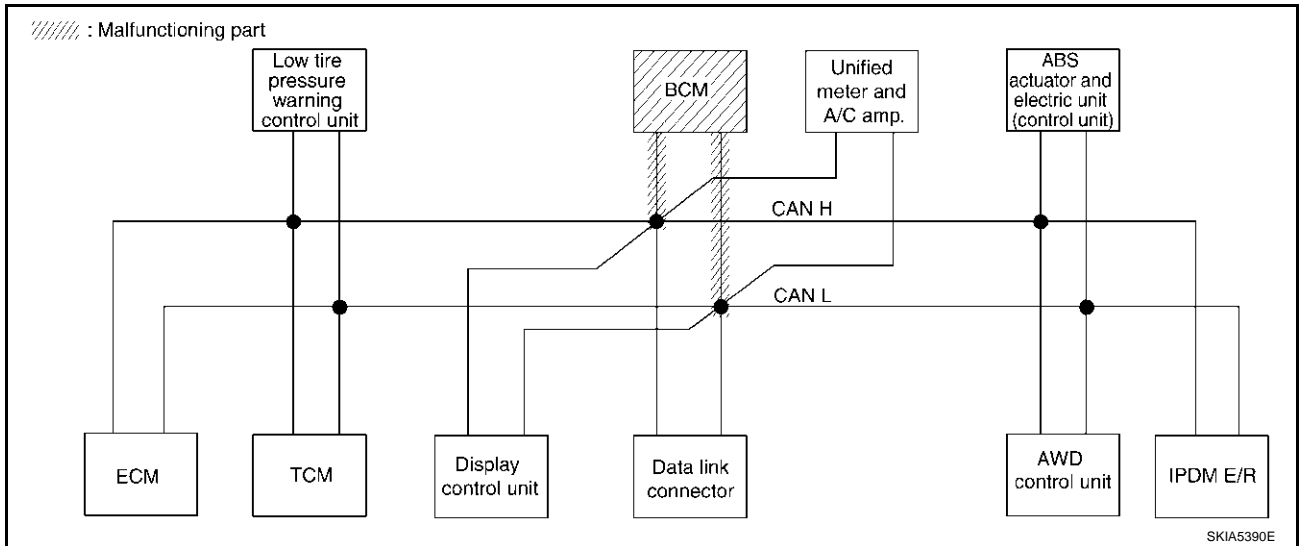
[CAN]

## Case 8

Check BCM circuit. Refer to [LAN-721, "BCM Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 21)

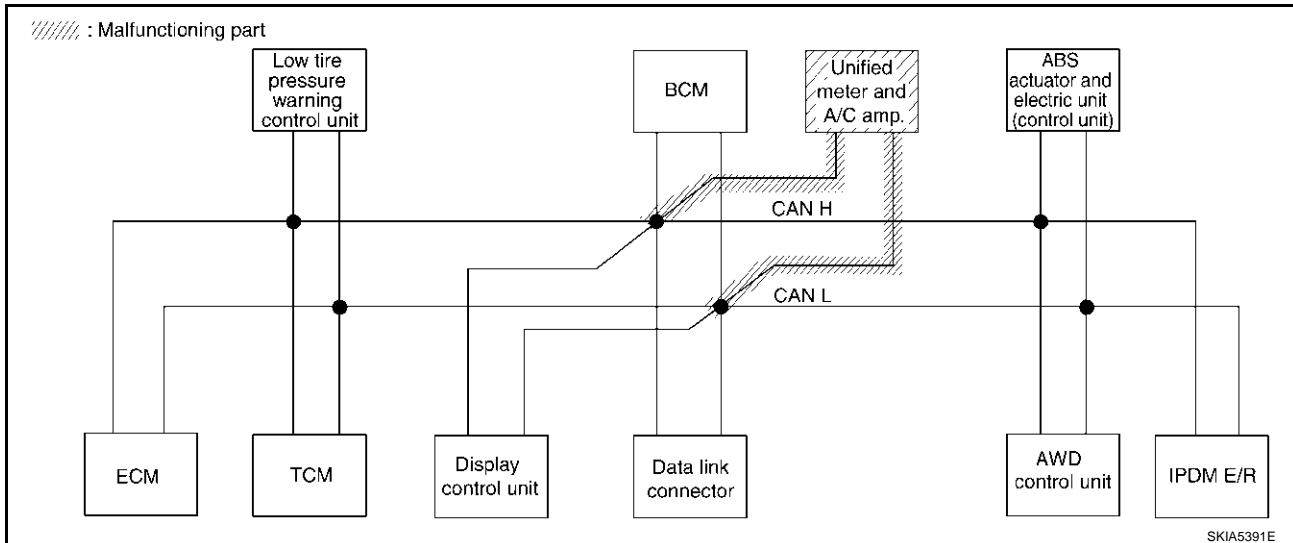
[CAN]

## Case 9

Check unified meter and A/C amp. circuit. Refer to [LAN-721, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

PKIB0891E



# CAN SYSTEM (TYPE 21)

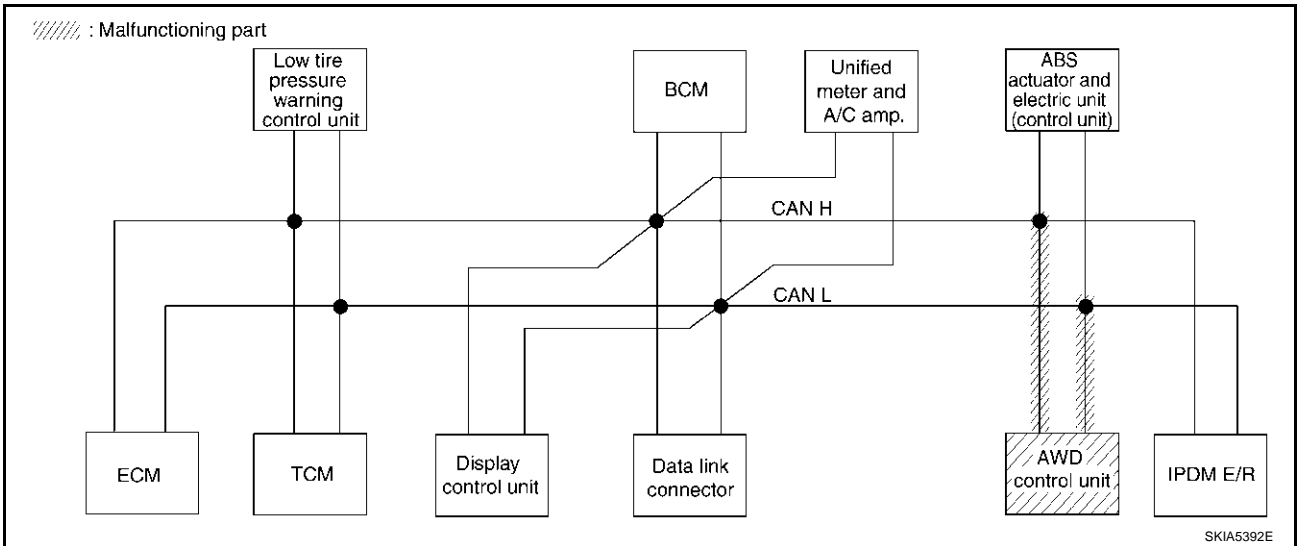
[CAN]

## Case 10

Check AWD control unit circuit. Refer to [LAN-722, "AWD Control Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

PKIB0892E



# CAN SYSTEM (TYPE 21)

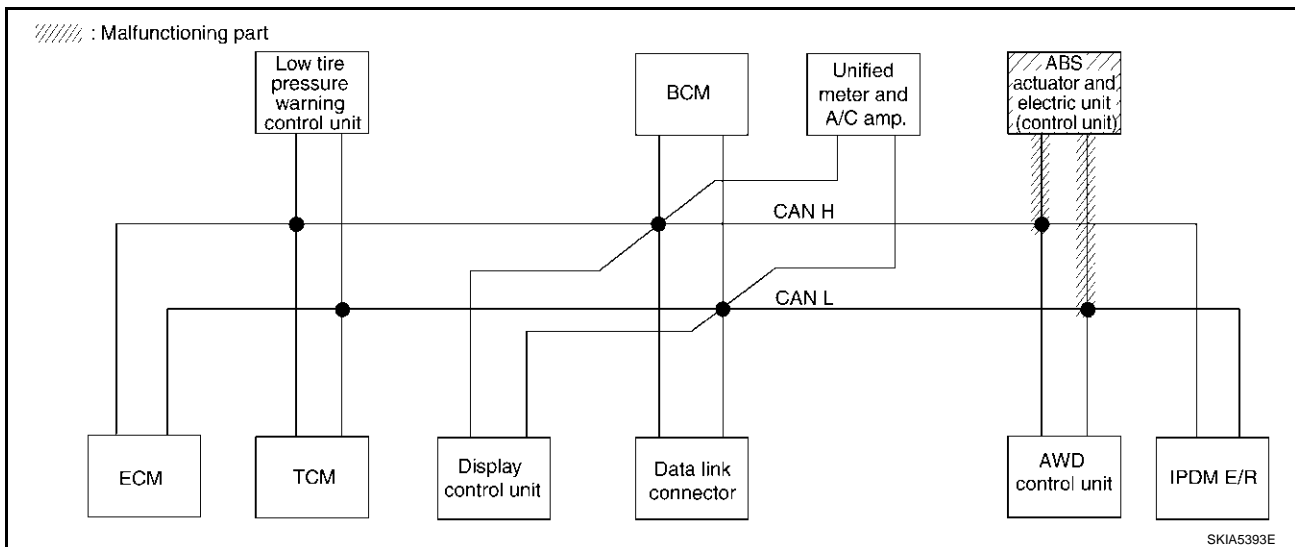
[CAN]

## Case 11

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-722, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

PKIB0893E



# CAN SYSTEM (TYPE 21)

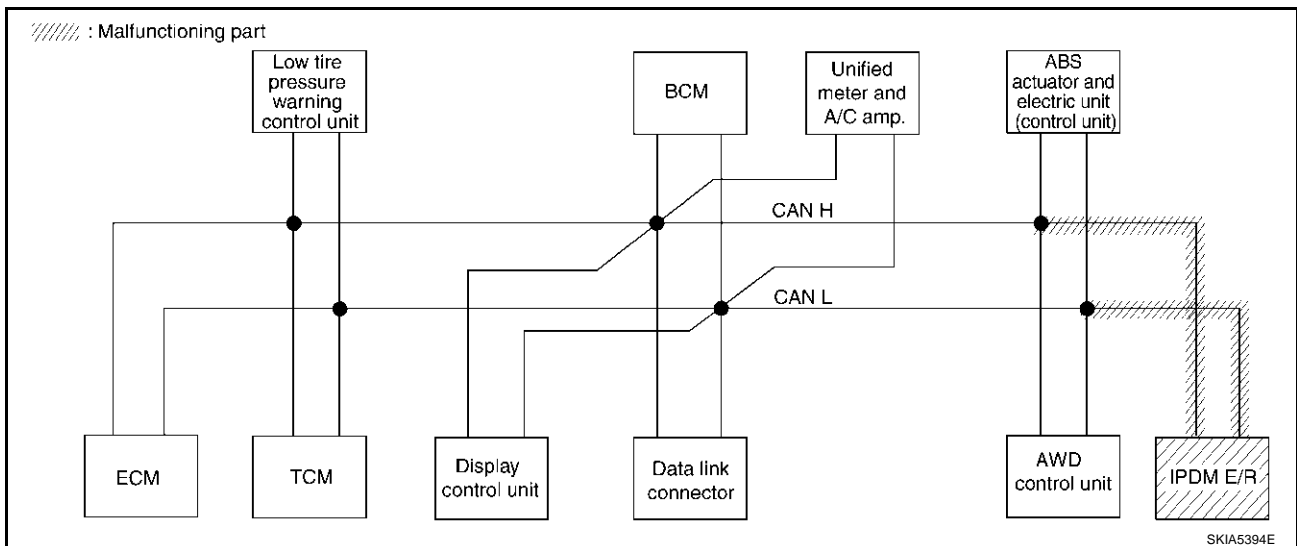
[CAN]

## Case 12

Check IPDM E/R circuit. Refer to [LAN-723, "IPDM E/R Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

PKIB0894E



## Case 13

Check CAN communication circuit. Refer to [LAN-723, "CAN Communication Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

PKIB0895E

# CAN SYSTEM (TYPE 21)

[CAN]

## Case 14

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-726, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	-	NG	UNKWN	-	UN <del>KN</del> W	-	-	-	UNKWN	UNKWN	UNKWN	-	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	-	-	UNKWN	UNKWN	UNKWN	UNKWN	-
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	-	-	-	-	UNKWN	UNKWN	UNKWN	UNKWN	-
Display control unit	-	CAN COMM	CAN CIRC 1	CAN CIRC 3	-	CAN CIRC 6	-	CAN CIRC 2	CAN CIRC 5	-	-	-	CAN CIRC 7
BCM	-	NG	UNKWN	UNKWN	-	-	-	-	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
METER A/C AMP	No indication	-	UNKWN	UNKWN	UN <del>KN</del> W	UNKWN	UNKWN	UNKWN	UNKWN	-	UNKWN	UN <del>KN</del> W	-
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	-	-	UNKWN	UNKWN	UNKWN	UNKWN	-
ABS	-	NG	UNKWN	UNKWN	-	-	-	-	UNKWN	UNKWN	UNKWN	UNKWN	-

PKIB0896E

## Case 15

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-726, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	-	NG	UNKWN	-	UNKWN	-	-	-	UNKWN	UNKWN	UNKWN	-	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UN <del>KN</del> W	-	-	-	-	UNKWN	UN <del>KN</del> W	UNKWN	UNKWN	-
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	-	-	-	-	UNKWN	UNKWN	UNKWN	UNKWN	-
Display control unit	-	CAN COMM	CAN CIRC 1	CAN CIRC 3	-	CAN CIRC 6	-	CAN CIRC 2	CAN CIRC 5	-	-	-	CAN CIRC 7
BCM	-	NG	UNKWN	UNKWN	-	-	-	-	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
METER A/C AMP	No indication	-	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	-	UNKWN	UNKWN	-
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	-	-	UNKWN	UNKWN	UNKWN	UNKWN	-
ABS	-	NG	UNKWN	UN <del>KN</del> W	-	-	-	-	UNKWN	UNKWN	UNKWN	UNKWN	-

PKIB0897E



## Circuit Check Between TCM and Data Link Connector

AKS00724

### 1. CHECK HARNESS FOR OPEN CIRCUIT

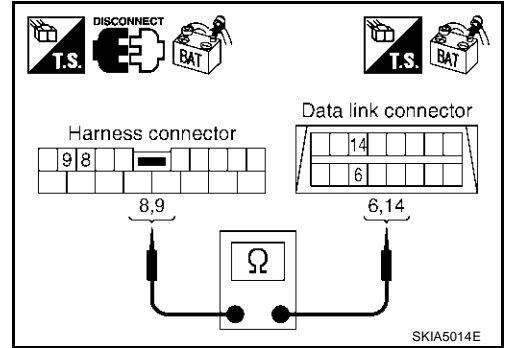
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

**8 (L) - 6 (L) : Continuity should exist.**

**9 (Y) - 14 (Y) : Continuity should exist.**

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-700, "Work Flow"](#).
- NG >> Repair harness.



## Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit)

AKS00725

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector M9
  - Harness connector B2
  - Harness connector B4
  - Harness connector E105

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

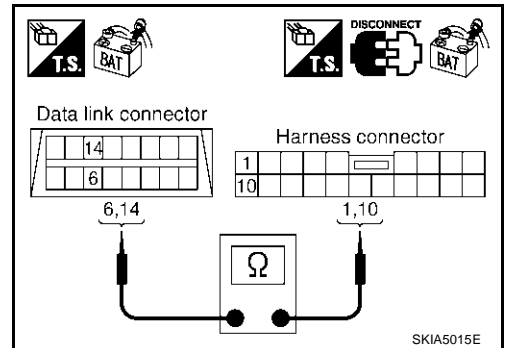
1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

**6 (L) - 1 (L) : Continuity should exist.**

**14 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



## 3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

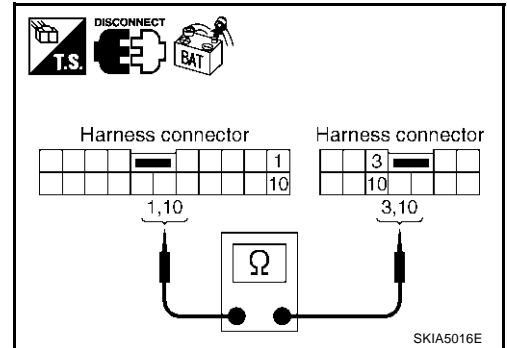
**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

OK >> GO TO 4.

NG >> Repair harness.



## 4. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

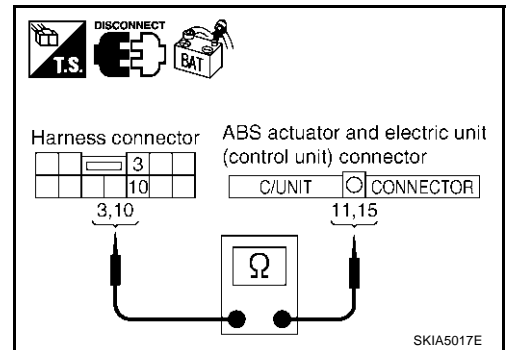
**3 (L) - 11 (L) : Continuity should exist.**

**10 (Y) - 15 (Y) : Continuity should exist.**

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-700, "Work Flow"](#).

NG >> Repair harness.



## ECM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

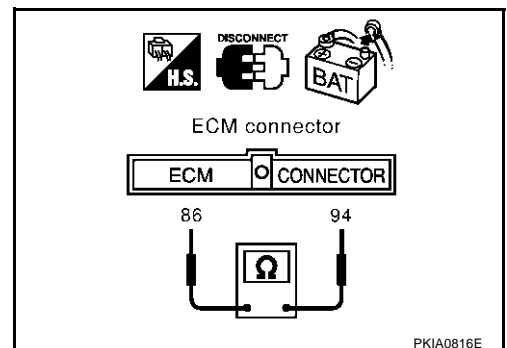
1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

**94 (L) - 86 (Y) : Approx. 108 - 132Ω**

OK or NG

OK >> Replace ECM.

NG >> Repair harness between ECM and TCM.



**TCM Circuit Check**

AKS00727

**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
  - TCM connector
  - Harness connector F102
  - Harness connector M82

**OK or NG**

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

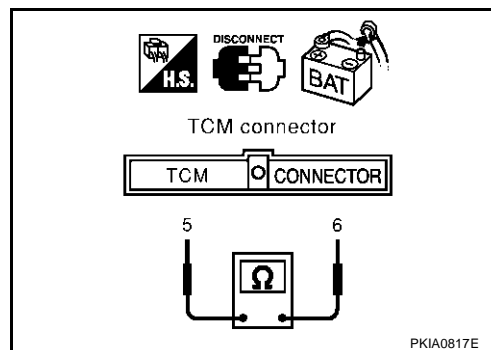
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Approx. 54 - 66Ω**

**OK or NG**

- OK >> Replace TCM.  
 NG >> Repair harness between TCM and low tire pressure warning control unit.

**Low Tire Pressure Warning Control Unit Circuit Check**

AKS00728

**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of low tire pressure warning control unit for damage, bend and loose connection (control unit side and harness side).

**OK or NG**

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

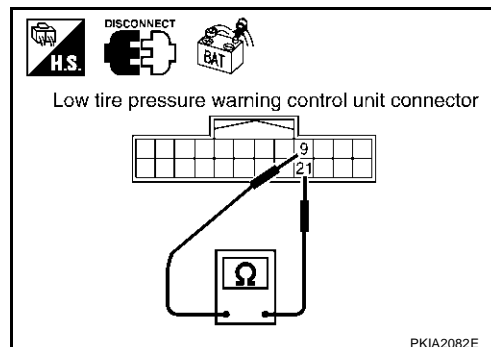
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect low tire pressure warning control unit connector.
2. Check resistance between low tire pressure warning control unit harness connector M81 terminals 9 (L) and 21 (Y).

**9 (L) - 21 (Y) : Approx. 54 - 66Ω**

**OK or NG**

- OK >> Replace low tire pressure warning control unit.  
 NG >> Repair harness between low tire pressure warning control unit and TCM.



## Display Control Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display control unit for damage, bend and loose connection (control unit side and harness side).

#### OK or NG

- OK >> GO TO 2.  
NG >> Repair terminal or connector.

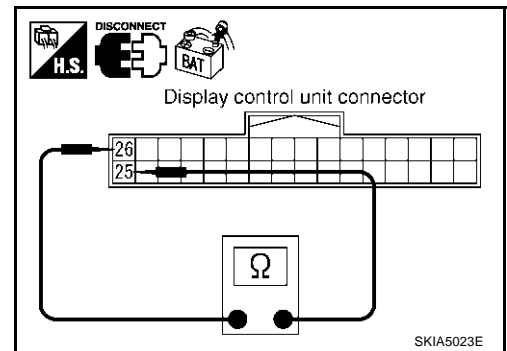
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect display control unit connector.
2. Check resistance between display control unit harness connector M43 terminals 25 (L) and 26 (Y).

**25 (L) - 26 (Y) : Approx. 54 - 66Ω**

#### OK or NG

- OK >> Replace display control unit.  
NG >> Repair harness between display control unit and data link connector.



## Data Link Connector Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

#### OK or NG

- OK >> GO TO 2.  
NG >> Repair terminal or connector.

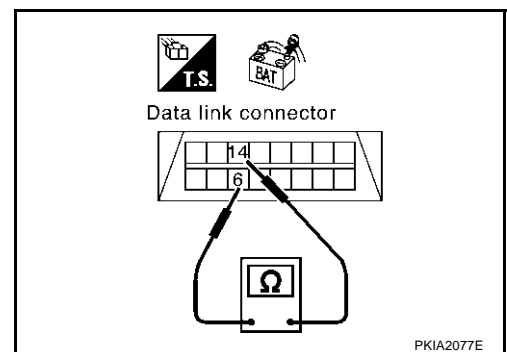
### 2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Approx. 54 - 66Ω**

#### OK or NG

- OK >> Diagnose again. Refer to [LAN-700, "Work Flow"](#).  
NG >> Repair harness between data link connector and BCM.



**BCM Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

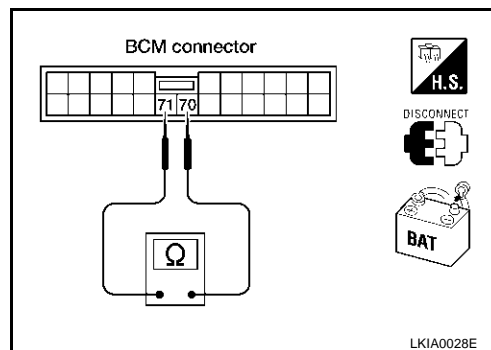
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M37 terminals 70 (L) and 71 (Y).

**70 (L) - 71 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace BCM. Refer to [BCS-36, "Removal and Installation of BCM"](#) .  
 NG >> Repair harness between BCM and data link connector.

**Unified Meter and A/C Amp. Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

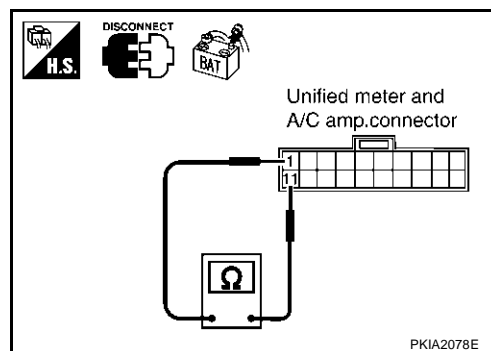
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

**1 (L) - 11 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace unified meter and A/C amp.  
 NG >> Repair harness between unified meter and A/C amp. and data link connector.



**AWD Control Unit Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of AWD control unit for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

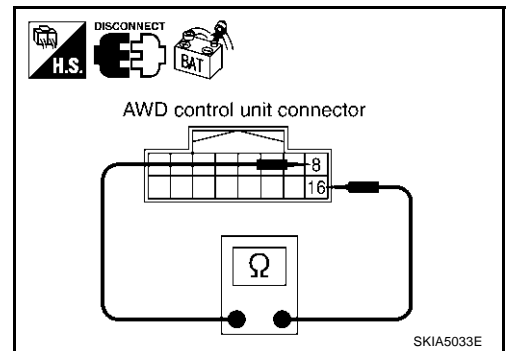
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect AWD control unit connector.
2. Check resistance between AWD control unit harness connector E111 terminals 8 (L) and 16 (Y).

**8 (L) - 16 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace AWD control unit.  
 NG >> Repair harness between AWD control unit and IPDM E/R.

**ABS Actuator and Electric Unit (Control Unit) Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

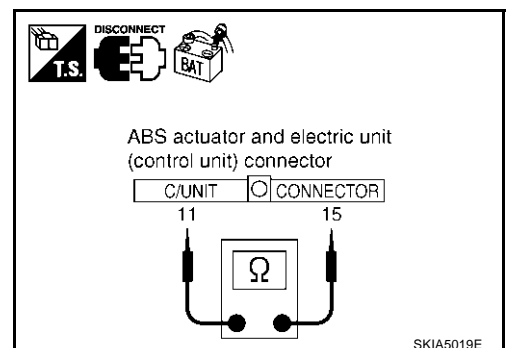
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

**11 (L) - 15 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).  
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



**IPDM E/R Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

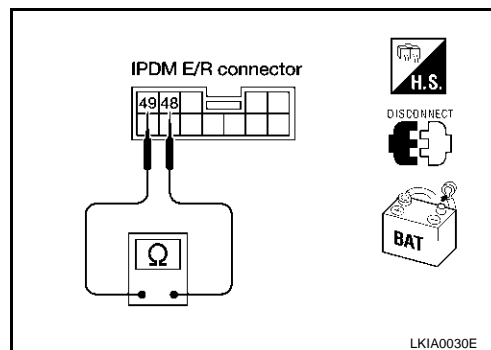
- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y)****: Approx. 108 - 132Ω**OK or NG

- OK >> Replace IPDM E/R.  
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).

**CAN Communication Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, meter side and harness side).

- ECM
- TCM
- Low tire pressure warning control unit
- Display control unit
- BCM
- Unified meter and A/C amp.
- AWD control unit
- ABS actuator and electric unit (control unit)
- IPDM E/R
- Between ECM and IPDM E/R
- Between ECM and TCM

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
  - ECM connector
  - Low tire pressure warning control unit connector
  - Harness connector M82
  - Display control unit connector
  - BCM connector
  - Unified meter and A/C amp. connector
  - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

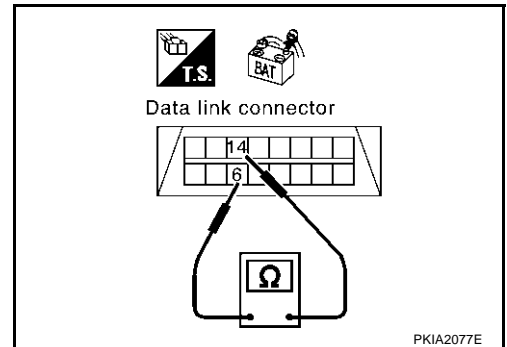
**6 (L) - 14 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 3.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9.



## 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

**6 (L) - Ground : Continuity should not exist.**

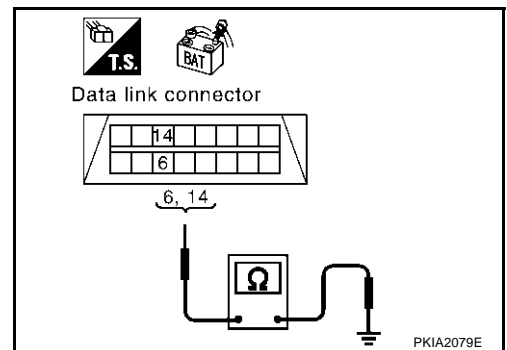
**14 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9.





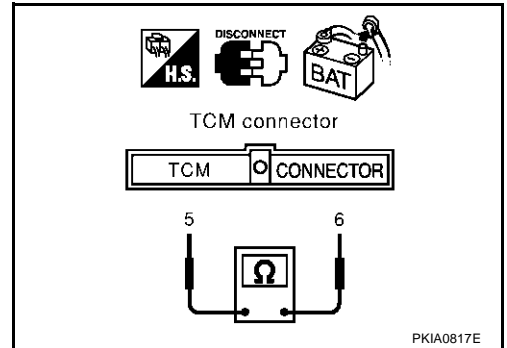
## 4. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Continuity should not exist.**

OK or NG

- OK >> GO TO 5.
- NG >> Repair harness between TCM and harness connector F102.



## 5. CHECK HARNESS FOR SHORT CIRCUIT

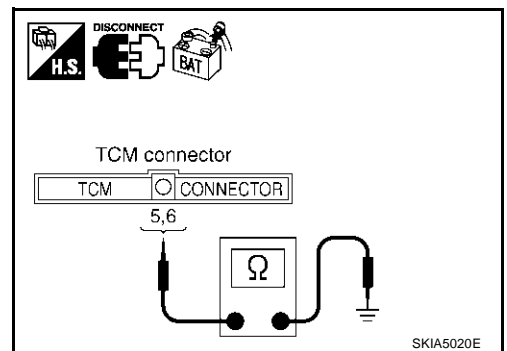
Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

**5 (L) - Ground : Continuity should not exist.**

**6 (Y) - Ground : Continuity should not exist.**

OK or NG

- OK >> GO TO 6.
- NG >> Repair harness between TCM and harness connector F102.



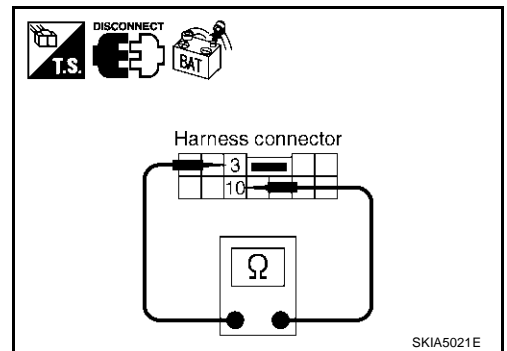
## 6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B4.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

**3 (L) - 10 (Y) : Continuity should not exist.**

OK or NG

- OK >> GO TO 7.
- NG >> Repair harness between harness connector B4 and harness connector B2.



## 7. CHECK HARNESS FOR SHORT CIRCUIT

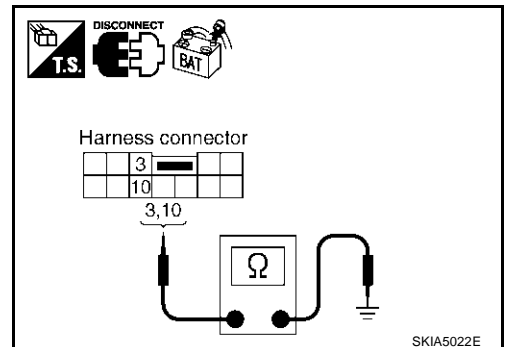
Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

**3 (L) - Ground : Continuity should not exist.**

**10 (Y) - Ground : Continuity should not exist.**

OK or NG

- OK >> GO TO 8.
- NG >> Repair harness between harness connector B4 and harness connector B2.



## 8. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect AWD control unit connector, ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

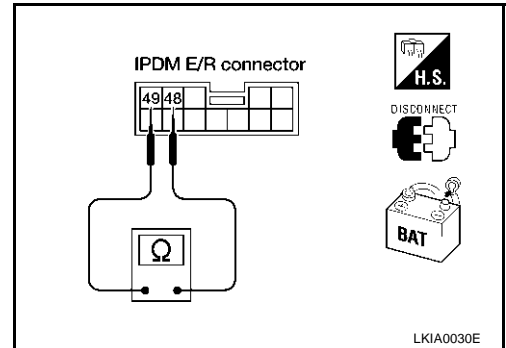
**48 (L) - 49 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 9.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

**48 (L) - Ground : Continuity should not exist.**

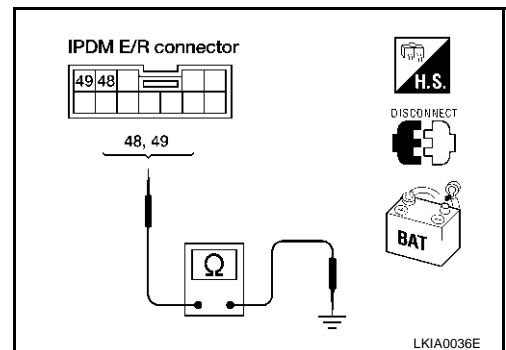
**49 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 10.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 10. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-727, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

### OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-700, "Work Flow"](#).

NG >> Replace ECM and/or IPDM E/R.

### IPDM E/R Ignition Relay Circuit Check

AKS007ZH

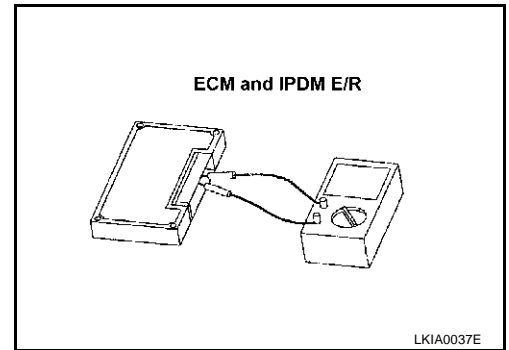
Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-45, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#).

## Component Inspection ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value ( $\Omega$ ) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



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LAN

## CAN SYSTEM (TYPE 22)

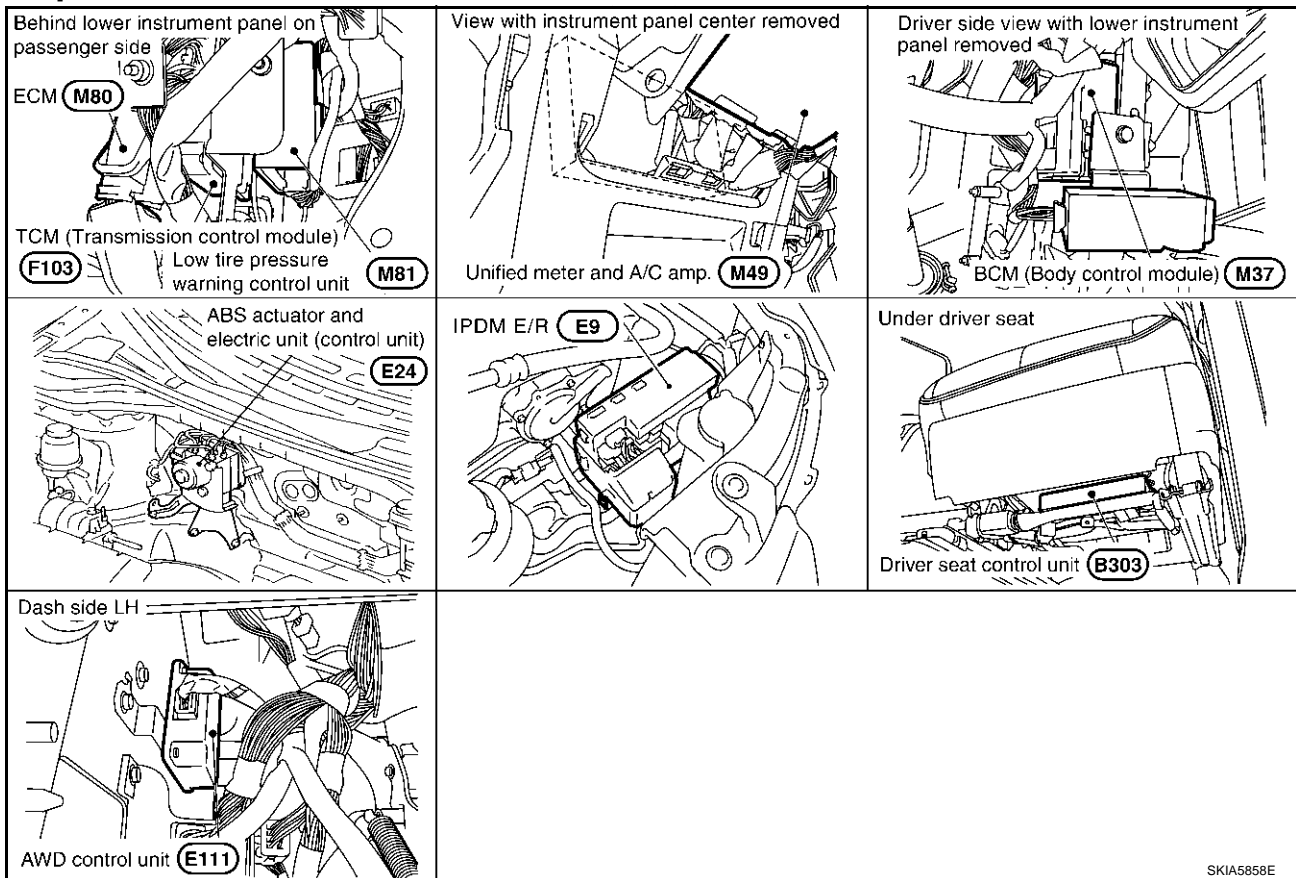
### System Description

AKS0072J

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

### Component Parts and Harness Connector Location

AKS0072K



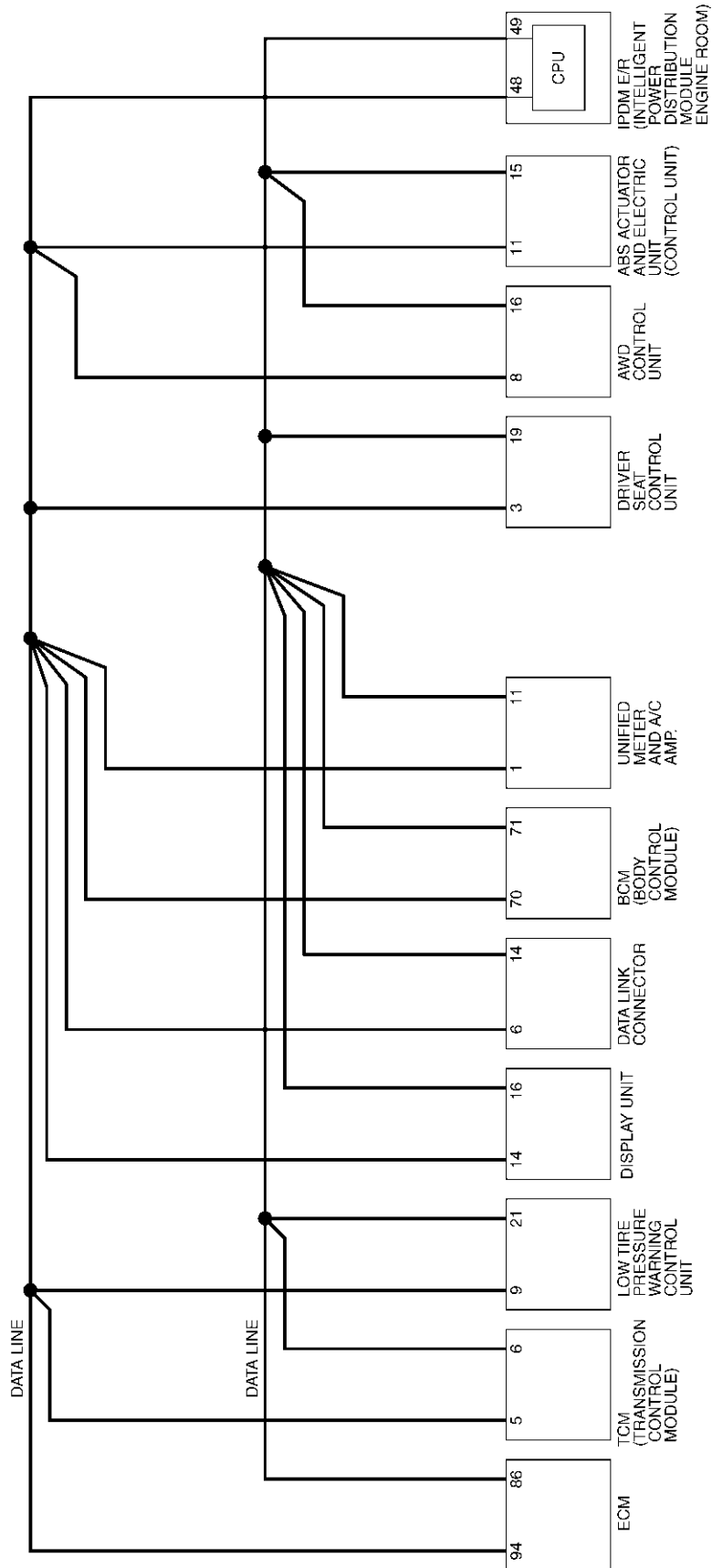
SKIA5858E

# CAN SYSTEM (TYPE 22)

[CAN]

## Schematic

AKS0072L



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TKWA1007E

# CAN SYSTEM (TYPE 22)

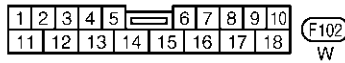
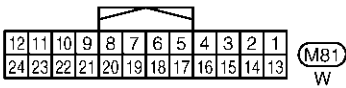
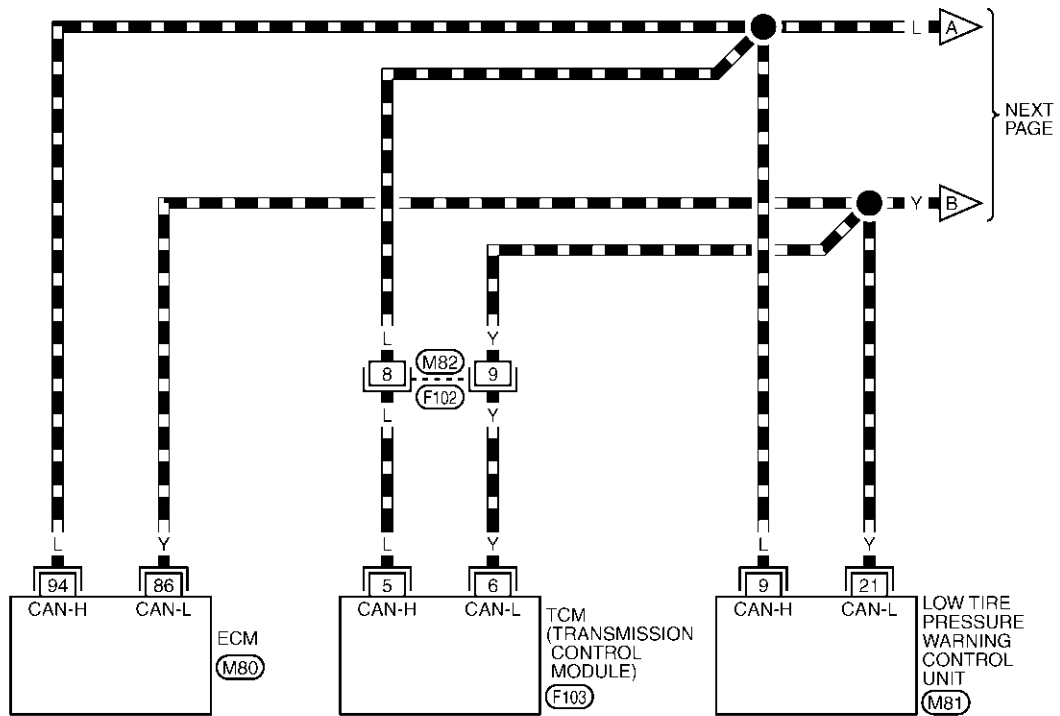
[CAN]

## Wiring Diagram - CAN -

AKS0072M

### LAN-CAN-64

▬ : DATA LINE



REFER TO THE FOLLOWING.  
 (M80), (F103) -ELECTRICAL  
 UNITS

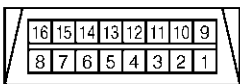
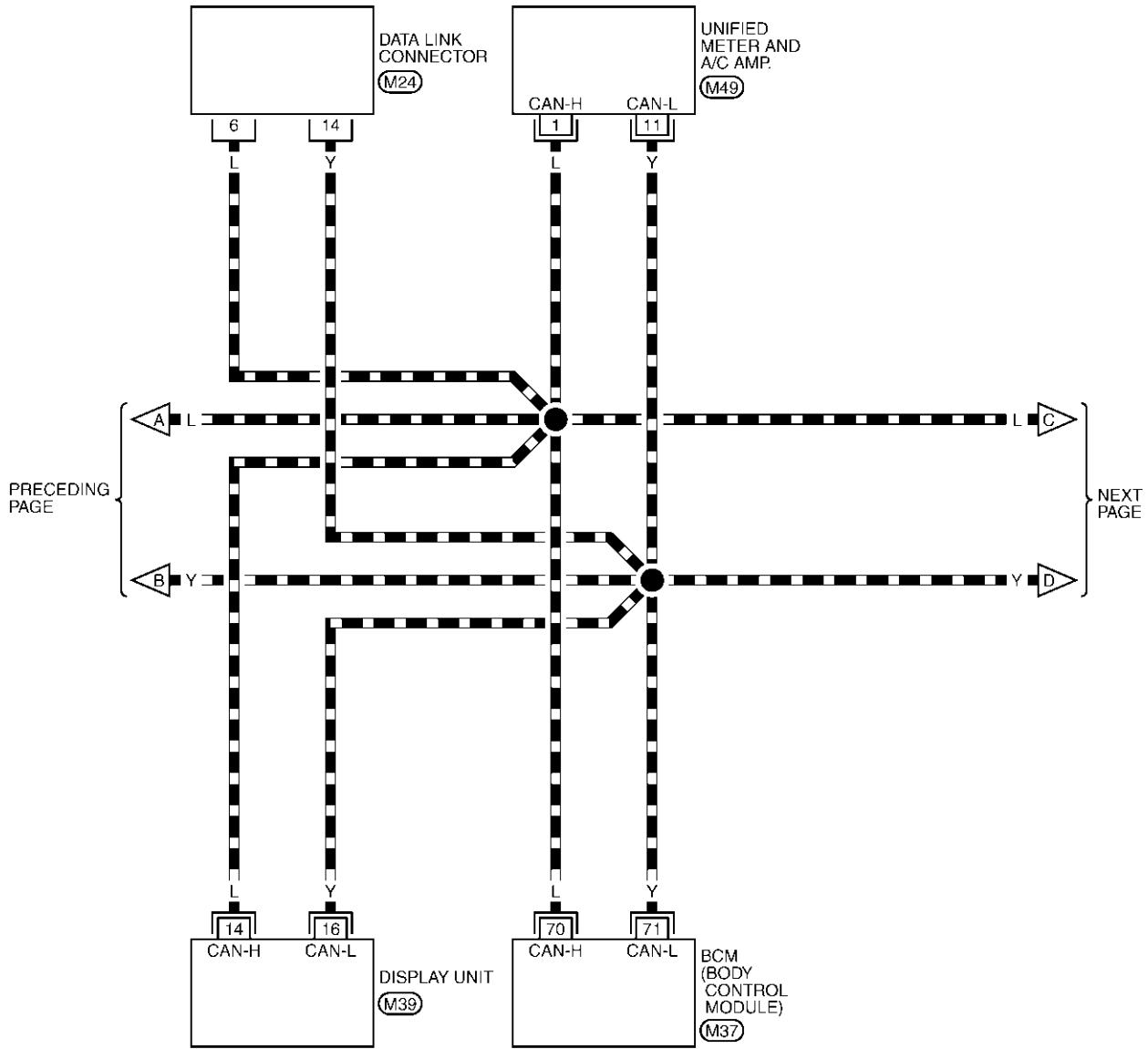
TKWA1008E

# CAN SYSTEM (TYPE 22)

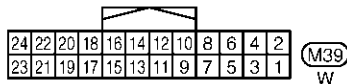
[CAN]

## LAN-CAN-65

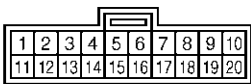
▬ : DATA LINE



(M24)  
W



(M39)  
W



(M49)  
GR



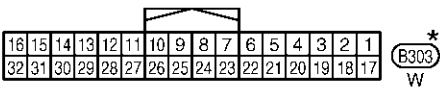
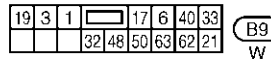
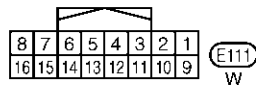
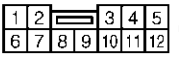
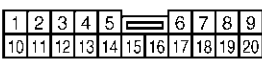
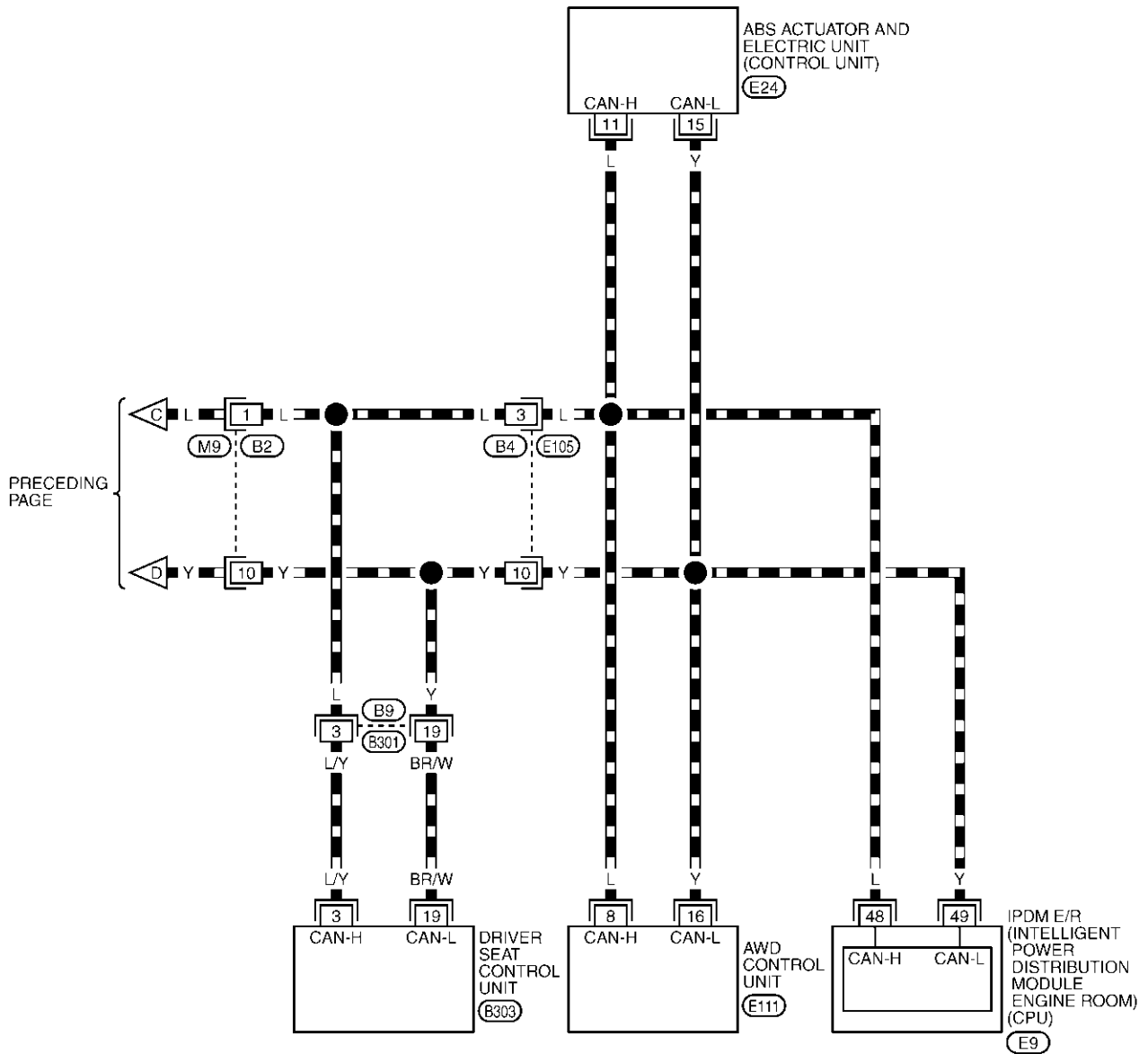
REFER TO THE FOLLOWING.

(M37) -ELECTRICAL UNITS

TKWA1009E

## LAN-CAN-66

▬ : DATA LINE



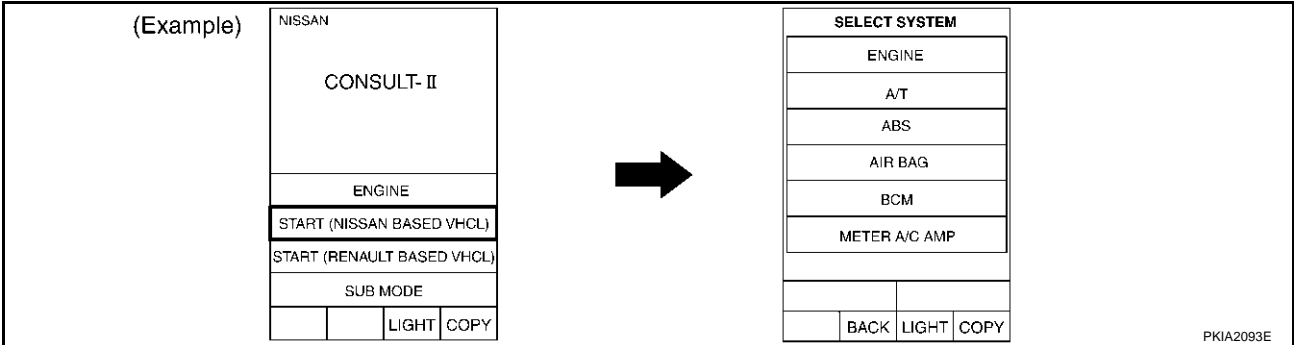
\*: THIS CONNECTOR IS NOT SHOWN IN "HARNES LAYOUT", PG SECTION.

REFER TO THE FOLLOWING.  
 (E24) -ELECTRICAL UNITS

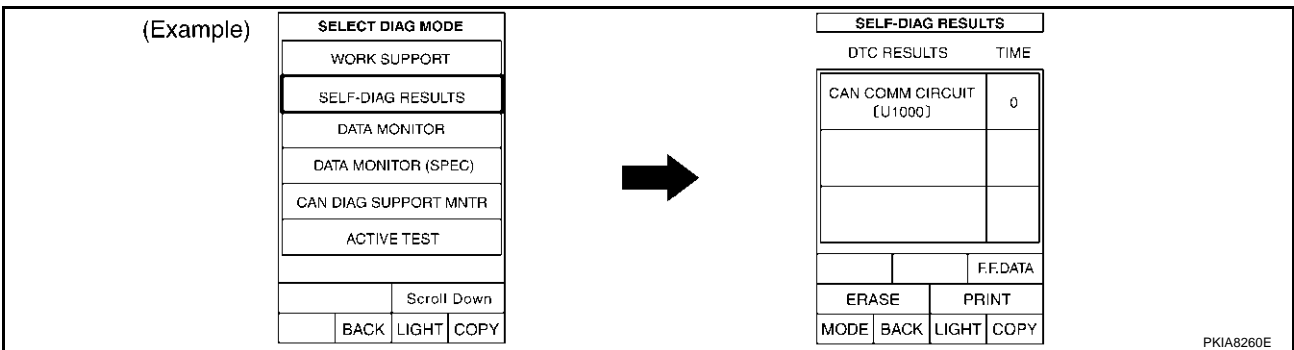


## Work Flow

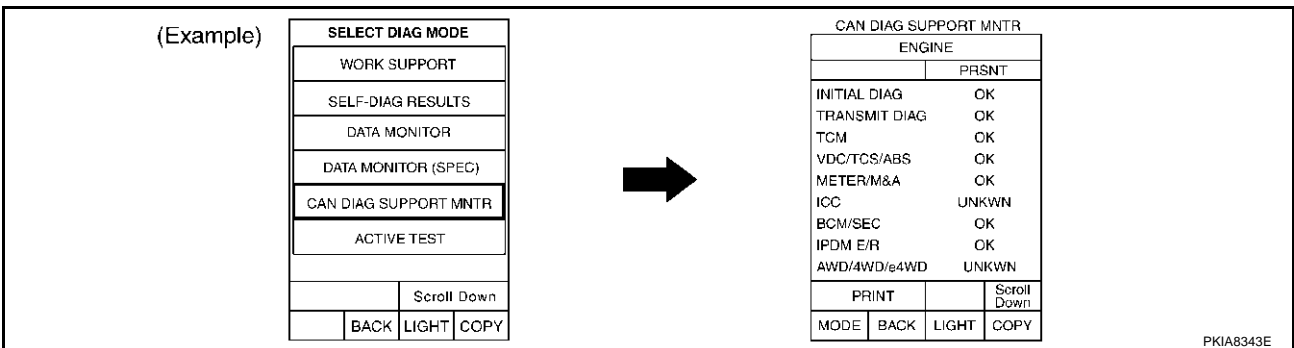
- When there are no indications of "TRANSMISSION", "AIR PRESSURE MONITOR", "METER A/C AMP" or "AUTO DRIVE POS." on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "AUTO DRIVE POS.", "ALL MODE AWD/4WD" and "ABS" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "AUTO DRIVE POS.", "ALL MODE AWD/4WD" and "ABS" displayed on CONSULT-II.



- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-735, "CHECK SHEET"](#).
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "v" onto the items with "No indication", "NG", or "UNKWKN" in the check sheet table. Refer to [LAN-735, "CHECK SHEET"](#).

**NOTE:**

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual. So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the integrated display system. Refer to [AV-110, "CAN Communication Line Check"](#).

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## CAN SYSTEM (TYPE 22)

[CAN]

7. Attach the CAN DIAG MONITOR check sheet onto the check sheet. Refer to [LAN-735, "CHECK SHEET"](#) .
8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG MONITOR check sheet. Refer to [LAN-735, "CHECK SHEET"](#) .

**NOTE:**

If "NG" is displayed on "CAN COMM" as "CAN DIAG MNTR" for the diagnosed control unit, replace the control unit. Refer to [AV-110, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-737, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

# CAN SYSTEM (TYPE 22)

[CAN]

## CHECK SHEET

**NOTE:**

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

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Check sheet table													
SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	-	NG	UNKWN	-	UNKWN	-	-	UNKWN	UNKWN	UNKWN	-	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	-	-	UNKWN	-	UNKWN	-	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	-	-	-	-	UNKWN	-	-	-	
Display unit	-	CAN COMM	CAN 1	CAN 3	-	CAN 6	-	CAN 2	CAN 5	-	-	CAN 7	
BCM	-	NG	UNKWN	UNKWN	-	-	-	-	UNKWN	-	-	UNKWN	
METER A/C AMP	No indication	-	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	-	UNKWN	UNKWN	-	
AUTO DRIVE POS.	No indication	NG	UNKWN	-	UNKWN	-	-	UNKWN	UNKWN	-	-	-	
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	-	-	UNKWN	-	-	-	
ABS	-	NG	UNKWN	UNKWN	-	-	-	-	-	-	-	-	

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

Attach copy of  
display unit  
CAN DIAG MONITOR check sheet

PKIB0898E

# CAN SYSTEM (TYPE 22)

[CAN]

Attach copy of  
ENGINE  
SELF-DIAG RESULTS

Attach copy of  
TRANSMISSION  
SELF-DIAG RESULTS

Attach copy of  
AIR PRESSURE  
MONITOR  
SELF-DIAG RESULTS

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
METER A/C AMP  
SELF-DIAG RESULTS

Attach copy of  
AUTO DRIVE POS.  
SELF-DIAG RESULTS

Attach copy of  
ALL MODE AWD/4WD  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

Attach copy of  
ENGINE  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
TRANSMISSION  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
AIR PRESSURE  
MONITOR  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
BCM  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
METER A/C AMP  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
AUTO DRIVE POS.  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ALL MODE AWD/4WD  
CAN DIAG SUPPORT  
MNTR

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CAN DIAG SUPPORT  
MNTR

PKIB0899E

# CAN SYSTEM (TYPE 22)

[CAN]

## CHECK SHEET RESULTS (EXAMPLE)

### NOTE:

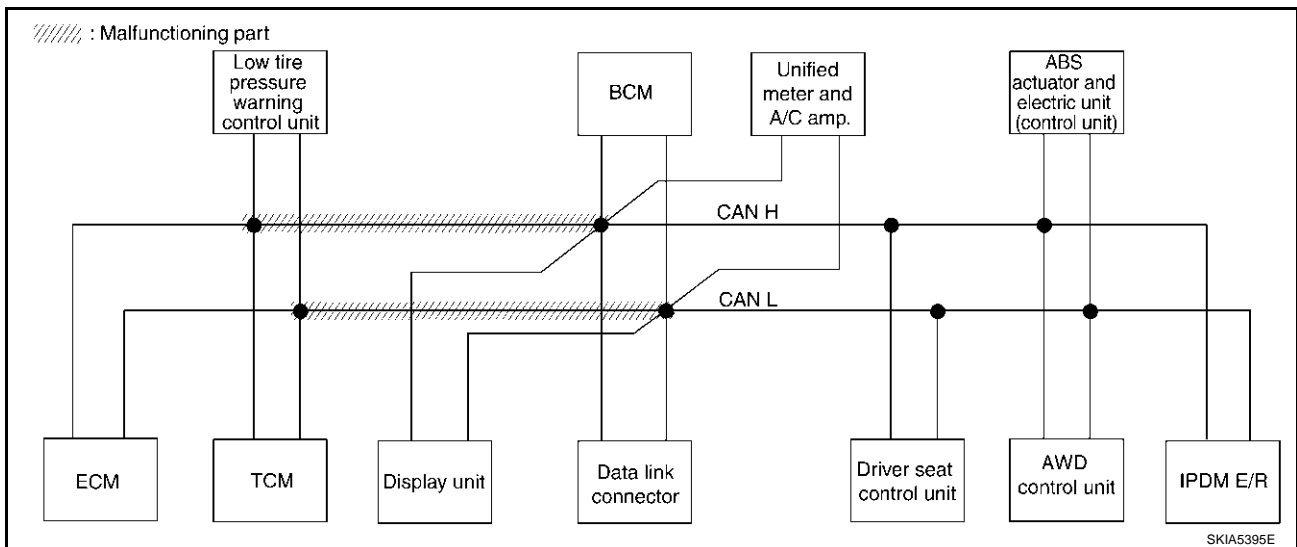
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

### Case 1

Check harness between TCM and data link connector. Refer to [LAN-752, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3 ✓	—	CAN 6 ✓	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

PKIB0900E



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# CAN SYSTEM (TYPE 22)

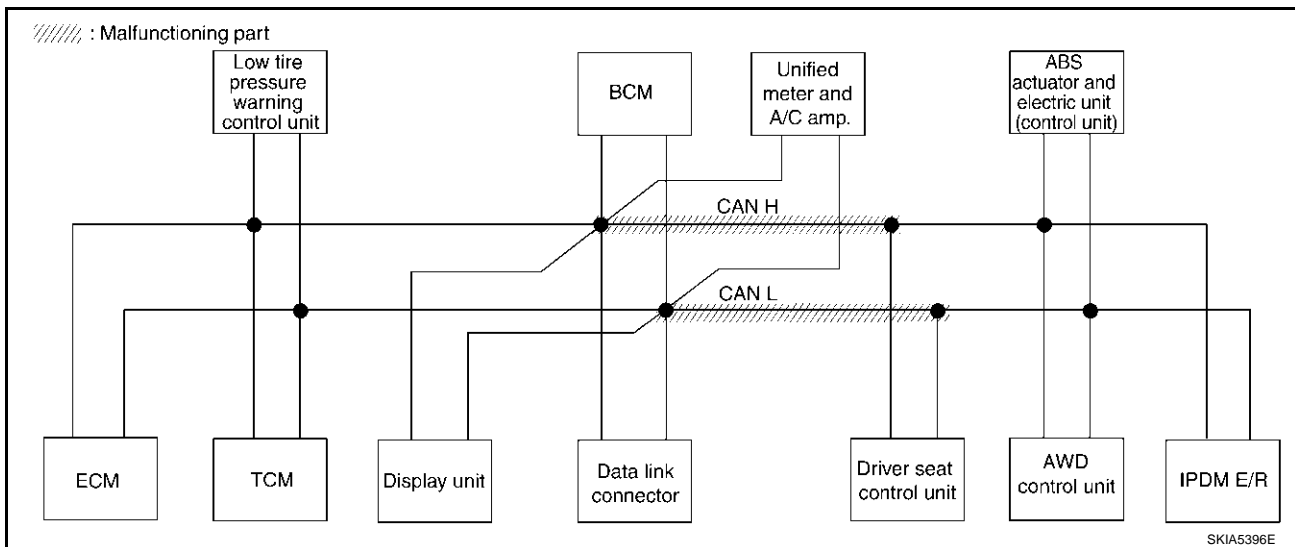
[CAN]

## Case 2

Check harness between data link connector and driver seat control unit. Refer to [LAN-752, "Circuit Check Between Data Link Connector and Driver Seat Control Unit"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

PKIB0901E



# CAN SYSTEM (TYPE 22)

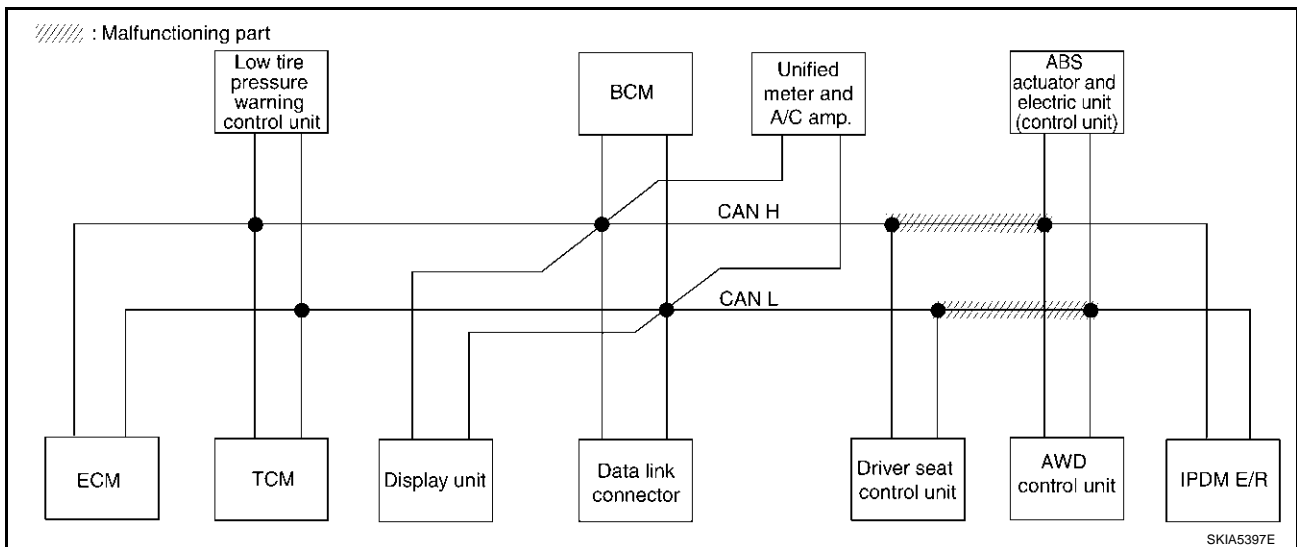
[CAN]

## Case 3

Check harness between driver seat control unit and ABS actuator and electric unit (control unit). Refer to LAN-753, "Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit)".

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

PKIB0902E



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# CAN SYSTEM (TYPE 22)

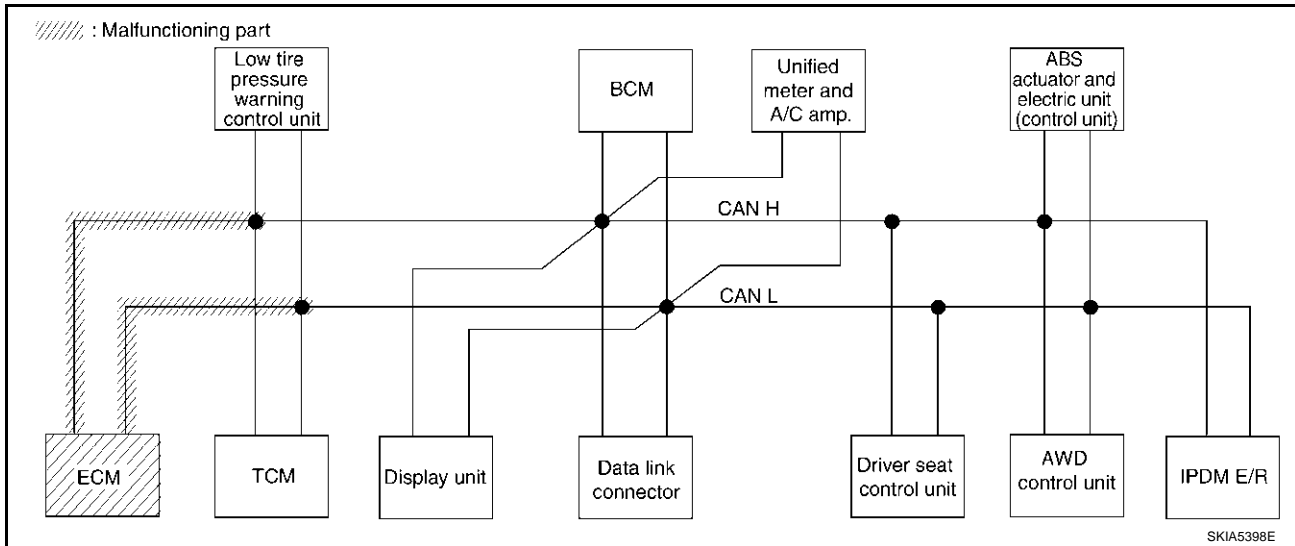
[CAN]

## Case 4

Check ECM circuit. Refer to [LAN-754, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW <sup>N</sup>	—	UNKW <sup>N</sup>	—	—	UNKW <sup>N</sup>	UNKW <sup>N</sup>	UNKW <sup>N</sup>	—	UNKW <sup>N</sup>
TRANSMISSION	No indication	NG	UNKW <sup>N</sup>	UNKW <sup>N</sup>	—	—	—	—	UNKW <sup>N</sup>	—	UNKW <sup>N</sup>	—
AIR PRESSURE MONITOR	No indication	NG	UNKW <sup>N</sup>	—	—	—	—	—	UNKW <sup>N</sup>	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKW <sup>N</sup>	UNKW <sup>N</sup>	—	—	—	—	UNKW <sup>N</sup>	—	—	UNKW <sup>N</sup>
METER A/C AMP	No indication	—	UNKW <sup>N</sup>	UNKW <sup>N</sup>	UNKW <sup>N</sup>	UNKW <sup>N</sup>	UNKW <sup>N</sup>	UNKW <sup>N</sup>	—	UNKW <sup>N</sup>	UNKW <sup>N</sup>	—
AUTO DRIVE POS.	No indication	NG	UNKW <sup>N</sup>	—	UNKW <sup>N</sup>	—	—	UNKW <sup>N</sup>	UNKW <sup>N</sup>	—	—	—
ALL MODE AWD/4WD	—	NG	UNKW <sup>N</sup>	UNKW <sup>N</sup>	—	—	—	—	UNKW <sup>N</sup>	—	—	—
ABS	—	NG	UNKW <sup>N</sup>	UNKW <sup>N</sup>	—	—	—	—	—	—	—	—

PKIB0903E





# CAN SYSTEM (TYPE 22)

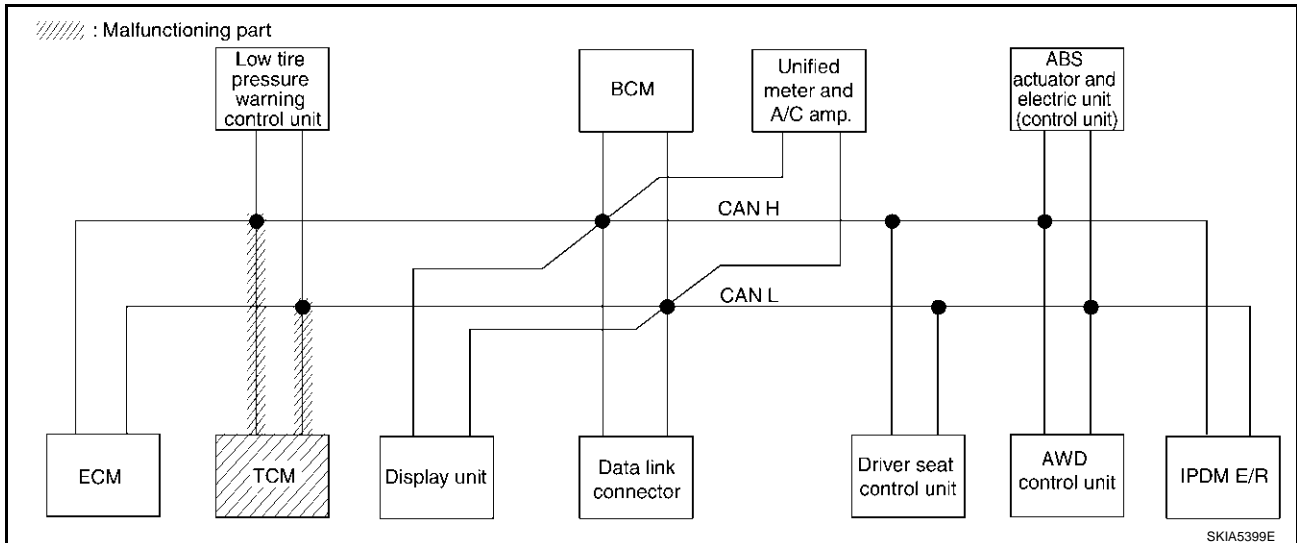
[CAN]

## Case 5

Check TCM circuit. Refer to [LAN-754, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

PKIB0904E



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# CAN SYSTEM (TYPE 22)

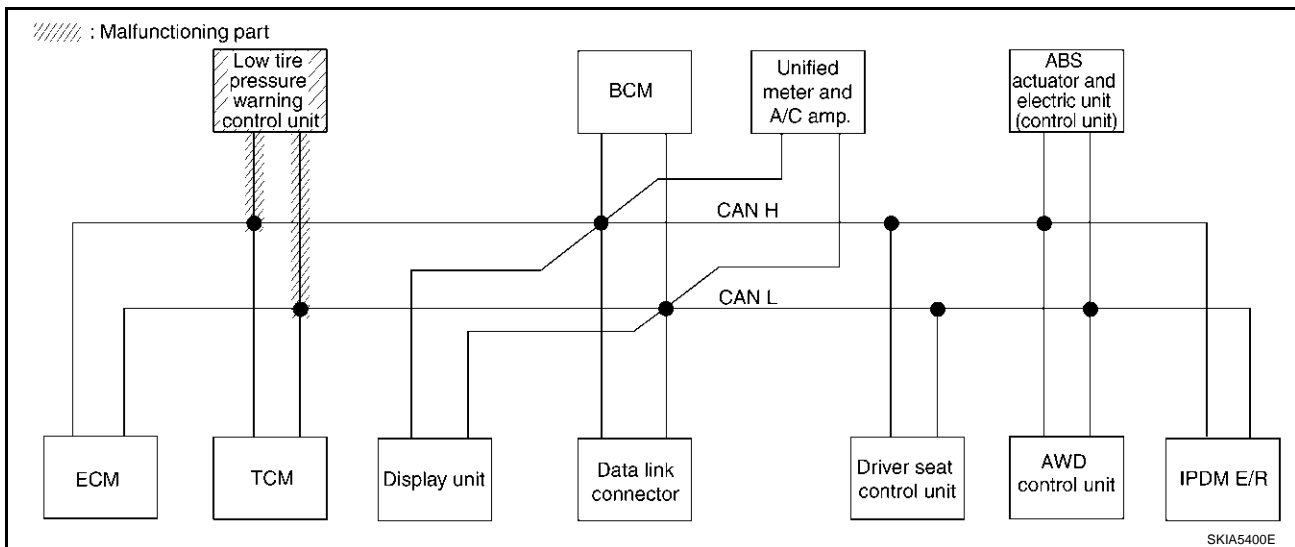
[CAN]

## Case 6

Check low tire pressure warning control unit circuit. Refer to [LAN-755, "Low Tire Pressure Warning Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

PKIB0905E



# CAN SYSTEM (TYPE 22)

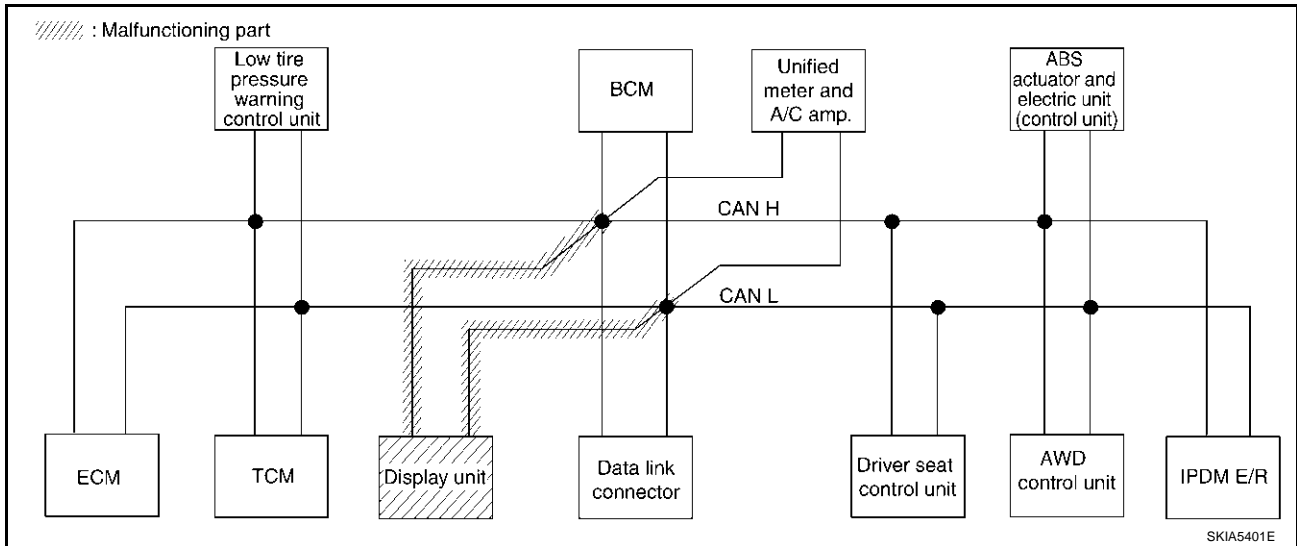
[CAN]

## Case 7

Check display unit circuit. Refer to [LAN-755, "Display Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CA✓1	CA✓3	—	CA✓6	—	CA✓2	CA✓5	—	—	CA✓7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	UNKWN	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 22)

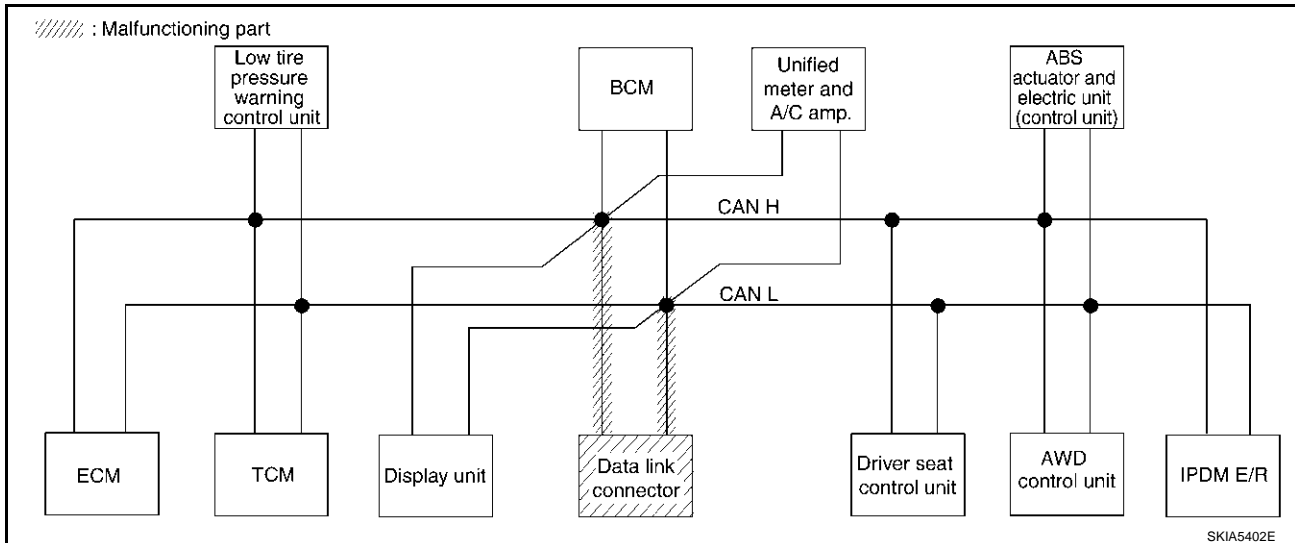
[CAN]

## Case 8

Check data link connector circuit. Refer to [LAN-756, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 22)

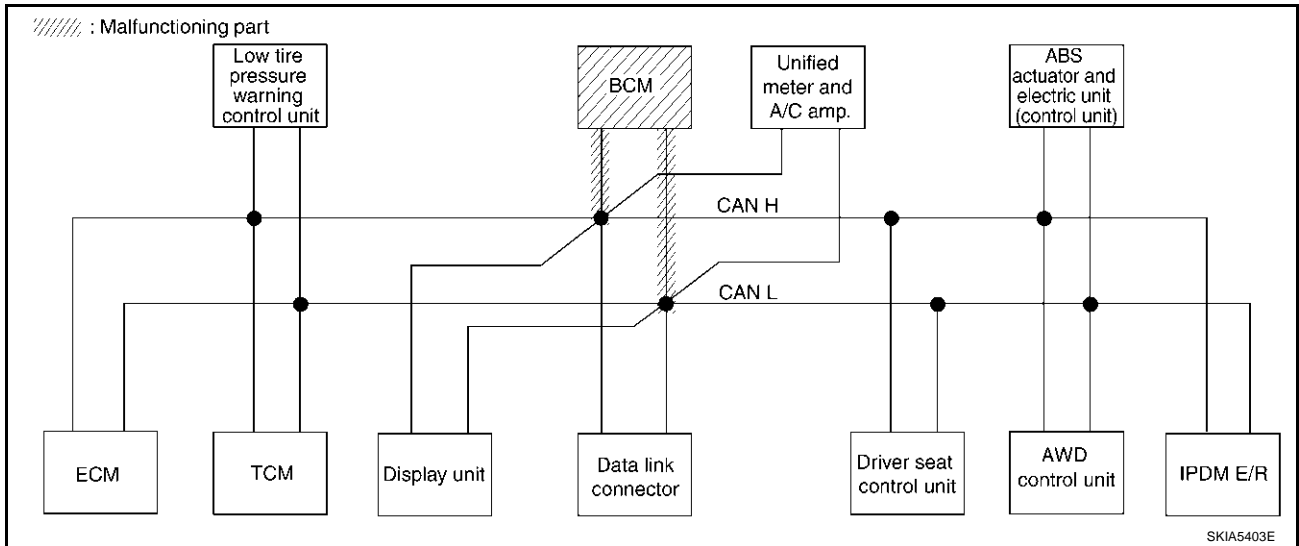
[CAN]

## Case 9

Check BCM circuit. Refer to [LAN-756, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 22)

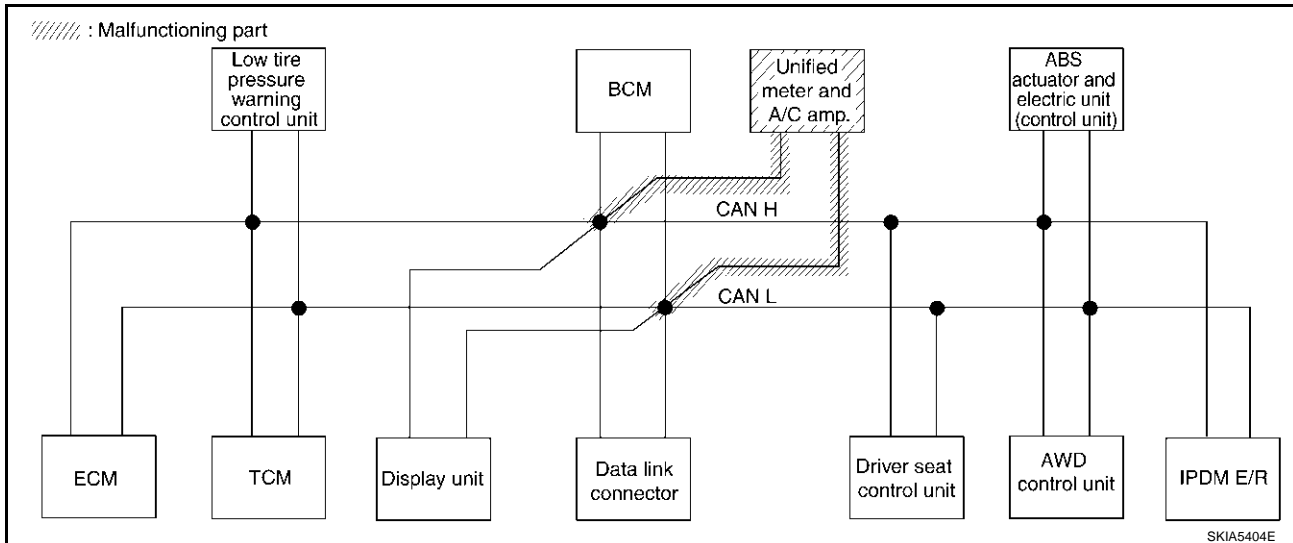
[CAN]

## Case 10

Check unified meter and A/C amp. circuit. Refer to [LAN-757, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

PKIB0909E



# CAN SYSTEM (TYPE 22)

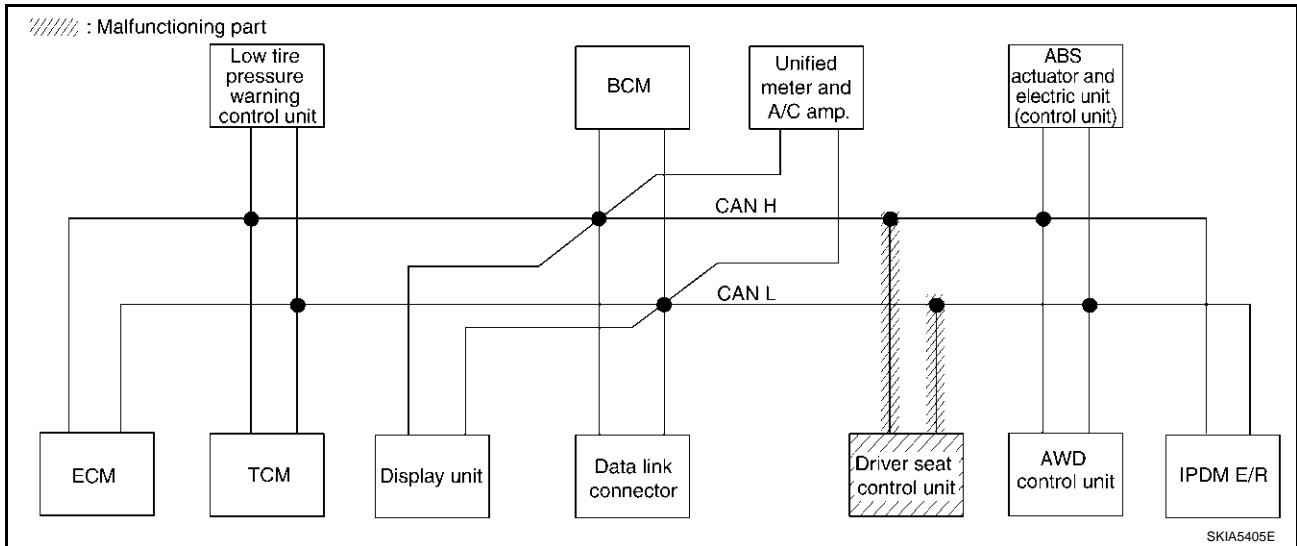
[CAN]

## Case 11

Check driver seat control unit circuit. Refer to [LAN-757, "Driver Seat Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

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# CAN SYSTEM (TYPE 22)

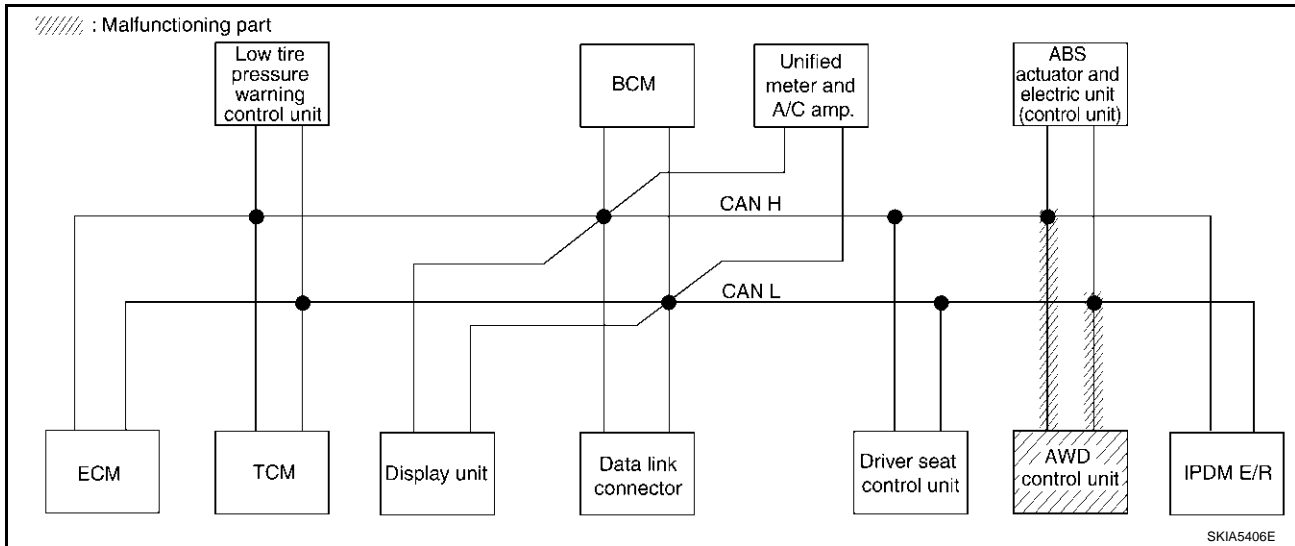
[CAN]

## Case 12

Check AWD control unit circuit. Refer to [LAN-758, "AWD Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

PKIB0911E





# CAN SYSTEM (TYPE 22)

[CAN]

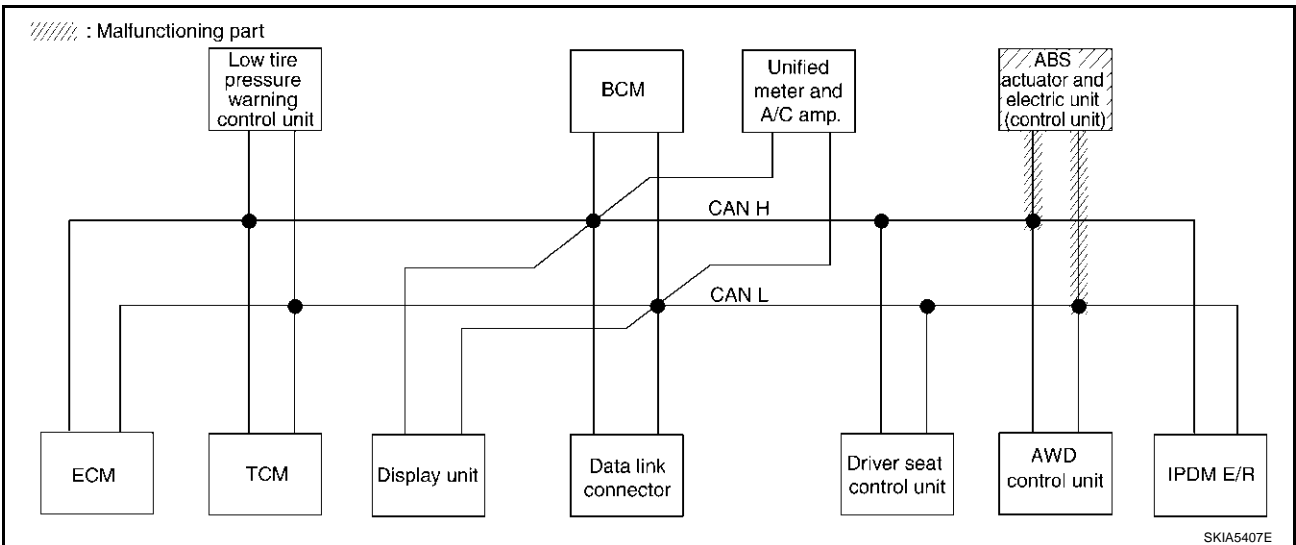
## Case 13

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-758, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

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SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	UNKWN	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

PKIB0912E



# CAN SYSTEM (TYPE 22)

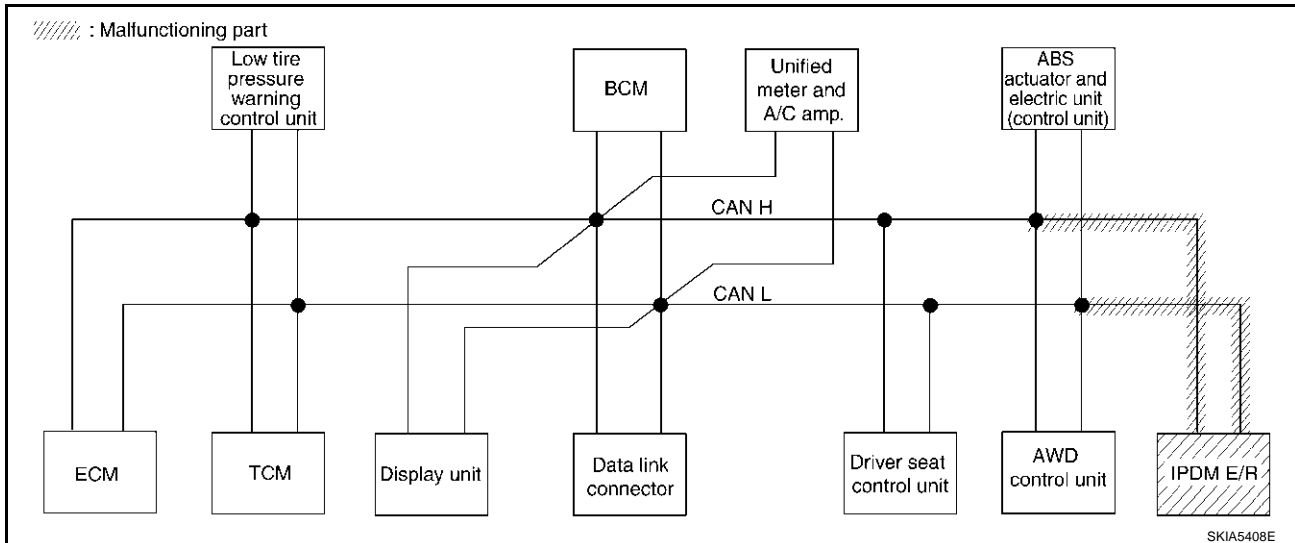
[CAN]

## Case 14

Check IPDM E/R circuit. Refer to [LAN-759, "IPDM E/R Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW <del>N</del>	—	UNKW <del>N</del>	—	—	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	—	UNKW <del>N</del>
TRANSMISSION	No indication	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	—	UNKW <del>N</del>	—	UNKW <del>N</del>	—
AIR PRESSURE MONITOR	No indication	NG	UNKW <del>N</del>	—	—	—	—	—	UNKW <del>N</del>	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	—	UNKW <del>N</del>	—	—	UNKW <del>N</del>
METER A/C AMP	No indication	—	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	—	UNKW <del>N</del>	UNKW <del>N</del>	—
AUTO DRIVE POS.	No indication	NG	UNKW <del>N</del>	—	UNKW <del>N</del>	—	—	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—
ALL MODE AWD/4WD	—	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	—	UNKW <del>N</del>	—	—	—
ABS	—	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	—	—	—	—	—

PKIB0913E



## Case 15

Check CAN communication circuit. Refer to [LAN-760, "CAN Communication Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW <del>N</del>	—	UNKW <del>N</del>	—	—	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	—	UNKW <del>N</del>
TRANSMISSION	No indication	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	—	UNKW <del>N</del>	—	UNKW <del>N</del>	—
AIR PRESSURE MONITOR	No indication	NG	UNKW <del>N</del>	—	—	—	—	—	UNKW <del>N</del>	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7
BCM	—	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	—	UNKW <del>N</del>	—	—	UNKW <del>N</del>
METER A/C AMP	No indication	—	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	—	UNKW <del>N</del>	UNKW <del>N</del>	—
AUTO DRIVE POS.	No indication	NG	UNKW <del>N</del>	—	UNKW <del>N</del>	—	—	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—
ALL MODE AWD/4WD	—	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	—	UNKW <del>N</del>	—	—	—
ABS	—	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	—	—	—	—	—

PKIB0914E

# CAN SYSTEM (TYPE 22)

[CAN]

## Case 16

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-764, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKW	—	UNKW	—	—	UNKW	UNKW	UNKW	—	UNKW	
TRANSMISSION	No indication ✓	NG	UNKW	UNKW	—	—	—	—	UNKW	—	UNKW	—	
AIR PRESSURE MONITOR	No indication	NG	UNKW	—	—	—	—	—	UNKW	—	—	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	—	NG	UNKW	UNKW	—	—	—	—	UNKW	—	—	UNKW	
METER A/C AMP	No indication	—	UNKW	UNKW	UNKW	UNKW	UNKW	UNKW	—	UNKW	UNKW	—	
AUTO DRIVE POS.	No indication	NG	UNKW	—	UNKW	—	—	UNKW	UNKW	—	—	—	
ALL MODE AWD/4WD	—	NG	UNKW	UNKW	—	—	—	—	UNKW	—	—	—	
ABS	—	NG	UNKW	UNKW	—	—	—	—	—	—	—	—	

PKIB0915E

## Case 17

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-764, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKW	—	UNKW	—	—	UNKW	UNKW	UNKW	—	UNKW	
TRANSMISSION	No indication	NG	UNKW	UNKW	—	—	—	—	UNKW	—	UNKW	—	
AIR PRESSURE MONITOR	No indication	NG	UNKW	—	—	—	—	—	UNKW	—	—	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	—	NG	UNKW	UNKW	—	—	—	—	UNKW	—	—	UNKW	
METER A/C AMP	No indication	—	UNKW	UNKW	UNKW	UNKW	UNKW	UNKW	—	UNKW	UNKW	—	
AUTO DRIVE POS.	No indication	NG	UNKW	—	UNKW	—	—	UNKW	UNKW	—	—	—	
ALL MODE AWD/4WD	—	NG	UNKW	UNKW	—	—	—	—	UNKW	—	—	—	
ABS	—	NG	UNKW	UNKW	—	—	—	—	—	—	—	—	

PKIB0916E

## Circuit Check Between TCM and Data Link Connector

AKS00720

### 1. CHECK HARNESS FOR OPEN CIRCUIT

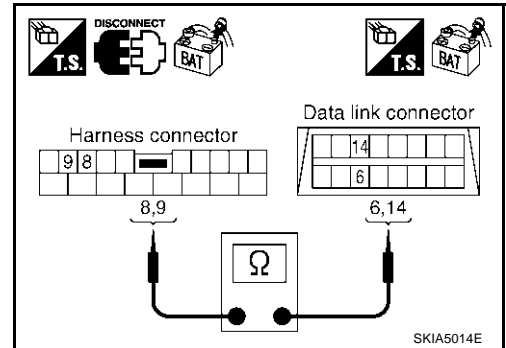
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

**8 (L) - 6 (L) : Continuity should exist.**

**9 (Y) - 14 (Y) : Continuity should exist.**

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-733, "Work Flow"](#) .
- NG >> Repair harness.



## Circuit Check Between Data Link Connector and Driver Seat Control Unit

AKS0072P

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector M9
  - Harness connector B2

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

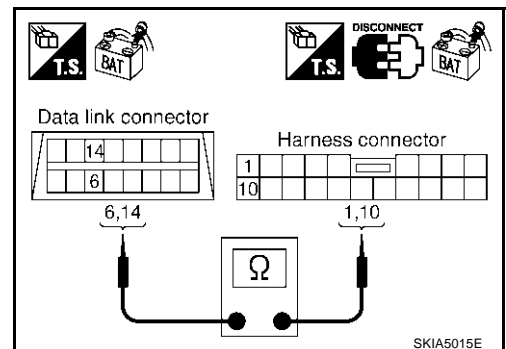
1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

**6 (L) - 1 (L) : Continuity should exist.**

**14 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



### 3. CHECK HARNESS FOR OPEN CIRCUIT

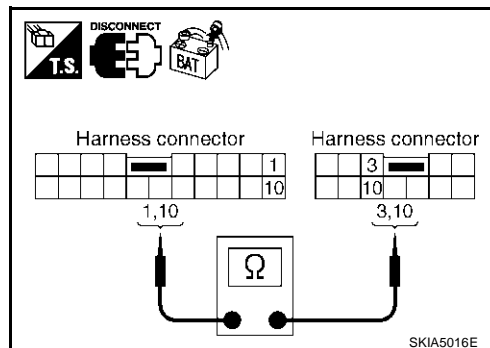
1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-733, "Work Flow"](#).
- NG >> Repair harness.



### Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit)

AKS0072Q

#### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector B4
  - Harness connector E105

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

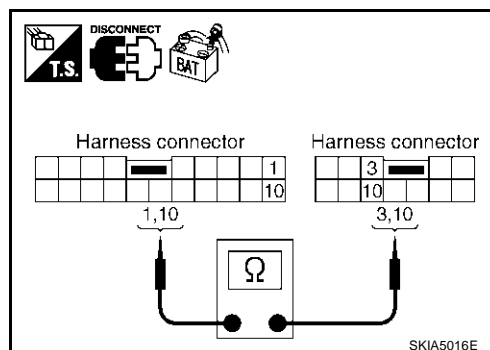
1. Disconnect harness connector B2 and harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



LAN

### 3. CHECK HARNESS FOR OPEN CIRCUIT

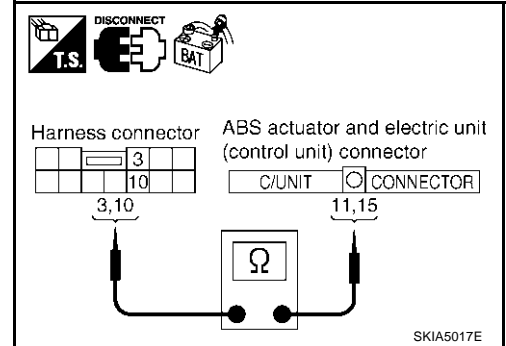
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

**3 (L) - 11 (L) : Continuity should exist.**

**10 (Y) - 15 (Y) : Continuity should exist.**

#### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-733. "Work Flow"](#) .
- NG >> Repair harness.



## ECM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

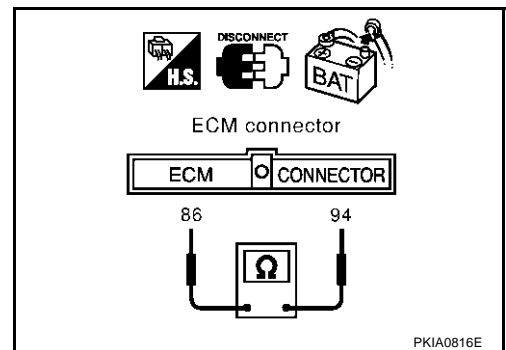
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

**94 (L) - 86 (Y) : Approx. 108 - 132Ω**

#### OK or NG

- OK >> Replace ECM.
- NG >> Repair harness between ECM and TCM.



## TCM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
  - TCM connector
  - Harness connector F102
  - Harness connector M82

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

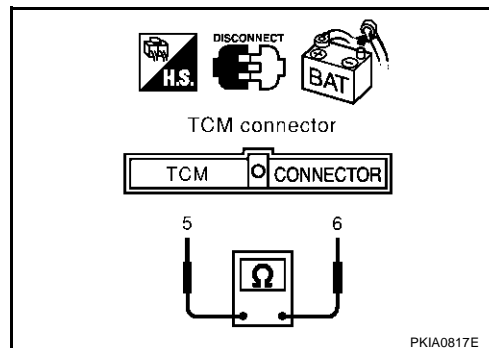
1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace TCM.  
 NG >> Repair harness between TCM and low tire pressure warning control unit.



## Low Tire Pressure Warning Control Unit Circuit Check

AKS0072T

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of low tire pressure warning control unit for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

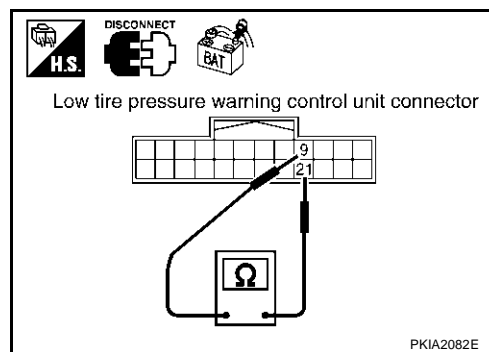
1. Disconnect low tire pressure warning control unit connector.
2. Check resistance between low tire pressure warning control unit harness connector M81 terminals 9 (L) and 21 (Y).

**9 (L) - 21 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace low tire pressure warning control unit.  
 NG >> Repair harness between low tire pressure warning control unit and TCM.



## Display Unit Circuit Check

AKS0072U

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display unit for damage, bend and loose connection (unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

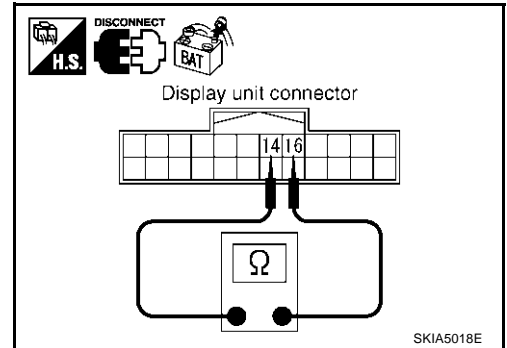
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect display unit connector.
2. Check resistance between display unit harness connector M39 terminals 14 (L) and 16 (Y).

**14 (L) - 16 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace display unit.  
 NG >> Repair harness between display unit and data link connector.



SKIA5018E

## Data Link Connector Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

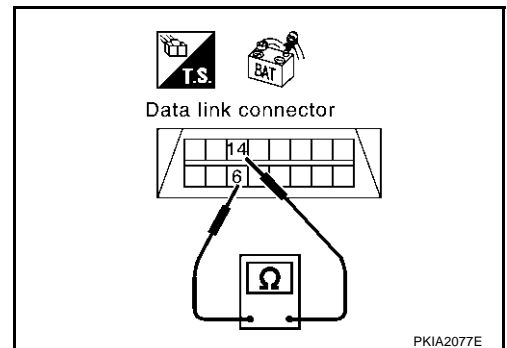
## 2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Diagnose again. Refer to [LAN-733, "Work Flow"](#).  
 NG >> Repair harness between data link connector and BCM.



PKIA2077E

## BCM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

AKS0072W



## 2. CHECK HARNESS FOR OPEN CIRCUIT

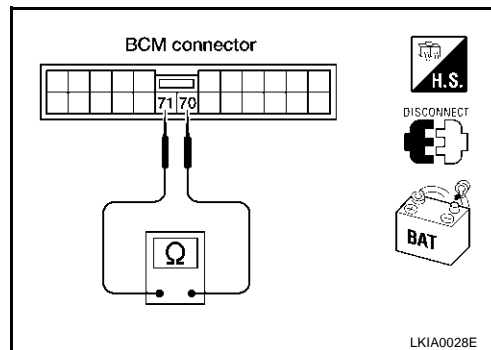
1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M37 terminals 70 (L) and 71 (Y).

**70 (L) - 71 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace BCM. Refer to [BCS-36, "Removal and Installation of BCM"](#).
- NG >> Repair harness between BCM and data link connector.



AKS0072X

## Unified Meter and A/C Amp. Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

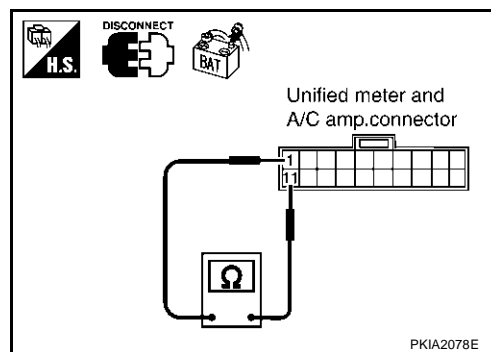
1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

**1 (L) - 11 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace unified meter and A/C amp.
- NG >> Repair harness between unified meter and A/C amp. and data link connector.



AKS0072Y

## Driver Seat Control Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control unit side and harness side).
  - Driver seat control unit connector
  - Harness connector B301
  - Harness connector B9

### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

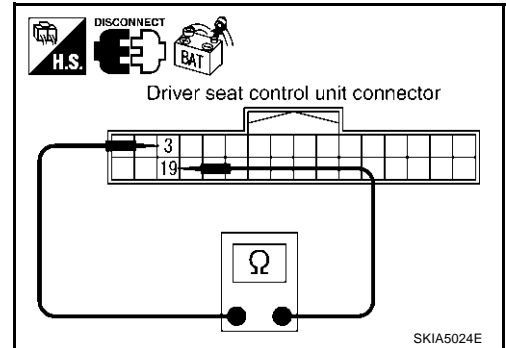
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect driver seat control unit connector.
2. Check resistance between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

**3 (L/Y) - 19 (BR/W) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace driver seat control unit.  
 NG >> Repair harness between driver seat control unit and harness connector B4.



AKS0072Z

## AWD Control Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of AWD control unit for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

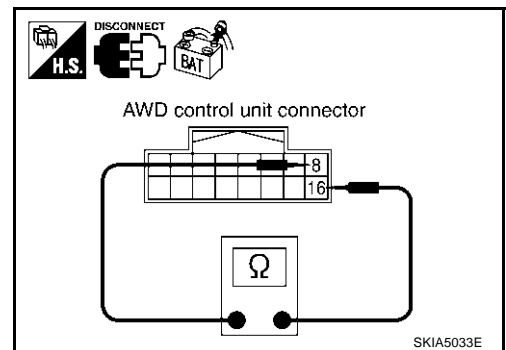
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect AWD control unit connector.
2. Check resistance between AWD control unit harness connector E111 terminals 8 (L) and 16 (Y).

**8 (L) - 16 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace AWD control unit.  
 NG >> Repair harness between AWD control unit and IPDM E/R.



AKS00730

## ABS Actuator and Electric Unit (Control Unit) Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

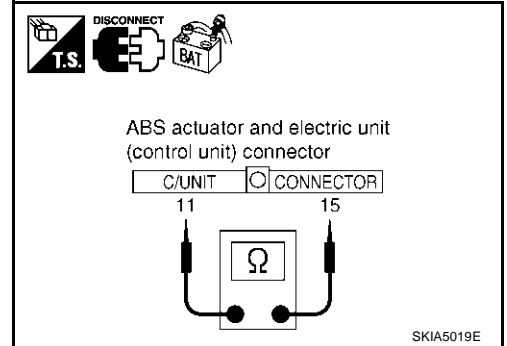
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

**11 (L) - 15 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).  
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



AKS00731

## IPDM E/R Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

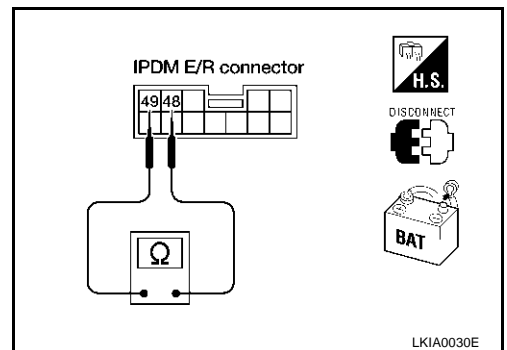
1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y)**

**: Approx. 108 - 132Ω**

### OK or NG

- OK >> Replace IPDM E/R.  
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



LKIA0030E

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L  
M

## CAN Communication Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, unit side, meter side and harness side).
  - ECM
  - TCM
  - Low tire pressure warning control unit
  - Display unit
  - BCM
  - Unified meter and A/C amp.
  - Driver seat control unit
  - AWD control unit
  - ABS actuator and electric unit (control unit)
  - IPDM E/R
  - Between ECM and IPDM E/R
  - Between ECM and TCM
  - Between ECM and driver seat control unit

#### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

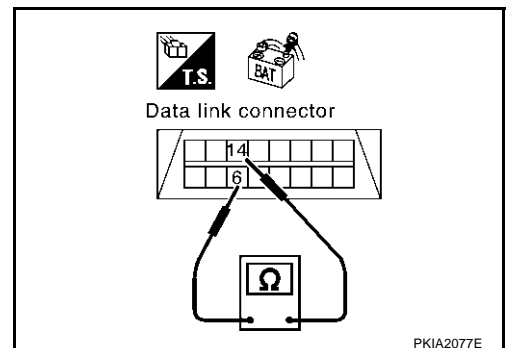
### 2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
  - ECM connector
  - Low tire pressure warning control unit connector
  - Harness connector M82
  - Display unit connector
  - BCM connector
  - Unified meter and A/C amp. connector
  - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Continuity should not exist.**

#### OK or NG

- OK >> GO TO 3.  
 NG >> Check the following harnesses. If any harness is damaged, repair the harness.
- Harness between data link connector and ECM.
  - Harness between data link connector and low tire pressure warning control unit.
  - Harness between data link connector and harness connector M82.
  - Harness between data link connector and display unit.
  - Harness between data link connector and BCM.
  - Harness between data link connector and unified meter and A/C amp.
  - Harness between data link connector and harness connector M9.



### 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

**6 (L) - Ground : Continuity should not exist.**

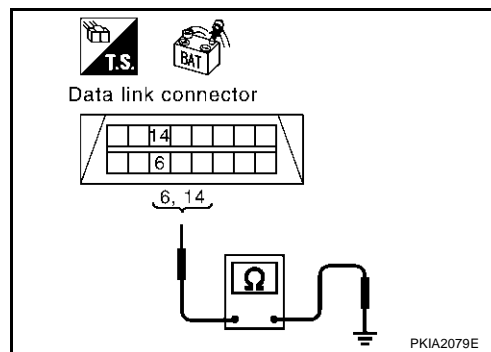
**14 (Y) - Ground : Continuity should not exist.**

#### OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9.



### 4. CHECK HARNESS FOR SHORT CIRCUIT

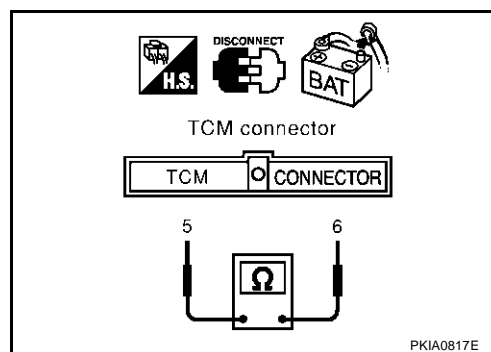
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Continuity should not exist.**

#### OK or NG

OK >> GO TO 5.

NG >> Repair harness between TCM and harness connector F102.



### 5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

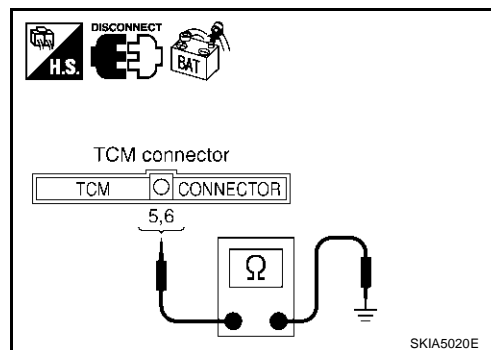
**5 (L) - Ground : Continuity should not exist.**

**6 (Y) - Ground : Continuity should not exist.**

#### OK or NG

OK >> GO TO 6.

NG >> Repair harness between TCM and harness connector F102.



## 6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B4 and harness connector B9.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

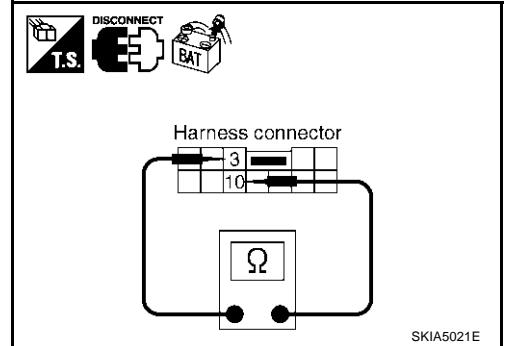
**3 (L) - 10 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 7.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Repair harness between harness connector B4 and harness connector B2.
- Repair harness between harness connector B4 and harness connector B9.



## 7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

**3 (L) - Ground : Continuity should not exist.**

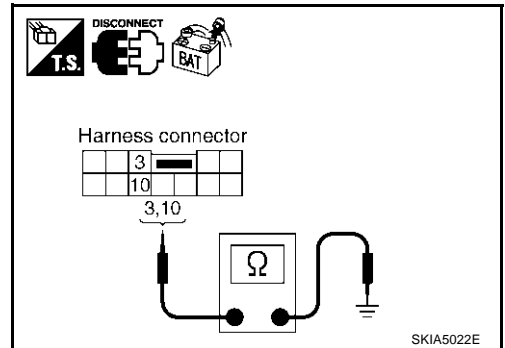
**10 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 8.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Repair harness between harness connector B4 and harness connector B2.
- Repair harness between harness connector B4 and harness connector B9.



## 8. CHECK HARNESS FOR SHORT CIRCUIT

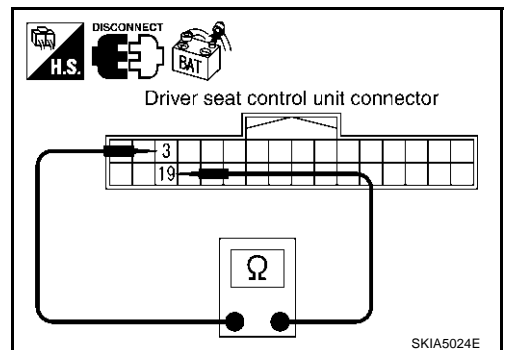
1. Disconnect driver seat control unit connector.
2. Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

**3 (L/Y) - 19 (BR/W) : Continuity should not exist.**

OK or NG

OK >> GO TO 9.

NG >> Repair harness between driver seat control unit and harness connector B301.



## 9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y), 19 (BR/W) and ground.

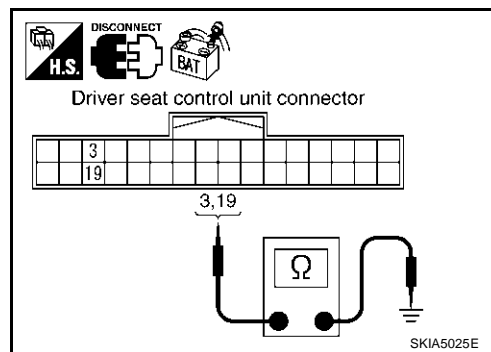
**3 (L/Y) - Ground : Continuity should not exist.**

**19 (BR/W) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 10.

NG >> Repair harness between driver seat control unit and harness connector B301.



## 10. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect AWD control unit connector, ABS actuator and electric unit (control unit) connector and IPDM E/R connector.

2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

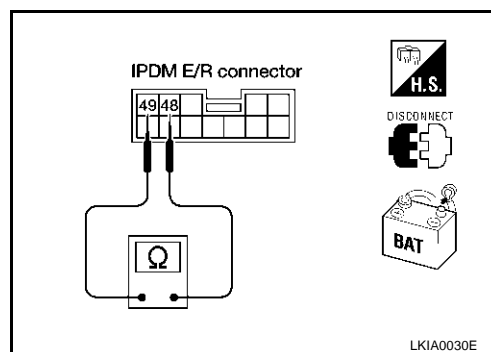
**48 (L) - 49 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 11.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 11. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

**48 (L) - Ground : Continuity should not exist.**

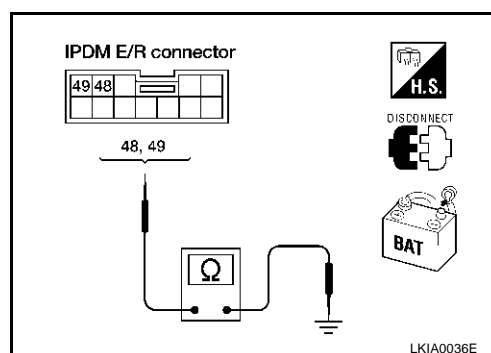
**49 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 12.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 12. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-764, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-733, "Work Flow"](#).

NG >> Replace ECM and/or IPDM E/R.

## IPDM E/R Ignition Relay Circuit Check

AKS00733

Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-45, "IPDM E/R Power/Ground Circuit Inspection"](#) .
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#) .

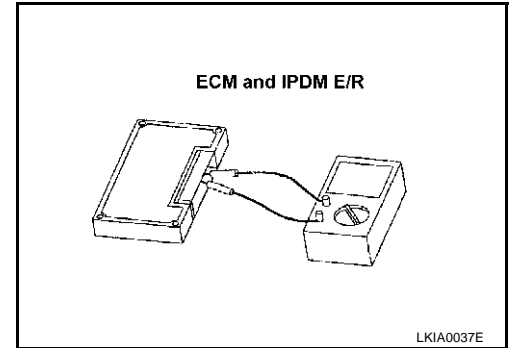
## Component Inspection

AKS00734

### ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value ( $\Omega$ ) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	





## CAN SYSTEM (TYPE 23)

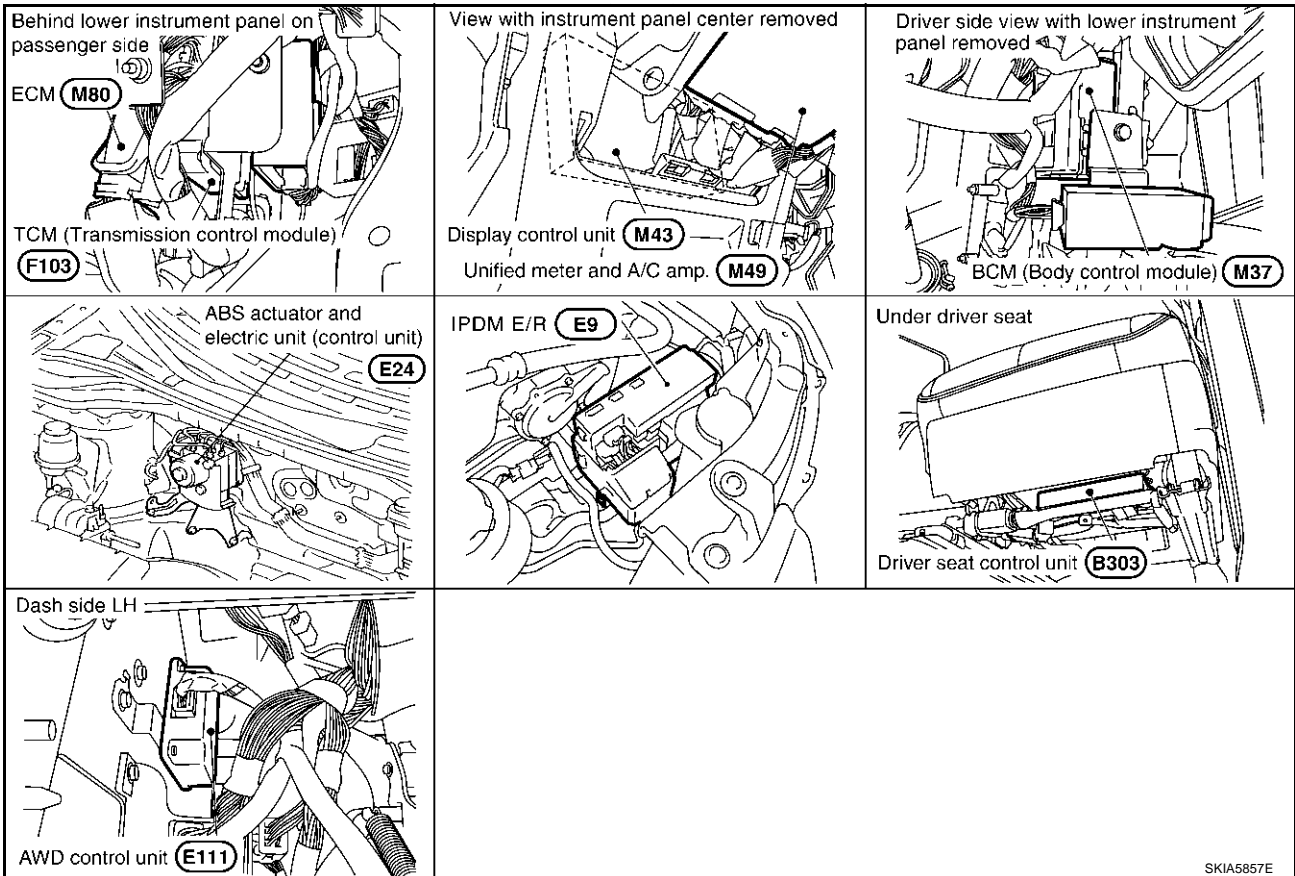
### System Description

AKS00735

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

### Component Parts and Harness Connector Location

AKS00736



SKIA5857E

A  
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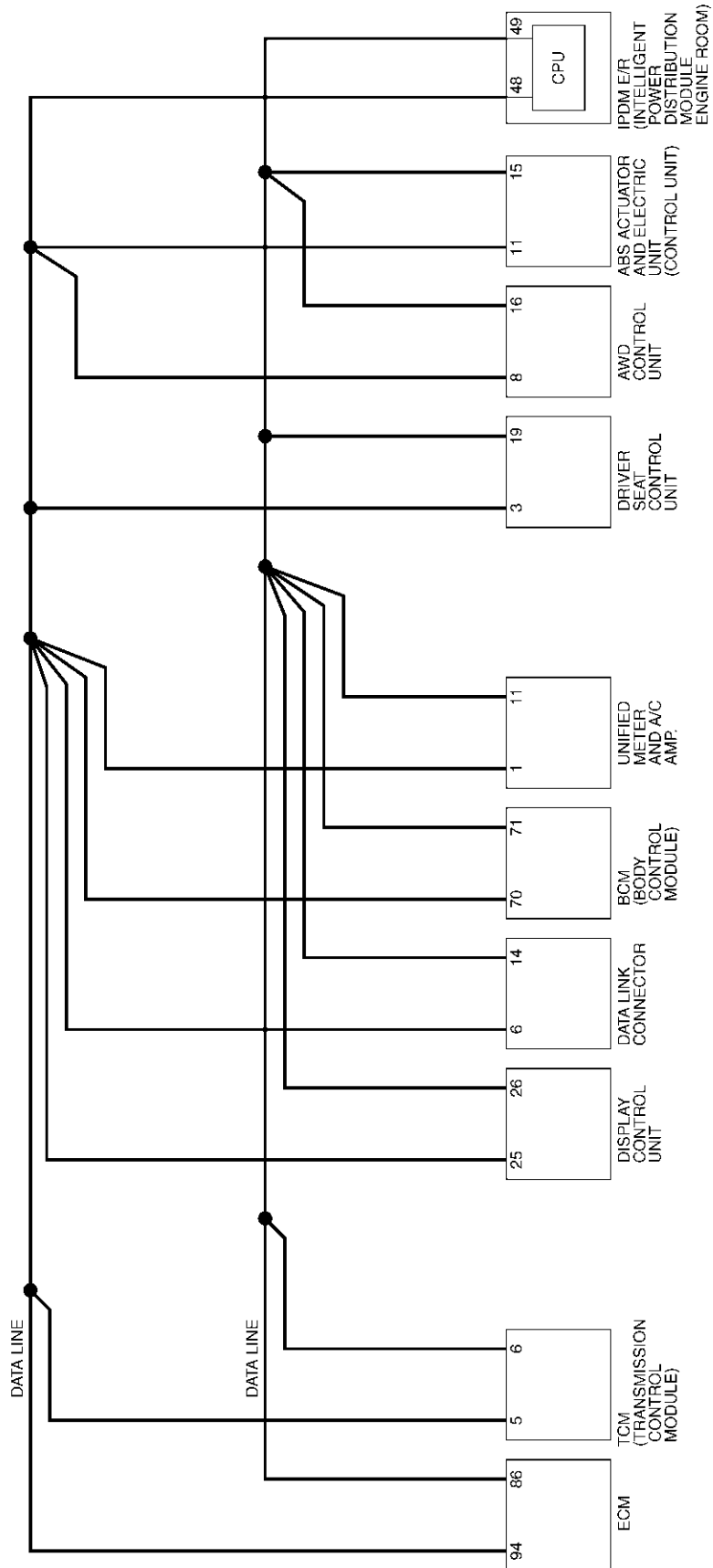
LAN

# CAN SYSTEM (TYPE 23)

[CAN]

## Schematic

AKS00737



TKWA1011E

# CAN SYSTEM (TYPE 23)

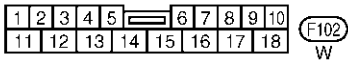
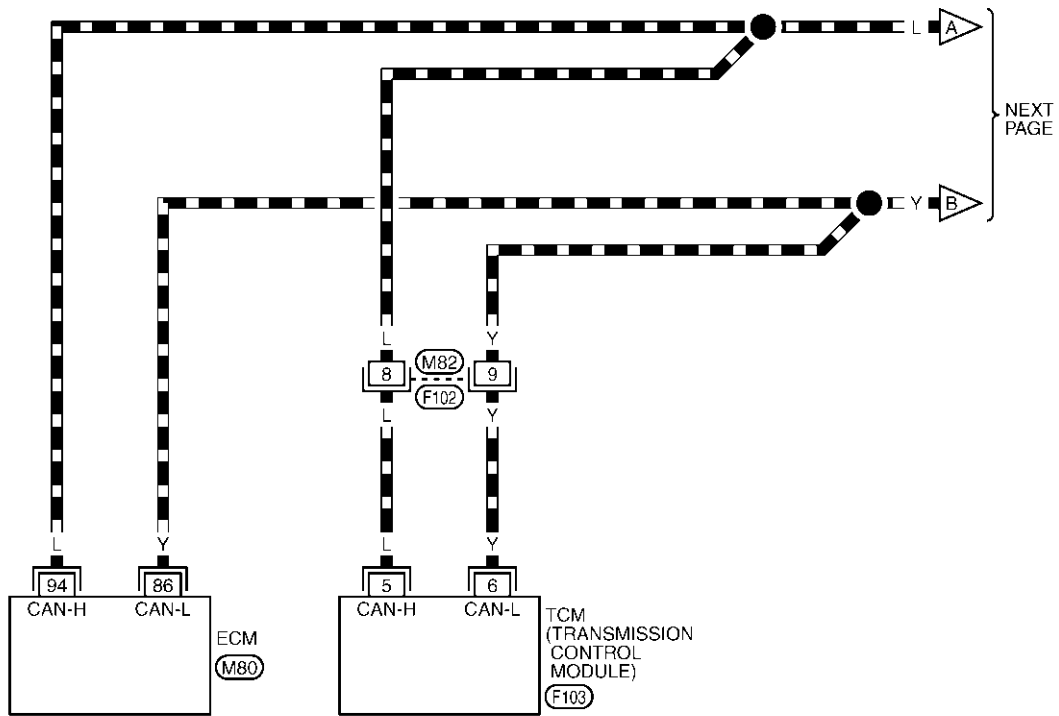
[CAN]

## Wiring Diagram - CAN -

AKS00738

### LAN-CAN-67

▬ : DATA LINE



REFER TO THE FOLLOWING.  
(M80), (F103) -ELECTRICAL  
UNITS

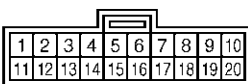
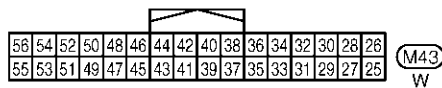
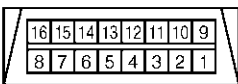
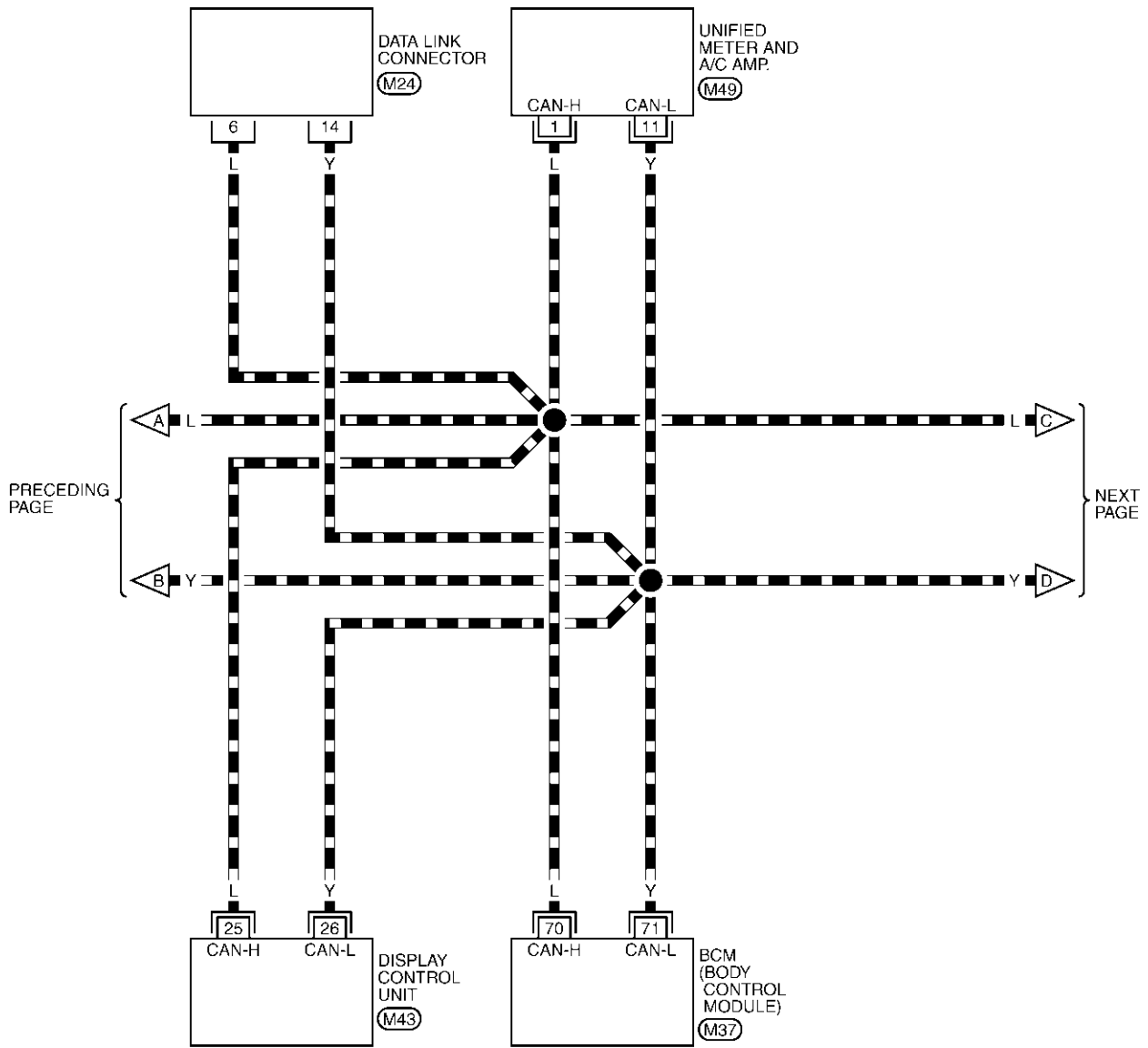
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LAN

TKWA1012E

## LAN-CAN-68

▬ : DATA LINE



REFER TO THE FOLLOWING.  
(M37) -ELECTRICAL UNITS

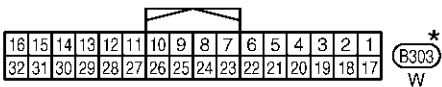
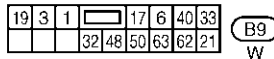
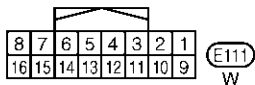
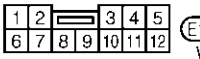
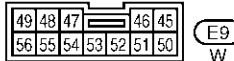
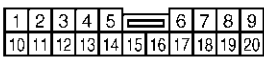
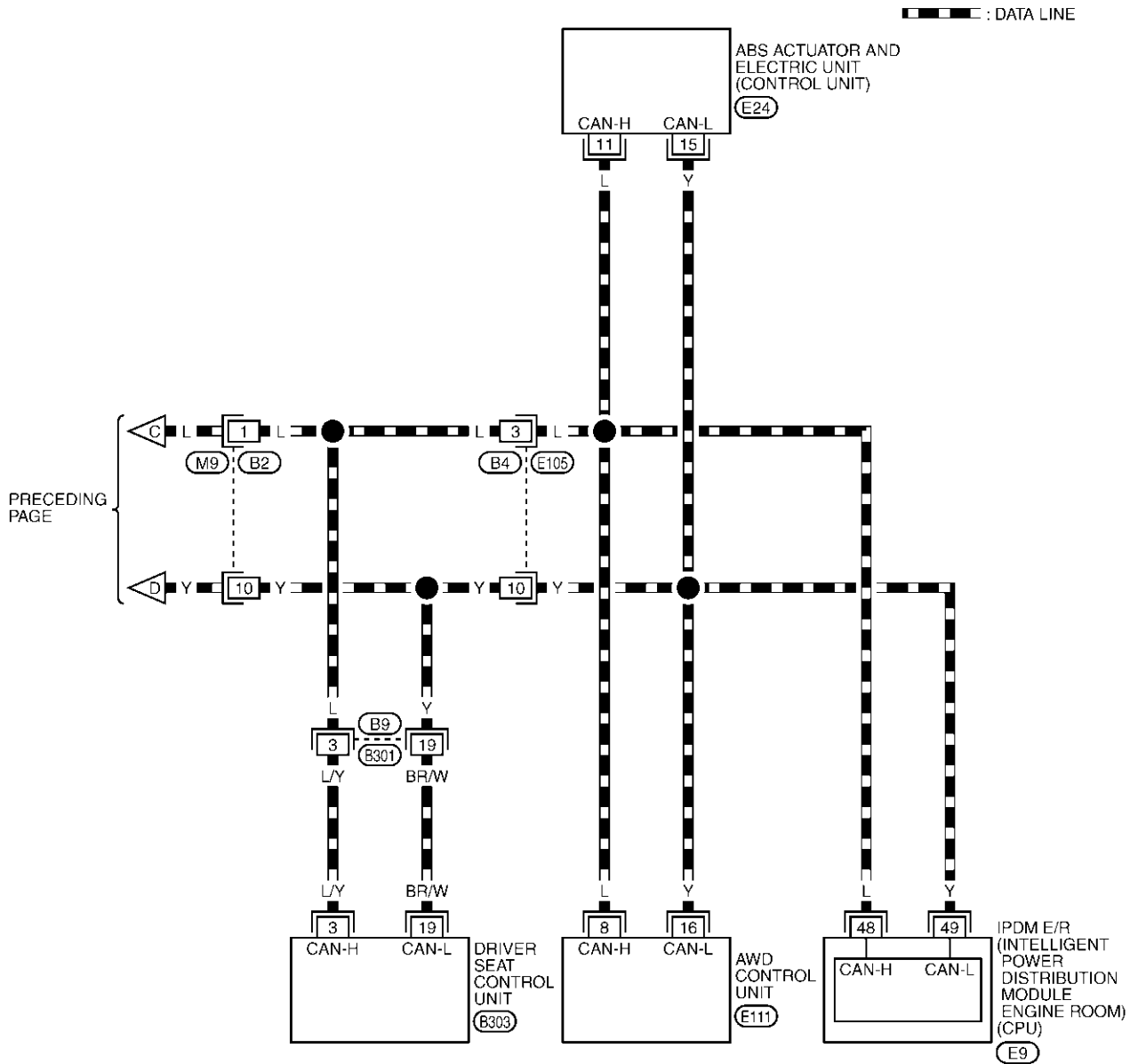
TKWA1013E

# CAN SYSTEM (TYPE 23)

[CAN]

LAN-CAN-69

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\*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

REFER TO THE FOLLOWING.  
E24 -ELECTRICAL UNITS

TKWA1014E

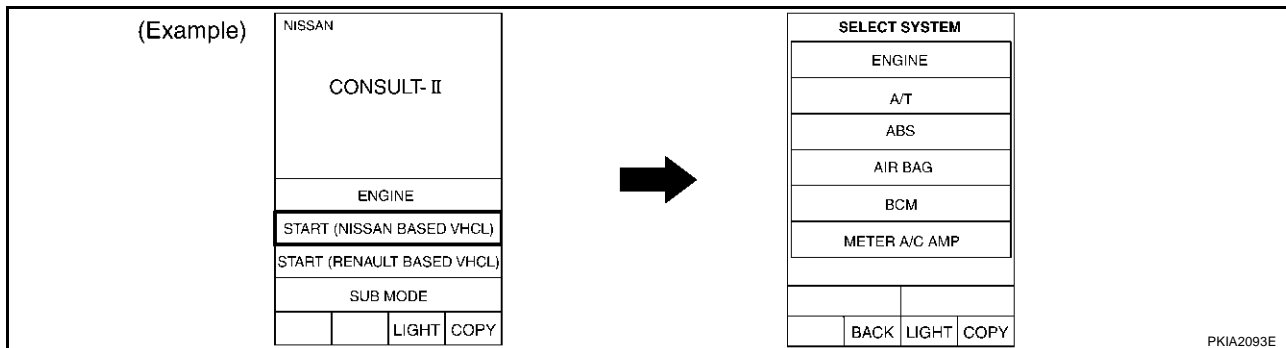
# CAN SYSTEM (TYPE 23)

[CAN]

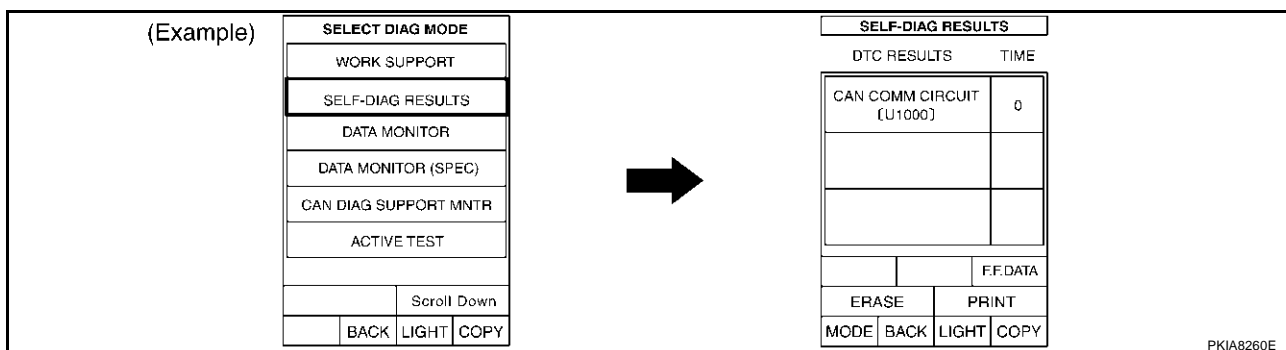
## Work Flow

AKS00C50

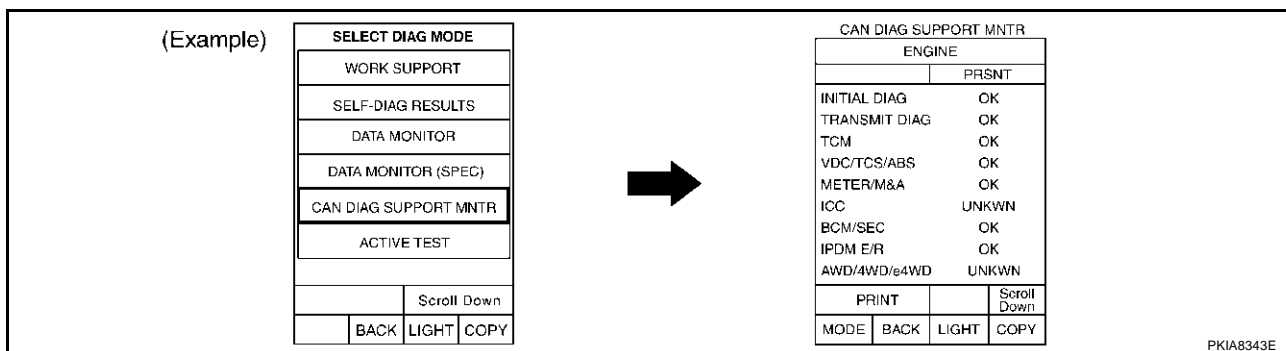
- When there are no indications of "TRANSMISSION", "METER A/C AMP" or "AUTO DRIVE POS." on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP", "AUTO DRIVE POS.", "ALL MODE AWD/4WD" and "ABS" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP", "AUTO DRIVE POS.", "ALL MODE AWD/4WD" and "ABS" displayed on CONSULT-II.



- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-772, "CHECK SHEET"](#) .
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "v" onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-772, "CHECK SHEET"](#) .

**NOTE:**

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual. So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the navigation system. Refer to [AV-203, "CAN Communication Line Check"](#) .
- Attach the CAN DIAG SUPPORT MONITOR check sheet onto the check sheet. Refer to [LAN-772, "CHECK SHEET"](#) .

## CAN SYSTEM (TYPE 23)

[CAN]

8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG SUPPORT MONITOR check sheet. Refer to [LAN-772, "CHECK SHEET"](#) .

**NOTE:**

If "NG" is displayed on "CAN COMM" as "CAN DIAG SUPPORT MONITOR" for the diagnosed control unit, replace the control unit. Refer to [AV-203, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-774, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

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# CAN SYSTEM (TYPE 23)

[CAN]

## CHECK SHEET

**NOTE:**

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

Attach copy of  
display control unit  
CAN DIAG SUPPORT MONITOR check sheet



# CAN SYSTEM (TYPE 23)

[CAN]

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Attach copy of  
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SELF-DIAG RESULTS

Attach copy of  
TRANSMISSION  
SELF-DIAG RESULTS

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
METER A/C AMP  
SELF-DIAG RESULTS

Attach copy of  
AUTO DRIVE POS.  
SELF-DIAG RESULTS

Attach copy of  
ALL MODE AWD/4WD  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

Attach copy of  
ENGINE  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
TRANSMISSION  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
BCM  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
METER A/C AMP  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
AUTO DRIVE POS.  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ALL MODE AWD/4WD  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ABS  
CAN DIAG SUPPORT  
MNTR

PKIB0865E

## CHECK SHEET RESULTS (EXAMPLE)

### NOTE:

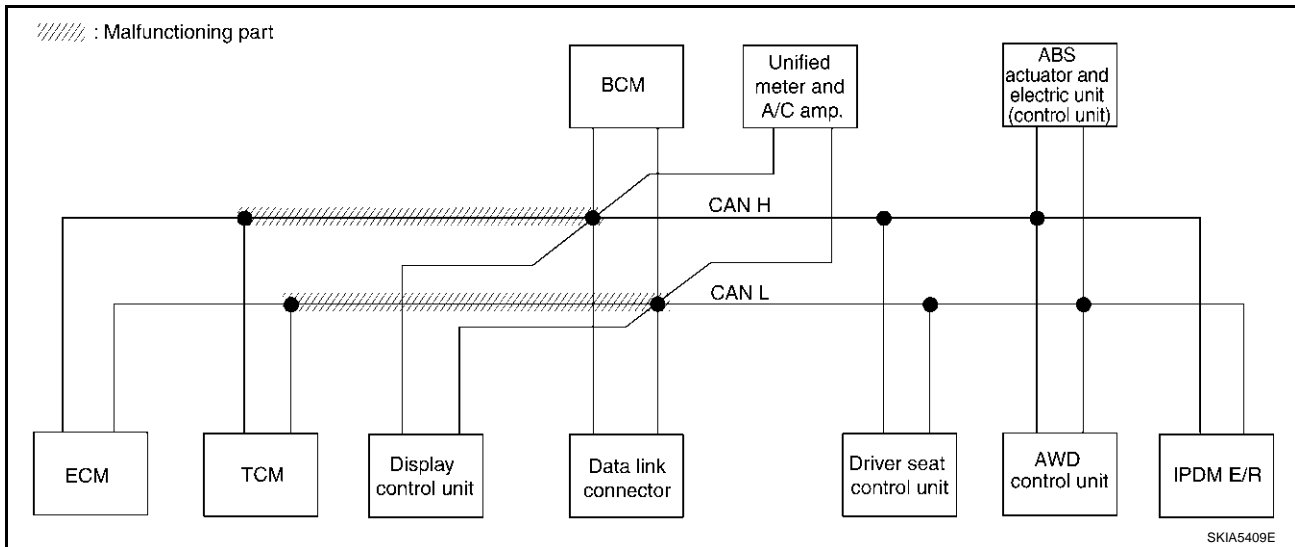
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

### Case 1

Check harness between TCM and data link connector. Refer to [LAN-788, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3 ✓	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN ✓	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN ✓	UNKWN ✓	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN ✓	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN ✓	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN ✓	—	—	—	—	—	—	—

PKIB0922E



# CAN SYSTEM (TYPE 23)

[CAN]

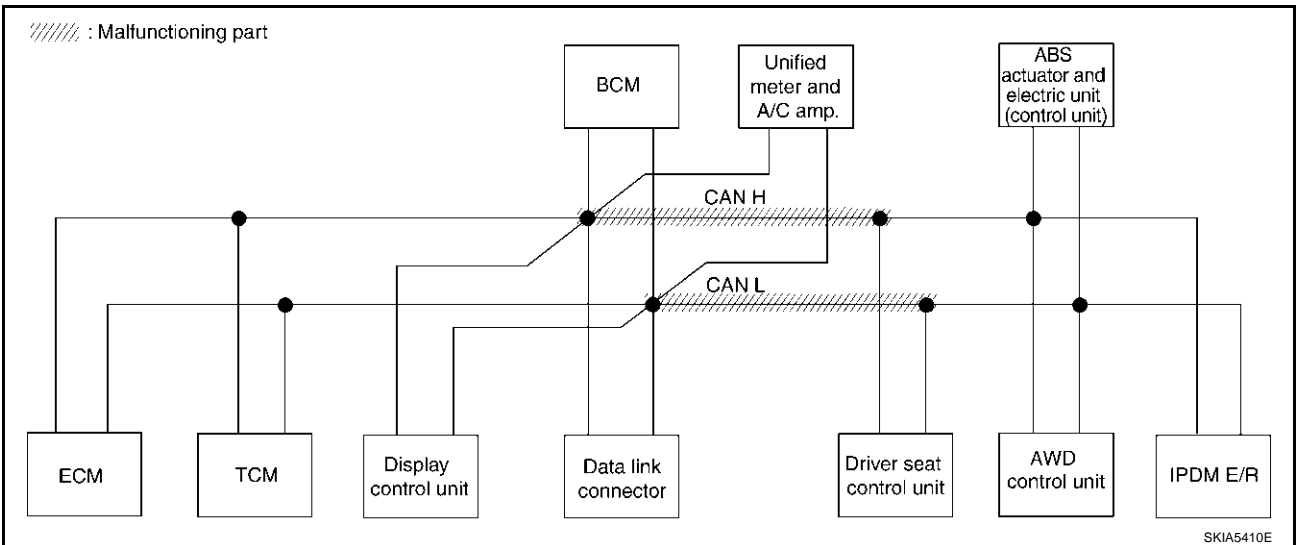
## Case 2

Check harness between data link connector and driver seat control unit. Refer to [LAN-788, "Circuit Check Between Data Link Connector and Driver Seat Control Unit"](#).

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SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	✓	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN ✓	—	—	—	UNKWN ✓	—	—	—	—
ABS	—	NG	UNKWN	UNKWN ✓	—	—	—	—	—	—	—	—

PKIB0923E



# CAN SYSTEM (TYPE 23)

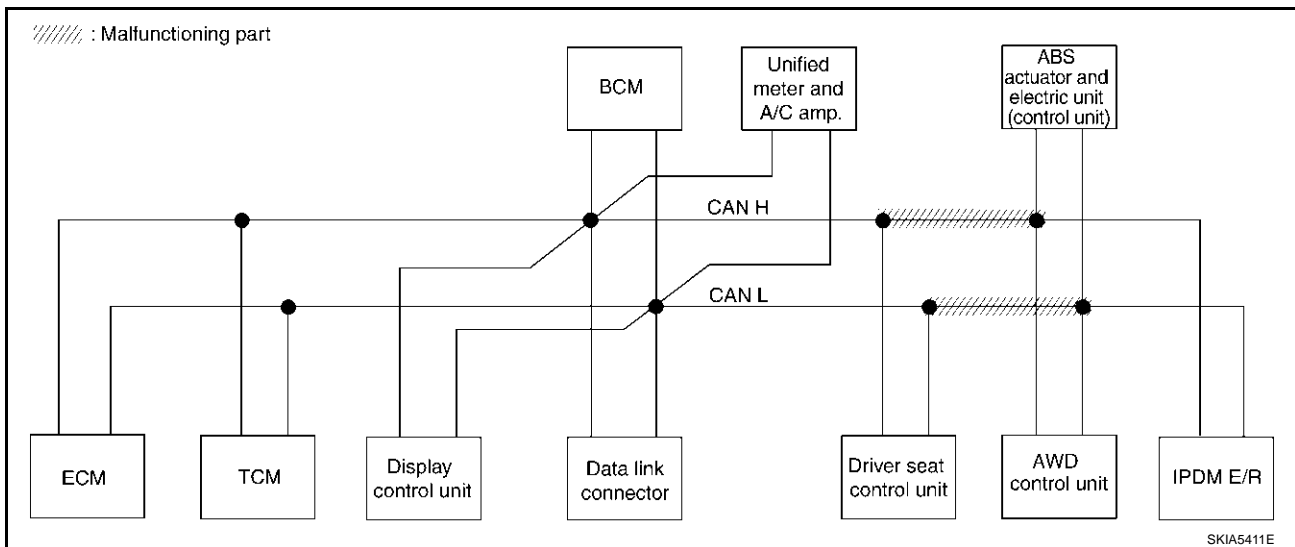
[CAN]

## Case 3

Check harness between driver seat control unit and ABS actuator and electric unit (control unit). Refer to [LAN-789, "Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit \(Control Unit\)"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R		
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7	UNKWN
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—	—

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SKIA5411E

# CAN SYSTEM (TYPE 23)

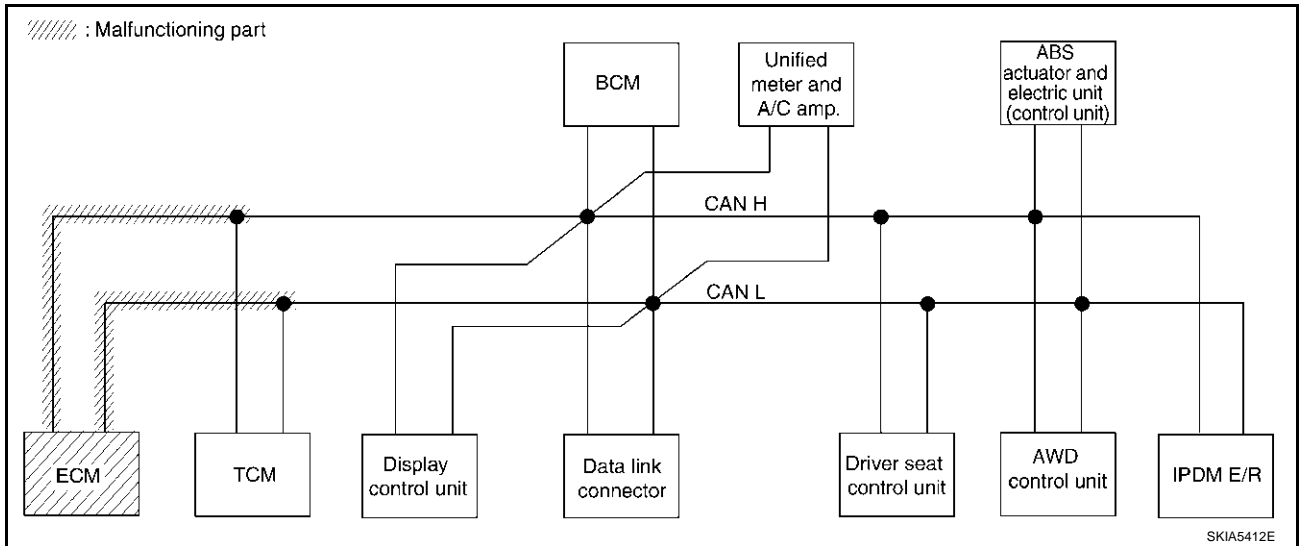
[CAN]

## Case 4

Check ECM circuit. Refer to [LAN-790, "ECM Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	
TRANSMISSION	No indication	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	UNKW <sup>✓</sup> N	—	—	UNKW <sup>✓</sup> N	
METER A/C AMP	No indication	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	
AUTO DRIVE POS.	No indication	NG	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	
ALL MODE AWD/4WD	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	UNKW <sup>✓</sup> N	—	—	—	
ABS	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	—	—	—	—	

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# CAN SYSTEM (TYPE 23)

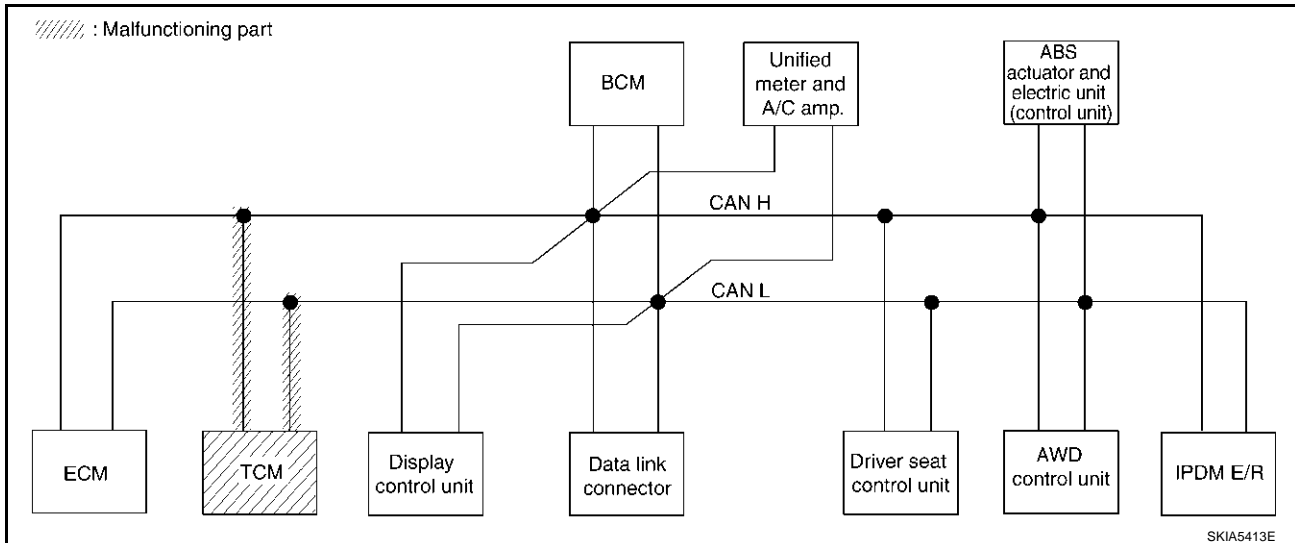
[CAN]

## Case 5

Check TCM circuit. Refer to [LAN-790, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN ✓	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN ✓	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN ✓	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

PKIB0926E



# CAN SYSTEM (TYPE 23)

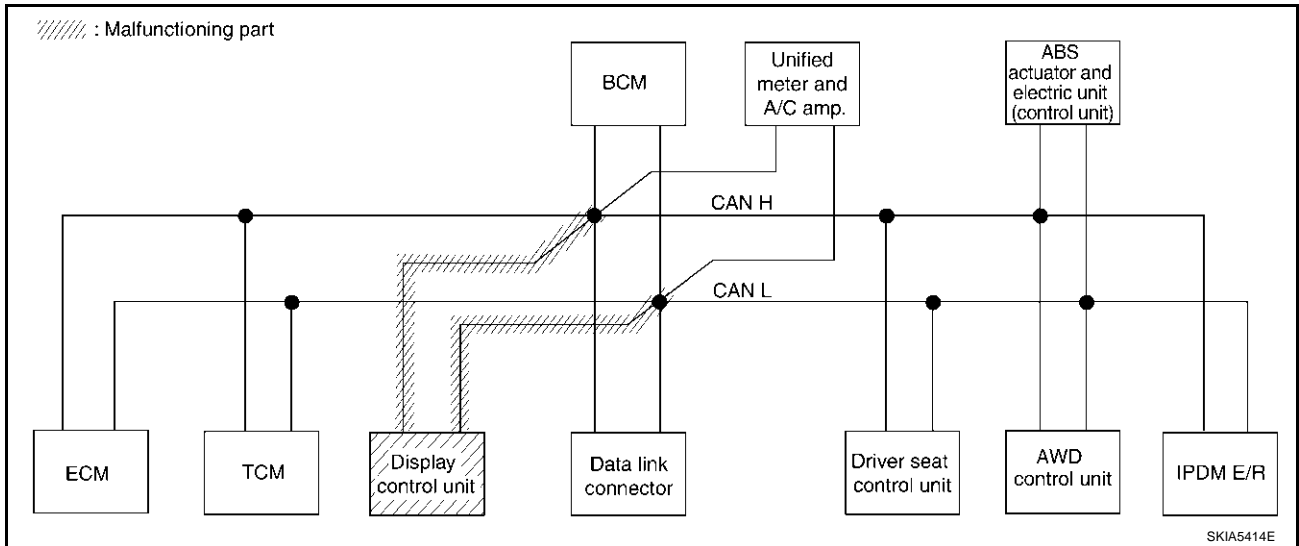
[CAN]

## Case 6

Check display control unit circuit. Refer to [LAN-791, "Display Control Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CRC 1 ✓	CAN CRC 3 ✓	—	—	CAN CRC 2 ✓	CAN CRC 5 ✓	—	—	CAN CRC 7 ✓
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

PKIB0927E



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# CAN SYSTEM (TYPE 23)

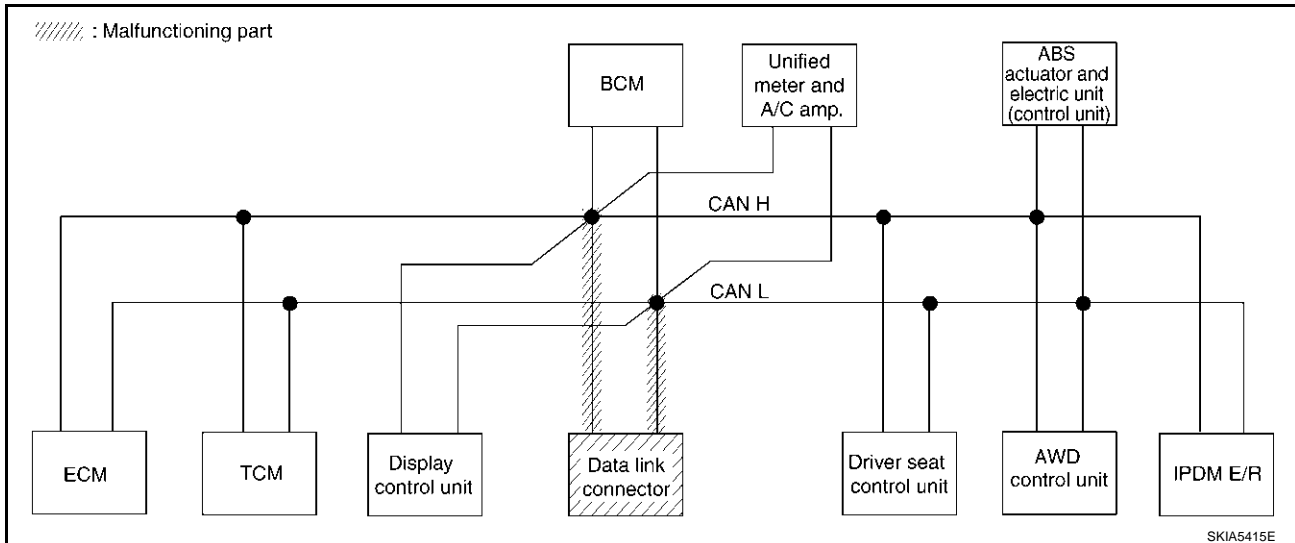
[CAN]

## Case 7

Check data link connector circuit. Refer to [LAN-791, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

PKIB0928E





# CAN SYSTEM (TYPE 23)

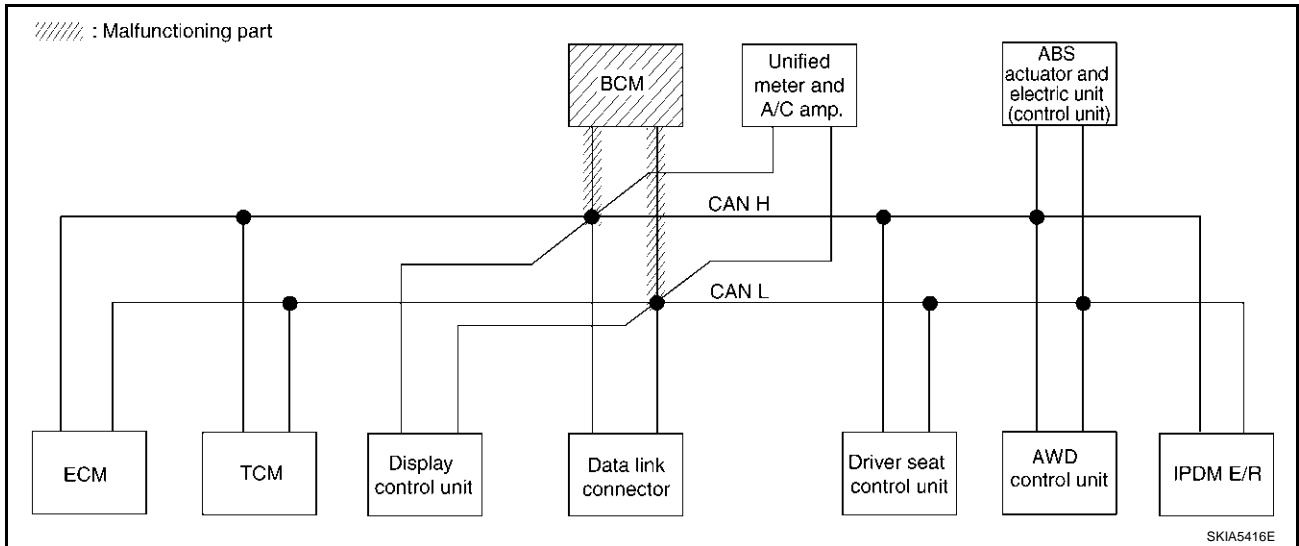
[CAN]

## Case 8

Check BCM circuit. Refer to [LAN-792, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

PKIB0929E



LAN

# CAN SYSTEM (TYPE 23)

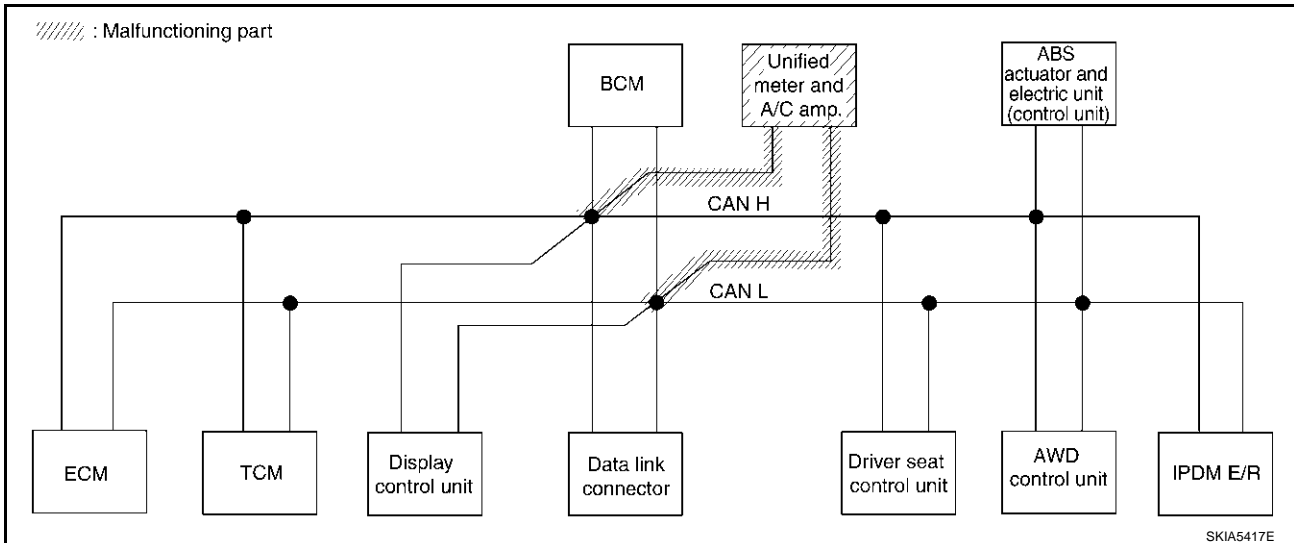
[CAN]

## Case 9

Check unified meter and A/C amp. circuit. Refer to [LAN-792, "Unified Meter and A/C Amp. Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	

PKIB0930E



# CAN SYSTEM (TYPE 23)

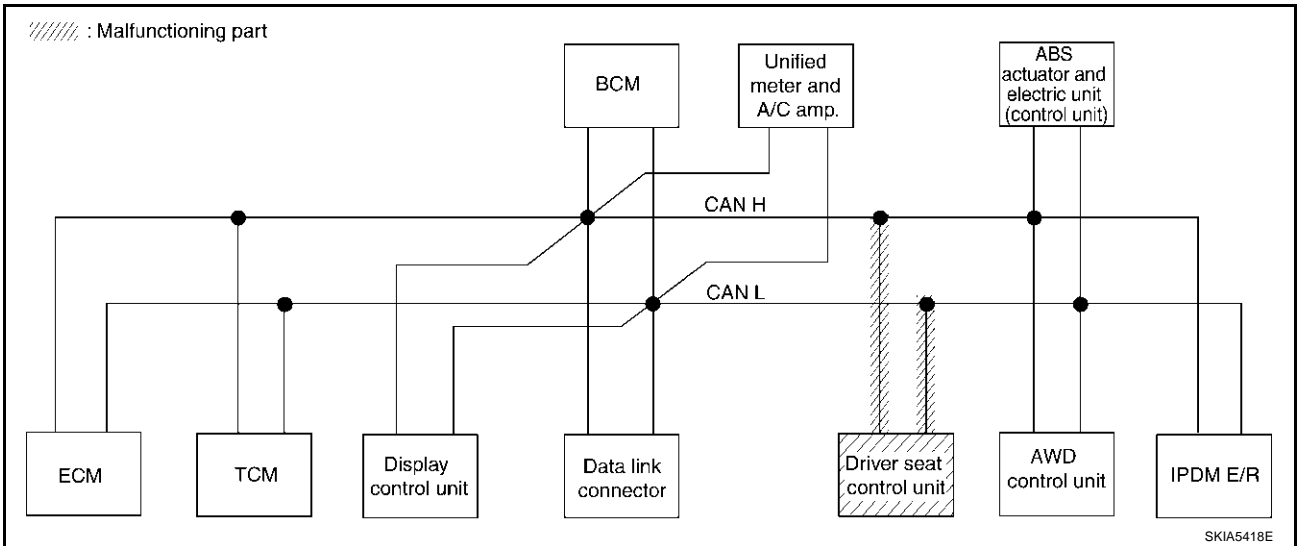
[CAN]

## Case 10

Check driver seat control unit circuit. Refer to [LAN-793, "Driver Seat Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	

PKIB0931E



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# CAN SYSTEM (TYPE 23)

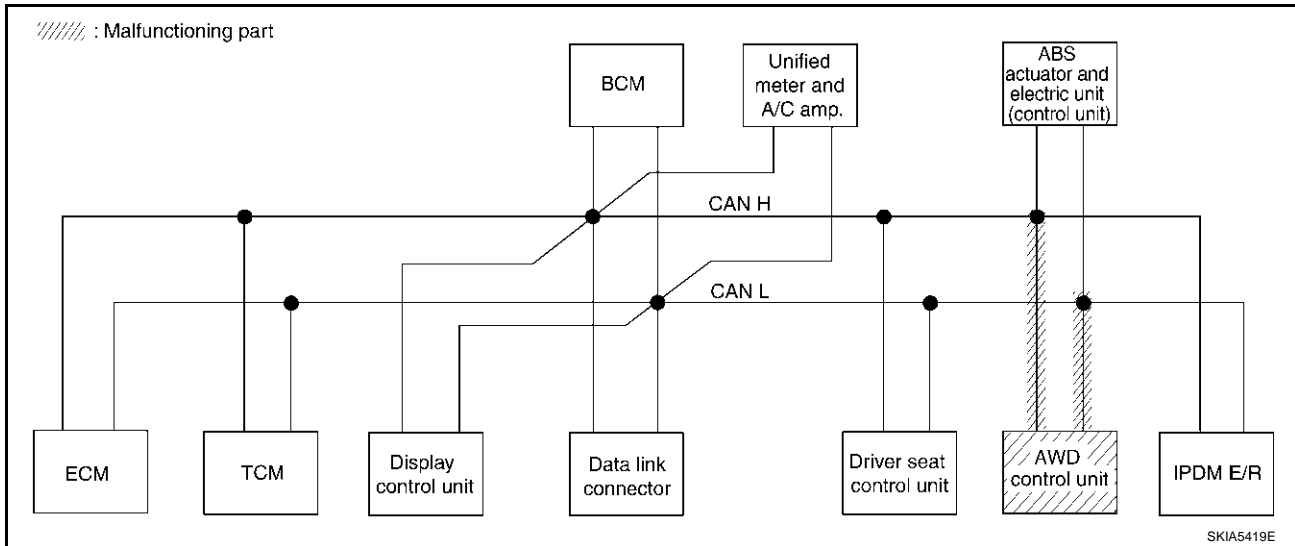
[CAN]

## Case 11

Check AWD control unit circuit. Refer to [LAN-793, "AWD Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—

PKIB0932E



# CAN SYSTEM (TYPE 23)

[CAN]

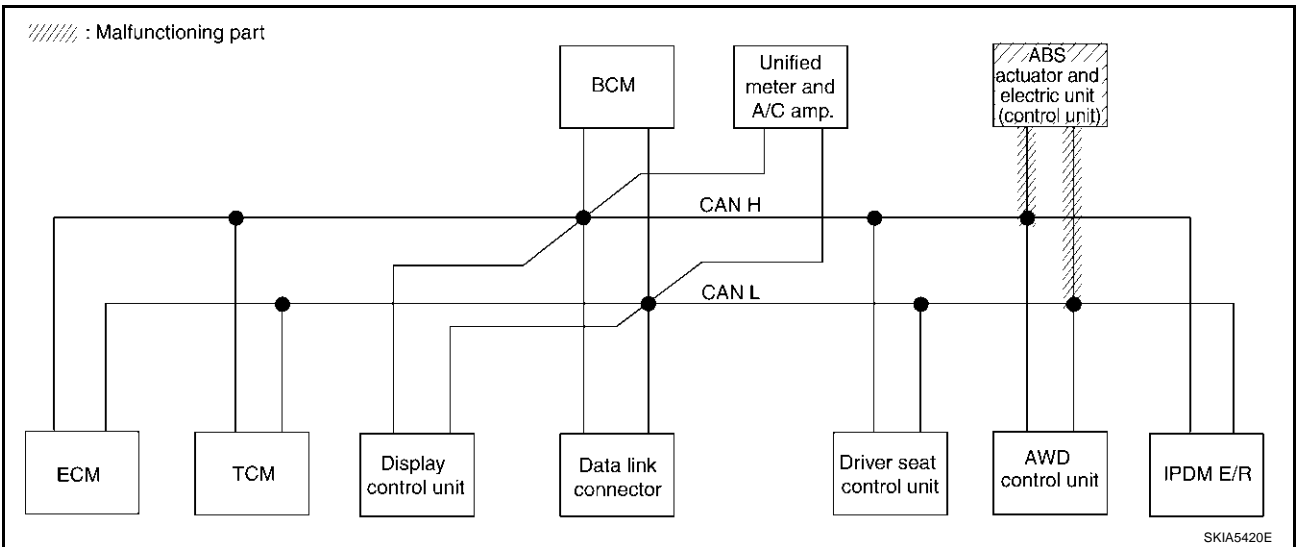
## Case 12

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-794, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

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SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	

PKIB0933E



# CAN SYSTEM (TYPE 23)

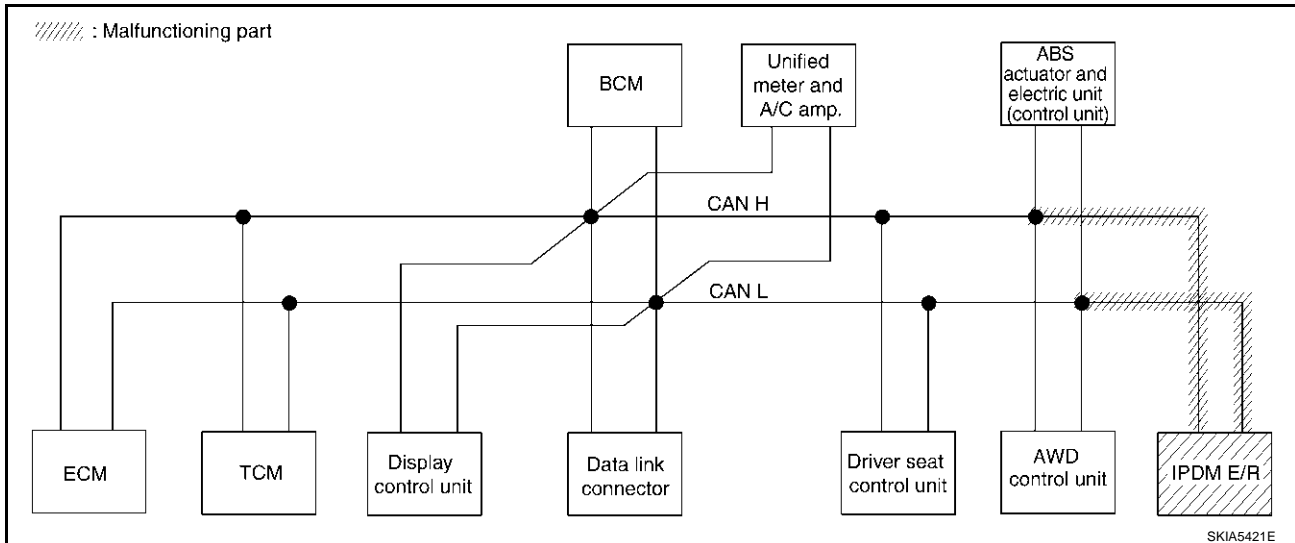
[CAN]

## Case 13

Check IPDM E/R circuit. Refer to [LAN-794, "IPDM E/R Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW	—	UNKW	—	UNKW	UNKW	UNKW	—	UNKW
TRANSMISSION	No indication	NG	UNKW	UNKW	—	—	—	UNKW	—	UNKW	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKW	UNKW	—	—	—	UNKW	—	—	UNKW
METER A/C AMP	No indication	—	UNKW	UNKW	UNKW	UNKW	UNKW	—	UNKW	UNKW	—
AUTO DRIVE POS.	No indication	NG	UNKW	—	UNKW	—	UNKW	UNKW	—	—	—
ALL MODE AWD/4WD	—	NG	UNKW	UNKW	—	—	—	UNKW	—	—	—
ABS	—	NG	UNKW	UNKW	—	—	—	—	—	—	—

PKIB0934E



## Case 14

Check CAN communication circuit. Refer to [LAN-795, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW	—	UNKW	—	UNKW	UNKW	UNKW	—	UNKW
TRANSMISSION	No indication	NG	UNKW	UNKW	—	—	—	UNKW	—	UNKW	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKW	UNKW	—	—	—	UNKW	—	—	UNKW
METER A/C AMP	No indication	—	UNKW	UNKW	UNKW	UNKW	UNKW	—	UNKW	UNKW	—
AUTO DRIVE POS.	No indication	NG	UNKW	—	UNKW	—	UNKW	UNKW	—	—	—
ALL MODE AWD/4WD	—	NG	UNKW	UNKW	—	—	—	UNKW	—	—	—
ABS	—	NG	UNKW	UNKW	—	—	—	—	—	—	—

PKIB0935E

# CAN SYSTEM (TYPE 23)

[CAN]

## Case 15

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-799, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	

PKIB0936E

## Case 16

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-799, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	

PKIB0937E

## Circuit Check Between TCM and Data Link Connector

AKS0073A

### 1. CHECK HARNESS FOR OPEN CIRCUIT

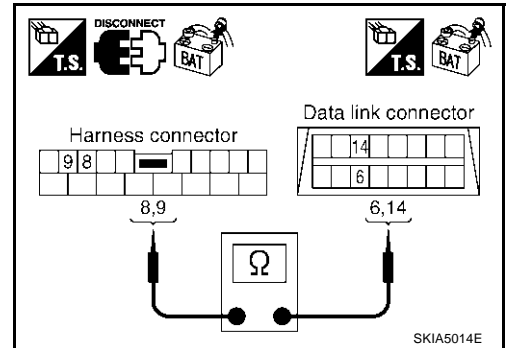
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

**8 (L) - 6 (L) : Continuity should exist.**

**9 (Y) - 14 (Y) : Continuity should exist.**

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-770, "Work Flow"](#).
- NG >> Repair harness.



## Circuit Check Between Data Link Connector and Driver Seat Control Unit

AKS0073B

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).

- Harness connector M9
- Harness connector B2

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

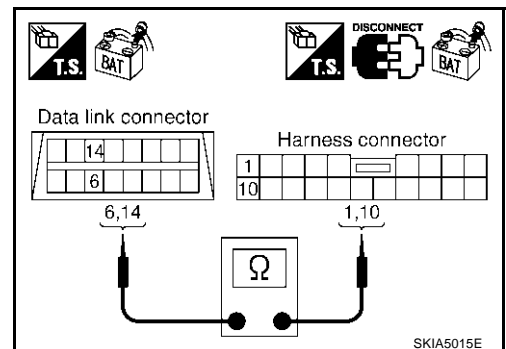
1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

**6 (L) - 1 (L) : Continuity should exist.**

**14 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.





### 3. CHECK HARNESS FOR OPEN CIRCUIT

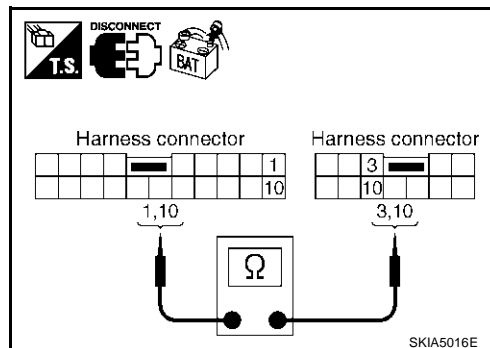
1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-770, "Work Flow"](#).
- NG >> Repair harness.



### Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit)

AKS0073C

#### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector B4
  - Harness connector E105

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

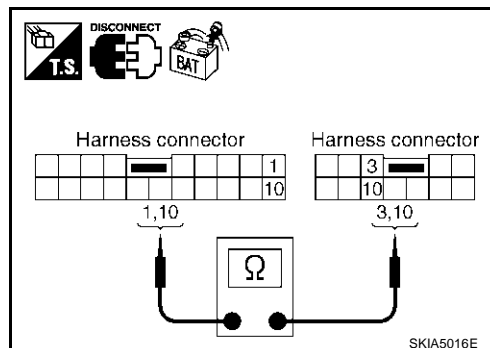
1. Disconnect harness connector B2 and harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



LAN

### 3. CHECK HARNESS FOR OPEN CIRCUIT

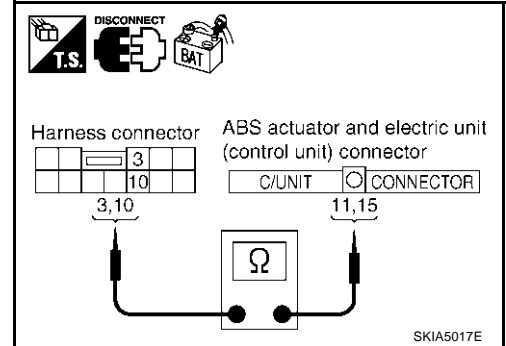
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

**3 (L) - 11 (L) : Continuity should exist.**

**10 (Y) - 15 (Y) : Continuity should exist.**

#### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-770, "Work Flow"](#) .
- NG >> Repair harness.



AKS0073D

## ECM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

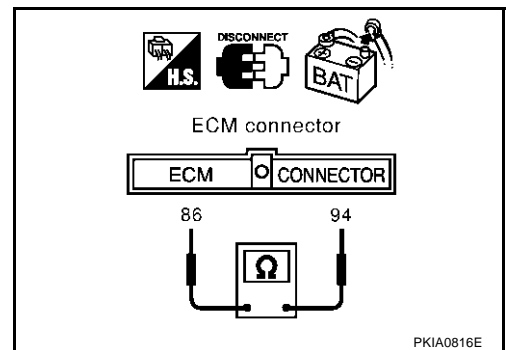
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

**94 (L) - 86 (Y) : Approx. 108 - 132Ω**

#### OK or NG

- OK >> Replace ECM.
- NG >> Repair harness between ECM and TCM.



AKS0073E

## TCM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
  - TCM connector
  - Harness connector F102
  - Harness connector M82

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

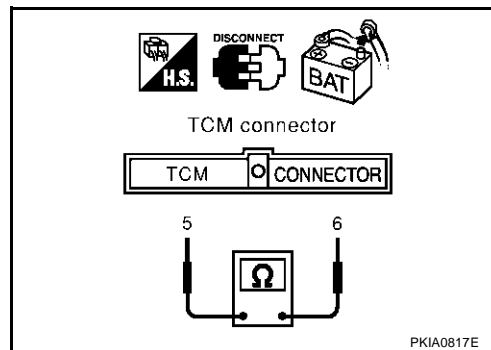
1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

5 (L) - 6 (Y)

: Approx. 54 - 66Ω

### OK or NG

- OK >> Replace TCM.  
 NG >> Repair harness between TCM and ECM.



## Display Control Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display control unit for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

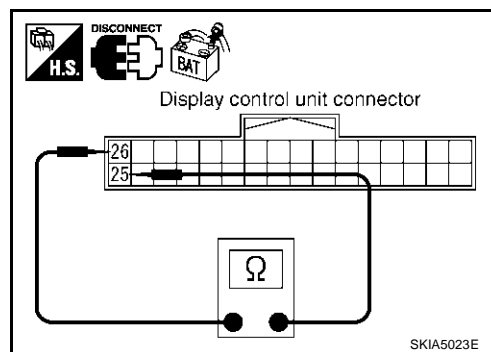
1. Disconnect display control unit connector.
2. Check resistance between display control unit harness connector M43 terminals 25 (L) and 26 (Y).

25 (L) - 26 (Y)

: Approx. 54 - 66Ω

### OK or NG

- OK >> Replace display control unit.  
 NG >> Repair harness between display control unit and data link connector.



## Data Link Connector Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

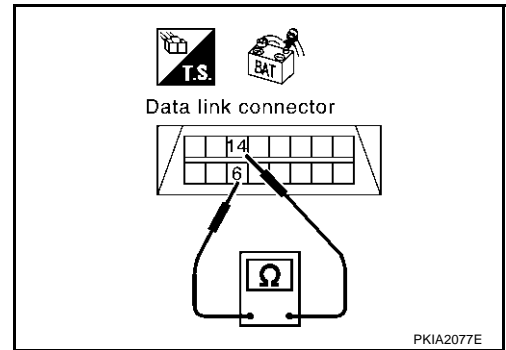
## 2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Diagnose again. Refer to [LAN-770, "Work Flow"](#).  
 NG >> Repair harness between data link connector and BCM.



AKS0073H

## BCM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

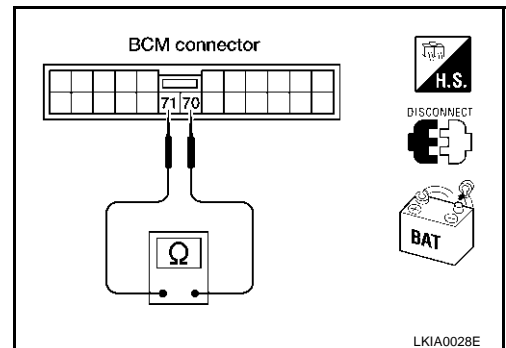
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M37 terminals 70 (L) and 71 (Y).

**70 (L) - 71 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace BCM. Refer to [BCS-36, "Removal and Installation of BCM"](#).  
 NG >> Repair harness between BCM and data link connector.



AKS0073I

## Unified Meter and A/C Amp. Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

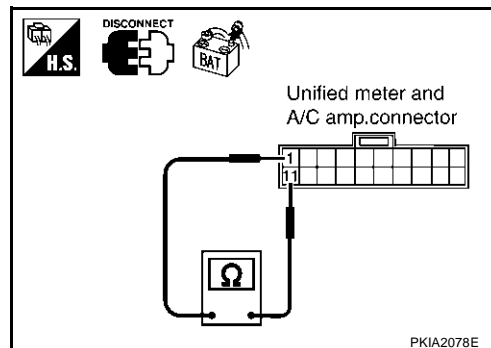
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

**1 (L) - 11 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace unified meter and A/C amp.  
 NG >> Repair harness between unified meter and A/C amp. and data link connector.



## Driver Seat Control Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control unit side and harness side).
  - Driver seat control unit connector
  - Harness connector B301
  - Harness connector B9

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

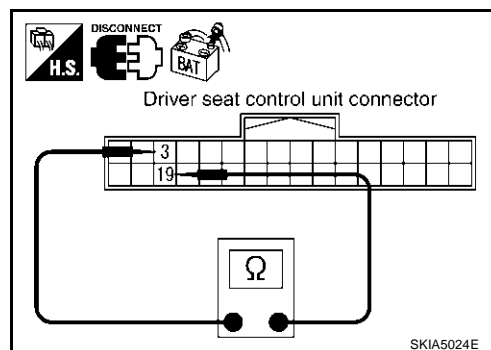
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect driver seat control unit connector.
2. Check resistance between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

**3 (L/Y) - 19 (BR/W) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace driver seat control unit.  
 NG >> Repair harness between driver seat control unit and harness connector B4.



## AWD Control Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of AWD control unit for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

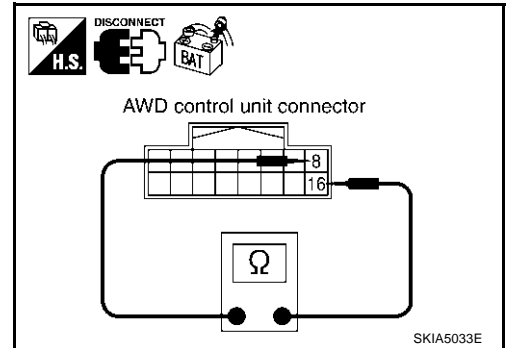
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect AWD control unit connector.
2. Check resistance between AWD control unit harness connector E111 terminals 8 (L) and 16 (Y).

**8 (L) - 16 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace AWD control unit.  
 NG >> Repair harness between AWD control unit and IPDM E/R.



## ABS Actuator and Electric Unit (Control Unit) Circuit Check

AKS0073L

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

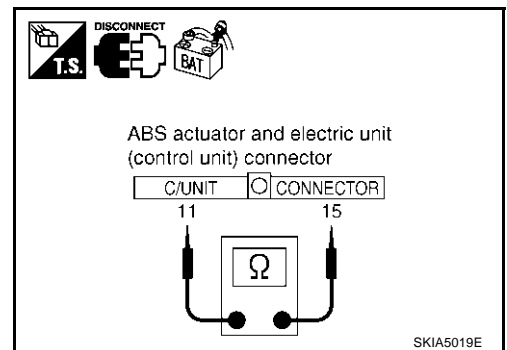
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

**11 (L) - 15 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).  
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



## IPDM E/R Circuit Check

AKS0073M

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

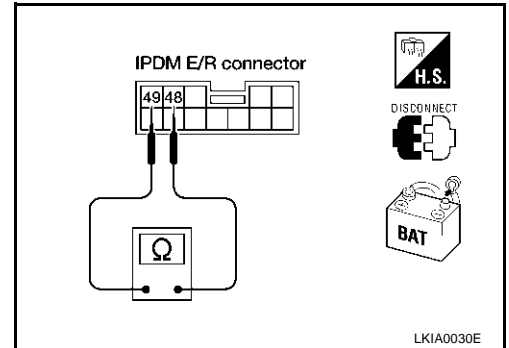
1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y)**

**: Approx. 108 - 132Ω**

### OK or NG

- OK >> Replace IPDM E/R.  
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



AKS0073N

## CAN Communication Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, meter side and harness side).
  - ECM
  - TCM
  - Display control unit
  - BCM
  - Unified meter and A/C amp.
  - Driver seat control unit
  - AWD control unit
  - ABS actuator and electric unit (control unit)
  - IPDM E/R
  - Between ECM and IPDM E/R
  - Between ECM and TCM
  - Between ECM and driver seat control unit

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

A  
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C  
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L  
M

## 2. CHECK HARNESS FOR SHORT CIRCUIT

- Disconnect following connectors.
  - ECM connector
  - Harness connector M82
  - Display control unit connector
  - BCM connector
  - Unified meter and A/C amp. connector
  - Harness connector M9
- Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

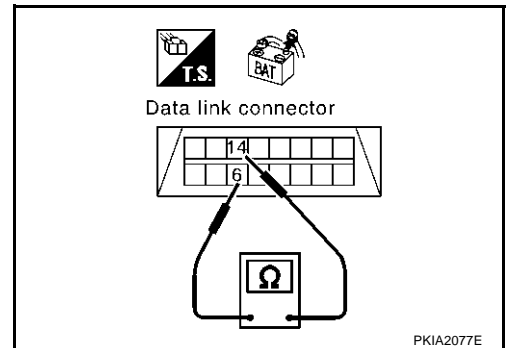
**6 (L) - 14 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 3.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9.



## 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

**6 (L) - Ground : Continuity should not exist.**

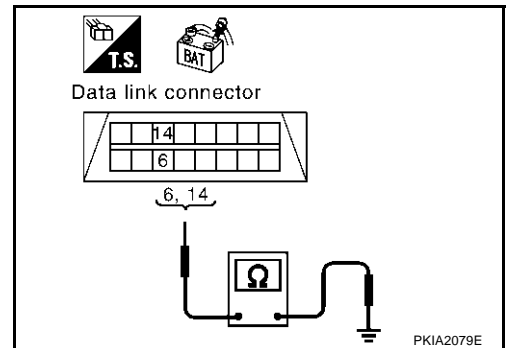
**14 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9.





#### 4. CHECK HARNESS FOR SHORT CIRCUIT

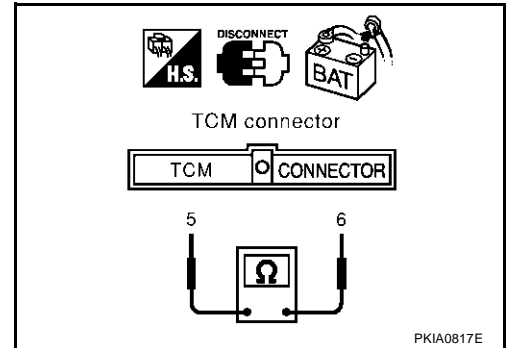
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Continuity should not exist.**

##### OK or NG

OK >> GO TO 5.

NG >> Repair harness between TCM and harness connector F102.



#### 5. CHECK HARNESS FOR SHORT CIRCUIT

- Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

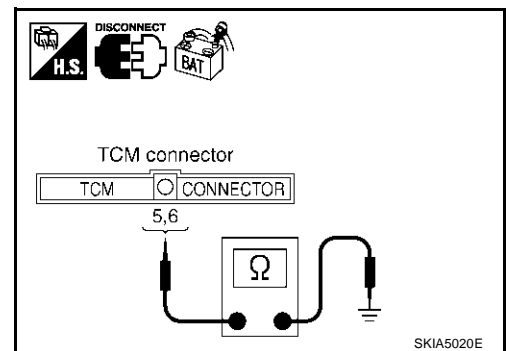
**5 (L) - Ground : Continuity should not exist.**

**6 (Y) - Ground : Continuity should not exist.**

##### OK or NG

OK >> GO TO 6.

NG >> Repair harness between TCM and harness connector F102.



#### 6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B4 and harness connector B9.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

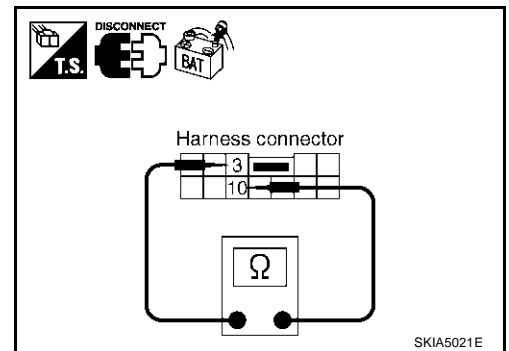
**3 (L) - 10 (Y) : Continuity should not exist.**

##### OK or NG

OK >> GO TO 7.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Repair harness between harness connector B4 and harness connector B2.
- Repair harness between harness connector B4 and harness connector B9.



A  
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C  
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E  
F  
G  
H  
I  
J  
LAN  
L  
M

## 7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

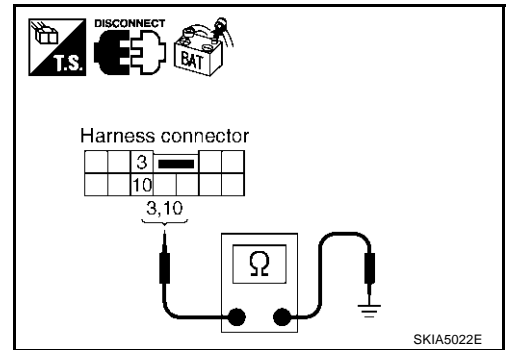
- 3 (L) - Ground : Continuity should not exist.**
- 10 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 8.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Repair harness between harness connector B4 and harness connector B2.
- Repair harness between harness connector B4 and harness connector B9.



## 8. CHECK HARNESS FOR SHORT CIRCUIT

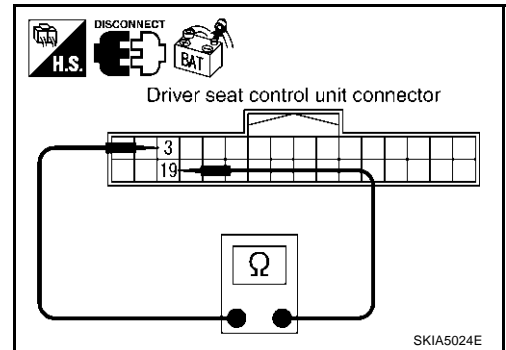
1. Disconnect driver seat control unit connector.
2. Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

- 3 (L/Y) - 19 (BR/W) : Continuity should not exist.**

OK or NG

OK >> GO TO 9.

NG >> Repair harness between driver seat control unit and harness connector B301.



## 9. CHECK HARNESS FOR SHORT CIRCUIT

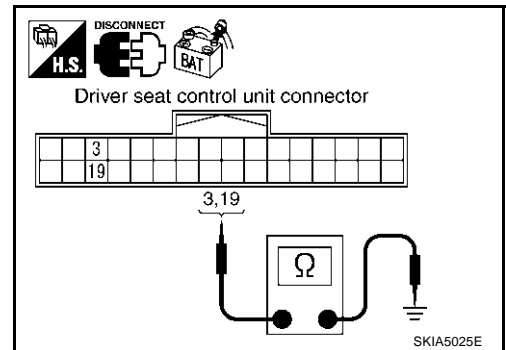
Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y), 19 (BR/W) and ground.

- 3 (L/Y) - Ground : Continuity should not exist.**
- 19 (BR/W) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 10.

NG >> Repair harness between driver seat control unit and harness connector B301.



## 10. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect AWD control unit connector, ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

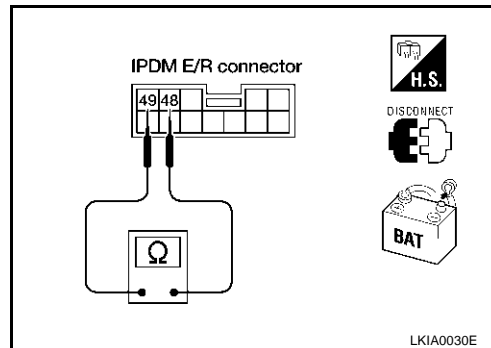
**48 (L) - 49 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 11.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 11. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

**48 (L) - Ground : Continuity should not exist.**

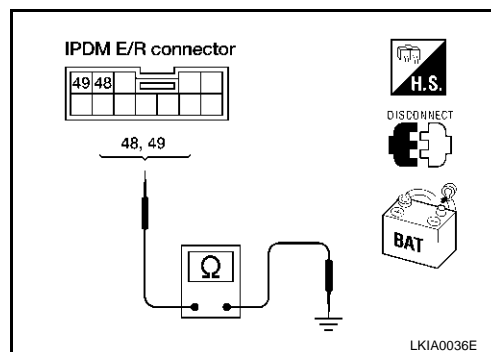
**49 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 12.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 12. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-800, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

### OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-770, "Work Flow"](#).

NG >> Replace ECM and/or IPDM E/R.

### IPDM E/R Ignition Relay Circuit Check

AKS00730

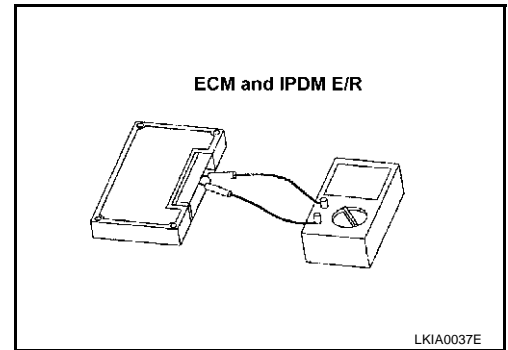
Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-45, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#).

**Component Inspection****ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION**

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value ( $\Omega$ ) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



## CAN SYSTEM (TYPE 24)

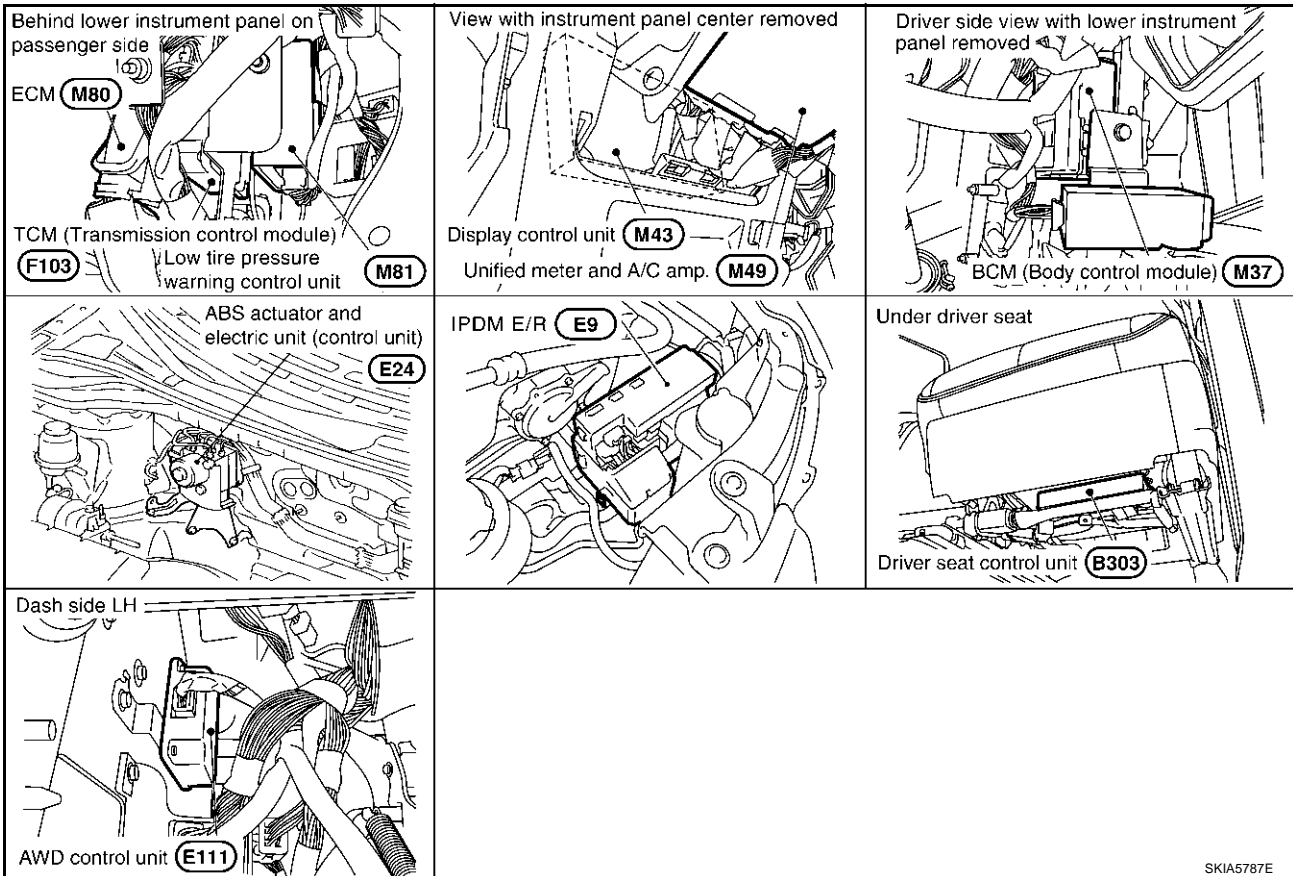
### System Description

AKS0073Q

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

### Component Parts and Harness Connector Location

AKS0073R



A  
B  
C  
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I  
J  
L  
M

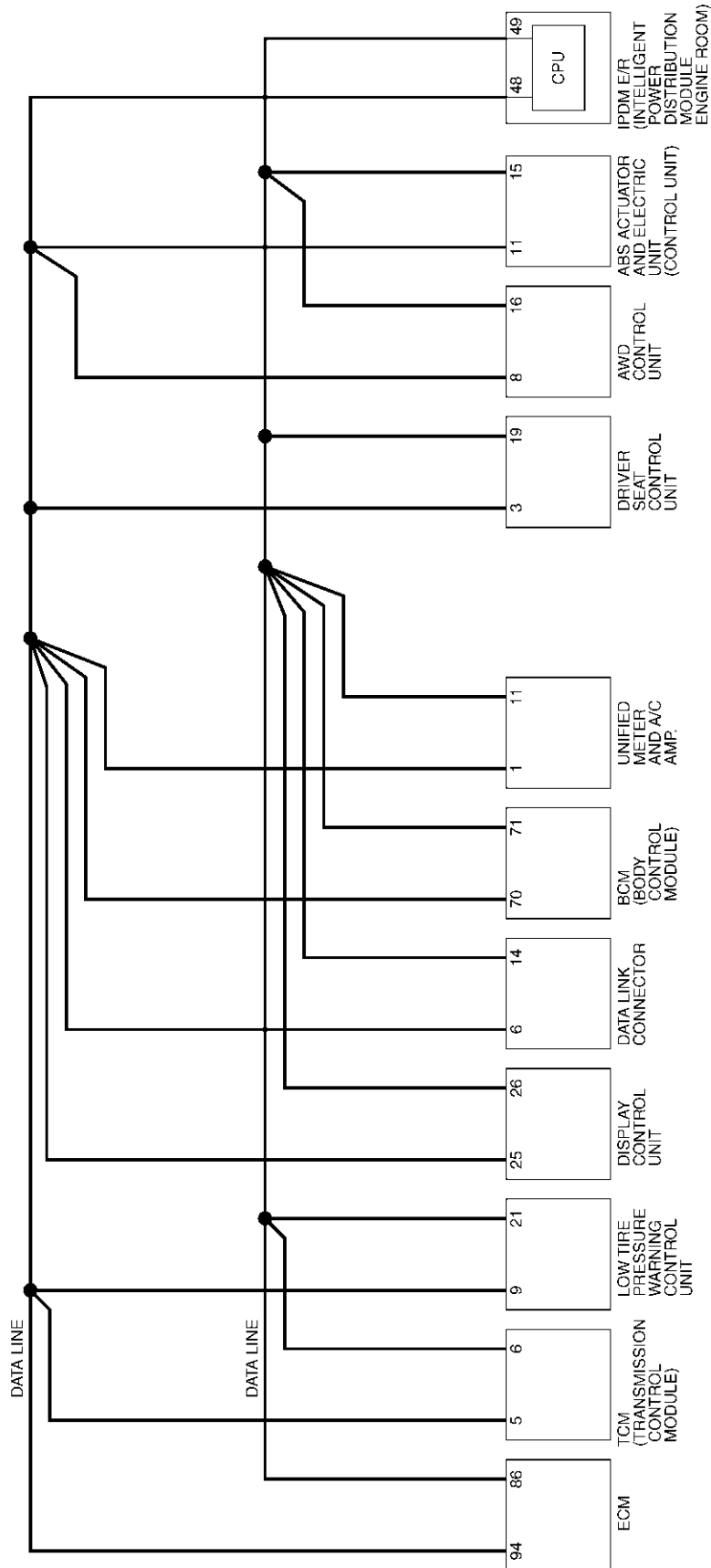
LAN

# CAN SYSTEM (TYPE 24)

[CAN]

## Schematic

AKS0073S



TKWA1015E

# CAN SYSTEM (TYPE 24)

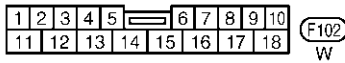
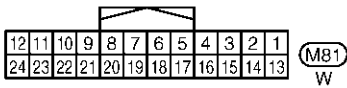
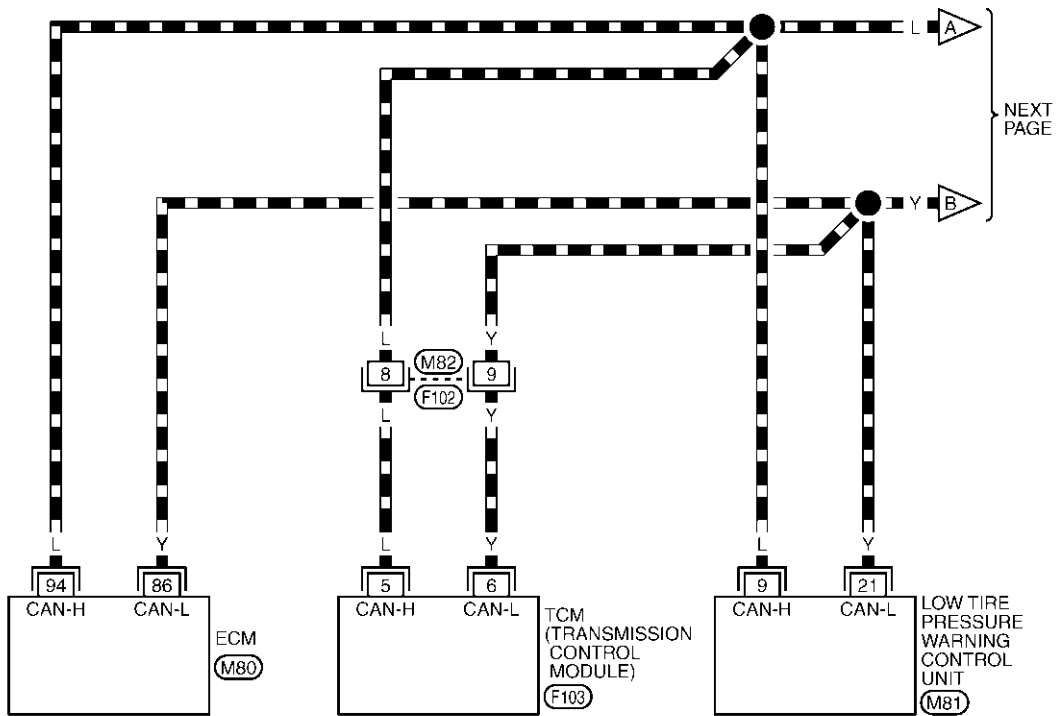
[CAN]

## Wiring Diagram - CAN -

AKS0073T

### LAN-CAN-70

▬ : DATA LINE



REFER TO THE FOLLOWING.  
 (M80), (F103) -ELECTRICAL  
 UNITS

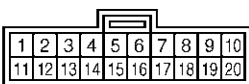
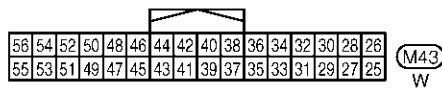
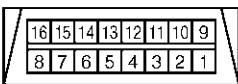
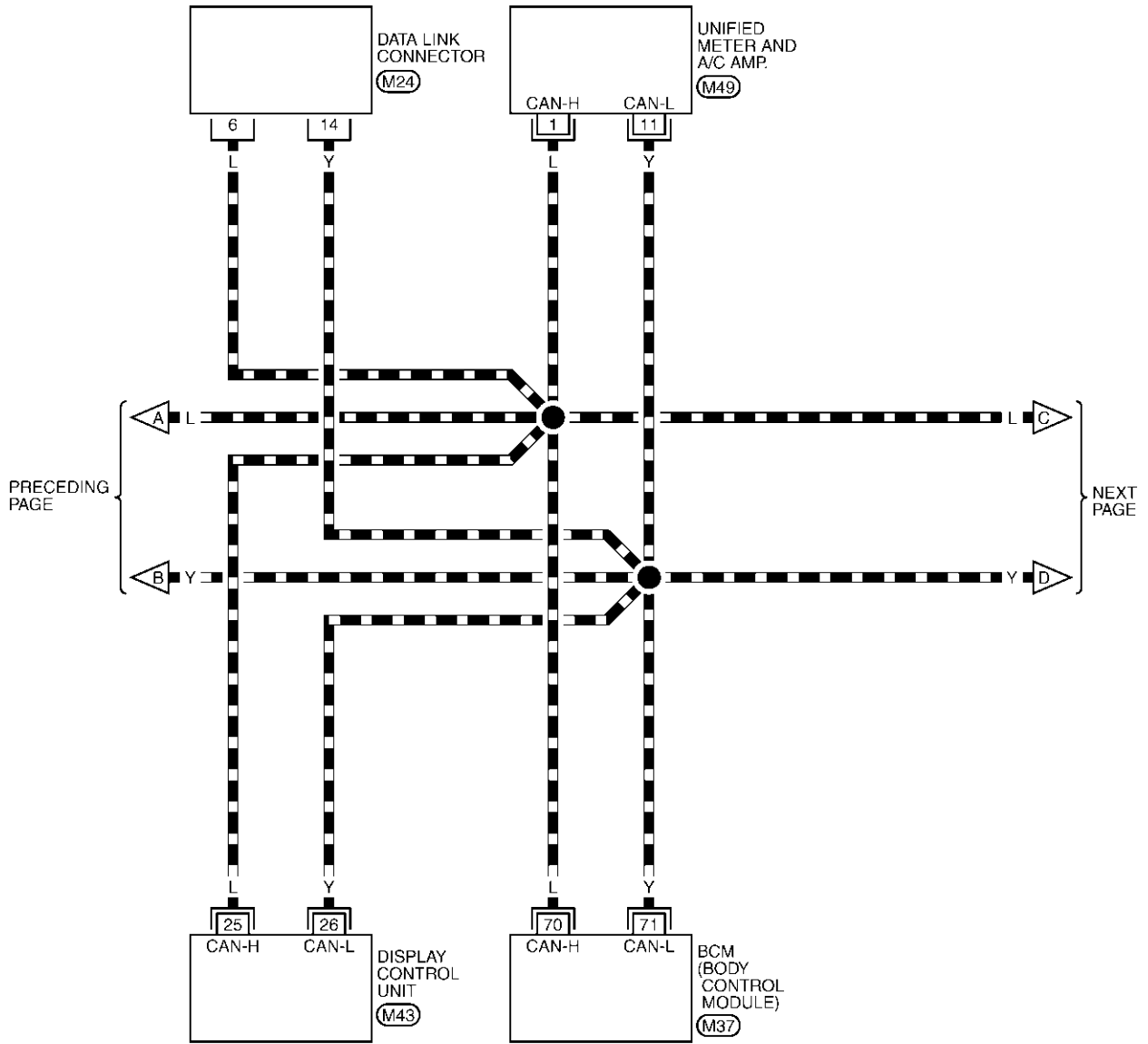
TKWA1016E

# CAN SYSTEM (TYPE 24)

[CAN]

## LAN-CAN-71

▬ : DATA LINE

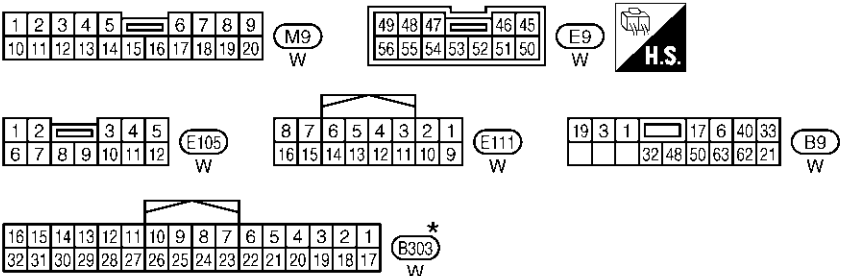
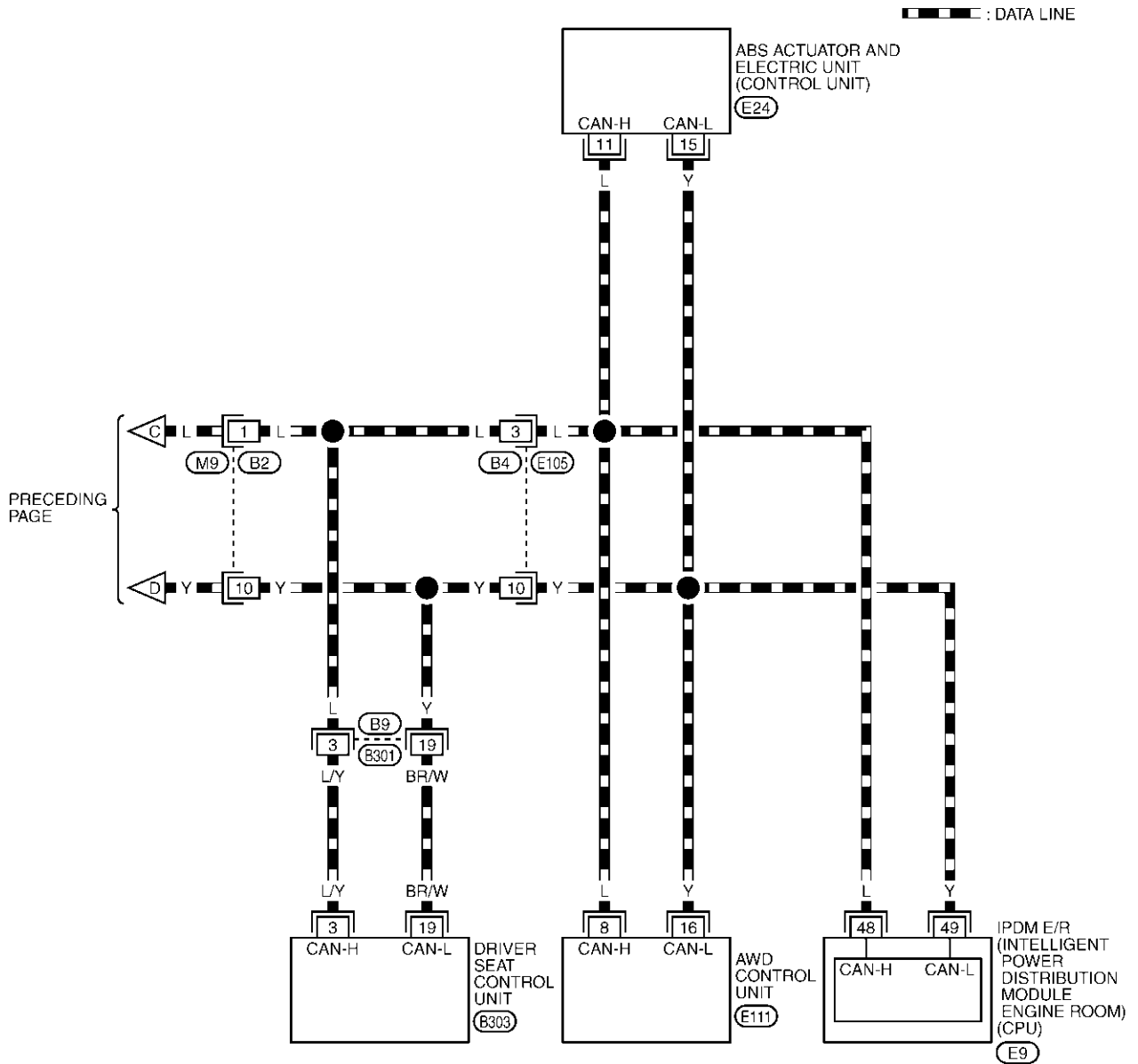


REFER TO THE FOLLOWING.  
(M37) -ELECTRICAL UNITS

TKWA1017E



A  
B  
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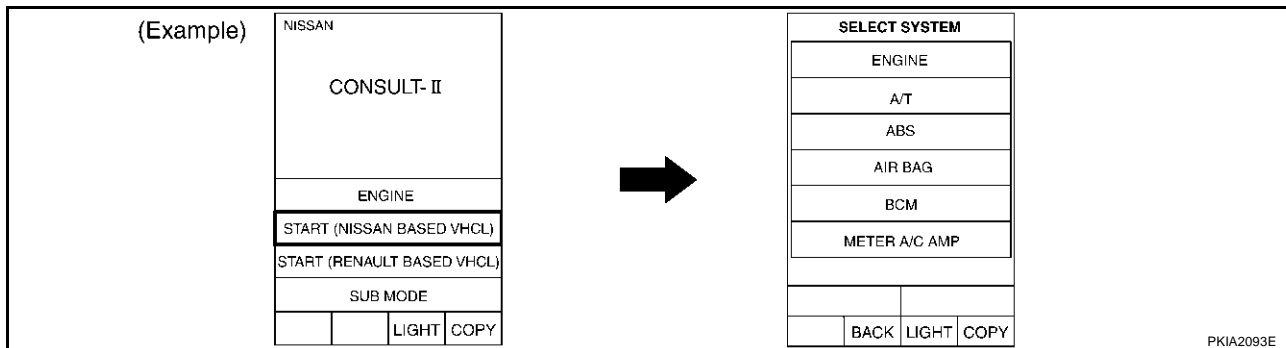
REFER TO THE FOLLOWING.  
E24 -ELECTRICAL UNITS

\*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

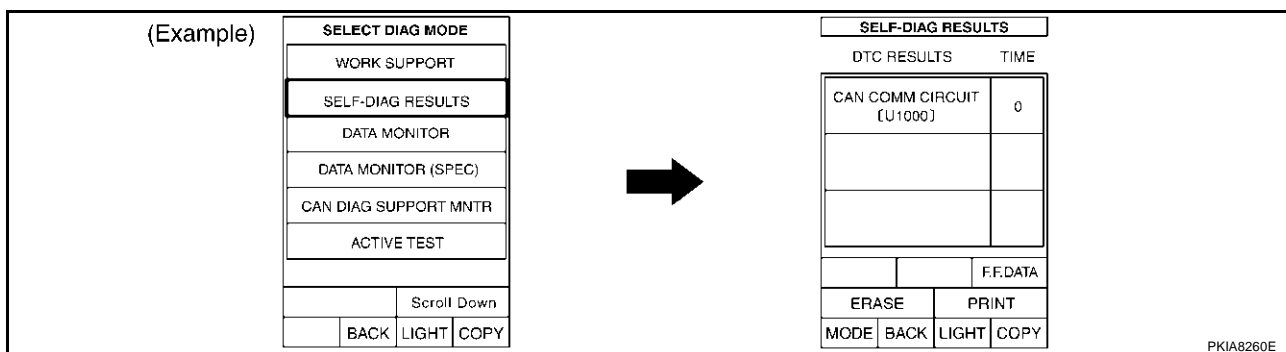
## Work Flow

AKS00C5P

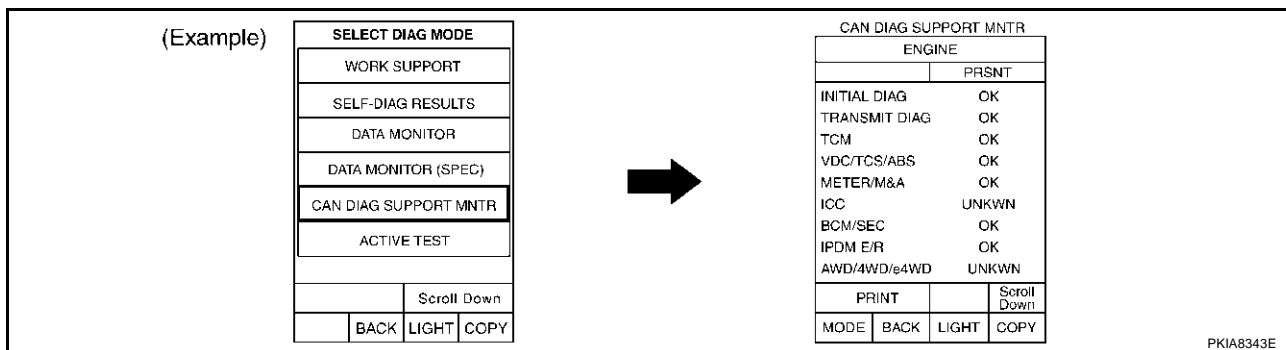
- When there are no indications of "TRANSMISSION", "AIR PRESSURE MONITOR", "METER A/C AMP" or "AUTO DRIVE POS." on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "AUTO DRIVE POS.", "ALL MODE AWD/4WD" and "ABS" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "AUTO DRIVE POS.", "ALL MODE AWD/4WD" and "ABS" displayed on CONSULT-II.



- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-808, "CHECK SHEET"](#) .
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "V" onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-808, "CHECK SHEET"](#) .

**NOTE:**

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual.  
So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the navigation system. Refer to [AV-203, "CAN Communication Line Check"](#) .

## CAN SYSTEM (TYPE 24)

[CAN]

7. Attach the CAN DIAG SUPPORT MONITOR check sheet onto the check sheet. Refer to [LAN-808, "CHECK SHEET"](#) .
8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG SUPPORT MONITOR check sheet. Refer to [LAN-808, "CHECK SHEET"](#) .  
**NOTE:**  
If "NG" is displayed on "CAN COMM" as "CAN DIAG SUPPORT MONITOR" for the diagnosed control unit, replace the control unit. Refer to [AV-203, "CAN Communication Line Check"](#) .
9. According to the check sheet results (example), start inspection. Refer to [LAN-810, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

A

B

C

D

E

F

G

H

I

J

LAN

L

M

# CAN SYSTEM (TYPE 24)

[CAN]

## CHECK SHEET

### NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	UNKWN	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

Attach copy of  
display control unit  
CAN DIAG SUPPORT MONITOR check sheet

PKIB0938E

# CAN SYSTEM (TYPE 24)

[CAN]

A  
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F  
G  
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I  
J  
LAN  
L  
M

Attach copy of  
ENGINE  
SELF-DIAG RESULTS

Attach copy of  
TRANSMISSION  
SELF-DIAG RESULTS

Attach copy of  
AIR PRESSURE  
MONITOR  
SELF-DIAG RESULTS

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
METER A/C AMP  
SELF-DIAG RESULTS

Attach copy of  
AUTO DRIVE POS.  
SELF-DIAG RESULTS

Attach copy of  
ALL MODE AWD/4WD  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

Attach copy of  
ENGINE  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
TRANSMISSION  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
AIR PRESSURE  
MONITOR  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
BCM  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
METER A/C AMP  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
AUTO DRIVE POS.  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ALL MODE AWD/4WD  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ABS  
CAN DIAG SUPPORT  
MNTR

PKIB0899E

# CAN SYSTEM (TYPE 24)

[CAN]

## CHECK SHEET RESULTS (EXAMPLE)

### NOTE:

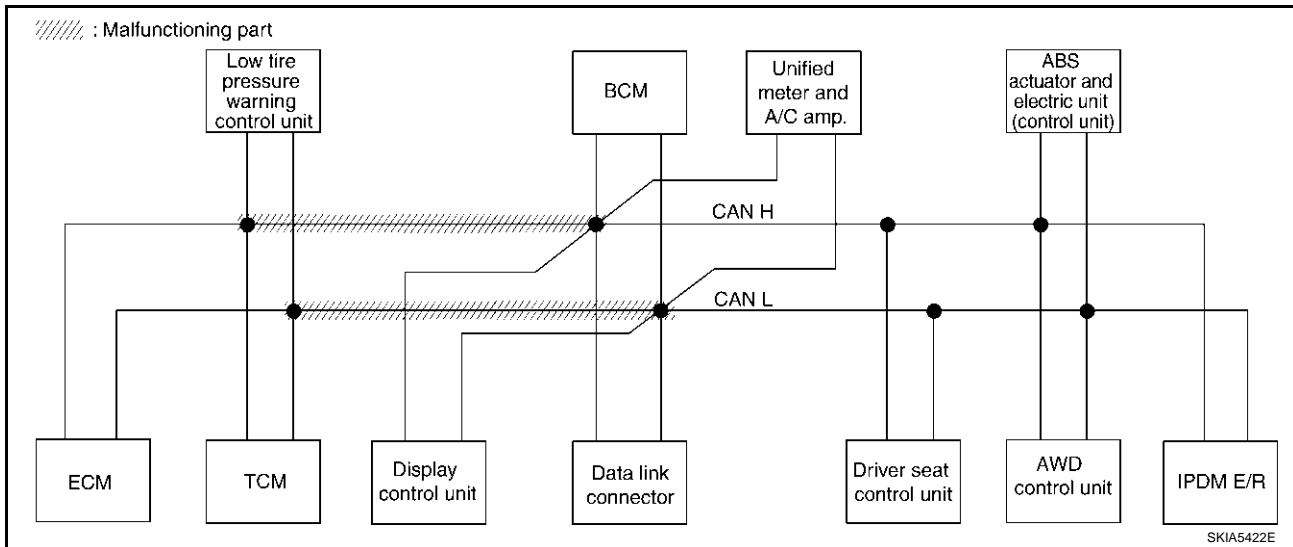
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

### Case 1

Check harness between TCM and data link connector. Refer to [LAN-825, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3 ✓	—	CAN CIRC 6 ✓	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

PKIB0939E



# CAN SYSTEM (TYPE 24)

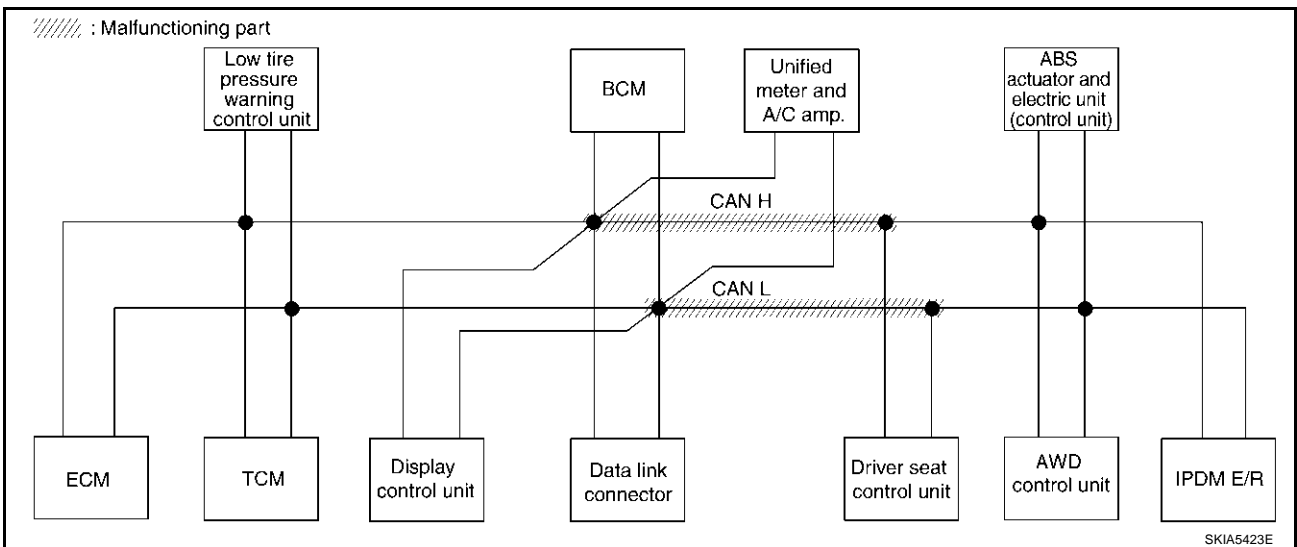
[CAN]

## Case 2

Check harness between data link connector and driver seat control unit. Refer to [LAN-826, "Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit \(Control Unit\)"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWVN	—	UNKWVN	—	—	UNKWVN	UNKWVN	UNKWVN	—	UNKWVN
TRANSMISSION	No indication	NG	UNKWVN	UNKWVN	—	—	—	—	UNKWVN	—	UNKWVN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWVN	—	—	—	—	—	UNKWVN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWVN	UNKWVN	—	—	—	—	UNKWVN	—	—	UNKWVN
METER A/C AMP	No indication	—	UNKWVN	UNKWVN	UNKWVN	UNKWVN	UNKWVN	UNKWVN	—	UNKWVN	UNKWVN	—
AUTO DRIVE POS.	✓	NG	UNKWVN	—	UNKWVN	—	—	UNKWVN	UNKWVN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWVN	UNKWVN	—	—	—	—	UNKWVN	—	—	—
ABS	—	NG	UNKWVN	UNKWVN	—	—	—	—	—	—	—	—

PKIB0940E



LAN

# CAN SYSTEM (TYPE 24)

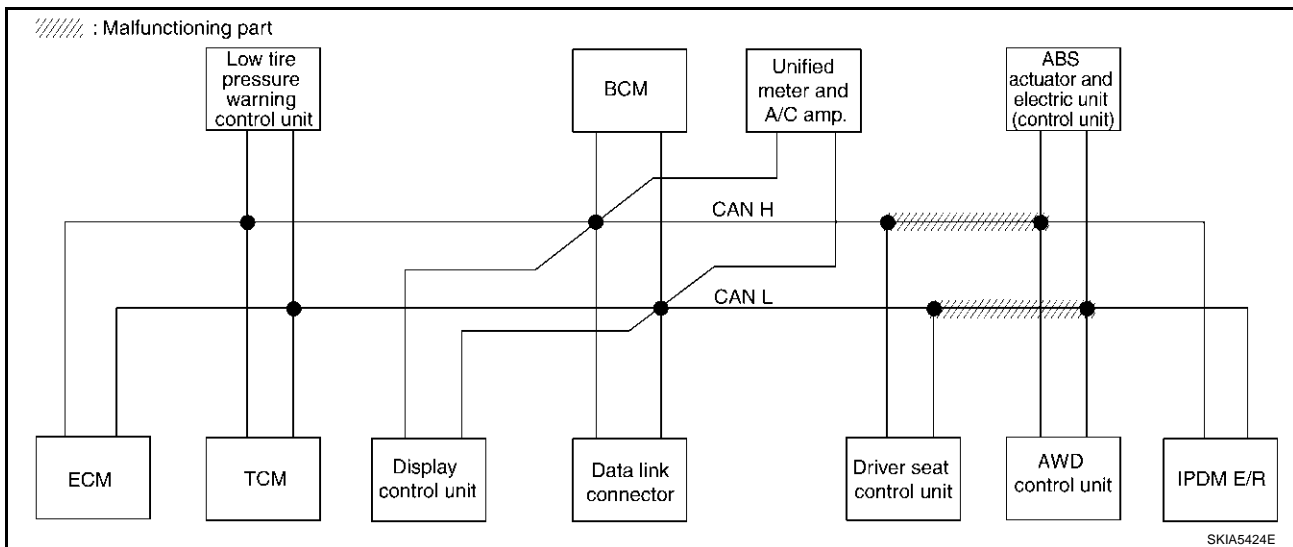
[CAN]

## Case 3

Check harness between driver seat control unit and ABS actuator and electric unit (control unit). Refer to [LAN-826, "Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit \(Control Unit\)"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWVN	—	UNKWVN	—	—	UNKWVN	UNKWVN	UNKWVN	—	UNKWVN
TRANSMISSION	No indication	NG	UNKWVN	UNKWVN	—	—	—	—	UNKWVN	—	UNKWVN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWVN	—	—	—	—	—	UNKWVN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWVN	UNKWVN	—	—	—	—	UNKWVN	—	—	UNKWVN
METER A/C AMP	No indication	—	UNKWVN	UNKWVN	UNKWVN	UNKWVN	UNKWVN	UNKWVN	—	UNKWVN	UNKWVN	—
AUTO DRIVE POS.	No indication	NG	UNKWVN	—	UNKWVN	—	—	UNKWVN	UNKWVN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWVN	UNKWVN	—	—	—	—	UNKWVN	—	—	—
ABS	—	NG	UNKWVN	UNKWVN	—	—	—	—	—	—	—	—

PKIB0941E





# CAN SYSTEM (TYPE 24)

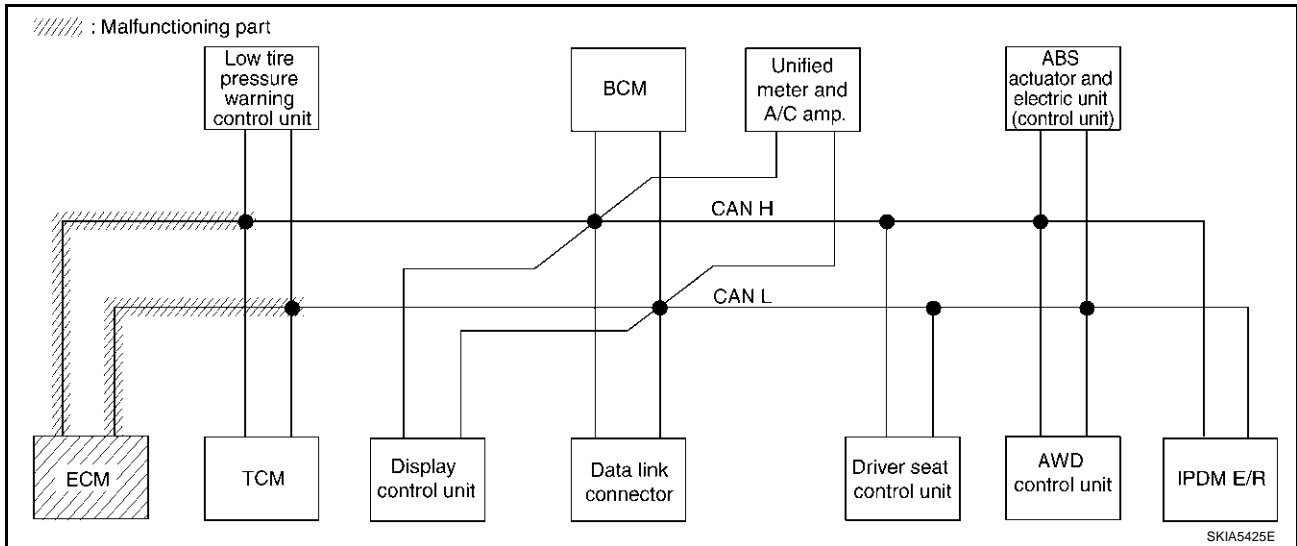
[CAN]

## Case 4

Check ECM circuit. Refer to [LAN-827, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW <del>N</del>	—	UNKW <del>N</del>	—	—	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	—	UNKW <del>N</del>
TRANSMISSION	No indication	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	—	UNKW <del>N</del>	—	UNKW <del>N</del>	—
AIR PRESSURE MONITOR	No indication	NG	UNKW <del>N</del>	—	—	—	—	—	UNKW <del>N</del>	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	—	UNKW <del>N</del>	—	—	UNKW <del>N</del>
METER A/C AMP	No indication	—	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	—	UNKW <del>N</del>	UNKW <del>N</del>	—
AUTO DRIVE POS.	No indication	NG	UNKW <del>N</del>	—	UNKW <del>N</del>	—	—	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—
ALL MODE AWD/4WD	—	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	—	UNKW <del>N</del>	—	—	—
ABS	—	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	—	—	—	—	—

PKIB0942E



# CAN SYSTEM (TYPE 24)

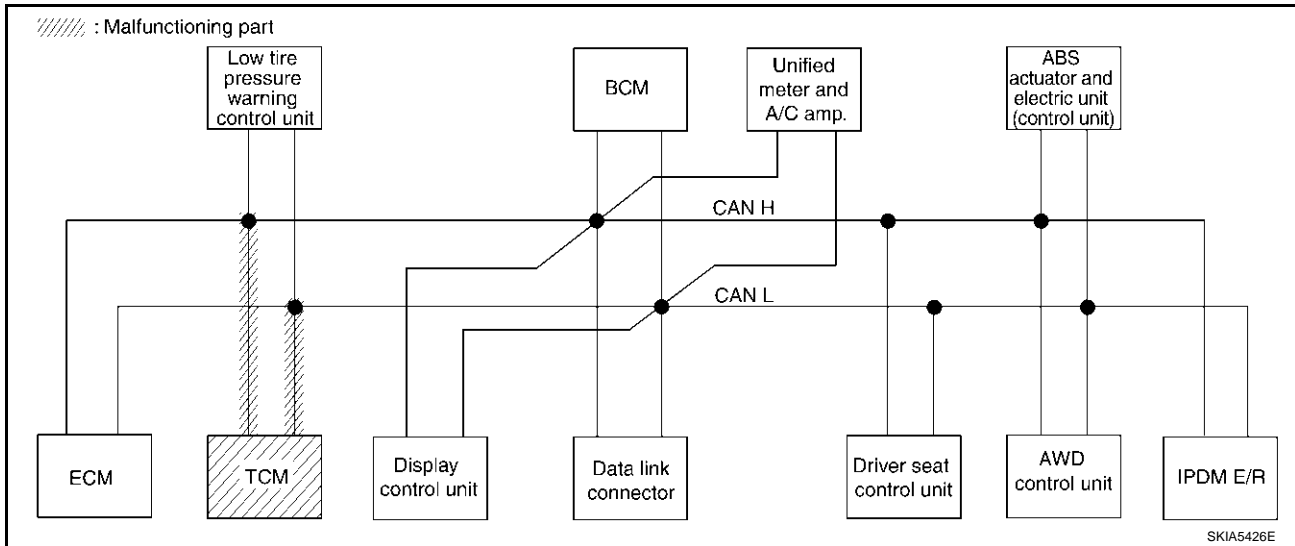
[CAN]

## Case 5

Check TCM circuit. Refer to [LAN-827, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

PKIB0943E



# CAN SYSTEM (TYPE 24)

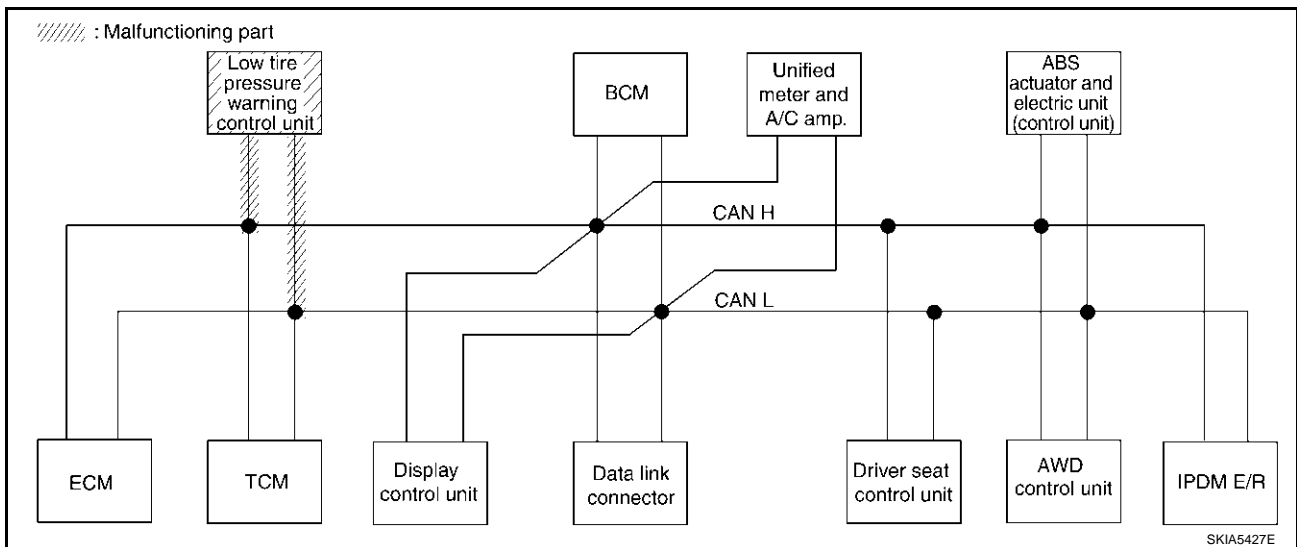
[CAN]

## Case 6

Check low tire pressure warning control unit circuit. Refer to [LAN-828, "Low Tire Pressure Warning Control Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6 ✓	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

PKIB0944E



# CAN SYSTEM (TYPE 24)

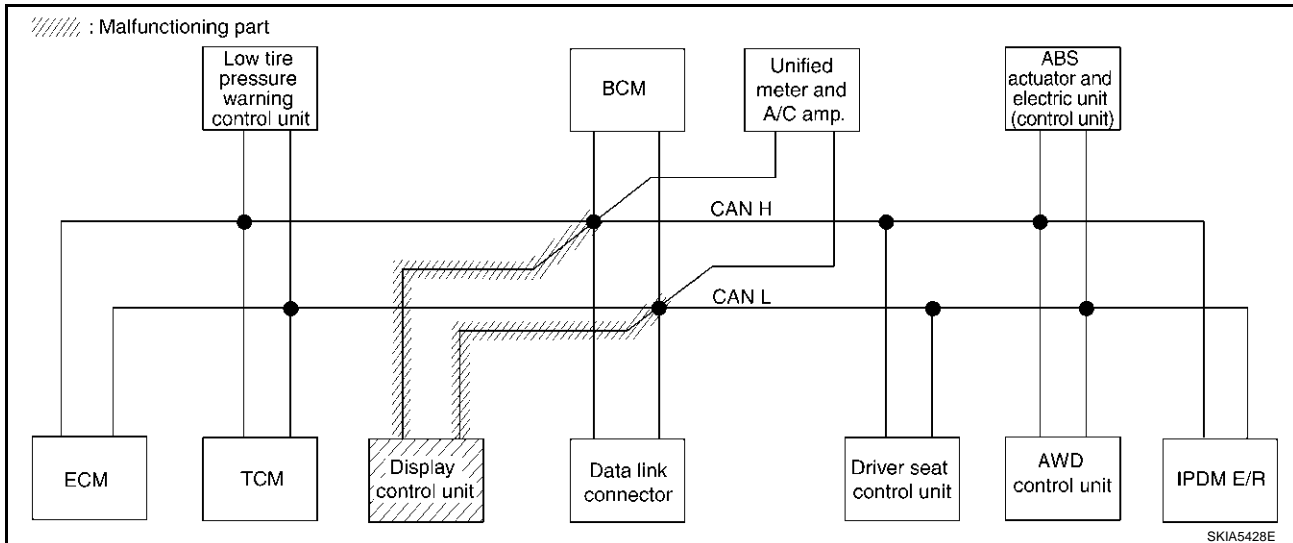
[CAN]

## Case 7

Check display control unit circuit. Refer to [LAN-828, "Display Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW	—	UNKW	—	—	UNKW	UNKW	UNKW	—	UNKW
TRANSMISSION	No indication	NG	UNKW	UNKW	—	—	—	—	UNKW	—	UNKW	—
AIR PRESSURE MONITOR	No indication	NG	UNKW	—	—	—	—	—	UNKW	—	—	—
Display control unit	—	CAN COMM	CAN/CRC 1 ✓	CAN/CRC 3 ✓	—	CAN/CRC 6 ✓	—	CAN/CRC 2 ✓	CAN/CRC 5 ✓	—	—	CAN/CRC 7 ✓
BCM	—	NG	UNKW	UNKW	—	—	—	—	UNKW	—	—	UNKW
METER A/C AMP	No indication	—	UNKW	UNKW	UNKW	UNKW	UNKW ✓	UNKW	—	UNKW	UNKW	—
AUTO DRIVE POS.	No indication	NG	UNKW	—	UNKW	—	—	—	UNKW	—	—	—
ALL MODE AWD/4WD	—	NG	UNKW	UNKW	—	—	—	—	UNKW	—	—	—
ABS	—	NG	UNKW	UNKW	—	—	—	—	—	—	—	—

PKIB0945E



# CAN SYSTEM (TYPE 24)

[CAN]

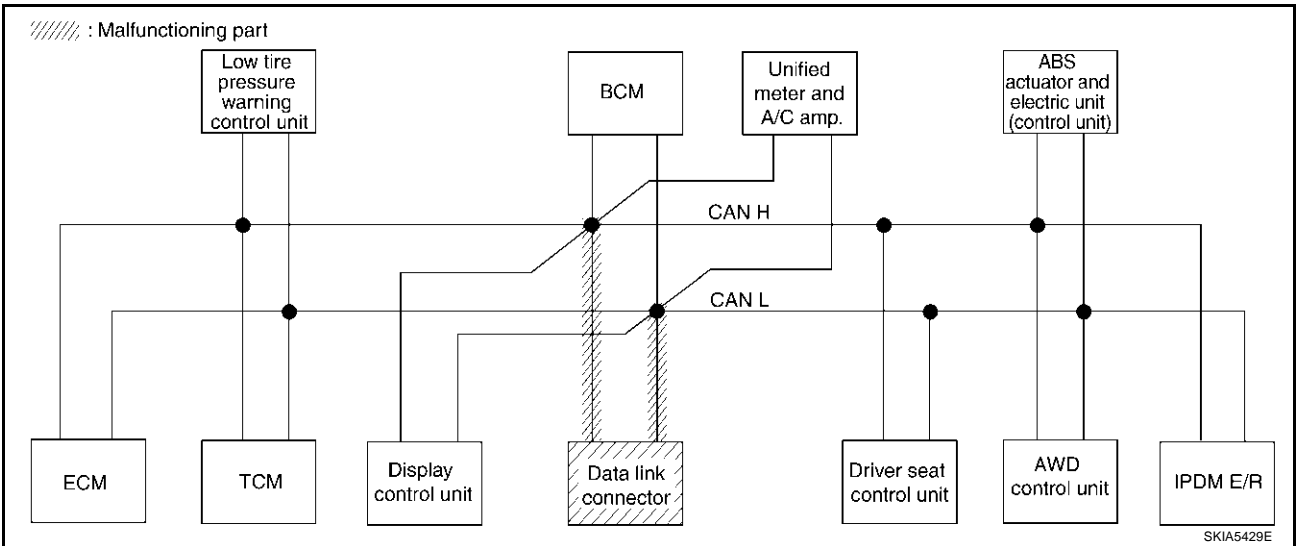
## Case 8

Check data link connector circuit. Refer to [LAN-829, "Data Link Connector Circuit Check"](#) .

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SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

PKIB0946E



# CAN SYSTEM (TYPE 24)

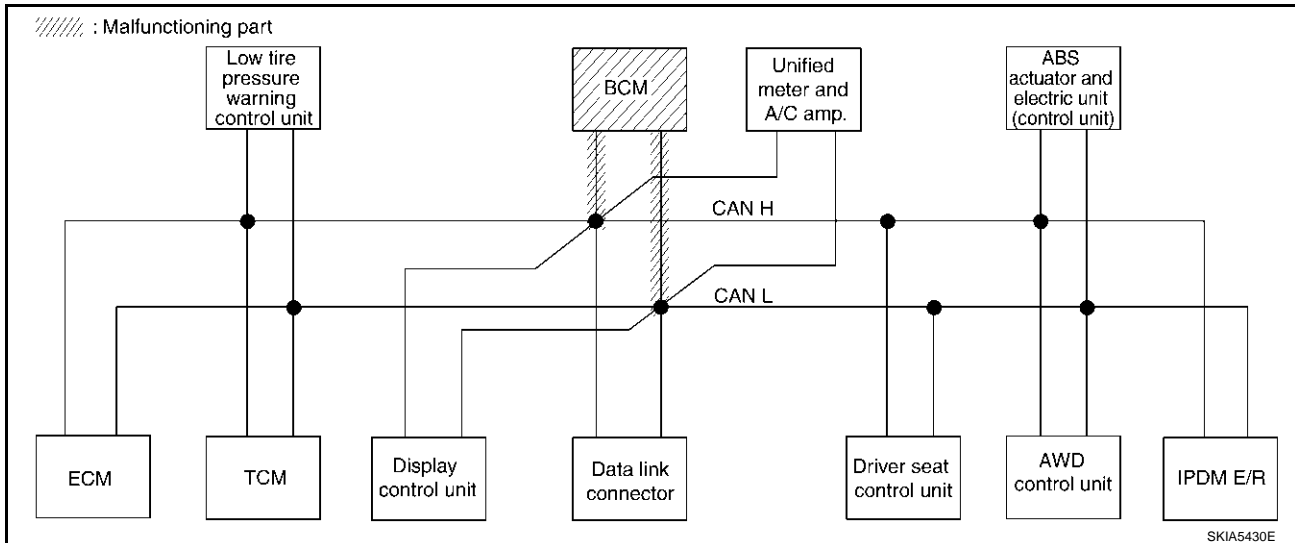
[CAN]

## Case 9

Check BCM circuit. Refer to [LAN-829, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWVN	—	UNKWVN	—	—	UNKWVN	UNKWVN	UNKWVN	—	UNKWVN
TRANSMISSION	No indication	NG	UNKWVN	UNKWVN	—	—	—	—	UNKWVN	—	UNKWVN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWVN	—	—	—	—	—	UNKWVN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWVN	UNKWVN	—	—	—	—	UNKWVN	—	—	UNKWVN
METER A/C AMP	No indication	—	UNKWVN	UNKWVN	UNKWVN	UNKWVN	UNKWVN	UNKWVN	—	UNKWVN	UNKWVN	—
AUTO DRIVE POS.	No indication	NG	UNKWVN	—	UNKWVN	—	—	UNKWVN	UNKWVN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWVN	UNKWVN	—	—	—	—	UNKWVN	—	—	—
ABS	—	NG	UNKWVN	UNKWVN	—	—	—	—	—	—	—	—

PKIB0947E



# CAN SYSTEM (TYPE 24)

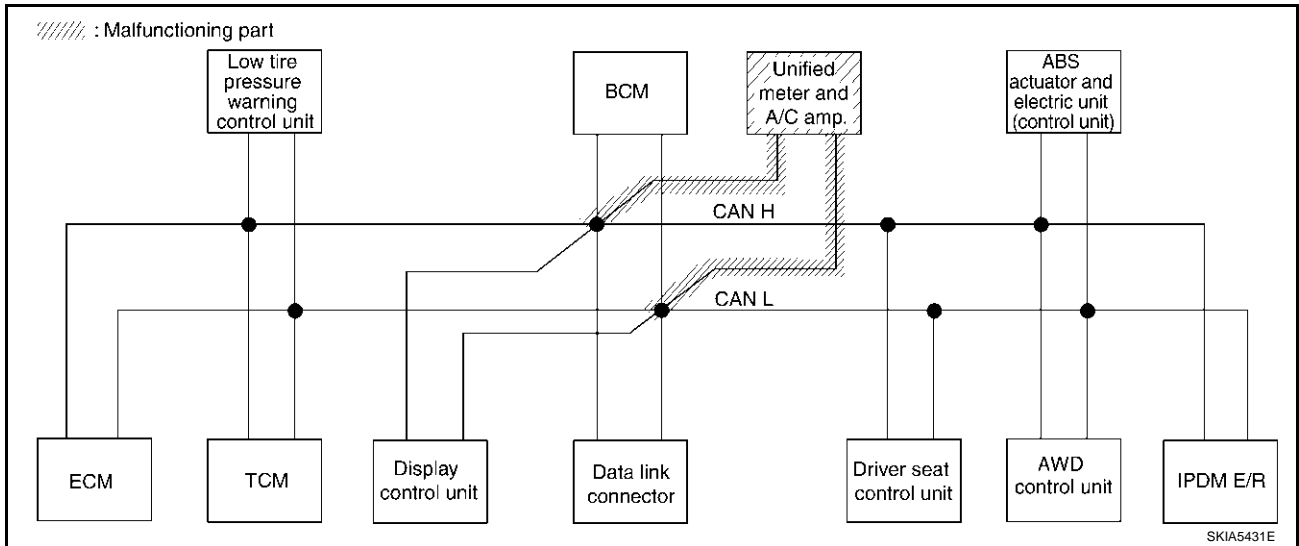
[CAN]

## Case 10

Check unified meter and A/C amp. circuit. Refer to [LAN-830, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

PKIB0948E



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# CAN SYSTEM (TYPE 24)

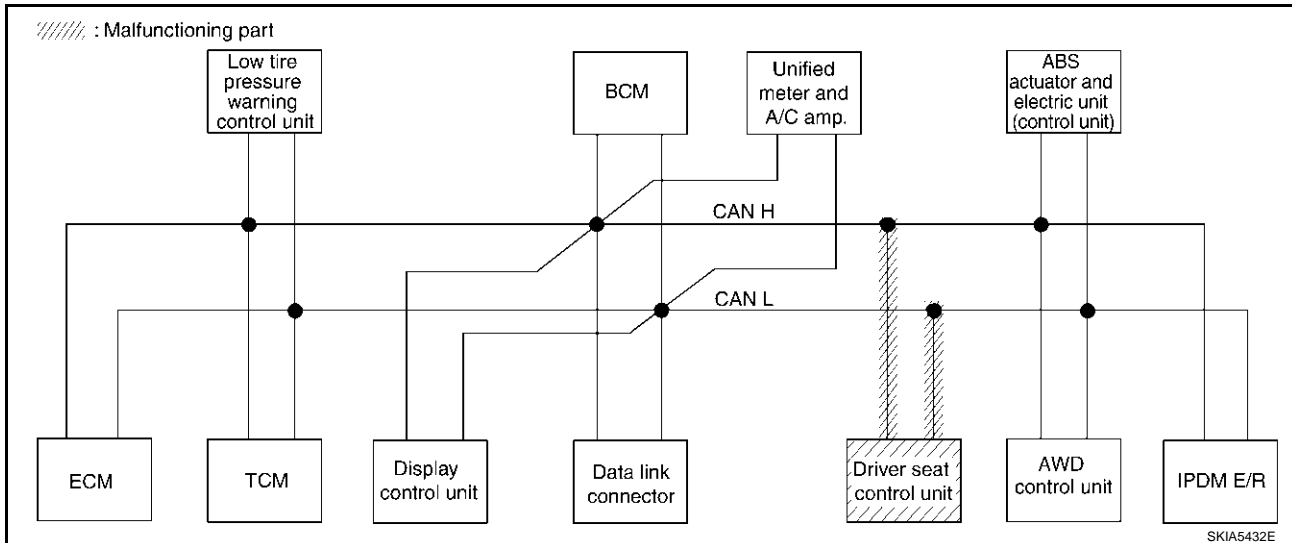
[CAN]

## Case 11

Check driver seat control unit circuit. Refer to [LAN-830, "Driver Seat Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—

PKIB0949E





# CAN SYSTEM (TYPE 24)

[CAN]

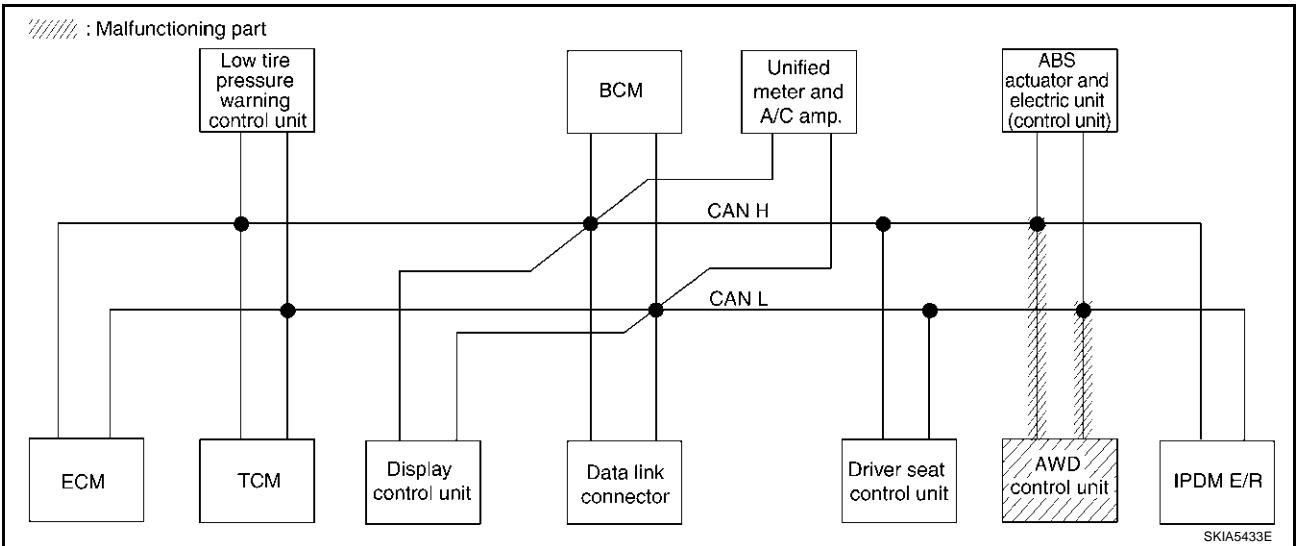
## Case 12

Check AWD control unit circuit. Refer to [LAN-831, "AWD Control Unit Circuit Check"](#).

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SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW N	—	UNKW N	—	—	UNKW N	UNKW N	UNKW N	—	UNKW N
TRANSMISSION	No indication	NG	UNKW N	UNKW N	—	—	—	—	UNKW N	—	UNKW N	—
AIR PRESSURE MONITOR	No indication	NG	UNKW N	—	—	—	—	—	UNKW N	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKW N	UNKW N	—	—	—	—	UNKW N	—	—	UNKW N
METER A/C AMP	No indication	—	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N	—	UNKW N	UNKW N	—
AUTO DRIVE POS.	No indication	NG	UNKW N	—	UNKW N	—	—	UNKW N	UNKW N	—	—	—
ALL MODE AWD/4WD	—	NG	UNKW N	UNKW N	—	—	—	—	UNKW N	—	—	—
ABS	—	NG	UNKW N	UNKW N	—	—	—	—	—	—	—	—

PKIB0950E



# CAN SYSTEM (TYPE 24)

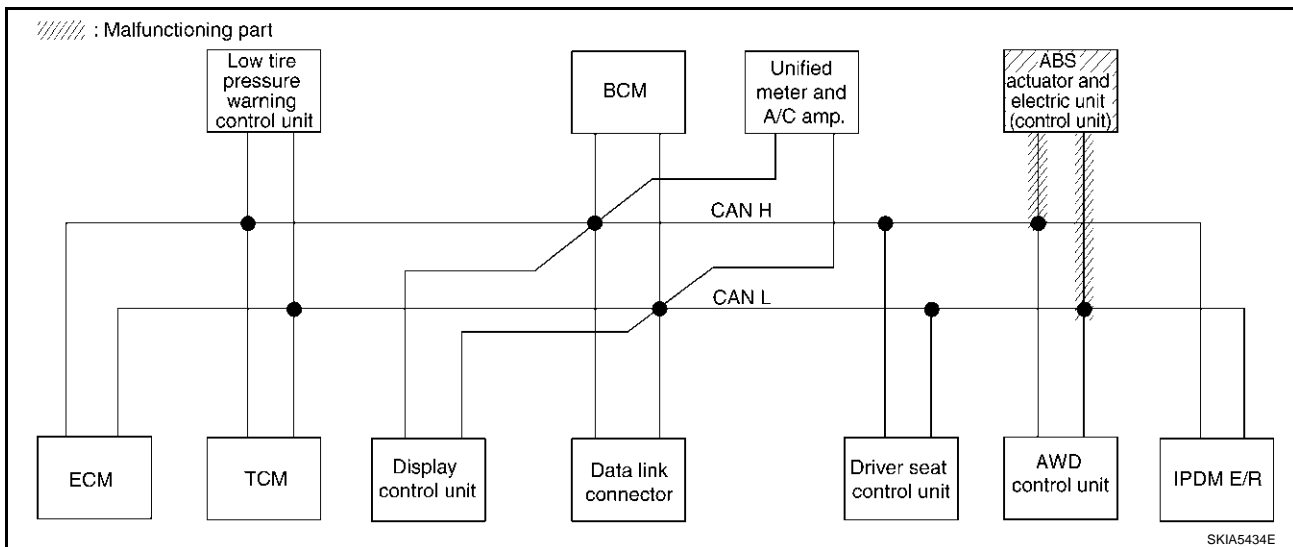
[CAN]

## Case 13

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-831, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW N	—	UNKW N	—	—	UNKW N	UNKW N	UNKW N	—	UNKW N
TRANSMISSION	No indication	NG	UNKW N	UNKW N	—	—	—	—	UNKW N	—	UNKW N	—
AIR PRESSURE MONITOR	No indication	NG	UNKW N	—	—	—	—	—	UNKW N	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKW N	UNKW N	—	—	—	—	UNKW N	—	—	UNKW N
METER A/C AMP	No indication	—	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N	—	UNKW N	UNKW N	—
AUTO DRIVE POS.	No indication	NG	UNKW N	—	UNKW N	—	—	UNKW N	UNKW N	—	—	—
ALL MODE AWD/4WD	—	NG	UNKW N	UNKW N	—	—	—	—	UNKW N	—	—	—
ABS	—	NG	UNKW N	UNKW N	—	—	—	—	—	—	—	—

PKIB0951E



# CAN SYSTEM (TYPE 24)

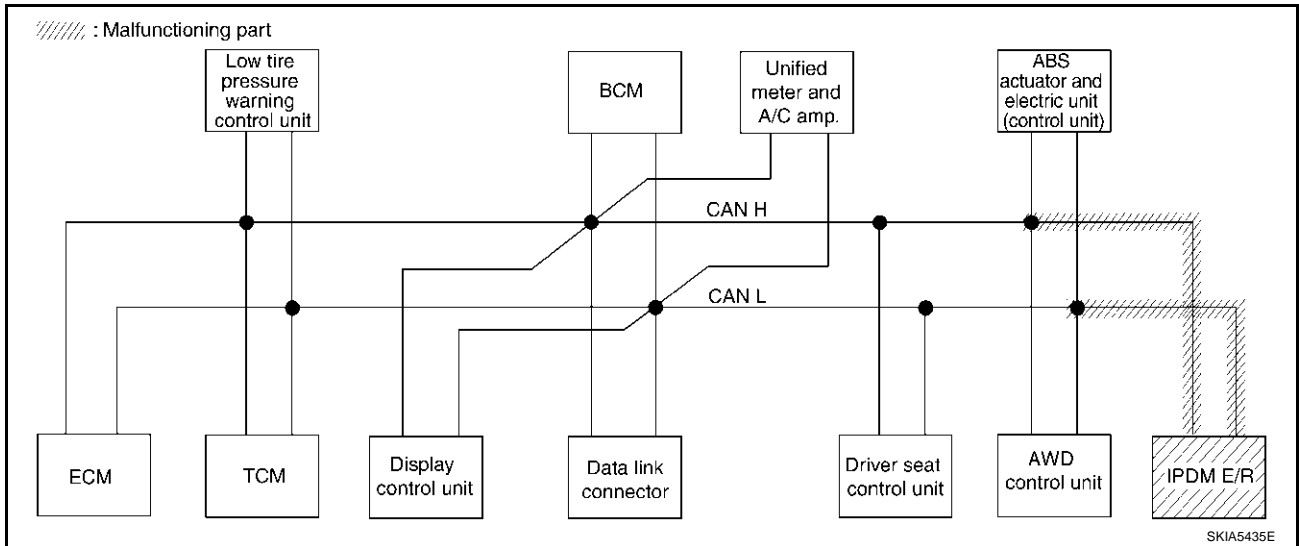
[CAN]

## Case 14

Check IPDM E/R circuit. Refer to [LAN-832, "IPDM E/R Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW	—	UNKW	—	—	UNKW	UNKW	UNKW	—	UNKW
TRANSMISSION	No indication	NG	UNKW	UNKW	—	—	—	—	UNKW	—	UNKW	—
AIR PRESSURE MONITOR	No indication	NG	UNKW	—	—	—	—	—	UNKW	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKW	UNKW	—	—	—	—	UNKW	—	—	UNKW
METER A/C AMP	No indication	—	UNKW	UNKW	UNKW	UNKW	UNKW	UNKW	—	UNKW	UNKW	—
AUTO DRIVE POS.	No indication	NG	UNKW	—	UNKW	—	—	UNKW	UNKW	—	—	—
ALL MODE AWD/4WD	—	NG	UNKW	UNKW	—	—	—	—	UNKW	—	—	—
ABS	—	NG	UNKW	UNKW	—	—	—	—	—	—	—	—

PKIB0952E



## Case 15

Check CAN communication circuit. Refer to [LAN-833, "CAN Communication Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW	—	UNKW	—	—	UNKW	UNKW	UNKW	—	UNKW
TRANSMISSION	No indication	NG	UNKW	UNKW	—	—	—	—	UNKW	—	UNKW	—
AIR PRESSURE MONITOR	No indication	NG	UNKW	—	—	—	—	—	UNKW	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	—	NG	UNKW	UNKW	—	—	—	—	UNKW	—	—	UNKW
METER A/C AMP	No indication	—	UNKW	UNKW	UNKW	UNKW	UNKW	UNKW	—	UNKW	UNKW	—
AUTO DRIVE POS.	No indication	NG	UNKW	—	UNKW	—	—	UNKW	UNKW	—	—	—
ALL MODE AWD/4WD	—	NG	UNKW	UNKW	—	—	—	—	UNKW	—	—	—
ABS	—	NG	UNKW	UNKW	—	—	—	—	—	—	—	—

PKIB0953E

# CAN SYSTEM (TYPE 24)

[CAN]

## Case 16

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-837, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS		
ENGINE	—	NG	UNKW	—	UN <del>KN</del> ✓W	—	—	UNKW	UNKW	UNKW	—	UNKW	
TRANSMISSION	No indication ✓	NG	UNKW	UNKW	—	—	—	—	UNKW	—	UNKW	—	
AIR PRESSURE MONITOR	No indication	NG	UNKW	—	—	—	—	—	UNKW	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	—	NG	UNKW	UNKW	—	—	—	—	UNKW	—	—	UNKW	
METER A/C AMP	No indication	—	UNKW	UNKW	UN <del>KN</del> ✓W	UNKW	UNKW	UNKW	—	UNKW	UN <del>KN</del> ✓W	—	
AUTO DRIVE POS.	No indication	NG	UNKW	—	UN <del>KN</del> ✓W	—	—	UNKW	UNKW	—	—	—	
ALL MODE AWD/4WD	—	NG	UNKW	UNKW	—	—	—	—	UNKW	—	—	—	
ABS	—	NG	UNKW	UNKW	—	—	—	—	—	—	—	—	

PKIB0954E

## Case 17

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-837, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	AWD /4WD	VDC/TCS /ABS		
ENGINE	—	NG	UNKW	—	UNKW	—	—	UNKW	UNKW	UNKW	—	UNKW	
TRANSMISSION	No indication	NG	UNKW	UN <del>KN</del> ✓W	—	—	—	—	UN <del>KN</del> ✓W	—	UNKW	—	
AIR PRESSURE MONITOR	No indication	NG	UNKW	—	—	—	—	—	UNKW	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	—	NG	UNKW	UNKW	—	—	—	—	UNKW	—	—	UNKW	
METER A/C AMP	No indication	—	UNKW	UNKW	UNKW	UNKW	UNKW	UNKW	—	UNKW	UNKW	—	
AUTO DRIVE POS.	No indication	NG	UNKW	—	UNKW	—	—	UNKW	UNKW	—	—	—	
ALL MODE AWD/4WD	—	NG	UNKW	UNKW	—	—	—	—	UNKW	—	—	—	
ABS	—	NG	UNKW	UN <del>KN</del> ✓W	—	—	—	—	—	—	—	—	

PKIB0955E

## Circuit Check Between TCM and Data Link Connector

AKS0073V

### 1. CHECK HARNESS FOR OPEN CIRCUIT

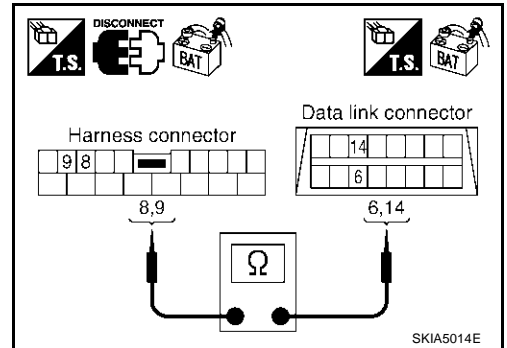
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

**8 (L) - 6 (L) : Continuity should exist.**

**9 (Y) - 14 (Y) : Continuity should exist.**

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-806, "Work Flow"](#).
- NG >> Repair harness.



## Circuit Check Between Data Link Connector and Driver Seat Control Unit

AKS0073W

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector M9
  - Harness connector B2

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

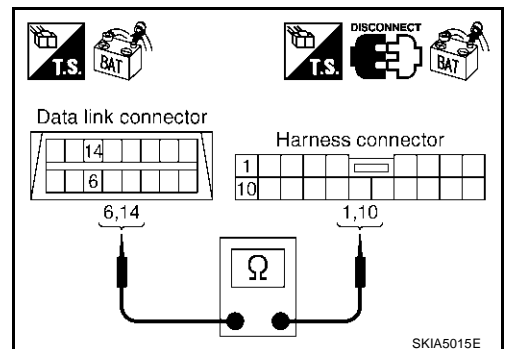
1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

**6 (L) - 1 (L) : Continuity should exist.**

**14 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



### 3. CHECK HARNESS FOR OPEN CIRCUIT

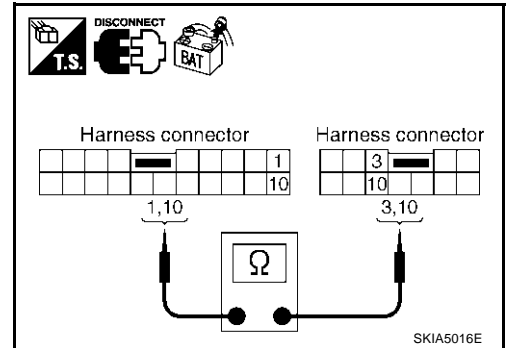
1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-806, "Work Flow"](#).
- NG >> Repair harness.



## Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit)

AKS0073X

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector B4
  - Harness connector E105

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

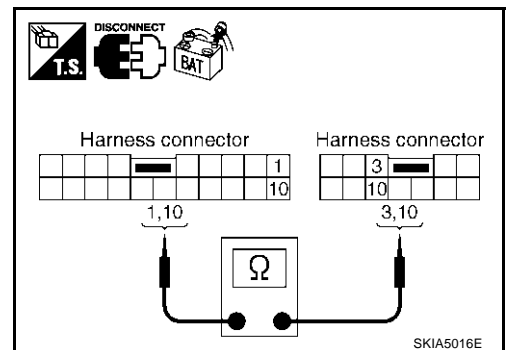
1. Disconnect harness connector B2 and harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.

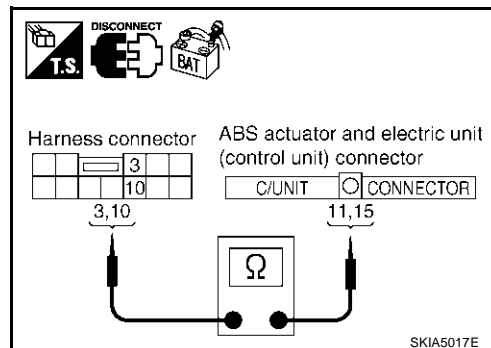


### 3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

**3 (L) - 11 (L) : Continuity should exist.**

**10 (Y) - 15 (Y) : Continuity should exist.**



#### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-806, "Work Flow"](#).
- NG >> Repair harness.

## ECM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

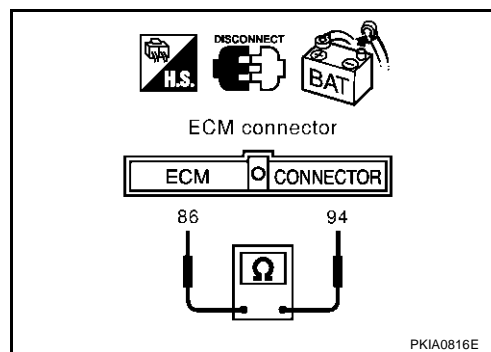
#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

**94 (L) - 86 (Y) : Approx. 108 - 132Ω**



#### OK or NG

- OK >> Replace ECM.
- NG >> Repair harness between ECM and TCM.

## TCM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
  - TCM connector
  - Harness connector F102
  - Harness connector M82

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

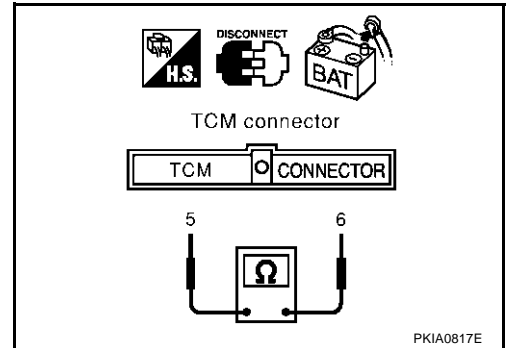
1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace TCM.  
 NG >> Repair harness between TCM and low tire pressure warning control unit.



## Low Tire Pressure Warning Control Unit Circuit Check

AKS00740

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of low tire pressure warning control unit for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

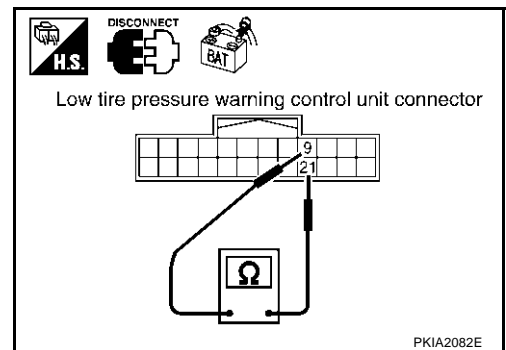
1. Disconnect low tire pressure warning control unit connector.
2. Check resistance between low tire pressure warning control unit harness connector M81 terminals 9 (L) and 21 (Y).

**9 (L) - 21 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace low tire pressure warning control unit.  
 NG >> Repair harness between low tire pressure warning control unit and TCM.



## Display Control Unit Circuit Check

AKS00741

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display control unit for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.



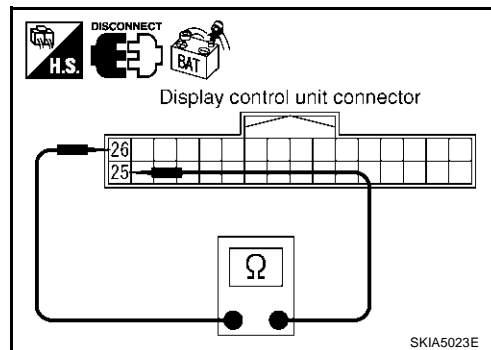
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect display control unit connector.
2. Check resistance between display control unit harness connector M43 terminals 25 (L) and 26 (Y).

**25 (L) - 26 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace display control unit.  
 NG >> Repair harness between display control unit and data link connector.



AKS00742

## Data Link Connector Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

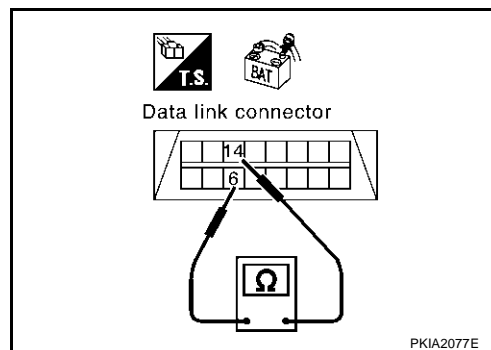
## 2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Diagnose again. Refer to [LAN-806, "Work Flow"](#) .  
 NG >> Repair harness between data link connector and BCM.



AKS00743

## BCM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

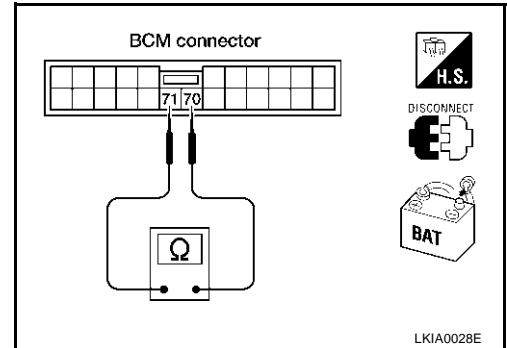
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M37 terminals 70 (L) and 71 (Y).

**70 (L) - 71 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace BCM. Refer to [BCS-36, "Removal and Installation of BCM"](#).
- NG >> Repair harness between BCM and data link connector.



## Unified Meter and A/C Amp. Circuit Check

AKS00744

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

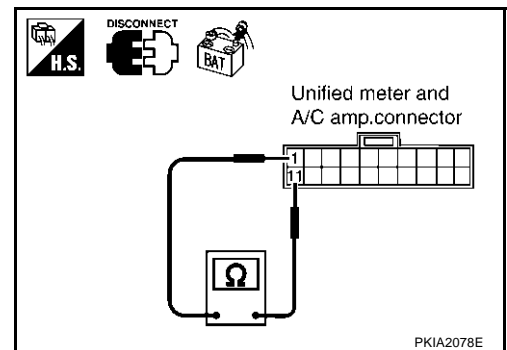
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

**1 (L) - 11 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace unified meter and A/C amp.
- NG >> Repair harness between unified meter and A/C amp. and data link connector.



## Driver Seat Control Unit Circuit Check

AKS00745

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control unit side and harness side).
  - Driver seat control unit connector
  - Harness connector B301
  - Harness connector B9

### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

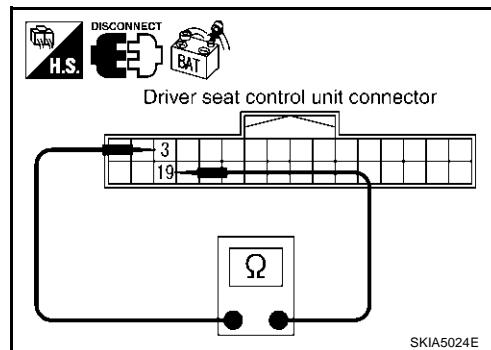
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect driver seat control unit connector.
2. Check resistance between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

**3 (L/Y) - 19 (BR/W) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace driver seat control unit.  
 NG >> Repair harness between driver seat control unit and harness connector B4.



AKS00746

## AWD Control Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of AWD control unit for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

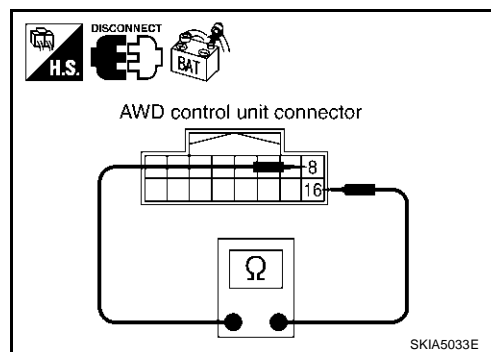
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect AWD control unit connector.
2. Check resistance between AWD control unit harness connector E111 terminals 8 (L) and 16 (Y).

**8 (L) - 16 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace AWD control unit.  
 NG >> Repair harness between AWD control unit and IPDM E/R.



AKS00747

## ABS Actuator and Electric Unit (Control Unit) Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

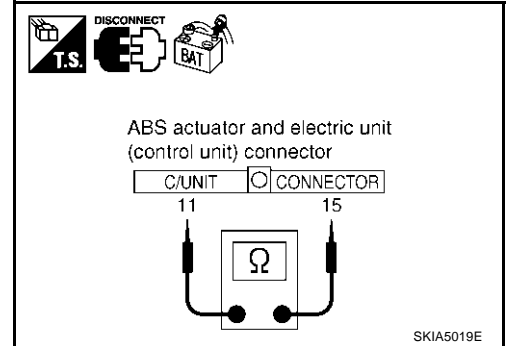
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

**11 (L) - 15 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).  
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



AKS00748

## IPDM E/R Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

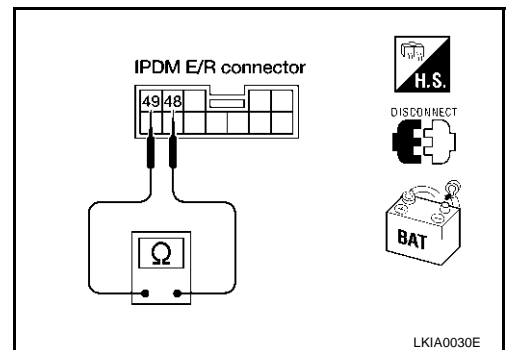
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y) : Approx. 108 - 132Ω**

### OK or NG

- OK >> Replace IPDM E/R.  
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



**CAN Communication Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, meter side and harness side).
  - ECM
  - TCM
  - Low tire pressure warning control unit
  - Display control unit
  - BCM
  - Unified meter and A/C amp.
  - Driver seat control unit
  - AWD control unit
  - ABS actuator and electric unit (control unit)
  - IPDM E/R
  - Between ECM and IPDM E/R
  - Between ECM and TCM
  - Between ECM and driver seat control unit

**OK or NG**

OK &gt;&gt; GO TO 2.

NG &gt;&gt; Repair terminal or connector.

**2. CHECK HARNESS FOR SHORT CIRCUIT**

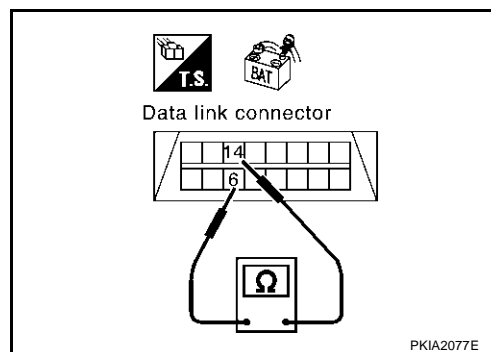
1. Disconnect following connectors.
  - ECM connector
  - Low tire pressure warning control unit connector
  - Harness connector M82
  - Display control unit connector
  - BCM connector
  - Unified meter and A/C amp. connector
  - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Continuity should not exist.****OK or NG**

OK &gt;&gt; GO TO 3.

NG &gt;&gt; Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9.



### 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

**6 (L) - Ground : Continuity should not exist.**

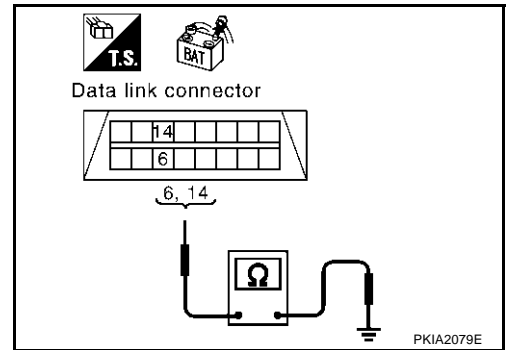
**14 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9.



### 4. CHECK HARNESS FOR SHORT CIRCUIT

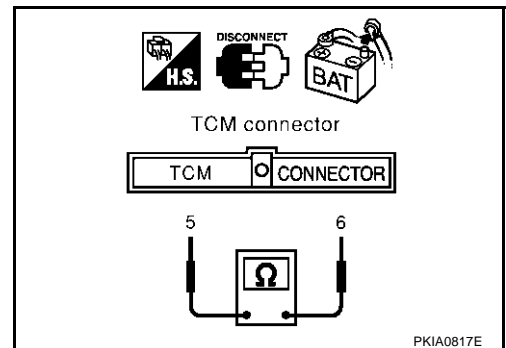
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 5.

NG >> Repair harness between TCM and harness connector F102.



### 5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

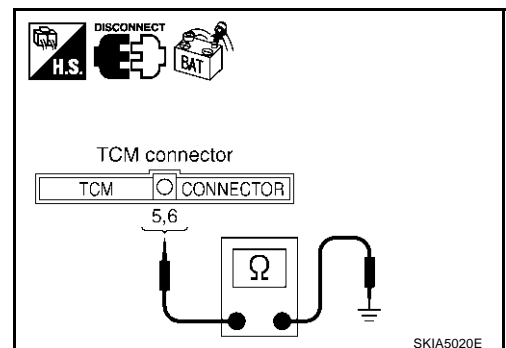
**5 (L) - Ground : Continuity should not exist.**

**6 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 6.

NG >> Repair harness between TCM and harness connector F102.



## 6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B4 and harness connector B9.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

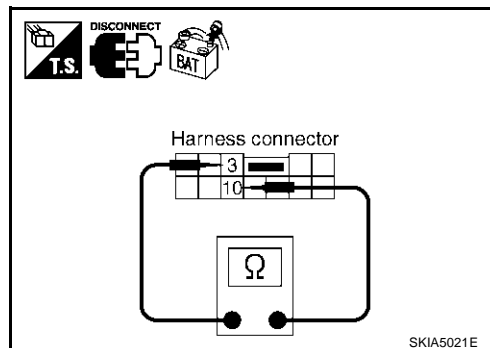
**3 (L) - 10 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 7.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Repair harness between harness connector B4 and harness connector B2.
- Repair harness between harness connector B4 and harness connector B9.



## 7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

**3 (L) - Ground : Continuity should not exist.**

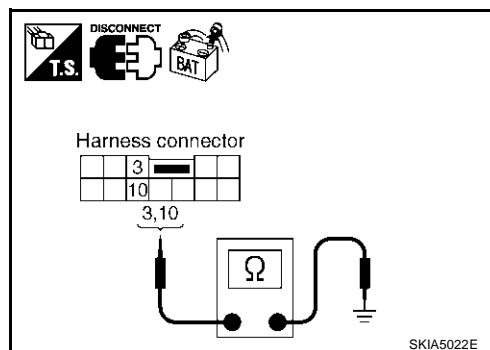
**10 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 8.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Repair harness between harness connector B4 and harness connector B2.
- Repair harness between harness connector B4 and harness connector B9.



## 8. CHECK HARNESS FOR SHORT CIRCUIT

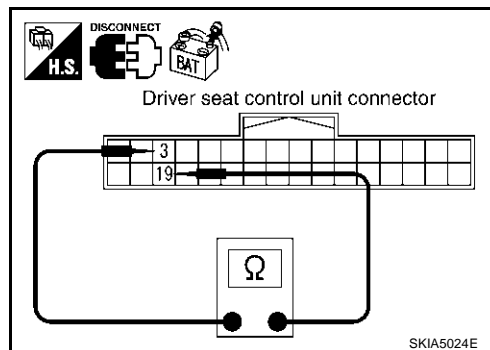
1. Disconnect driver seat control unit connector.
2. Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

**3 (L/Y) - 19 (BR/W) : Continuity should not exist.**

### OK or NG

OK >> GO TO 9.

NG >> Repair harness between driver seat control unit and harness connector B301.



## 9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y), 19 (BR/W) and ground.

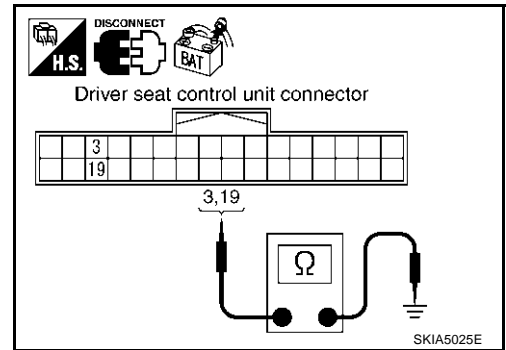
**3 (L/Y) - Ground : Continuity should not exist.**

**19 (BR/W) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 10.

NG >> Repair harness between driver seat control unit and harness connector B301.



## 10. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect AWD control unit connector, ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

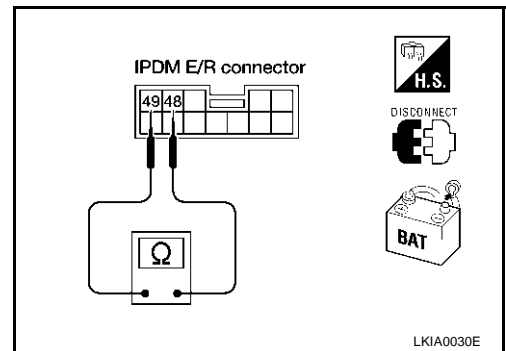
**48 (L) - 49 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 11.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 11. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

**48 (L) - Ground : Continuity should not exist.**

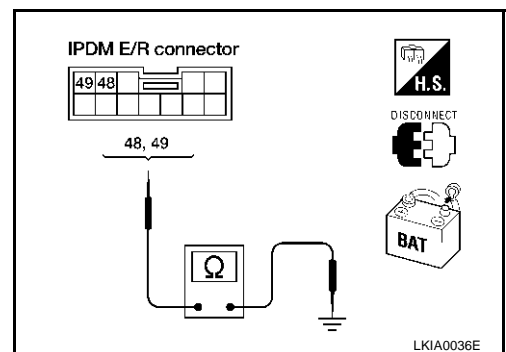
**49 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 12.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 12. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-837, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-806, "Work Flow"](#).

NG >> Replace ECM and/or IPDM E/R.



## IPDM E/R Ignition Relay Circuit Check

AKS0074A

Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-45. "IPDM E/R Power/Ground Circuit Inspection"](#) .
- Ignition power supply circuit. Refer to [PG-10. "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#) .

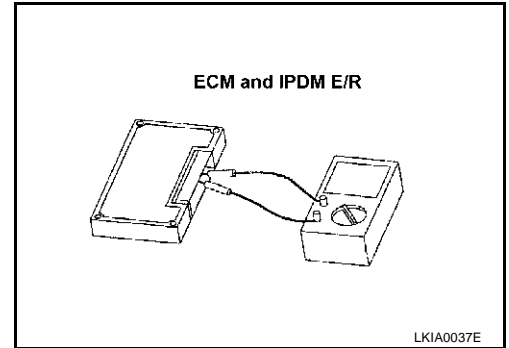
## Component Inspection

AKS0074B

### ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value ( $\Omega$ ) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
L  
M

LAN

## CAN SYSTEM (TYPE 25)

PFP:23710

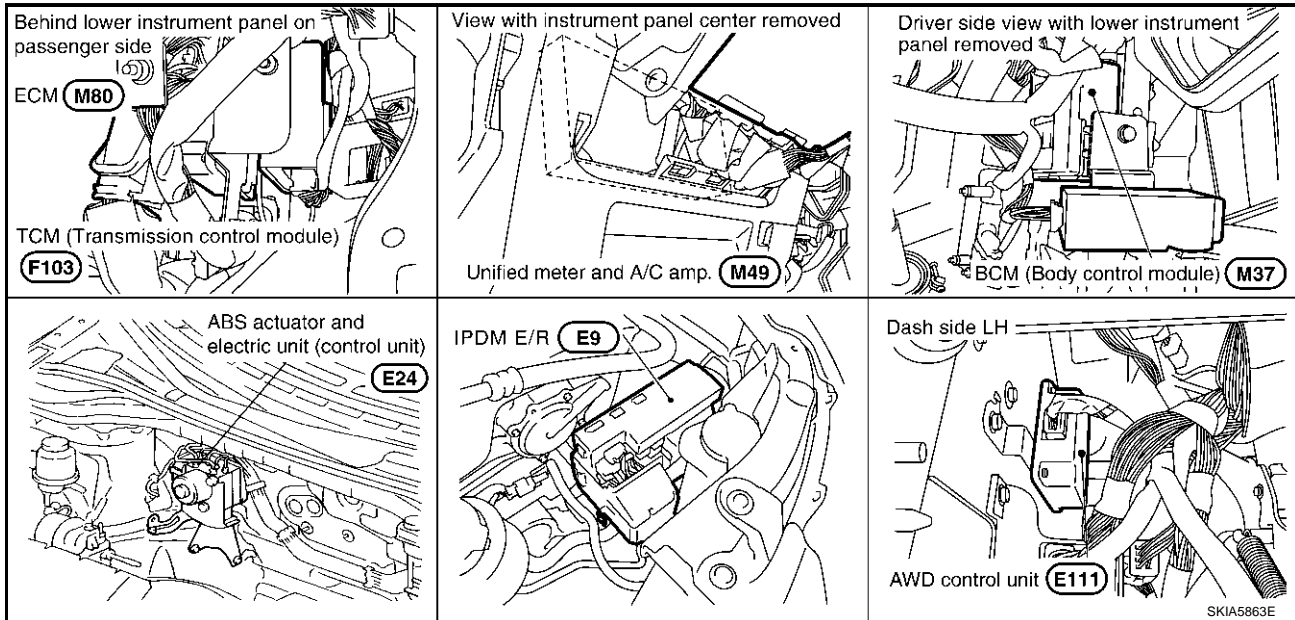
### System Description

AKS0074C

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

### Component Parts and Harness Connector Location

AKS0074D

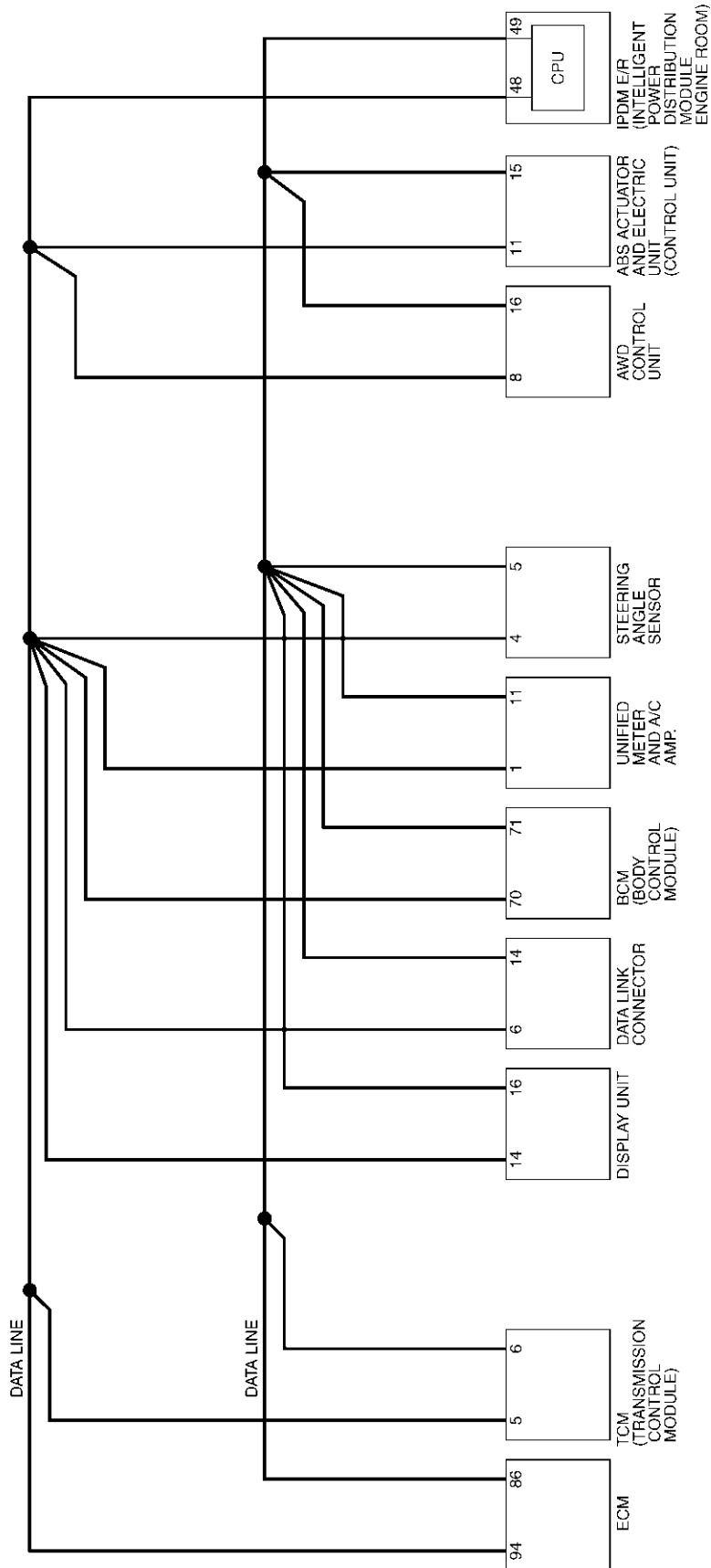


# CAN SYSTEM (TYPE 25)

[CAN]

## Schematic

AKS0074E



A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
LAN  
L  
M

TKWA1019E

# CAN SYSTEM (TYPE 25)

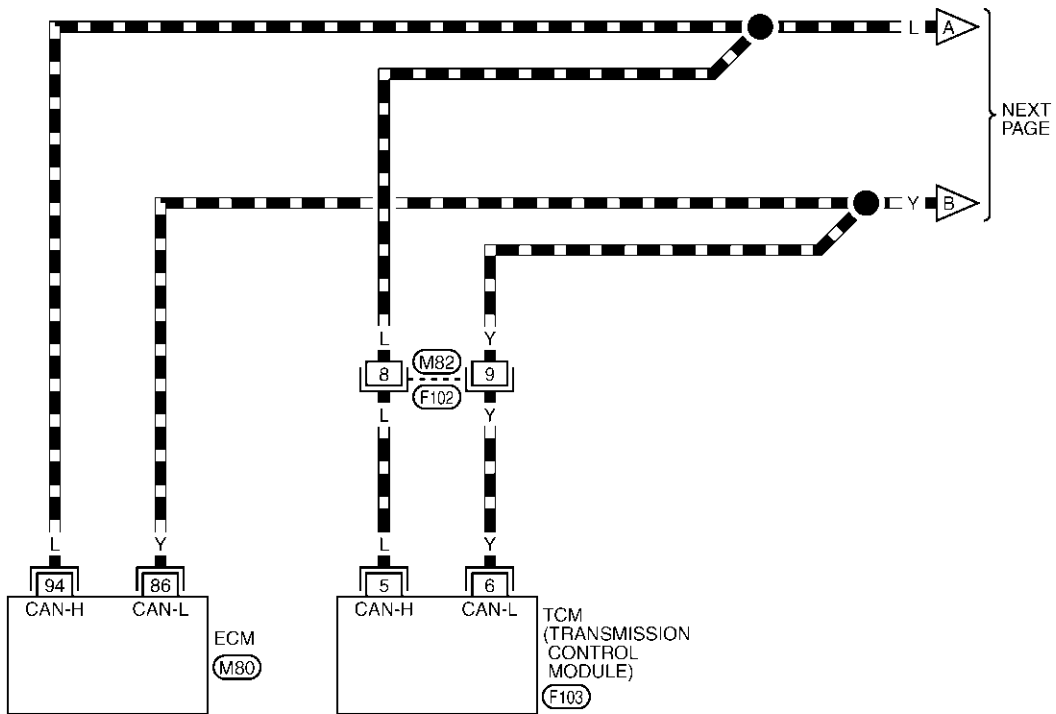
[CAN]

## Wiring Diagram - CAN -

AKS0074F

### LAN-CAN-73

▬ : DATA LINE



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18		

(F102)  
W

REFER TO THE FOLLOWING.  
(M80), (F103) -ELECTRICAL  
UNITS

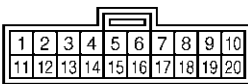
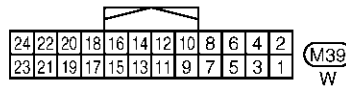
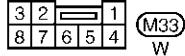
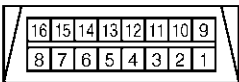
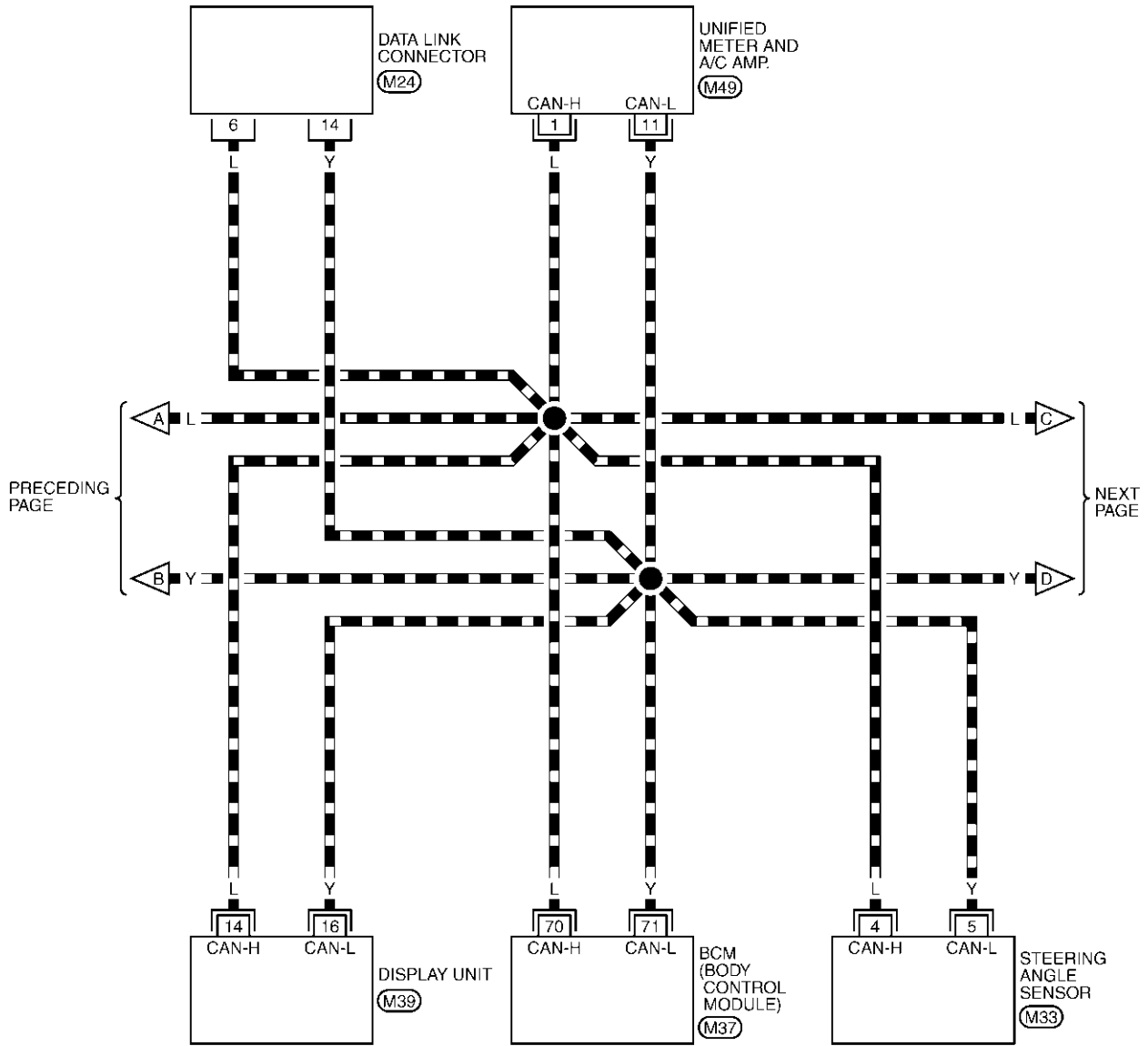
TKWA1020E

# CAN SYSTEM (TYPE 25)

[CAN]

## LAN-CAN-74

▬ : DATA LINE

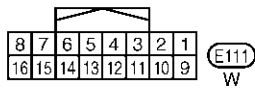
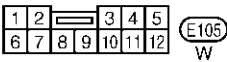
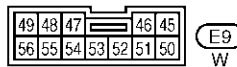
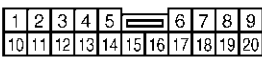
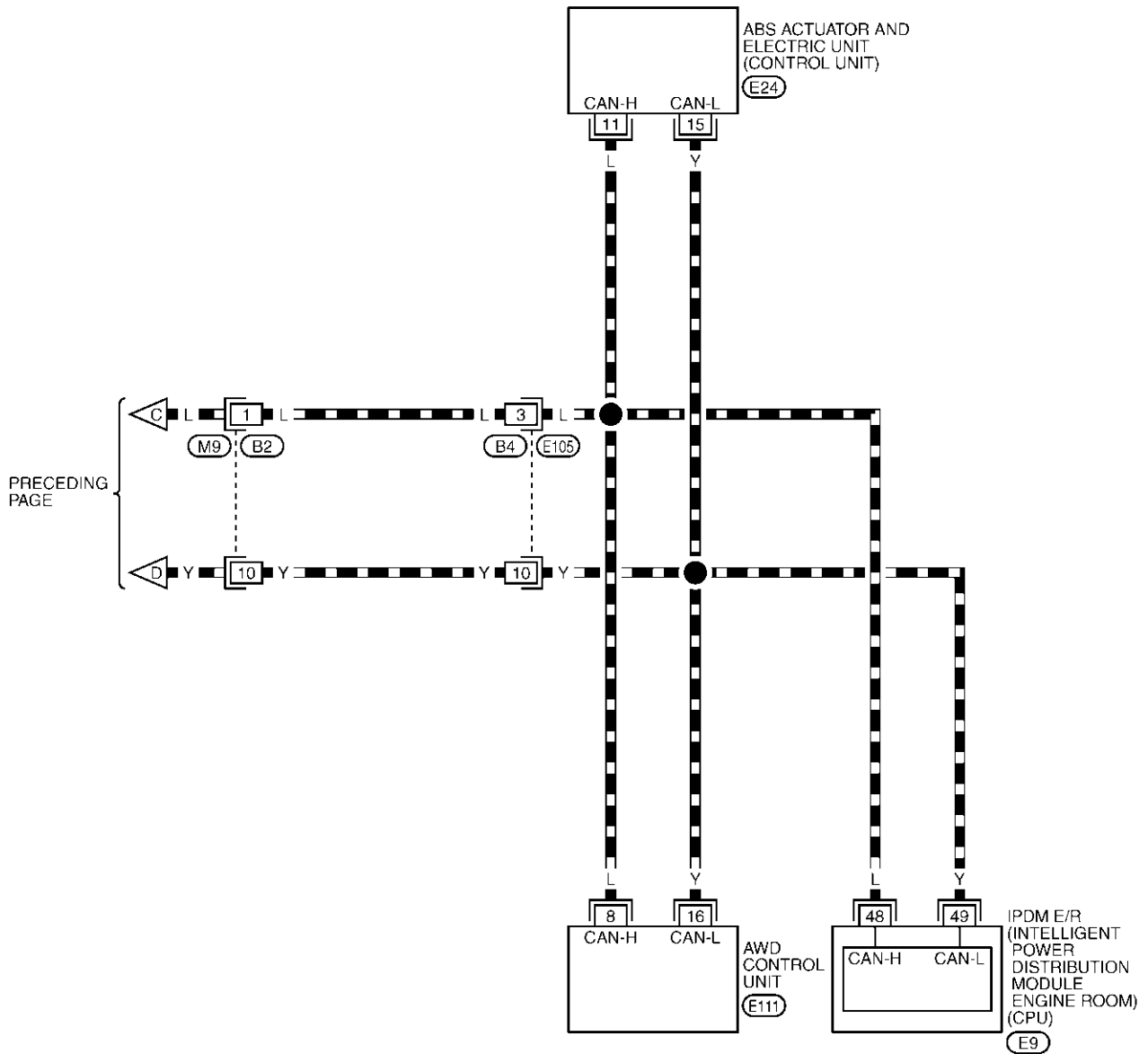


REFER TO THE FOLLOWING.  
(M37) -ELECTRICAL UNITS

TKWA1021E

## LAN-CAN-75

▬ : DATA LINE



REFER TO THE FOLLOWING.  
 (E24) -ELECTRICAL UNITS

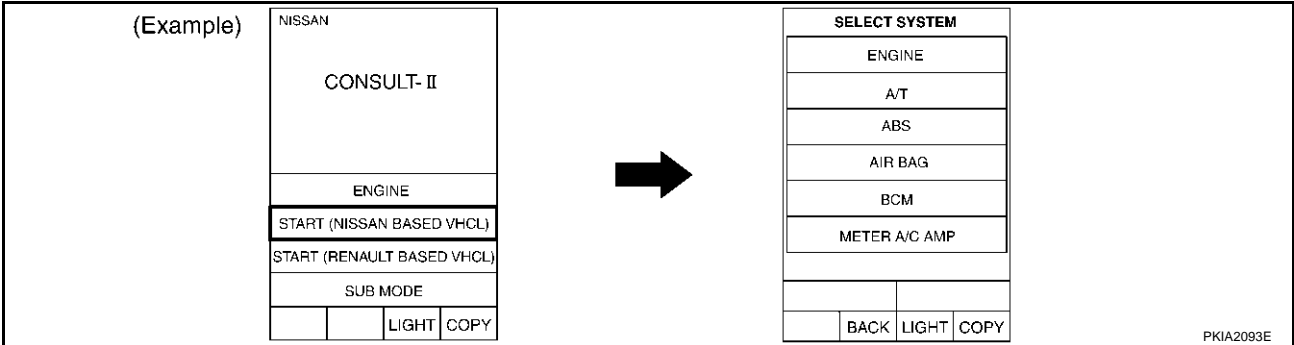
# CAN SYSTEM (TYPE 25)

[CAN]

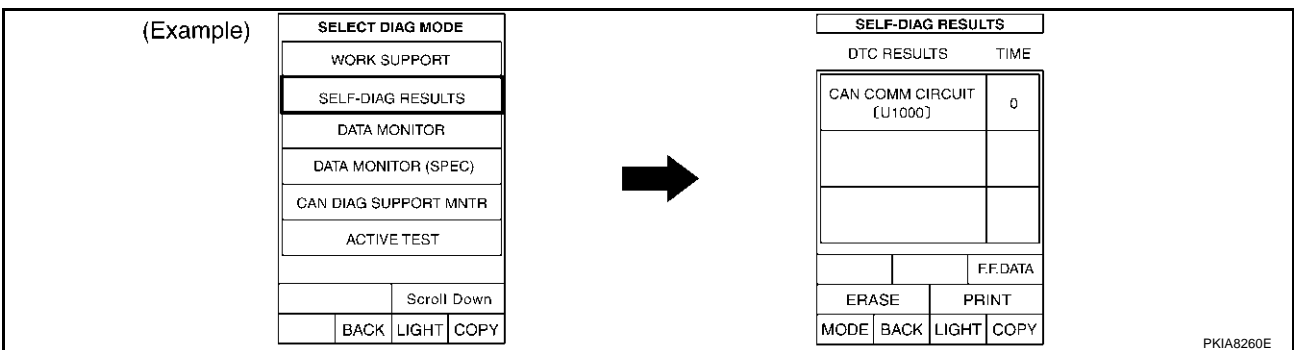
AKS00C5Q

## Work Flow

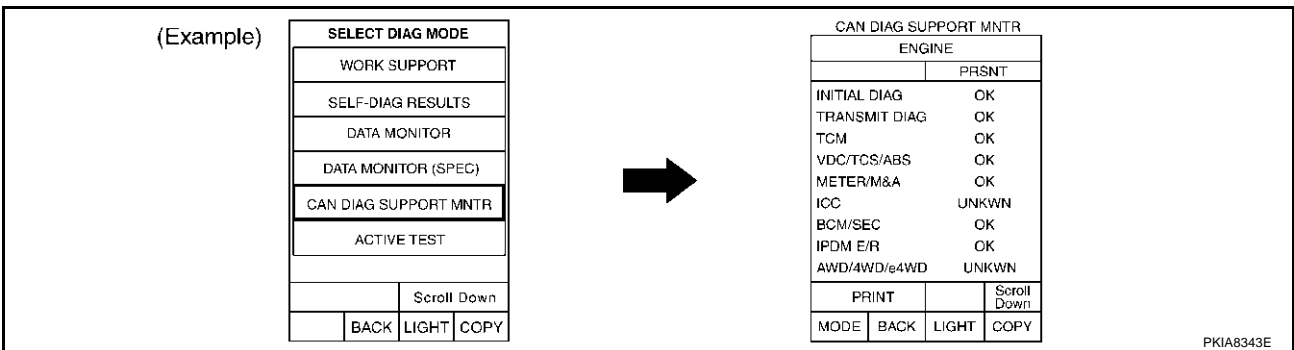
- When there are no indications of "TRANSMISSION" or "METER A/C AMP" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP", "ALL MODE AWD/4WD" and "ABS" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP", "ALL MODE AWD/4WD" and "ABS" displayed on CONSULT-II.



- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-845, "CHECK SHEET"](#).
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "v" onto the items with "No indication", "NG", or "UNKWVN" in the check sheet table. Refer to [LAN-845, "CHECK SHEET"](#).

**NOTE:**

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual. So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the integrated display system. Refer to [AV-110, "CAN Communication Line Check"](#).
- Attach the CAN DIAG MONITOR check sheet onto the check sheet. Refer to [LAN-845, "CHECK SHEET"](#).

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8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG MONITOR check sheet. Refer to [LAN-845, "CHECK SHEET"](#) .

**NOTE:**

If "NG" is displayed on "CAN COMM" as "CAN DIAG MNTR" for the diagnosed control unit, replace the control unit. Refer to [AV-110, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-847, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .



# CAN SYSTEM (TYPE 25)

[CAN]

## CHECK SHEET

**NOTE:**

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

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Check sheet table												
SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

Attach copy of  
display unit  
CAN DIAG MONITOR check sheet

PKIB0957E

# CAN SYSTEM (TYPE 25)

[CAN]

Attach copy of  
ENGINE  
SELF-DIAG RESULTS

Attach copy of  
TRANSMISSION  
SELF-DIAG RESULTS

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
METER A/C AMP  
SELF-DIAG RESULTS

Attach copy of  
ALL MODE AWD/4WD  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

Attach copy of  
ENGINE  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
TRANSMISSION  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
BCM  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
METER A/C AMP  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ALL MODE AWD/4WD  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ABS  
CAN DIAG SUPPORT  
MNTR

PKIB0715E

# CAN SYSTEM (TYPE 25)

[CAN]

## CHECK SHEET RESULTS (EXAMPLE)

### NOTE:

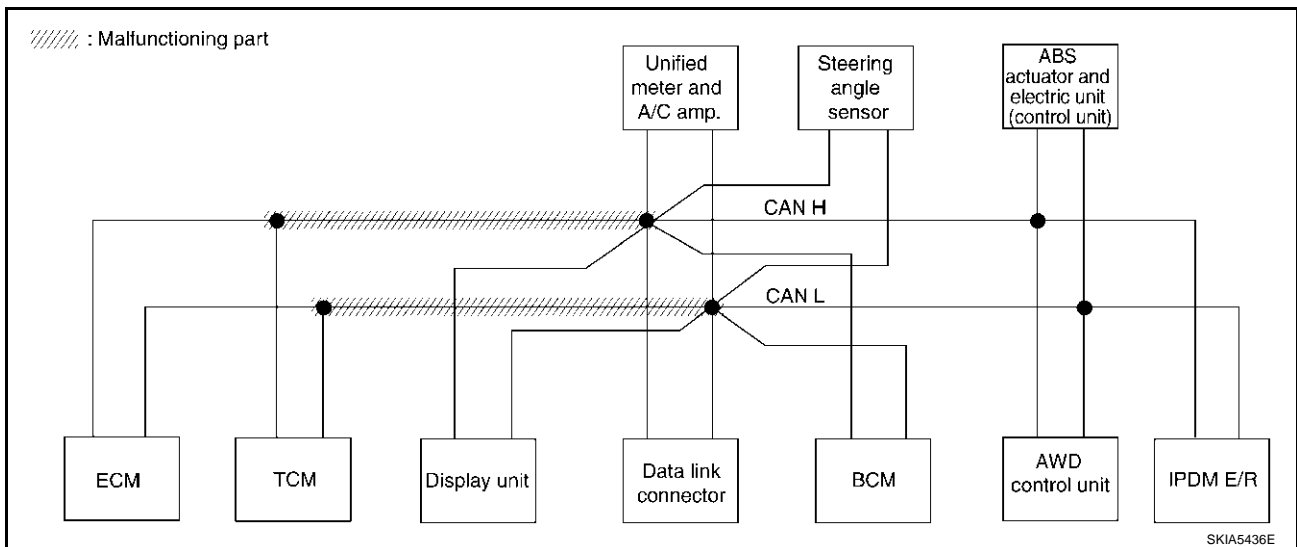
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

### Case 1

Check harness between TCM and data link connector. Refer to [LAN-860, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

PKIB0958E



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# CAN SYSTEM (TYPE 25)

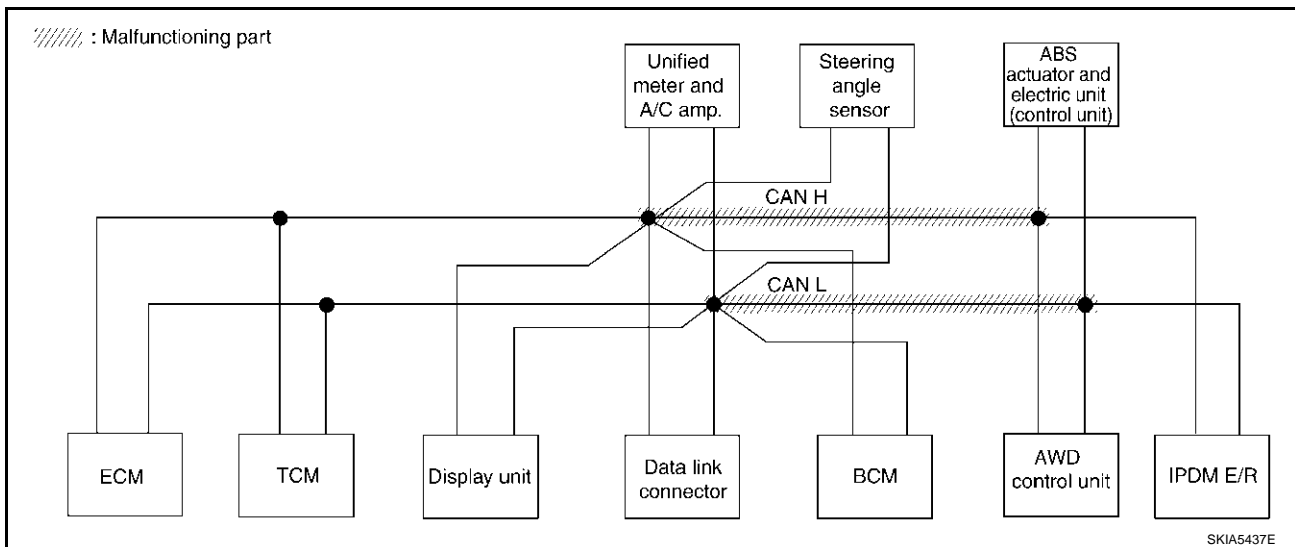
[CAN]

## Case 2

Check harness between data link connector and ABS actuator and electric unit (control unit). Refer to [LAN-860, "Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit \(Control Unit\)"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

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# CAN SYSTEM (TYPE 25)

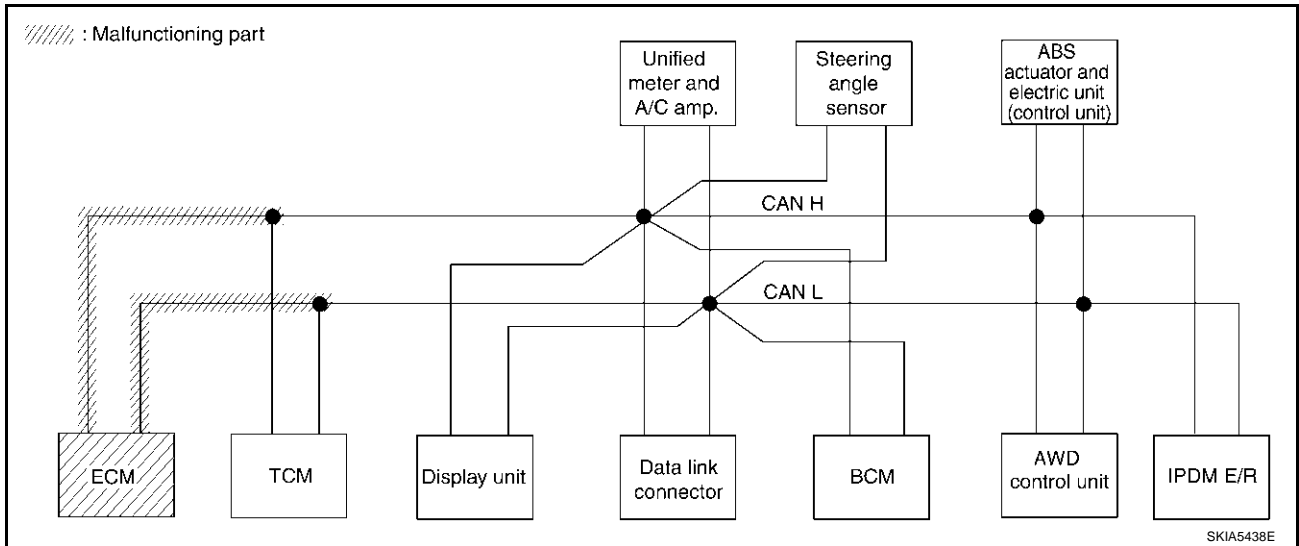
[CAN]

## Case 3

Check ECM circuit. Refer to [LAN-861, "ECM Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW <del>N</del>	—	UNKW <del>N</del>	—	UNKW <del>N</del>	UNKW <del>N</del>	—	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>
TRANSMISSION	No indication	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	UNKW <del>N</del>	—	—	UNKW <del>N</del>	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	UNKW <del>N</del>	—	—	—	UNKW <del>N</del>
METER A/C AMP	No indication	—	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	—	—	UNKW <del>N</del>	UNKW <del>N</del>	—
ALL MODE AWD/4WD	—	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	UNKW <del>N</del>	—	—	UNKW <del>N</del>	—
ABS	—	NG	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	UNKW <del>N</del>	UNKW <del>N</del>	—	—

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# CAN SYSTEM (TYPE 25)

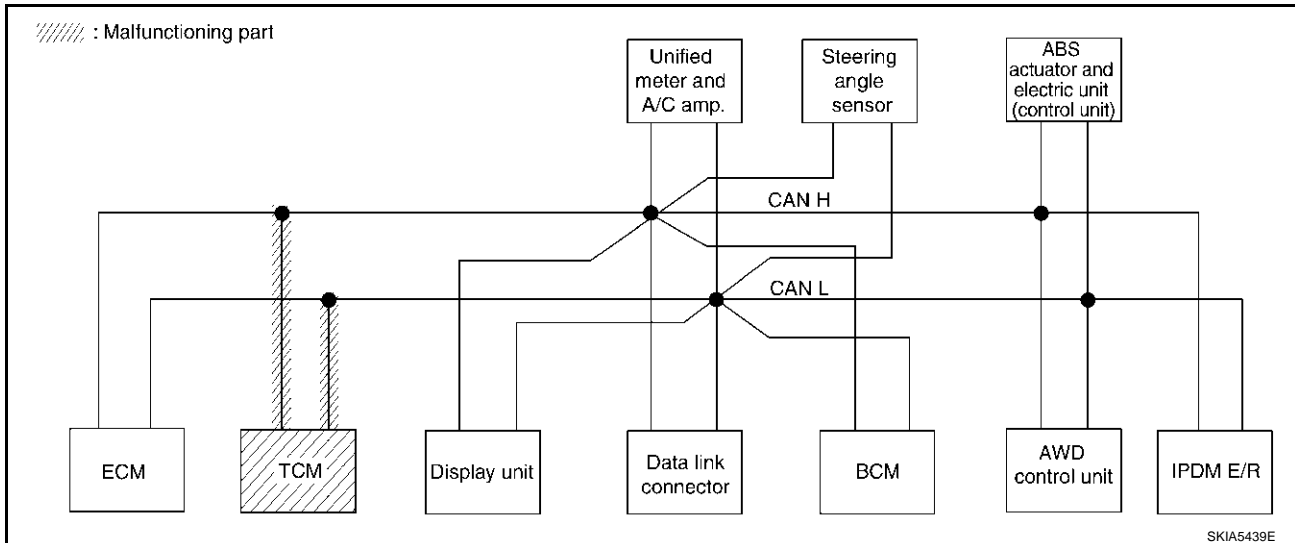
[CAN]

## Case 4

Check TCM circuit. Refer to [LAN-862, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

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# CAN SYSTEM (TYPE 25)

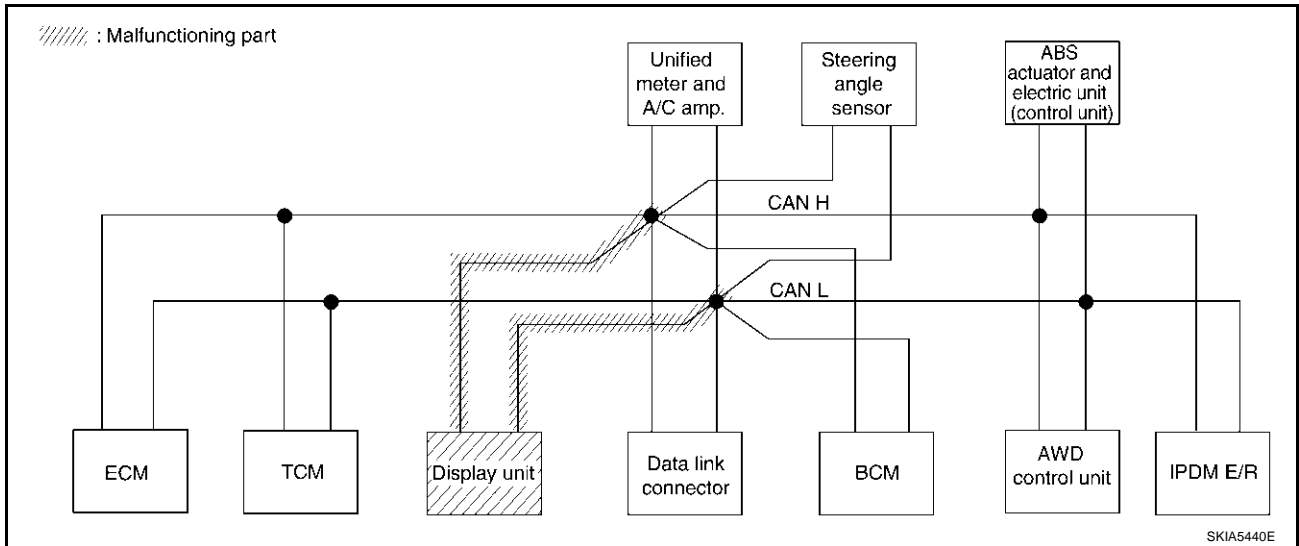
[CAN]

## Case 5

Check display unit circuit. Refer to [LAN-862, "Display Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display unit	—	CAN COMM	CA✓1	CA✓3	—	—	CA✓2	CA✓5	—	—	—	CA✓7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UN✓VN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

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# CAN SYSTEM (TYPE 25)

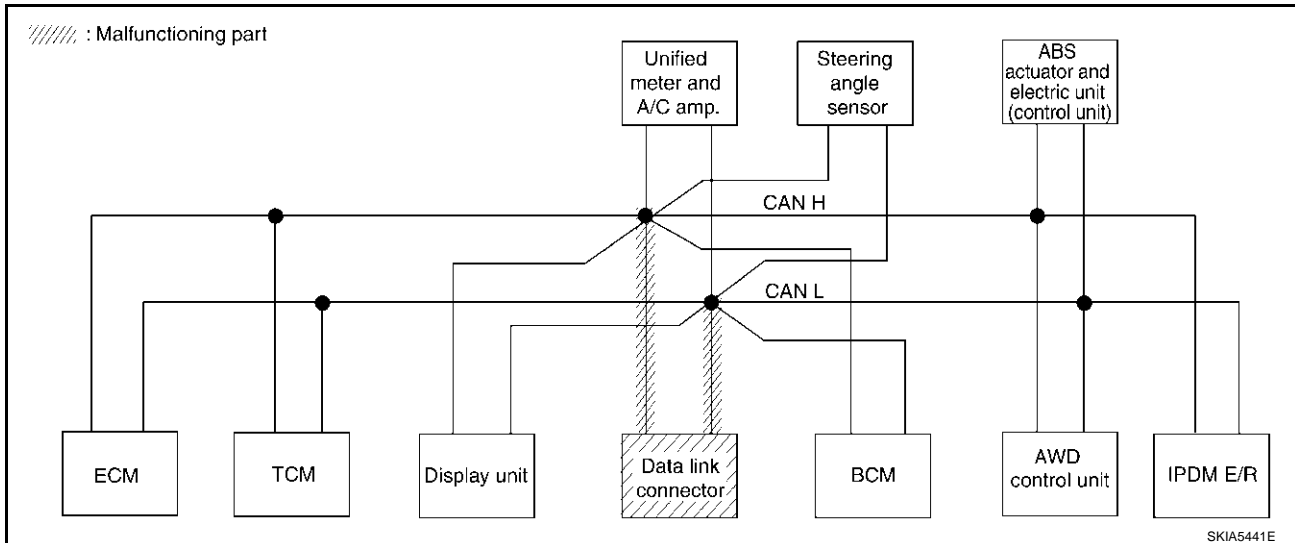
[CAN]

## Case 6

Check data link connector circuit. Refer to [LAN-863, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

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# CAN SYSTEM (TYPE 25)

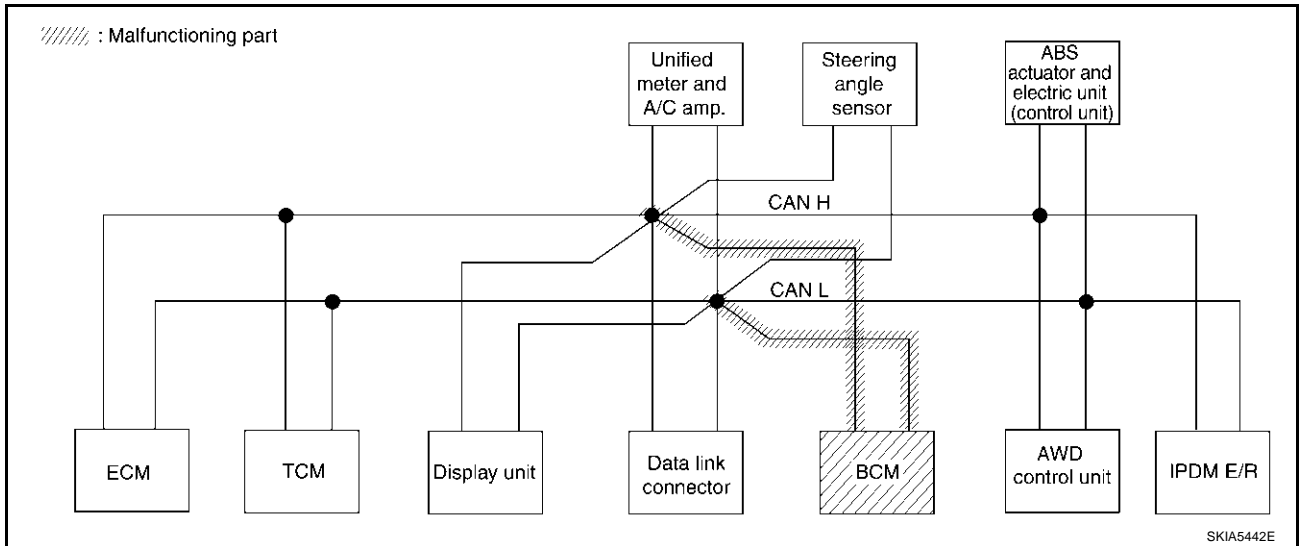
[CAN]

## Case 7

Check BCM circuit. Refer to [LAN-863, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

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# CAN SYSTEM (TYPE 25)

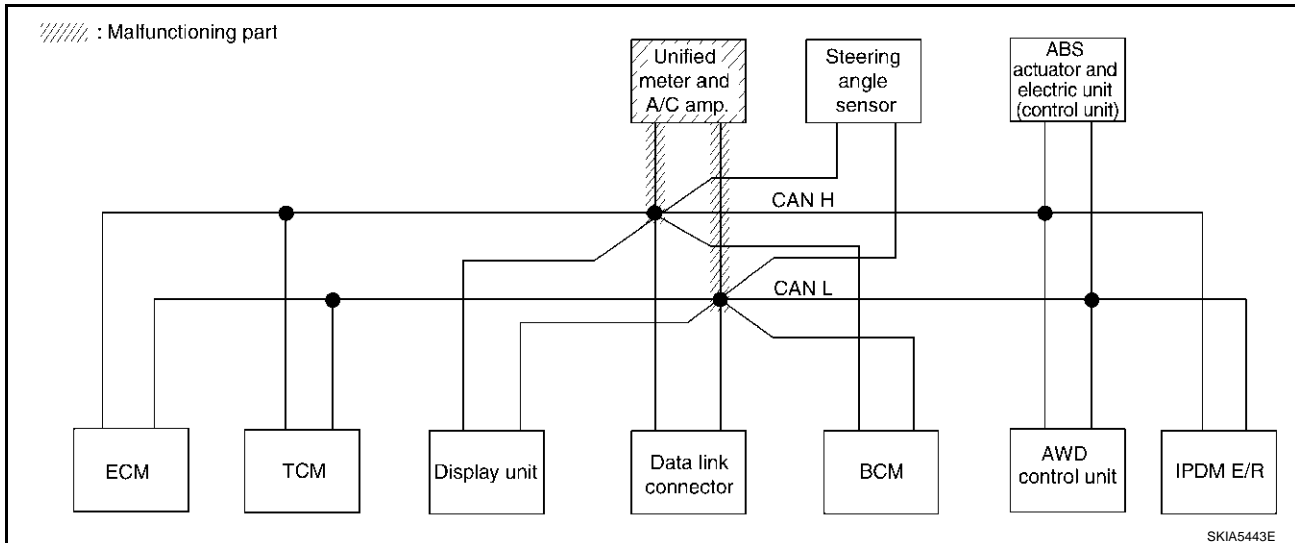
[CAN]

## Case 8

Check unified meter and A/C amp. circuit. Refer to [LAN-864, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

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# CAN SYSTEM (TYPE 25)

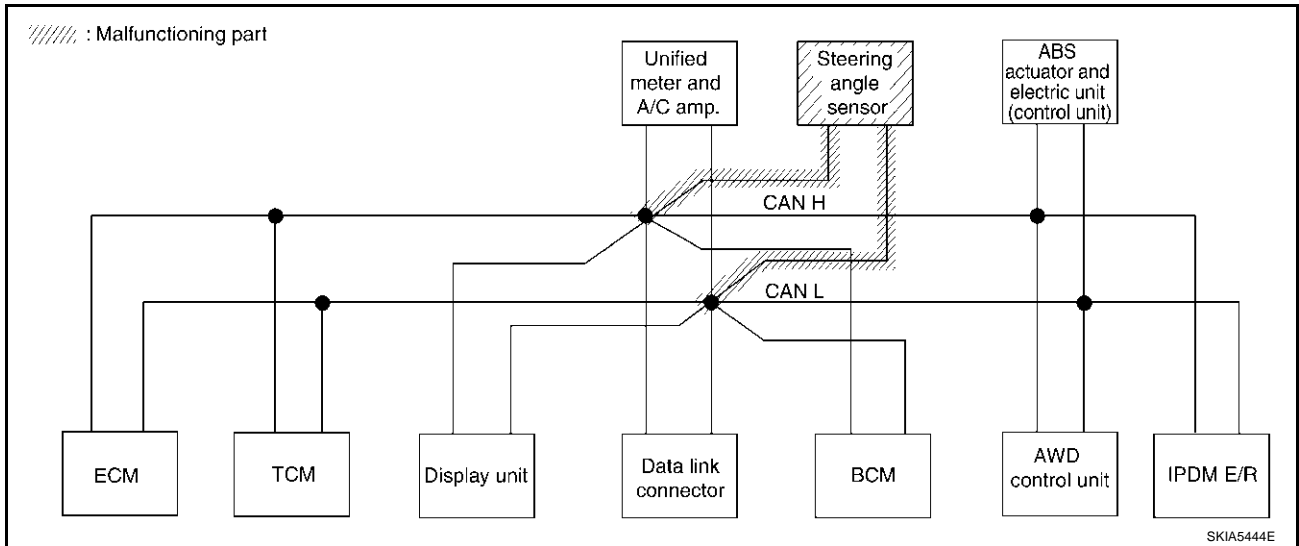
[CAN]

## Case 9

Check steering angle sensor circuit. Refer to [LAN-864, "Steering Angle Sensor Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

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# CAN SYSTEM (TYPE 25)

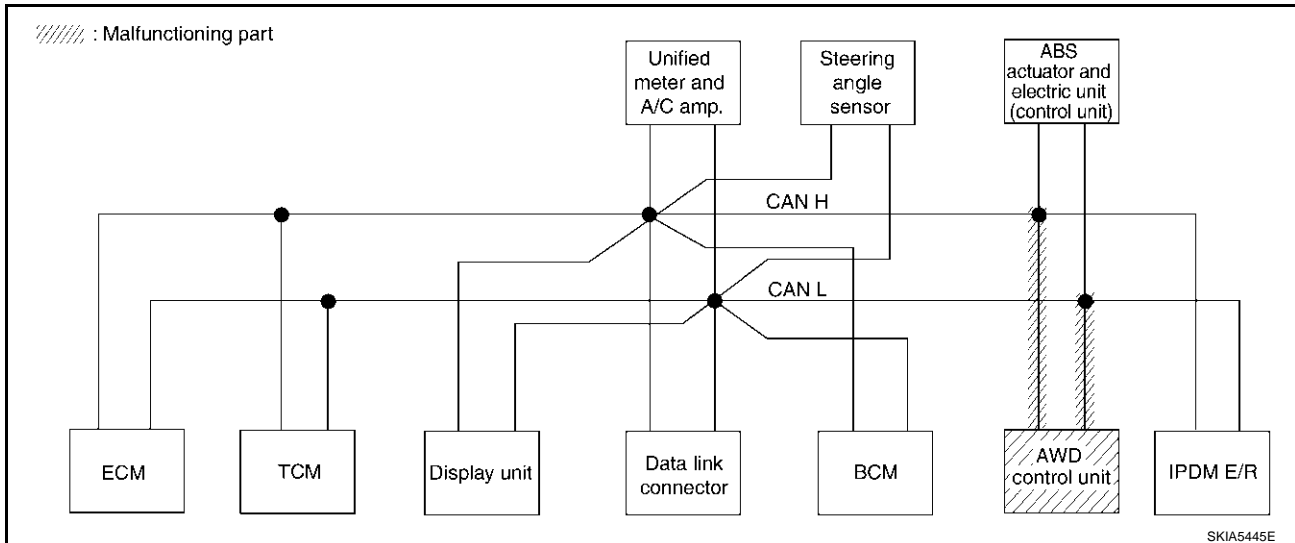
[CAN]

## Case 10

Check AWD control unit circuit. Refer to [LAN-865, "AWD Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

PKIB0967E



# CAN SYSTEM (TYPE 25)

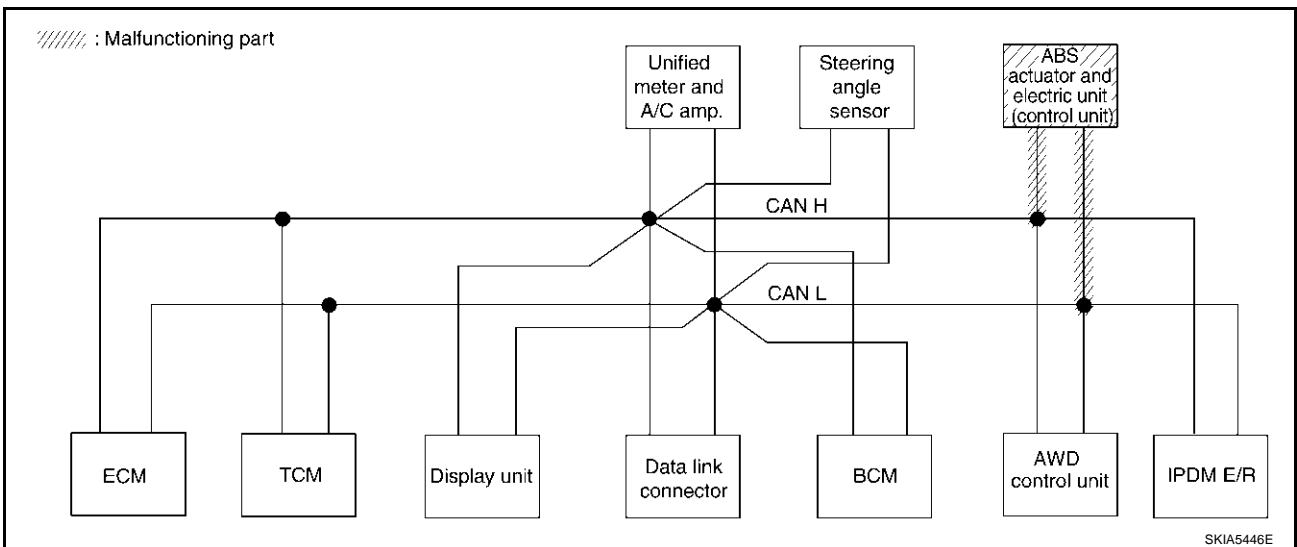
[CAN]

## Case 11

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-865, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN ✓	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN ✓	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN ✓	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN ✓	—
ABS	—	NG	UNKWN ✓	UNKWN ✓	UNKWN ✓	—	—	—	UNKWN ✓	UNKWN ✓	—	—

PKIB0968E



A  
B  
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# CAN SYSTEM (TYPE 25)

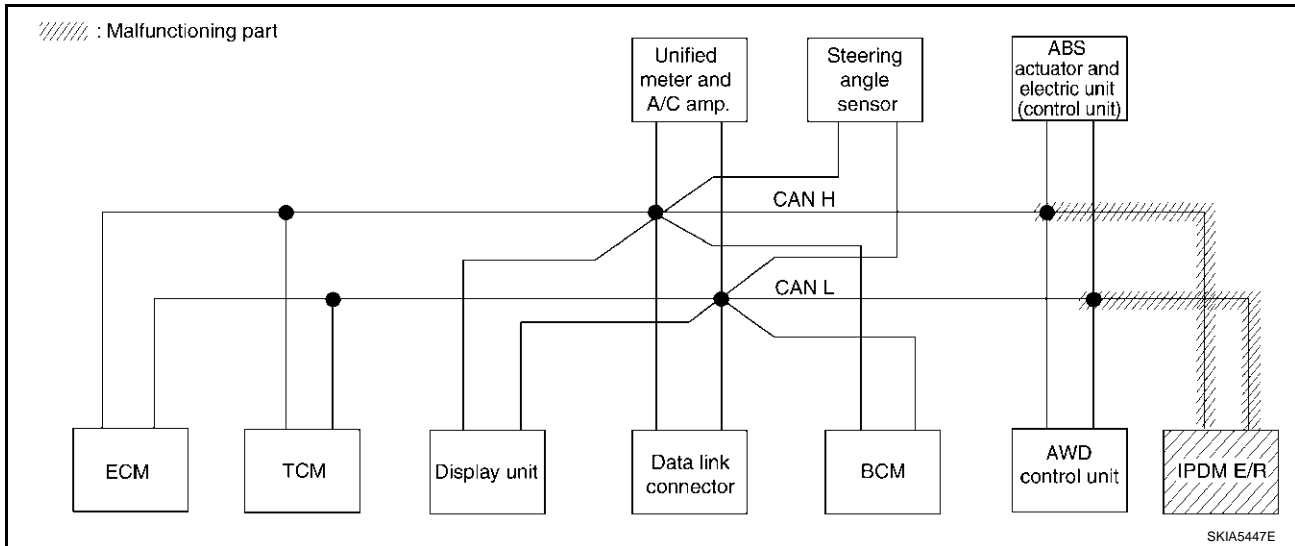
[CAN]

## Case 12

Check IPDM E/R circuit. Refer to [LAN-866, "IPDM E/R Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN ✓	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	—	CAN 7 ✓	
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN ✓	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—	

PKIB0969E



## Case 13

Check CAN communication circuit. Refer to [LAN-866, "CAN Communication Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN ✓	—	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	UNKWN ✓	
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—	
Display unit	—	CAN COMM	CAN 1 ✓	CAN 3 ✓	—	—	CAN 2 ✓	CAN 5 ✓	—	—	—	CAN 7 ✓	
BCM	—	NG	UNKWN ✓	UNKWN ✓	—	—	—	UNKWN ✓	—	—	—	UNKWN ✓	
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN ✓	UNKWN ✓	—	—	—	UNKWN ✓	—	—	UNKWN ✓	—	
ABS	—	NG	UNKWN ✓	UNKWN ✓	UNKWN ✓	—	—	—	UNKWN ✓	UNKWN ✓	—	—	

PKIB0970E

# CAN SYSTEM (TYPE 25)

[CAN]

## Case 14

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-869, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS		
ENGINE	-	NG	UNKWN	-	UN <del>KN</del> W <del>N</del>	-	UNKWN	UNKWN	-	UNKWN	UN <del>KN</del> W <del>N</del>	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	-	UNKWN	-	-	UNKWN	-	
Display unit	-	CAN COMM	CAN 1	CAN 3	-	-	CAN 2	CAN 5	-	-	-	CAN 7	
BCM	-	NG	UNKWN	UNKWN	-	-	-	UNKWN	-	-	-	UNKWN	
METER A/C AMP	No indication	-	UNKWN	UNKWN	UN <del>KN</del> W <del>N</del>	UNKWN	UNKWN	-	-	UNKWN	UN <del>KN</del> W <del>N</del>	-	
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	-	UNKWN	-	-	UN <del>KN</del> W <del>N</del>	-	
ABS	-	NG	UNKWN	UNKWN	UNKWN	-	-	-	UNKWN	UNKWN	-	-	

PKIB0971E

## Case 15

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-869, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS		
ENGINE	-	NG	UNKWN	-	UNKWN	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UN <del>KN</del> W <del>N</del>	-	-	-	UN <del>KN</del> W <del>N</del>	-	-	UNKWN	-	
Display unit	-	CAN COMM	CAN 1	CAN 3	-	-	CAN 2	CAN 5	-	-	-	CAN 7	
BCM	-	NG	UNKWN	UNKWN	-	-	-	UNKWN	-	-	-	UNKWN	
METER A/C AMP	No indication	-	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	-	-	UNKWN	UNKWN	-	
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	-	UNKWN	-	-	UNKWN	-	
ABS	-	NG	UNKWN	UN <del>KN</del> W <del>N</del>	UNKWN	-	-	-	UN <del>KN</del> W <del>N</del>	UN <del>KN</del> W <del>N</del>	-	-	

PKIB0972E

## Circuit Check Between TCM and Data Link Connector

### 1. CHECK HARNESS FOR OPEN CIRCUIT

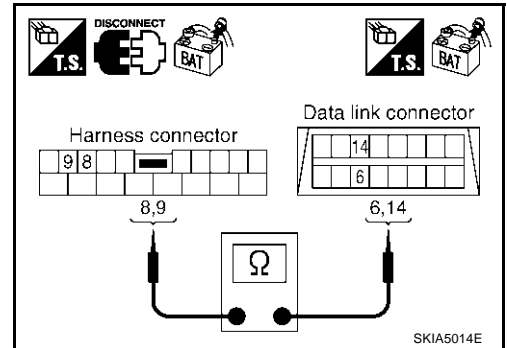
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

**8 (L) - 6 (L) : Continuity should exist.**

**9 (Y) - 14 (Y) : Continuity should exist.**

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-843, "Work Flow"](#) .
- NG >> Repair harness.



## Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit)

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector M9
  - Harness connector B2
  - Harness connector B4
  - Harness connector E105

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

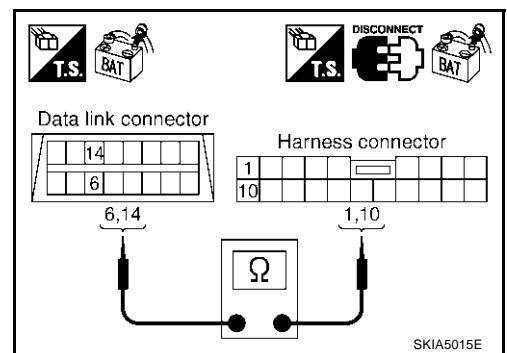
1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

**6 (L) - 1 (L) : Continuity should exist.**

**14 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.





### 3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

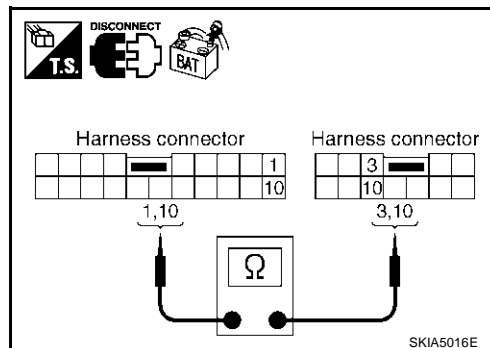
**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

OK >> GO TO 4.

NG >> Repair harness.



### 4. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

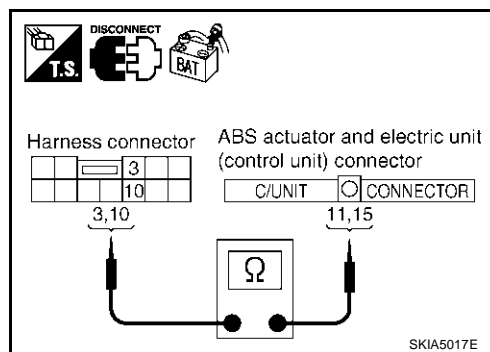
**3 (L) - 11 (L) : Continuity should exist.**

**10 (Y) - 15 (Y) : Continuity should exist.**

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-843, "Work Flow"](#).

NG >> Repair harness.



## ECM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

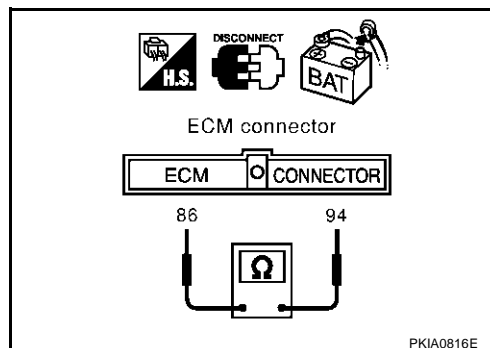
1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

**94 (L) - 86 (Y) : Approx. 108 - 132Ω**

OK or NG

OK >> Replace ECM.

NG >> Repair harness between ECM and TCM.



**TCM Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
  - TCM connector
  - Harness connector F102
  - Harness connector M82

**OK or NG**

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

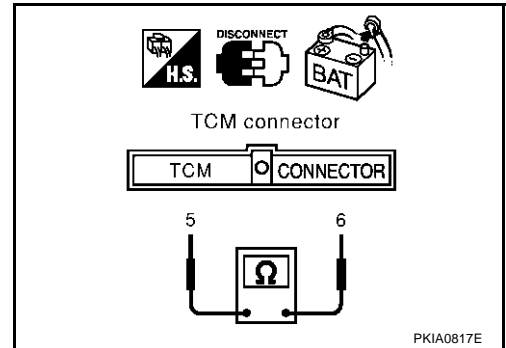
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Approx. 54 - 66Ω**

**OK or NG**

- OK >> Replace TCM.  
 NG >> Repair harness between TCM and ECM.

**Display Unit Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display unit for damage, bend and loose connection (unit side and harness side).

**OK or NG**

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

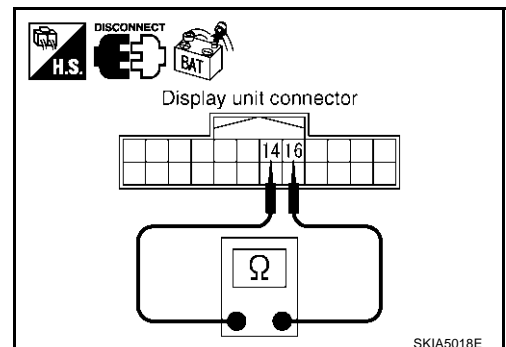
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect display unit connector.
2. Check resistance between display unit harness connector M39 terminals 14 (L) and 16 (Y).

**14 (L) - 16 (Y) : Approx. 54 - 66Ω**

**OK or NG**

- OK >> Replace display unit.  
 NG >> Repair harness between display unit and data link connector.



**Data Link Connector Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

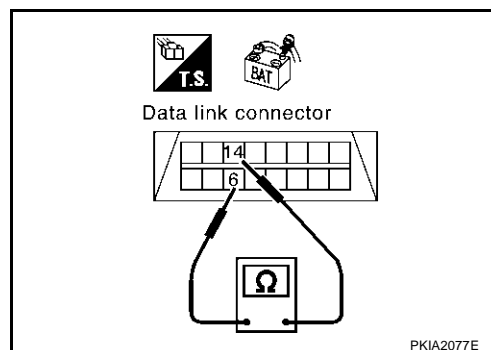
**2. CHECK HARNESS FOR OPEN CIRCUIT**

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Diagnose again. Refer to [LAN-843, "Work Flow"](#) .  
 NG >> Repair harness between data link connector and BCM.

**BCM Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

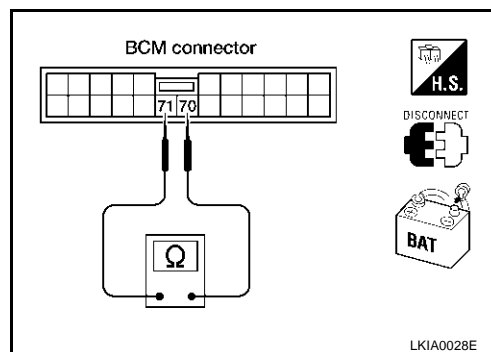
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M37 terminals 70 (L) and 71 (Y).

**70 (L) - 71 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace BCM. Refer to [BCS-36, "Removal and Installation of BCM"](#) .  
 NG >> Repair harness between BCM and data link connector.



**Unified Meter and A/C Amp. Circuit Check**

AKS00740

**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

**OK or NG**

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

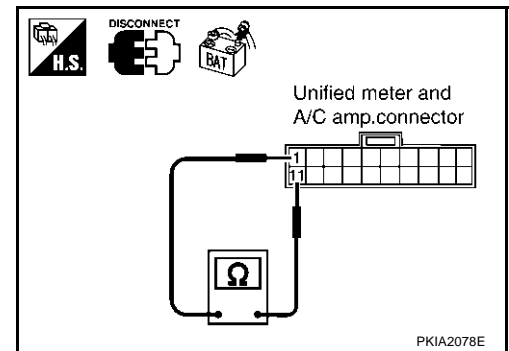
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

**1 (L) - 11 (Y) : Approx. 54 - 66Ω**

**OK or NG**

- OK >> Replace unified meter and A/C amp.  
 NG >> Repair harness between unified meter and A/C amp. and data link connector.

**Steering Angle Sensor Circuit Check**

AKS0074P

**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of steering angle sensor for damage, bend and loose connection (sensor side and harness side).

**OK or NG**

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

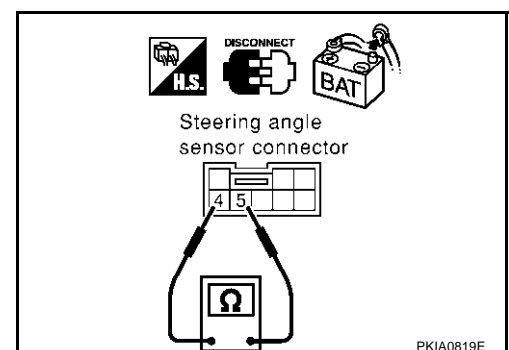
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M33 terminals 4 (L) and 5 (Y).

**4 (L) - 5 (Y) : Approx. 54 - 66Ω**

**OK or NG**

- OK >> Replace steering angle sensor.  
 NG >> Repair harness between steering angle sensor and data link connector.



**AWD Control Unit Circuit Check**

AKS0074Q

**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of AWD control unit for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

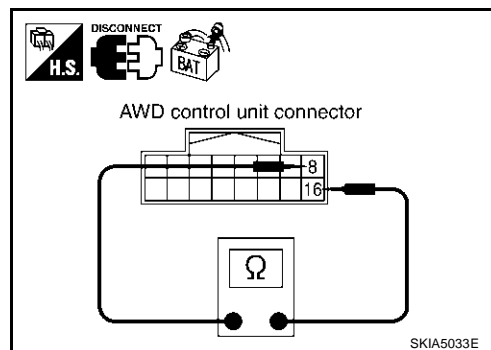
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect AWD control unit connector.
2. Check resistance between AWD control unit harness connector E111 terminals 8 (L) and 16 (Y).

**8 (L) - 16 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace AWD control unit.  
 NG >> Repair harness between AWD control unit and IPDM E/R.

**ABS Actuator and Electric Unit (Control Unit) Circuit Check**

AKS0074R

**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

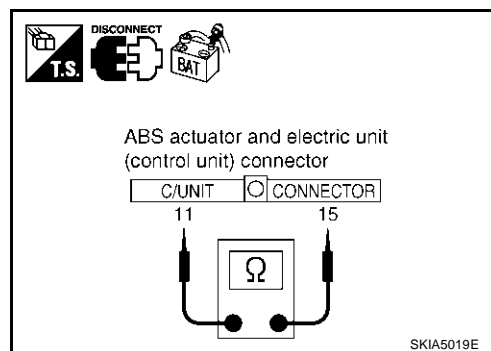
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

**11 (L) - 15 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).  
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



**IPDM E/R Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

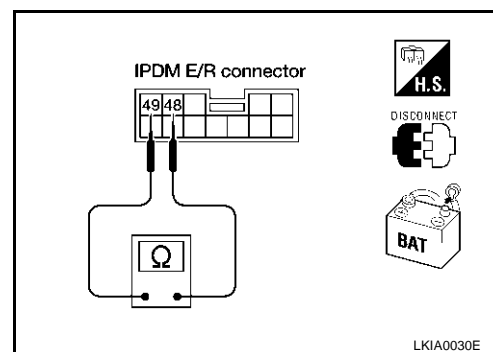
- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y)****: Approx. 108 - 132Ω**OK or NG

- OK >> Replace IPDM E/R.  
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).

**CAN Communication Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, unit side, meter side, sensor side, control unit side and harness side).

- ECM
- TCM
- Display unit
- BCM
- Unified meter and A/C amp.
- Steering angle sensor
- AWD control unit
- ABS actuator and electric unit (control unit)
- IPDM E/R
- Between ECM and IPDM E/R
- Between ECM and TCM

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR SHORT CIRCUIT

- Disconnect following connectors.
  - ECM connector
  - Harness connector M82
  - Display unit connector
  - BCM connector
  - Unified meter and A/C amp. connector
  - Steering angle sensor connector
  - Harness connector M9
- Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

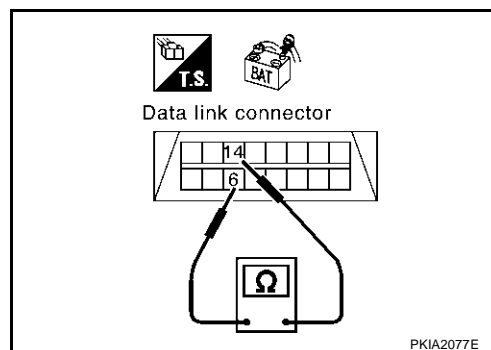
**6 (L) - 14 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 3.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M9.



## 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

**6 (L) - Ground : Continuity should not exist.**

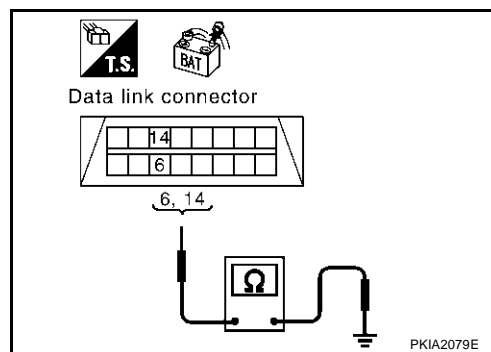
**14 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M9.



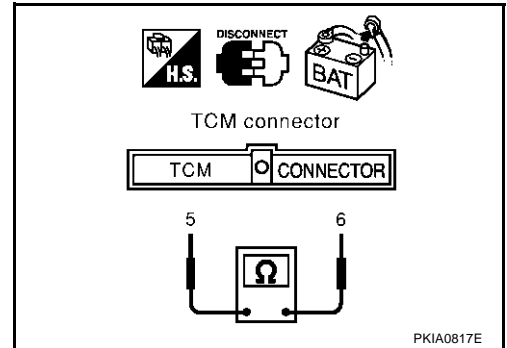
## 4. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Continuity should not exist.**

OK or NG

- OK >> GO TO 5.  
 NG >> Repair harness between TCM and harness connector F102.



## 5. CHECK HARNESS FOR SHORT CIRCUIT

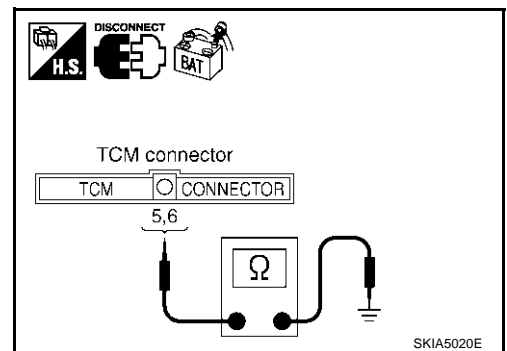
Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

**5 (L) - Ground : Continuity should not exist.**

**6 (Y) - Ground : Continuity should not exist.**

OK or NG

- OK >> GO TO 6.  
 NG >> Repair harness between TCM and harness connector F102.



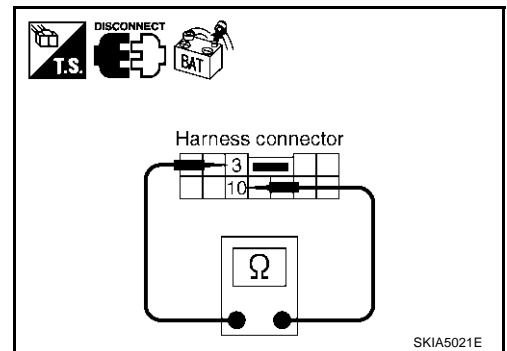
## 6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B4.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

**3 (L) - 10 (Y) : Continuity should not exist.**

OK or NG

- OK >> GO TO 7.  
 NG >> Repair harness between harness connector B4 and harness connector B2.



## 7. CHECK HARNESS FOR SHORT CIRCUIT

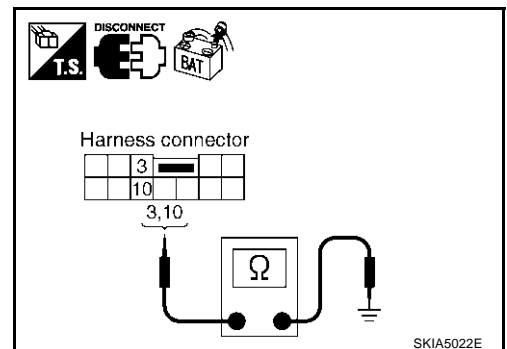
Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

**3 (L) - Ground : Continuity should not exist.**

**10 (Y) - Ground : Continuity should not exist.**

OK or NG

- OK >> GO TO 8.  
 NG >> Repair harness between harness connector B4 and harness connector B2.





## 8. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect AWD control unit connector, ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

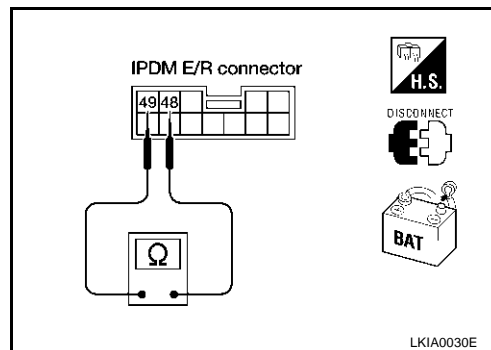
**48 (L) - 49 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 9.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

**48 (L) - Ground : Continuity should not exist.**

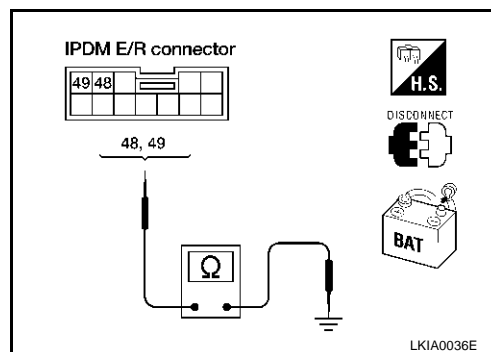
**49 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 10.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 10. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-870, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

### OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-843, "Work Flow"](#).

NG >> Replace ECM and/or IPDM E/R.

## IPDM E/R Ignition Relay Circuit Check

AKS0074U

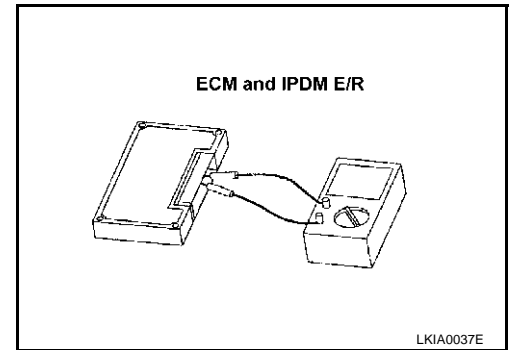
Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-45, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#).

**Component Inspection****ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION**

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value ( $\Omega$ ) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



## CAN SYSTEM (TYPE 26)

PF:23710

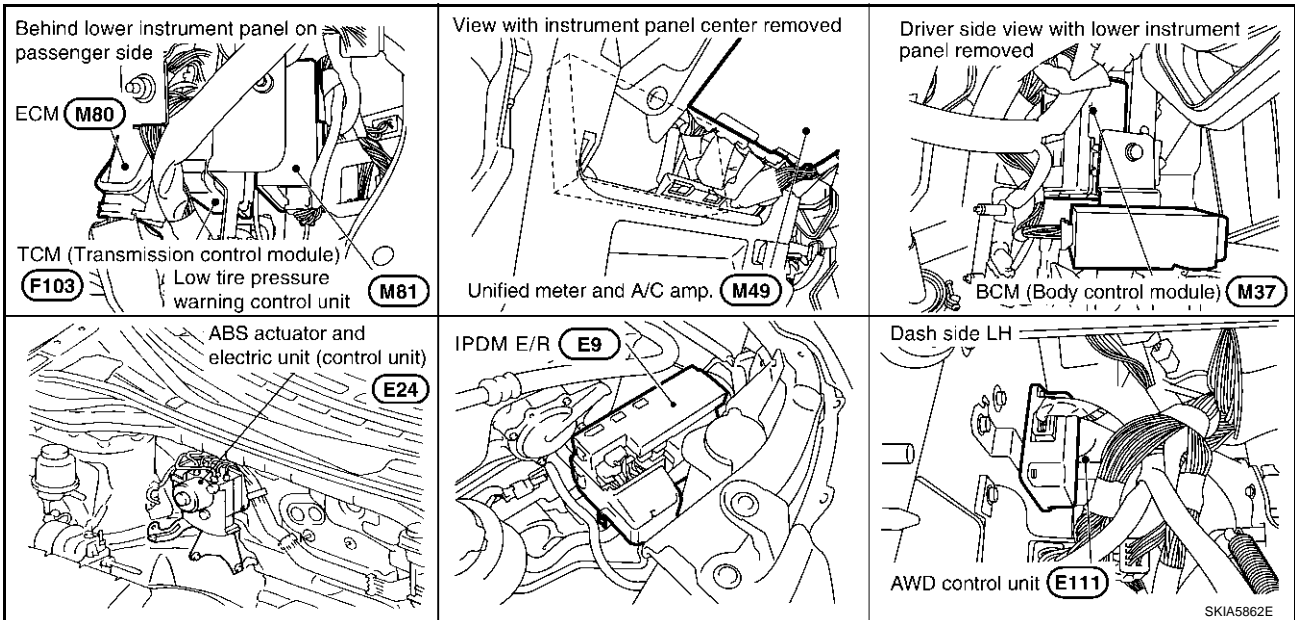
### System Description

AKS0074W

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

### Component Parts and Harness Connector Location

AKS0074X



A  
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LAN

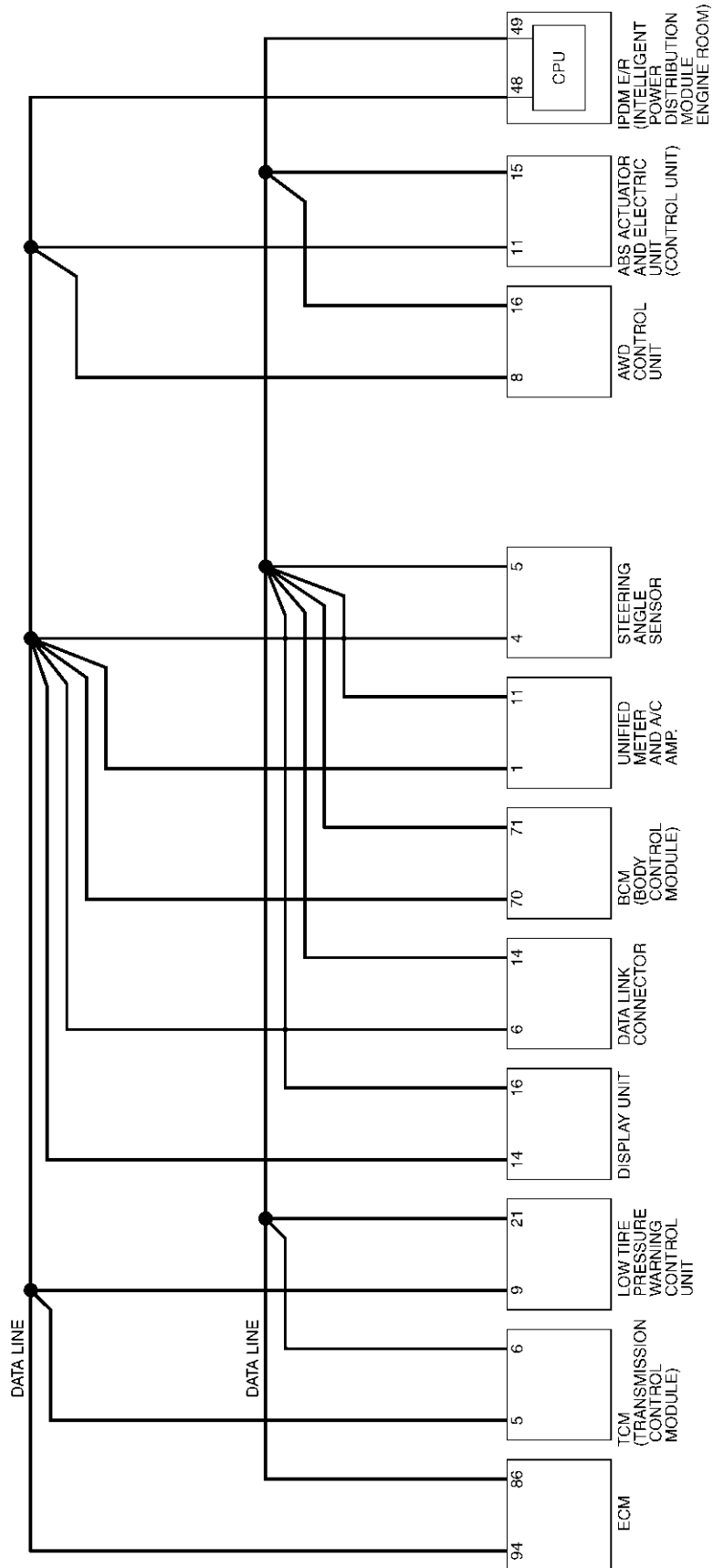
L  
M

# CAN SYSTEM (TYPE 26)

[CAN]

## Schematic

AKS0074Y



TKWA1023E

# CAN SYSTEM (TYPE 26)

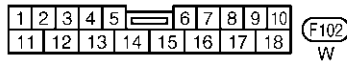
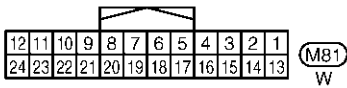
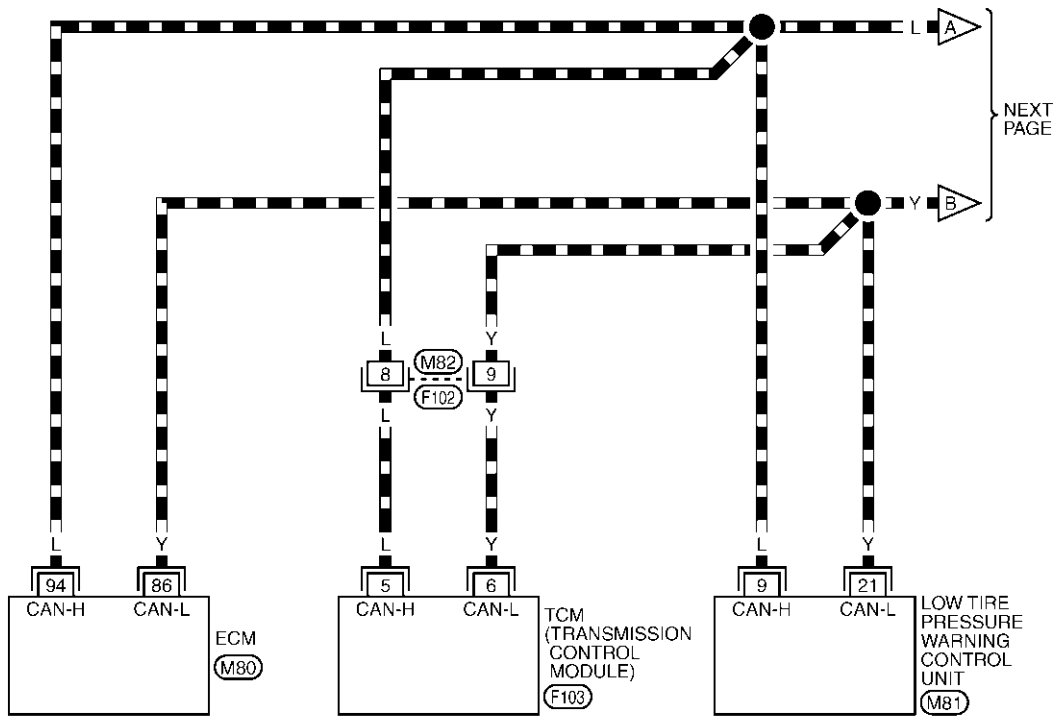
[CAN]

## Wiring Diagram - CAN -

AKS0074Z

### LAN-CAN-76

▬ : DATA LINE

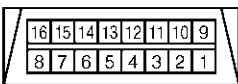
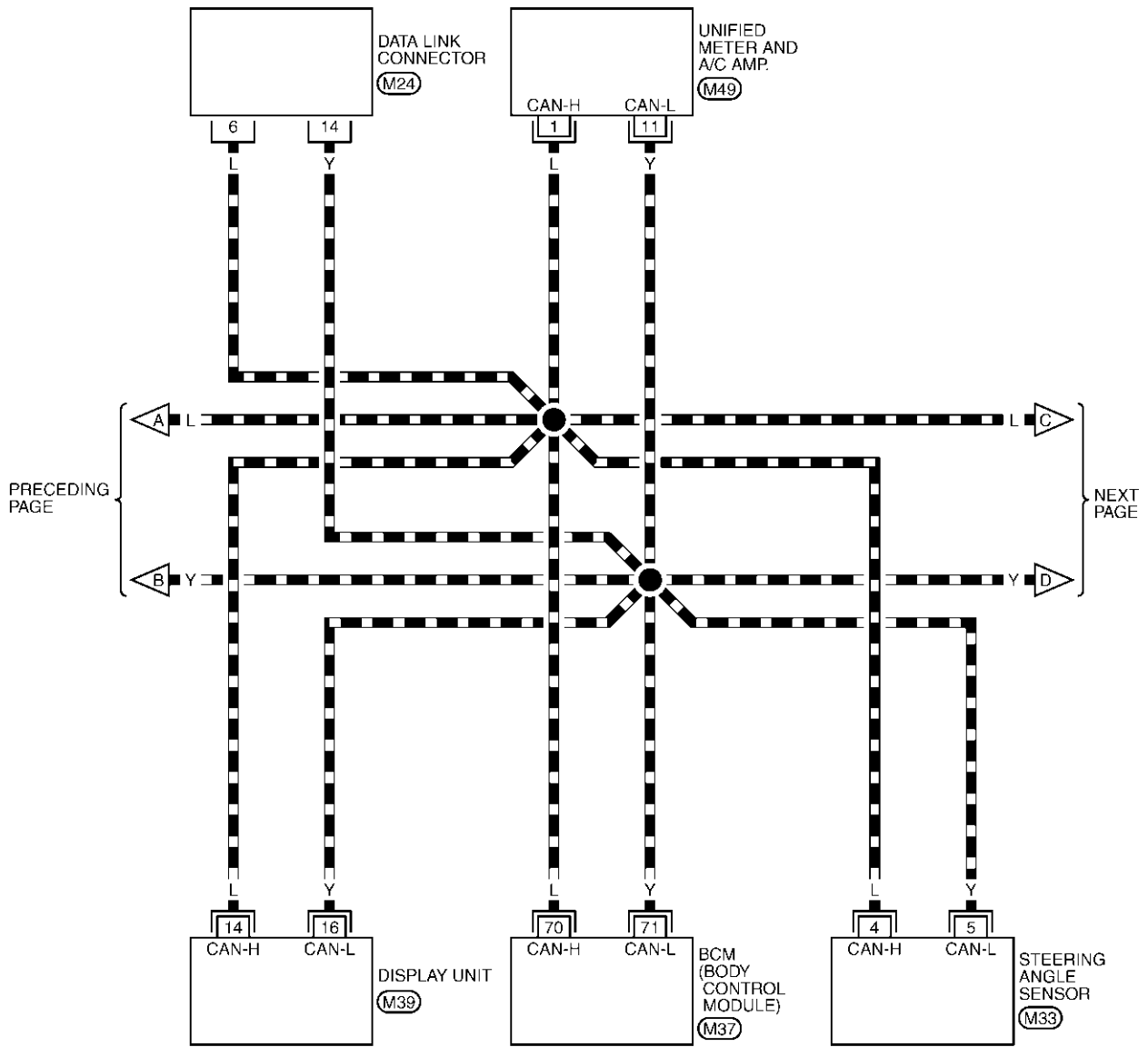


REFER TO THE FOLLOWING.  
 (M80), (F103) -ELECTRICAL  
 UNITS

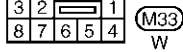
TKWA1024E

## LAN-CAN-77

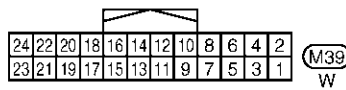
▬ : DATA LINE



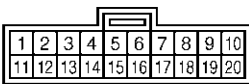
(M24)  
W



(M33)  
W



(M39)  
W



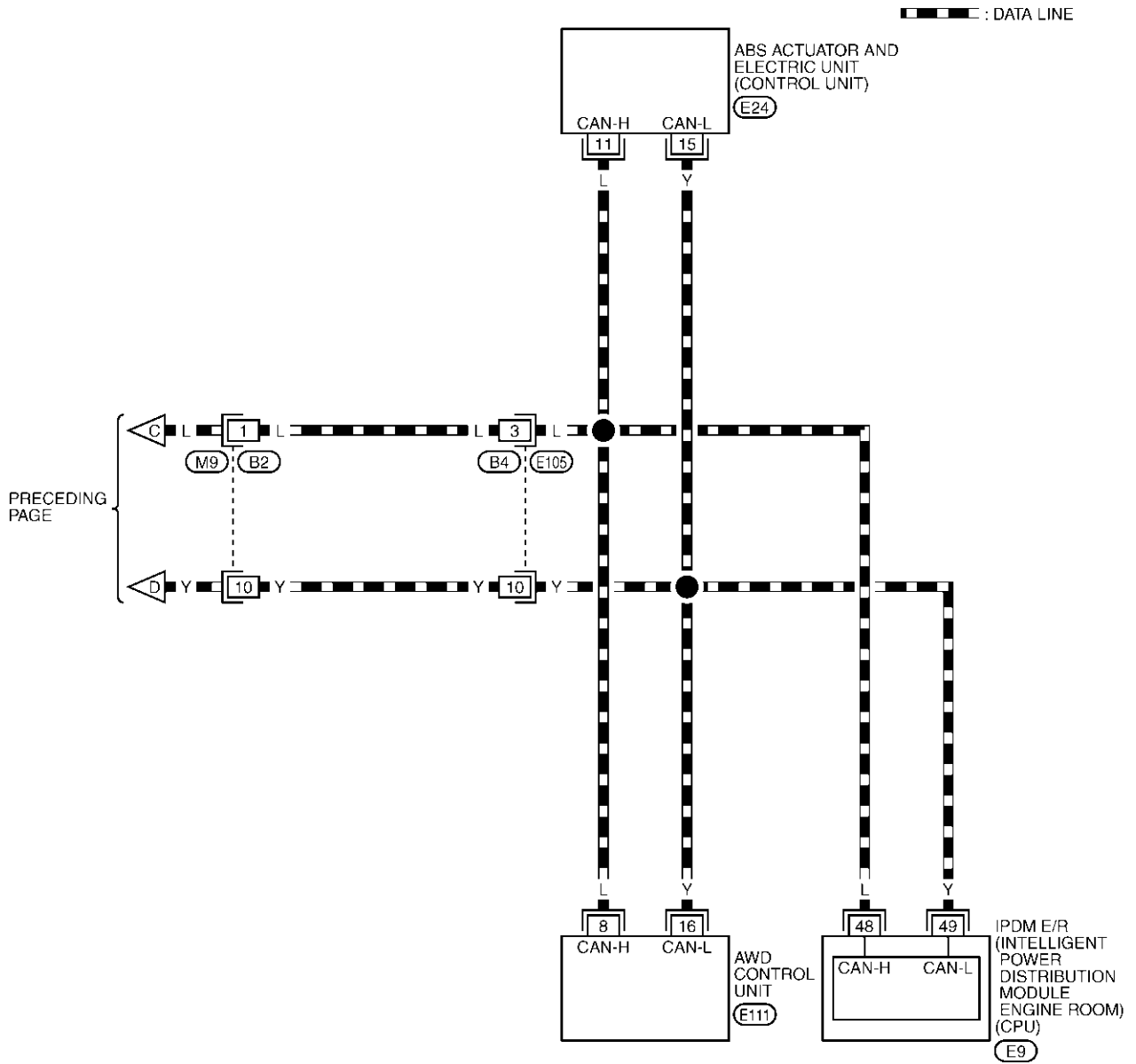
(M49)  
GR



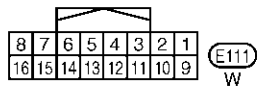
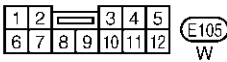
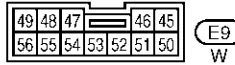
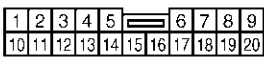
REFER TO THE FOLLOWING.

(M37) -ELECTRICAL UNITS

## LAN-CAN-78



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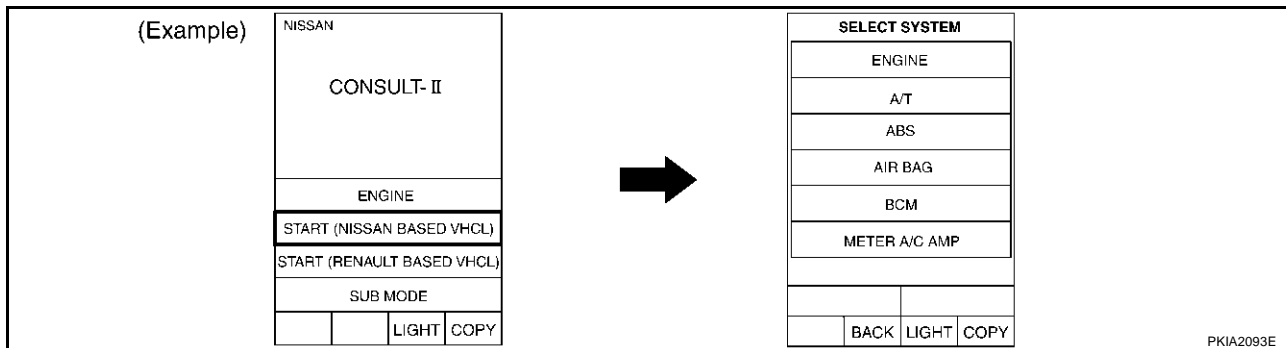


REFER TO THE FOLLOWING.  
E24 -ELECTRICAL UNITS

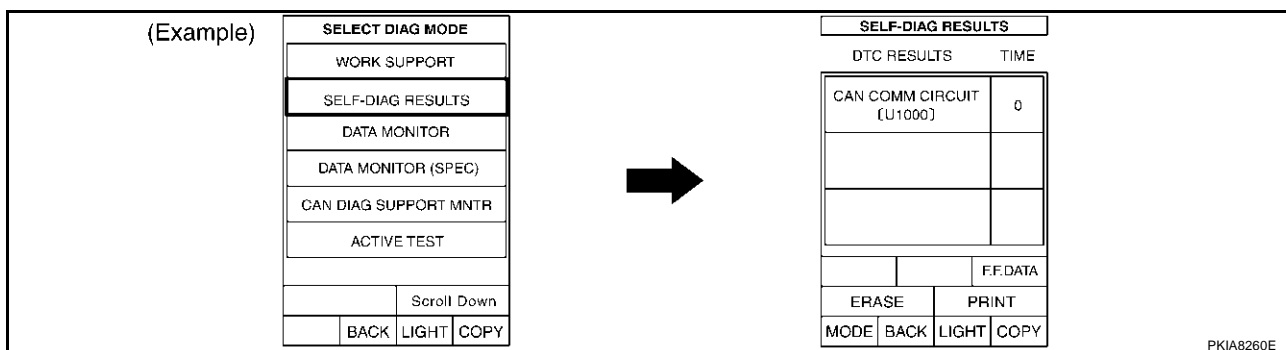
## Work Flow

AKS00C5R

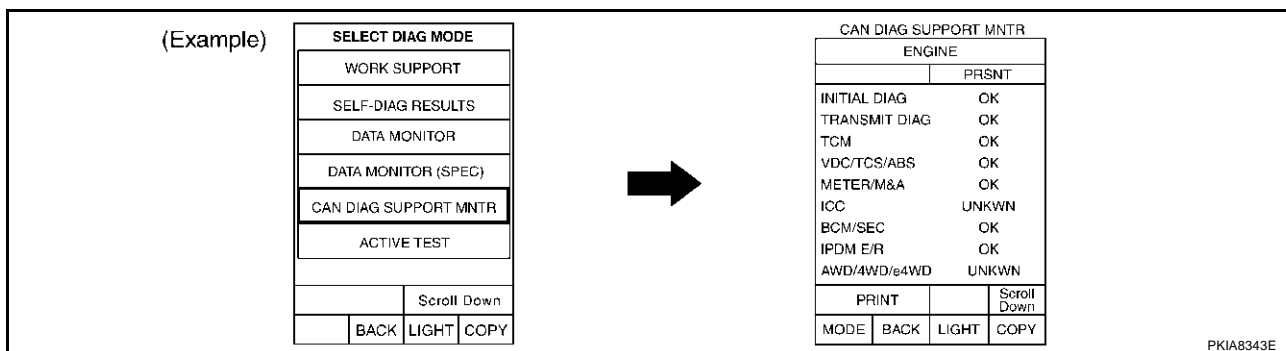
- When there are no indications of "TRANSMISSION", "AIR PRESSURE MONITOR" or "METER A/C AMP" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "ALL MODE AWD/4WD" and "ABS" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "ALL MODE AWD/4WD" and "ABS" displayed on CONSULT-II.



- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-878, "CHECK SHEET"](#) .
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "v" onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-878, "CHECK SHEET"](#) .

**NOTE:**

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual.  
So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the integrated display system. Refer to [AV-110, "CAN Communication Line Check"](#) .
- Attach the CAN DIAG MONITOR check sheet onto the check sheet. Refer to [LAN-878, "CHECK SHEET"](#) .



# CAN SYSTEM (TYPE 26)

[CAN]

8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG MONITOR check sheet. Refer to [LAN-878, "CHECK SHEET"](#) .

**NOTE:**

If "NG" is displayed on "CAN COMM" as "CAN DIAG MNTR" for the diagnosed control unit, replace the control unit. Refer to [AV-110, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-880, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

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F

G

H

I

J

LAN

L

M

# CAN SYSTEM (TYPE 26)

[CAN]

## CHECK SHEET

**NOTE:**

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

Check sheet table

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

Attach copy of  
display unit  
CAN DIAG MONITOR check sheet

# CAN SYSTEM (TYPE 26)

[CAN]

A  
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Attach copy of  
ENGINE  
SELF-DIAG RESULTS

Attach copy of  
TRANSMISSION  
SELF-DIAG RESULTS

Attach copy of  
AIR PRESSURE  
MONITOR  
SELF-DIAG RESULTS

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
METER A/C AMP  
SELF-DIAG RESULTS

Attach copy of  
ALL MODE AWD/4WD  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

Attach copy of  
ENGINE  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
TRANSMISSION  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
AIR PRESSURE  
MONITOR  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
BCM  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
METER A/C AMP  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ALL MODE AWD/4WD  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ABS  
CAN DIAG SUPPORT  
MNTR

PKIB0731E

## CHECK SHEET RESULTS (EXAMPLE)

### NOTE:

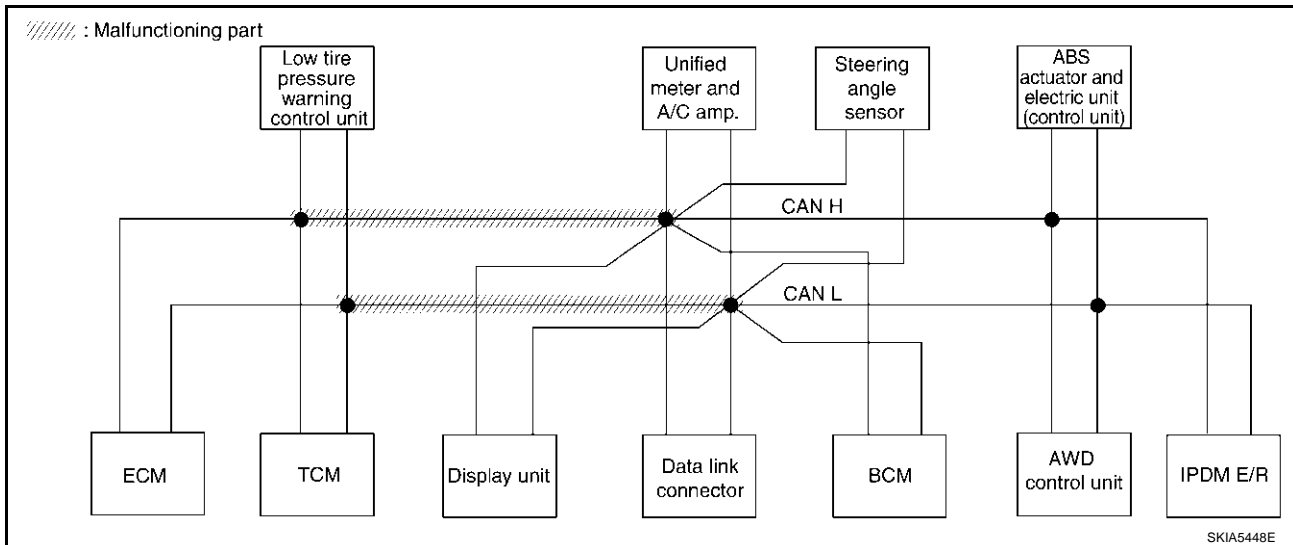
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

### Case 1

Check harness between TCM and data link connector. Refer to [LAN-894, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3 ✓	—	CAN 6 ✓	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB0974E



# CAN SYSTEM (TYPE 26)

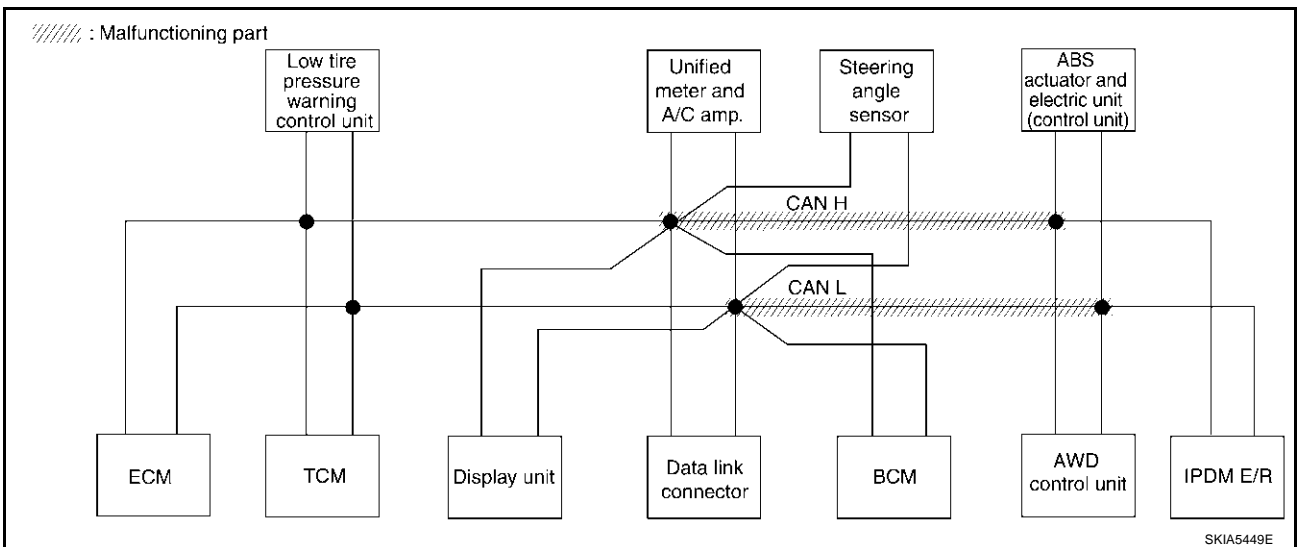
[CAN]

## Case 2

Check harness between data link connector and ABS actuator and electric unit (control unit). Refer to LAN-894, "Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit)".

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB0975E



LAN

# CAN SYSTEM (TYPE 26)

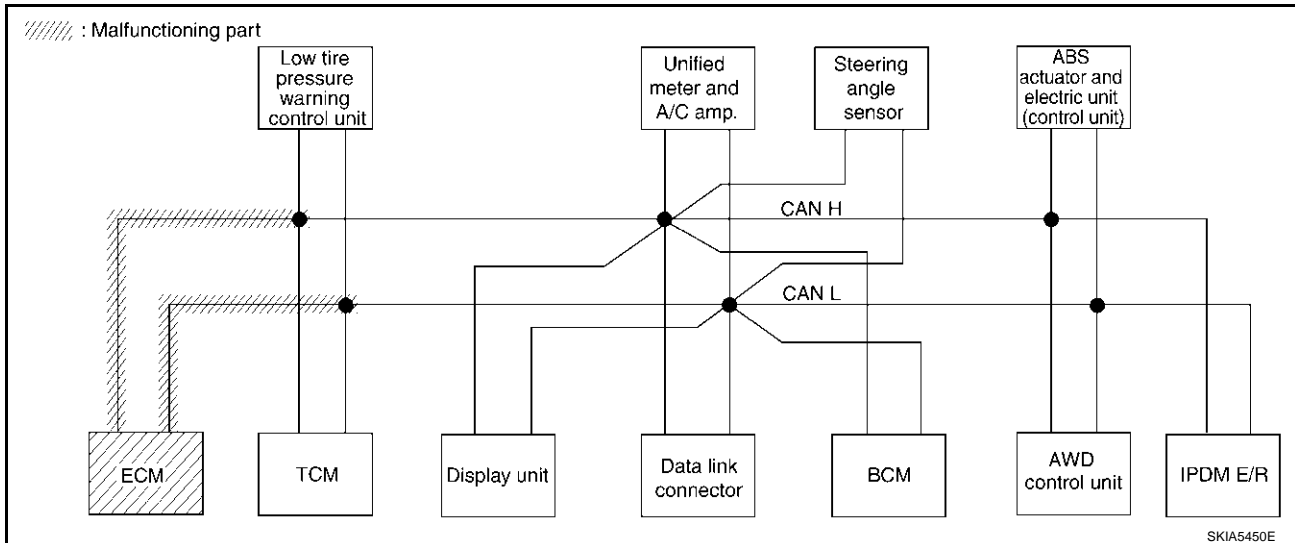
[CAN]

## Case 3

Check ECM circuit. Refer to [LAN-895, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN ✓	—	UNKWN ✓	—	—	UNKWN ✓	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	UNKWN ✓
TRANSMISSION	No indication	NG	UNKWN	UNKWN ✓	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3 ✓	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN ✓	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN ✓	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB0976E



# CAN SYSTEM (TYPE 26)

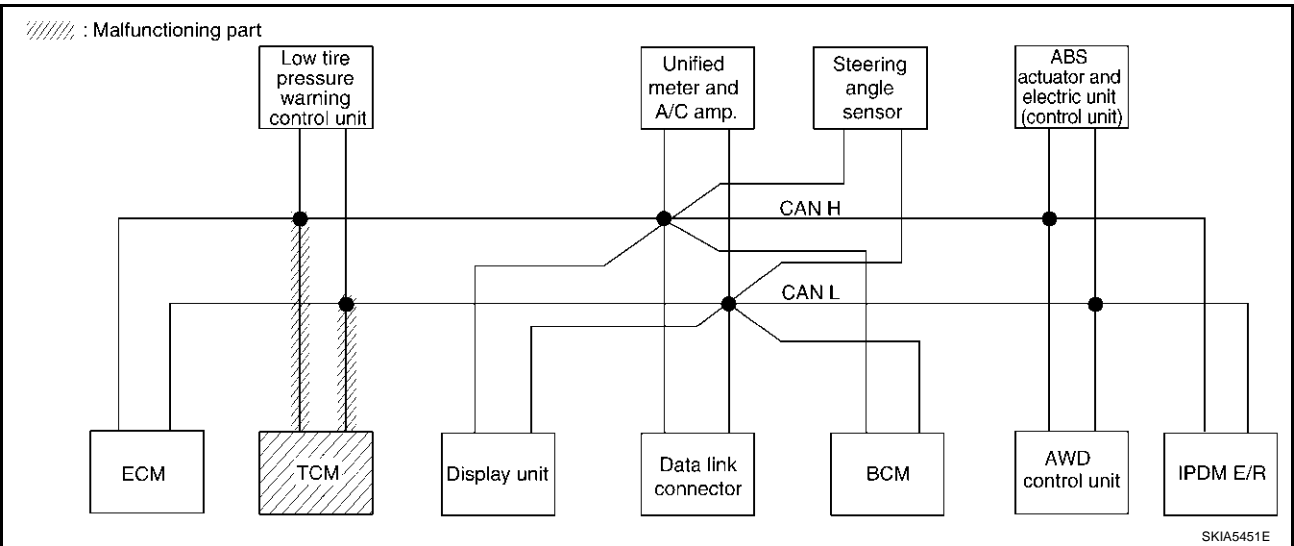
[CAN]

## Case 4

Check TCM circuit. Refer to [LAN-896, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB0977E



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# CAN SYSTEM (TYPE 26)

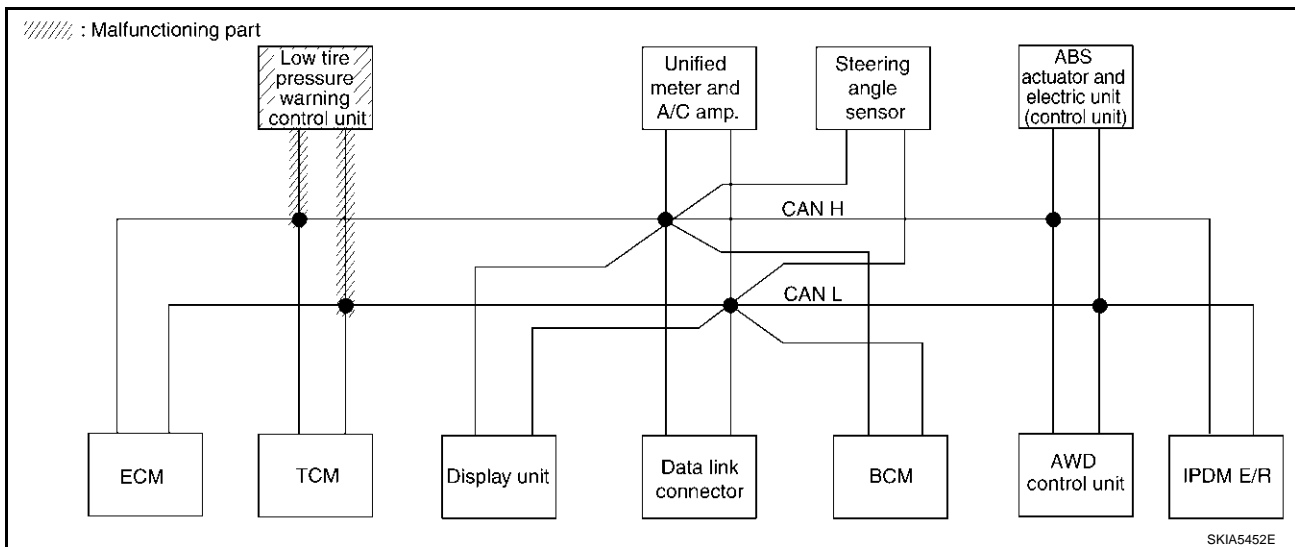
[CAN]

## Case 5

Check low tire pressure warning control unit circuit. Refer to [LAN-896, "Low Tire Pressure Warning Control Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6 ✓	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB0978E





# CAN SYSTEM (TYPE 26)

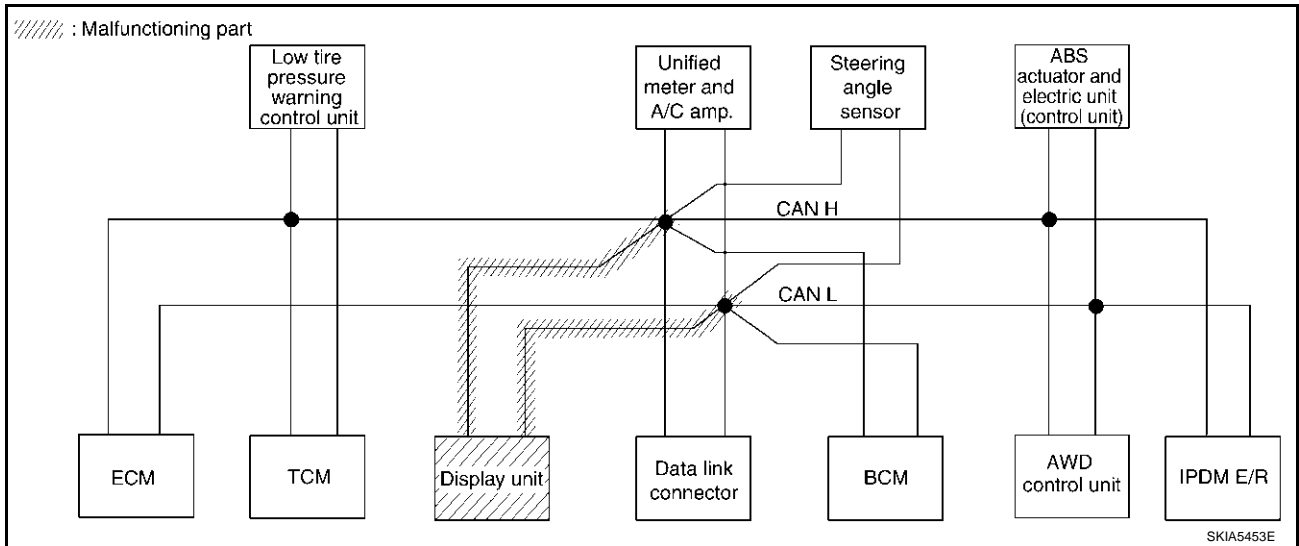
[CAN]

## Case 6

Check display unit circuit. Refer to [LAN-897, "Display Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CA <del>N</del> 1	CA <del>N</del> 3	—	CA <del>N</del> 6	—	CA <del>N</del> 2	CA <del>N</del> 5	—	—	—	CA <del>N</del> 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UN <del>S</del> KN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB0979E



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# CAN SYSTEM (TYPE 26)

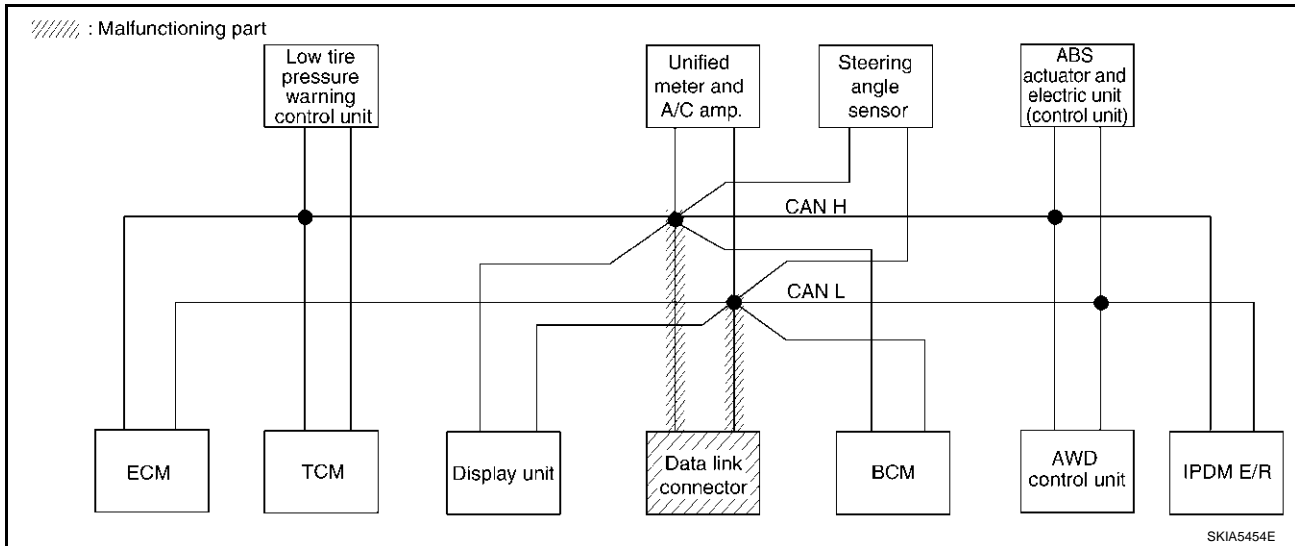
[CAN]

## Case 7

Check data link connector circuit. Refer to [LAN-897, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB0980E



# CAN SYSTEM (TYPE 26)

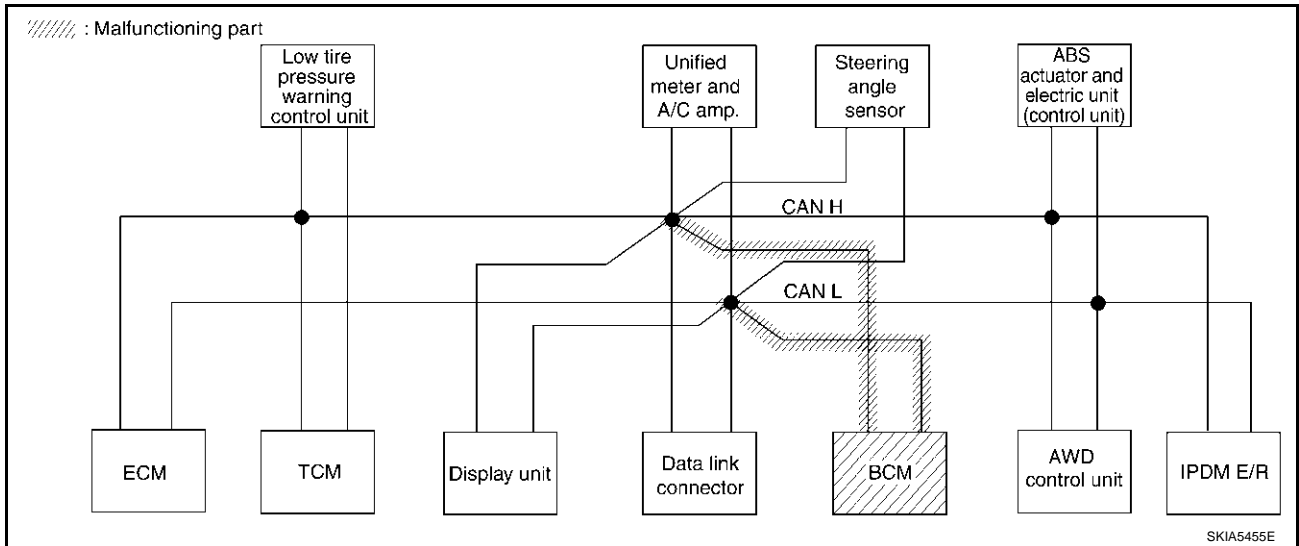
[CAN]

## Case 8

Check BCM circuit. Refer to [LAN-898, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB0981E



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# CAN SYSTEM (TYPE 26)

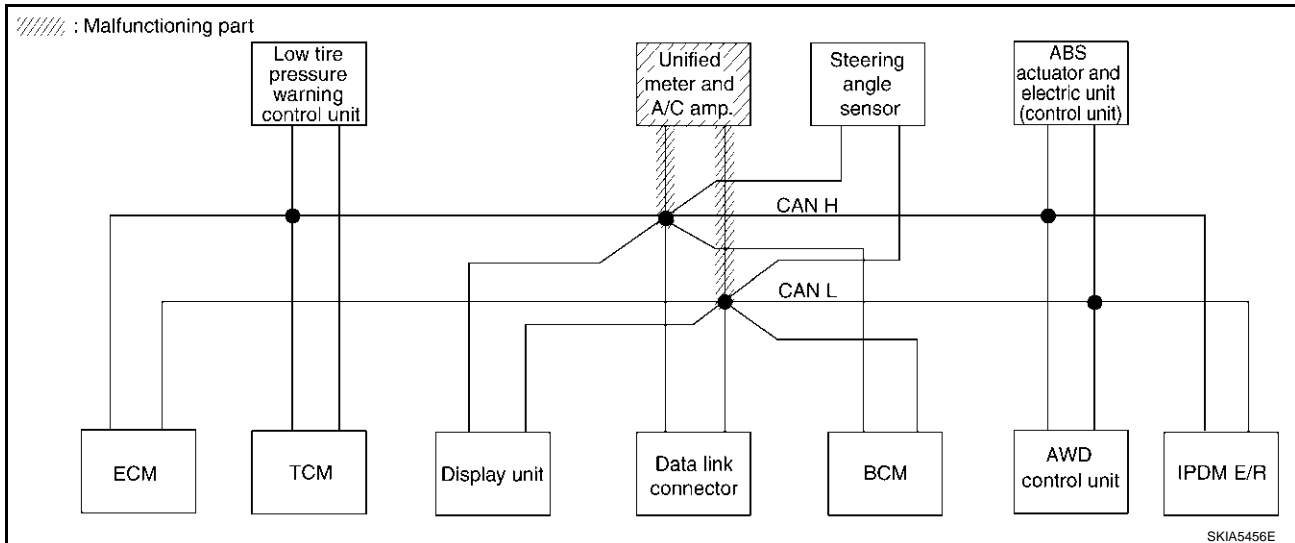
[CAN]

## Case 9

Check unified meter and A/C amp. circuit. Refer to [LAN-898, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB0982E



# CAN SYSTEM (TYPE 26)

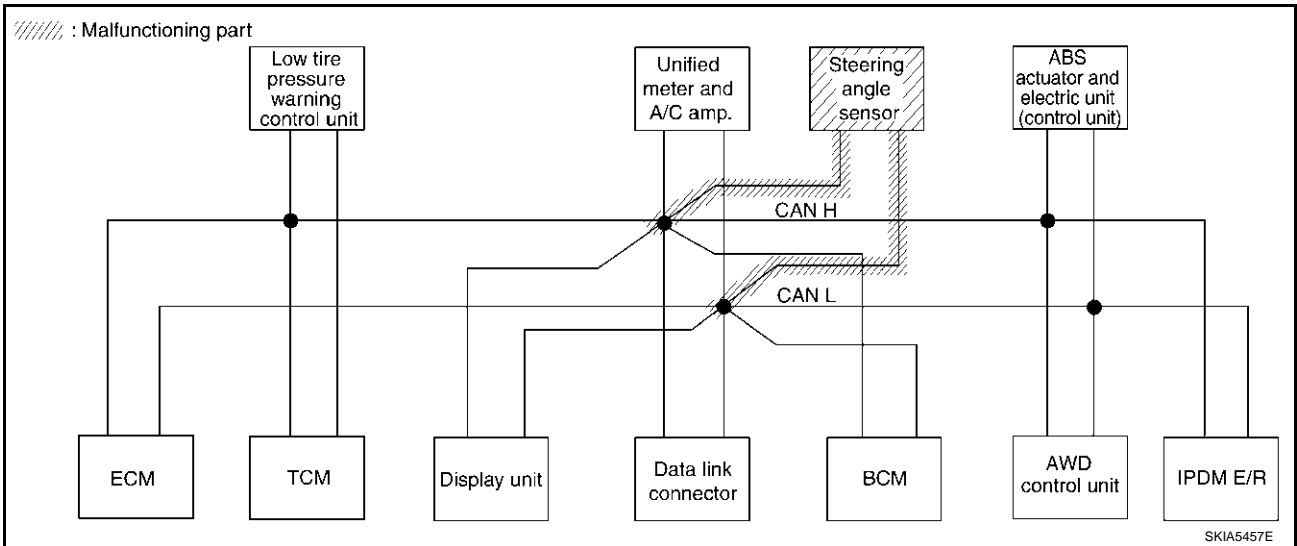
[CAN]

## Case 10

Check steering angle sensor circuit. Refer to [LAN-899, "Steering Angle Sensor Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB0983E



# CAN SYSTEM (TYPE 26)

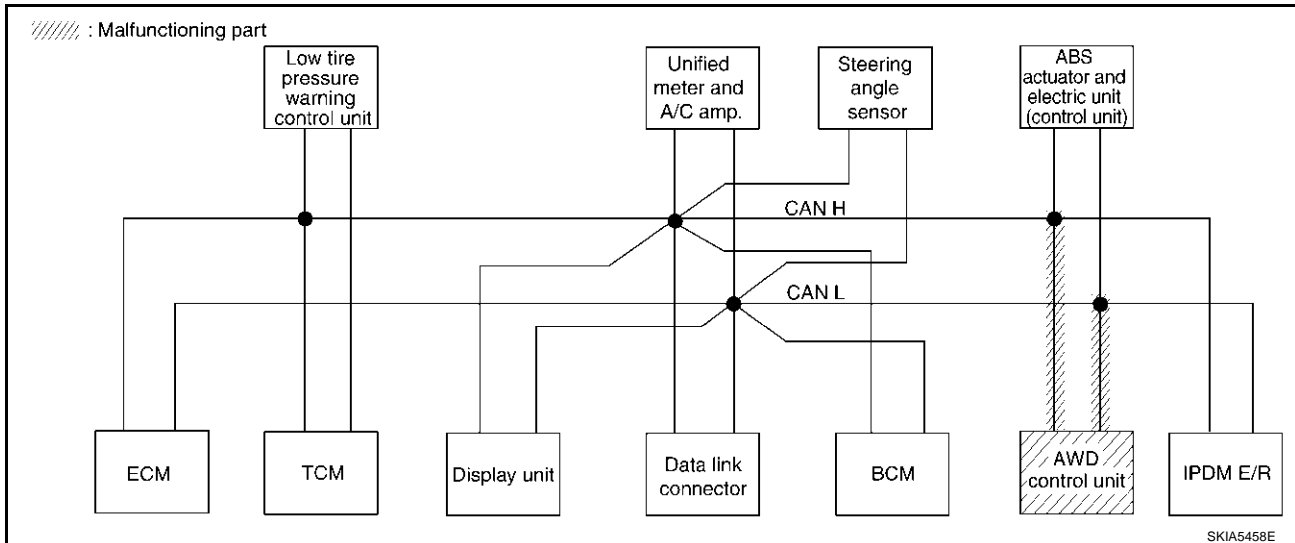
[CAN]

## Case 11

Check AWD control unit circuit. Refer to [LAN-899, "AWD Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB0984E



# CAN SYSTEM (TYPE 26)

[CAN]

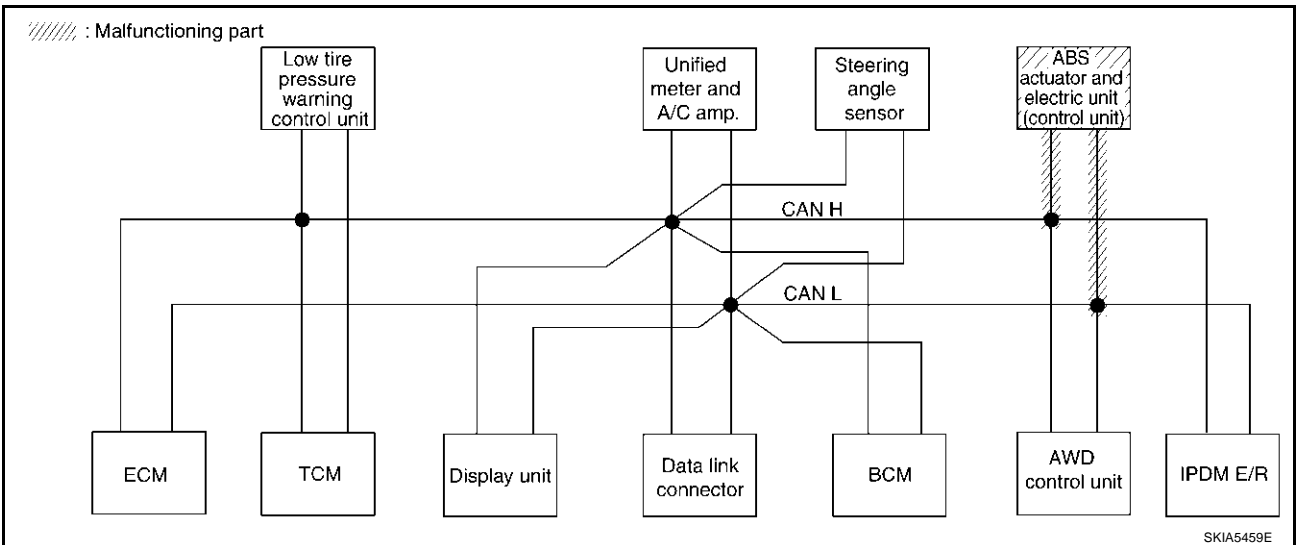
## Case 12

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-900, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

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SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB0985E



LAN

# CAN SYSTEM (TYPE 26)

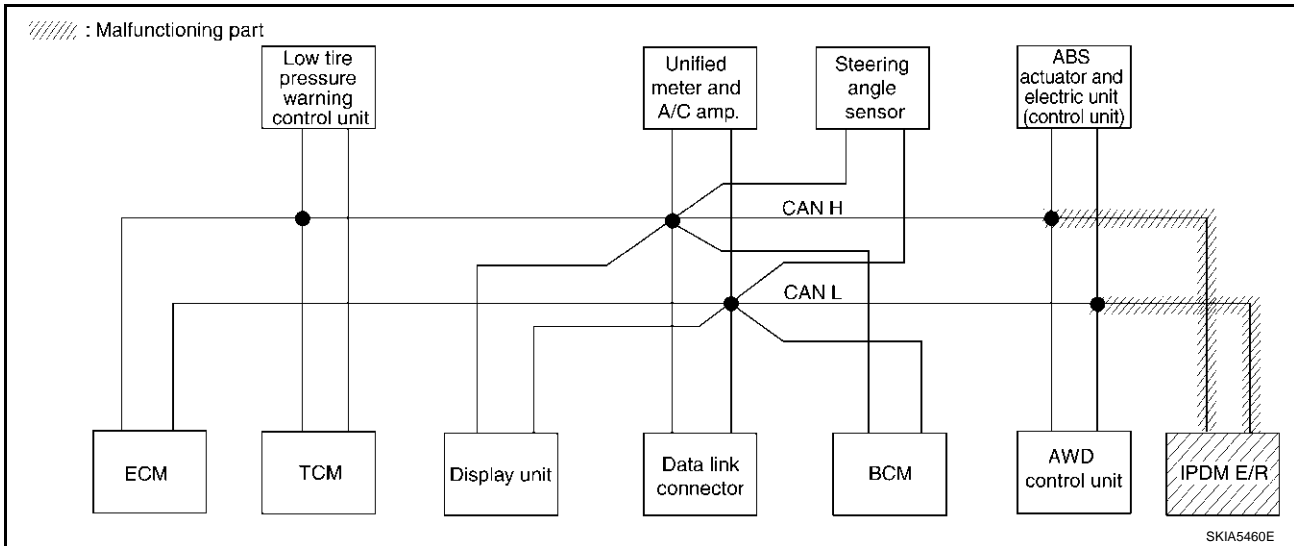
[CAN]

## Case 13

Check IPDM E/R circuit. Refer to [LAN-900, "IPDM E/R Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB0986E



## Case 14

Check CAN communication circuit. Refer to [LAN-901, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB0987E



# CAN SYSTEM (TYPE 26)

[CAN]

## Case 15

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-904, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB0988E

## Case 16

Case 23: Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-904, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB0989E

## Circuit Check Between TCM and Data Link Connector

AKS00751

### 1. CHECK HARNESS FOR OPEN CIRCUIT

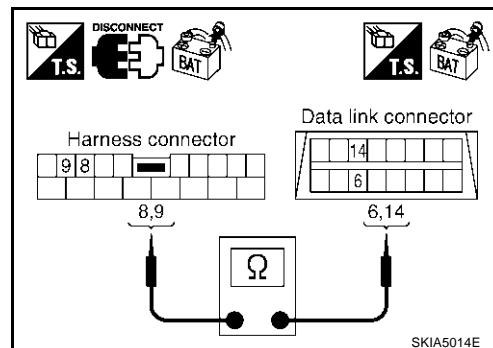
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

**8 (L) - 6 (L) : Continuity should exist.**

**9 (Y) - 14 (Y) : Continuity should exist.**

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-876, "Work Flow"](#).
- NG >> Repair harness.



## Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit)

AKS00752

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector M9
  - Harness connector B2
  - Harness connector B4
  - Harness connector E105

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

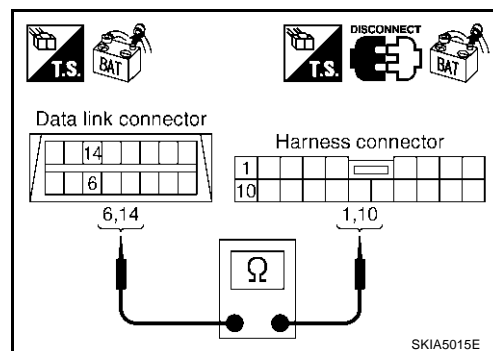
1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

**6 (L) - 1 (L) : Continuity should exist.**

**14 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



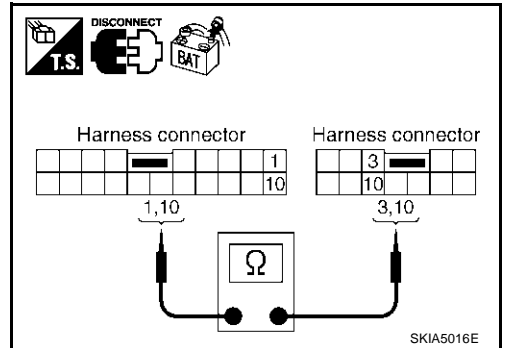
**3. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

**1 (L) - 3 (L) : Continuity should exist.**  
**10 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

- OK >> GO TO 4.  
 NG >> Repair harness.



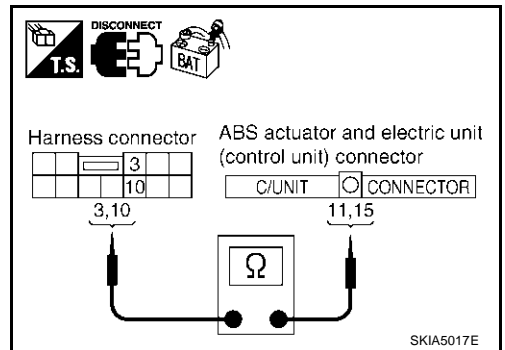
**4. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

**3 (L) - 11 (L) : Continuity should exist.**  
**10 (Y) - 15 (Y) : Continuity should exist.**

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-876. "Work Flow"](#).  
 NG >> Repair harness.



**ECM Circuit Check**

**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

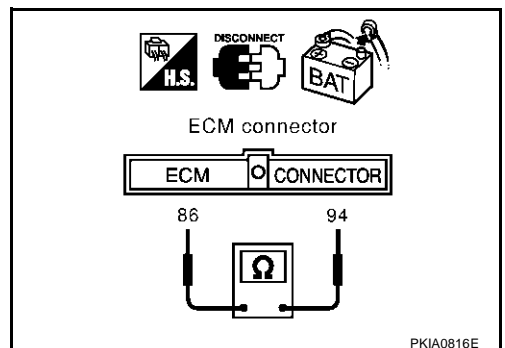
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

**94 (L) - 86 (Y) : Approx. 108 - 132Ω**

OK or NG

- OK >> Replace ECM.  
 NG >> Repair harness between ECM and TCM.



**TCM Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
  - TCM connector
  - Harness connector F102
  - Harness connector M82

OK or NG

OK &gt;&gt; GO TO 2.

NG &gt;&gt; Repair terminal or connector.

**2. CHECK HARNESS FOR OPEN CIRCUIT**

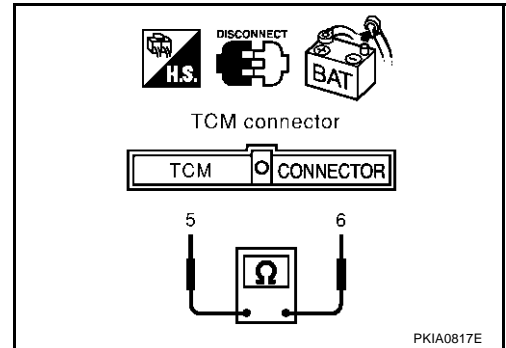
1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Approx. 54 - 66Ω**

OK or NG

OK &gt;&gt; Replace TCM.

NG &gt;&gt; Repair harness between TCM and low tire pressure warning control unit.

**Low Tire Pressure Warning Control Unit Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of low tire pressure warning control unit for damage, bend and loose connection (control unit side and harness side).

OK or NG

OK &gt;&gt; GO TO 2.

NG &gt;&gt; Repair terminal or connector.

**2. CHECK HARNESS FOR OPEN CIRCUIT**

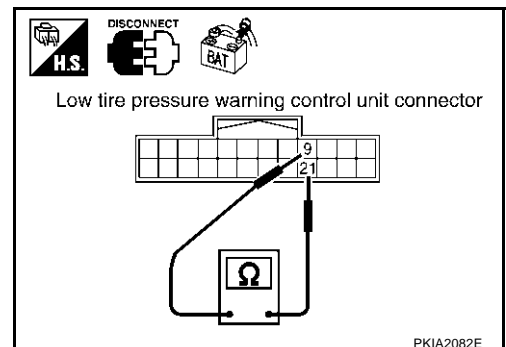
1. Disconnect low tire pressure warning control unit connector.
2. Check resistance between low tire pressure warning control unit harness connector M81 terminals 9 (L) and 21 (Y).

**9 (L) - 21 (Y) : Approx. 54 - 66Ω**

OK or NG

OK &gt;&gt; Replace low tire pressure warning control unit.

NG &gt;&gt; Repair harness between low tire pressure warning control unit and TCM.



## Display Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display unit for damage, bend and loose connection (unit side and harness side).

#### OK or NG

- OK >> GO TO 2.  
NG >> Repair terminal or connector.

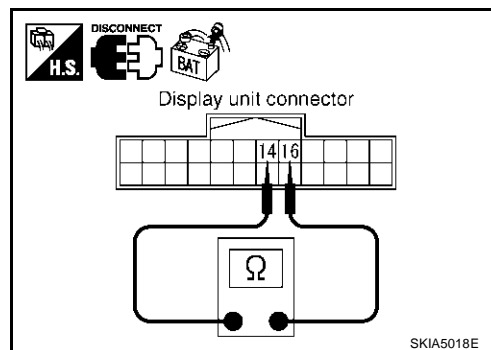
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect display unit connector.
2. Check resistance between display unit harness connector M39 terminals 14 (L) and 16 (Y).

**14 (L) - 16 (Y) : Approx. 54 - 66Ω**

#### OK or NG

- OK >> Replace display unit.  
NG >> Repair harness between display unit and data link connector.



## Data Link Connector Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

#### OK or NG

- OK >> GO TO 2.  
NG >> Repair terminal or connector.

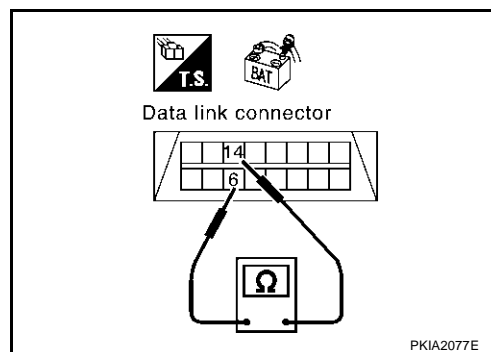
### 2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Approx. 54 - 66Ω**

#### OK or NG

- OK >> Diagnose again. Refer to [LAN-876, "Work Flow"](#).  
NG >> Repair harness between data link connector and BCM.



**BCM Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

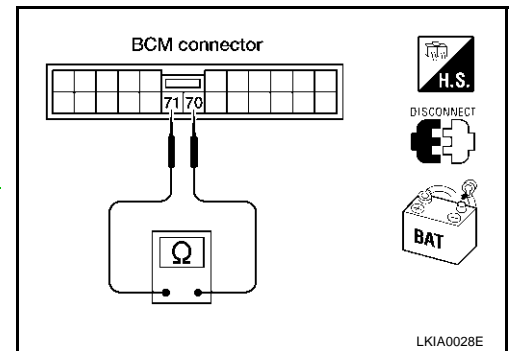
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M37 terminals 70 (L) and 71 (Y).

**70 (L) - 71 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace BCM. Refer to [BCS-36, "Removal and Installation of BCM"](#).
- NG >> Repair harness between BCM and data link connector.

**Unified Meter and A/C Amp. Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

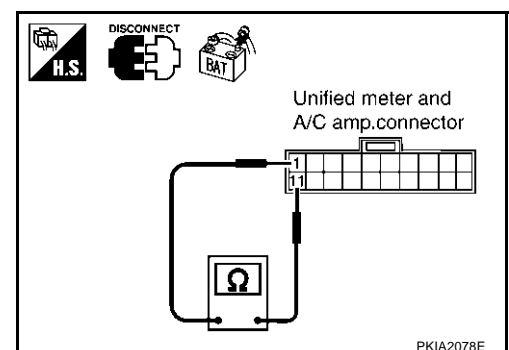
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

**1 (L) - 11 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace unified meter and A/C amp.
- NG >> Repair harness between unified meter and A/C amp. and data link connector.



**Steering Angle Sensor Circuit Check**

AKS0075A

**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of steering angle sensor for damage, bend and loose connection (sensor side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

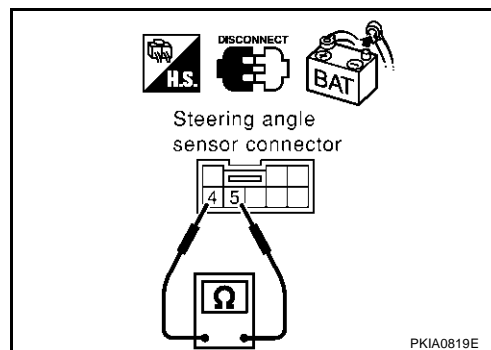
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M33 terminals 4 (L) and 5 (Y).

**4 (L) - 5 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace steering angle sensor.  
 NG >> Repair harness between steering angle sensor and data link connector.



AKS0075B

**AWD Control Unit Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of AWD control unit for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

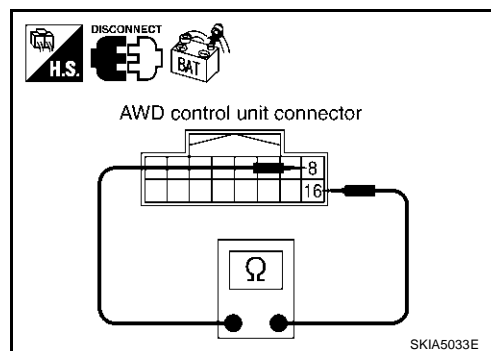
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect AWD control unit connector.
2. Check resistance between AWD control unit harness connector E111 terminals 8 (L) and 16 (Y).

**8 (L) - 16 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace AWD control unit.  
 NG >> Repair harness between AWD control unit and IPDM E/R.



## ABS Actuator and Electric Unit (Control Unit) Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

#### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

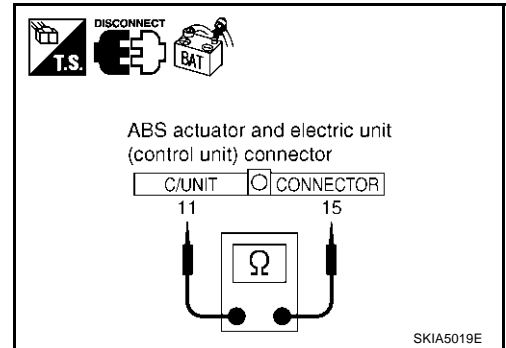
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

**11 (L) - 15 (Y) : Approx. 54 - 66Ω**

#### OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).  
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



## IPDM E/R Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

#### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

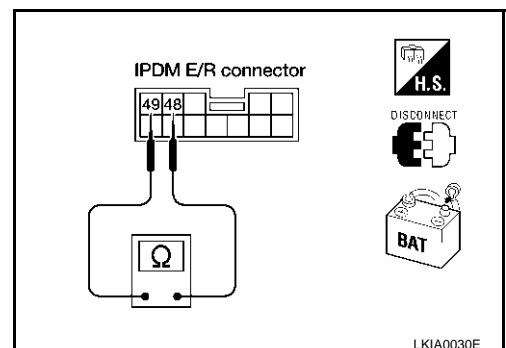
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y) : Approx. 108 - 132Ω**

#### OK or NG

- OK >> Replace IPDM E/R.  
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).





**CAN Communication Circuit Check**

AKS0075E

**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, unit side, meter side, sensor side and harness side).
  - ECM
  - TCM
  - Low tire pressure warning control unit
  - Display unit
  - BCM
  - Unified meter and A/C amp.
  - Steering angle sensor
  - AWD control unit
  - ABS actuator and electric unit (control unit)
  - IPDM E/R
  - Between ECM and IPDM E/R
  - Between ECM and TCM

OK or NG

OK &gt;&gt; GO TO 2.

NG &gt;&gt; Repair terminal or connector.

A

B

C

D

E

F

G

H

I

J

LAN

L

M

## 2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
  - ECM connector
  - Low tire pressure warning control unit connector
  - Harness connector M82
  - Display unit connector
  - BCM connector
  - Unified meter and A/C amp. connector
  - Steering angle sensor connector
  - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

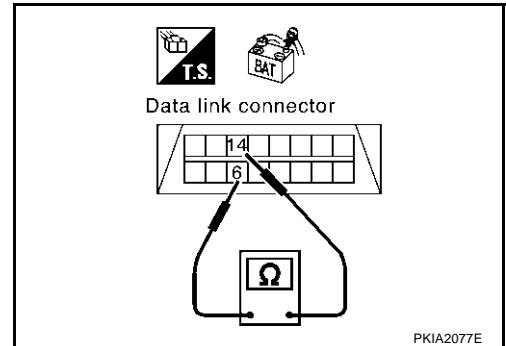
**6 (L) - 14 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 3.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M9.



## 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

**6 (L) - Ground : Continuity should not exist.**

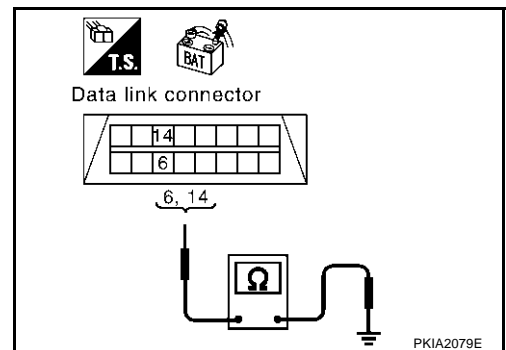
**14 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M9.



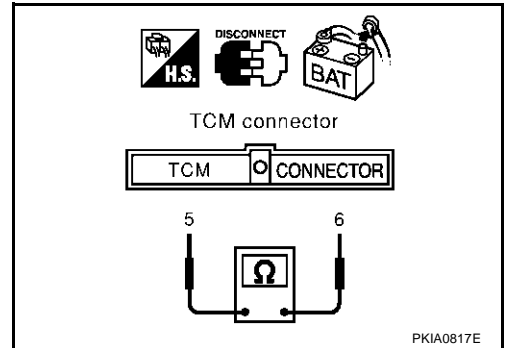
**4. CHECK HARNESS FOR SHORT CIRCUIT**

1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Continuity should not exist.**

OK or NG

- OK >> GO TO 5.  
 NG >> Repair harness between TCM and harness connector F102.



**5. CHECK HARNESS FOR SHORT CIRCUIT**

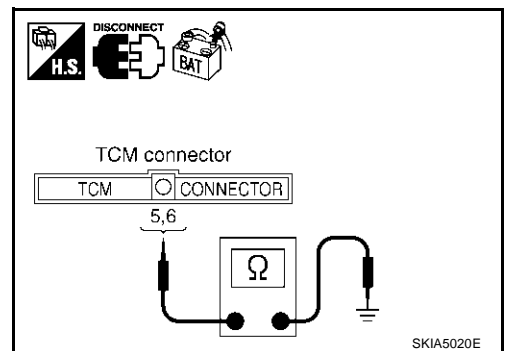
Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

**5 (L) - Ground : Continuity should not exist.**

**6 (Y) - Ground : Continuity should not exist.**

OK or NG

- OK >> GO TO 6.  
 NG >> Repair harness between TCM and harness connector F102.



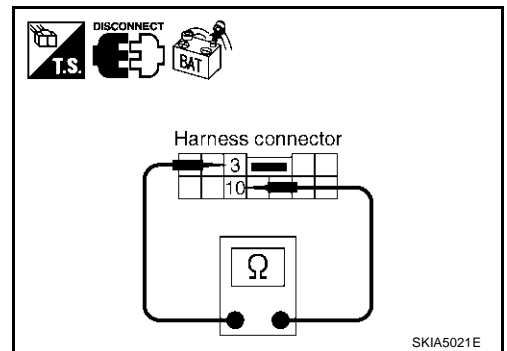
**6. CHECK HARNESS FOR SHORT CIRCUIT**

1. Disconnect harness connector B4.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

**3 (L) - 10 (Y) : Continuity should not exist.**

OK or NG

- OK >> GO TO 7.  
 NG >> Repair harness between harness connector B4 and harness connector B2.



**7. CHECK HARNESS FOR SHORT CIRCUIT**

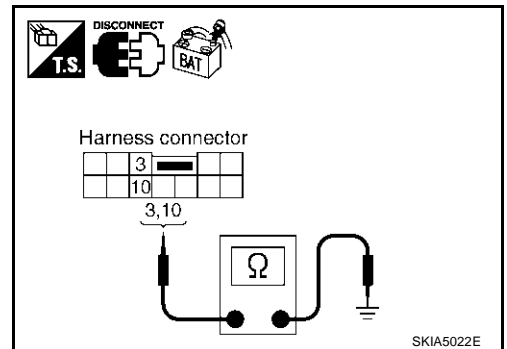
Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

**3 (L) - Ground : Continuity should not exist.**

**10 (Y) - Ground : Continuity should not exist.**

OK or NG

- OK >> GO TO 8.  
 NG >> Repair harness between harness connector B4 and harness connector B2.



## 8. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect AWD control unit connector, ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

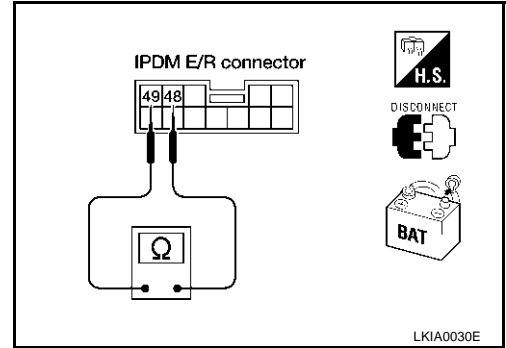
**48 (L) - 49 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 9.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

**48 (L) - Ground : Continuity should not exist.**

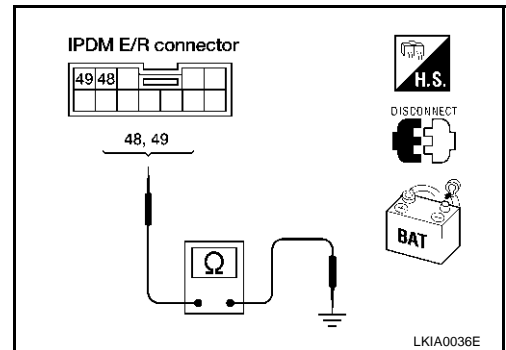
**49 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 10.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 10. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-905, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

### OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-876, "Work Flow"](#).

NG >> Replace ECM and/or IPDM E/R.

### IPDM E/R Ignition Relay Circuit Check

AKS0075F

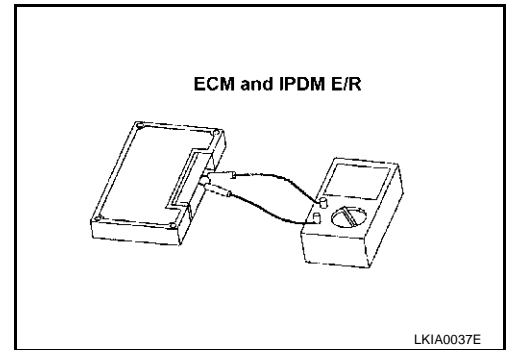
Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-45, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#).

## Component Inspection ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value ( $\Omega$ ) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



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LAN

## CAN SYSTEM (TYPE 27)

PFP:23710

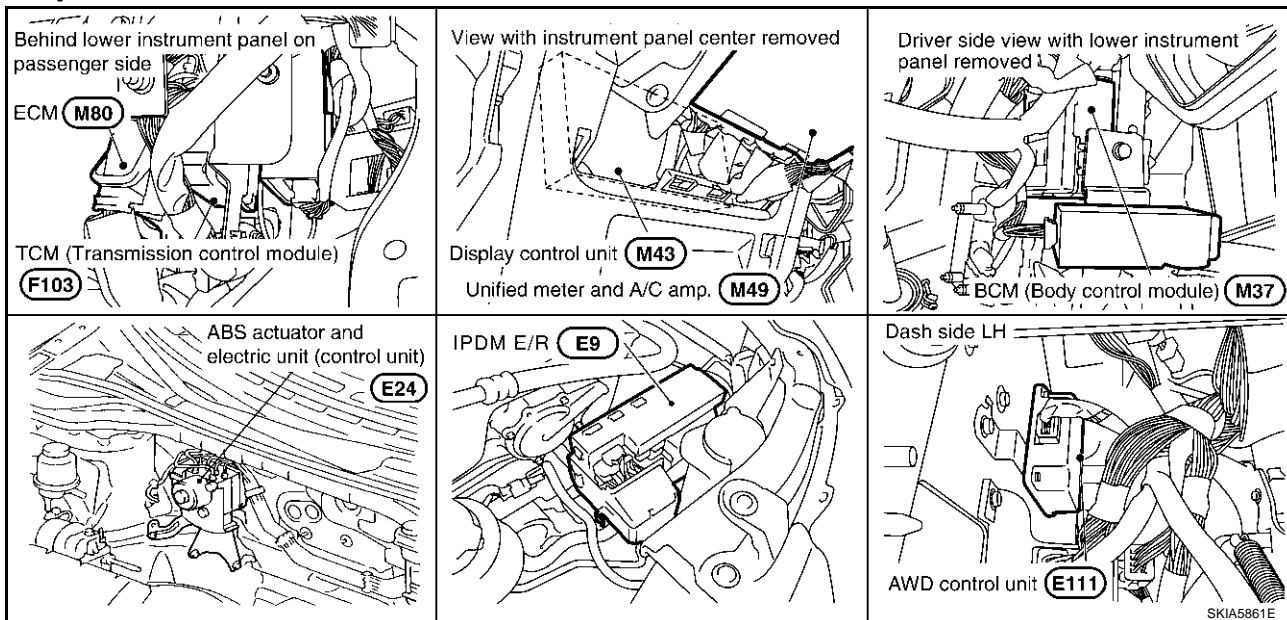
### System Description

AKS0075H

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

### Component Parts and Harness Connector Location

AKS0075I

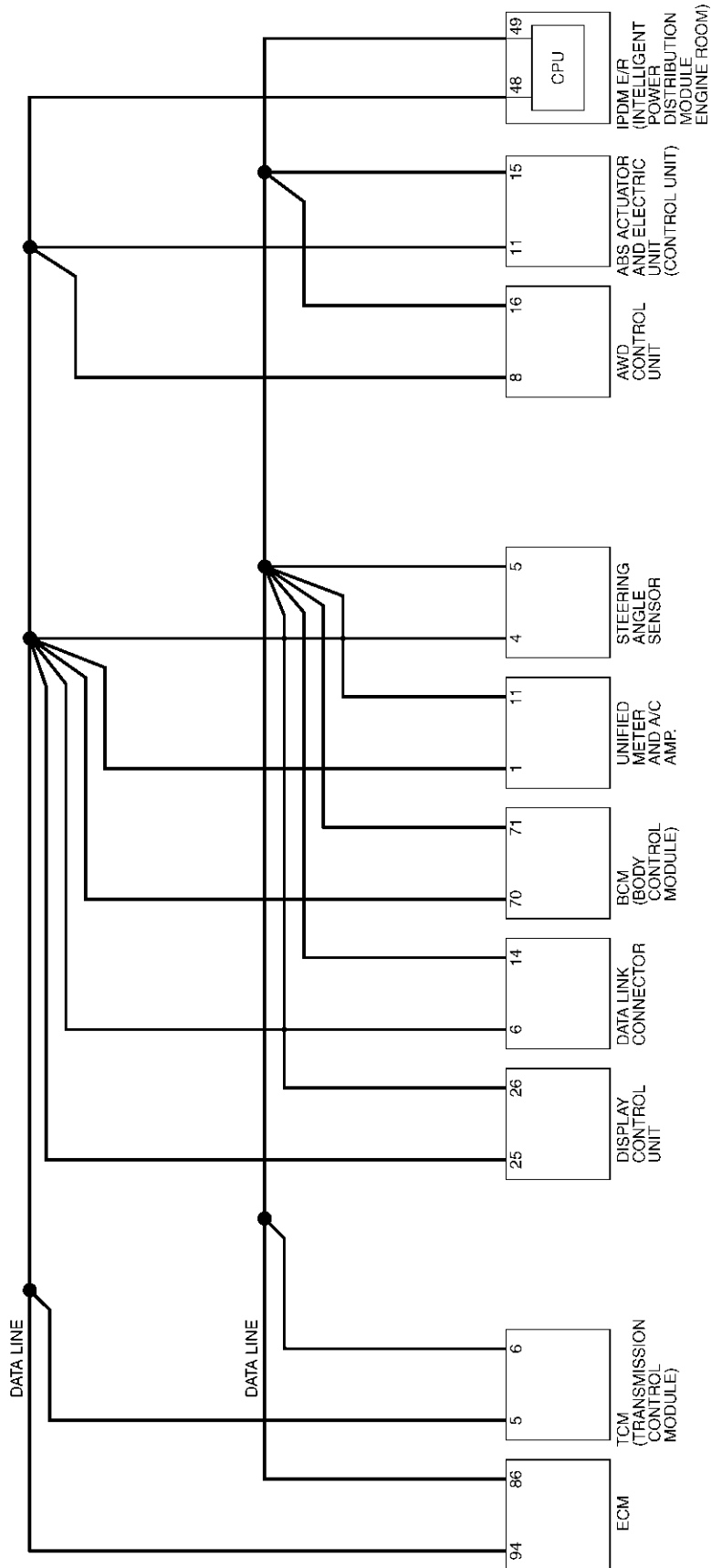


# CAN SYSTEM (TYPE 27)

[CAN]

## Schematic

AKS0075J



A  
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TKWA1027E

# CAN SYSTEM (TYPE 27)

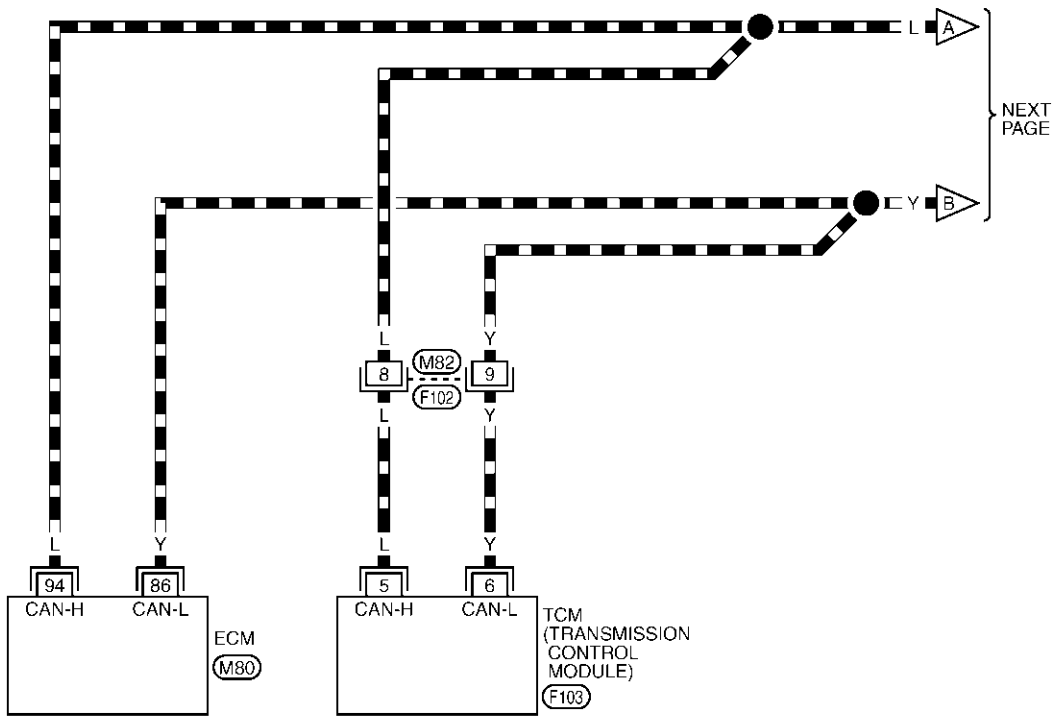
[CAN]

## Wiring Diagram - CAN -

AKS0075K

### LAN-CAN-79

▬ : DATA LINE



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18		

(F102)  
W

REFER TO THE FOLLOWING.  
(M80), (F103) -ELECTRICAL  
UNITS

TKWA1026E

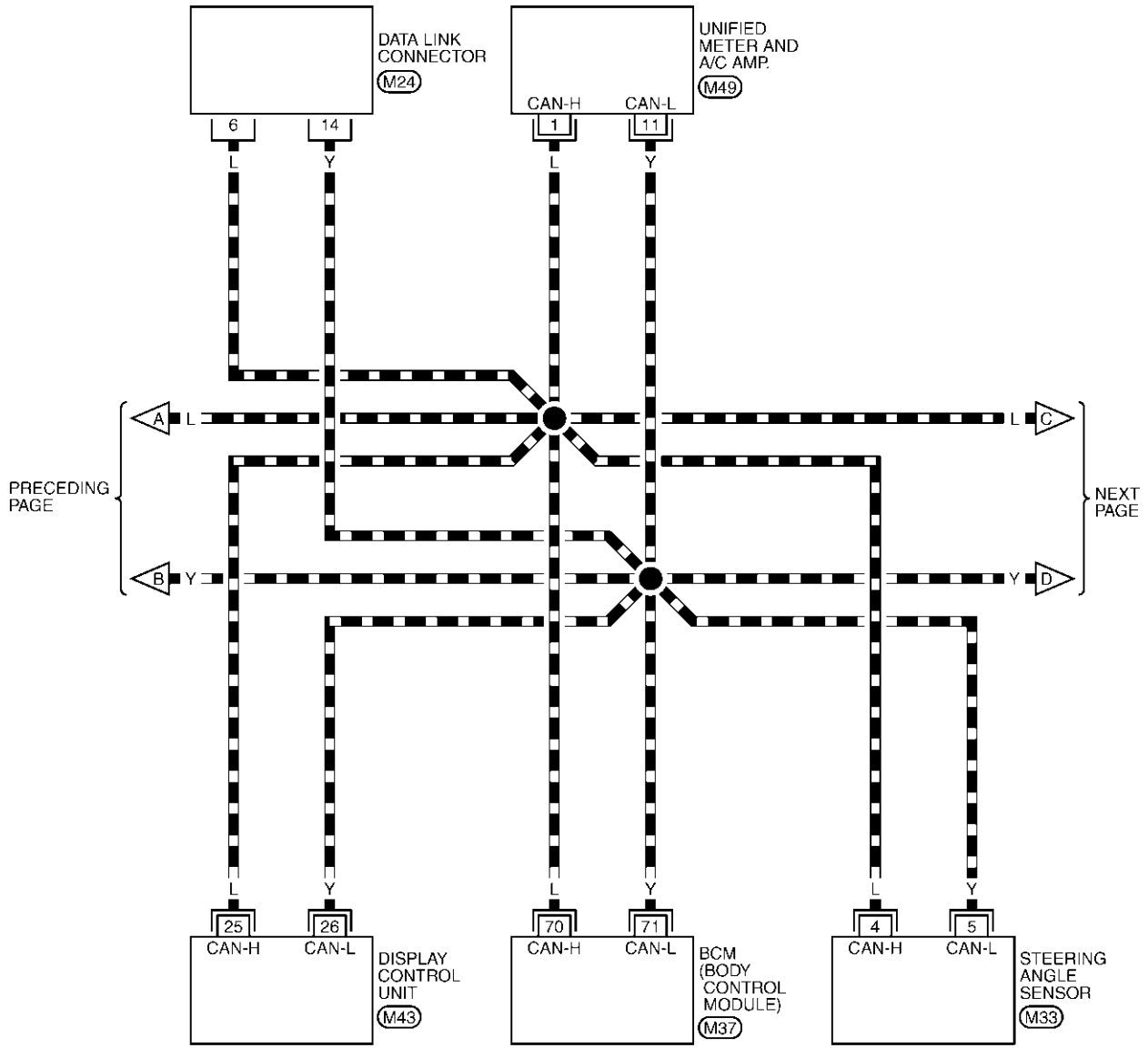


# CAN SYSTEM (TYPE 27)

[CAN]

## LAN-CAN-80

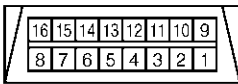
▬ : DATA LINE



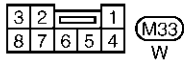
PRECEDING PAGE

NEXT PAGE

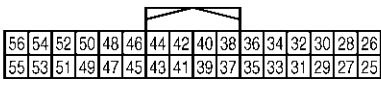
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LAN  
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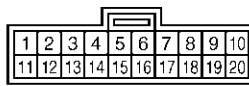
M24  
W



M33  
W



M43  
W



M49  
GR



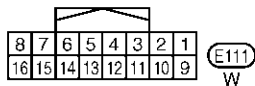
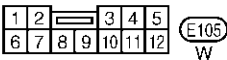
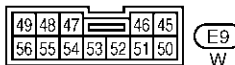
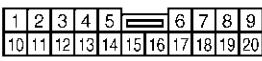
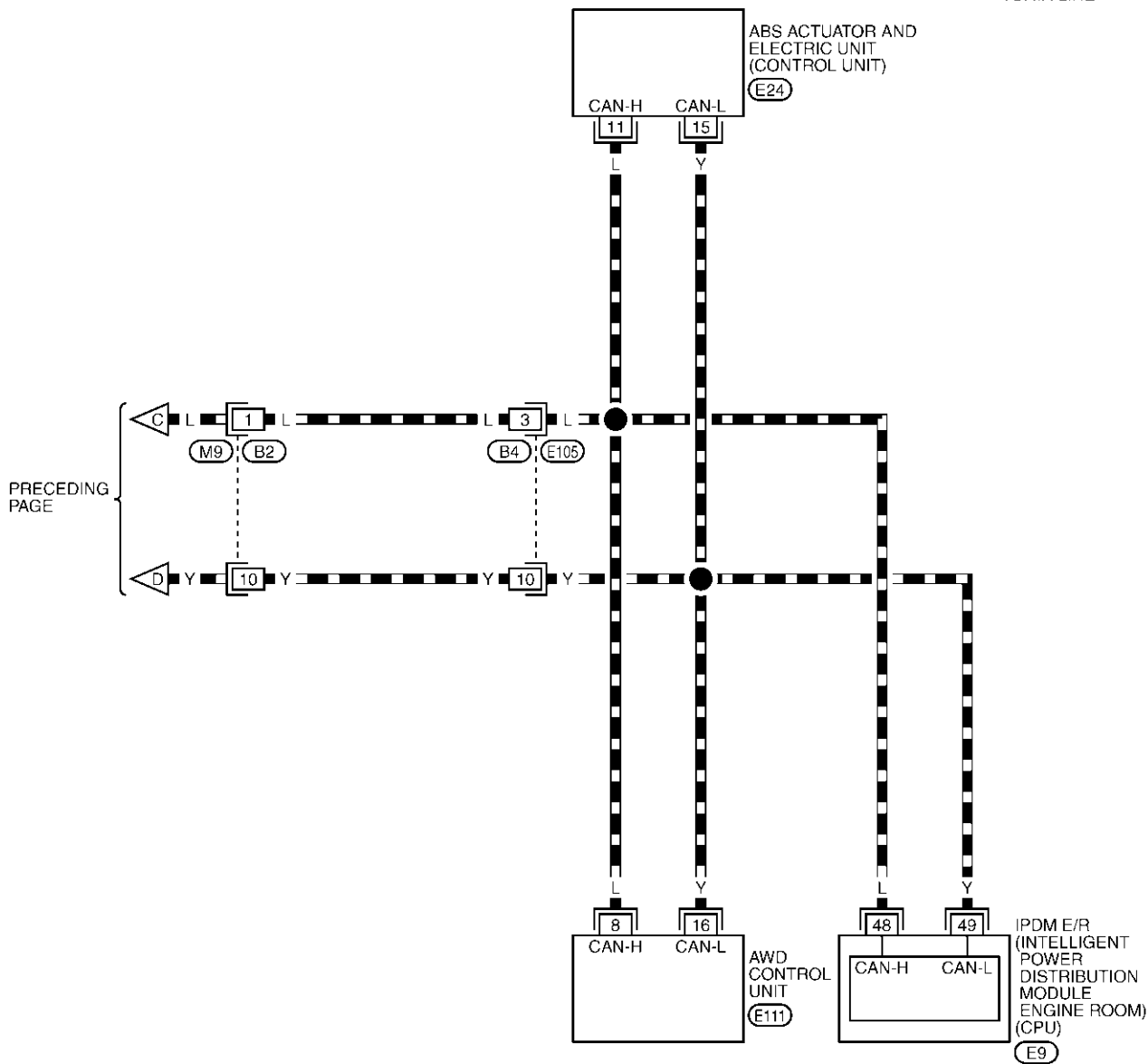
REFER TO THE FOLLOWING.

M37 -ELECTRICAL UNITS

TKWA1029E

LAN-CAN-81

▬ : DATA LINE



REFER TO THE FOLLOWING.  
 (E24) -ELECTRICAL UNITS

# CAN SYSTEM (TYPE 27)

[CAN]

AKS00C5S

## Work Flow

- When there are no indications of "TRANSMISSION" or "METER A/C AMP" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".

(Example)	NISSAN				<b>SELECT SYSTEM</b>			
	CONSULT-II				ENGINE			
	ENGINE				A/T			
	START (NISSAN BASED VHCL)				ABS			
	START (RENAULT BASED VHCL)				AIR BAG			
	SUB MODE				BCM			
					METER A/C AMP			
			LIGHT COPY		BACK		LIGHT COPY	
					PKIA2093E			

- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP", "ALL MODE AWD/4WD" and "ABS" displayed on CONSULT-II.

(Example)	<b>SELECT DIAG MODE</b>		<b>SELF-DIAG RESULTS</b>			
	WORK SUPPORT		DTC RESULTS		TIME	
	<b>SELF-DIAG RESULTS</b>		CAN COMM CIRCUIT [U1000]		0	
	DATA MONITOR					
	DATA MONITOR (SPEC)					
	CAN DIAG SUPPORT MNTR					
	ACTIVE TEST					
					F.F.DATA	
			Scroll Down		ERASE PRINT	
			BACK LIGHT COPY		MODE BACK LIGHT COPY	
		PKIA8260E				

- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP", "ALL MODE AWD/4WD" and "ABS" displayed on CONSULT-II.

(Example)	<b>SELECT DIAG MODE</b>		<b>CAN DIAG SUPPORT MNTR</b>			
	WORK SUPPORT		<b>ENGINE</b>			
	<b>SELF-DIAG RESULTS</b>		INITIAL DIAG		OK	
	DATA MONITOR		TRANSMIT DIAG		OK	
	DATA MONITOR (SPEC)		TCM		OK	
	CAN DIAG SUPPORT MNTR		VDC/TCS/ABS		OK	
	ACTIVE TEST		METER/M&A		OK	
			ICC		UNKWVN	
			BCM/SEC		OK	
			IPDM E/R		OK	
		AWD/4WD/e4WD		UNKWVN		
		PRINT		Scroll Down		
		MODE BACK		LIGHT COPY		
		PKIA8343E				

- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-913, "CHECK SHEET"](#).
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "v" onto the items with "No indication", "NG", or "UNKWVN" in the check sheet table. Refer to [LAN-913, "CHECK SHEET"](#).

### NOTE:

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual. So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the navigation system. Refer to [AV-203, "CAN Communication Line Check"](#).
- Attach the CAN DIAG SUPPORT MONITOR check sheet onto the check sheet. Refer to [LAN-913, "CHECK SHEET"](#).

- 
8. Mark the “NG” or “UNKWN” item of the check sheet table with “v” from the result of CAN DIAG SUPPORT MONITOR check sheet. Refer to [LAN-913, "CHECK SHEET"](#) .  
**NOTE:**  
If “NG” is displayed on “CAN COMM” as “CAN DIAG SUPPORT MONITOR” for the diagnosed control unit, replace the control unit. Refer to [AV-203, "CAN Communication Line Check"](#) .
  9. According to the check sheet results (example), start inspection. Refer to [LAN-915, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

# CAN SYSTEM (TYPE 27)

**[CAN]**

## CHECK SHEET

**NOTE:**

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

A  
B  
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LAN  
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Check sheet table													
SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	-	NG	UNKWN	-	UNKWN	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	-	UNKWN	-	-	UNKWN	-	
Display control unit	-	CAN COMM	CAN CIRC 1	CAN CIRC 3	-	-	CAN CIRC 2	CAN CIRC 5	-	-	-	CAN CIRC 7	
BCM	-	NG	UNKWN	UNKWN	-	-	-	UNKWN	-	-	-	UNKWN	
METER A/C AMP	No indication	-	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	-	-	UNKWN	UNKWN	-	
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	-	UNKWN	-	-	UNKWN	-	
ABS	-	NG	UNKWN	UNKWN	UNKWN	-	-	-	UNKWN	UNKWN	-	-	

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

Attach copy of  
display control unit  
CAN DIAG SUPPORT MONITOR check sheet

PKIB0999E

# CAN SYSTEM (TYPE 27)

[CAN]

Attach copy of  
ENGINE  
SELF-DIAG RESULTS

Attach copy of  
TRANSMISSION  
SELF-DIAG RESULTS

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
METER A/C AMP  
SELF-DIAG RESULTS

Attach copy of  
ALL MODE AWD/4WD  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

Attach copy of  
ENGINE  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
TRANSMISSION  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
BCM  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
METER A/C AMP  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ALL MODE AWD/4WD  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ABS  
CAN DIAG SUPPORT  
MNTR

PKIB0715E

# CAN SYSTEM (TYPE 27)

[CAN]

## CHECK SHEET RESULTS (EXAMPLE)

### NOTE:

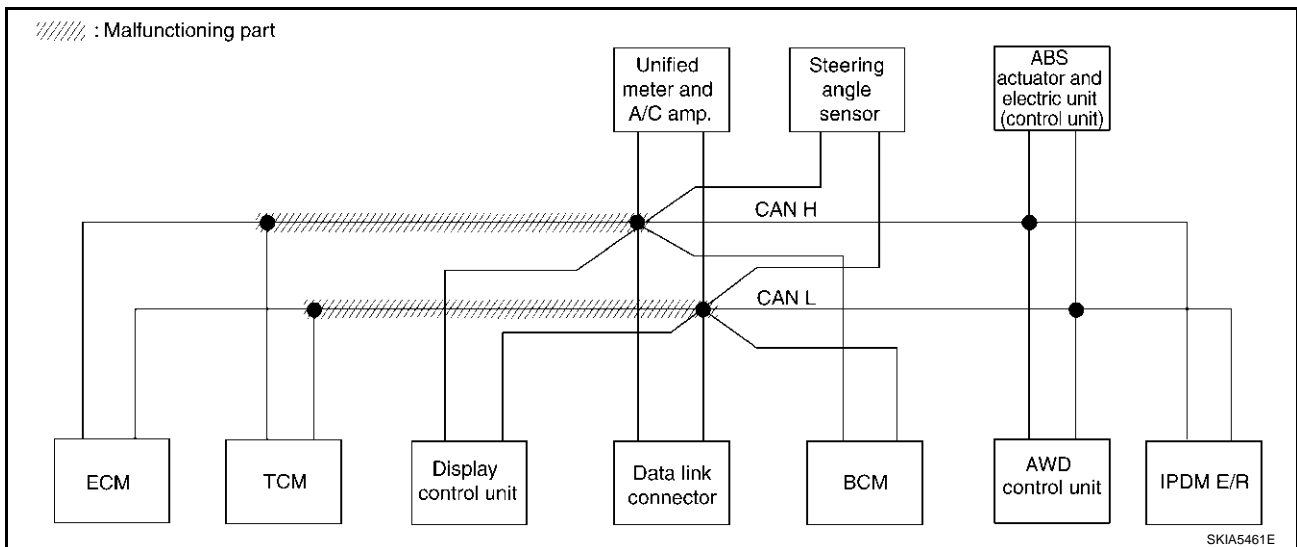
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

### Case 1

Check harness between TCM and data link connector. Refer to [LAN-928, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

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# CAN SYSTEM (TYPE 27)

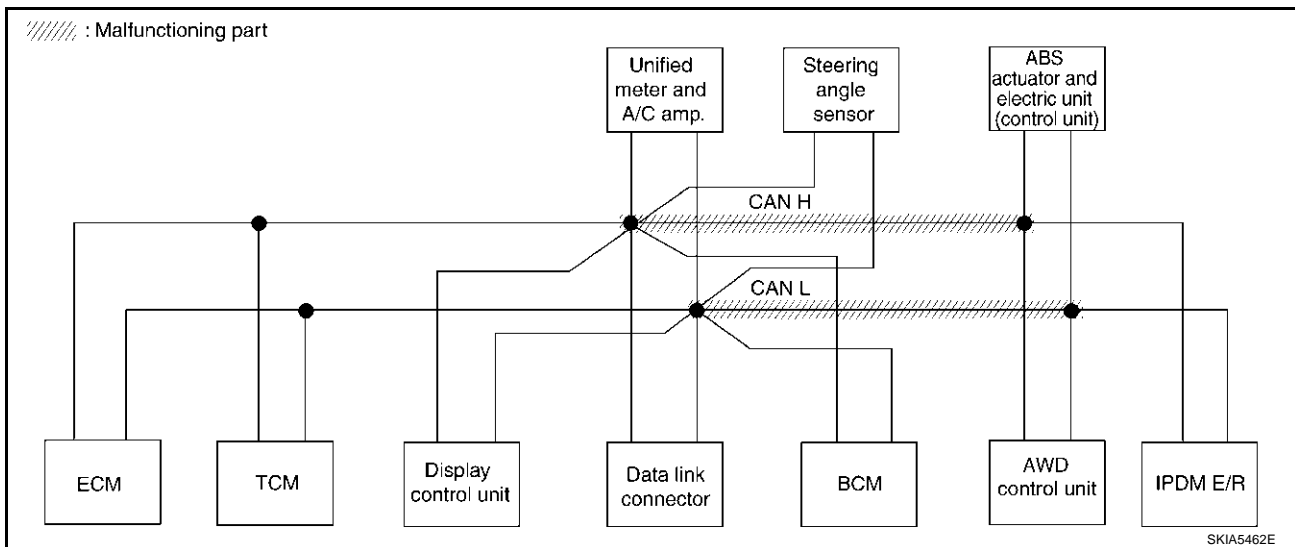
[CAN]

## Case 2

Check harness between data link connector and ABS actuator and electric unit (control unit). Refer to [LAN-928, "Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit \(Control Unit\)"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

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# CAN SYSTEM (TYPE 27)

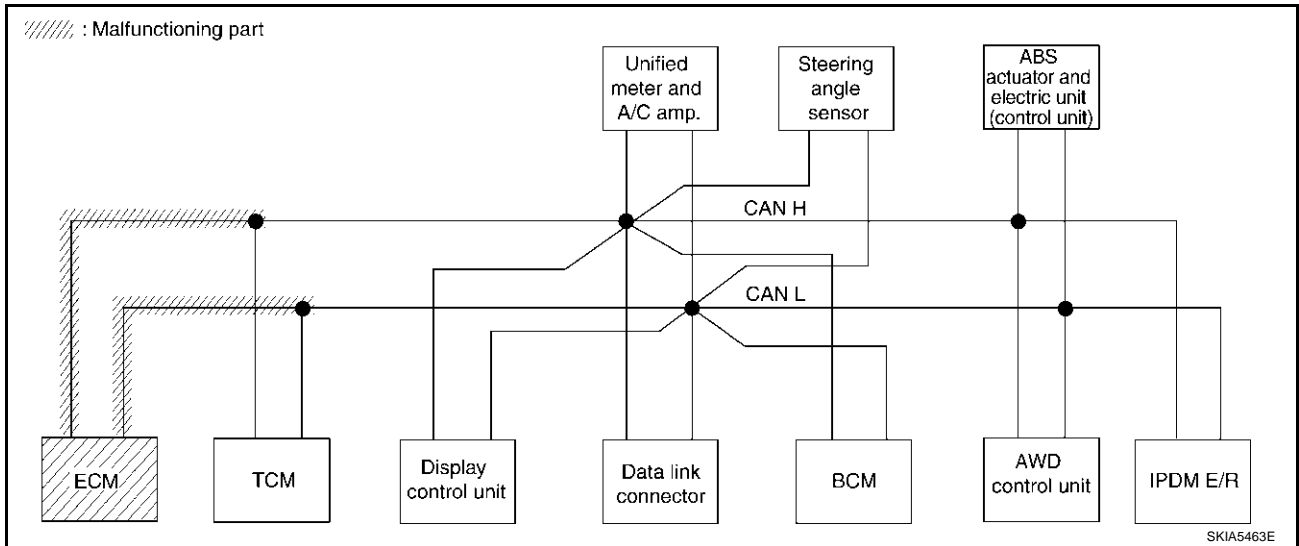
[CAN]

## Case 3

Check ECM circuit. Refer to [LAN-929, "ECM Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N
TRANSMISSION	No indication	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	UNKW <sup>✓</sup> N	—	—	UNKW <sup>✓</sup> N	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	UNKW <sup>✓</sup> N	—	—	—	UNKW <sup>✓</sup> N
METER A/C AMP	No indication	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—
ALL MODE AWD/4WD	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	UNKW <sup>✓</sup> N	—	—	UNKW <sup>✓</sup> N	—
ABS	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—

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# CAN SYSTEM (TYPE 27)

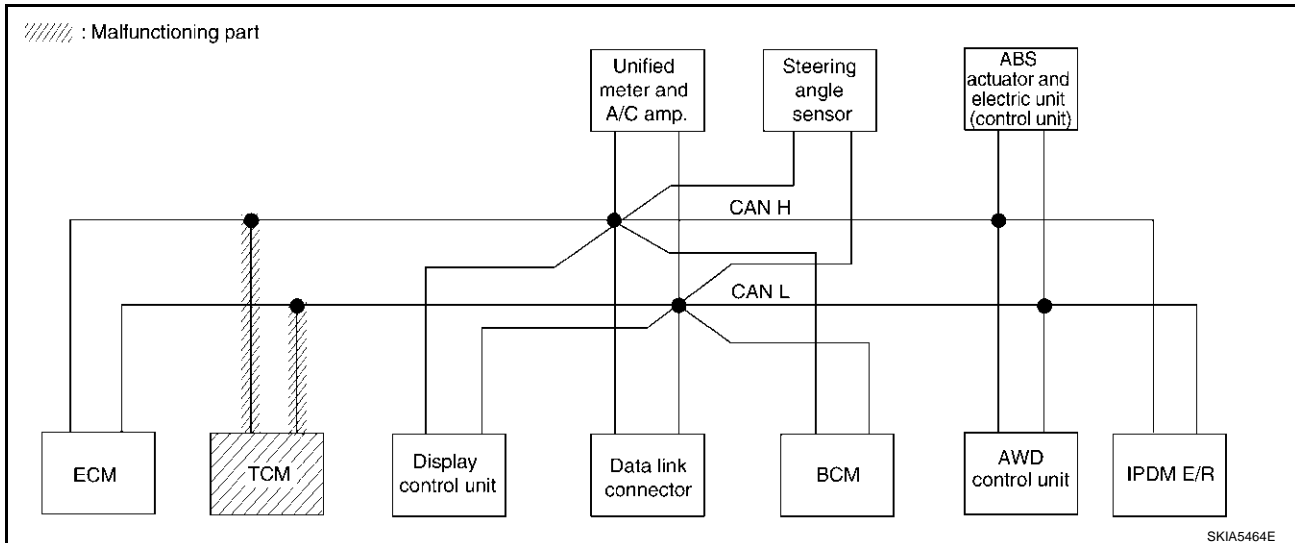
[CAN]

## Case 4

Check TCM circuit. Refer to [LAN-930, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

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# CAN SYSTEM (TYPE 27)

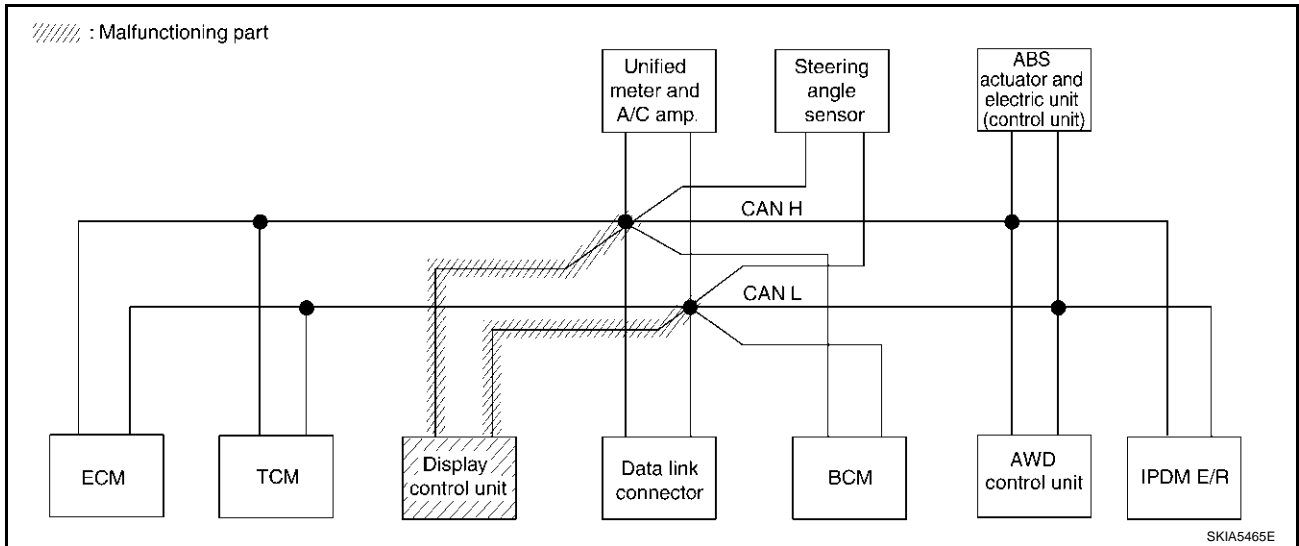
[CAN]

## Case 5

Check display control unit circuit. Refer to [LAN-930, "Display Control Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CRC 1 ✓	CAN CRC 3 ✓	—	—	CAN CRC 2 ✓	CAN CRC 5 ✓	—	—	—	CAN CRC 7 ✓
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

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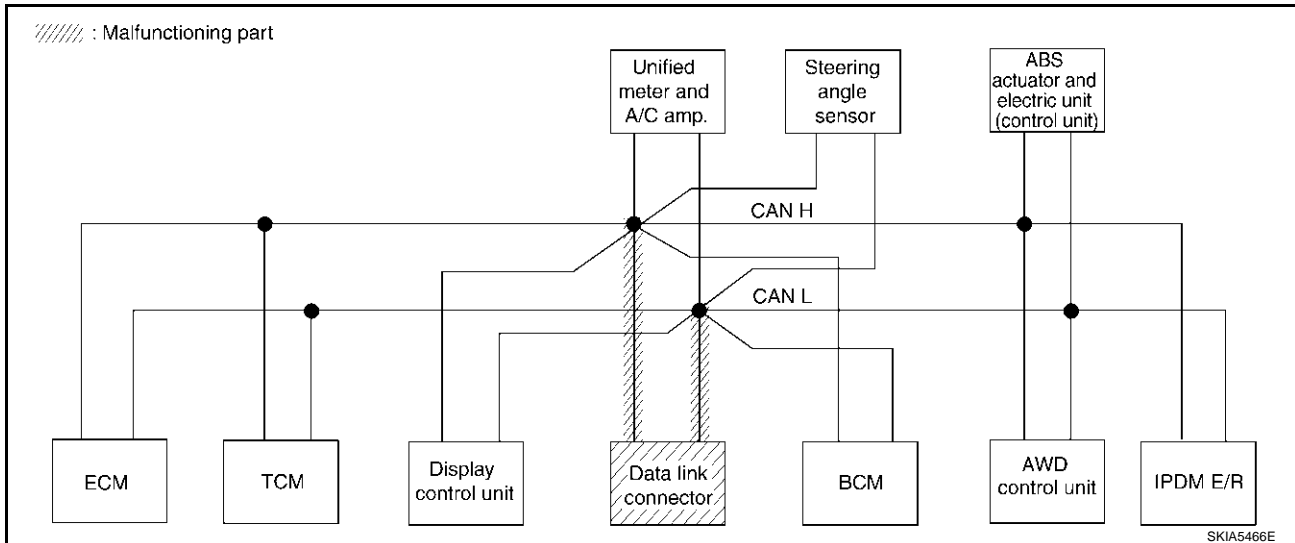
[CAN]

## Case 6

Check data link connector circuit. Refer to [LAN-931, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

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# CAN SYSTEM (TYPE 27)

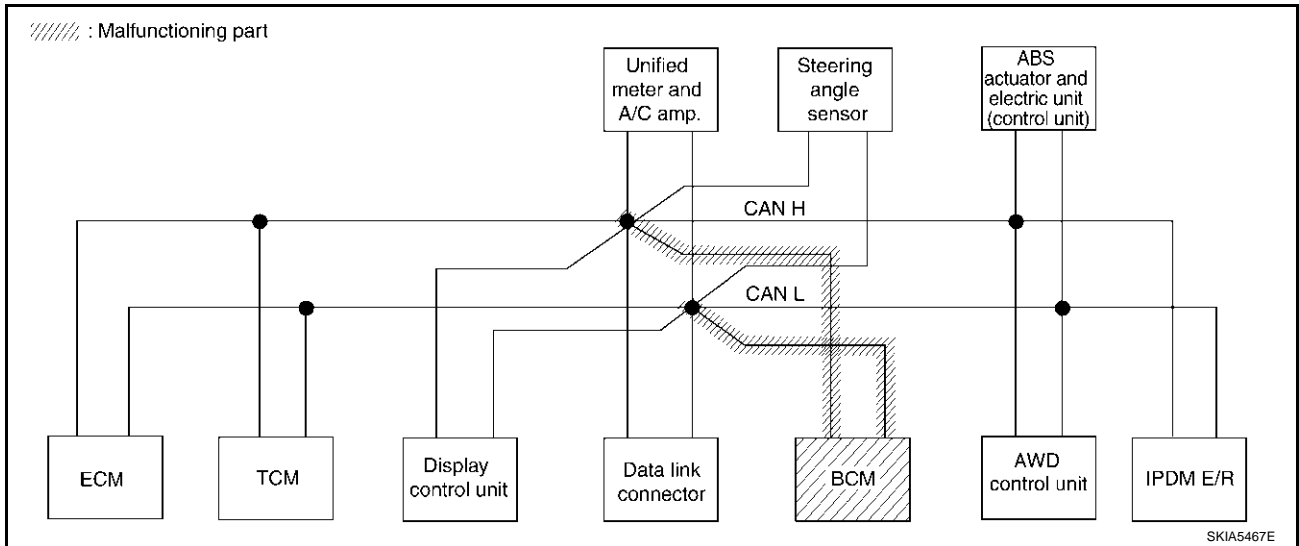
[CAN]

## Case 7

Check BCM circuit. Refer to [LAN-931, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

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# CAN SYSTEM (TYPE 27)

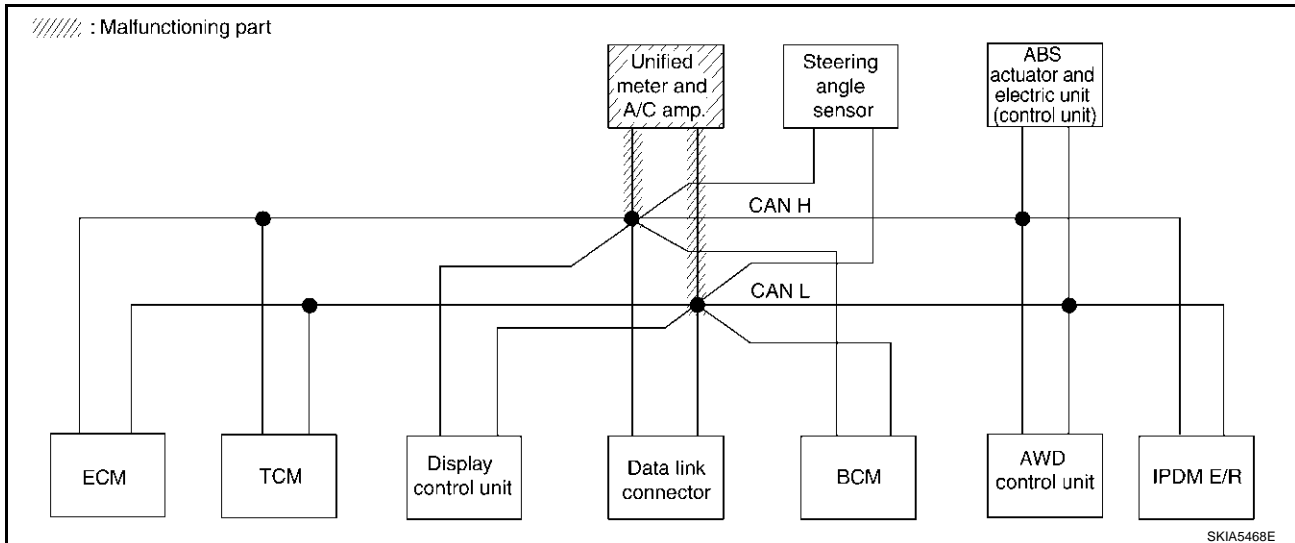
[CAN]

## Case 8

Check unified meter and A/C amp. circuit. Refer to [LAN-932, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

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# CAN SYSTEM (TYPE 27)

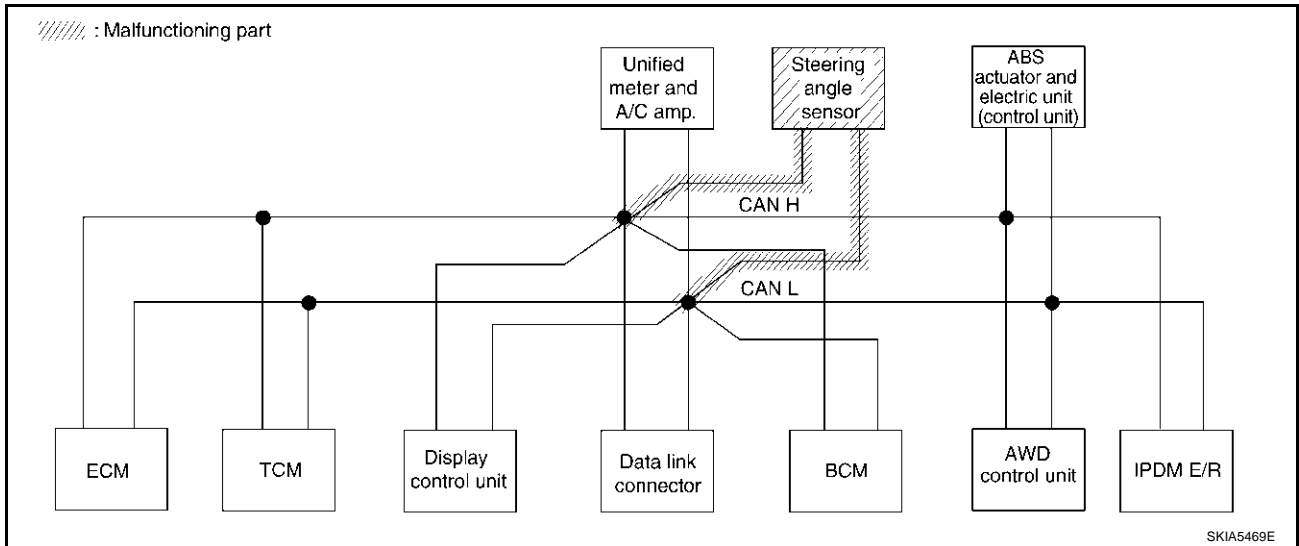
[CAN]

## Case 9

Check steering angle sensor circuit. Refer to [LAN-932, "Steering Angle Sensor Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

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# CAN SYSTEM (TYPE 27)

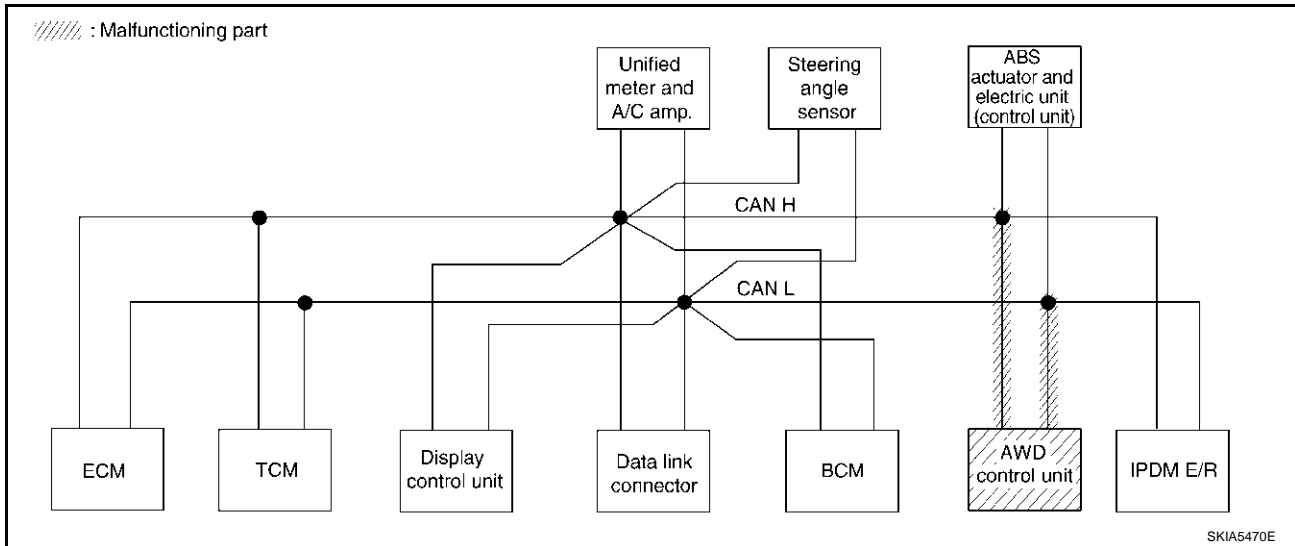
[CAN]

## Case 10

Check AWD control unit circuit. Refer to [LAN-933, "AWD Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW	—	UNKW	—	UNKW	UNKW	—	UNKW	UNKW	UNKW
TRANSMISSION	No indication	NG	UNKW	UNKW	—	—	—	UNKW	—	—	UNKW	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKW	UNKW	—	—	—	UNKW	—	—	—	UNKW
METER A/C AMP	No indication	—	UNKW	UNKW	UNKW	UNKW	UNKW	—	—	UNKW	UNKW	—
ALL MODE AWD/4WD	—	NG	UNKW	UNKW	—	—	—	UNKW	—	—	UNKW	—
ABS	—	NG	UNKW	UNKW	UNKW	—	—	—	UNKW	UNKW	—	—

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# CAN SYSTEM (TYPE 27)

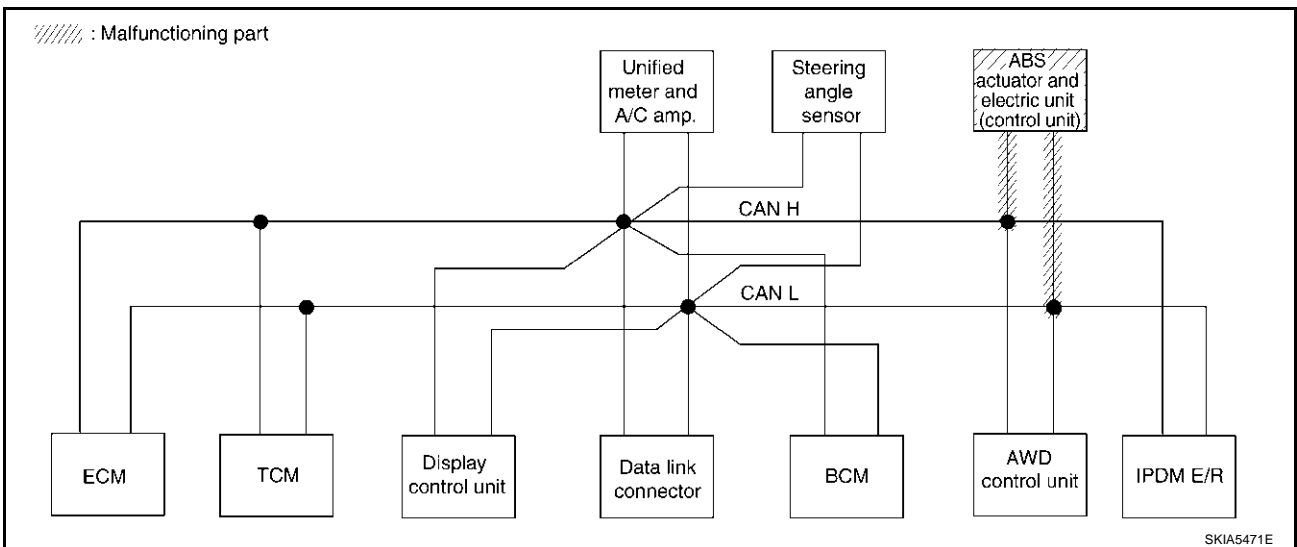
[CAN]

## Case 11

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-933, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

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# CAN SYSTEM (TYPE 27)

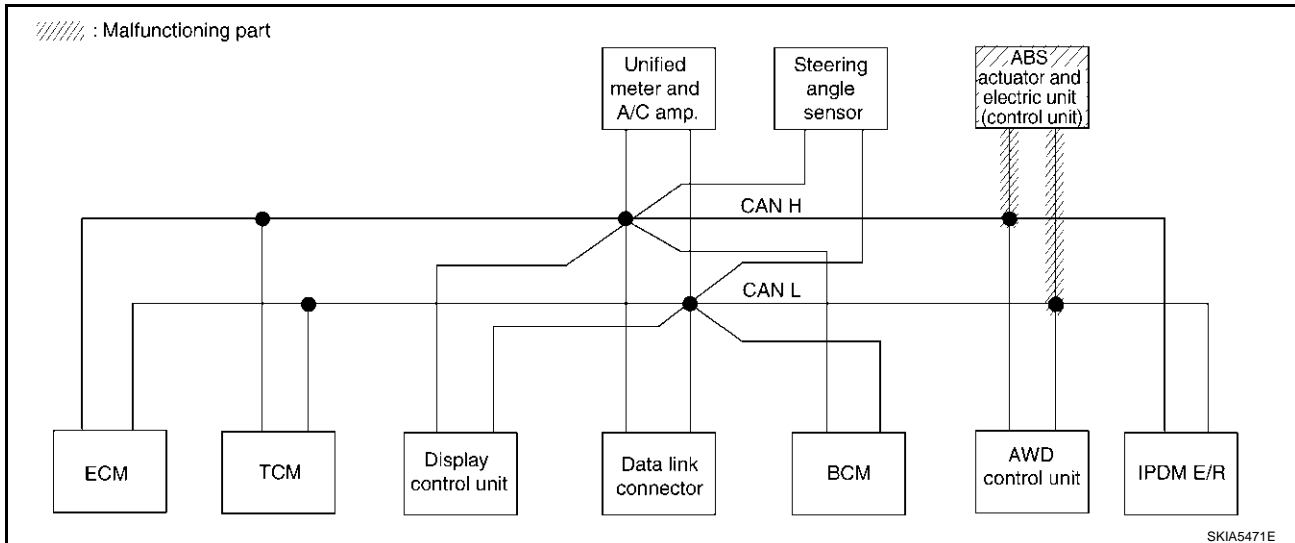
[CAN]

## Case 12

Check IPDM E/R circuit. Refer to [LAN-934, "IPDM E/R Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN ✓
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7 ✓
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN ✓
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

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## Case 13

Check CAN communication circuit. Refer to [LAN-934, "CAN Communication Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN ✓	—	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	UNKWN ✓
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1 ✓	CAN CIRC 3 ✓	—	—	CAN CIRC 2 ✓	CAN CIRC 5 ✓	—	—	—	CAN CIRC 7 ✓
BCM	—	NG	UNKWN ✓	UNKWN ✓	—	—	—	UNKWN ✓	—	—	—	UNKWN ✓
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN ✓	UNKWN ✓	—	—	—	UNKWN ✓	—	—	UNKWN ✓	—
ABS	—	NG	UNKWN ✓	UNKWN ✓	UNKWN ✓	—	—	—	UNKWN ✓	UNKWN ✓	—	—

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# CAN SYSTEM (TYPE 27)

[CAN]

## Case 14

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-937, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS		
ENGINE	-	NG	UNKWN	-	✓	-	UNKWN	UNKWN	-	UNKWN	✓	UNKWN	
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	-	-	-	UNKWN	-	-	UNKWN	-	
Display control unit	-	CAN COMM	CAN CIRC 1	CAN CIRC 3	-	-	CAN CIRC 2	CAN CIRC 5	-	-	-	CAN CIRC 7	
BCM	-	NG	UNKWN	UNKWN	-	-	-	UNKWN	-	-	-	UNKWN	
METER A/C AMP	No indication	-	UNKWN	UNKWN	✓	UNKWN	UNKWN	-	-	UNKWN	✓	-	
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	-	UNKWN	-	-	✓	-	
ABS	-	NG	UNKWN	UNKWN	UNKWN	-	-	-	UNKWN	UNKWN	-	-	

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## Case 15

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-937, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS		
ENGINE	-	NG	UNKWN	-	UNKWN	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	✓	-	-	-	✓	-	-	UNKWN	-	
Display control unit	-	CAN COMM	CAN CIRC 1	CAN CIRC 3	-	-	CAN CIRC 2	CAN CIRC 5	-	-	-	CAN CIRC 7	
BCM	-	NG	UNKWN	UNKWN	-	-	-	UNKWN	-	-	-	UNKWN	
METER A/C AMP	No indication	-	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	-	-	UNKWN	UNKWN	-	
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	-	UNKWN	-	-	UNKWN	-	
ABS	-	NG	UNKWN	✓	UNKWN	-	-	-	✓	✓	-	-	

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## Circuit Check Between TCM and Data Link Connector

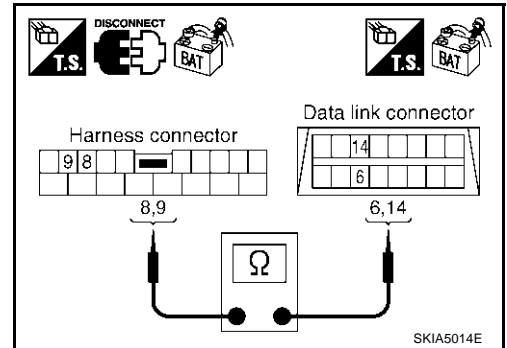
### 1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

**8 (L) - 6 (L) : Continuity should exist.**  
**9 (Y) - 14 (Y) : Continuity should exist.**

**OK or NG**

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-911, "Work Flow"](#) .
- NG >> Repair harness.



## Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit)

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector M9
  - Harness connector B2
  - Harness connector B4
  - Harness connector E105

**OK or NG**

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

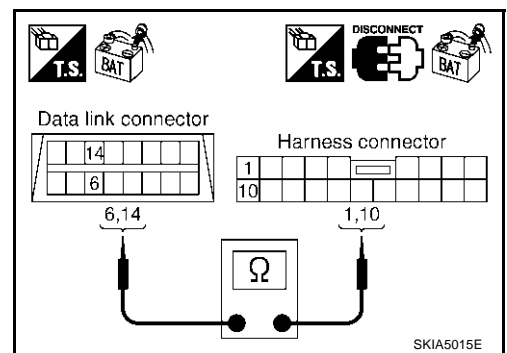
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

**6 (L) - 1 (L) : Continuity should exist.**  
**14 (Y) - 10 (Y) : Continuity should exist.**

**OK or NG**

- OK >> GO TO 3.
- NG >> Repair harness.



## 3. CHECK HARNESS FOR OPEN CIRCUIT

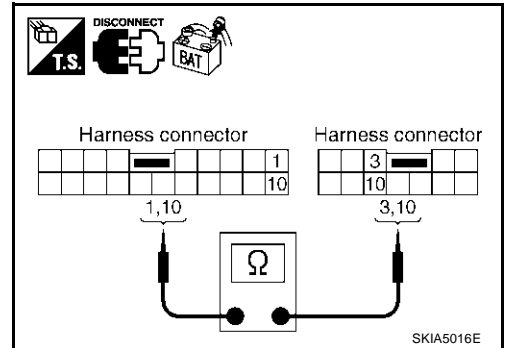
1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

- OK >> GO TO 4.  
 NG >> Repair harness.



## 4. CHECK HARNESS FOR OPEN CIRCUIT

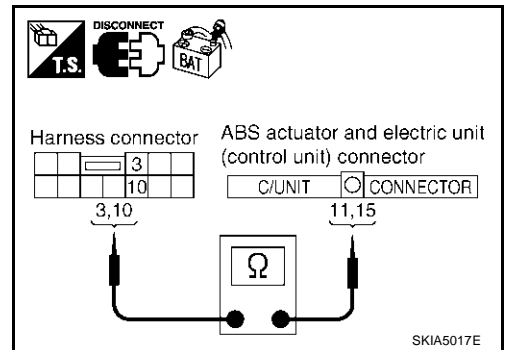
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

**3 (L) - 11 (L) : Continuity should exist.**

**10 (Y) - 15 (Y) : Continuity should exist.**

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-911, "Work Flow"](#) .  
 NG >> Repair harness.



## ECM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

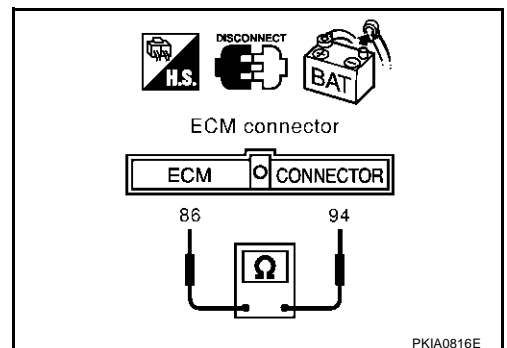
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

**94 (L) - 86 (Y) : Approx. 108 - 132Ω**

OK or NG

- OK >> Replace ECM.  
 NG >> Repair harness between ECM and TCM.



**TCM Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
  - TCM connector
  - Harness connector F102
  - Harness connector M82

**OK or NG**

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

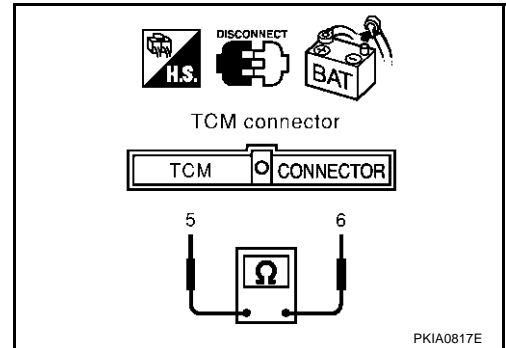
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Approx. 54 - 66Ω**

**OK or NG**

- OK >> Replace TCM.  
 NG >> Repair harness between TCM and ECM.

**Display Control Unit Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display control unit for damage, bend and loose connection (control unit side and harness side).

**OK or NG**

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

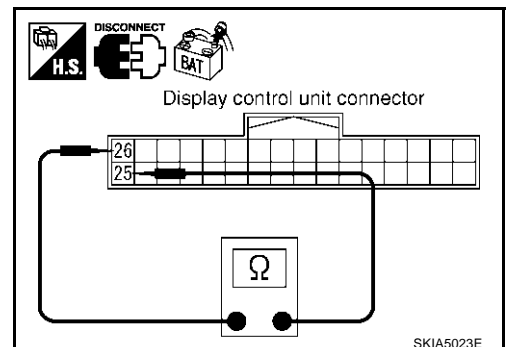
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect display control unit connector.
2. Check resistance between display control unit harness connector M43 terminals 25 (L) and 26 (Y).

**25 (L) - 26 (Y) : Approx. 54 - 66Ω**

**OK or NG**

- OK >> Replace display control unit.  
 NG >> Repair harness between display control unit and data link connector.



**Data Link Connector Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

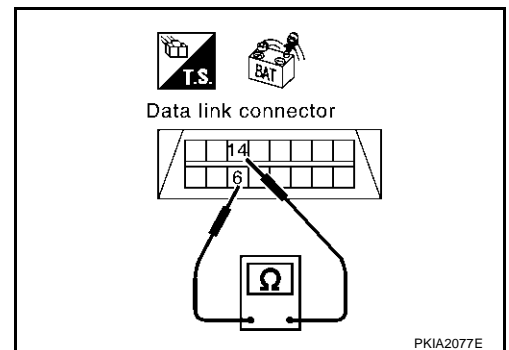
**2. CHECK HARNESS FOR OPEN CIRCUIT**

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Diagnose again. Refer to [LAN-911, "Work Flow"](#) .  
 NG >> Repair harness between data link connector and BCM.

**BCM Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

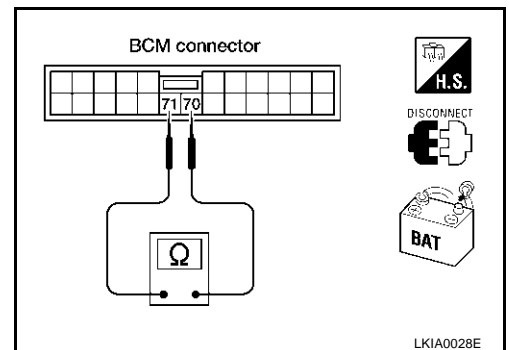
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M37 terminals 70 (L) and 71 (Y).

**70 (L) - 71 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace BCM. Refer to [BCS-36, "Removal and Installation of BCM"](#) .  
 NG >> Repair harness between BCM and data link connector.



## Unified Meter and A/C Amp. Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

#### OK or NG

- OK >> GO TO 2.  
NG >> Repair terminal or connector.

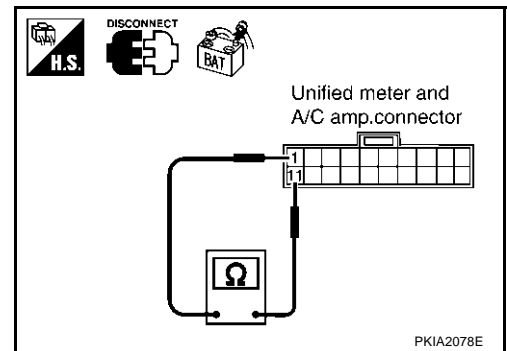
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

**1 (L) - 11 (Y) : Approx. 54 - 66Ω**

#### OK or NG

- OK >> Replace unified meter and A/C amp.  
NG >> Repair harness between unified meter and A/C amp. and data link connector.



PKIA2078E

## Steering Angle Sensor Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of steering angle sensor for damage, bend and loose connection (sensor side and harness side).

#### OK or NG

- OK >> GO TO 2.  
NG >> Repair terminal or connector.

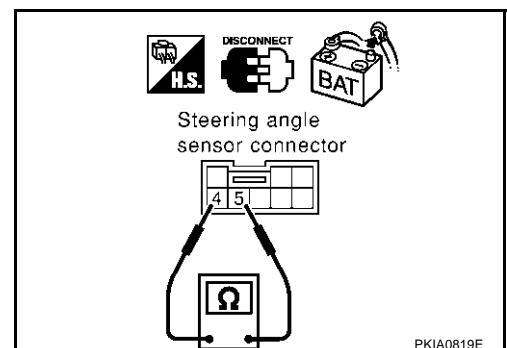
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M33 terminals 4 (L) and 5 (Y).

**4 (L) - 5 (Y) : Approx. 54 - 66Ω**

#### OK or NG

- OK >> Replace steering angle sensor.  
NG >> Repair harness between steering angle sensor and data link connector.



PKIA0819E



**AWD Control Unit Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of AWD control unit for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

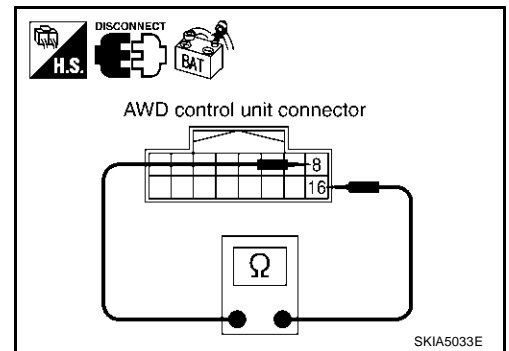
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect AWD control unit connector.
2. Check resistance between AWD control unit harness connector E111 terminals 8 (L) and 16 (Y).

**8 (L) - 16 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace AWD control unit.  
 NG >> Repair harness between AWD control unit and IPDM E/R.

**ABS Actuator and Electric Unit (Control Unit) Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

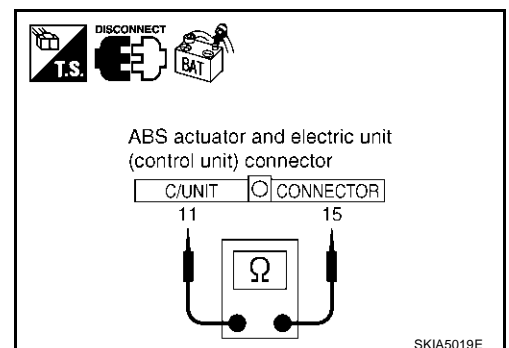
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

**11 (L) - 15 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).  
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



**IPDM E/R Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

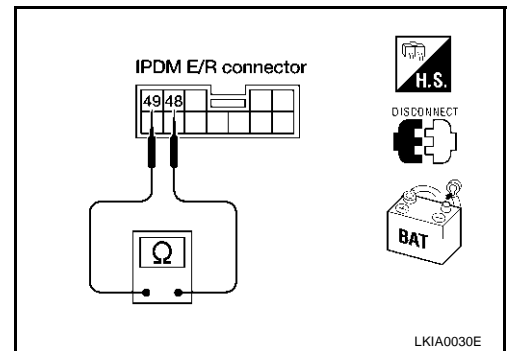
- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y)****: Approx. 108 - 132Ω**OK or NG

- OK >> Replace IPDM E/R.  
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).

**CAN Communication Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, meter side, sensor side and harness side).

- ECM
- TCM
- Display control unit
- BCM
- Unified meter and A/C amp.
- Steering angle sensor
- AWD control unit
- ABS actuator and electric unit (control unit)
- IPDM E/R
- Between ECM and IPDM E/R
- Between ECM and TCM

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
  - ECM connector
  - Harness connector M82
  - Display control unit connector
  - BCM connector
  - Unified meter and A/C amp. connector
  - Steering angle sensor connector
  - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

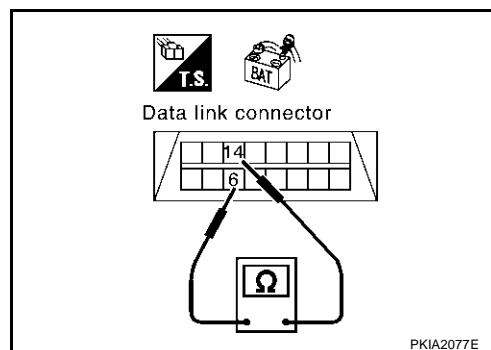
**6 (L) - 14 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 3.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M9.



## 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

**6 (L) - Ground : Continuity should not exist.**

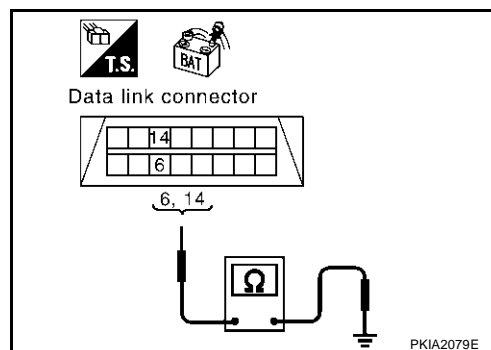
**14 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M9.



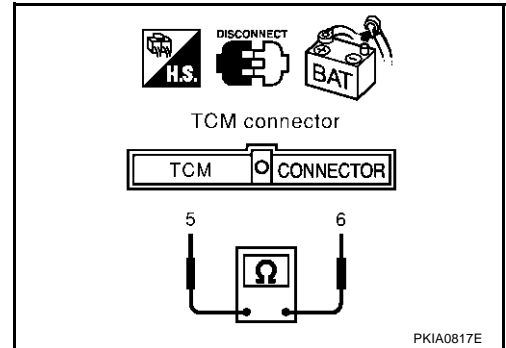
## 4. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Continuity should not exist.**

OK or NG

- OK >> GO TO 5.  
 NG >> Repair harness between TCM and harness connector F102.



## 5. CHECK HARNESS FOR SHORT CIRCUIT

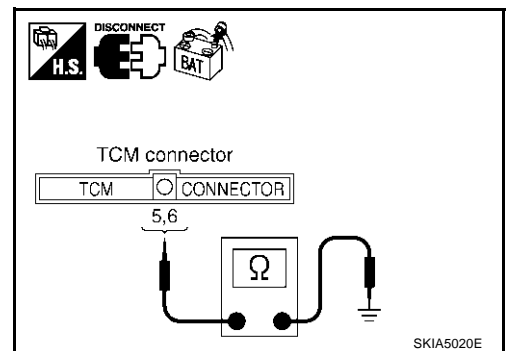
Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

**5 (L) - Ground : Continuity should not exist.**

**6 (Y) - Ground : Continuity should not exist.**

OK or NG

- OK >> GO TO 6.  
 NG >> Repair harness between TCM and harness connector F102.



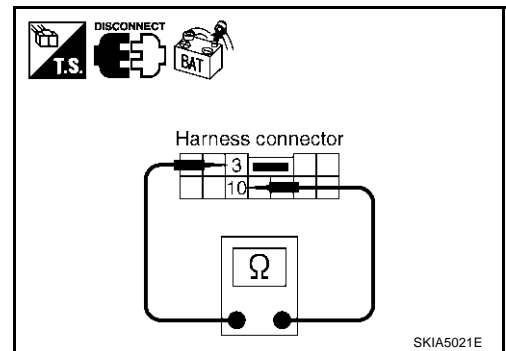
## 6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B4.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

**3 (L) - 10 (Y) : Continuity should not exist.**

OK or NG

- OK >> GO TO 7.  
 NG >> Repair harness between harness connector B4 and harness connector B2.



## 7. CHECK HARNESS FOR SHORT CIRCUIT

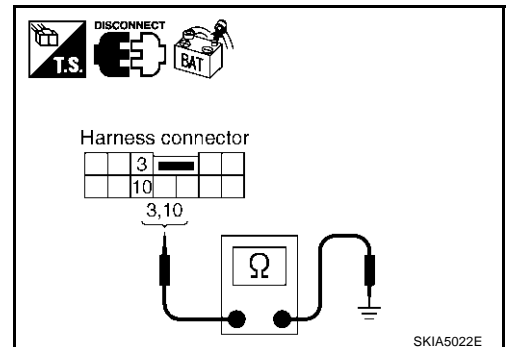
Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

**3 (L) - Ground : Continuity should not exist.**

**10 (Y) - Ground : Continuity should not exist.**

OK or NG

- OK >> GO TO 8.  
 NG >> Repair harness between harness connector B4 and harness connector B2.



## 8. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect AWD control unit connector, ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

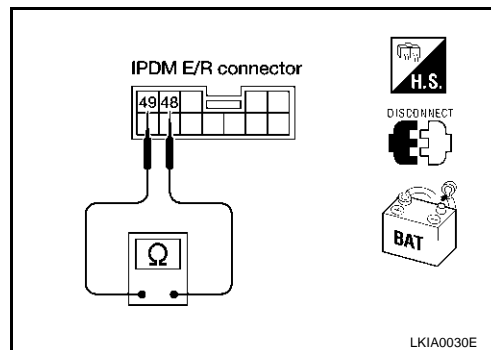
**48 (L) - 49 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 9.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

**48 (L) - Ground : Continuity should not exist.**

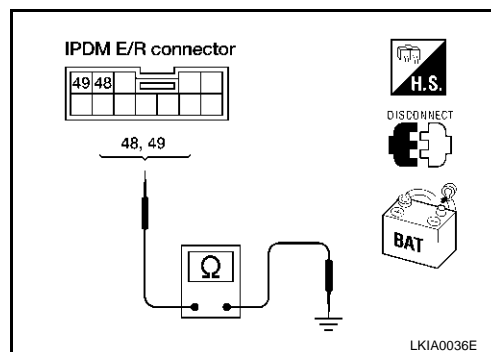
**49 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 10.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 10. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-938, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

### OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-911, "Work Flow"](#).

NG >> Replace ECM and/or IPDM E/R.

## IPDM E/R Ignition Relay Circuit Check

AKS0075Z

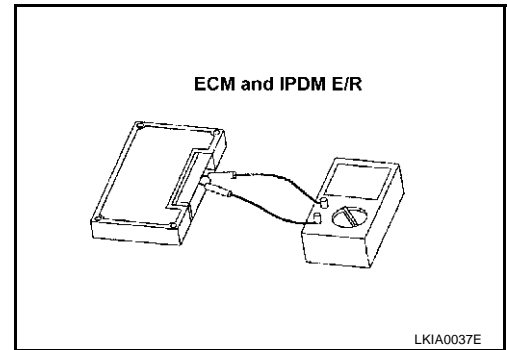
Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-45, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#).

**Component Inspection****ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION**

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value ( $\Omega$ ) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



## CAN SYSTEM (TYPE 28)

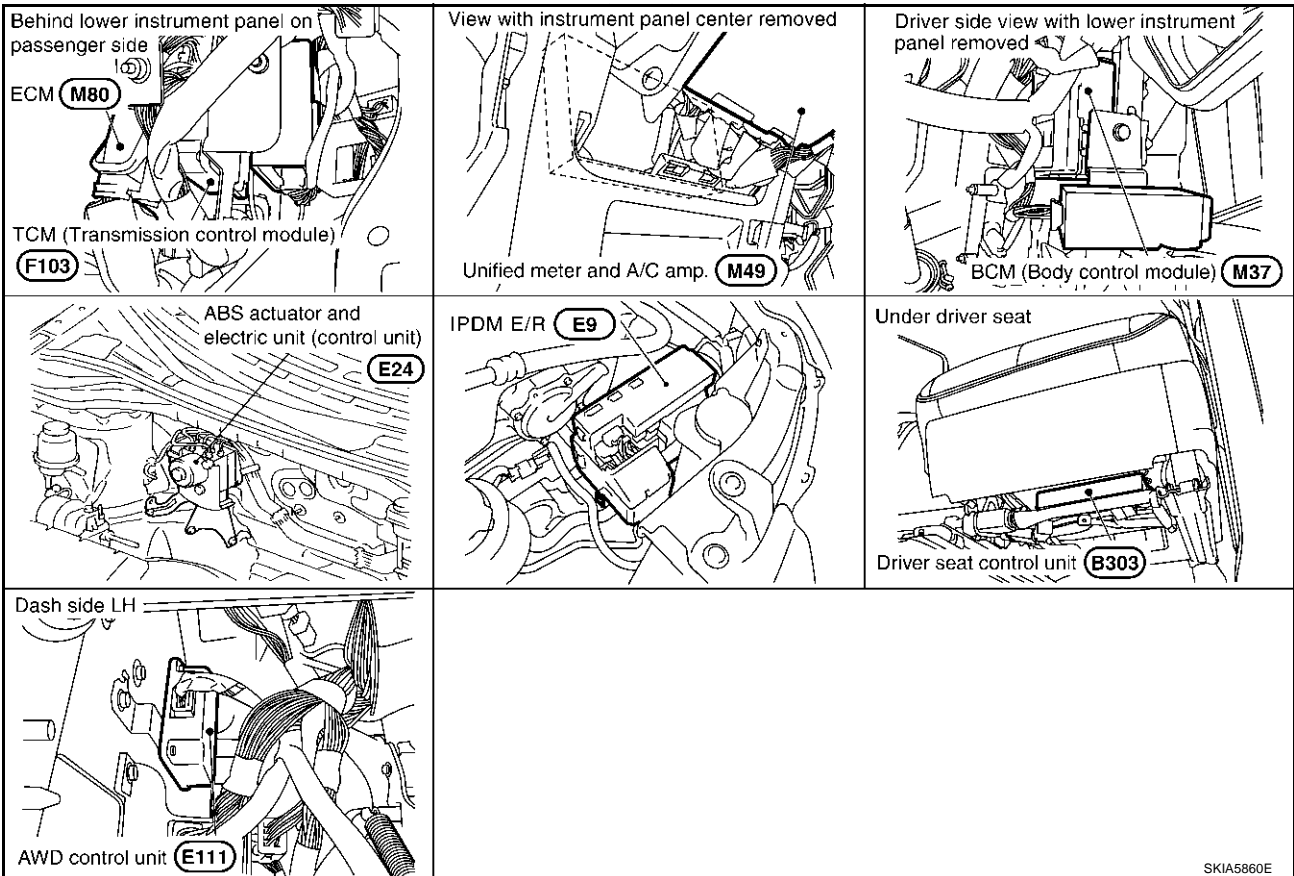
### System Description

AKS00761

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

### Component Parts and Harness Connector Location

AKS00762



SKIA5860E

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
L  
M

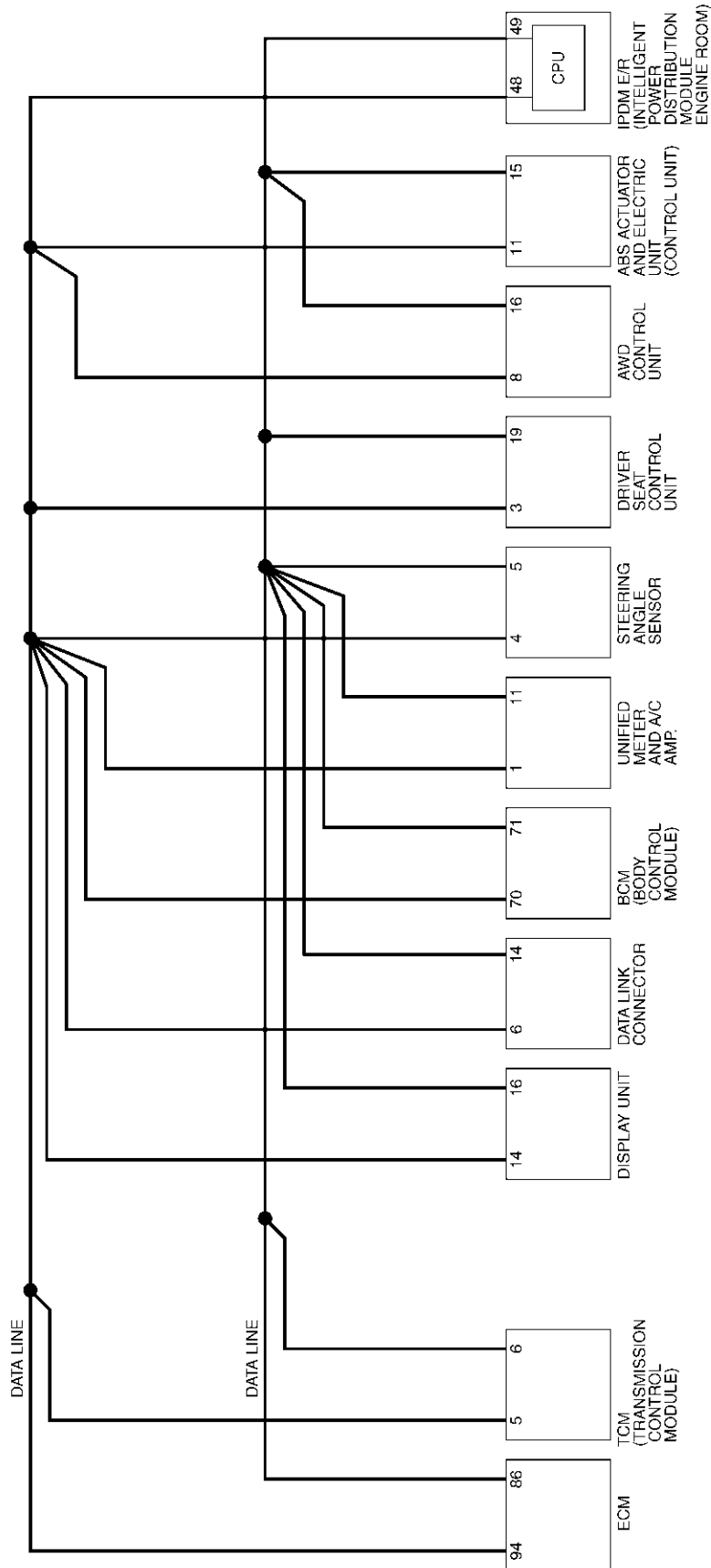
LAN

# CAN SYSTEM (TYPE 28)

[CAN]

## Schematic

AKS00763



TKWA1031E



# CAN SYSTEM (TYPE 28)

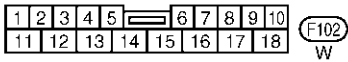
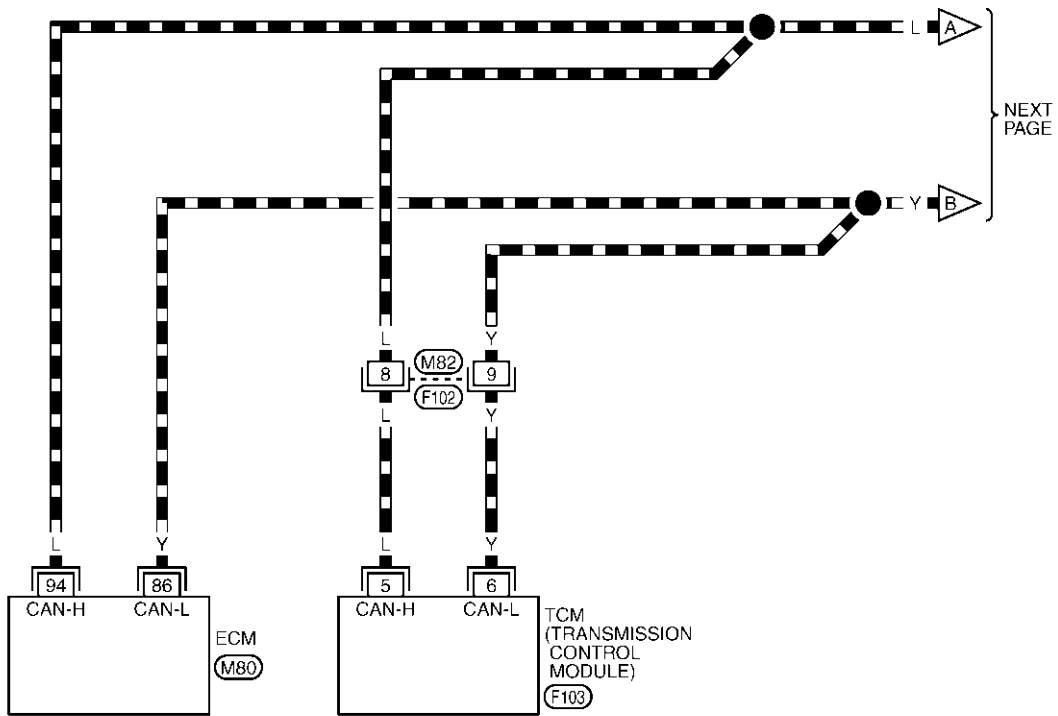
[CAN]

## Wiring Diagram - CAN -

AKS00764

### LAN-CAN-82

▬ : DATA LINE

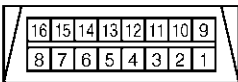
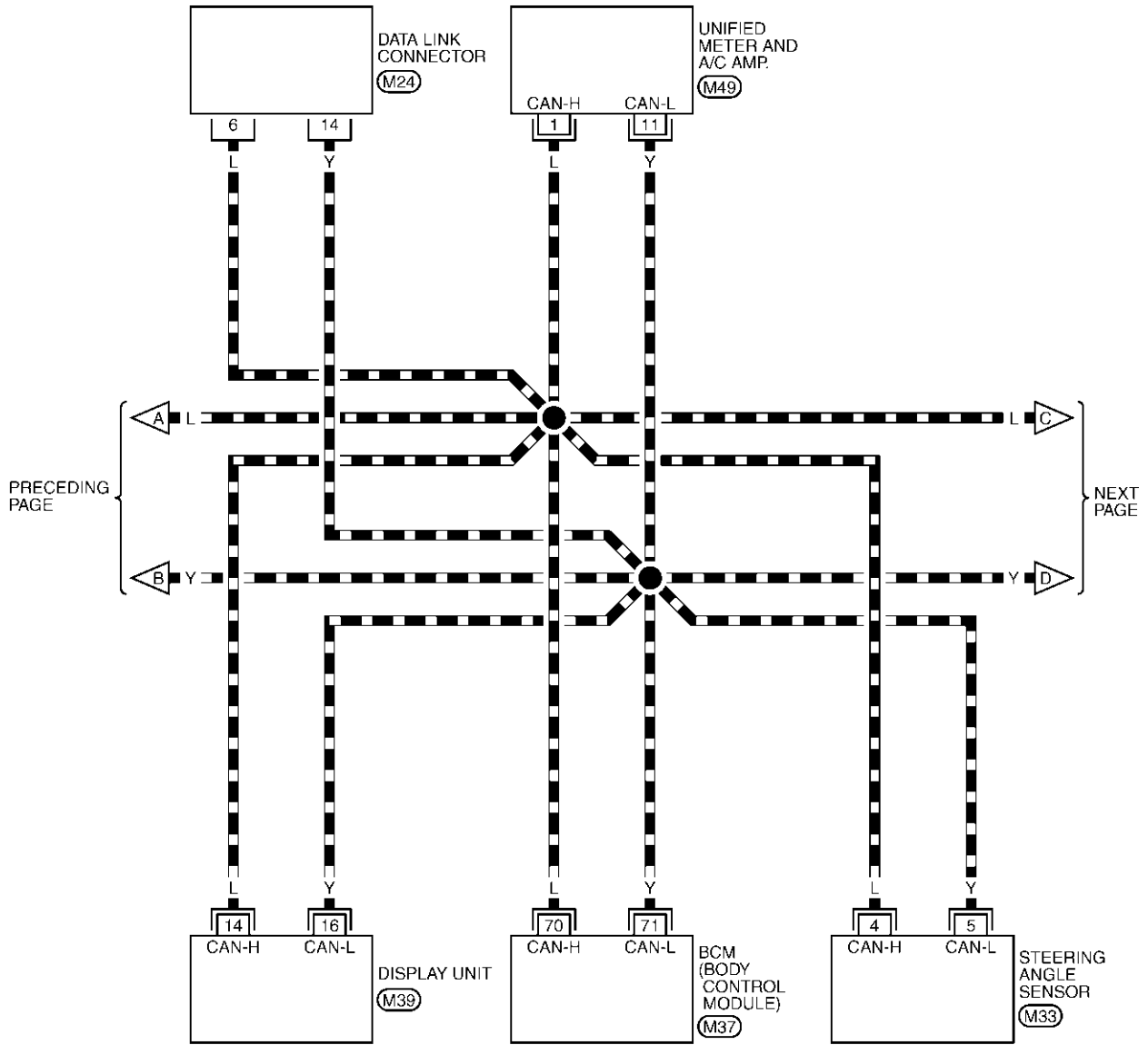


REFER TO THE FOLLOWING.  
(M80), (F103) -ELECTRICAL  
UNITS

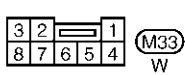
TKWA1032E

## LAN-CAN-83

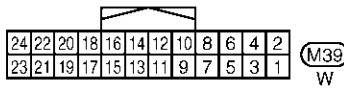
▬ : DATA LINE



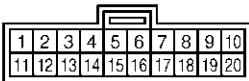
(M24)  
W



(M33)  
W



(M39)  
W



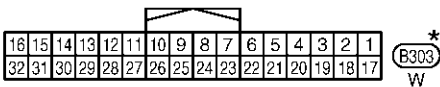
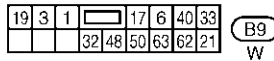
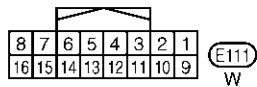
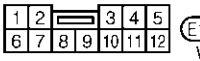
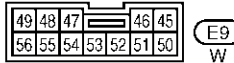
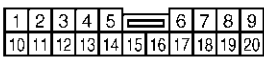
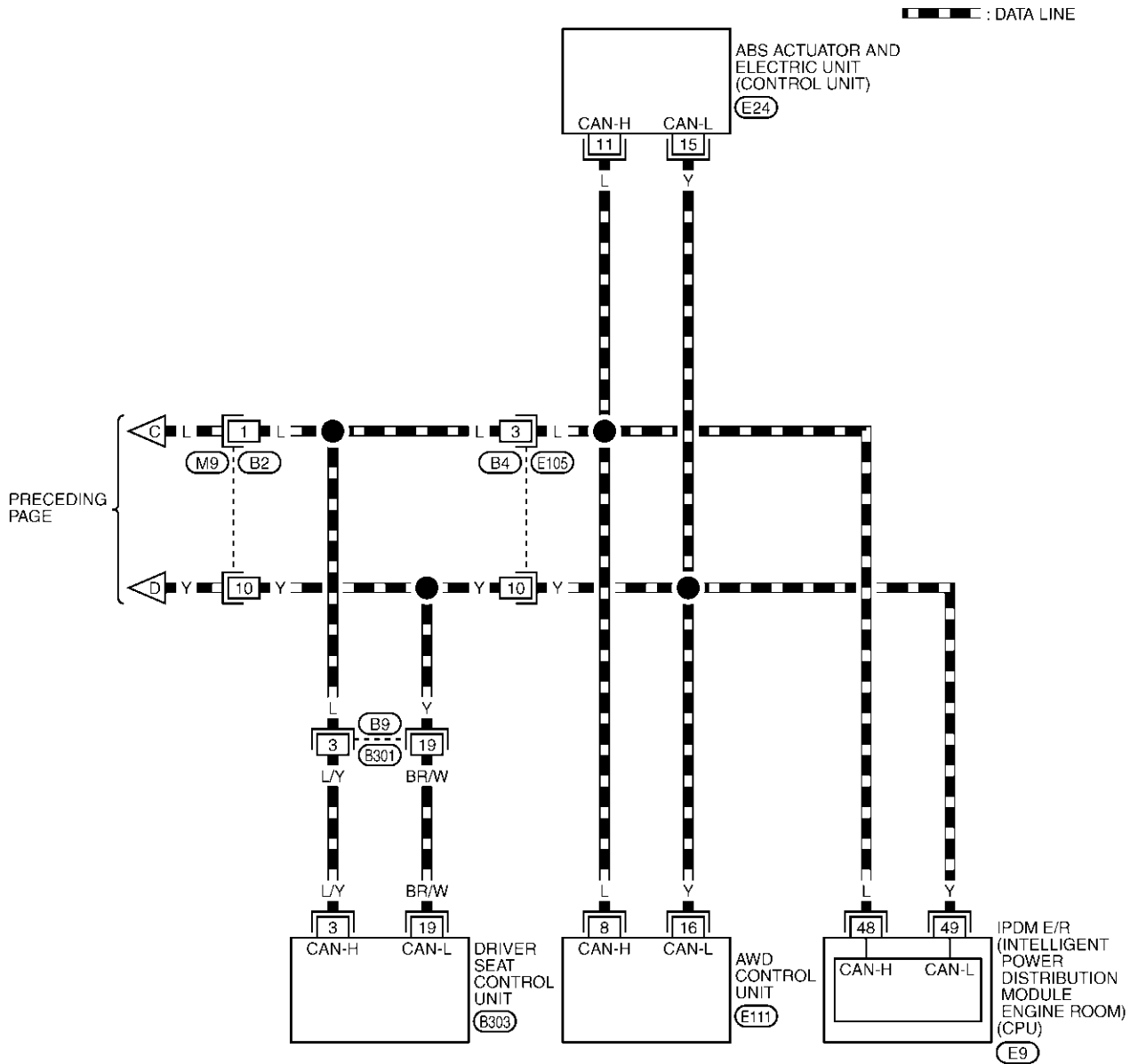
(M49)  
GR



REFER TO THE FOLLOWING.

(M37) -ELECTRICAL UNITS

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
LAN  
L  
M

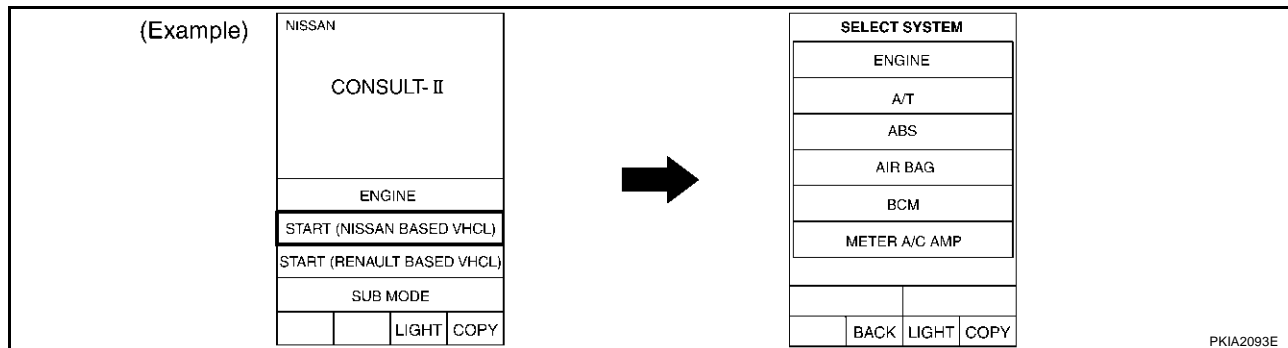


\*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

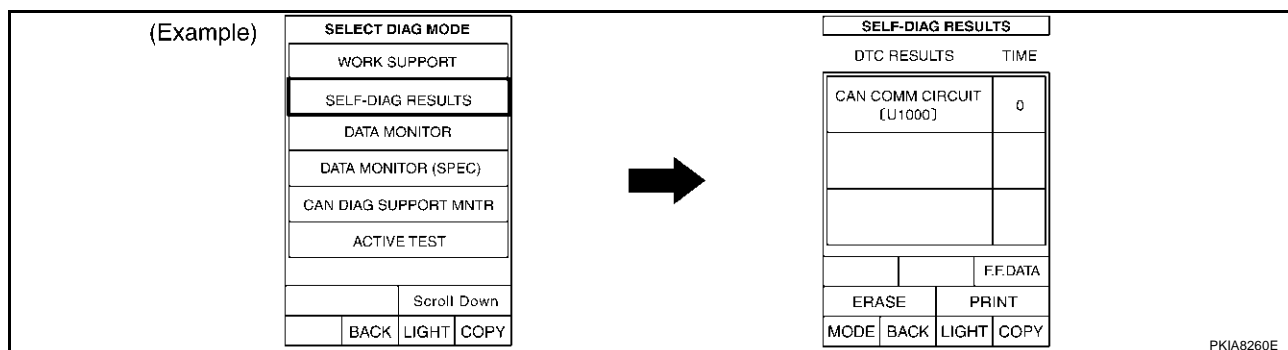
REFER TO THE FOLLOWING.  
E24 -ELECTRICAL UNITS

## Work Flow

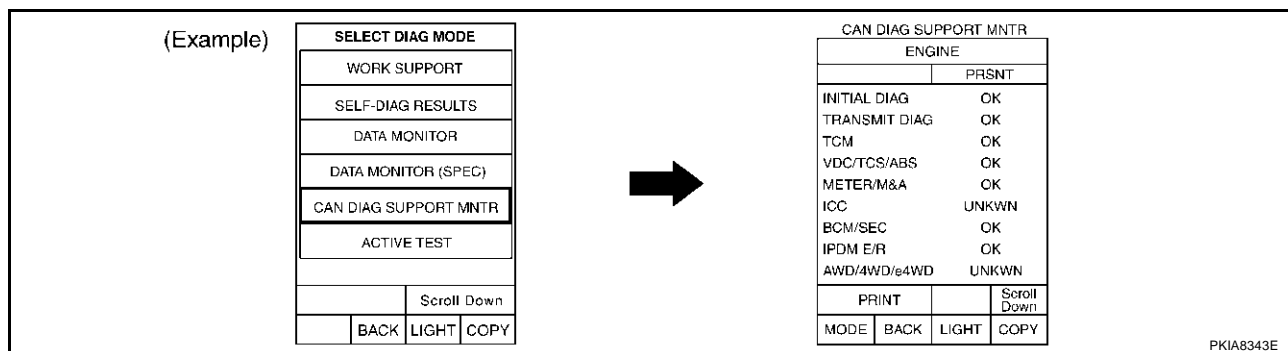
- When there are no indications of "TRANSMISSION", "METER A/C AMP" or "AUTO DRIVE POS." on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP", "AUTO DRIVE POS.", "ALL MODE AWD/4WD" and "ABS" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP", "AUTO DRIVE POS.", "ALL MODE AWD/4WD" and "ABS" displayed on CONSULT-II.



- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-946, "CHECK SHEET"](#) .
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "v" onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-946, "CHECK SHEET"](#) .

**NOTE:**

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual.  
So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the integrated display system. Refer to [AV-110, "CAN Communication Line Check"](#) .
- Attach the CAN DIAG MONITOR check sheet onto the check sheet. Refer to [LAN-946, "CHECK SHEET"](#) .

## CAN SYSTEM (TYPE 28)

[CAN]

8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG MONITOR check sheet. Refer to [LAN-946, "CHECK SHEET"](#) .

**NOTE:**

If "NG" is displayed on "CAN COMM" as "CAN DIAG MNTR" for the diagnosed control unit, replace the control unit. Refer to [AV-110, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-948, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

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M

# CAN SYSTEM (TYPE 28)

[CAN]

## CHECK SHEET

### NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

Attach copy of  
display unit  
CAN DIAG MONITOR check sheet

PKIB1015E

# CAN SYSTEM (TYPE 28)

[CAN]

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Attach copy of  
ENGINE  
SELF-DIAG RESULTS

Attach copy of  
TRANSMISSION  
SELF-DIAG RESULTS

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
METER A/C AMP  
SELF-DIAG RESULTS

Attach copy of  
AUTO DRIVE POS.  
SELF-DIAG RESULTS

Attach copy of  
ALL MODE AWD/4WD  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

Attach copy of  
ENGINE  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
TRANSMISSION  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
BCM  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
METER A/C AMP  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
AUTO DRIVE POS.  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ALL MODE AWD/4WD  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ABS  
CAN DIAG SUPPORT  
MNTR

PKIB0865E

## CHECK SHEET RESULTS (EXAMPLE)

**NOTE:**

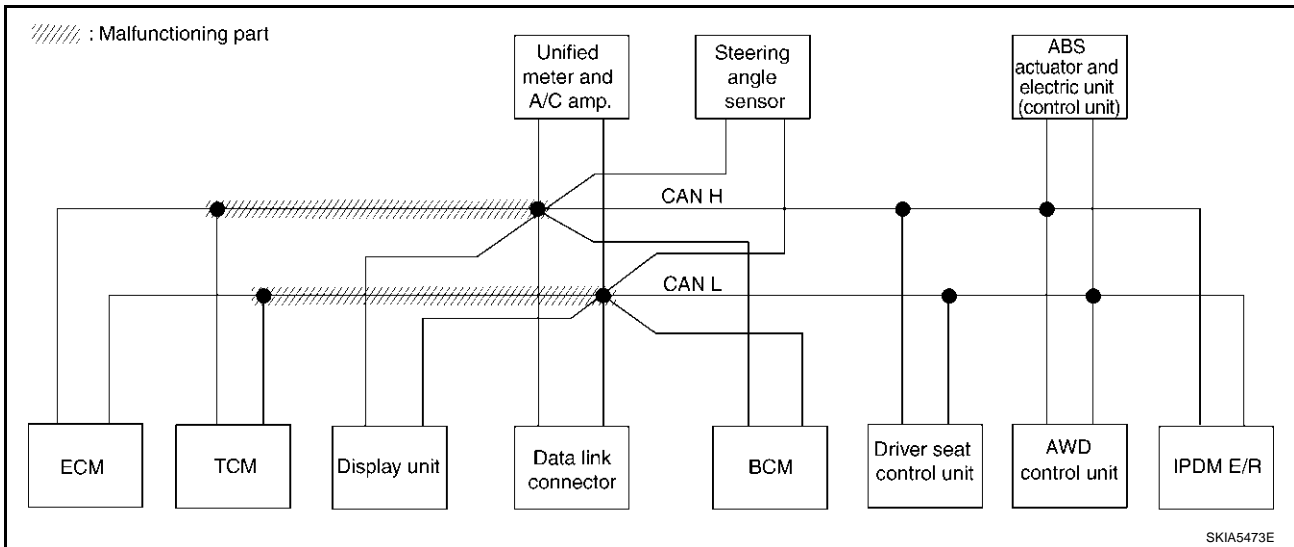
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

**Case 1**

Check harness between TCM and data link connector. Refer to [LAN-963, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3 ✓	—	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

PKIB1016E





# CAN SYSTEM (TYPE 28)

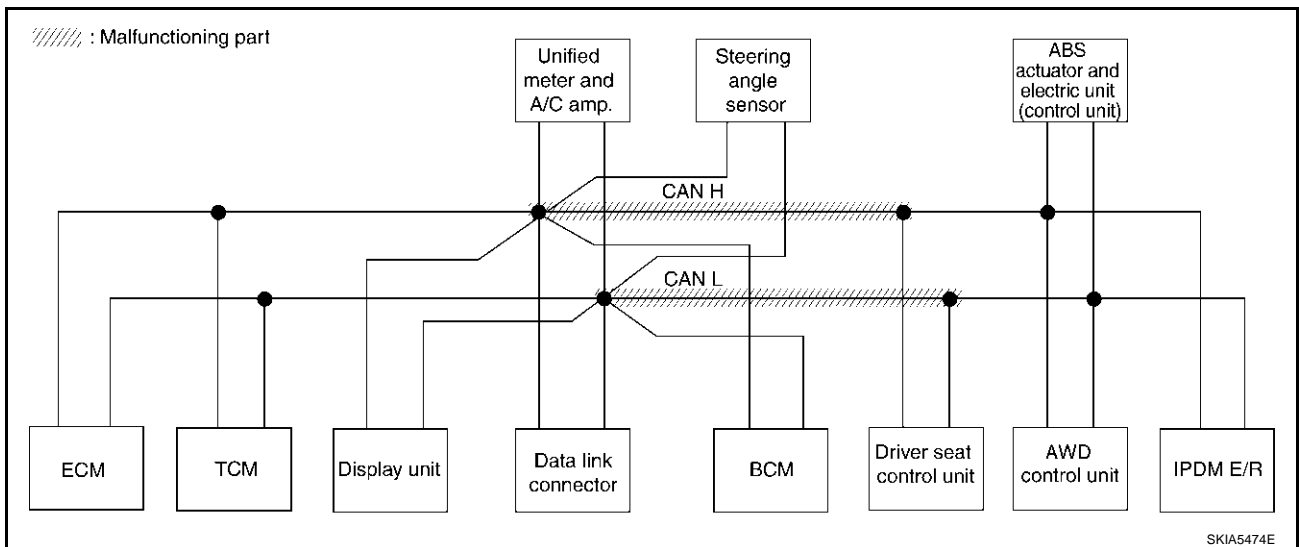
[CAN]

## Case 2

Check harness between data link connector and driver seat control unit. Refer to [LAN-963, "Circuit Check Between Data Link Connector and Driver Seat Control Unit"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

PKIB1017E



LAN

# CAN SYSTEM (TYPE 28)

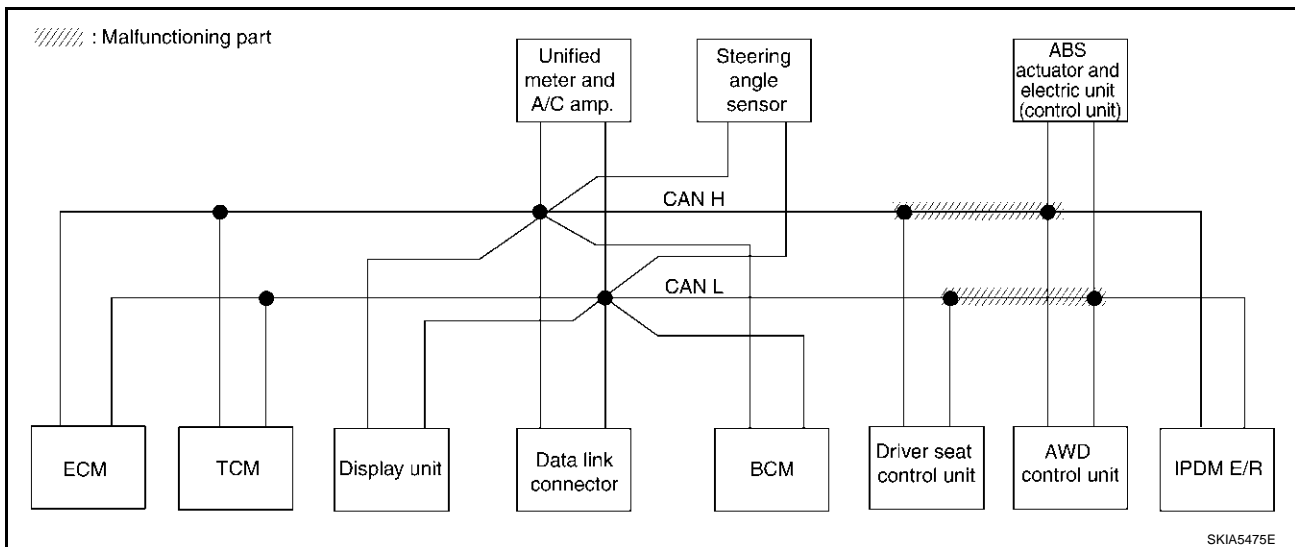
[CAN]

## Case 3

Check harness between driver seat control unit and ABS actuator and electric unit (control unit). Refer to [LAN-964, "Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit \(Control Unit\)"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

PKIB1018E



# CAN SYSTEM (TYPE 28)

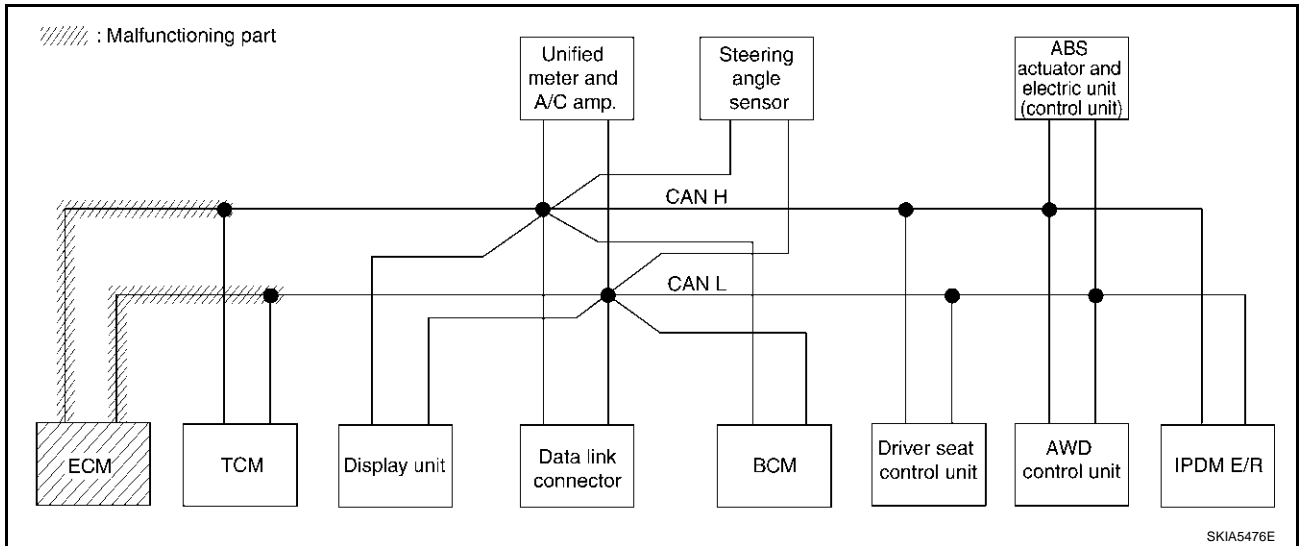
[CAN]

## Case 4

Check ECM circuit. Refer to [LAN-965, "ECM Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN ✓	—	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	UNKWN ✓
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN ✓	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN ✓	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN ✓	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN	—	—	—	UNKWN	UNKWN	—	—

PKIB1019E



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# CAN SYSTEM (TYPE 28)

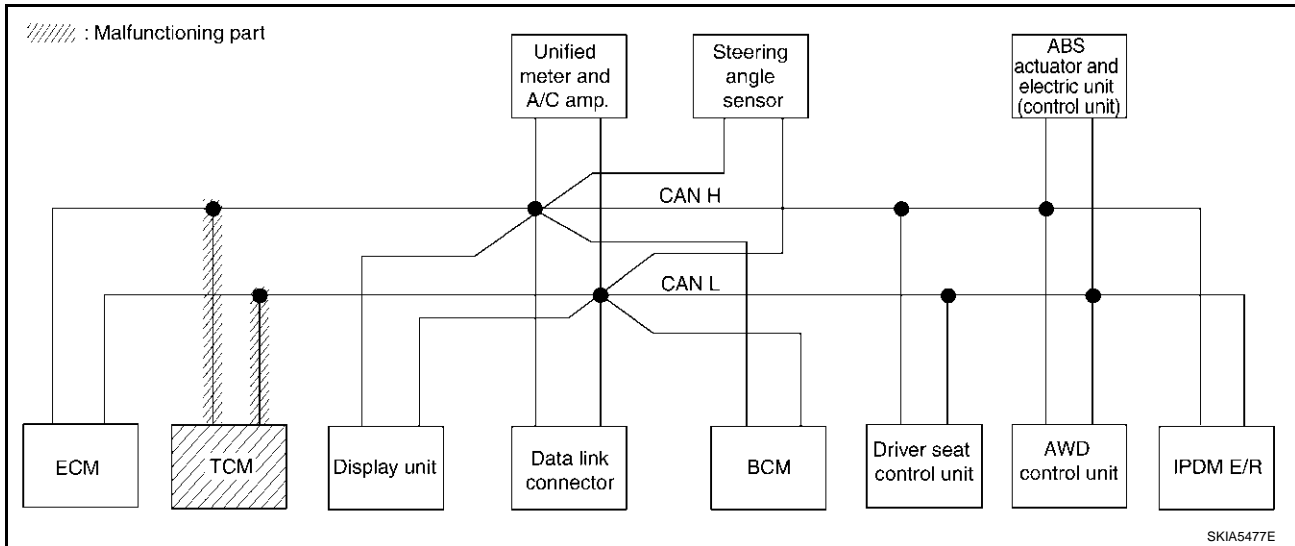
[CAN]

## Case 5

Check TCM circuit. Refer to [LAN-965, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

PKIB1020E



# CAN SYSTEM (TYPE 28)

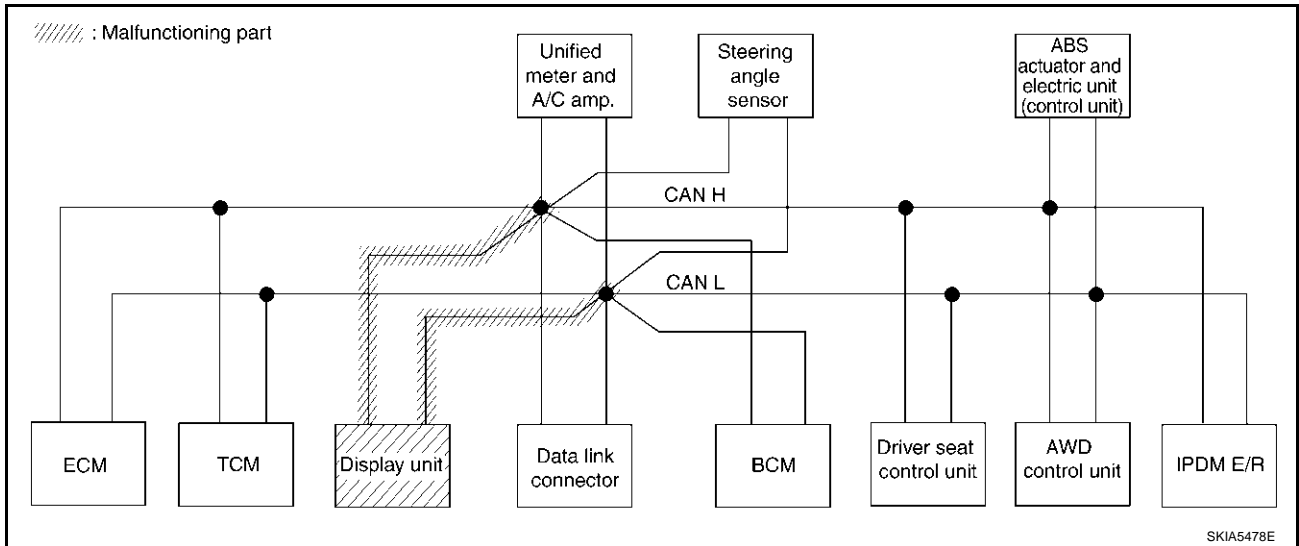
[CAN]

## Case 6

Check display unit circuit. Refer to [LAN-966, "Display Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—	
Display unit	—	CAN COMM	CA <del>1</del> ✓	CA <del>3</del> ✓	—	—	CA <del>2</del> ✓	CA <del>5</del> ✓	—	—	—	CA <del>7</del> ✓	
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UN <del>✓</del>	UNKWN	—	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—	

PKIB1021E



LAN

# CAN SYSTEM (TYPE 28)

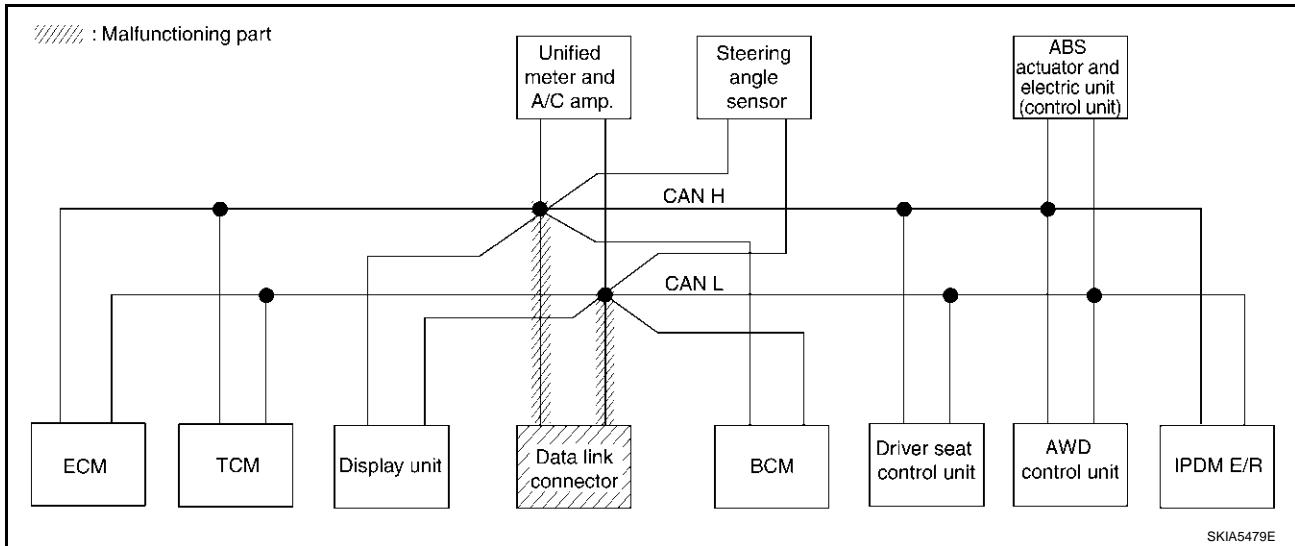
[CAN]

## Case 7

Check data link connector circuit. Refer to [LAN-966, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

PKIB1022E



# CAN SYSTEM (TYPE 28)

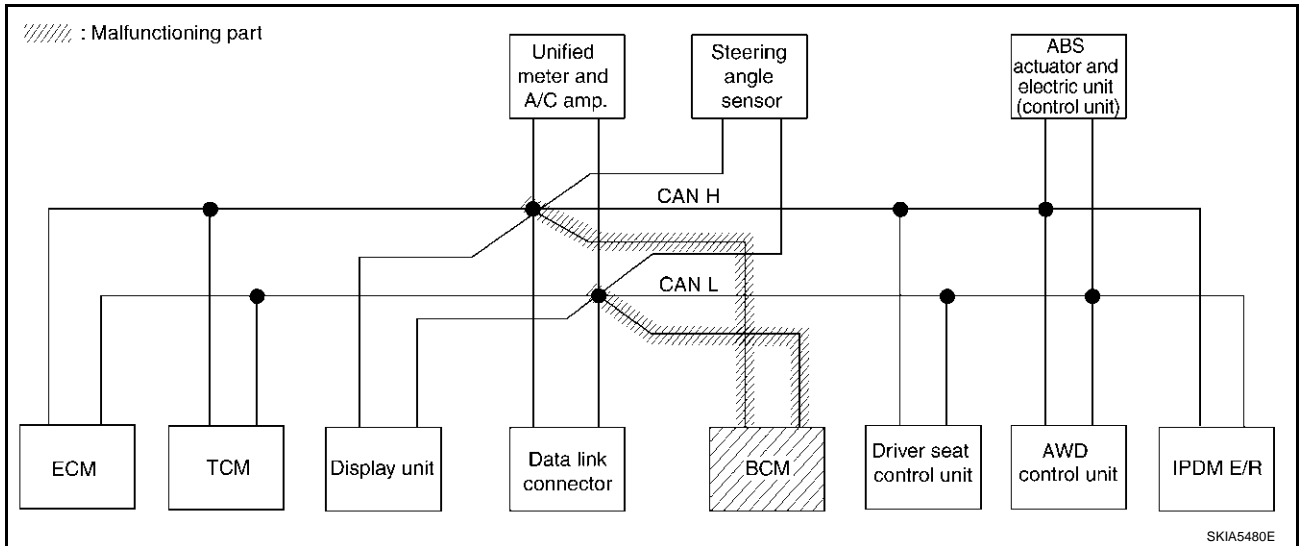
[CAN]

## Case 8

Check BCM circuit. Refer to [LAN-967, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	—	CAN 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—	

PKIB1023E



LAN

# CAN SYSTEM (TYPE 28)

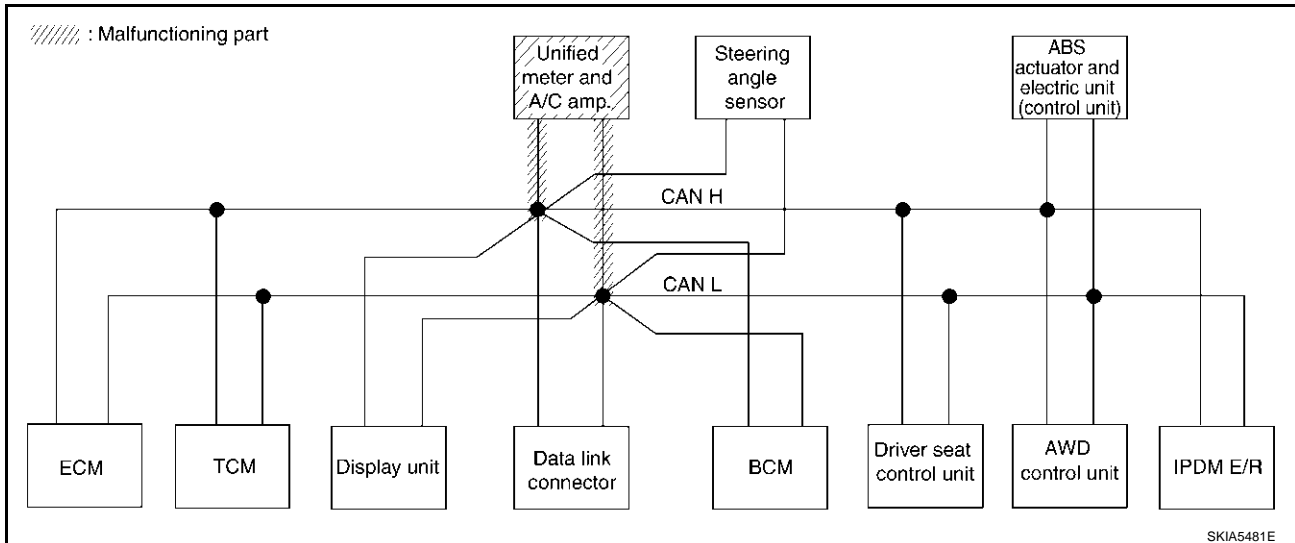
[CAN]

## Case 9

Check unified meter and A/C amp. circuit. Refer to [LAN-967, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

PKIB1024E





# CAN SYSTEM (TYPE 28)

[CAN]

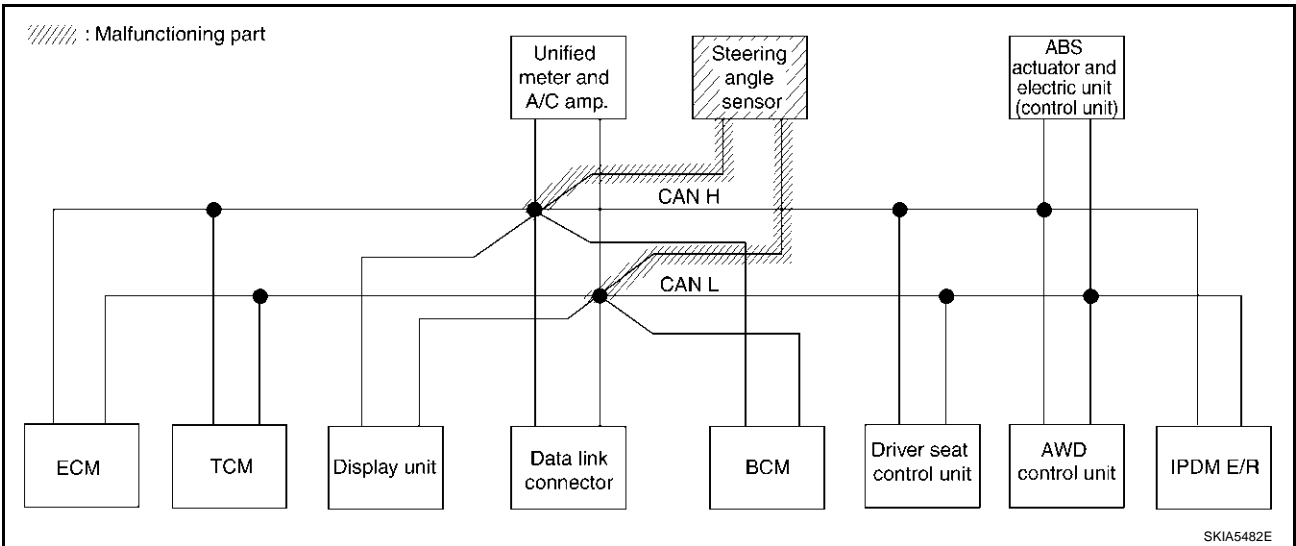
## Case 10

Check steering angle sensor circuit. Refer to [LAN-968, "Steering Angle Sensor Circuit Check"](#) .

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SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

PKIB1025E



# CAN SYSTEM (TYPE 28)

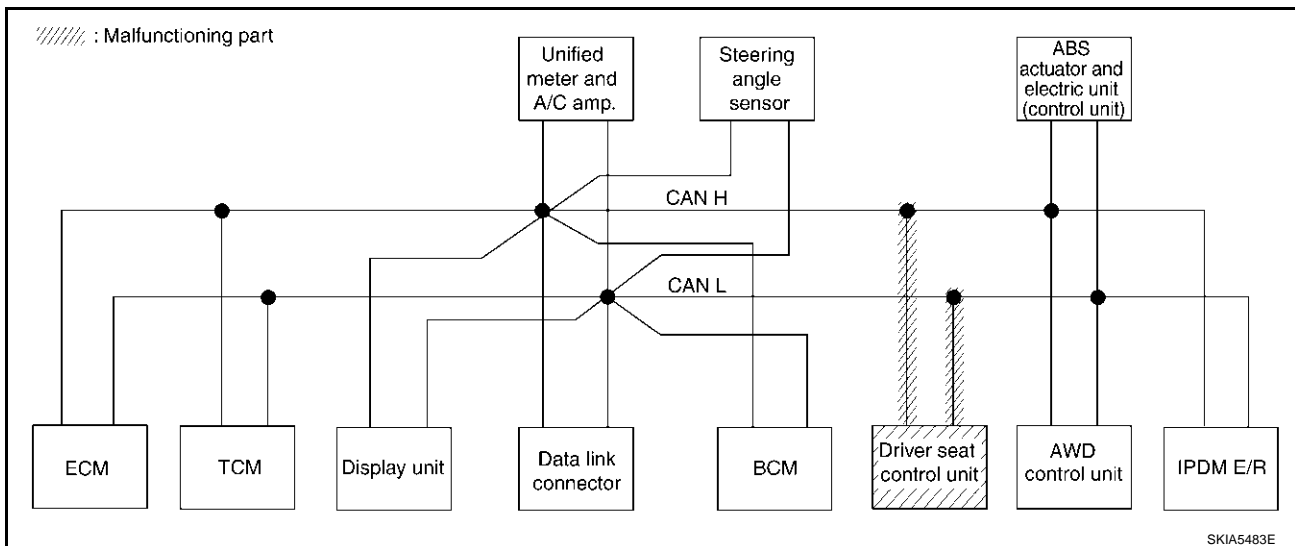
[CAN]

## Case 11

Check driver seat control unit circuit. Refer to [LAN-968, "Driver Seat Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

PKIB1026E



# CAN SYSTEM (TYPE 28)

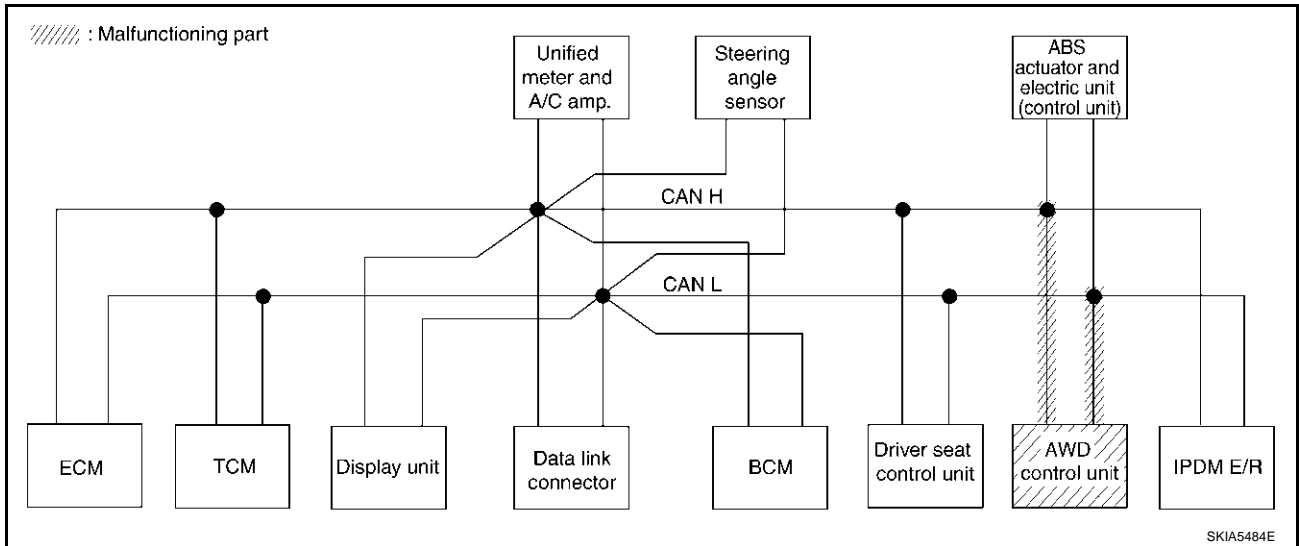
[CAN]

## Case 12

Check AWD control unit circuit. Refer to [LAN-969, "AWD Control Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

PKIB1027E



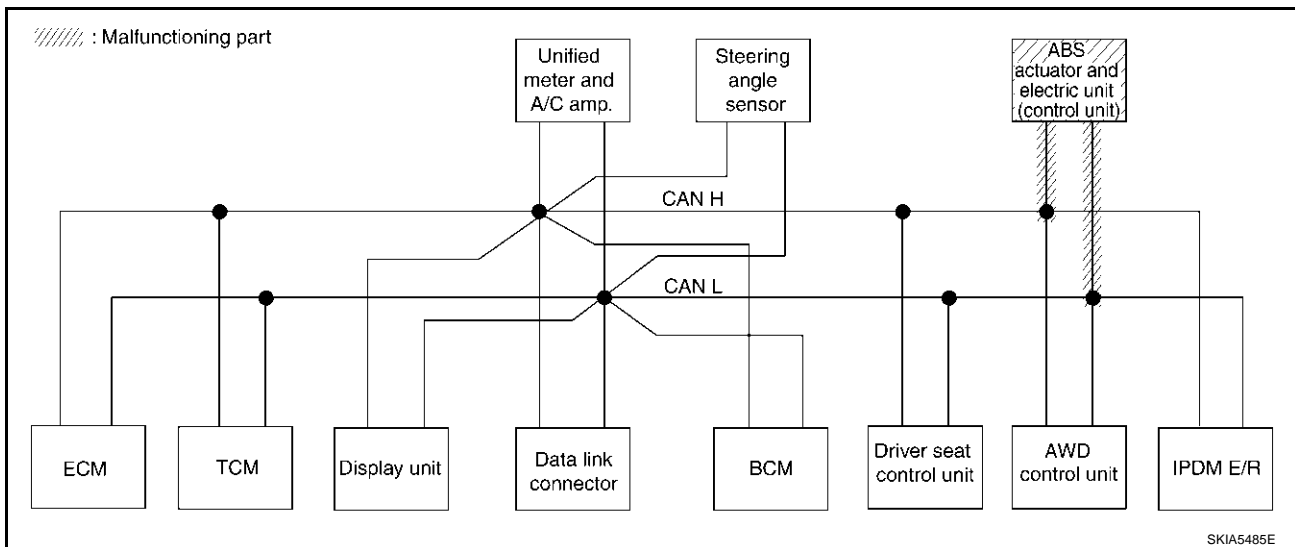
A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
LAN  
L  
M

## Case 13

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-969, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

PKIB1028E



# CAN SYSTEM (TYPE 28)

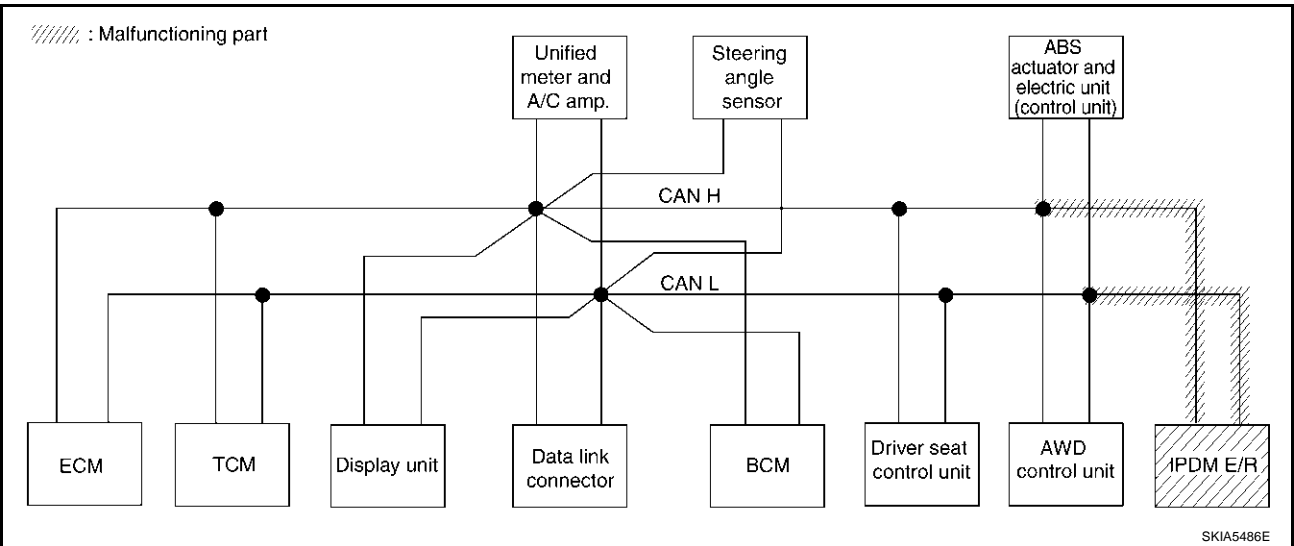
[CAN]

## Case 14

Check IPDM E/R circuit. Refer to [LAN-970, "IPDM E/R Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN ✓
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	—	CAN 7 ✓
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN ✓
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

PKIB1029E



## Case 15

Check CAN communication circuit. Refer to [LAN-971, "CAN Communication Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN ✓	—	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	UNKWN ✓
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1 ✓	CAN 3 ✓	—	—	CAN 2 ✓	CAN 5 ✓	—	—	—	CAN 7 ✓
BCM	—	NG	UNKWN ✓	UNKWN ✓	—	—	—	UNKWN ✓	—	—	—	UNKWN ✓
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN ✓	UNKWN ✓	—	—	—	UNKWN ✓	—	—	UNKWN ✓	—
ABS	—	NG	UNKWN ✓	UNKWN ✓	UNKWN ✓	—	—	—	UNKWN ✓	UNKWN ✓	—	—

PKIB1030E

# CAN SYSTEM (TYPE 28)

[CAN]

## Case 16

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-975, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

PKIB1031E

## Case 17

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-975, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

PKIB1032E

**Circuit Check Between TCM and Data Link Connector**

AKS00766

**1. CHECK HARNESS FOR OPEN CIRCUIT**

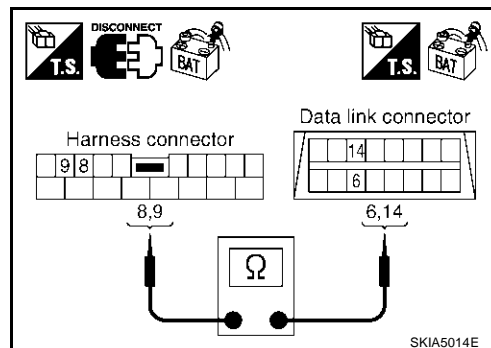
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

**8 (L) - 6 (L) : Continuity should exist.**

**9 (Y) - 14 (Y) : Continuity should exist.**

**OK or NG**

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-944, "Work Flow"](#).
- NG >> Repair harness.

**Circuit Check Between Data Link Connector and Driver Seat Control Unit**

AKS00767

**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector M9
  - Harness connector B2

**OK or NG**

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

**2. CHECK HARNESS FOR OPEN CIRCUIT**

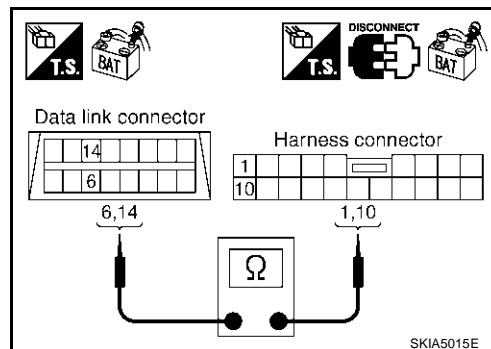
1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

**6 (L) - 1 (L) : Continuity should exist.**

**14 (Y) - 10 (Y) : Continuity should exist.**

**OK or NG**

- OK >> GO TO 3.
- NG >> Repair harness.



### 3. CHECK HARNESS FOR OPEN CIRCUIT

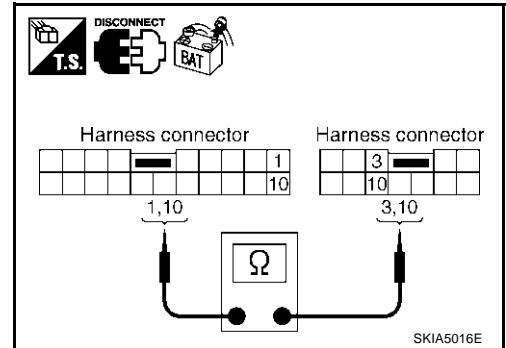
1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-944, "Work Flow"](#) .
- NG >> Repair harness.



## Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit)

AKS00768

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector B4
  - Harness connector E105

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

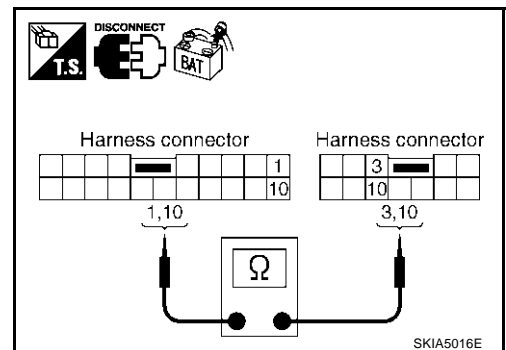
1. Disconnect harness connector B2 and harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



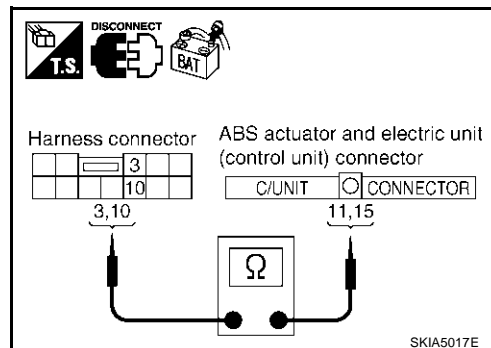


### 3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

**3 (L) - 11 (L) : Continuity should exist.**

**10 (Y) - 15 (Y) : Continuity should exist.**



#### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-944, "Work Flow"](#).
- NG >> Repair harness.

## ECM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

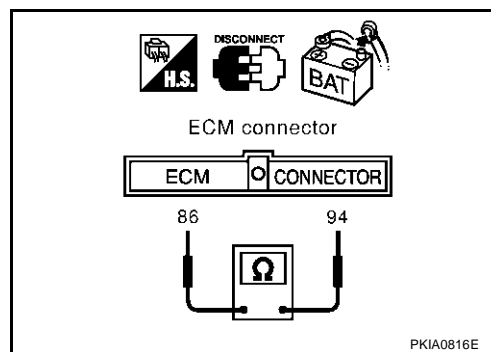
#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

**94 (L) - 86 (Y) : Approx. 108 - 132Ω**



#### OK or NG

- OK >> Replace ECM.
- NG >> Repair harness between ECM and TCM.

## TCM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
  - TCM connector
  - Harness connector F102
  - Harness connector M82

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

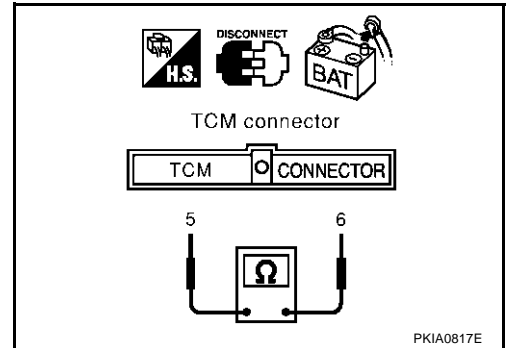
1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace TCM.  
 NG >> Repair harness between TCM and ECM.



## Display Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display unit for damage, bend and loose connection (unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

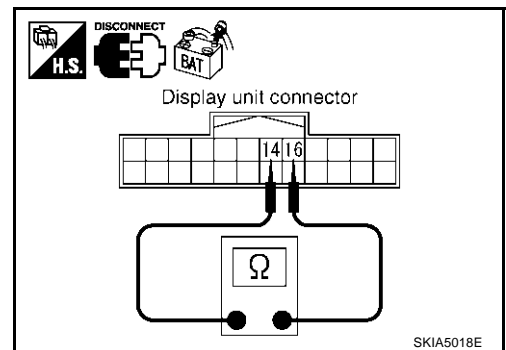
1. Disconnect display unit connector.
2. Check resistance between display unit harness connector M39 terminals 14 (L) and 16 (Y).

**14 (L) - 16 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace display unit.  
 NG >> Repair harness between display unit and data link connector.



## Data Link Connector Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

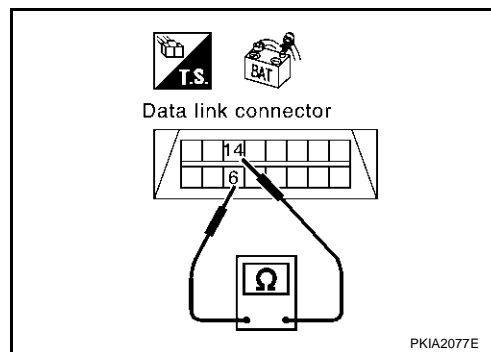
## 2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Diagnose again. Refer to [LAN-944, "Work Flow"](#).  
 NG >> Repair harness between data link connector and BCM.



## BCM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

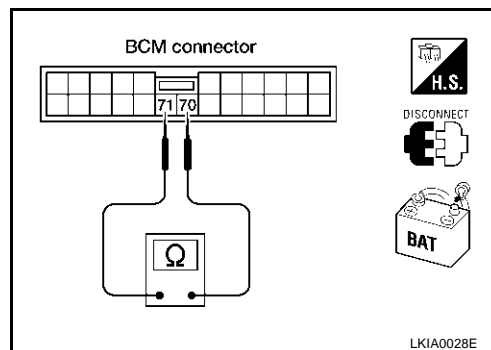
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M37 terminals 70 (L) and 71 (Y).

**70 (L) - 71 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace BCM. Refer to [BCS-36, "Removal and Installation of BCM"](#).  
 NG >> Repair harness between BCM and data link connector.



## Unified Meter and A/C Amp. Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

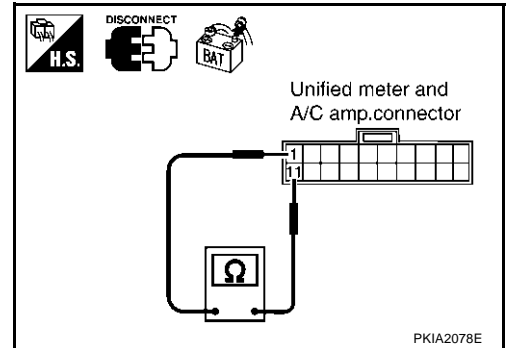
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

**1 (L) - 11 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace unified meter and A/C amp.  
 NG >> Repair harness between unified meter and A/C amp. and data link connector.



## Steering Angle Sensor Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of steering angle sensor for damage, bend and loose connection (sensor side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

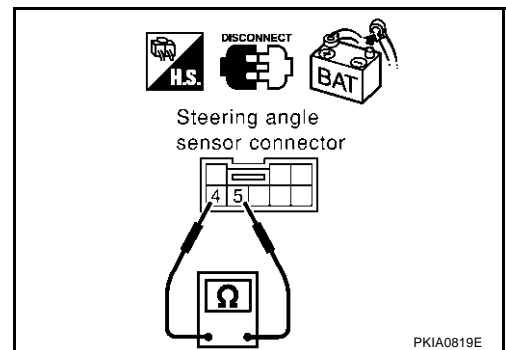
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M33 terminals 4 (L) and 5 (Y).

**4 (L) - 5 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace steering angle sensor.  
 NG >> Repair harness between steering angle sensor and data link connector.



## Driver Seat Control Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control unit side and harness side).
  - Driver seat control unit connector
  - Harness connector B301
  - Harness connector B9

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

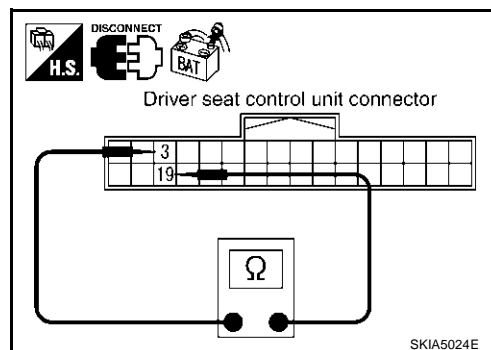
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect driver seat control unit connector.
2. Check resistance between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

**3 (L/Y) - 19 (BR/W) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace driver seat control unit.  
 NG >> Repair harness between driver seat control unit and harness connector B4.



AKS0076H

## AWD Control Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of AWD control unit for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

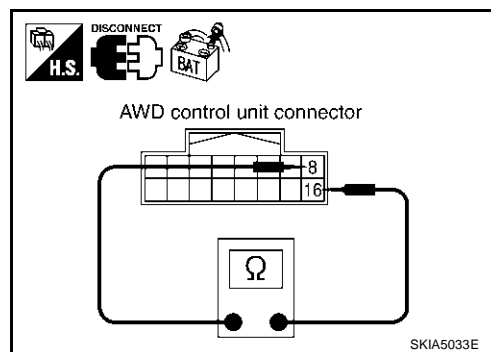
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect AWD control unit connector.
2. Check resistance between AWD control unit harness connector E111 terminals 8 (L) and 16 (Y).

**8 (L) - 16 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace AWD control unit.  
 NG >> Repair harness between AWD control unit and IPDM E/R.



AKS0076I

## ABS Actuator and Electric Unit (Control Unit) Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

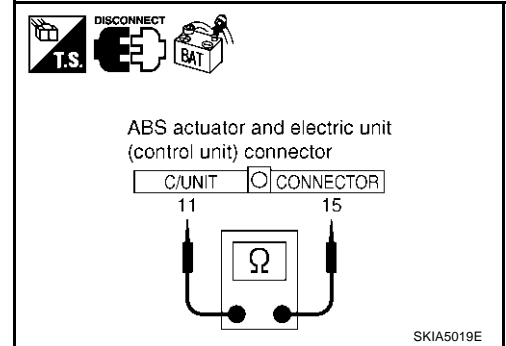
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

**11 (L) - 15 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).  
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



AKS0076J

## IPDM E/R Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

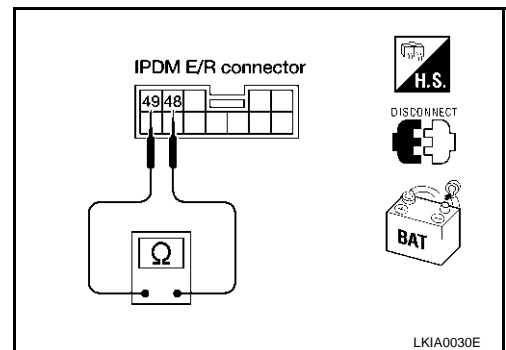
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y) : Approx. 108 - 132Ω**

### OK or NG

- OK >> Replace IPDM E/R.  
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



**CAN Communication Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, unit side, meter side, sensor side, control unit side and harness side).
  - ECM
  - TCM
  - Display unit
  - BCM
  - Unified meter and A/C amp.
  - Steering angle sensor
  - Driver seat control unit
  - AWD control unit
  - ABS actuator and electric unit (control unit)
  - IPDM E/R
  - Between ECM and IPDM E/R
  - Between ECM and TCM
  - Between ECM and driver seat control unit

**OK or NG**

OK &gt;&gt; GO TO 2.

NG &gt;&gt; Repair terminal or connector.

**2. CHECK HARNESS FOR SHORT CIRCUIT**

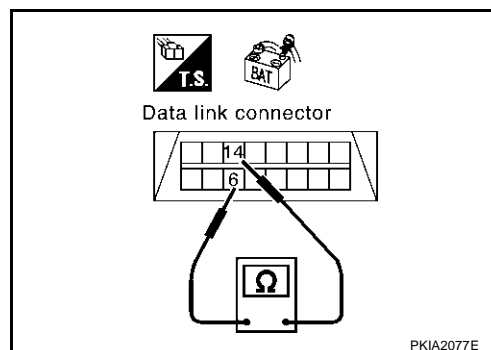
1. Disconnect following connectors.
  - ECM connector
  - Harness connector M82
  - Display unit connector
  - BCM connector
  - Unified meter and A/C amp. connector
  - Steering angle sensor connector
  - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Continuity should not exist.****OK or NG**

OK &gt;&gt; GO TO 3.

NG &gt;&gt; Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M9.



### 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

**6 (L) - Ground : Continuity should not exist.**

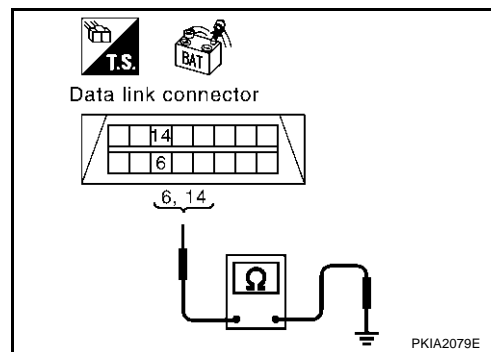
**14 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M9.



### 4. CHECK HARNESS FOR SHORT CIRCUIT

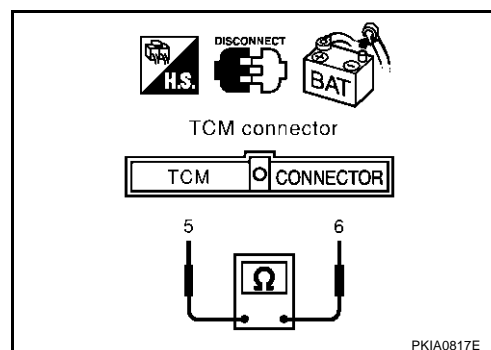
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 5.

NG >> Repair harness between TCM and harness connector F102.



### 5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

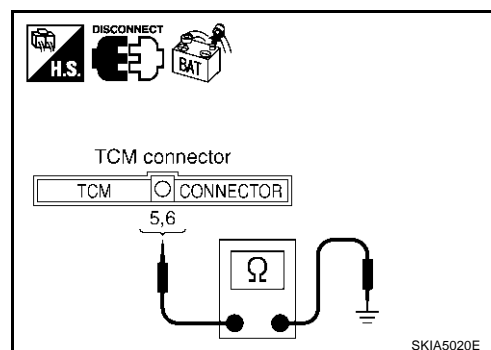
**5 (L) - Ground : Continuity should not exist.**

**6 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 6.

NG >> Repair harness between TCM and harness connector F102.





## 6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B4 and harness connector B9.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

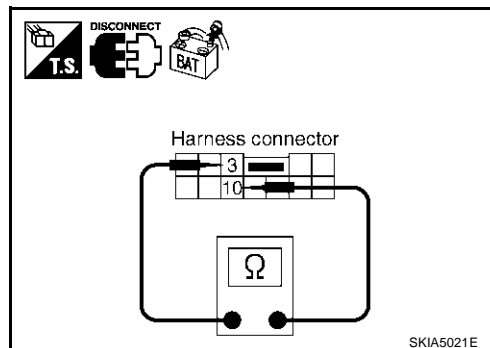
**3 (L) - 10 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 7.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Repair harness between harness connector B4 and harness connector B2.
- Repair harness between harness connector B4 and harness connector B9.



## 7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

**3 (L) - Ground : Continuity should not exist.**

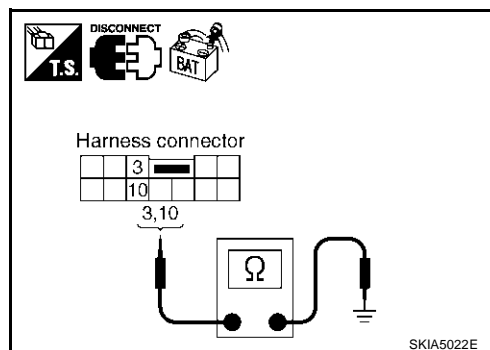
**10 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 8.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Repair harness between harness connector B4 and harness connector B2.
- Repair harness between harness connector B4 and harness connector B9.



## 8. CHECK HARNESS FOR SHORT CIRCUIT

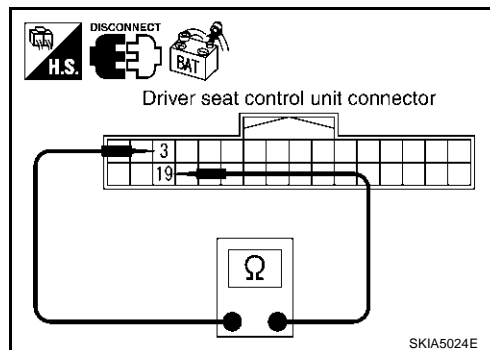
1. Disconnect driver seat control unit connector.
2. Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

**3 (L/Y) - 19 (BR/W) : Continuity should not exist.**

### OK or NG

OK >> GO TO 9.

NG >> Repair harness between driver seat control unit and harness connector B301.



## 9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y), 19 (BR/W) and ground.

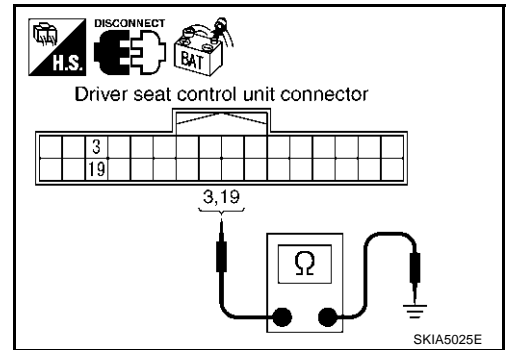
**3 (L/Y) - Ground : Continuity should not exist.**

**19 (BR/W) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 10.

NG >> Repair harness between driver seat control unit and harness connector B301.



## 10. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect AWD control unit connector, ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

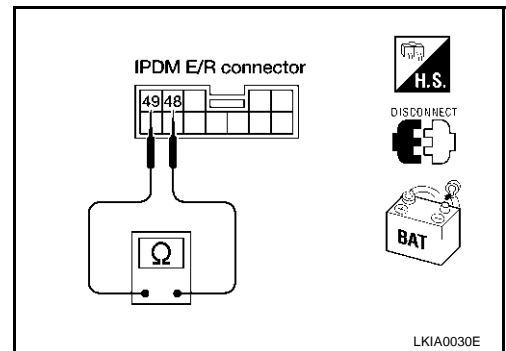
**48 (L) - 49 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 11.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 11. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

**48 (L) - Ground : Continuity should not exist.**

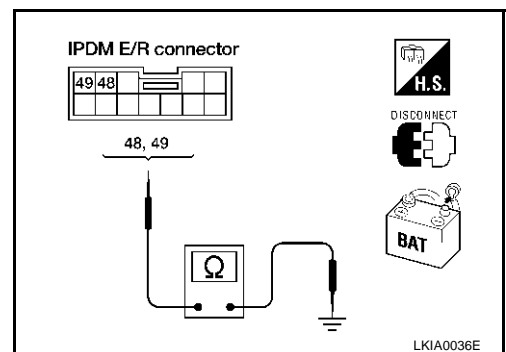
**49 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 12.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 12. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-975, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-944, "Work Flow"](#).

NG >> Replace ECM and/or IPDM E/R.

**IPDM E/R Ignition Relay Circuit Check**

AKS0076L

Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-45. "IPDM E/R Power/Ground Circuit Inspection"](#) .
- Ignition power supply circuit. Refer to [PG-10. "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#) .

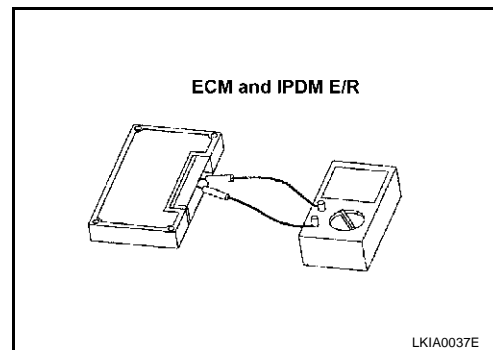
**Component Inspection**

AKS0076M

**ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION**

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value ( $\Omega$ ) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	

A  
B  
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LAN

L  
M

## CAN SYSTEM (TYPE 29)

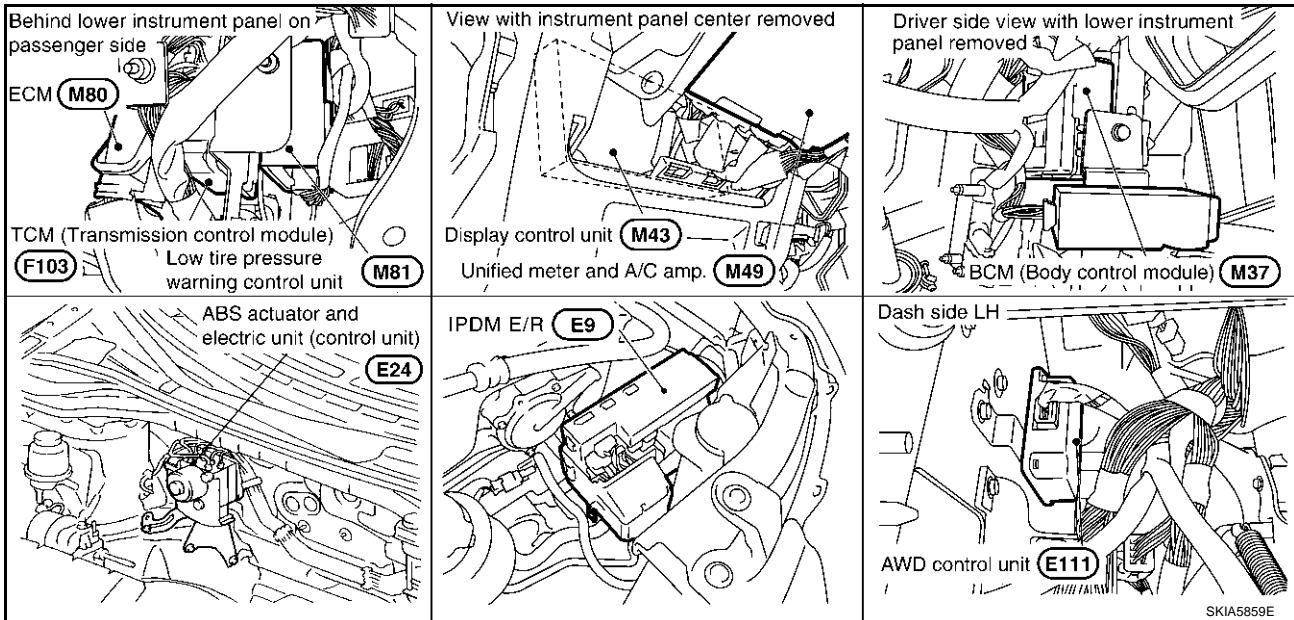
### System Description

AKS0076N

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

### Component Parts and Harness Connector Location

AKS0076O

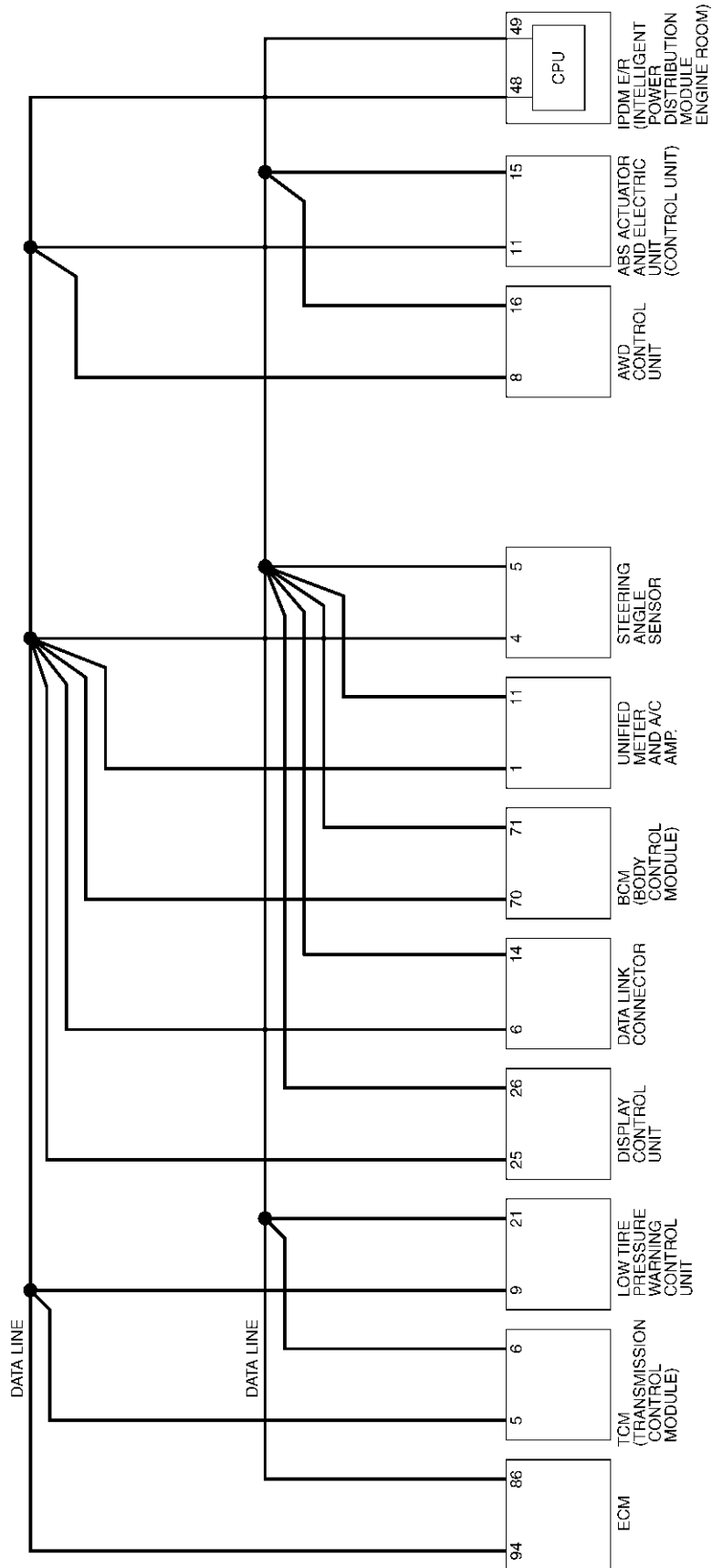


# CAN SYSTEM (TYPE 29)

[CAN]

## Schematic

AKS0076P



A  
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LAN

TKWA1035E

# CAN SYSTEM (TYPE 29)

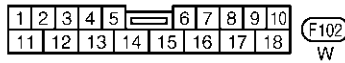
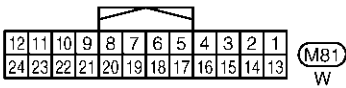
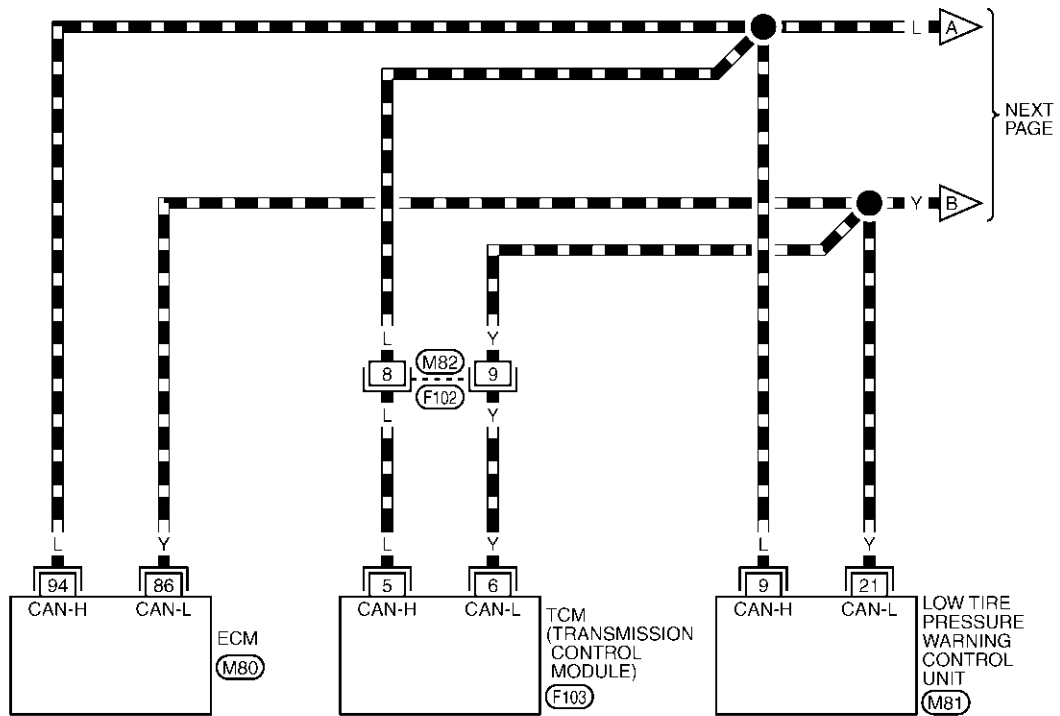
[CAN]

## Wiring Diagram - CAN -

AKS0076Q

### LAN-CAN-85

▬ : DATA LINE



REFER TO THE FOLLOWING.  
 (M80), (F103) -ELECTRICAL  
 UNITS

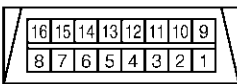
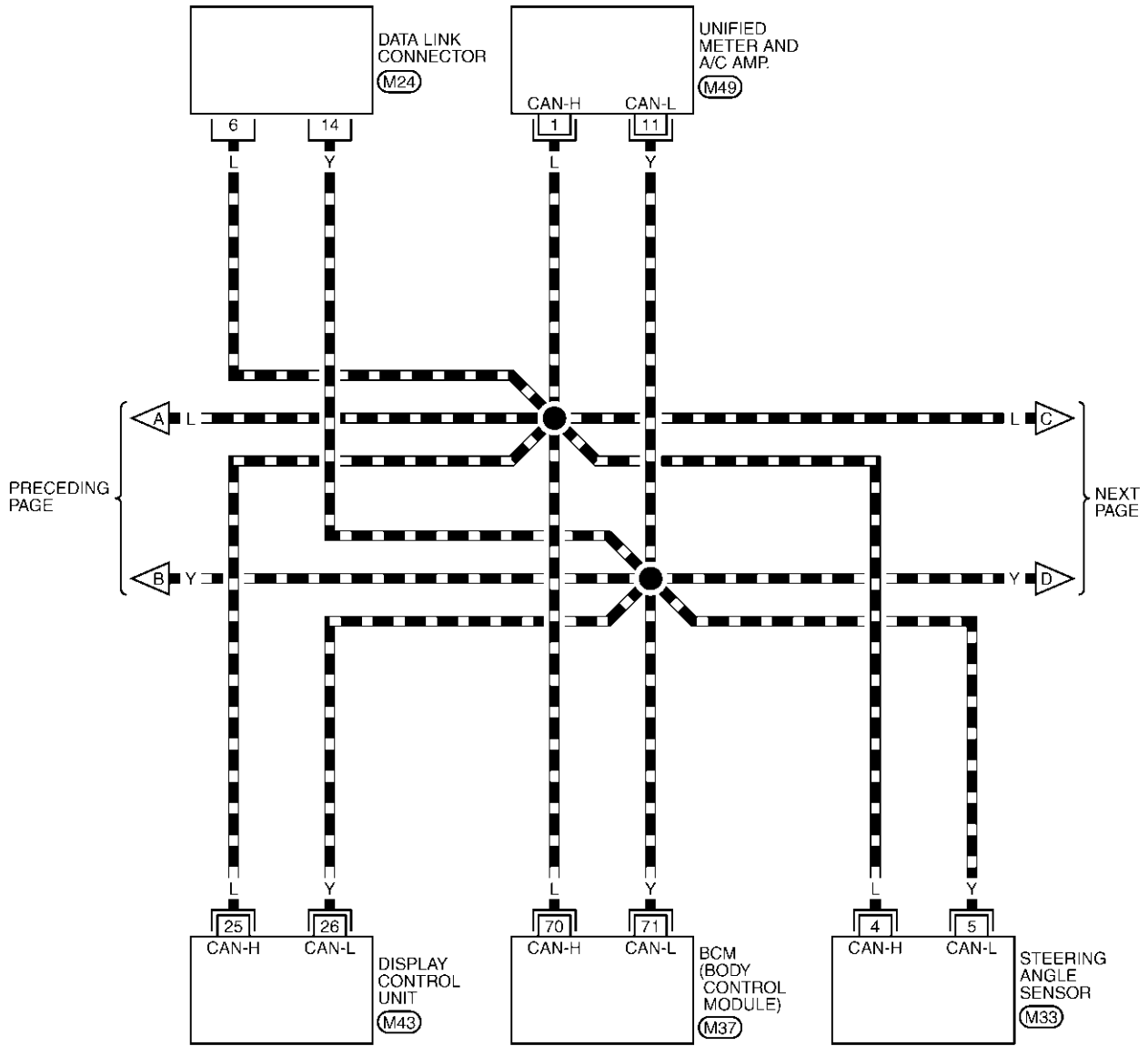
TKWA1036E

# CAN SYSTEM (TYPE 29)

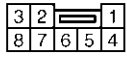
[CAN]

## LAN-CAN-86

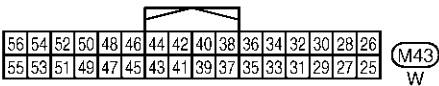
▬ : DATA LINE



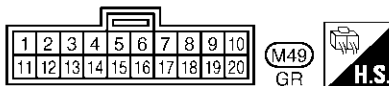
(M24)  
W



(M33)  
W



(M43)  
W



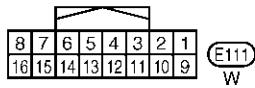
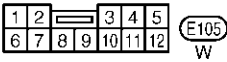
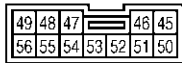
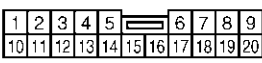
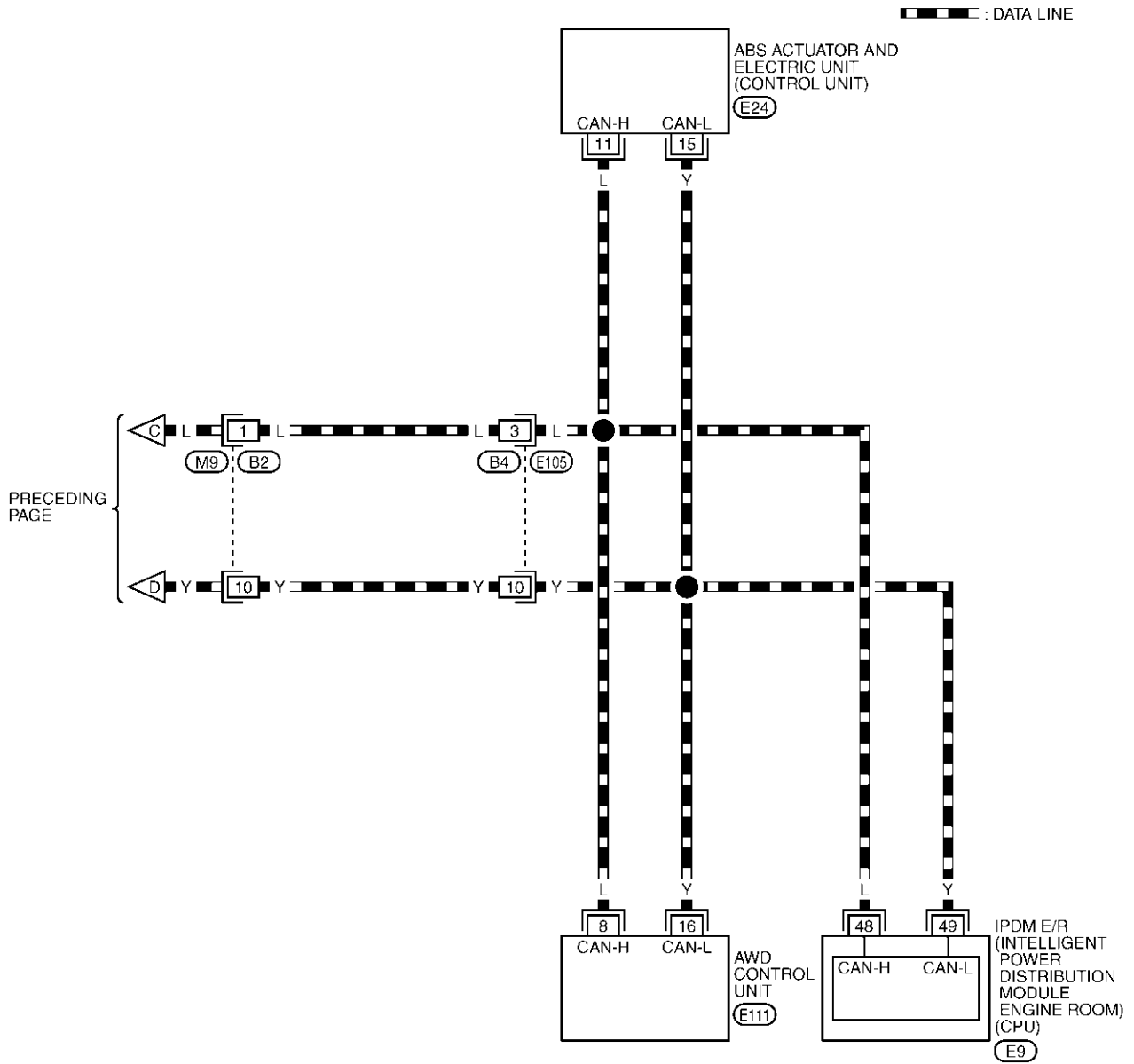
(M49)  
GR



REFER TO THE FOLLOWING.  
(M37) -ELECTRICAL UNITS

TKWA1037E

## LAN-CAN-87



REFER TO THE FOLLOWING.  
(E24) -ELECTRICAL UNITS



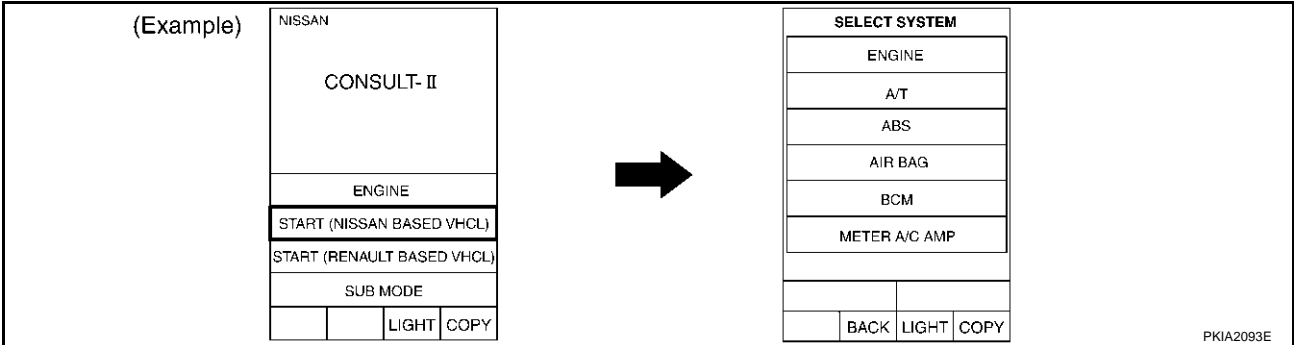
# CAN SYSTEM (TYPE 29)

[CAN]

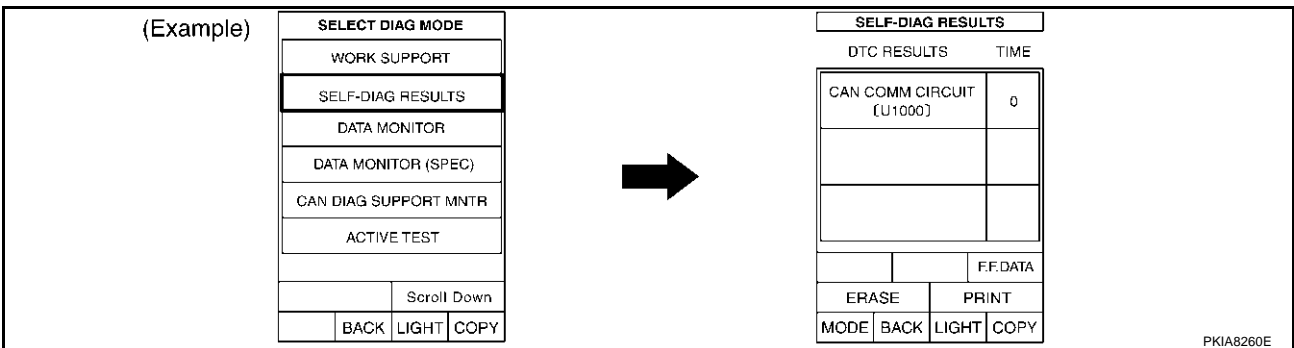
AKS00CSU

## Work Flow

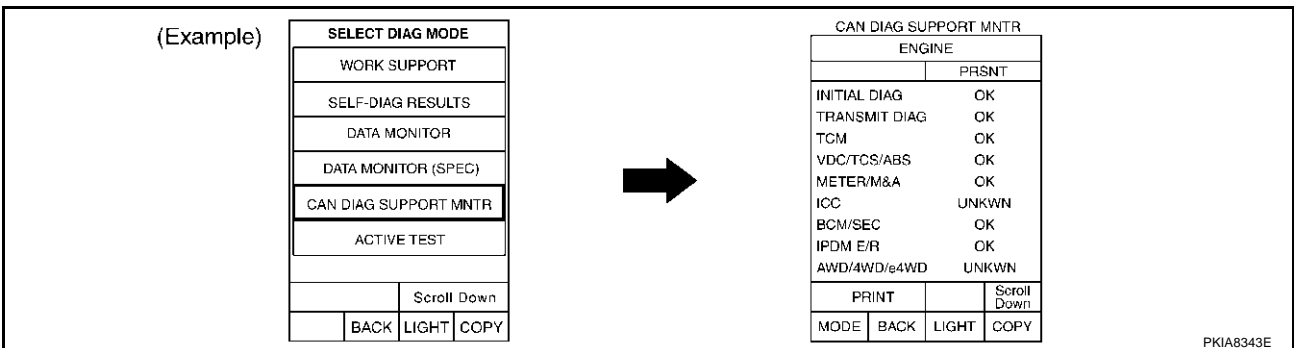
- When there are no indications of "TRANSMISSION", "AIR PRESSURE MONITOR" or "METER A/C AMP" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "ALL MODE AWD/4WD" and "ABS" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "ALL MODE AWD/4WD" and "ABS" displayed on CONSULT-II.



- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-983, "CHECK SHEET"](#).
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "v" onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-983, "CHECK SHEET"](#).

**NOTE:**

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual. So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the navigation system. Refer to [AV-203, "CAN Communication Line Check"](#).
- Attach the CAN DIAG SUPPORT MONITOR check sheet onto the check sheet. Refer to [LAN-983, "CHECK SHEET"](#).

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LAN

- 
8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG SUPPORT MONITOR check sheet. Refer to [LAN-983, "CHECK SHEET"](#) .

**NOTE:**

If "NG" is displayed on "CAN COMM" as "CAN DIAG SUPPORT MONITOR" for the diagnosed control unit, replace the control unit. Refer to [AV-203, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-985, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

# CAN SYSTEM (TYPE 29)

[CAN]

## CHECK SHEET

### NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

A  
B  
C  
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E  
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G  
H  
I  
J  
LAN  
L  
M

Check sheet table		CAN DIAG SUPPORT MNTR											
SELECT SYSTEM screen		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

Attach copy of  
display control unit  
CAN DIAG SUPPORT MONITOR check sheet

PKIB1034E

# CAN SYSTEM (TYPE 29)

[CAN]

Attach copy of  
ENGINE  
SELF-DIAG RESULTS

Attach copy of  
TRANSMISSION  
SELF-DIAG RESULTS

Attach copy of  
AIR PRESSURE  
MONITOR  
SELF-DIAG RESULTS

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
METER A/C AMP  
SELF-DIAG RESULTS

Attach copy of  
ALL MODE AWD/4WD  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

Attach copy of  
ENGINE  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
TRANSMISSION  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
AIR PRESSURE  
MONITOR  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
BCM  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
METER A/C AMP  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ALL MODE AWD/4WD  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ABS  
CAN DIAG SUPPORT  
MNTR

PKIB0731E

# CAN SYSTEM (TYPE 29)

[CAN]

## CHECK SHEET RESULTS (EXAMPLE)

### NOTE:

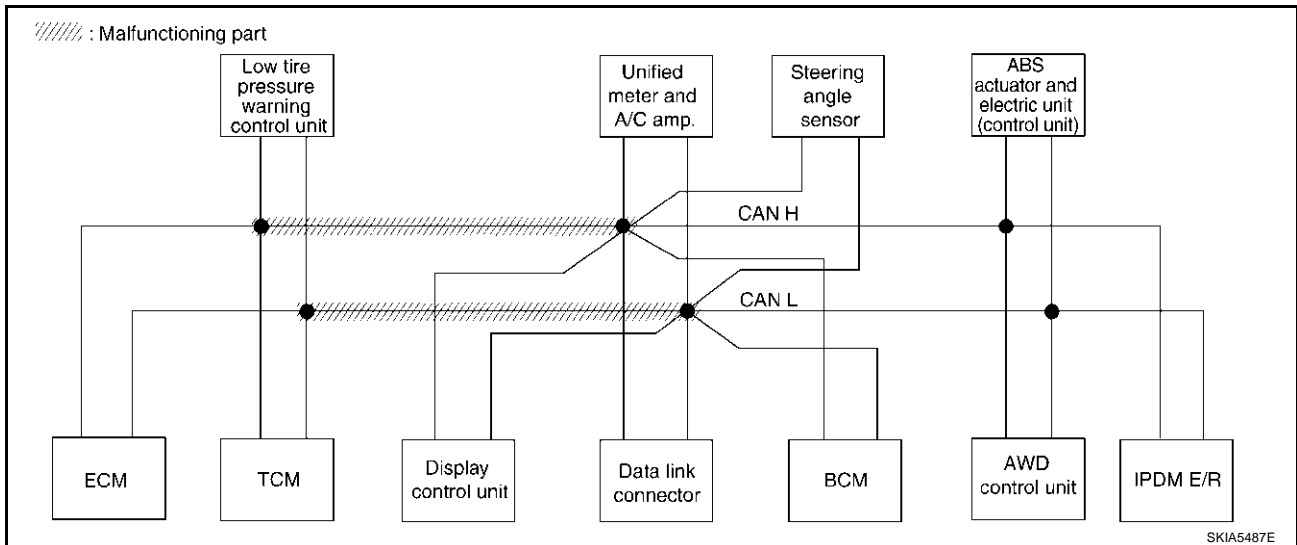
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

### Case 1

Check harness between TCM and data link connector. Refer to [LAN-999, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWVN	—	UNKWVN	—	—	UNKWVN	UNKWVN	—	UNKWVN	UNKWVN	UNKWVN
TRANSMISSION	No indication ✓	NG	UNKWVN	UNKWVN	—	—	—	—	UNKWVN	—	—	UNKWVN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWVN	—	—	—	—	—	UNKWVN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3 ✓	—	CAN CIRC 6 ✓	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWVN	UNKWVN	—	—	—	—	UNKWVN	—	—	—	UNKWVN
METER A/C AMP	No indication	—	UNKWVN	UNKWVN	UNKWVN	UNKWVN	UNKWVN	UNKWVN	—	—	UNKWVN	UNKWVN	—
ALL MODE AWD/4WD	—	NG	UNKWVN	UNKWVN	—	—	—	—	UNKWVN	—	—	UNKWVN	—
ABS	—	NG	UNKWVN	UNKWVN	UNKWVN	—	—	—	—	UNKWVN	UNKWVN	—	—

PKIB1035E



# CAN SYSTEM (TYPE 29)

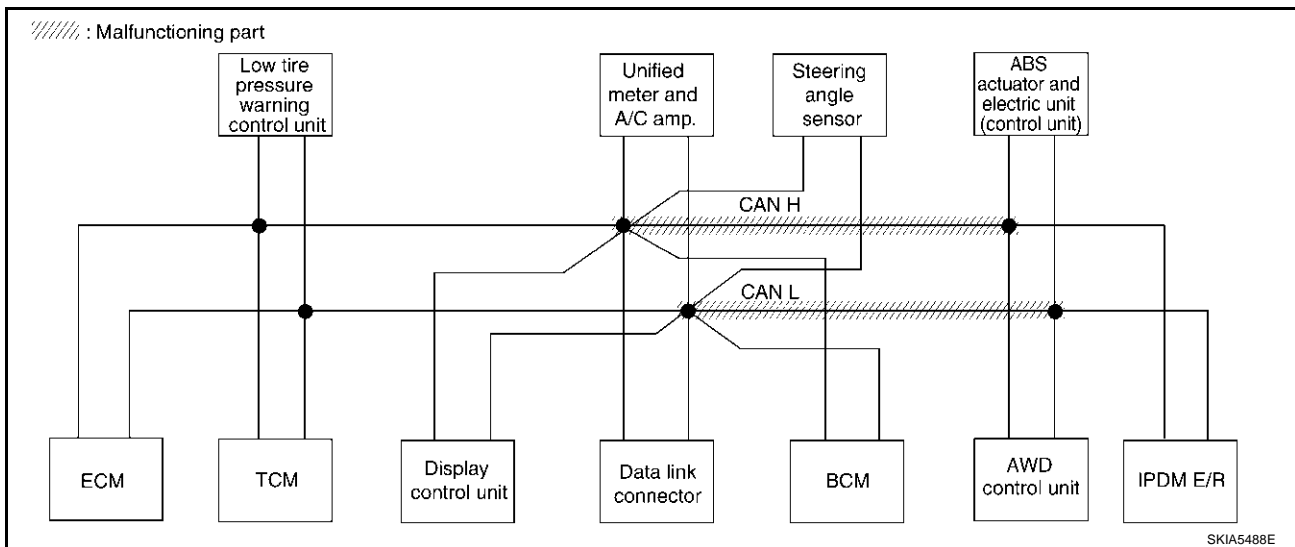
[CAN]

## Case 2

Check harness between data link connector and ABS actuator and electric unit (control unit). Refer to [LAN-999, "Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit \(Control Unit\)"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1036E



SKIA5488E

# CAN SYSTEM (TYPE 29)

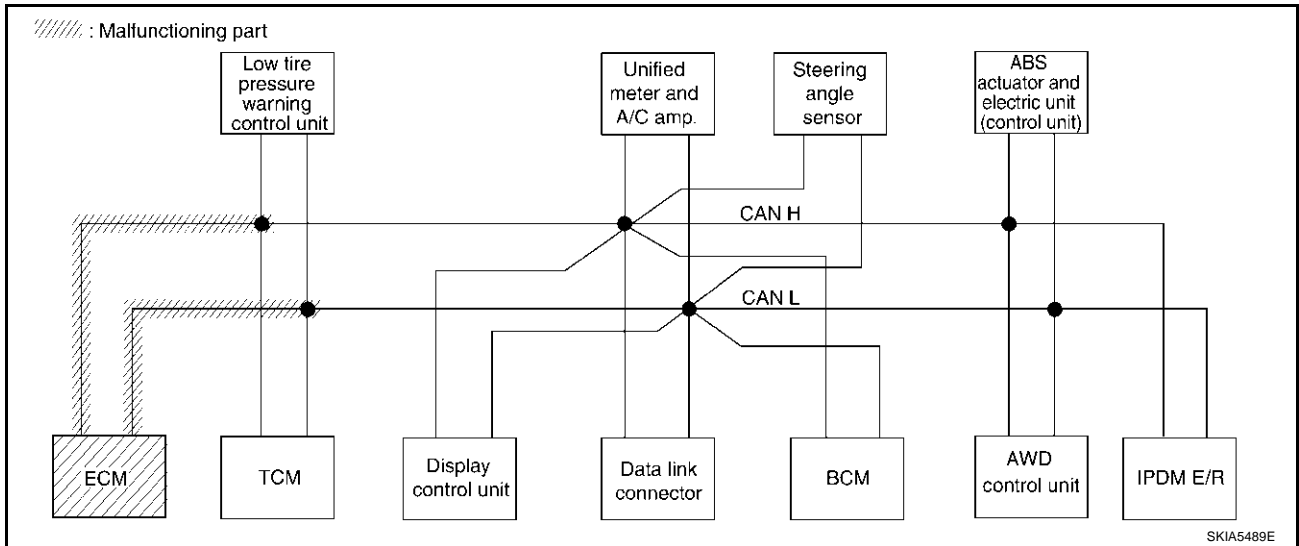
[CAN]

## Case 3

Check ECM circuit. Refer to [LAN-1000, "ECM Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	—	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N
TRANSMISSION	No indication	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	—	UNKW <sup>✓</sup> N	—	—	UNKW <sup>✓</sup> N	—
AIR PRESSURE MONITOR	No indication	NG	UNKW <sup>✓</sup> N	—	—	—	—	—	UNKW <sup>✓</sup> N	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	—	UNKW <sup>✓</sup> N	—	—	—	UNKW <sup>✓</sup> N
METER A/C AMP	No indication	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—
ALL MODE AWD/4WD	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	—	UNKW <sup>✓</sup> N	—	—	UNKW <sup>✓</sup> N	—
ABS	—	NG	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—	—	—	UNKW <sup>✓</sup> N	UNKW <sup>✓</sup> N	—	—

PKIB1037E



LAN

# CAN SYSTEM (TYPE 29)

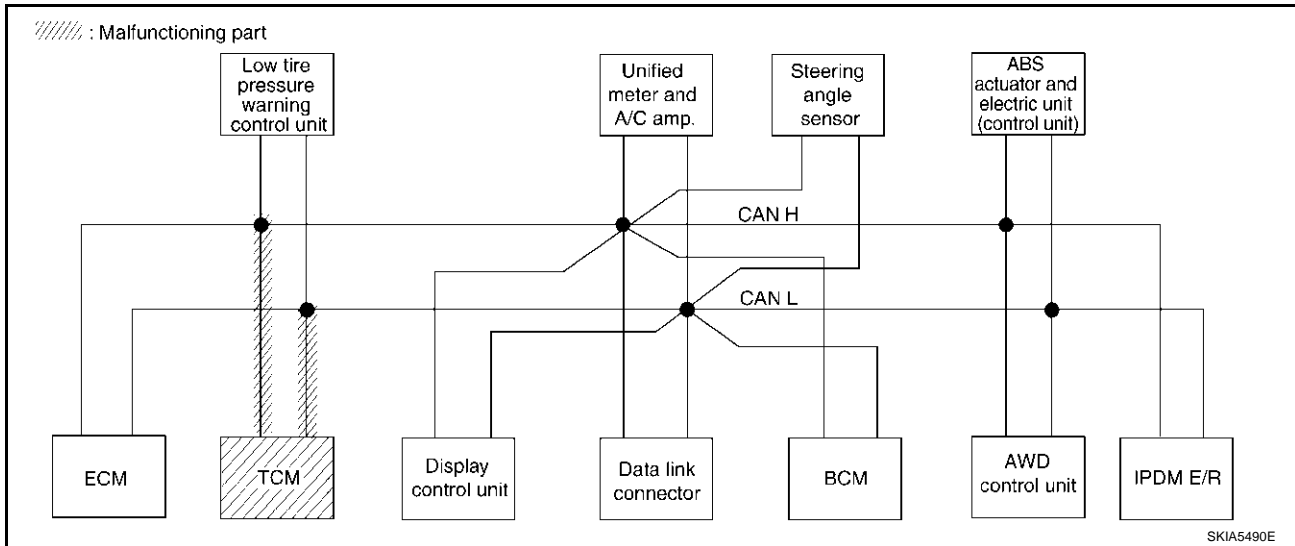
[CAN]

## Case 4

Check TCM circuit. Refer to [LAN-1001, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN ✓	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN ✓	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN ✓	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1038E





# CAN SYSTEM (TYPE 29)

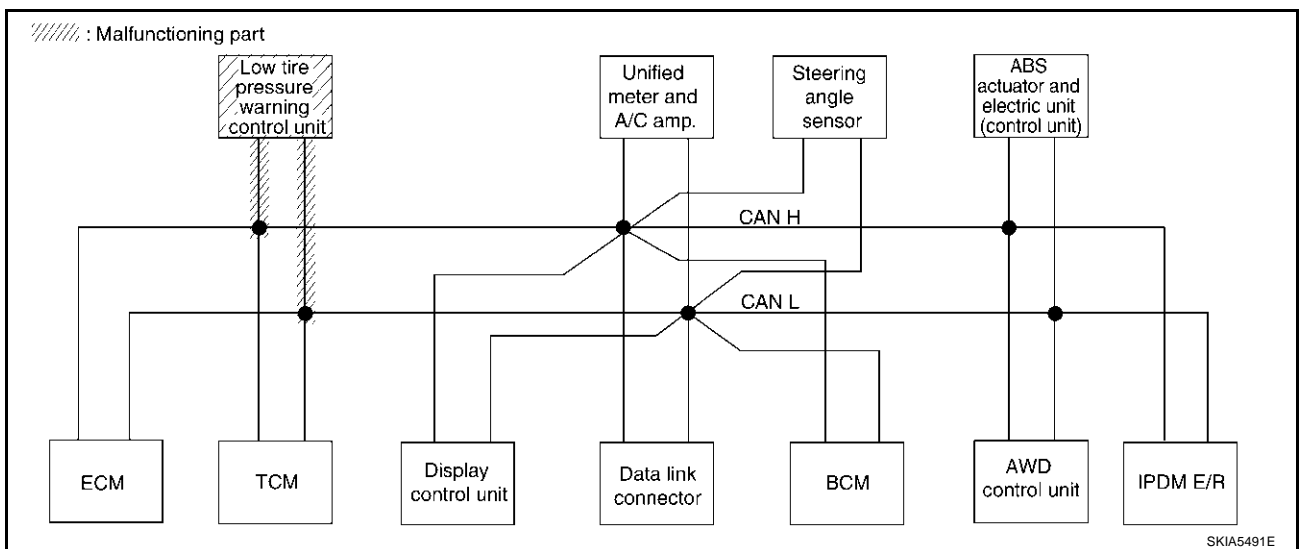
[CAN]

## Case 5

Check low tire pressure warning control unit circuit. Refer to [LAN-1001, "Low Tire Pressure Warning Control Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1039E



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# CAN SYSTEM (TYPE 29)

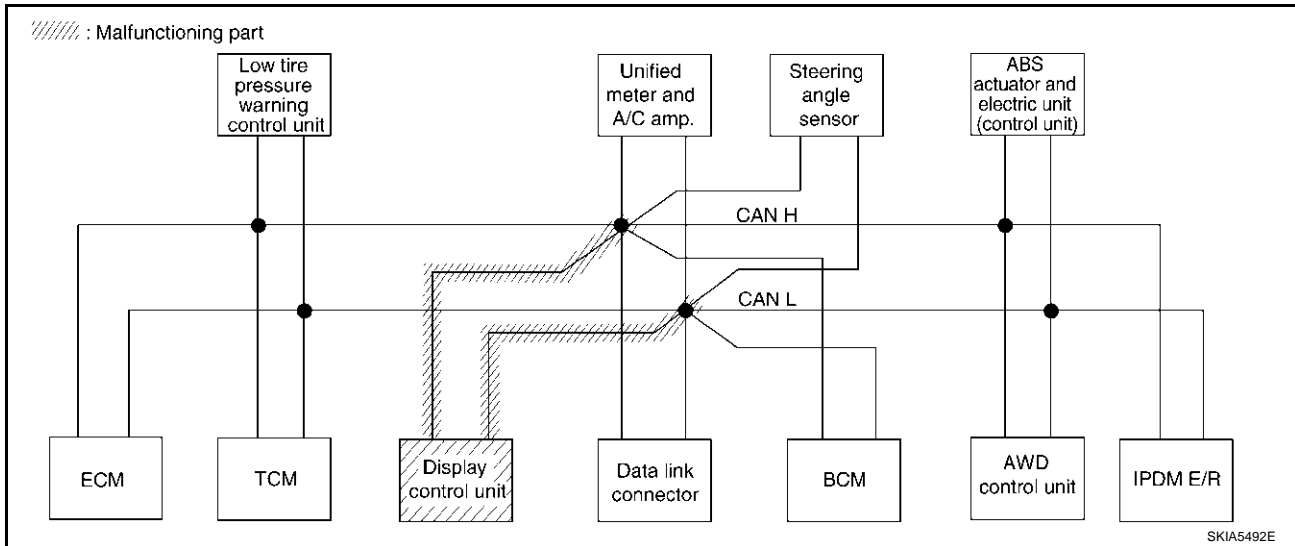
[CAN]

## Case 6

Check display control unit circuit. Refer to [LAN-1002, "Display Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN DRC 1 ✓	CAN DRC 3 ✓	—	CAN DRC 6 ✓	—	CAN DRC 2 ✓	CAN DRC 5 ✓	—	—	—	CAN DRC 7 ✓
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1040E



# CAN SYSTEM (TYPE 29)

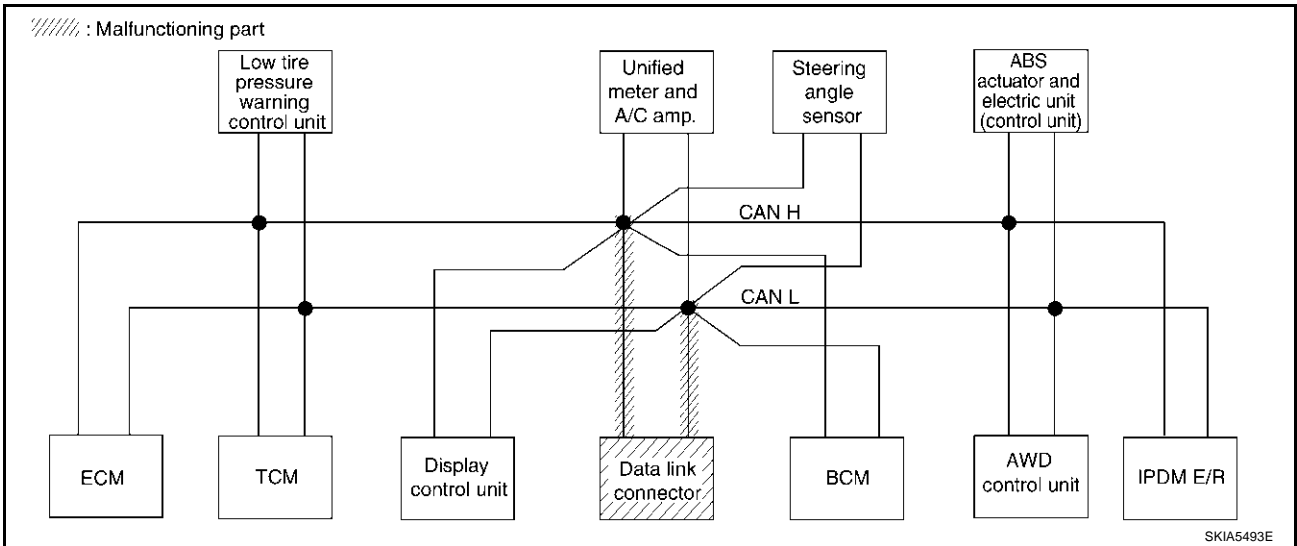
[CAN]

## Case 7

Check data link connector circuit. Refer to [LAN-1002, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1041E



LAN

# CAN SYSTEM (TYPE 29)

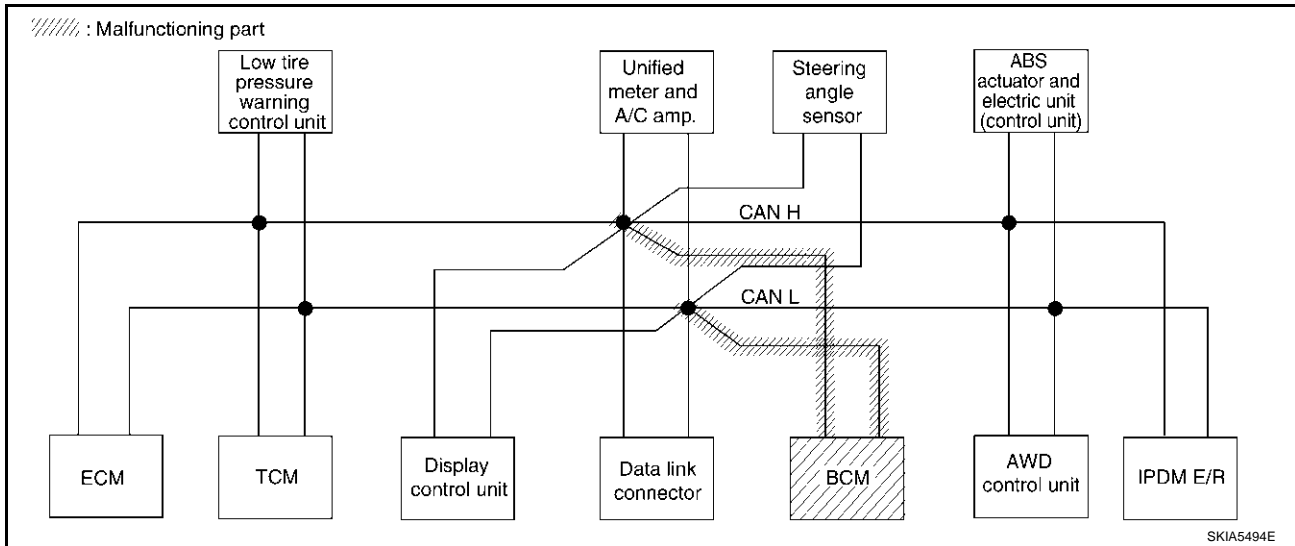
[CAN]

## Case 8

Check BCM circuit. Refer to [LAN-1003, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1042E



# CAN SYSTEM (TYPE 29)

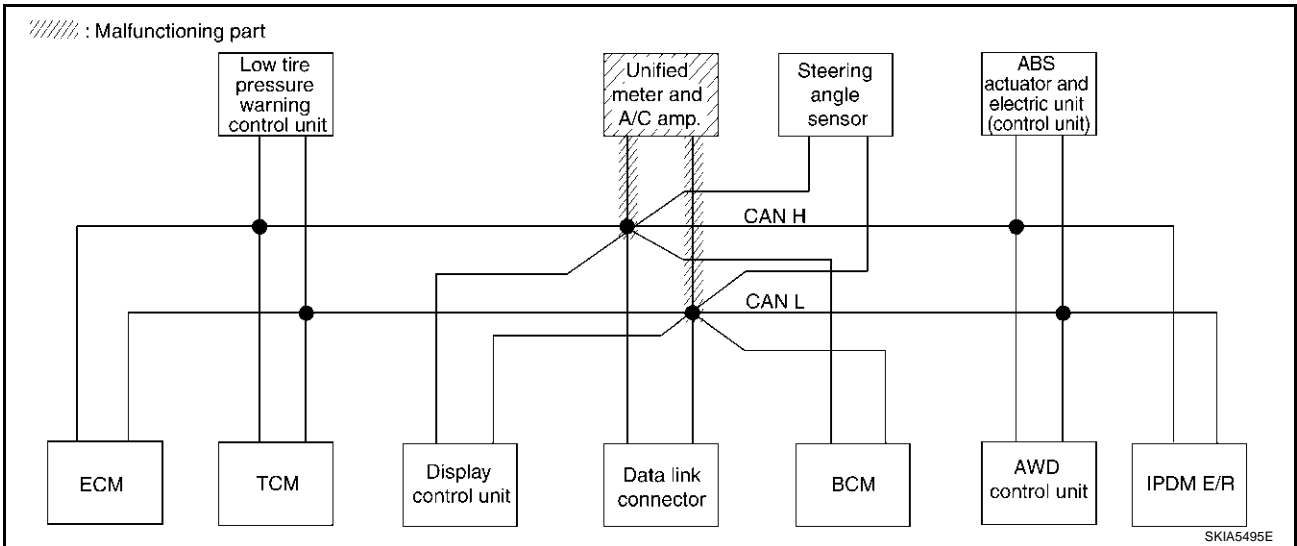
[CAN]

## Case 9

Check unified meter and A/C amp. circuit. Refer to [LAN-1003, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1043E



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# CAN SYSTEM (TYPE 29)

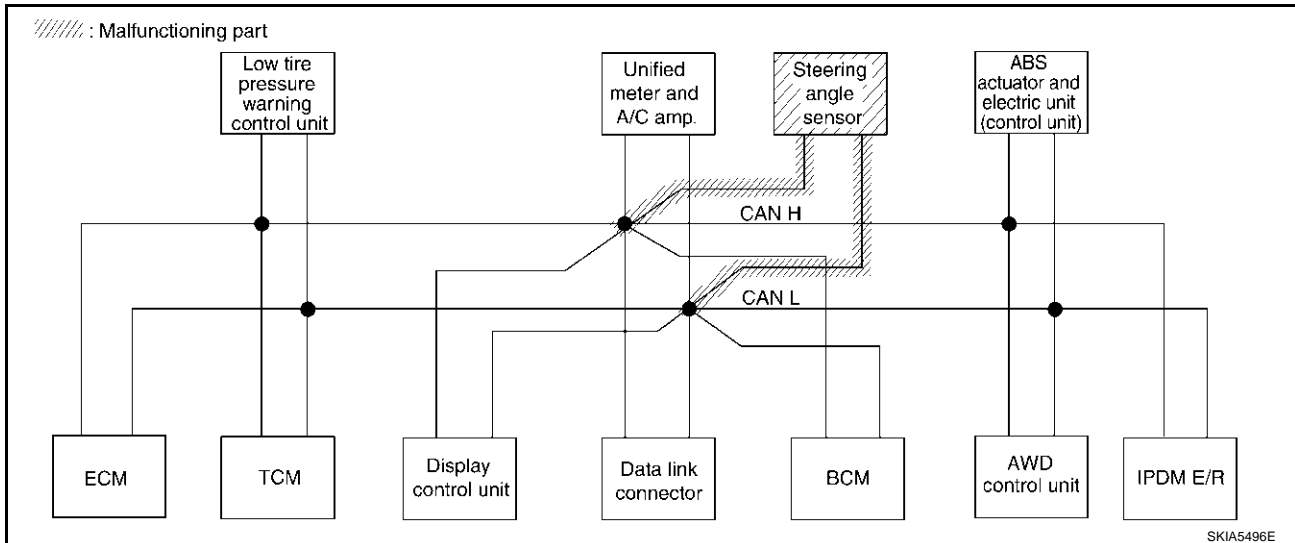
[CAN]

## Case 10

Check steering angle sensor circuit. Refer to [LAN-1004, "Steering Angle Sensor Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1044E



SKIA5496E

# CAN SYSTEM (TYPE 29)

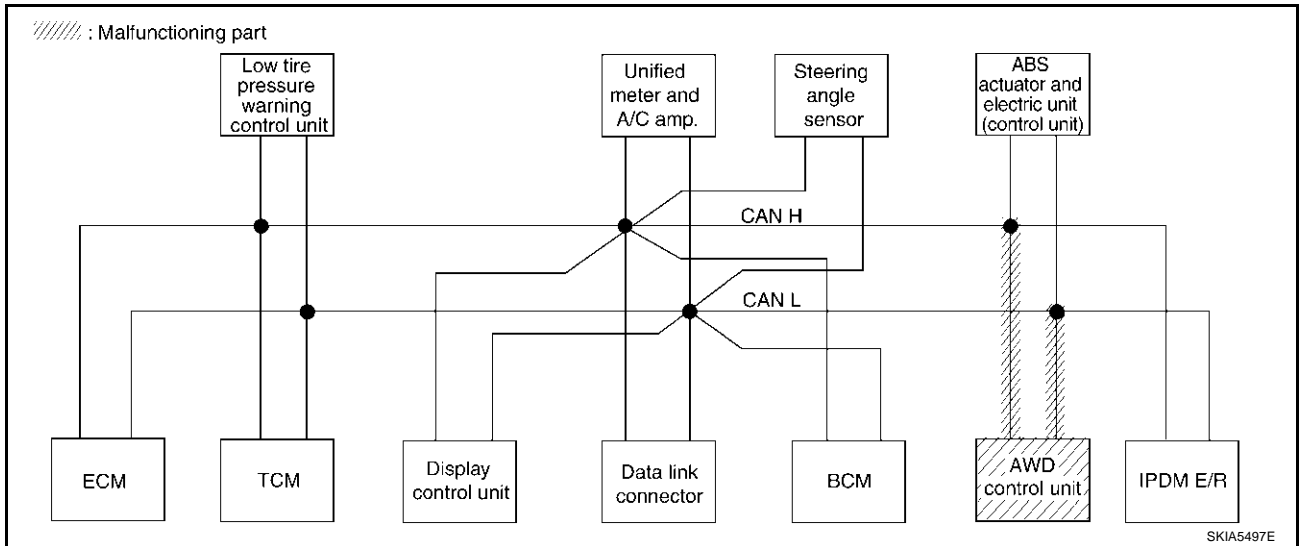
[CAN]

## Case 11

Check AWD control unit circuit. Refer to [LAN-1004, "AWD Control Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1045E



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# CAN SYSTEM (TYPE 29)

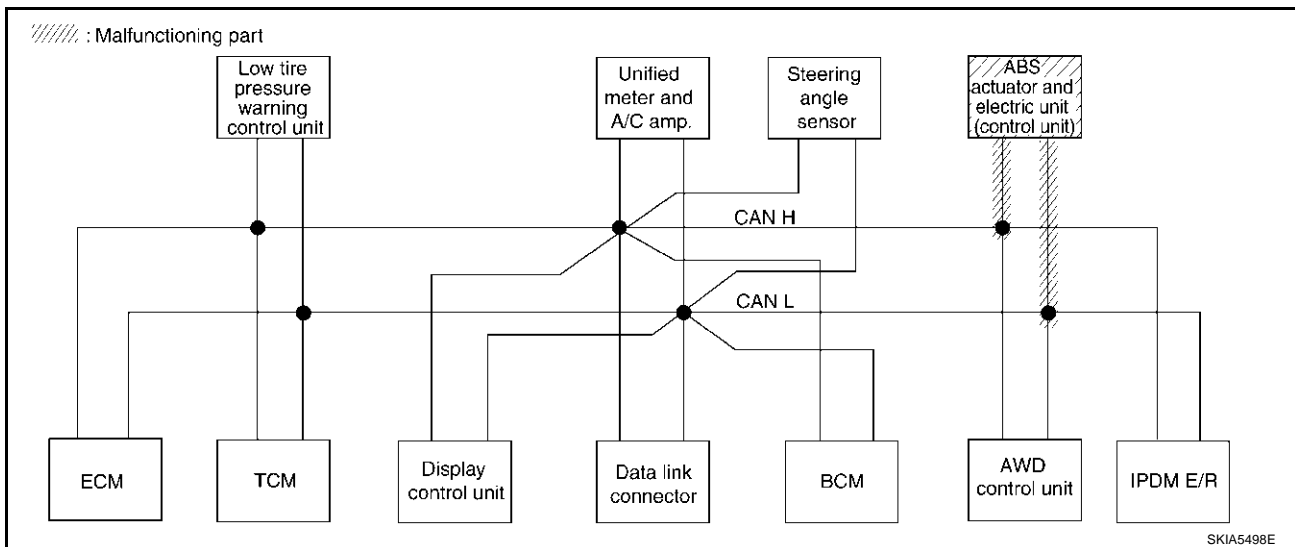
[CAN]

## Case 12

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-1005, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1046E



SKIA5498E



# CAN SYSTEM (TYPE 29)

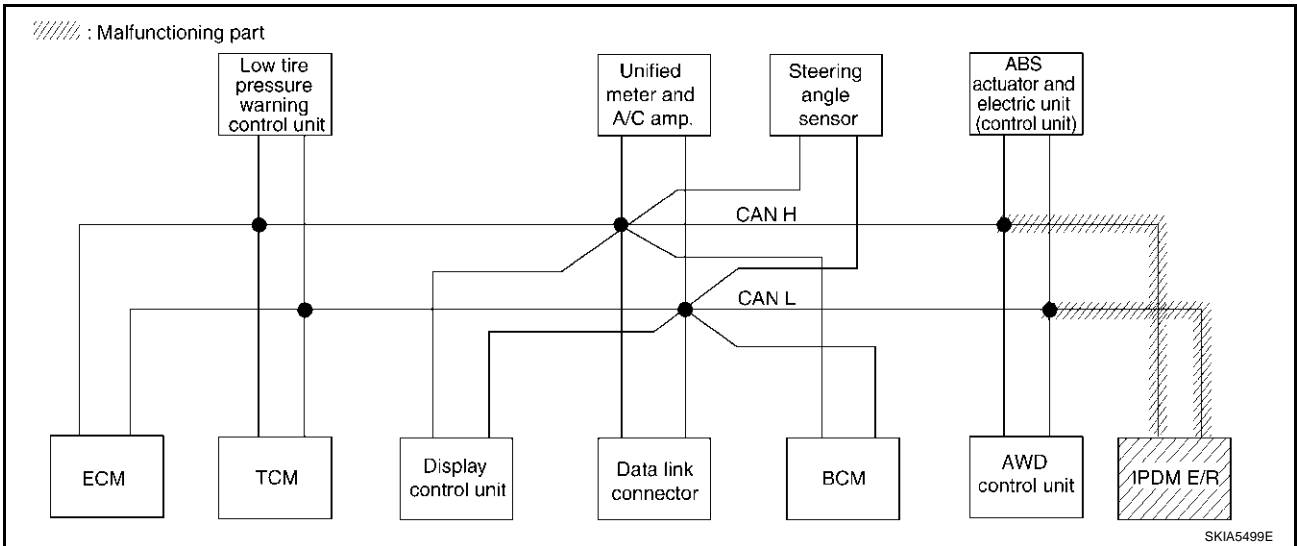
[CAN]

## Case 13

Check IPDM E/R circuit. Refer to [LAN-1005, "IPDM E/R Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1047E



## Case 14

Check CAN communication circuit. Refer to [LAN-1006, "CAN Communication Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1048E

# CAN SYSTEM (TYPE 29)

[CAN]

## Case 15

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-1009, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1049E

## Case 16

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-1009, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1050E

## Circuit Check Between TCM and Data Link Connector

AKS0076S

### 1. CHECK HARNESS FOR OPEN CIRCUIT

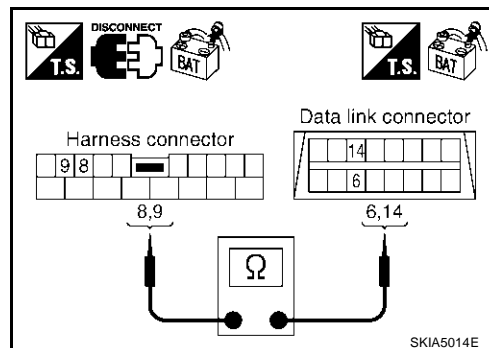
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

**8 (L) - 6 (L) : Continuity should exist.**

**9 (Y) - 14 (Y) : Continuity should exist.**

#### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-981, "Work Flow"](#).
- NG >> Repair harness.



## Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit)

AKS0076T

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector M9
  - Harness connector B2
  - Harness connector B4
  - Harness connector E105

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

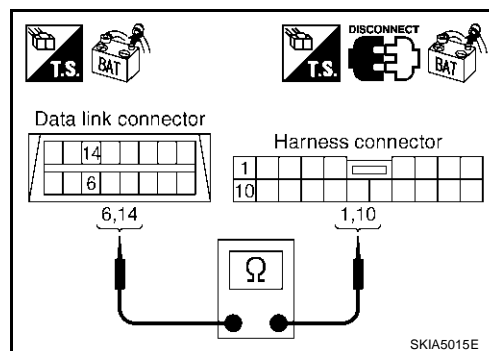
1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

**6 (L) - 1 (L) : Continuity should exist.**

**14 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



## 3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

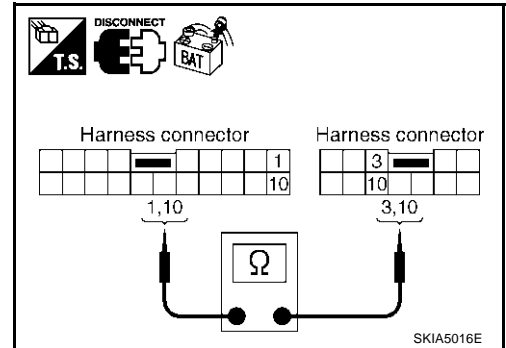
**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

OK >> GO TO 4.

NG >> Repair harness.



## 4. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

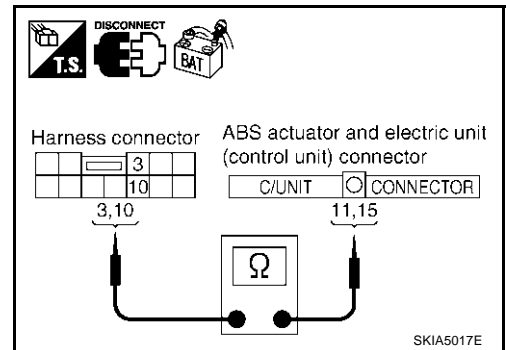
**3 (L) - 11 (L) : Continuity should exist.**

**10 (Y) - 15 (Y) : Continuity should exist.**

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-981, "Work Flow"](#).

NG >> Repair harness.



## ECM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

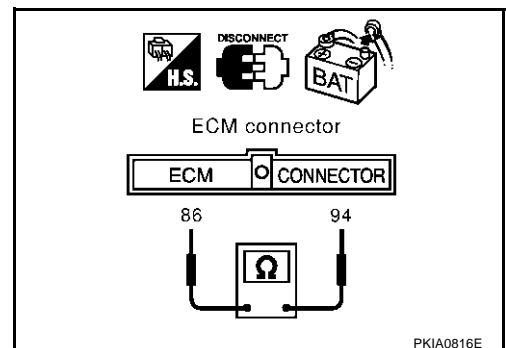
1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

**94 (L) - 86 (Y) : Approx. 108 - 132Ω**

OK or NG

OK >> Replace ECM.

NG >> Repair harness between ECM and TCM.



**TCM Circuit Check**

AKS0076V

**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
  - TCM connector
  - Harness connector F102
  - Harness connector M82

**OK or NG**

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

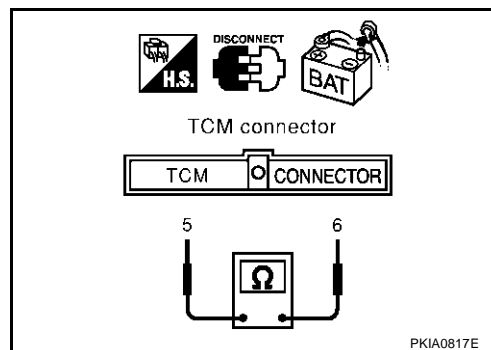
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Approx. 54 - 66Ω**

**OK or NG**

- OK >> Replace TCM.  
 NG >> Repair harness between TCM and low tire pressure warning control unit.

**Low Tire Pressure Warning Control Unit Circuit Check**

AKS0076W

**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of low tire pressure warning control unit for damage, bend and loose connection (control unit side and harness side).

**OK or NG**

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

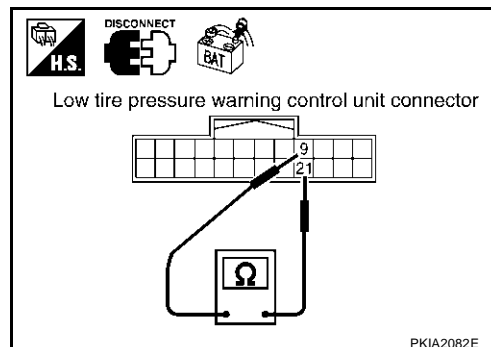
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect low tire pressure warning control unit connector.
2. Check resistance between low tire pressure warning control unit harness connector M81 terminals 9 (L) and 21 (Y).

**9 (L) - 21 (Y) : Approx. 54 - 66Ω**

**OK or NG**

- OK >> Replace low tire pressure warning control unit.  
 NG >> Repair harness between low tire pressure warning control unit and TCM.



## Display Control Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display control unit for damage, bend and loose connection (control unit side and harness side).

#### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

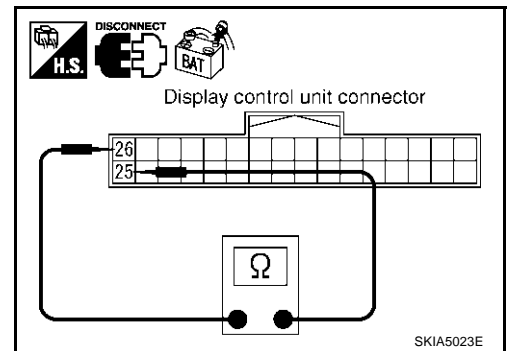
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect display control unit connector.
2. Check resistance between display control unit harness connector M43 terminals 25 (L) and 26 (Y).

**25 (L) - 26 (Y) : Approx. 54 - 66Ω**

#### OK or NG

- OK >> Replace display control unit.  
 NG >> Repair harness between display control unit and data link connector.



## Data Link Connector Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

#### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

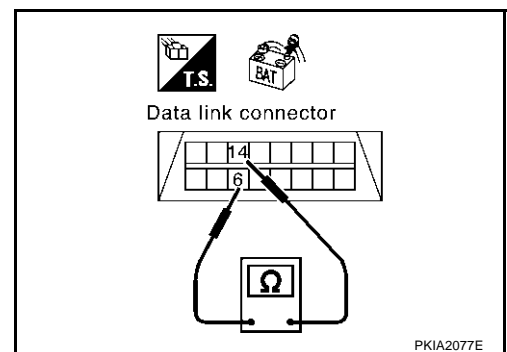
### 2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Approx. 54 - 66Ω**

#### OK or NG

- OK >> Diagnose again. Refer to [LAN-981, "Work Flow"](#).  
 NG >> Repair harness between data link connector and BCM.



**BCM Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

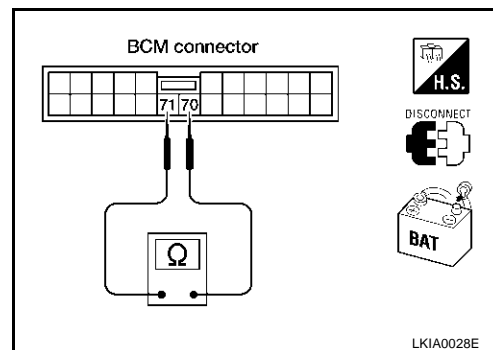
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M37 terminals 70 (L) and 71 (Y).

**70 (L) - 71 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace BCM. Refer to [BCS-36, "Removal and Installation of BCM"](#) .  
 NG >> Repair harness between BCM and data link connector.

**Unified Meter and A/C Amp. Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

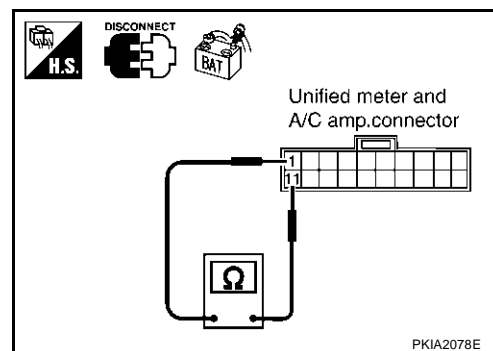
**2. CHECK HARNESS FOR OPEN CIRCUIT**

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

**1 (L) - 11 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace unified meter and A/C amp.  
 NG >> Repair harness between unified meter and A/C amp. and data link connector.



## Steering Angle Sensor Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of steering angle sensor for damage, bend and loose connection (sensor side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

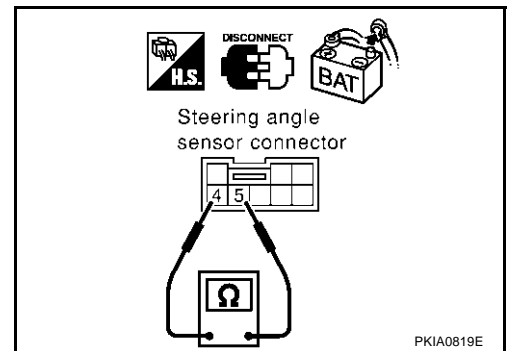
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M33 terminals 4 (L) and 5 (Y).

**4 (L) - 5 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace steering angle sensor.  
 NG >> Repair harness between steering angle sensor and data link connector.



## AWD Control Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of AWD control unit for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

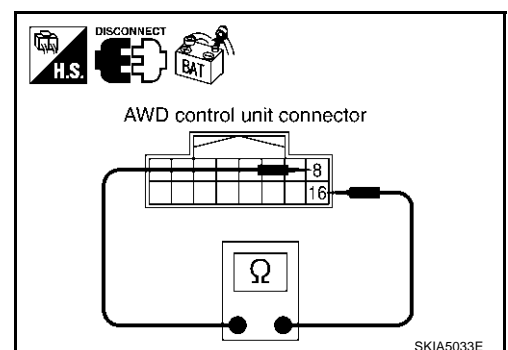
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect AWD control unit connector.
2. Check resistance between AWD control unit harness connector E111 terminals 8 (L) and 16 (Y).

**8 (L) - 16 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace AWD control unit.  
 NG >> Repair harness between AWD control unit and IPDM E/R.





## ABS Actuator and Electric Unit (Control Unit) Circuit Check

AKS00773

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

#### OK or NG

- OK >> GO TO 2.  
NG >> Repair terminal or connector.

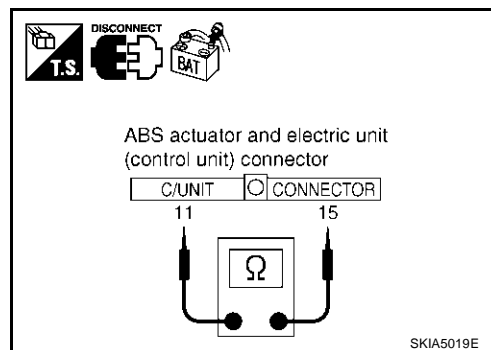
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

**11 (L) - 15 (Y) : Approx. 54 - 66Ω**

#### OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).  
NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



AKS00774

## IPDM E/R Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

#### OK or NG

- OK >> GO TO 2.  
NG >> Repair terminal or connector.

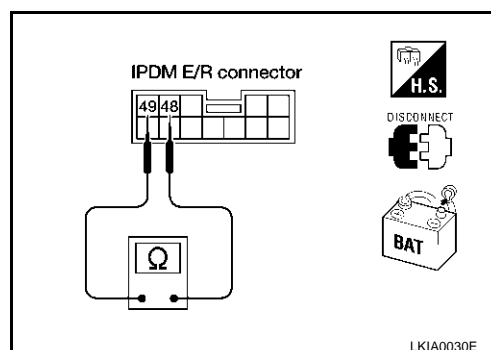
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y) : Approx. 108 - 132Ω**

#### OK or NG

- OK >> Replace IPDM E/R.  
NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



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## CAN Communication Circuit Check

AKS00775

### 1. CHECK CONNECTOR

---

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, meter side, sensor side and harness side).
  - ECM
  - TCM
  - Low tire pressure warning control unit
  - Display control unit
  - BCM
  - Unified meter and A/C amp.
  - Steering angle sensor
  - AWD control unit
  - ABS actuator and electric unit (control unit)
  - IPDM E/R
  - Between ECM and IPDM E/R
  - Between ECM and TCM

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
  - ECM connector
  - Low tire pressure warning control unit connector
  - Harness connector M82
  - Display control unit connector
  - BCM connector
  - Unified meter and A/C amp. connector
  - Steering angle sensor connector
  - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

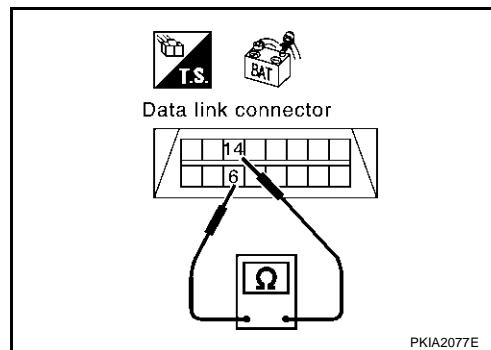
**6 (L) - 14 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 3.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M9.



## 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

**6 (L) - Ground : Continuity should not exist.**

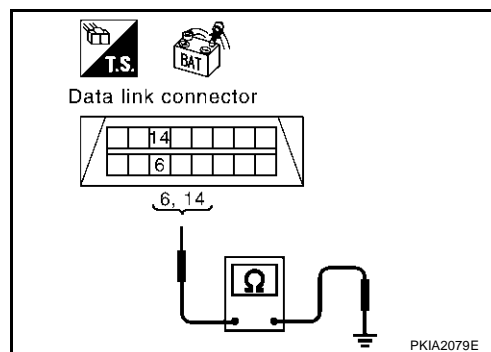
**14 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M9.



## 4. CHECK HARNESS FOR SHORT CIRCUIT

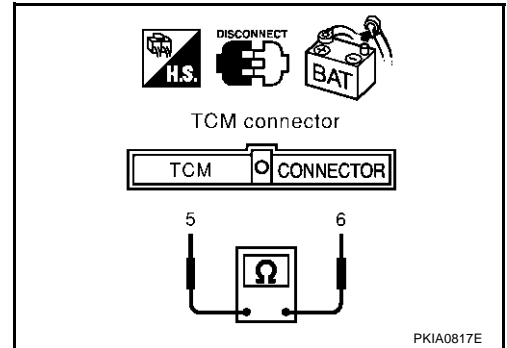
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 5.

NG >> Repair harness between TCM and harness connector F102.



## 5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

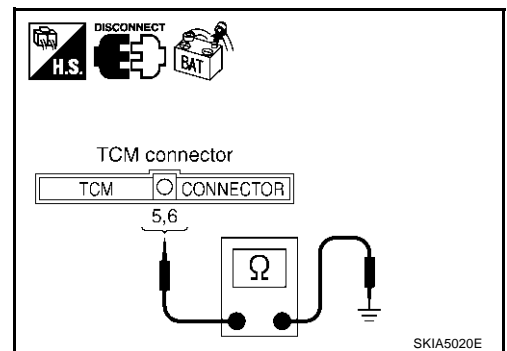
**5 (L) - Ground : Continuity should not exist.**

**6 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 6.

NG >> Repair harness between TCM and harness connector F102.



## 6. CHECK HARNESS FOR SHORT CIRCUIT

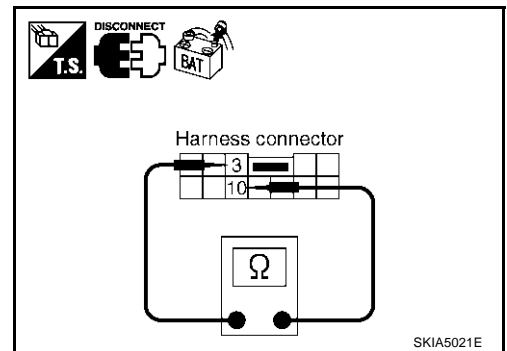
1. Disconnect harness connector B4.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

**3 (L) - 10 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 7.

NG >> Repair harness between harness connector B4 and harness connector B2.



## 7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

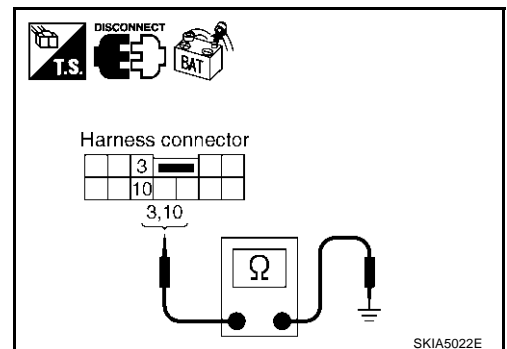
**3 (L) - Ground : Continuity should not exist.**

**10 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 8.

NG >> Repair harness between harness connector B4 and harness connector B2.



## 8. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect AWD control unit connector, ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

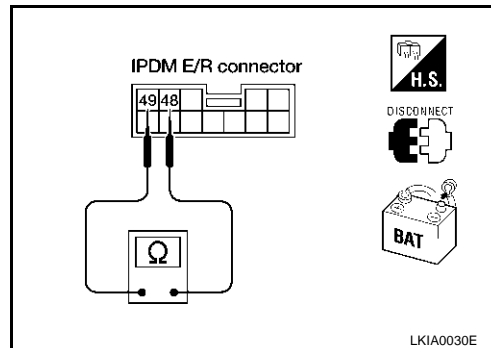
**48 (L) - 49 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 9.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

**48 (L) - Ground : Continuity should not exist.**

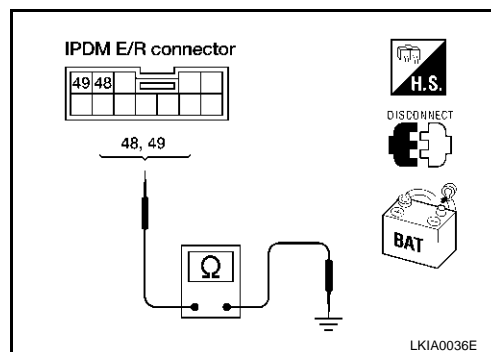
**49 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 10.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 10. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-1010, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

### OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-981, "Work Flow"](#).

NG >> Replace ECM and/or IPDM E/R.

## IPDM E/R Ignition Relay Circuit Check

AKS00776

Check the following. If no malfunction is found, replace the IPDM E/R.

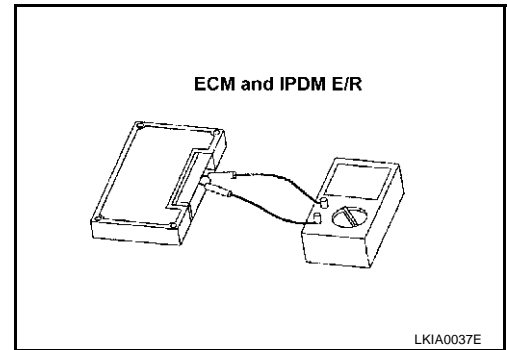
- IPDM E/R power supply circuit. Refer to [PG-45, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#).

## Component Inspection

### ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value ( $\Omega$ ) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



## CAN SYSTEM (TYPE 30)

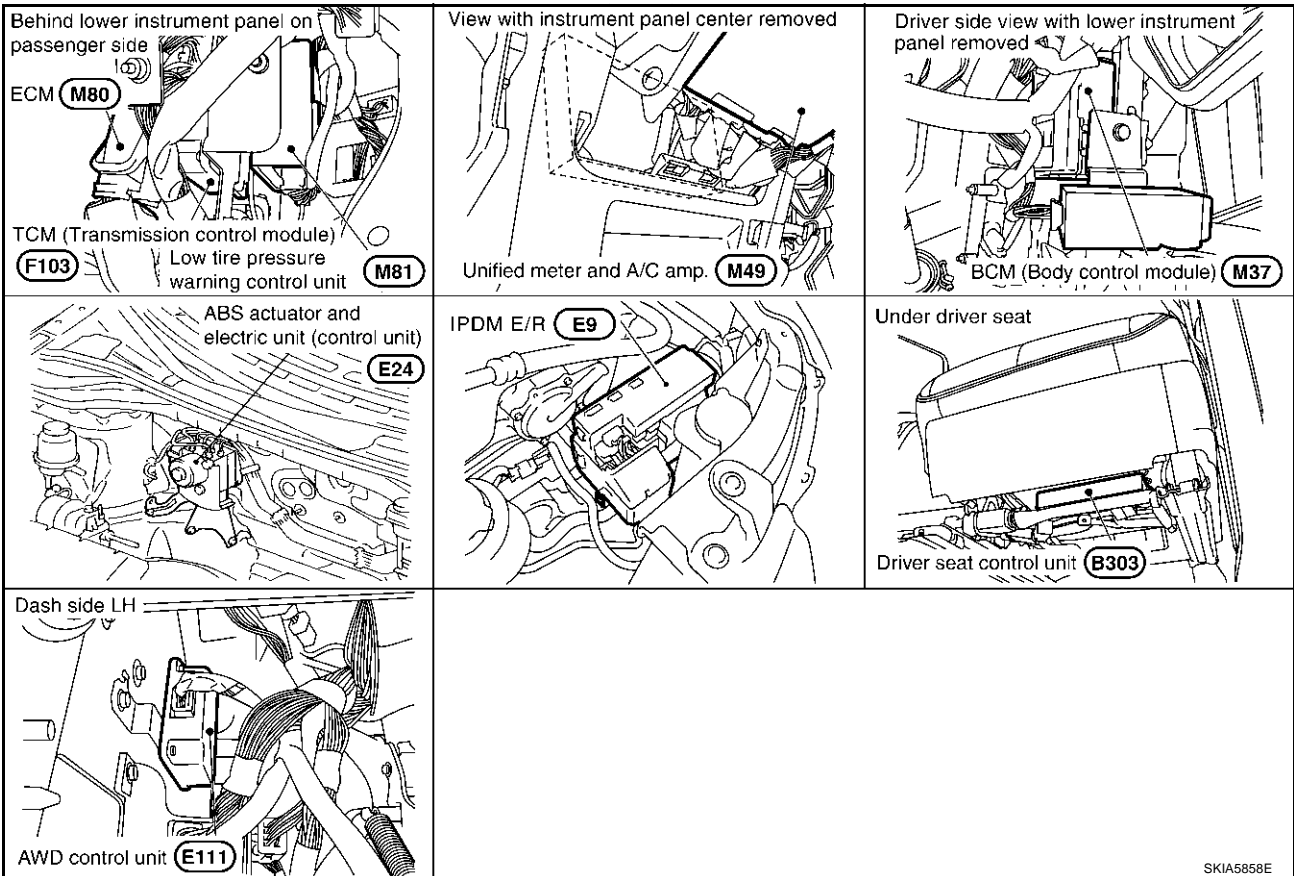
### System Description

AKS00778

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

### Component Parts and Harness Connector Location

AKS00779



SKIA5858E

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
L  
M

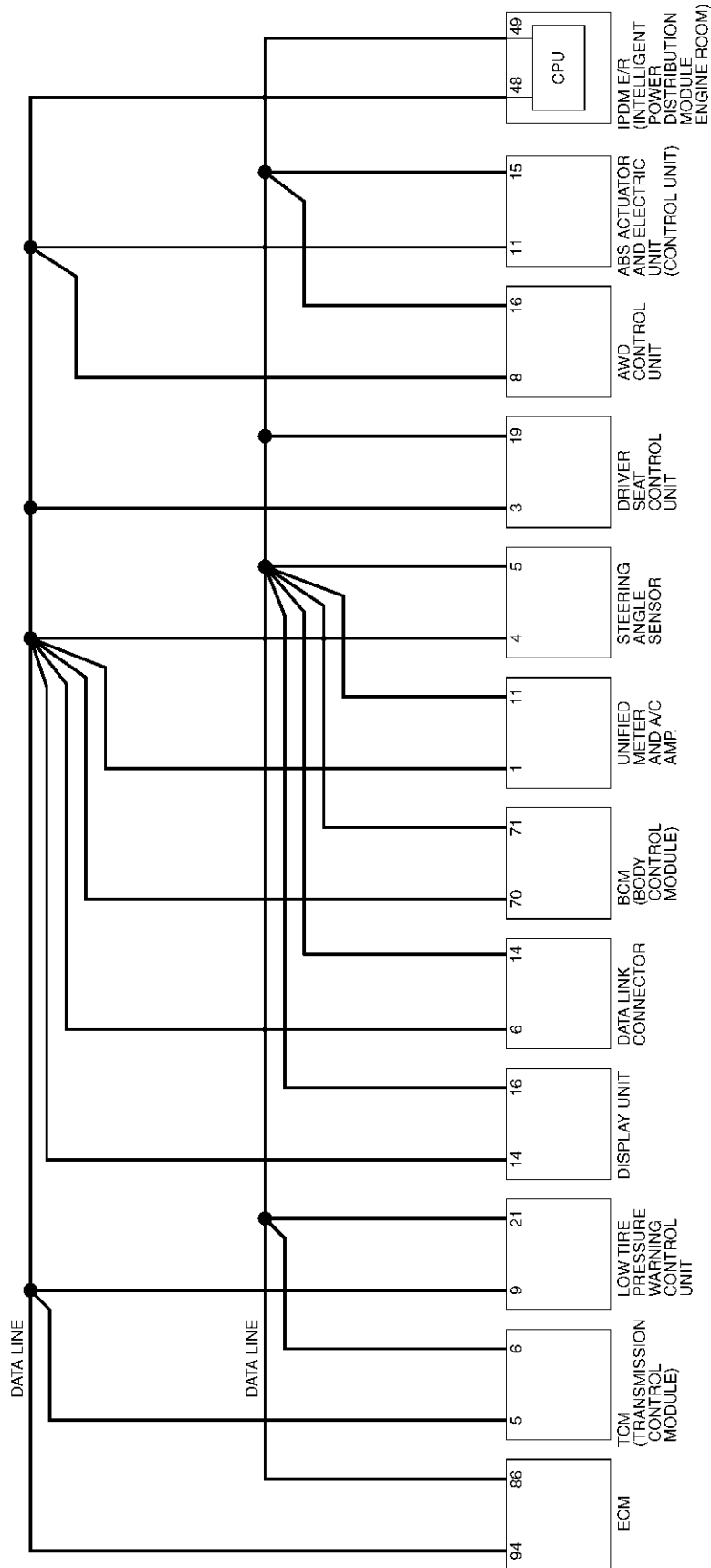
LAN

# CAN SYSTEM (TYPE 30)

[CAN]

## Schematic

AKS0077A



TKWA1039E



# CAN SYSTEM (TYPE 30)

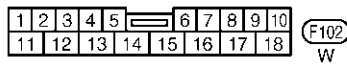
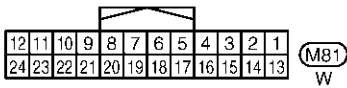
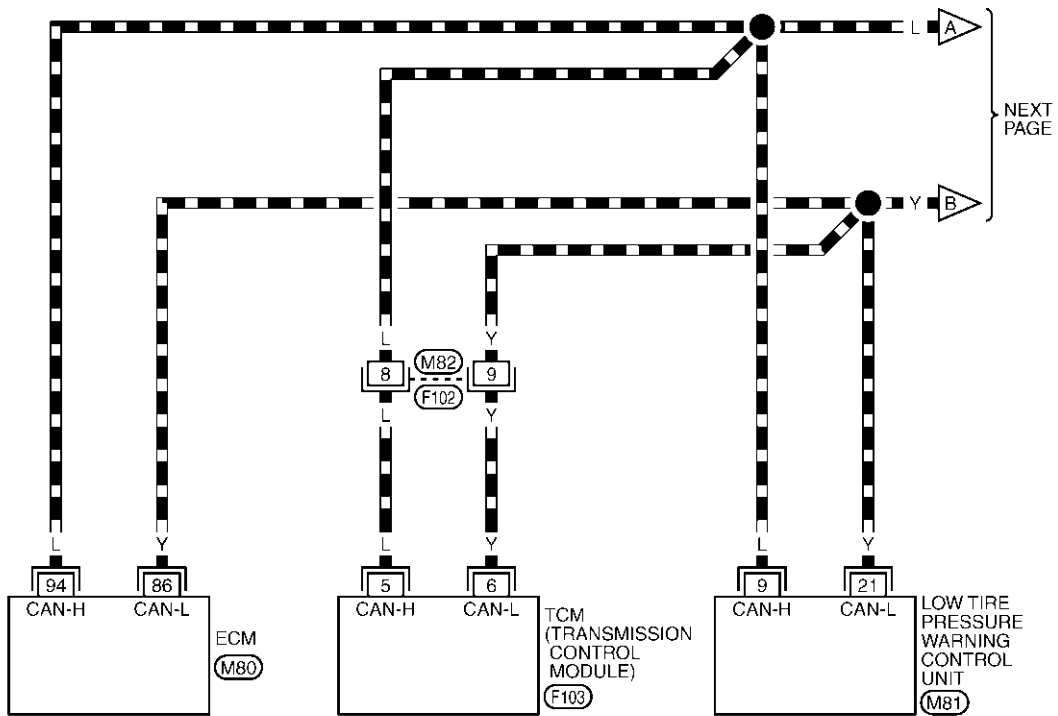
[CAN]

## Wiring Diagram - CAN -

AKS0077B

### LAN-CAN-88

▬ : DATA LINE



REFER TO THE FOLLOWING.  
 (M80), (F103) -ELECTRICAL  
 UNITS

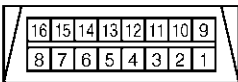
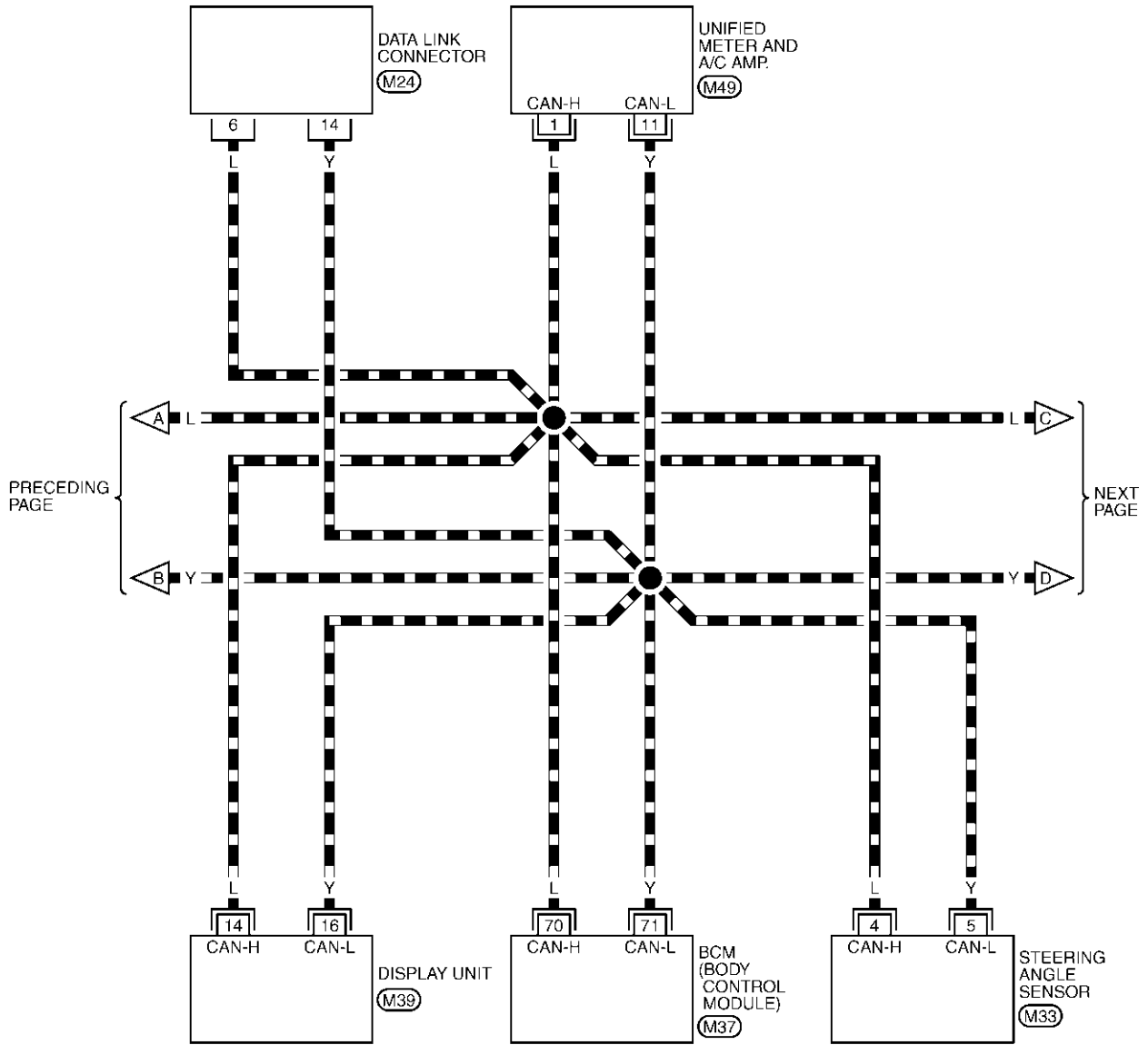
TKWA1040E

# CAN SYSTEM (TYPE 30)

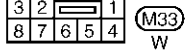
[CAN]

## LAN-CAN-89

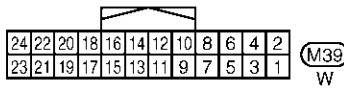
▬ : DATA LINE



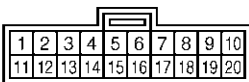
(M24)  
W



(M33)  
W



(M39)  
W



(M49)  
GR



REFER TO THE FOLLOWING.

(M37) -ELECTRICAL UNITS

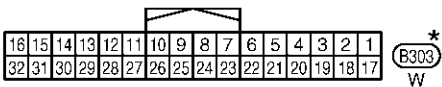
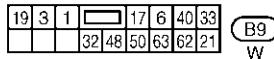
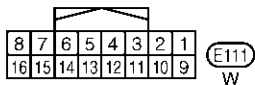
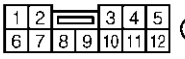
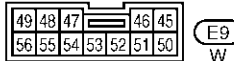
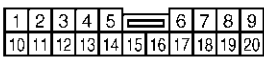
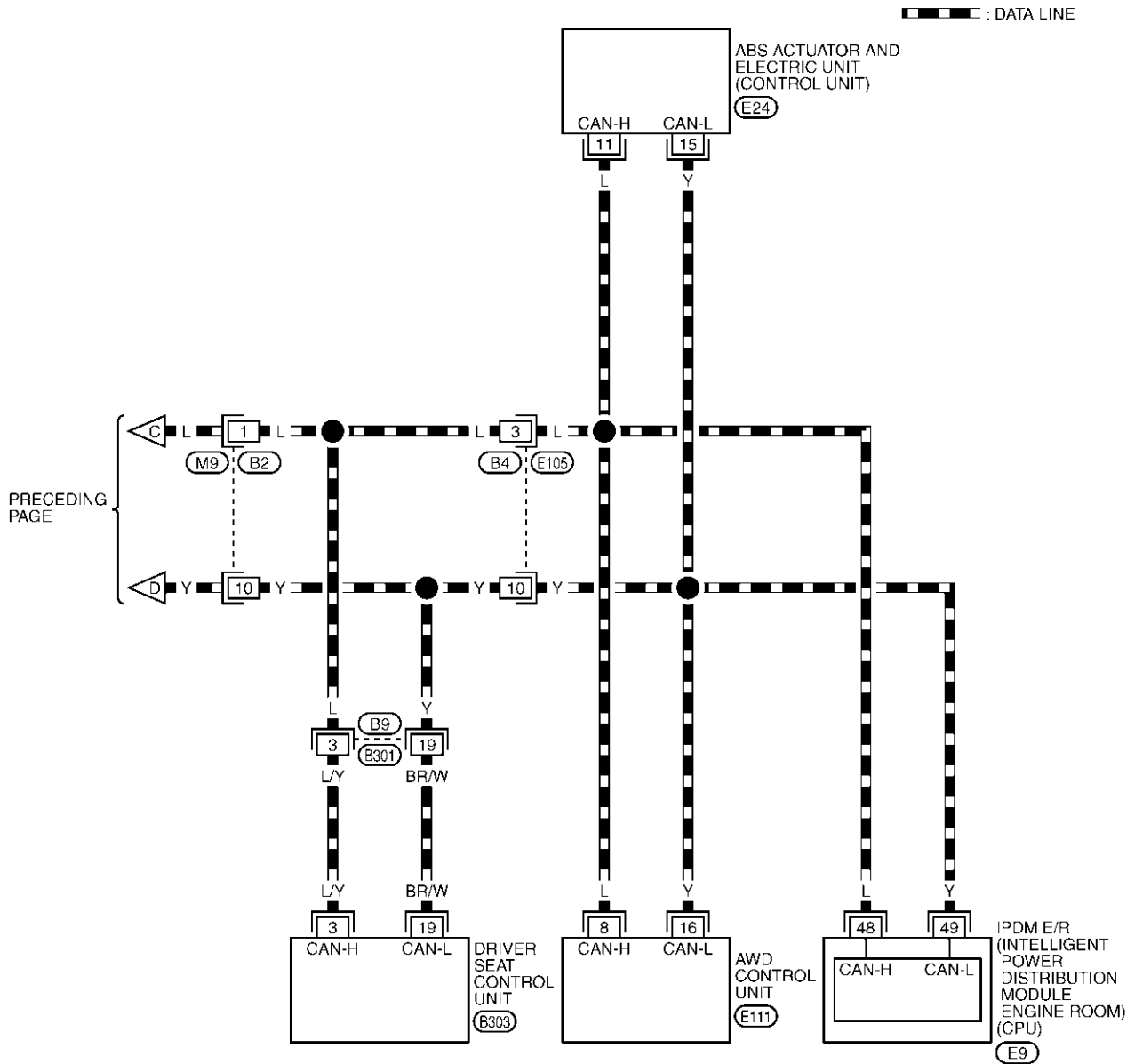
TKWA1041E

# CAN SYSTEM (TYPE 30)

[CAN]

## LAN-CAN-90

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
LAN  
L  
M



\*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

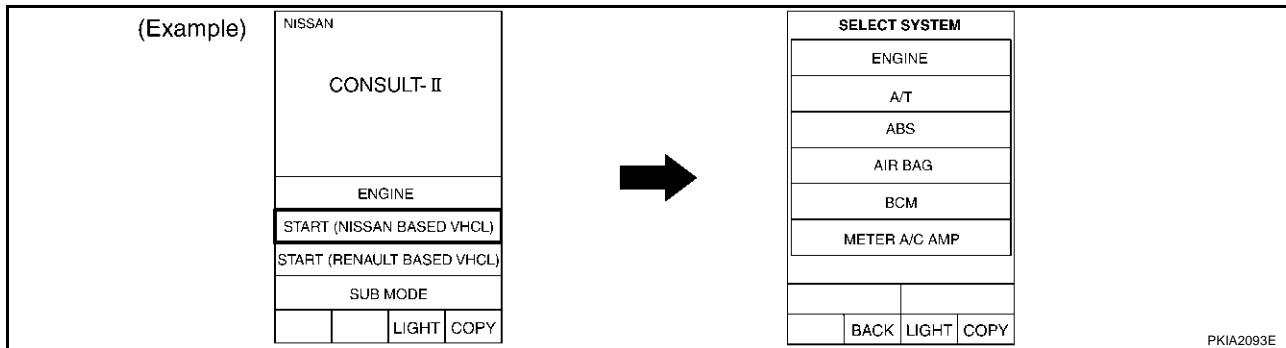
REFER TO THE FOLLOWING.  
(E24) -ELECTRICAL UNITS

TKWA1042E

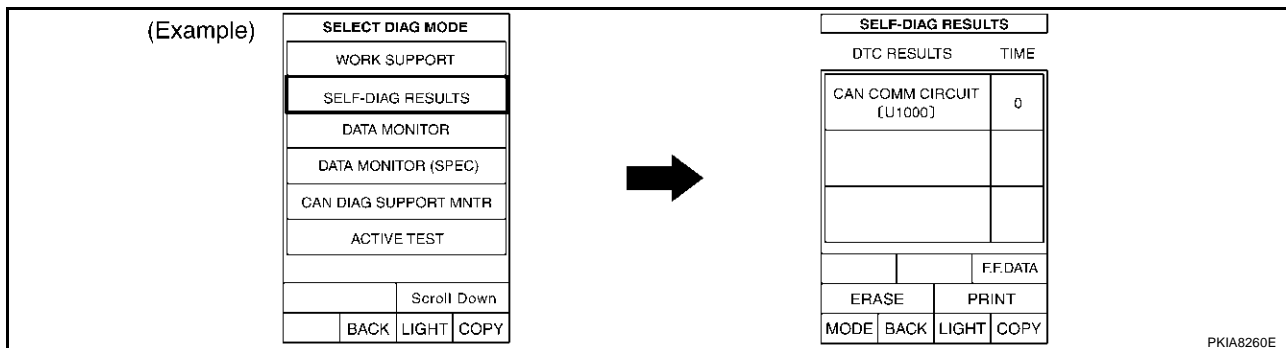
## Work Flow

AKS00C5V

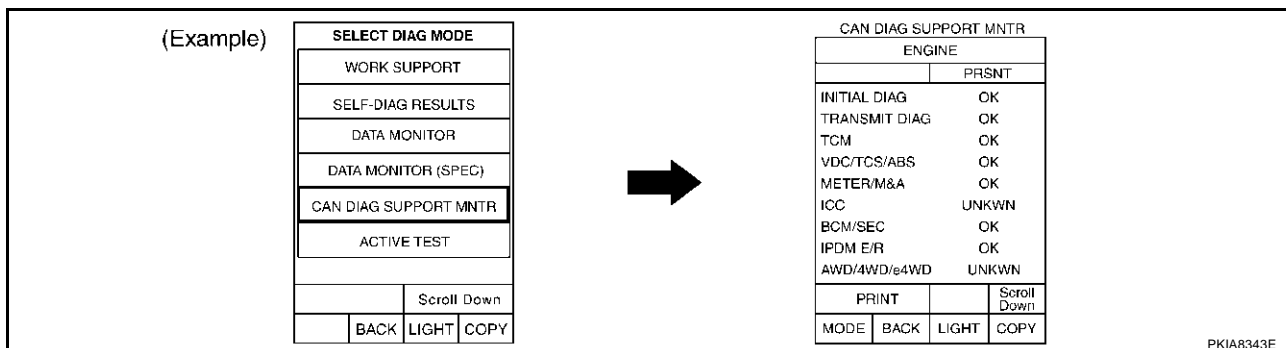
- When there are no indications of "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP" or "AUTO DRIVE POS." on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "AUTO DRIVE POS.", "ALL MODE AWD/4WD" and "ABS" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "AUTO DRIVE POS.", "ALL MODE AWD/4WD" and "ABS" displayed on CONSULT-II.



- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-1018, "CHECK SHEET"](#) .
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "V" onto the items with "No indication", "NG", or "UNKWKN" in the check sheet table. Refer to [LAN-1018, "CHECK SHEET"](#) .

**NOTE:**

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
  - The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual. So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.
- Check CAN communication line of the integrated display system. Refer to [AV-110, "CAN Communication Line Check"](#) .

## CAN SYSTEM (TYPE 30)

[CAN]

7. Attach the CAN DIAG MONITOR check sheet onto the check sheet. Refer to [LAN-1018, "CHECK SHEET"](#) .
8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG MONITOR check sheet. Refer to [LAN-1018, "CHECK SHEET"](#) .  
**NOTE:**  
If "NG" is displayed on "CAN COMM" as "CAN DIAG MNTR" for the diagnosed control unit, replace the control unit. Refer to [AV-110, "CAN Communication Line Check"](#) .
9. According to the check sheet results (example), start inspection. Refer to [LAN-1020, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

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# CAN SYSTEM (TYPE 30)

[CAN]

## CHECK SHEET

### NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

Attach copy of  
display unit  
CAN DIAG MONITOR check sheet

PKIB1051E

# CAN SYSTEM (TYPE 30)

[CAN]

Attach copy of ENGINE SELF-DIAG RESULTS	Attach copy of TRANSMISSION SELF-DIAG RESULTS	Attach copy of AIR PRESSURE MONITOR SELF-DIAG RESULTS	Attach copy of BCM SELF-DIAG RESULTS
Attach copy of METER A/C AMP SELF-DIAG RESULTS	Attach copy of AUTO DRIVE POS. SELF-DIAG RESULTS	Attach copy of ALL MODE AWD/4WD SELF-DIAG RESULTS	Attach copy of ABS SELF-DIAG RESULTS
Attach copy of ENGINE CAN DIAG SUPPORT MNTR	Attach copy of TRANSMISSION CAN DIAG SUPPORT MNTR	Attach copy of AIR PRESSURE MONITOR CAN DIAG SUPPORT MNTR	Attach copy of BCM CAN DIAG SUPPORT MNTR
Attach copy of METER A/C AMP CAN DIAG SUPPORT MNTR	Attach copy of AUTO DRIVE POS. CAN DIAG SUPPORT MNTR	Attach copy of ALL MODE AWD/4WD CAN DIAG SUPPORT MNTR	Attach copy of ABS CAN DIAG SUPPORT MNTR

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PKIB0899E

# CAN SYSTEM (TYPE 30)

[CAN]

## CHECK SHEET RESULTS (EXAMPLE)

### NOTE:

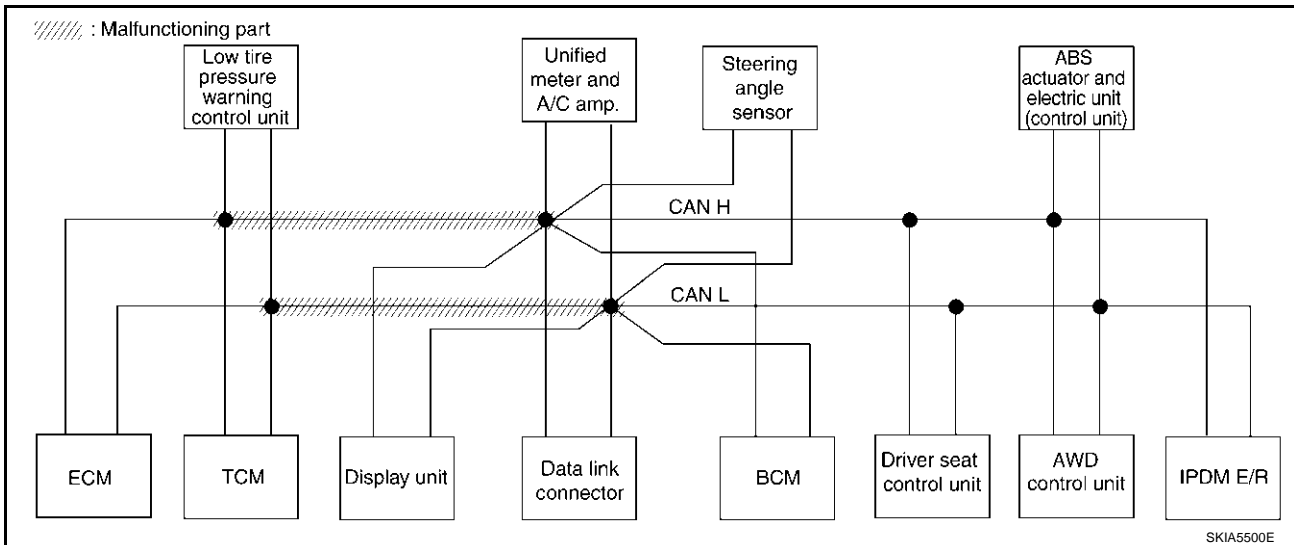
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

### Case 1

Check harness between TCM and data link connector. Refer to [LAN-1036, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3 ✓	—	CAN 6 ✓	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1052E



SKIA5500E



# CAN SYSTEM (TYPE 30)

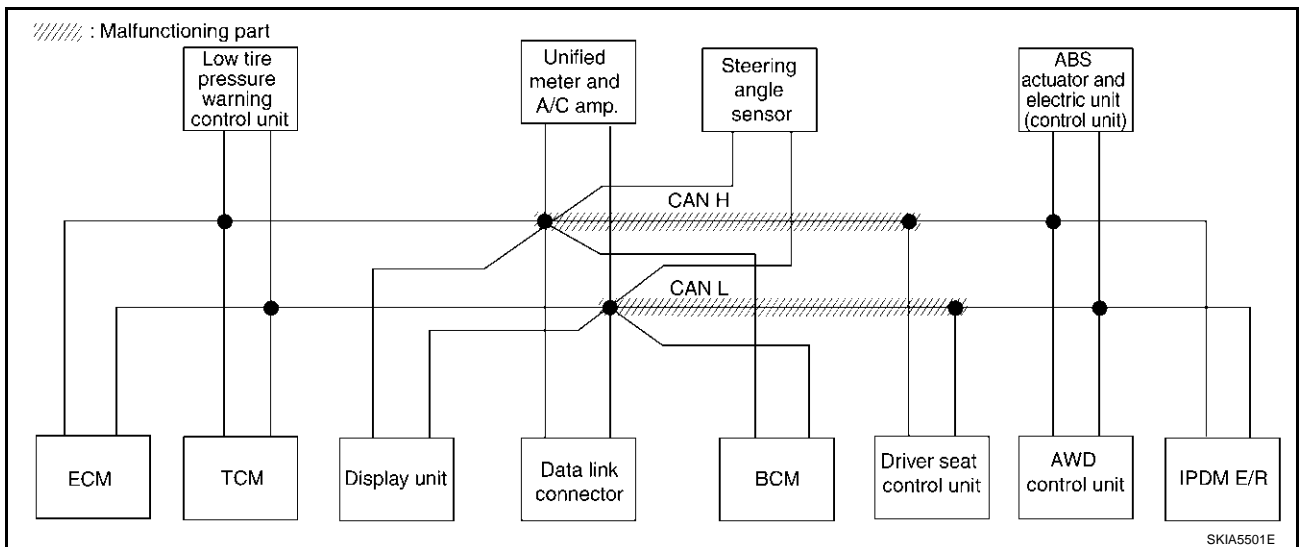
[CAN]

## Case 2

Check harness between data link connector and driver seat control unit. Refer to [LAN-1036, "Circuit Check Between Data Link Connector and Driver Seat Control Unit"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1053E



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# CAN SYSTEM (TYPE 30)

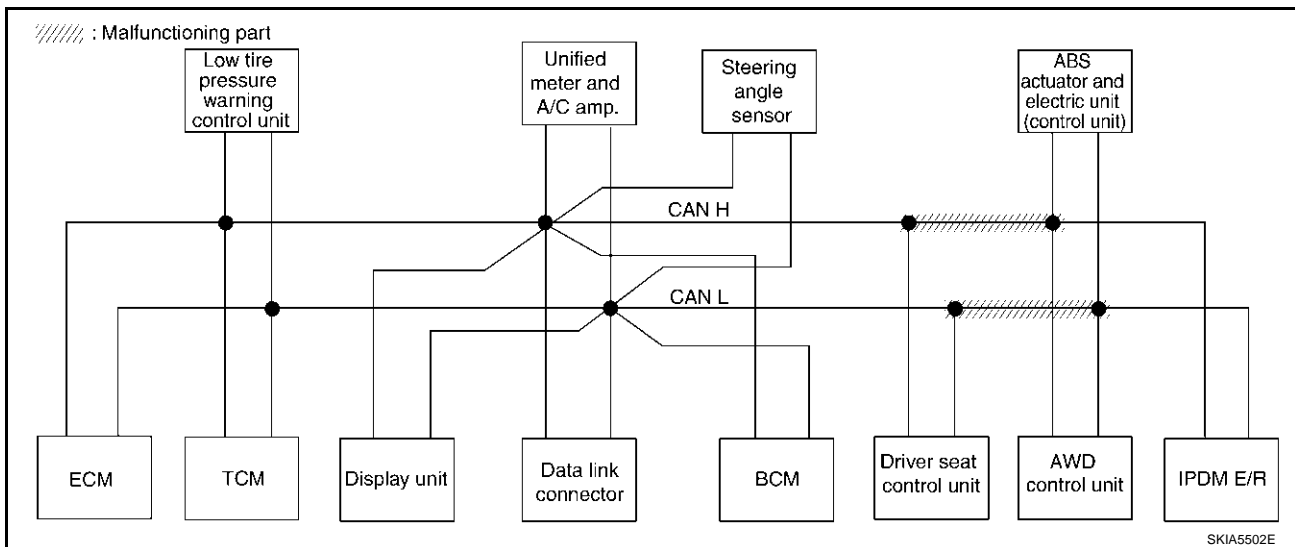
[CAN]

## Case 3

Check harness between driver seat control unit and ABS actuator and electric unit (control unit). Refer to [LAN-1037, "Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit \(Control Unit\)"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1054E



SKIA5502E

# CAN SYSTEM (TYPE 30)

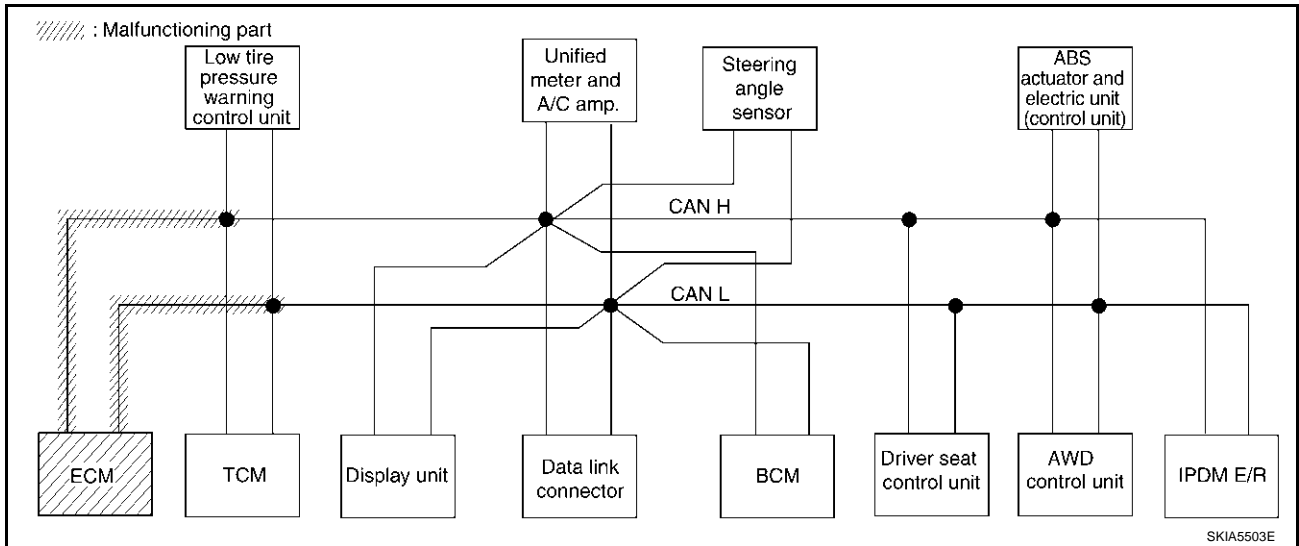
[CAN]

## Case 4

Check ECM circuit. Refer to [LAN-1038, "ECM Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW <sup>N</sup>	—	UNKW <sup>N</sup>	—	—	UNKW <sup>N</sup>	UNKW <sup>N</sup>	—	UNKW <sup>N</sup>	UNKW <sup>N</sup>	UNKW <sup>N</sup>
TRANSMISSION	No indication	NG	UNKW <sup>N</sup>	UNKW <sup>N</sup>	—	—	—	—	UNKW <sup>N</sup>	—	—	UNKW <sup>N</sup>	—
AIR PRESSURE MONITOR	No indication	NG	UNKW <sup>N</sup>	—	—	—	—	—	UNKW <sup>N</sup>	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKW <sup>N</sup>	UNKW <sup>N</sup>	—	—	—	—	UNKW <sup>N</sup>	—	—	—	UNKW <sup>N</sup>
METER A/C AMP	No indication	—	UNKW <sup>N</sup>	UNKW <sup>N</sup>	UNKW <sup>N</sup>	UNKW <sup>N</sup>	UNKW <sup>N</sup>	UNKW <sup>N</sup>	—	—	UNKW <sup>N</sup>	UNKW <sup>N</sup>	—
AUTO DRIVE POS.	No indication	NG	UNKW <sup>N</sup>	—	UNKW <sup>N</sup>	—	—	UNKW <sup>N</sup>	UNKW <sup>N</sup>	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKW <sup>N</sup>	UNKW <sup>N</sup>	—	—	—	—	UNKW <sup>N</sup>	—	—	UNKW <sup>N</sup>	—
ABS	—	NG	UNKW <sup>N</sup>	UNKW <sup>N</sup>	UNKW <sup>N</sup>	—	—	—	—	UNKW <sup>N</sup>	UNKW <sup>N</sup>	—	—

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# CAN SYSTEM (TYPE 30)

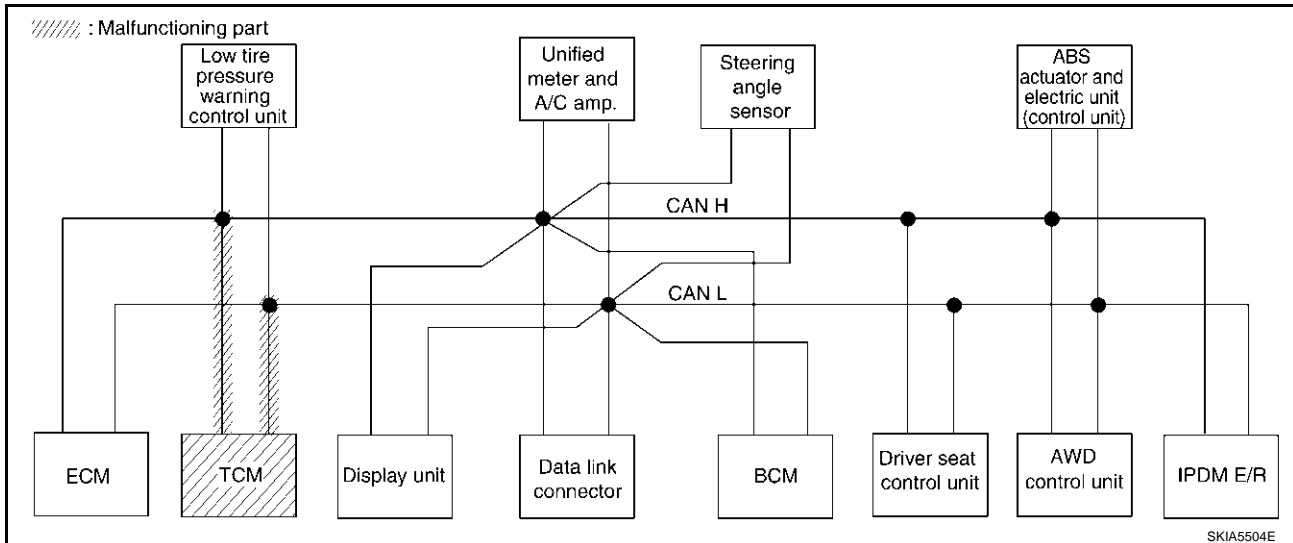
[CAN]

## Case 5

Check TCM circuit. Refer to [LAN-1038, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1056E



# CAN SYSTEM (TYPE 30)

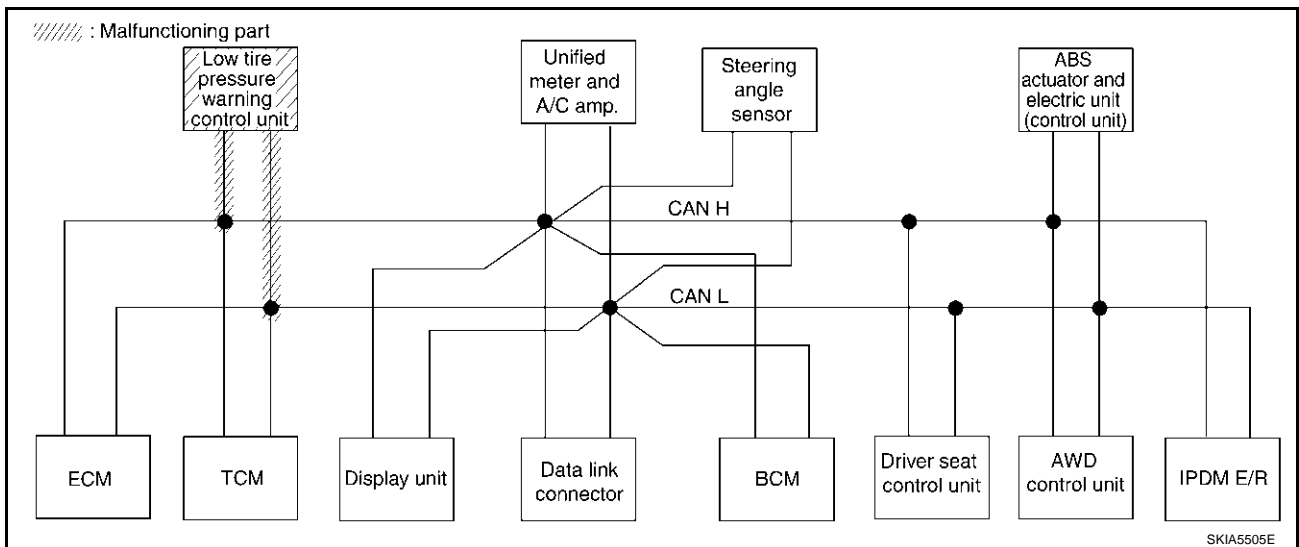
[CAN]

## Case 6

Check low tire pressure warning control unit circuit. Refer to [LAN-1039, "Low Tire Pressure Warning Control Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6 ✓	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

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# CAN SYSTEM (TYPE 30)

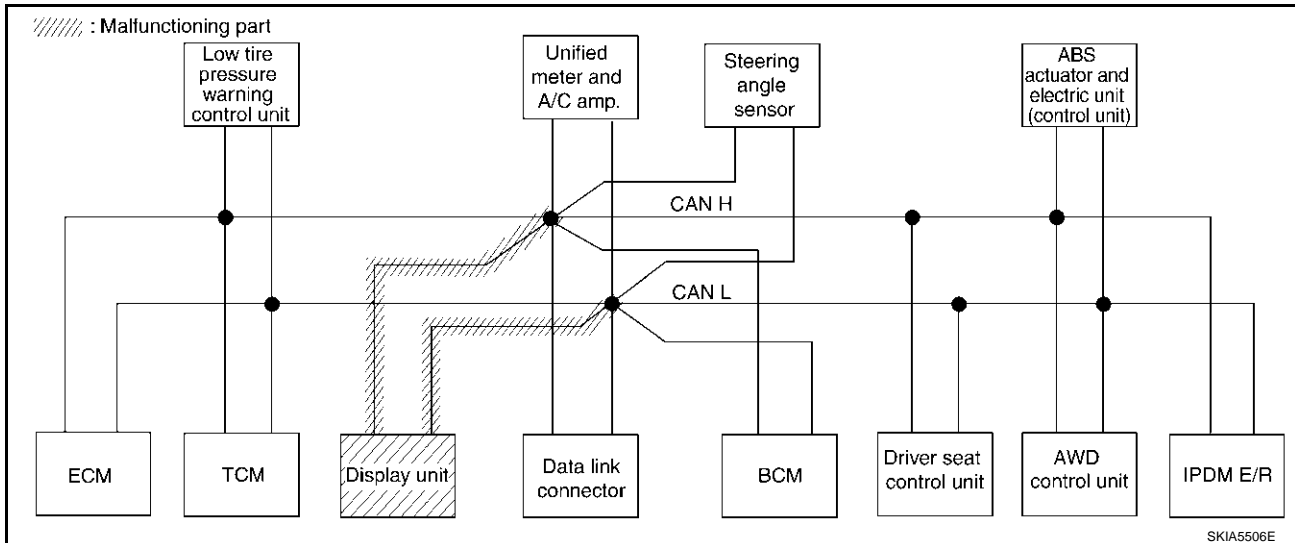
[CAN]

## Case 7

Check display unit circuit. Refer to [LAN-1039, "Display Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CA✓1	CA✓3	—	CA✓6	—	CA✓2	CA✓5	—	—	—	CA✓7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1058E



# CAN SYSTEM (TYPE 30)

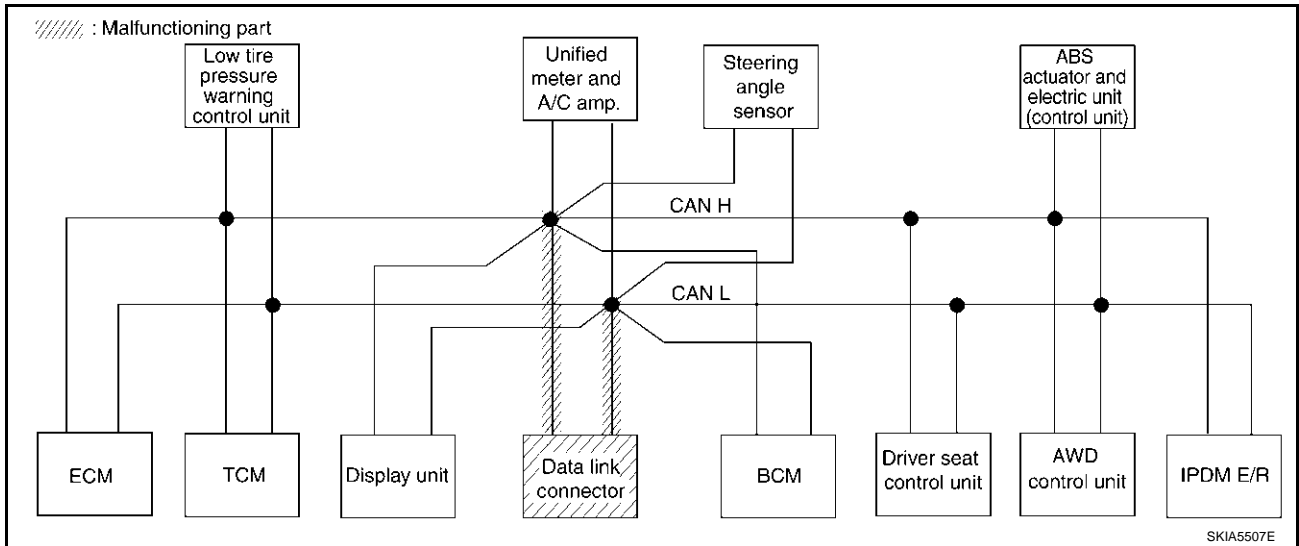
[CAN]

## Case 8

Check data link connector circuit. Refer to [LAN-1040, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

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# CAN SYSTEM (TYPE 30)

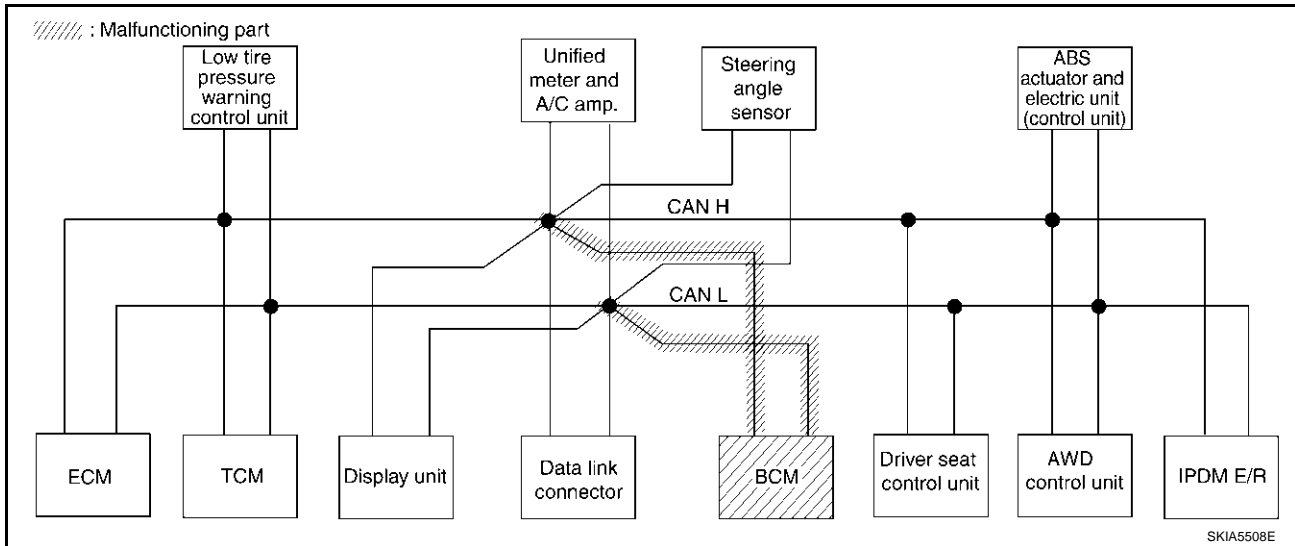
[CAN]

## Case 9

Check BCM circuit. Refer to [LAN-1040, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1060E





# CAN SYSTEM (TYPE 30)

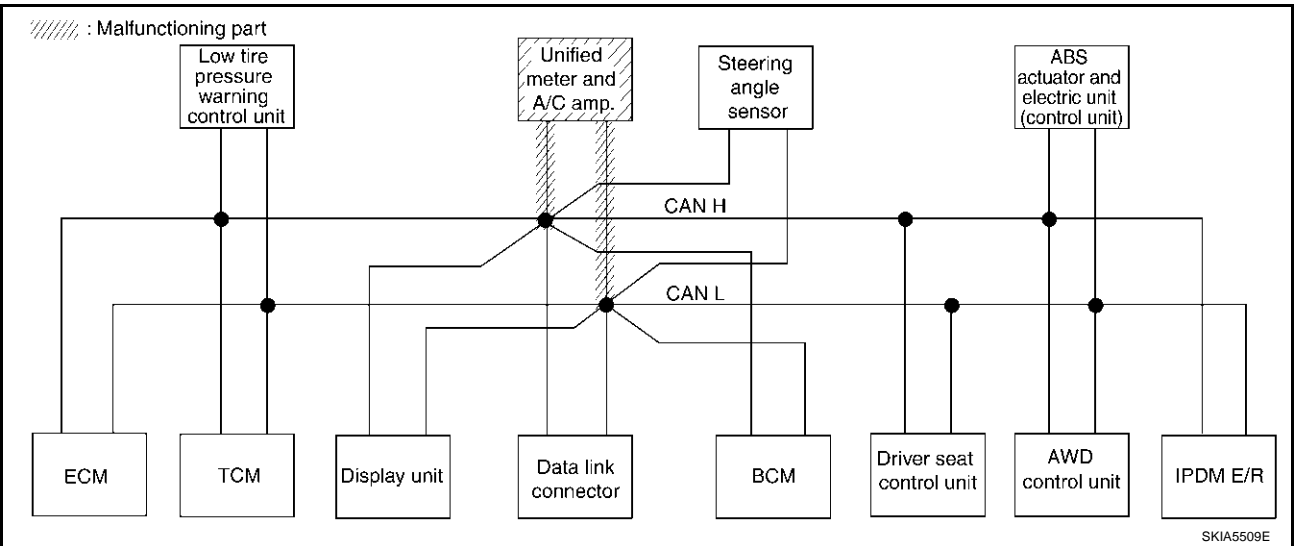
[CAN]

## Case 10

Check unified meter and A/C amp. circuit. Refer to [LAN-1041, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1061E



# CAN SYSTEM (TYPE 30)

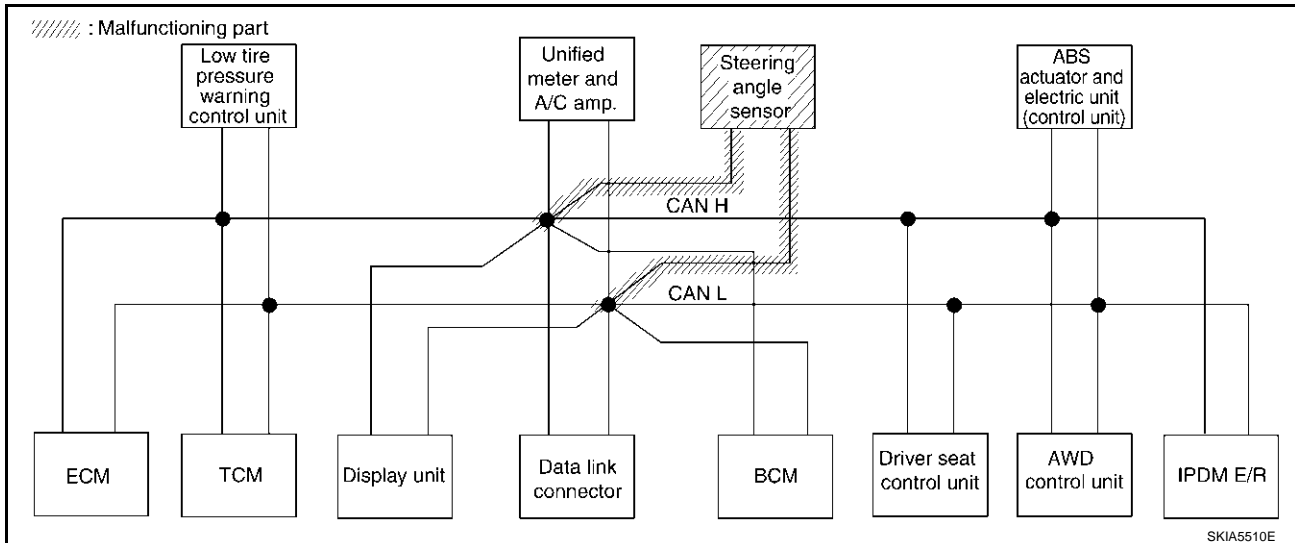
[CAN]

## Case 11

Check steering angle sensor circuit. Refer to [LAN-1041, "Steering Angle Sensor Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN ✓	UNKWN	—	—

PKIB1062E



SKIA5510E

# CAN SYSTEM (TYPE 30)

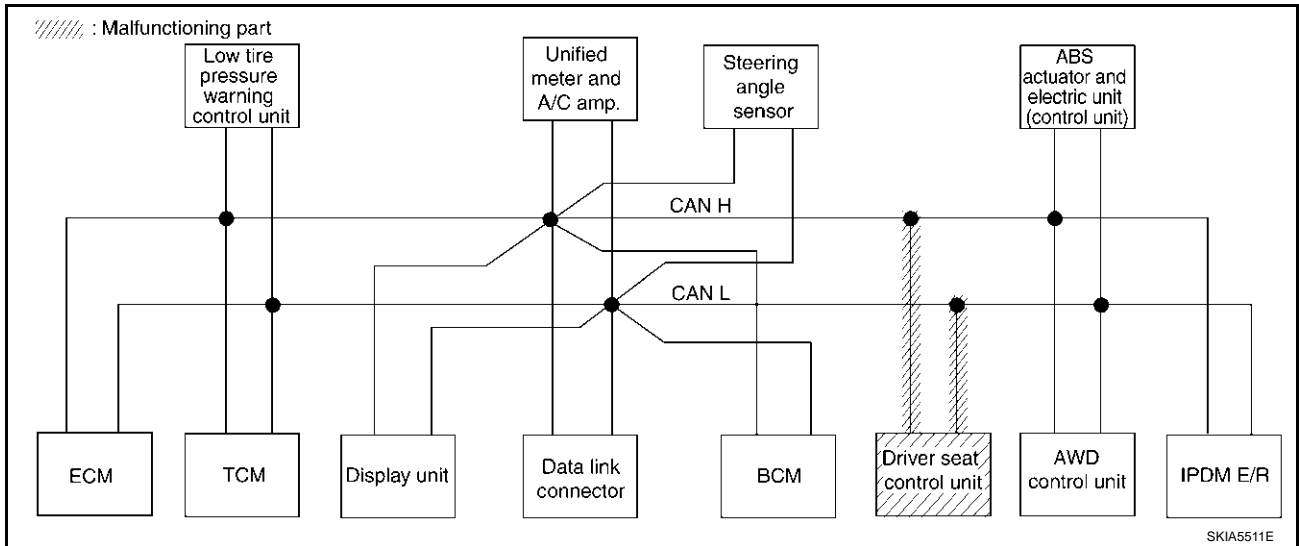
[CAN]

## Case 12

Check driver seat control unit circuit. Refer to [LAN-1042, "Driver Seat Control Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1063E



# CAN SYSTEM (TYPE 30)

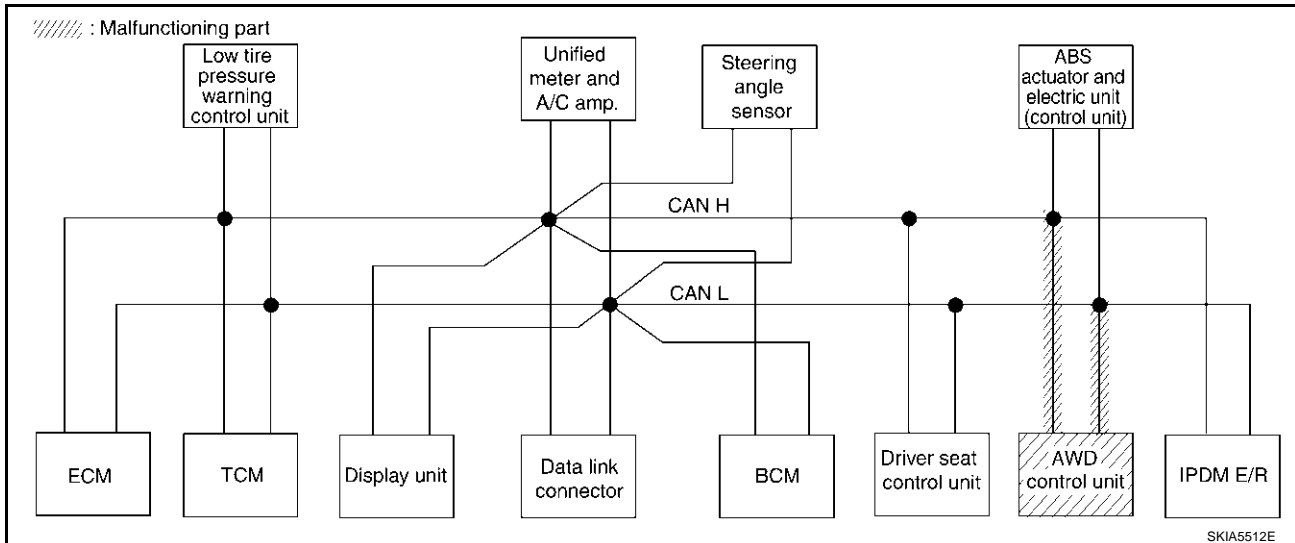
[CAN]

## Case 13

Check AWD control unit circuit. Refer to [LAN-1042, "AWD Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1064E



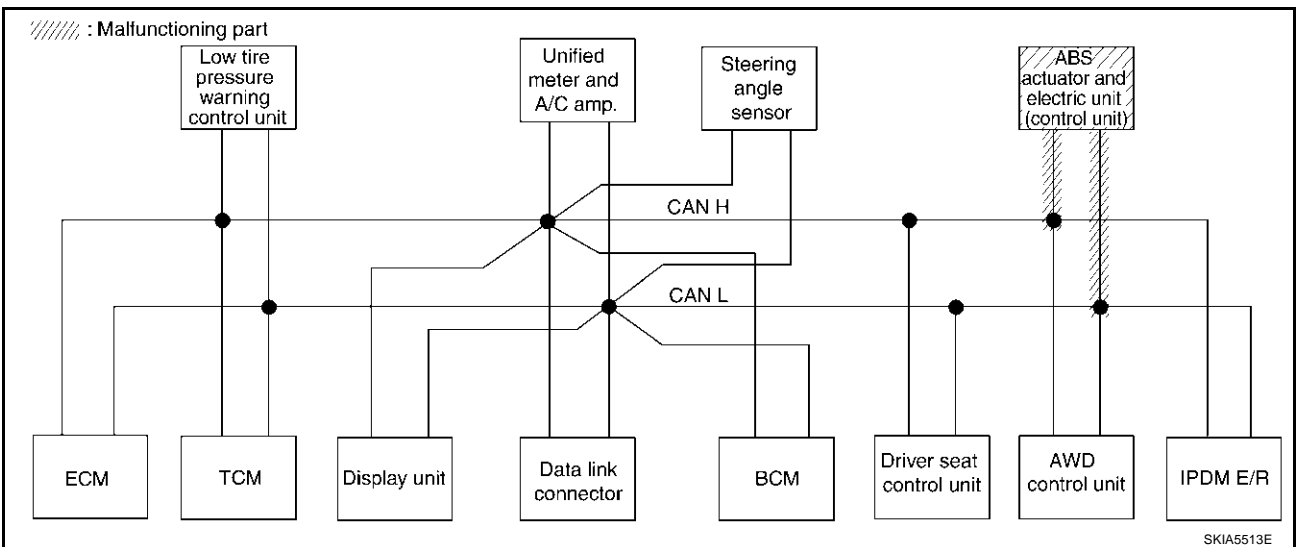
## Case 14

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-1043, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

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SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN ✓	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN ✓	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN ✓	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN ✓	—
ABS	—	NG	UNKWN ✓	UNKWN ✓	UNKWN ✓	—	—	—	—	UNKWN ✓	UNKWN ✓	—	—

PKIB1065E



# CAN SYSTEM (TYPE 30)

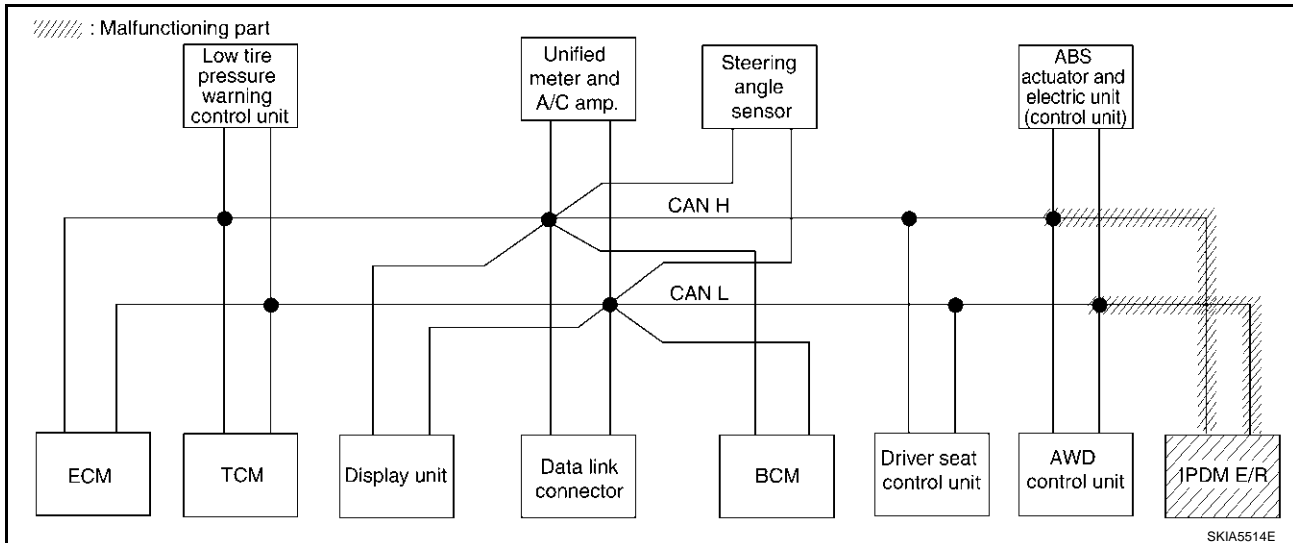
[CAN]

## Case 15

Check IPDM E/R circuit. Refer to [LAN-1043, "IPDM E/R Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1066E



## Case 16

Check CAN communication circuit. Refer to [LAN-1044, "CAN Communication Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1067E

# CAN SYSTEM (TYPE 30)

[CAN]

## Case 17

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-1048, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1068E

## Case 18

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-1048, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1069E

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LAN

## Circuit Check Between TCM and Data Link Connector

AKS0077D

### 1. CHECK HARNESS FOR OPEN CIRCUIT

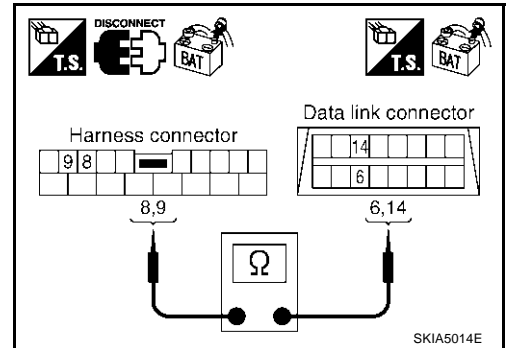
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

**8 (L) - 6 (L) : Continuity should exist.**

**9 (Y) - 14 (Y) : Continuity should exist.**

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-1016, "Work Flow"](#) .
- NG >> Repair harness.



## Circuit Check Between Data Link Connector and Driver Seat Control Unit

AKS0077E

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).

- Harness connector M9
- Harness connector B2

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

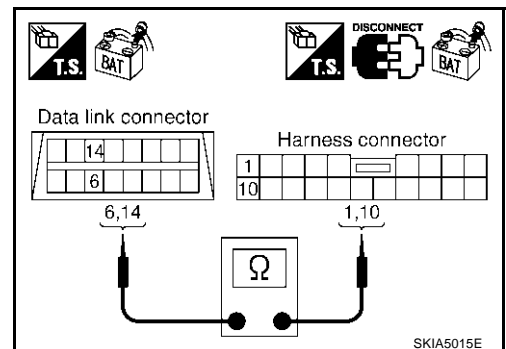
1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

**6 (L) - 1 (L) : Continuity should exist.**

**14 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.





### 3. CHECK HARNESS FOR OPEN CIRCUIT

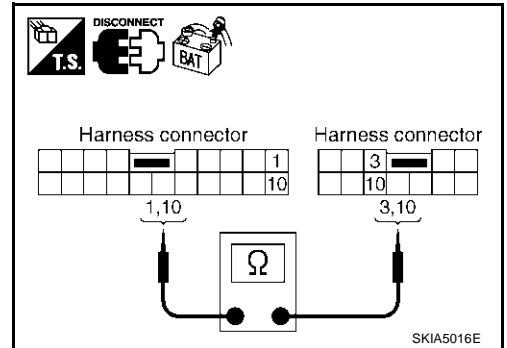
1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-1016, "Work Flow"](#).
- NG >> Repair harness.



## Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit)

AKS0077F

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector B4
  - Harness connector E105

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

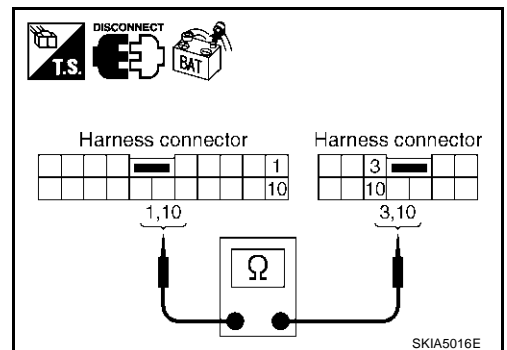
1. Disconnect harness connector B2 and harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



LAN

L

M

### 3. CHECK HARNESS FOR OPEN CIRCUIT

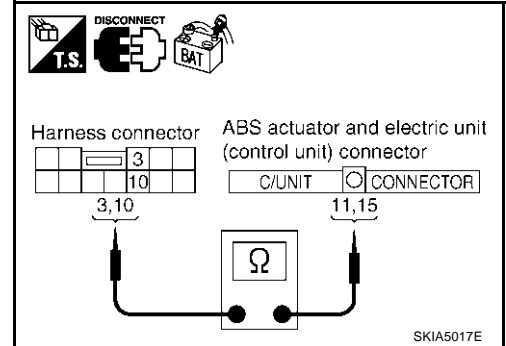
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

**3 (L) - 11 (L) : Continuity should exist.**

**10 (Y) - 15 (Y) : Continuity should exist.**

#### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-1016, "Work Flow"](#) .
- NG >> Repair harness.



## ECM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

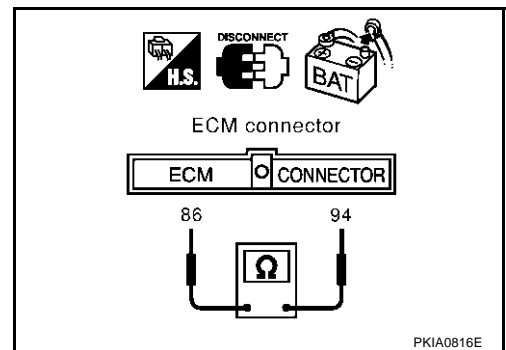
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

**94 (L) - 86 (Y) : Approx. 108 - 132Ω**

#### OK or NG

- OK >> Replace ECM.
- NG >> Repair harness between ECM and TCM.



## TCM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
  - TCM connector
  - Harness connector F102
  - Harness connector M82

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

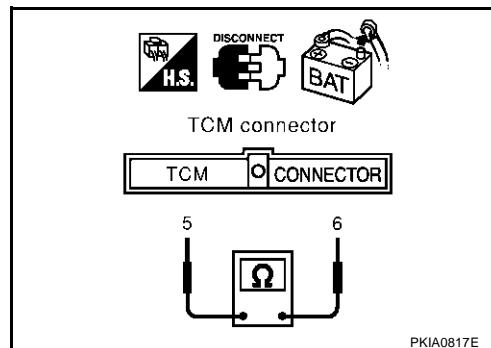
1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace TCM.  
 NG >> Repair harness between TCM and low tire pressure warning control unit.



## Low Tire Pressure Warning Control Unit Circuit Check

AKS0077I

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of low tire pressure warning control unit for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

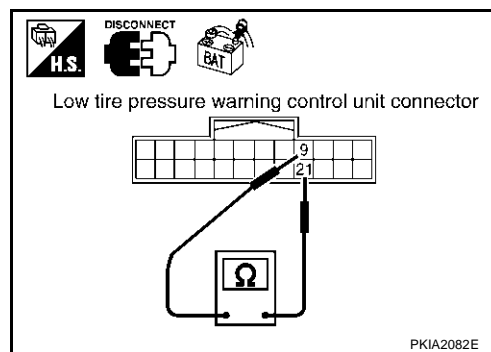
1. Disconnect low tire pressure warning control unit connector.
2. Check resistance between low tire pressure warning control unit harness connector M81 terminals 9 (L) and 21 (Y).

**9 (L) - 21 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace low tire pressure warning control unit.  
 NG >> Repair harness between low tire pressure warning control unit and TCM.



## Display Unit Circuit Check

AKS0077J

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display unit for damage, bend and loose connection (unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

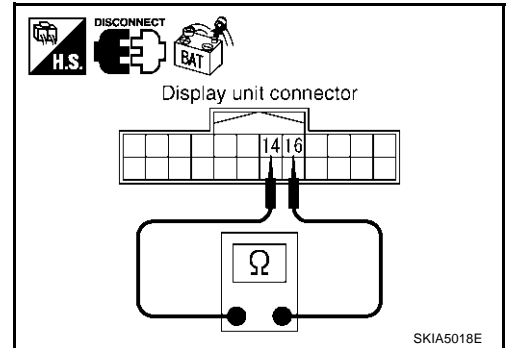
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect display unit connector.
2. Check resistance between display unit harness connector M39 terminals 14 (L) and 16 (Y).

**14 (L) - 16 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace display unit.  
 NG >> Repair harness between display unit and data link connector.



## Data Link Connector Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

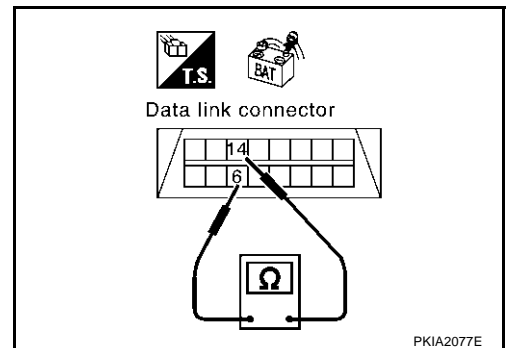
## 2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Diagnose again. Refer to [LAN-1016, "Work Flow"](#).  
 NG >> Repair harness between data link connector and BCM.



## BCM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

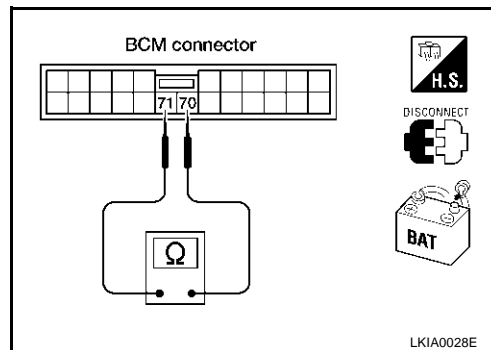
1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M37 terminals 70 (L) and 71 (Y).

**70 (L) - 71 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace BCM. Refer to [BCS-36, "Removal and Installation of BCM"](#).
- NG >> Repair harness between BCM and data link connector.



AKS0077M

## Unified Meter and A/C Amp. Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

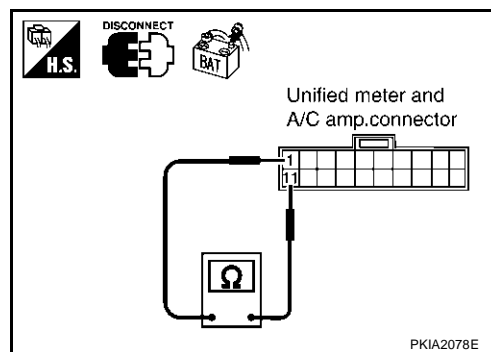
1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

**1 (L) - 11 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace unified meter and A/C amp.
- NG >> Repair harness between unified meter and A/C amp. and data link connector.



AKS0077N

## Steering Angle Sensor Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of steering angle sensor for damage, bend and loose connection (sensor side and harness side).

### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

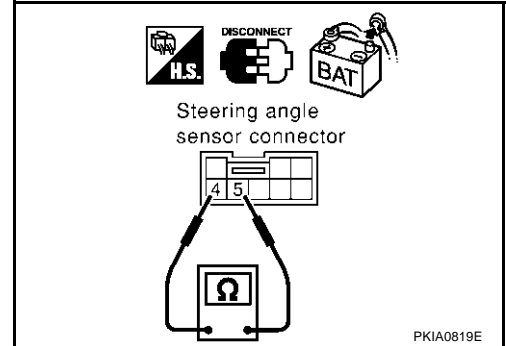
1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M33 terminals 4 (L) and 5 (Y).

**4 (L) - 5 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace steering angle sensor.  
 NG >> Repair harness between steering angle sensor and data link connector.



## Driver Seat Control Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control unit side and harness side).
  - Driver seat control unit connector
  - Harness connector B301
  - Harness connector B9

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

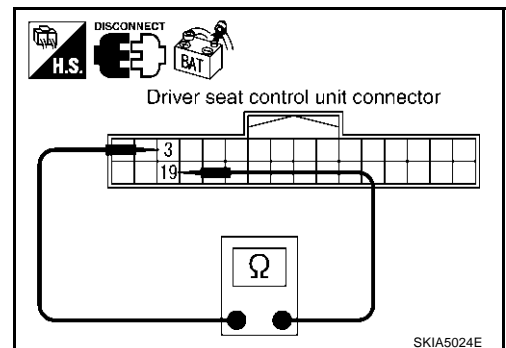
1. Disconnect driver seat control unit connector.
2. Check resistance between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

**3 (L/Y) - 19 (BR/W)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace driver seat control unit.  
 NG >> Repair harness between driver seat control unit and harness connector B4.



## AWD Control Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of AWD control unit for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

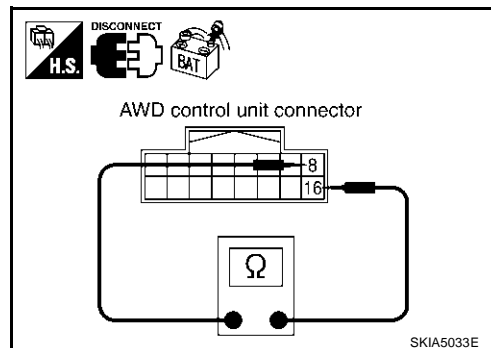
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect AWD control unit connector.
2. Check resistance between AWD control unit harness connector E111 terminals 8 (L) and 16 (Y).

**8 (L) - 16 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace AWD control unit.  
 NG >> Repair harness between AWD control unit and IPDM E/R.



## ABS Actuator and Electric Unit (Control Unit) Circuit Check

AKS0077Q

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

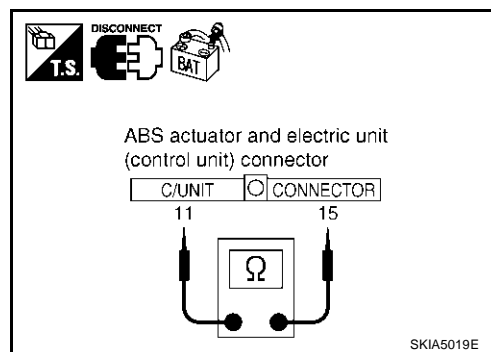
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

**11 (L) - 15 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).  
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



## IPDM E/R Circuit Check

AKS0077R

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

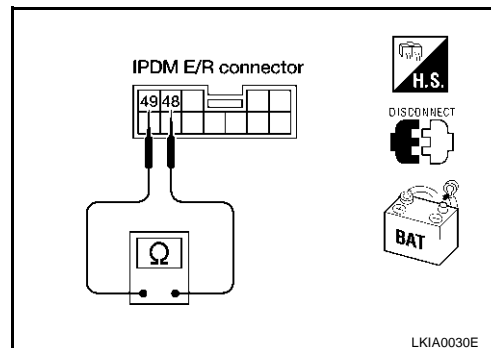
1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y)**

**: Approx. 108 - 132Ω**

### OK or NG

- OK >> Replace IPDM E/R.  
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



## CAN Communication Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, unit side, meter side, sensor side and harness side).

- ECM
- TCM
- Low tire pressure warning control unit
- Display unit
- BCM
- Unified meter and A/C amp.
- Steering angle sensor
- Driver seat control unit
- AWD control unit
- ABS actuator and electric unit (control unit)
- IPDM E/R
- Between ECM and IPDM E/R
- Between ECM and TCM
- Between ECM and driver seat control unit

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.



## 2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
  - ECM connector
  - Low tire pressure warning control unit connector
  - Harness connector M82
  - Display unit connector
  - BCM connector
  - Unified meter and A/C amp. connector
  - Steering angle sensor connector
  - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

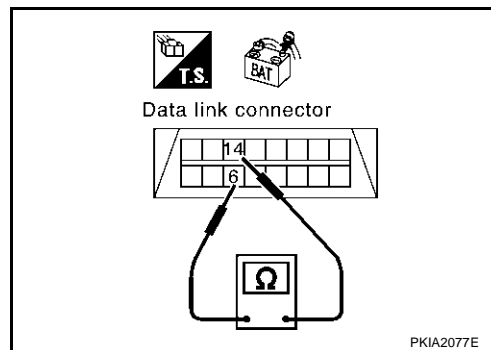
**6 (L) - 14 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 3.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M9.



## 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

**6 (L) - Ground : Continuity should not exist.**

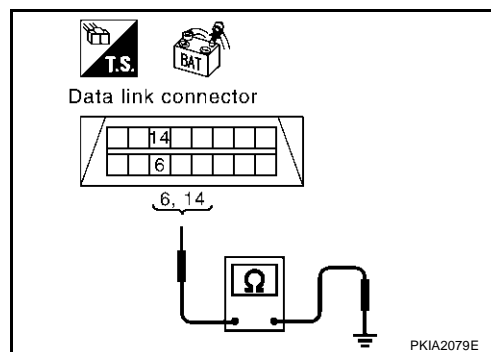
**14 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M9.



#### 4. CHECK HARNESS FOR SHORT CIRCUIT

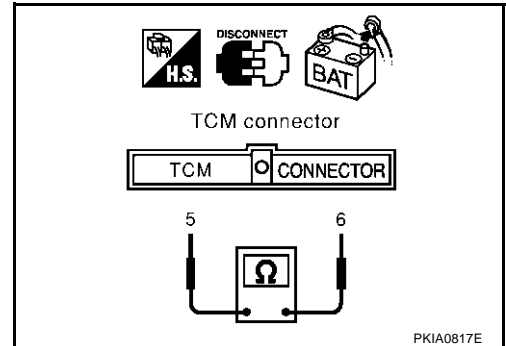
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 5.

NG >> Repair harness between TCM and harness connector F102.



#### 5. CHECK HARNESS FOR SHORT CIRCUIT

- Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

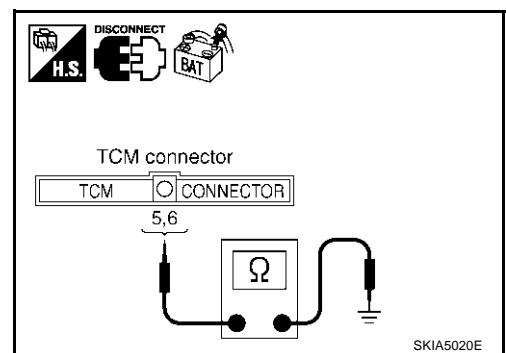
**5 (L) - Ground : Continuity should not exist.**

**6 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 6.

NG >> Repair harness between TCM and harness connector F102.



#### 6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B4 and harness connector B9.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

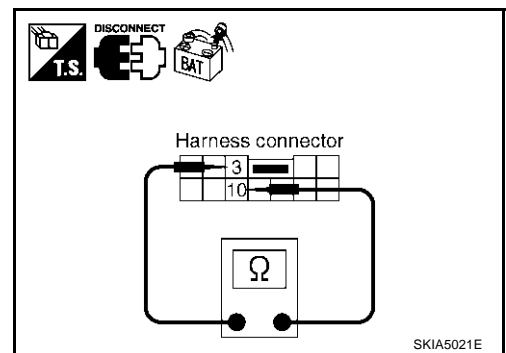
**3 (L) - 10 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 7.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Repair harness between harness connector B4 and harness connector B2.
- Repair harness between harness connector B4 and harness connector B9.



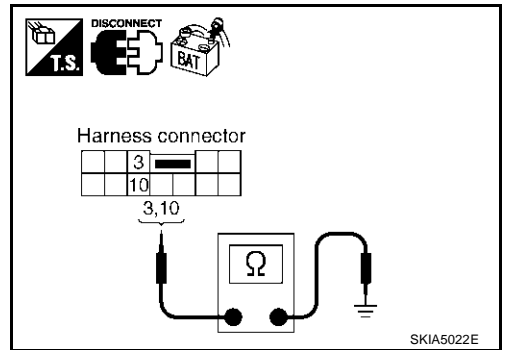
**7. CHECK HARNESS FOR SHORT CIRCUIT**

Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

- 3 (L) - Ground : Continuity should not exist.**
- 10 (Y) - Ground : Continuity should not exist.**

OK or NG

- OK >> GO TO 8.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Repair harness between harness connector B4 and harness connector B2.
  - Repair harness between harness connector B4 and harness connector B9.



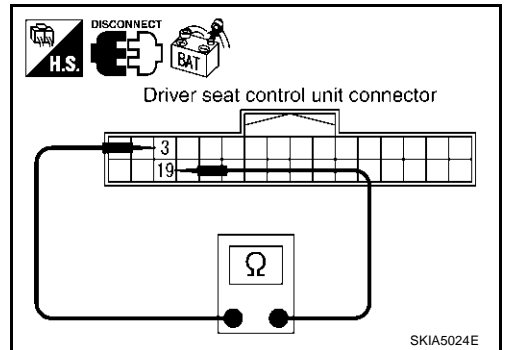
**8. CHECK HARNESS FOR SHORT CIRCUIT**

1. Disconnect driver seat control unit connector.
2. Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

- 3 (L/Y) - 19 (BR/W) : Continuity should not exist.**

OK or NG

- OK >> GO TO 9.
- NG >> Repair harness between driver seat control unit and harness connector B301.



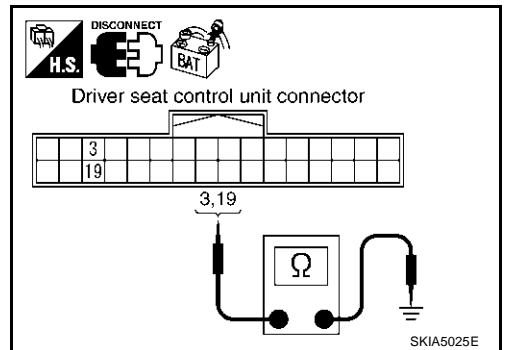
**9. CHECK HARNESS FOR SHORT CIRCUIT**

Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y), 19 (BR/W) and ground.

- 3 (L/Y) - Ground : Continuity should not exist.**
- 19 (BR/W) - Ground : Continuity should not exist.**

OK or NG

- OK >> GO TO 10.
- NG >> Repair harness between driver seat control unit and harness connector B301.



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LAN

## 10. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect AWD control unit connector, ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

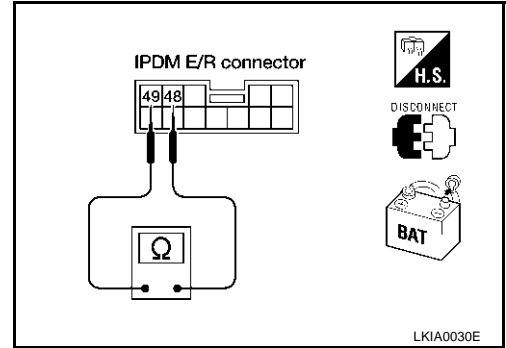
**48 (L) - 49 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 11.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 11. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

**48 (L) - Ground : Continuity should not exist.**

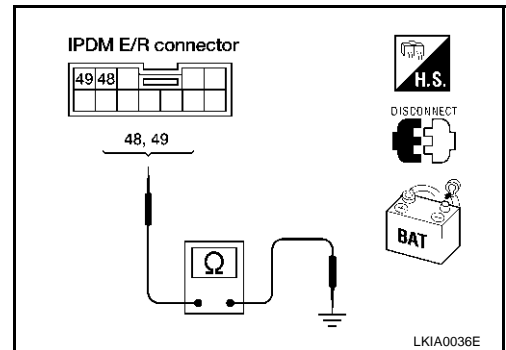
**49 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 12.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 12. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-1049, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

### OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-1016, "Work Flow"](#).

NG >> Replace ECM and/or IPDM E/R.

### IPDM E/R Ignition Relay Circuit Check

AKS0077T

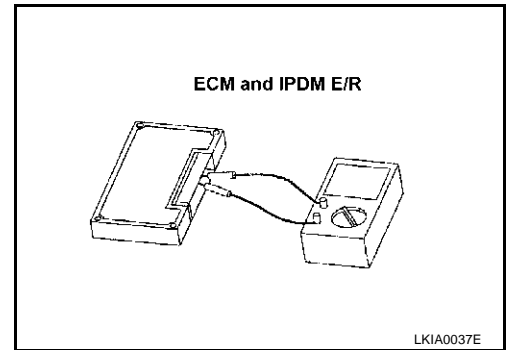
Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-45, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#).

## Component Inspection ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value ( $\Omega$ ) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



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LAN

## CAN SYSTEM (TYPE 31)

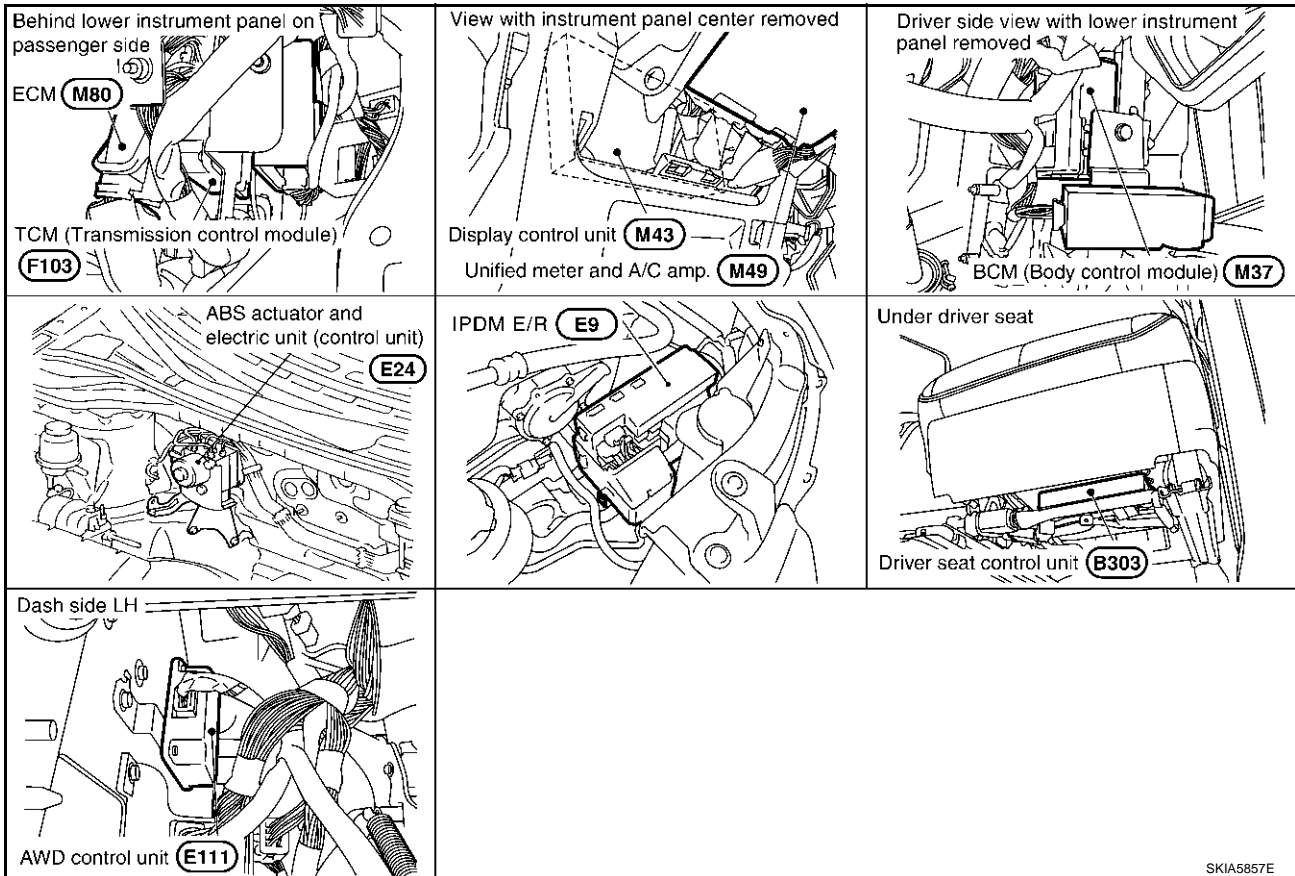
### System Description

AKS0077V

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

### Component Parts and Harness Connector Location

AKS0077W



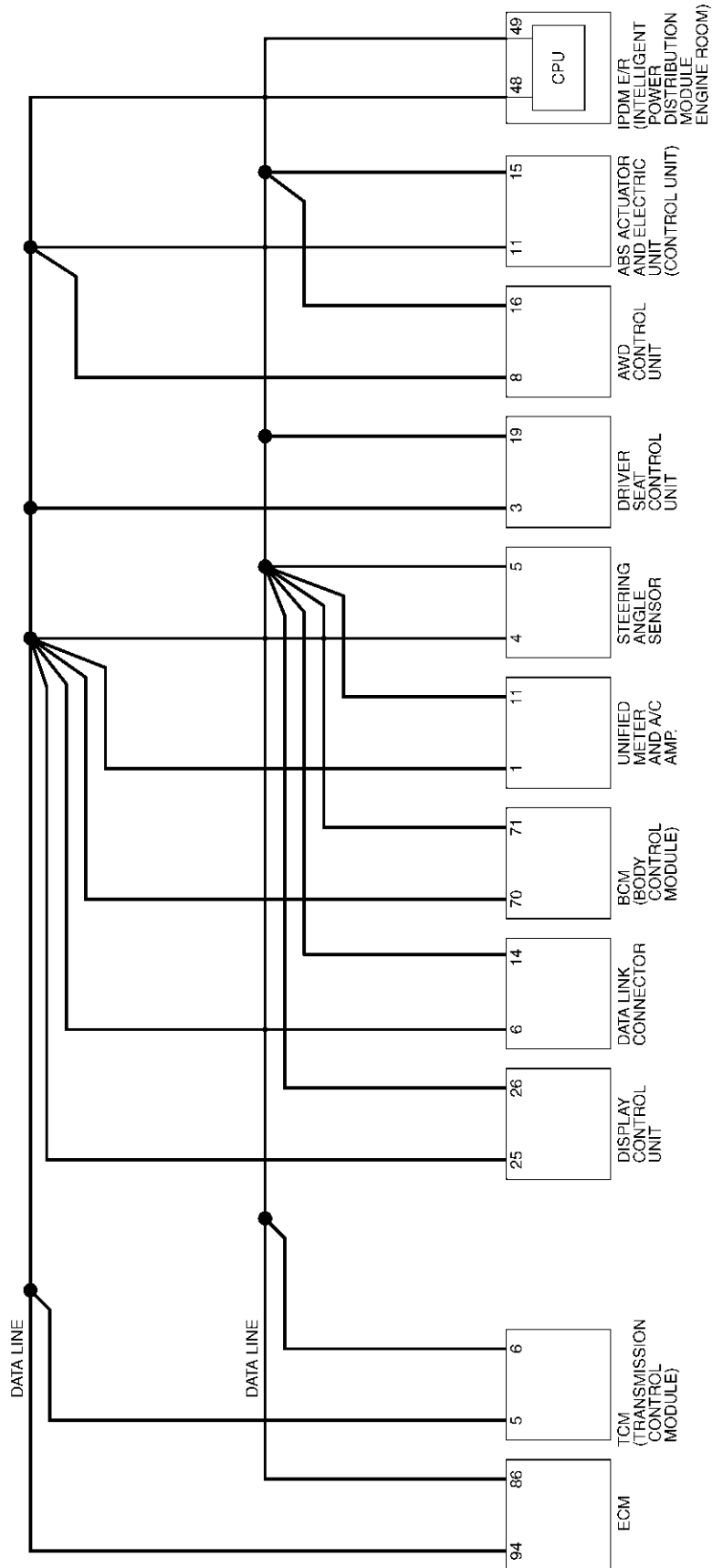
SKIA5857E

# CAN SYSTEM (TYPE 31)

[CAN]

## Schematic

AKS0077X



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TKWA1043E

# CAN SYSTEM (TYPE 31)

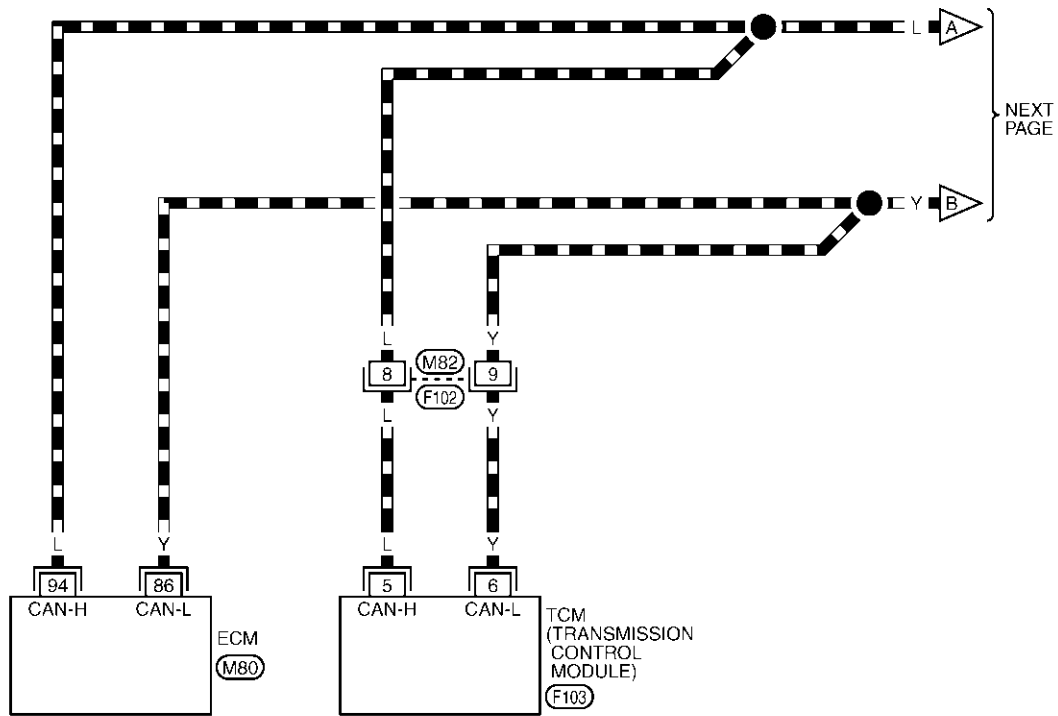
[CAN]

## Wiring Diagram - CAN -

AKS0077Y

### LAN-CAN-91

▬ : DATA LINE



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18		

(F102)  
W

REFER TO THE FOLLOWING.  
(M80), (F103) -ELECTRICAL  
UNITS

TKWA1044E

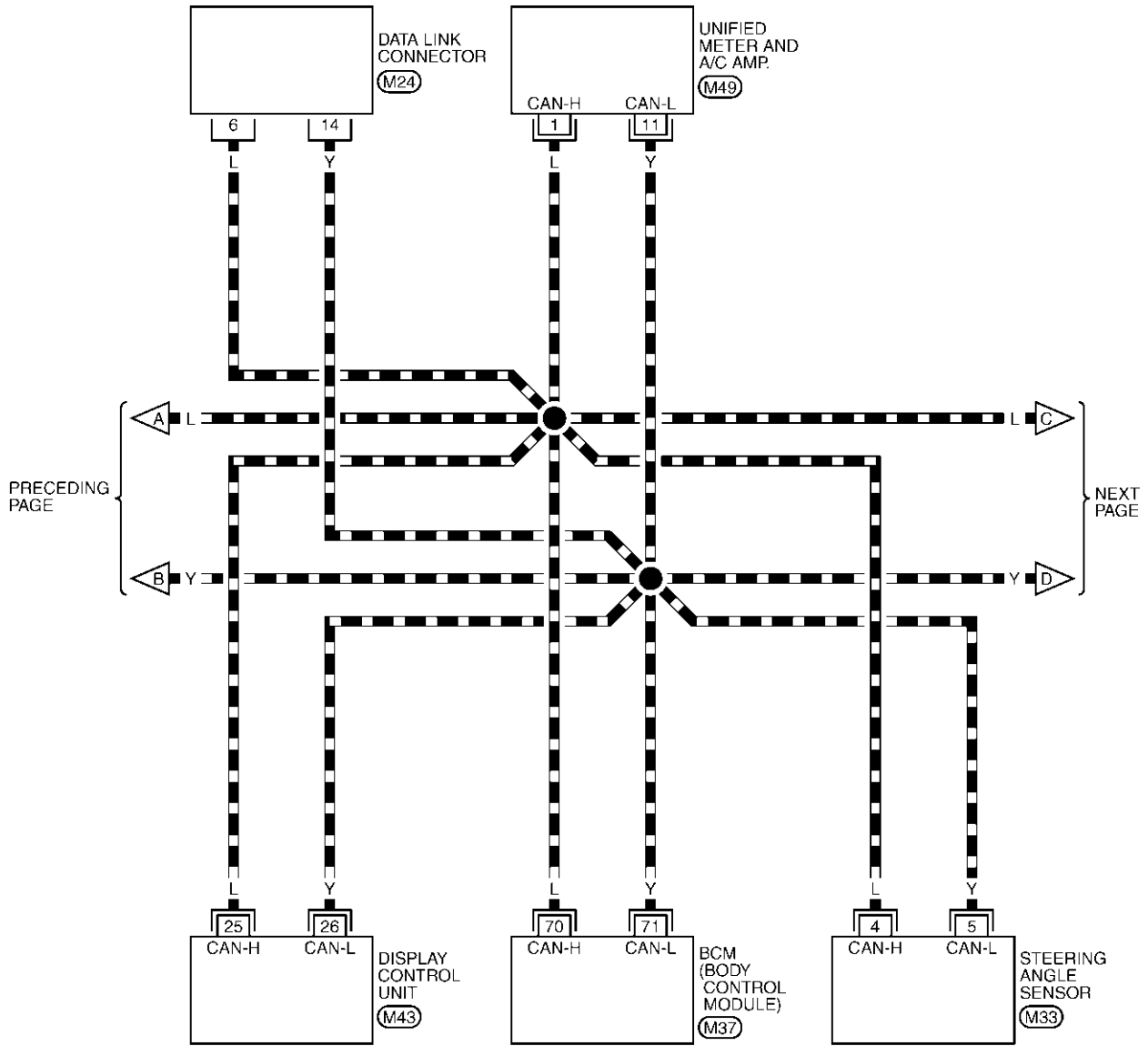


# CAN SYSTEM (TYPE 31)

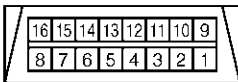
[CAN]

## LAN-CAN-92

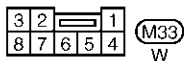
▬ : DATA LINE



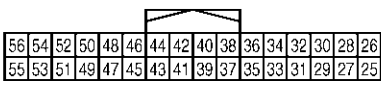
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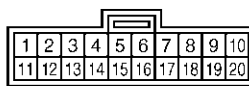
(M24)  
W



(M33)  
W



(M43)  
W



(M49)  
GR

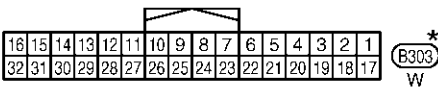
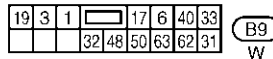
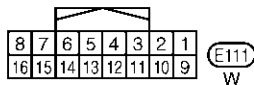
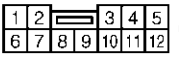
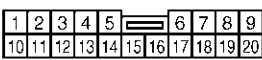
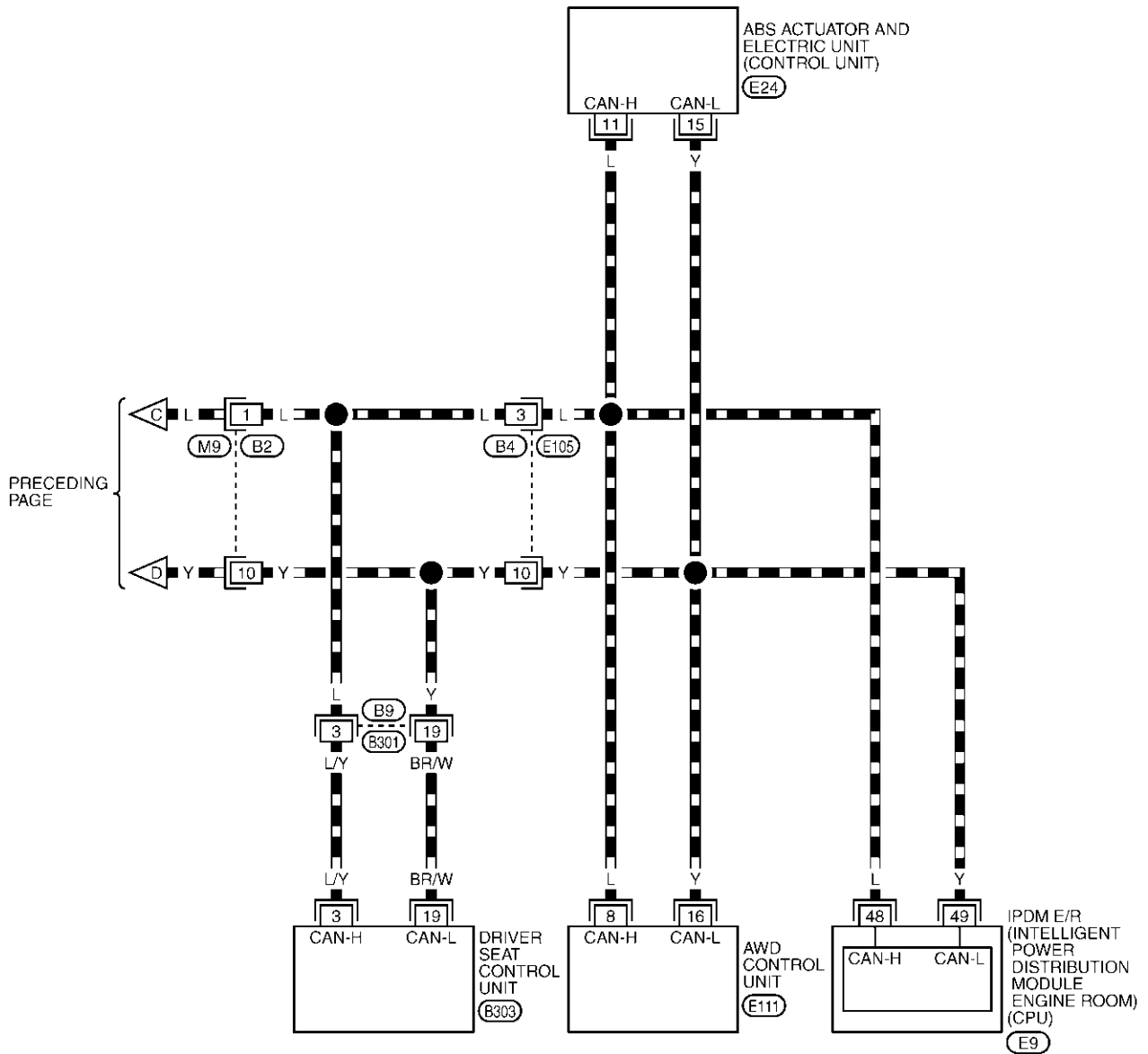


REFER TO THE FOLLOWING.  
(M37) -ELECTRICAL UNITS

TKWA1045E

## LAN-CAN-93

▬ : DATA LINE



\*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

REFER TO THE FOLLOWING.  
 (E24) -ELECTRICAL UNITS



- 
8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG SUPPORT MONITOR check sheet. Refer to [LAN-1057, "CHECK SHEET"](#) .

**NOTE:**

If "NG" is displayed on "CAN COMM" as "CAN DIAG SUPPORT MONITOR" for the diagnosed control unit, replace the control unit. Refer to [AV-203, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-1059, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

# CAN SYSTEM (TYPE 31)

[CAN]

## CHECK SHEET

### NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

A  
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Check sheet table												
SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

Attach copy of  
display control unit  
CAN DIAG SUPPORT MONITOR check sheet

PKIB1070E

# CAN SYSTEM (TYPE 31)

[CAN]

Attach copy of  
ENGINE  
SELF-DIAG RESULTS

Attach copy of  
TRANSMISSION  
SELF-DIAG RESULTS

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
METER A/C AMP  
SELF-DIAG RESULTS

Attach copy of  
AUTO DRIVE POS.  
SELF-DIAG RESULTS

Attach copy of  
ALL MODE AWD/4WD  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

Attach copy of  
ENGINE  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
TRANSMISSION  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
BCM  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
METER A/C AMP  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
AUTO DRIVE POS.  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ALL MODE AWD/4WD  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ABS  
CAN DIAG SUPPORT  
MNTR

PKIB0865E

# CAN SYSTEM (TYPE 31)

[CAN]

## CHECK SHEET RESULTS (EXAMPLE)

### NOTE:

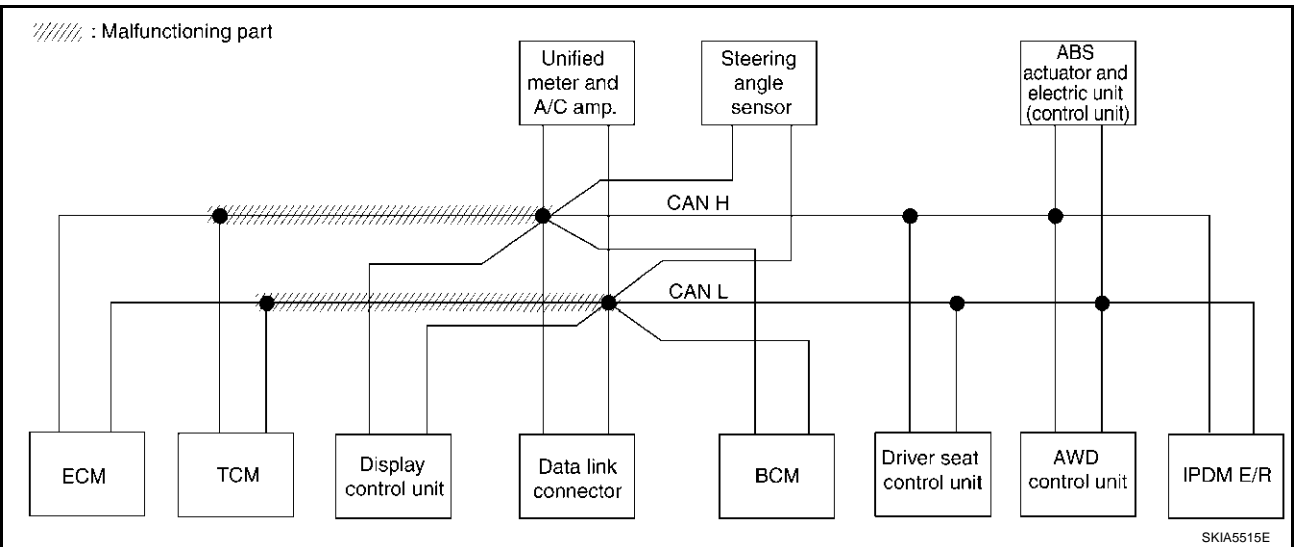
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

### Case 1

Check harness between TCM and data link connector. Refer to [LAN-1074, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3 ✓	—	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

PKIB1071E



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# CAN SYSTEM (TYPE 31)

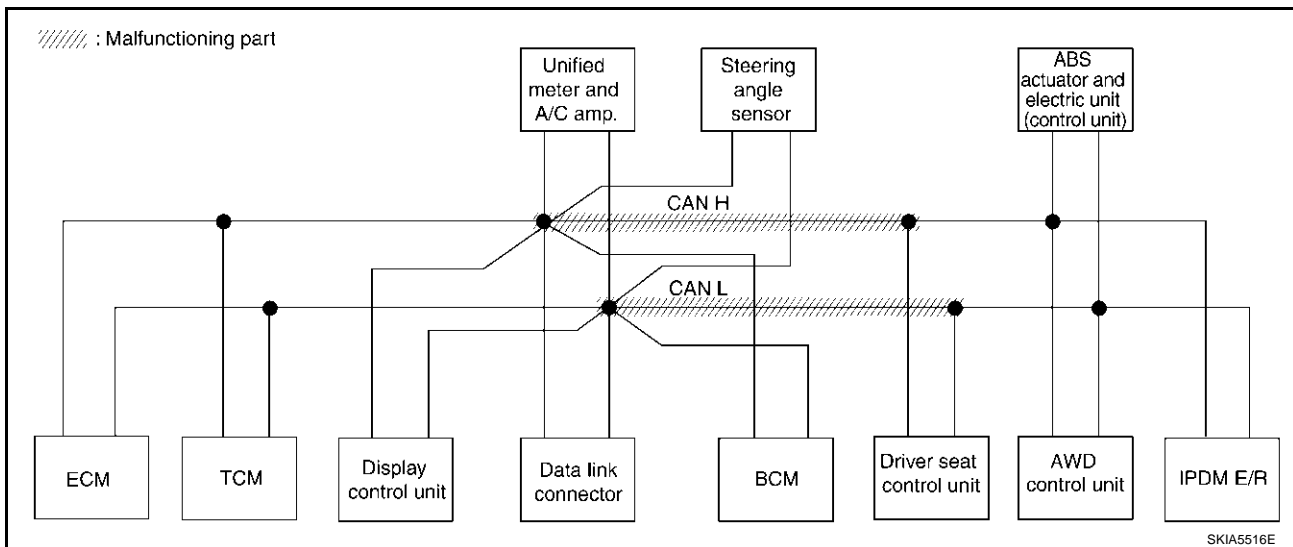
[CAN]

## Case 2

Check harness between data link connector and driver seat control unit. Refer to [LAN-1074, "Circuit Check Between Data Link Connector and Driver Seat Control Unit"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

PKIB1072E





# CAN SYSTEM (TYPE 31)

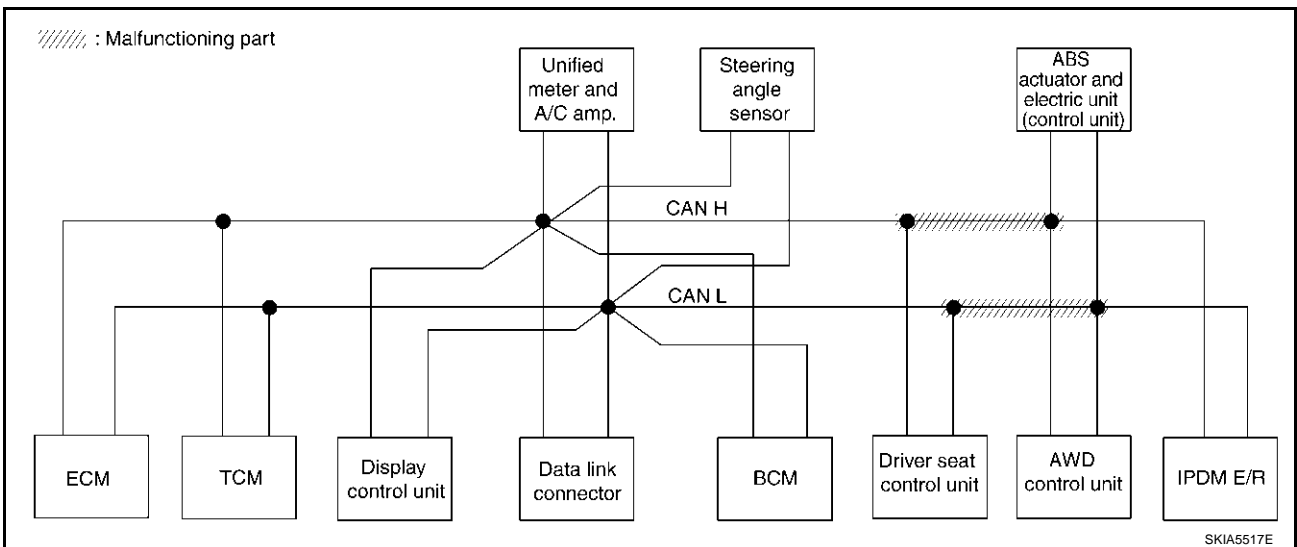
[CAN]

## Case 3

Check harness between driver seat control unit and ABS actuator and electric unit (control unit). Refer to [LAN-1075, "Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit \(Control Unit\)"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

PKIB1073E



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# CAN SYSTEM (TYPE 31)

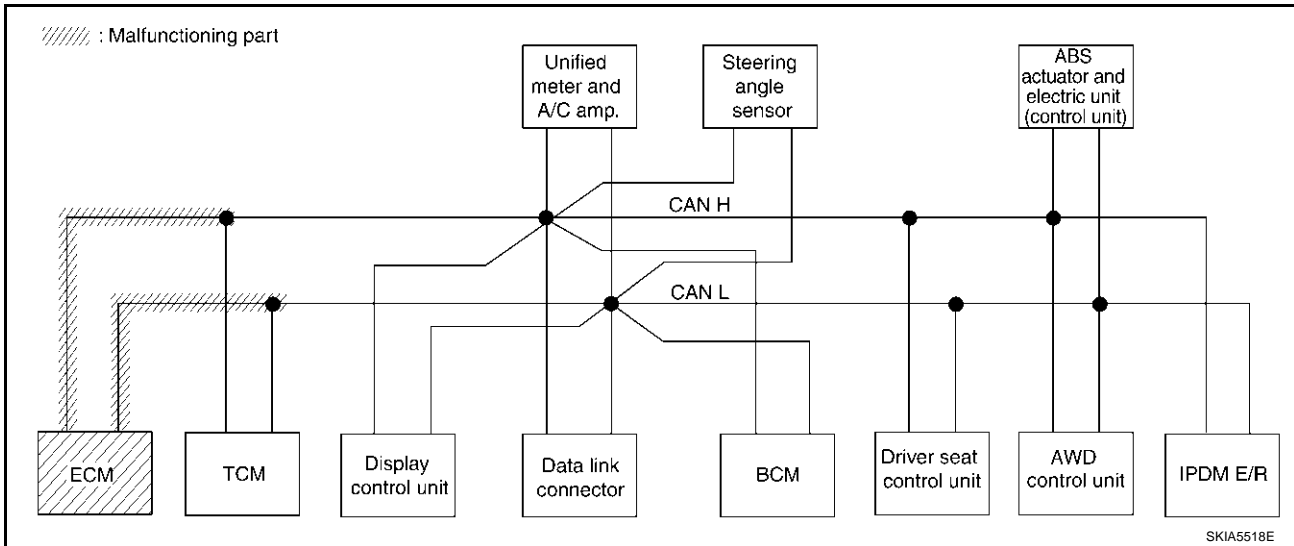
[CAN]

## Case 4

Check ECM circuit. Refer to [LAN-1076, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN ✓	—	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	UNKWN ✓
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

PKIB1074E



# CAN SYSTEM (TYPE 31)

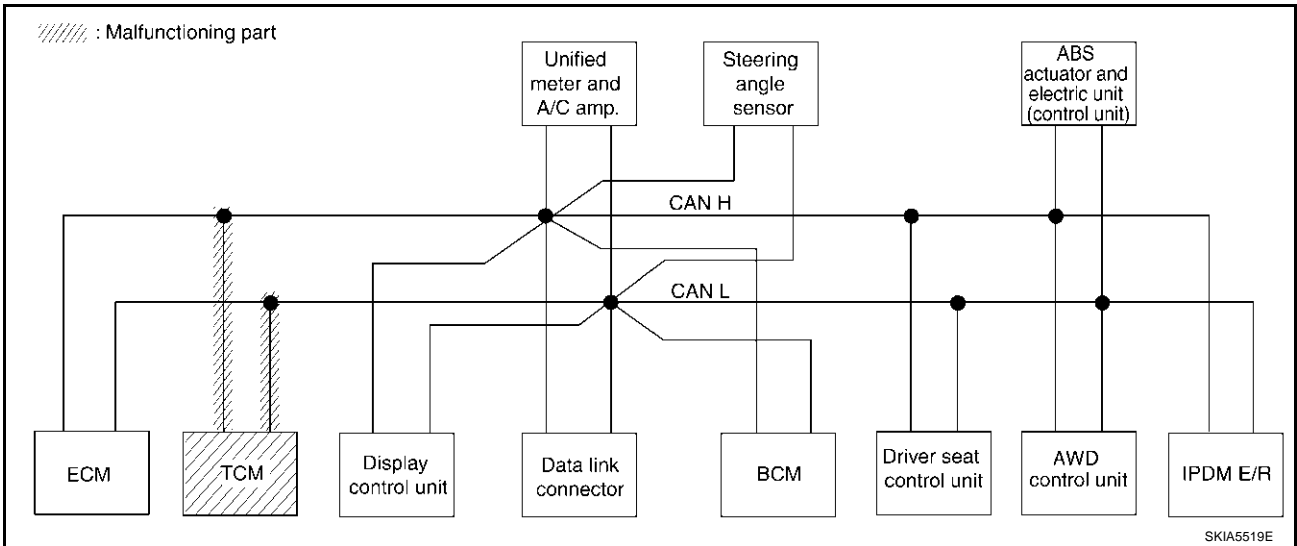
[CAN]

## Case 5

Check TCM circuit. Refer to [LAN-1076, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

PKIB1075E



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# CAN SYSTEM (TYPE 31)

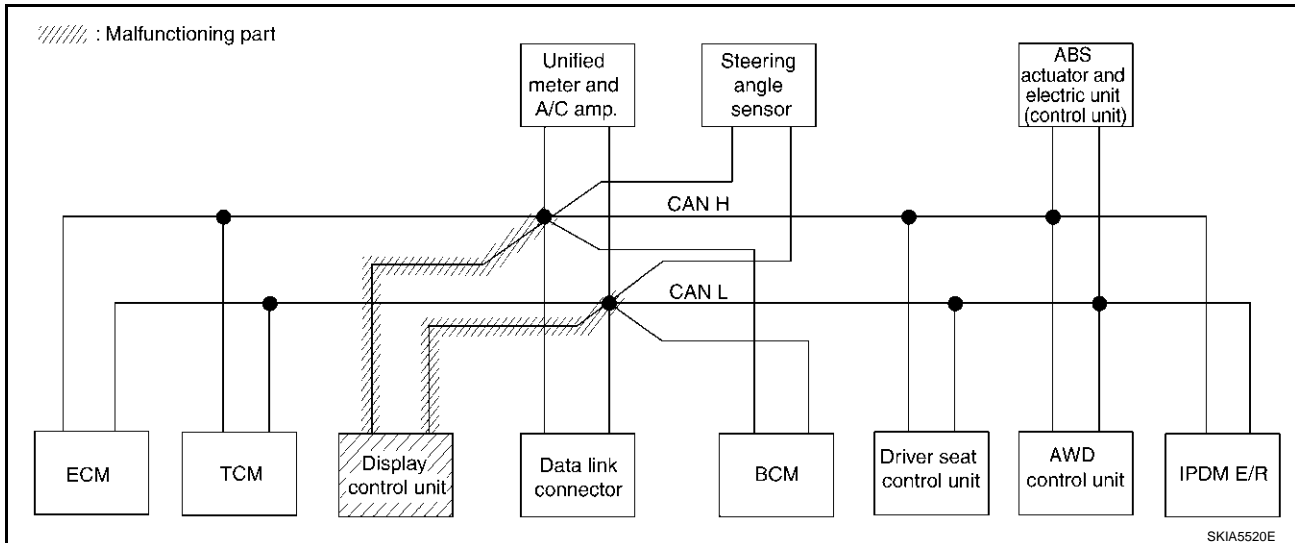
[CAN]

## Case 6

Check display control unit circuit. Refer to [LAN-1077, "Display Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display control unit	—	CAN COMM	CAN-CRC 1 ✓	CAN-CRC 3 ✓	—	—	CAN-CRC 2 ✓	CAN-CRC 5 ✓	—	—	—	CAN-CRC 7 ✓
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

PKIB1076E



# CAN SYSTEM (TYPE 31)

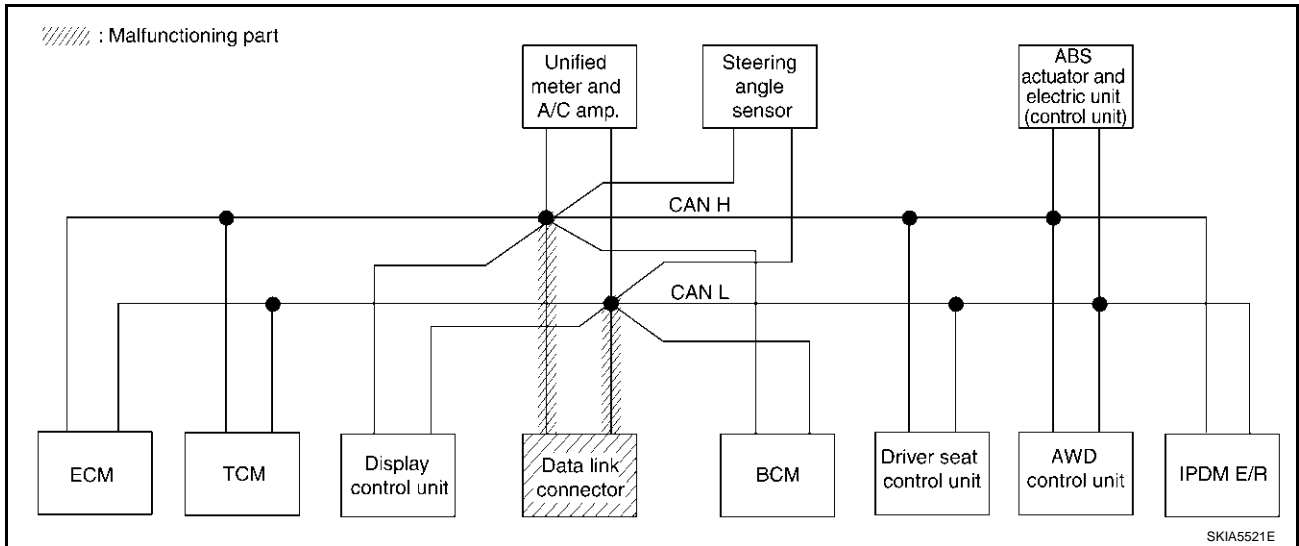
[CAN]

## Case 7

Check data link connector circuit. Refer to [LAN-1077, "Data Link Connector Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

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# CAN SYSTEM (TYPE 31)

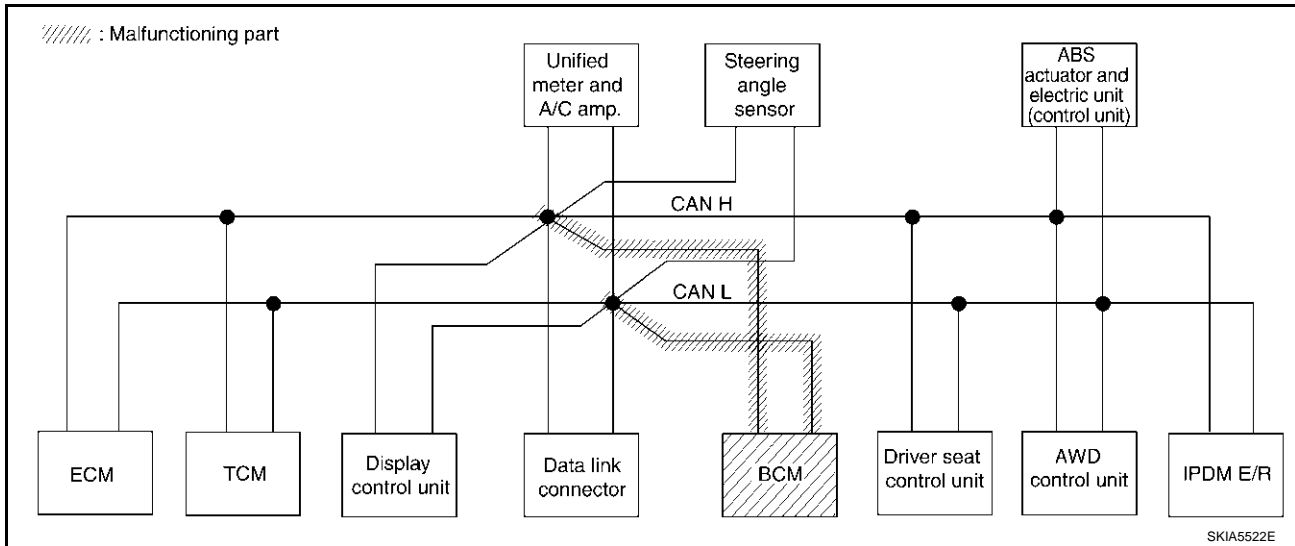
[CAN]

## Case 8

Check BCM circuit. Refer to [LAN-1078, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

PKIB1078E



# CAN SYSTEM (TYPE 31)

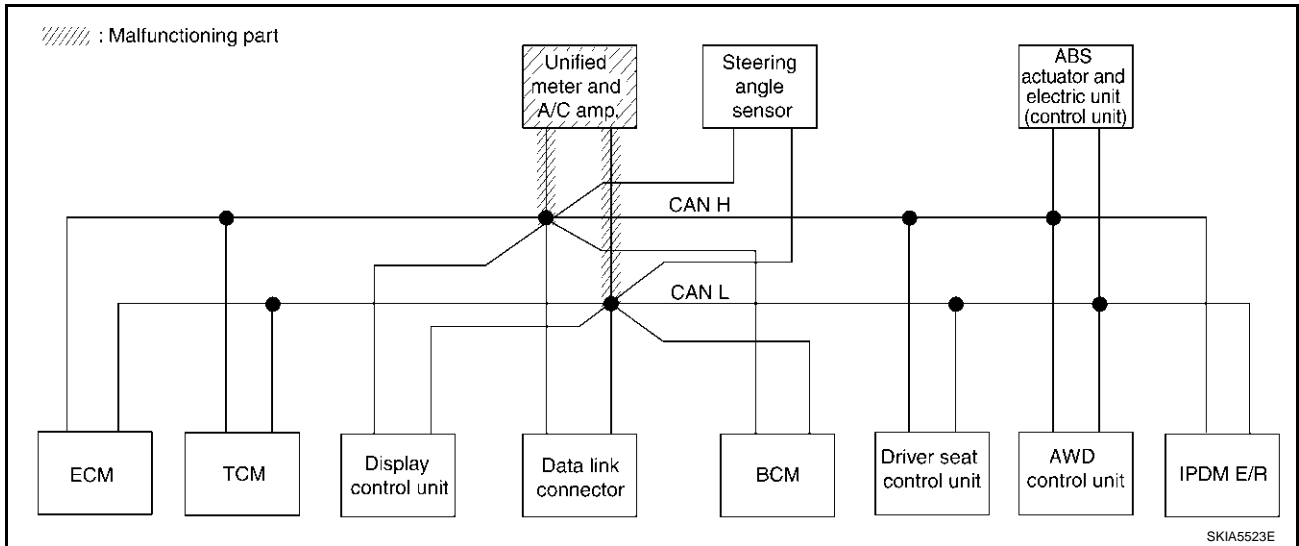
[CAN]

## Case 9

Check unified meter and A/C amp. circuit. Refer to [LAN-1078, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

PKIB1079E



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# CAN SYSTEM (TYPE 31)

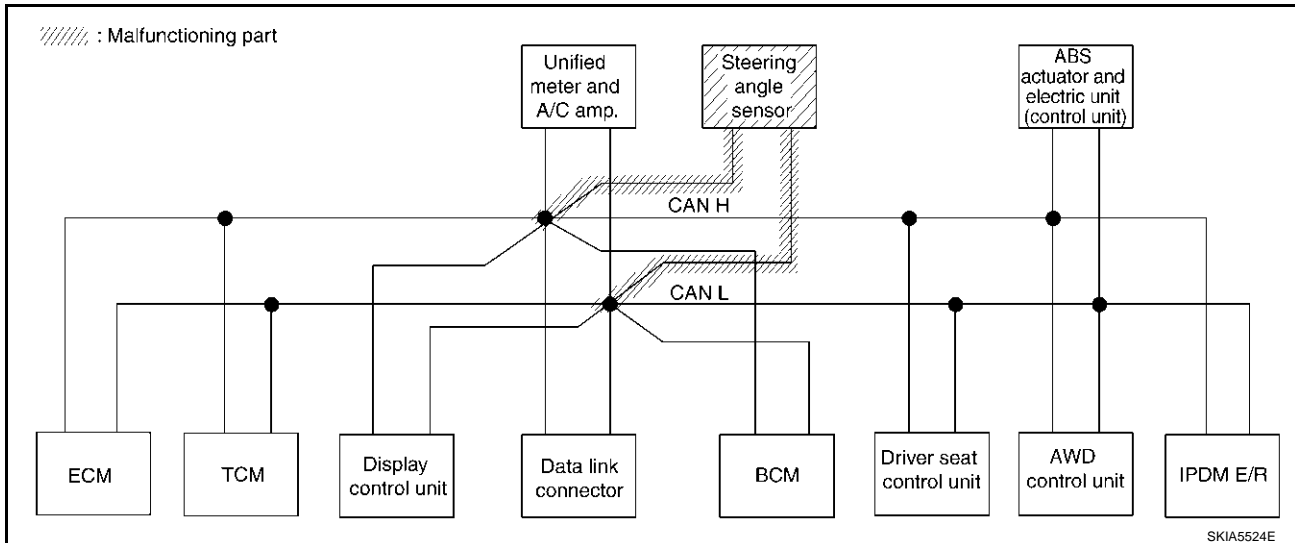
[CAN]

## Case 10

Check steering angle sensor circuit. Refer to [LAN-1079, "Steering Angle Sensor Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—	

PKIB1080E





# CAN SYSTEM (TYPE 31)

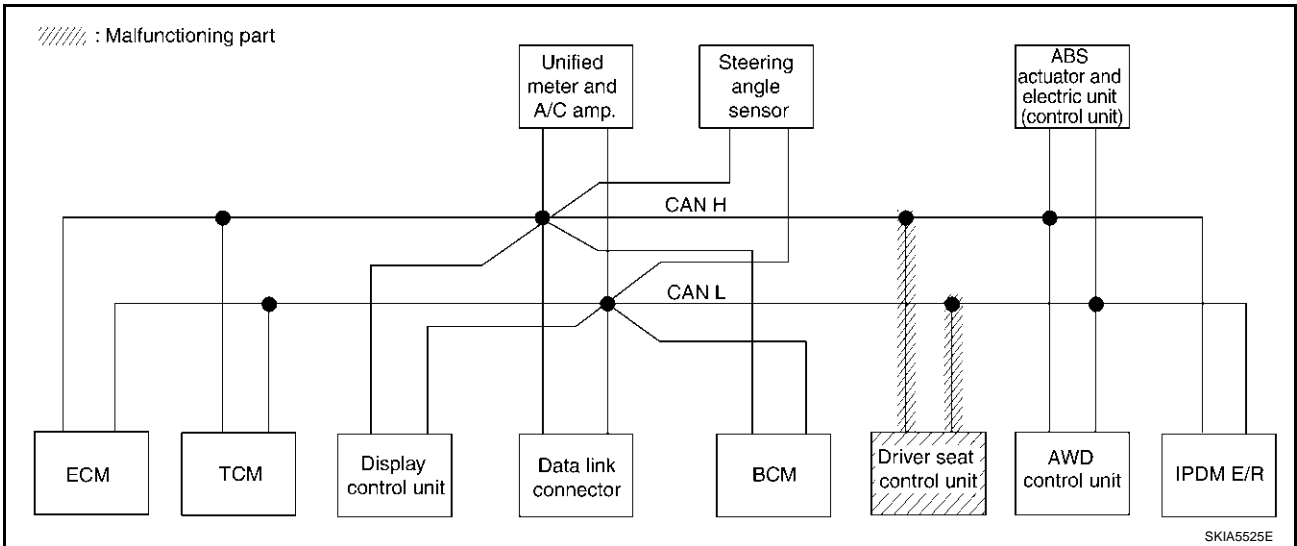
[CAN]

## Case 11

Check driver seat control unit circuit. Refer to [LAN-1079, "Driver Seat Control Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

PKIB1081E



LAN

# CAN SYSTEM (TYPE 31)

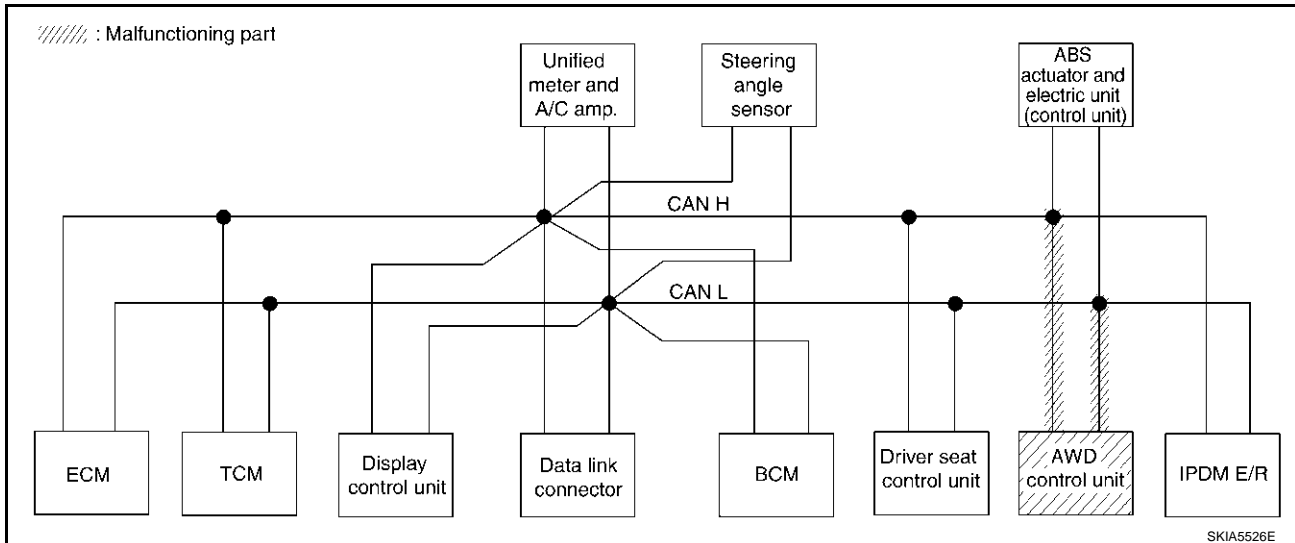
[CAN]

## Case 12

Check AWD control unit circuit. Refer to [LAN-1080, "AWD Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

PKIB1082E



SKIA5526E

# CAN SYSTEM (TYPE 31)

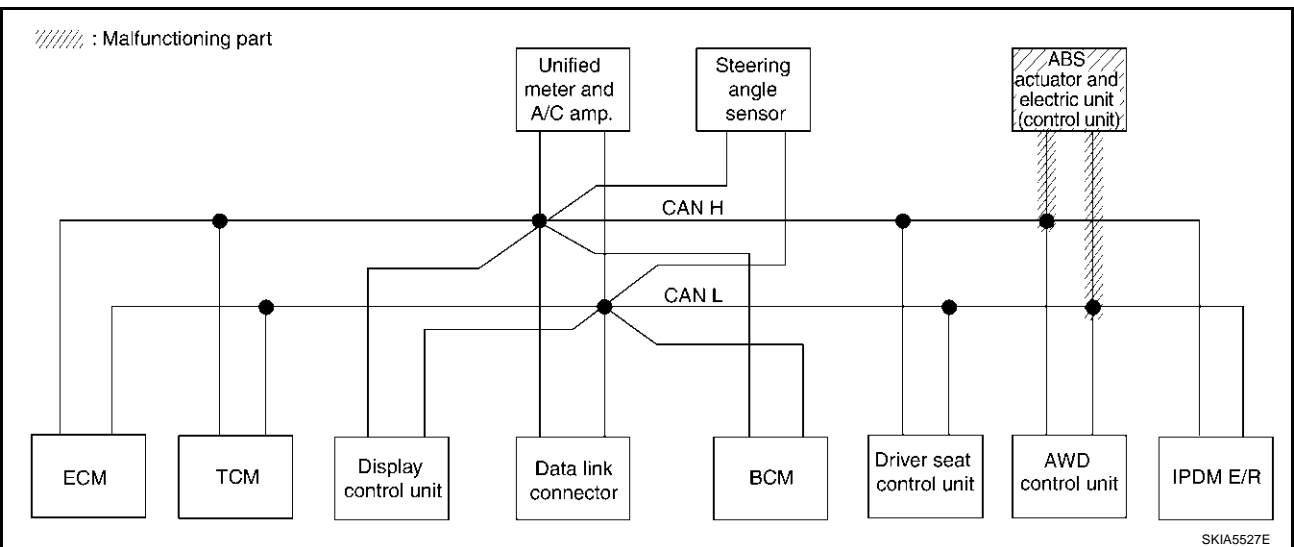
[CAN]

## Case 13

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-1080, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—

PKIB1083E



# CAN SYSTEM (TYPE 31)

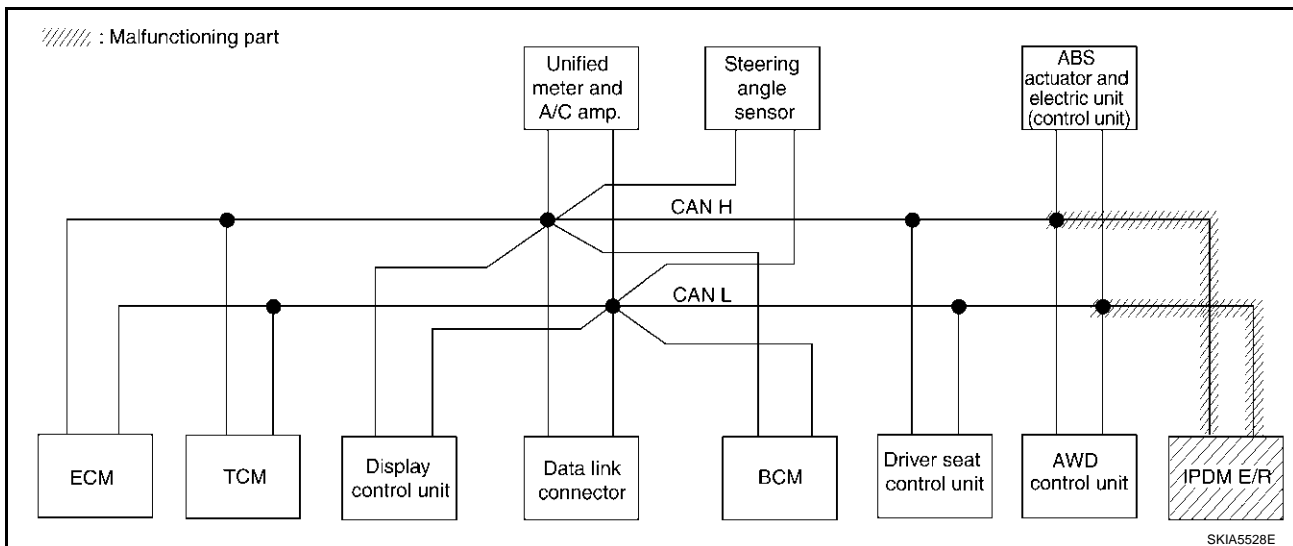
[CAN]

## Case 14

Check IPDM E/R circuit. Refer to [LAN-1081, "IPDM E/R Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—	

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## Case 15

Check CAN communication circuit. Refer to [LAN-1082, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7	
BCM	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—	

PKIB1085E

# CAN SYSTEM (TYPE 31)

[CAN]

## Case 16

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-1086, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	-	NG	UNKWN	-	UN <del>KN</del> W <del>N</del>	-	UNKWN	UNKWN	-	UNKWN	UN <del>KN</del> W <del>N</del>	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	-	UNKWN	-	-	UNKWN	-	
Display control unit	-	CAN COMM	CAN CIRC 1	CAN CIRC 3	-	-	CAN CIRC 2	CAN CIRC 5	-	-	-	CAN CIRC 7	
BCM	-	NG	UNKWN	UNKWN	-	-	-	UNKWN	-	-	-	UNKWN	
METER A/C AMP	No indication	-	UNKWN	UNKWN	UN <del>KN</del> W <del>N</del>	UNKWN	UNKWN	-	-	UNKWN	UN <del>KN</del> W <del>N</del>	-	
AUTO DRIVE POS.	No indication	NG	UNKWN	-	UN <del>KN</del> W <del>N</del>	-	UNKWN	UNKWN	-	-	-	-	
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	-	UNKWN	-	-	UN <del>KN</del> W <del>N</del>	-	
ABS	-	NG	UNKWN	UNKWN	UNKWN	-	-	-	UNKWN	UNKWN	-	-	

PKIB1086E

## Case 17

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-1086, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	-	NG	UNKWN	-	UNKWN	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UN <del>KN</del> W <del>N</del>	-	-	-	UN <del>KN</del> W <del>N</del>	-	-	UNKWN	-	
Display control unit	-	CAN COMM	CAN CIRC 1	CAN CIRC 3	-	-	CAN CIRC 2	CAN CIRC 5	-	-	-	CAN CIRC 7	
BCM	-	NG	UNKWN	UNKWN	-	-	-	UNKWN	-	-	-	UNKWN	
METER A/C AMP	No indication	-	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	-	-	UNKWN	UNKWN	-	
AUTO DRIVE POS.	No indication	NG	UNKWN	-	UNKWN	-	UNKWN	UNKWN	-	-	-	-	
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	-	UNKWN	-	-	UNKWN	-	
ABS	-	NG	UNKWN	UN <del>KN</del> W <del>N</del>	UNKWN	-	-	-	UN <del>KN</del> W <del>N</del>	UN <del>KN</del> W <del>N</del>	-	-	

PKIB1087E

## Circuit Check Between TCM and Data Link Connector

### 1. CHECK HARNESS FOR OPEN CIRCUIT

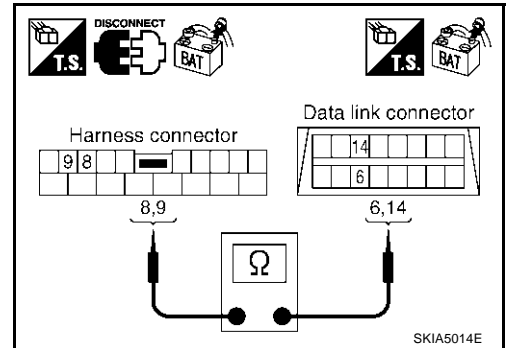
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

**8 (L) - 6 (L) : Continuity should exist.**

**9 (Y) - 14 (Y) : Continuity should exist.**

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-1055, "Work Flow"](#) .
- NG >> Repair harness.



## Circuit Check Between Data Link Connector and Driver Seat Control Unit

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).

- Harness connector M9
- Harness connector B2

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

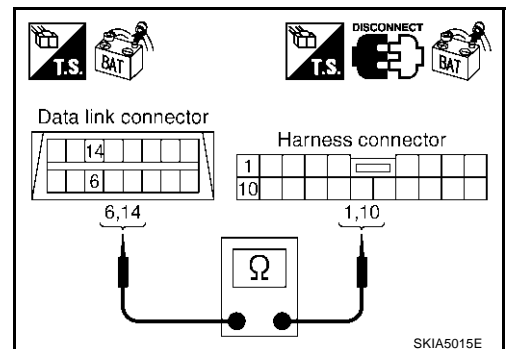
1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

**6 (L) - 1 (L) : Continuity should exist.**

**14 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



### 3. CHECK HARNESS FOR OPEN CIRCUIT

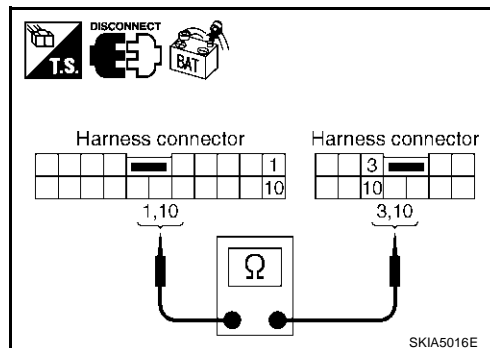
1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-1055, "Work Flow"](#).
- NG >> Repair harness.



## Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit)

AKS00782

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
  - Harness connector B4
  - Harness connector E105

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

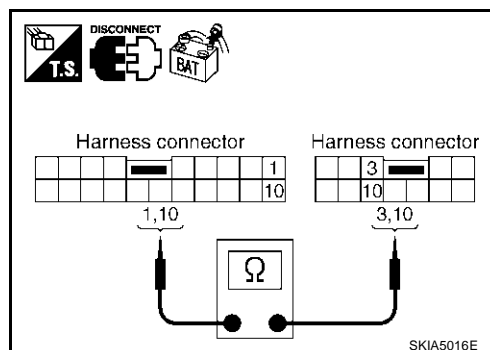
1. Disconnect harness connector B2 and harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



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L

M

### 3. CHECK HARNESS FOR OPEN CIRCUIT

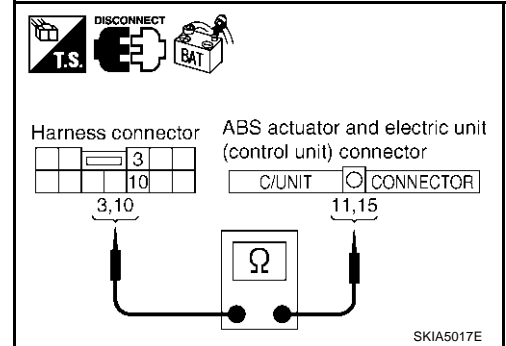
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

**3 (L) - 11 (L) : Continuity should exist.**

**10 (Y) - 15 (Y) : Continuity should exist.**

#### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-1055. "Work Flow"](#) .
- NG >> Repair harness.



AKS00783

## ECM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

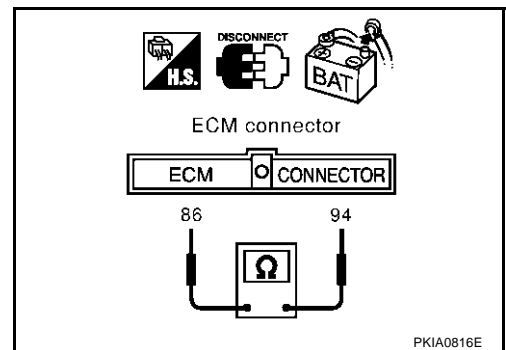
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

**94 (L) - 86 (Y) : Approx. 108 - 132Ω**

#### OK or NG

- OK >> Replace ECM.
- NG >> Repair harness between ECM and TCM.



AKS00784

## TCM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
  - TCM connector
  - Harness connector F102
  - Harness connector M82

#### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.



## 2. CHECK HARNESS FOR OPEN CIRCUIT

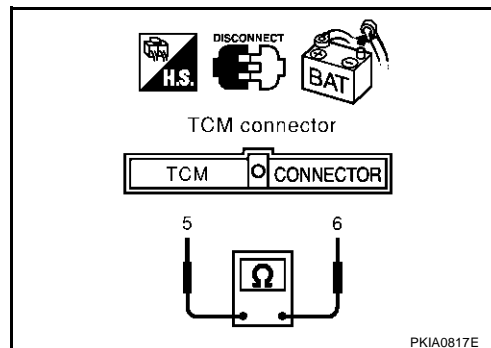
1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace TCM.  
 NG >> Repair harness between TCM and ECM.



## Display Control Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display control unit for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

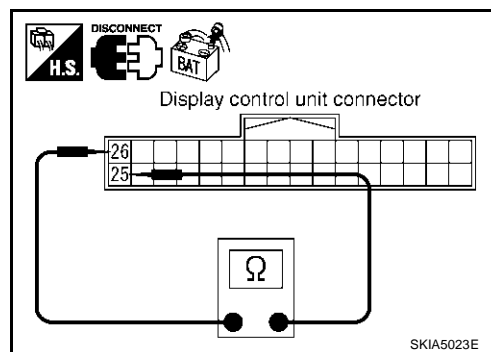
1. Disconnect display control unit connector.
2. Check resistance between display control unit harness connector M43 terminals 25 (L) and 26 (Y).

**25 (L) - 26 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace display control unit.  
 NG >> Repair harness between display control unit and data link connector.



## Data Link Connector Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

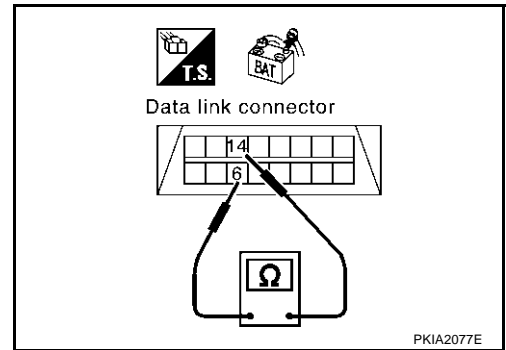
## 2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Diagnose again. Refer to [LAN-1055, "Work Flow"](#).  
 NG >> Repair harness between data link connector and BCM.



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## BCM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

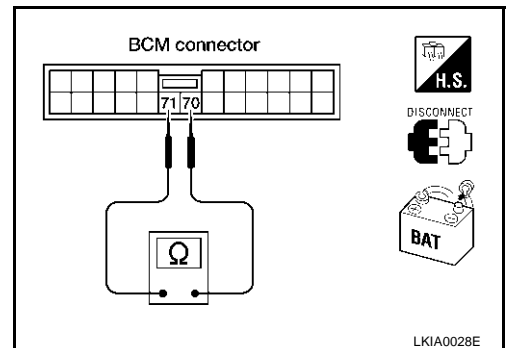
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M37 terminals 70 (L) and 71 (Y).

**70 (L) - 71 (Y) : Approx. 54 - 66Ω**

OK or NG

- OK >> Replace BCM. Refer to [BCS-36, "Removal and Installation of BCM"](#).  
 NG >> Repair harness between BCM and data link connector.



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## Unified Meter and A/C Amp. Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

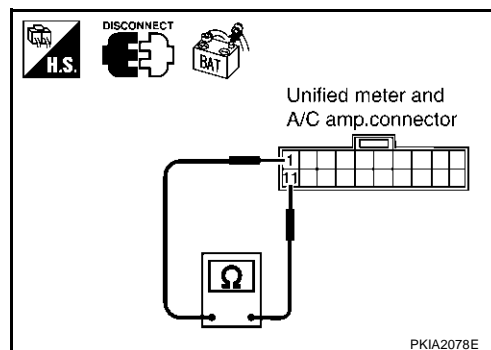
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

**1 (L) - 11 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace unified meter and A/C amp.  
 NG >> Repair harness between unified meter and A/C amp. and data link connector.



## Steering Angle Sensor Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of steering angle sensor for damage, bend and loose connection (sensor side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

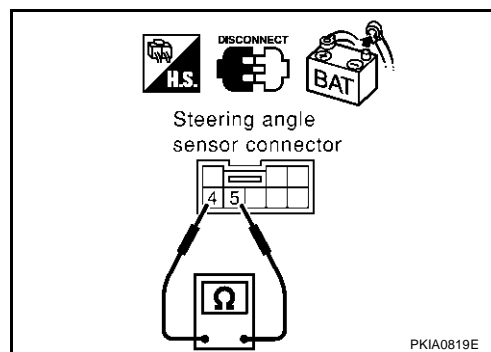
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M33 terminals 4 (L) and 5 (Y).

**4 (L) - 5 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace steering angle sensor.  
 NG >> Repair harness between steering angle sensor and data link connector.



## Driver Seat Control Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control unit side and harness side).
  - Driver seat control unit connector
  - Harness connector B301
  - Harness connector B9

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

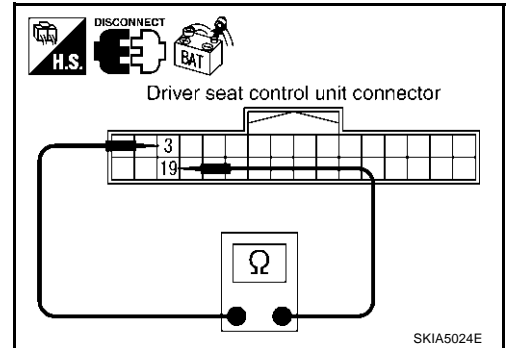
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect driver seat control unit connector.
2. Check resistance between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

**3 (L/Y) - 19 (BR/W) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace driver seat control unit.  
 NG >> Repair harness between driver seat control unit and harness connector B4.



AKS0078B

## AWD Control Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of AWD control unit for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

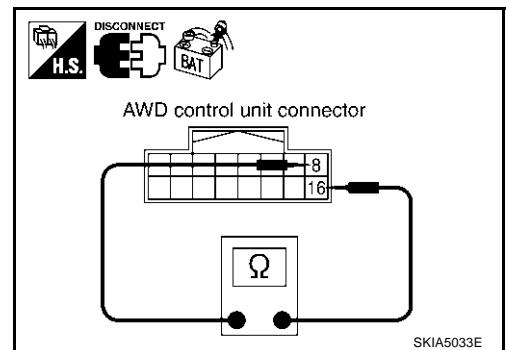
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect AWD control unit connector.
2. Check resistance between AWD control unit harness connector E111 terminals 8 (L) and 16 (Y).

**8 (L) - 16 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace AWD control unit.  
 NG >> Repair harness between AWD control unit and IPDM E/R.



AKS0078C

## ABS Actuator and Electric Unit (Control Unit) Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

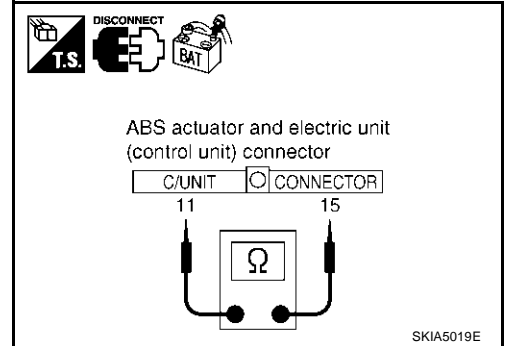
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

**11 (L) - 15 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).  
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



AKS0078D

## IPDM E/R Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

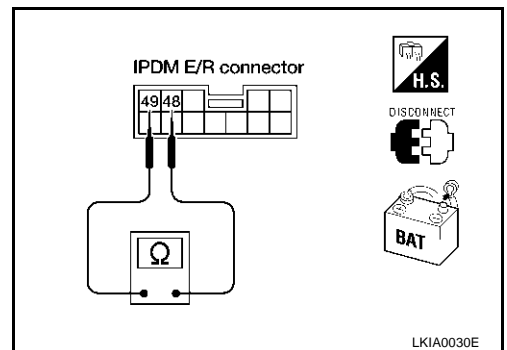
1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y)**

**: Approx. 108 - 132Ω**

### OK or NG

- OK >> Replace IPDM E/R.  
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



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A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
LAN  
L  
M

## CAN Communication Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, meter side, sensor side, and harness side).
  - ECM
  - TCM
  - Display control unit
  - BCM
  - Unified meter and A/C amp.
  - Steering angle sensor
  - Driver seat control unit
  - AWD control unit
  - ABS actuator and electric unit (control unit)
  - IPDM E/R
  - Between ECM and IPDM E/R
  - Between ECM and TCM
  - Between ECM and driver seat control unit

#### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

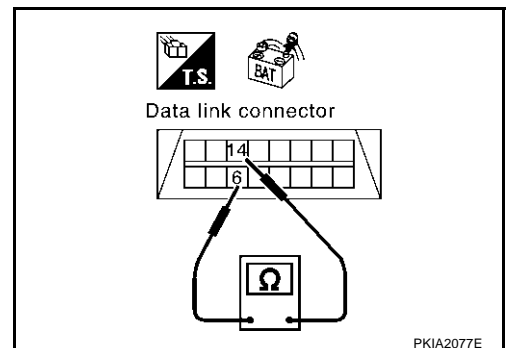
### 2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
  - ECM connector
  - Harness connector M82
  - Display control unit connector
  - BCM connector
  - Unified meter and A/C amp. connector
  - Steering angle sensor connector
  - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Continuity should not exist.**

#### OK or NG

- OK >> GO TO 3.  
 NG >> Check the following harnesses. If any harness is damaged, repair the harness.
- Harness between data link connector and ECM.
  - Harness between data link connector and harness connector M82.
  - Harness between data link connector and display control unit.
  - Harness between data link connector and BCM.
  - Harness between data link connector and unified meter and A/C amp.
  - Harness between data link connector and steering angle sensor.
  - Harness between data link connector and harness connector M9.



PKIA2077E

### 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

**6 (L) - Ground : Continuity should not exist.**

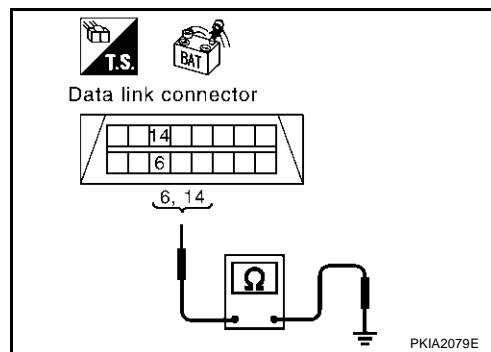
**14 (Y) - Ground : Continuity should not exist.**

#### OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M9.



### 4. CHECK HARNESS FOR SHORT CIRCUIT

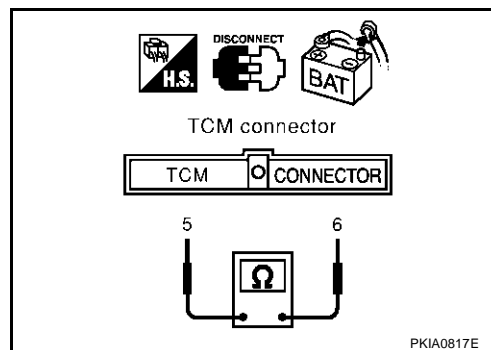
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Continuity should not exist.**

#### OK or NG

OK >> GO TO 5.

NG >> Repair harness between TCM and harness connector F102.



### 5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

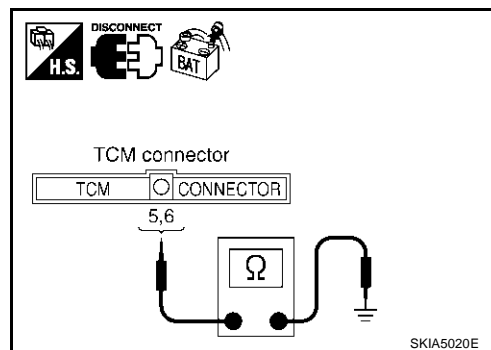
**5 (L) - Ground : Continuity should not exist.**

**6 (Y) - Ground : Continuity should not exist.**

#### OK or NG

OK >> GO TO 6.

NG >> Repair harness between TCM and harness connector F102.



## 6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B4 and harness connector B9.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

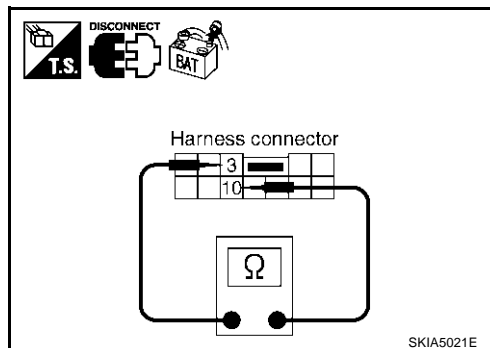
**3 (L) - 10 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 7.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Repair harness between harness connector B4 and harness connector B2.
- Repair harness between harness connector B4 and harness connector B9.



## 7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

**3 (L) - Ground : Continuity should not exist.**

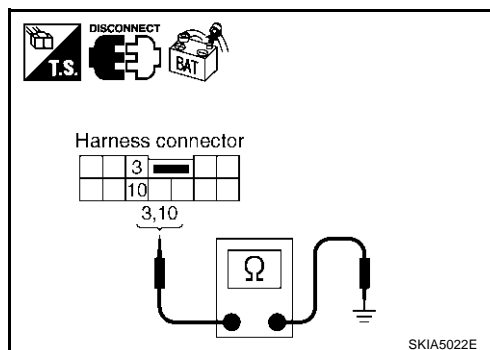
**10 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 8.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Repair harness between harness connector B4 and harness connector B2.
- Repair harness between harness connector B4 and harness connector B9.



## 8. CHECK HARNESS FOR SHORT CIRCUIT

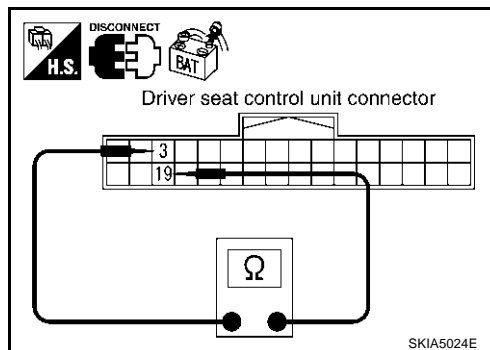
1. Disconnect driver seat control unit connector.
2. Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

**3 (L/Y) - 19 (BR/W) : Continuity should not exist.**

### OK or NG

OK >> GO TO 9.

NG >> Repair harness between driver seat control unit and harness connector B301.





## 9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y), 19 (BR/W) and ground.

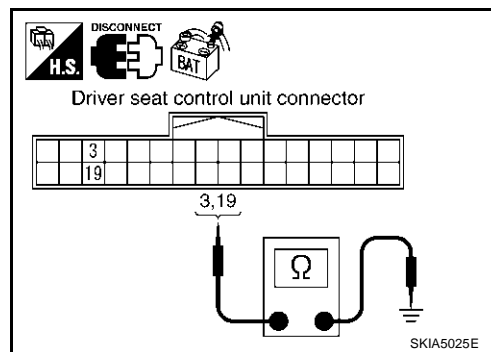
**3 (L/Y) - Ground : Continuity should not exist.**

**19 (BR/W) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 10.

NG >> Repair harness between driver seat control unit and harness connector B301.



## 10. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect AWD control unit connector, ABS actuator and electric unit (control unit) connector and IPDM E/R connector.

2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

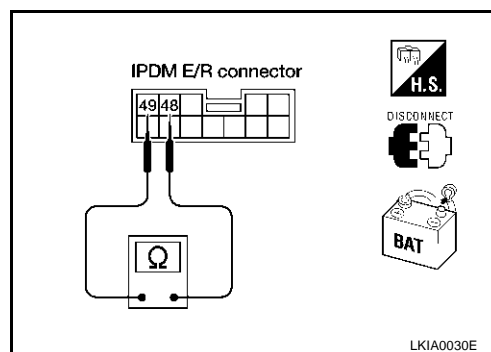
**48 (L) - 49 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 11.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 11. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

**48 (L) - Ground : Continuity should not exist.**

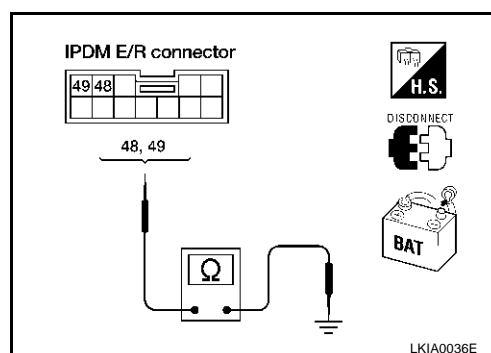
**49 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 12.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 12. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-1086. "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-1055. "Work Flow"](#).

NG >> Replace ECM and/or IPDM E/R.

**IPDM E/R Ignition Relay Circuit Check**

AKS0078F

Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-45, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#).

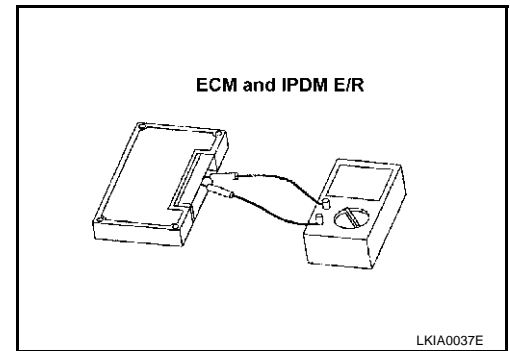
**Component Inspection**

AKS0078G

**ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION**

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value ( $\Omega$ ) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



## CAN SYSTEM (TYPE 32)

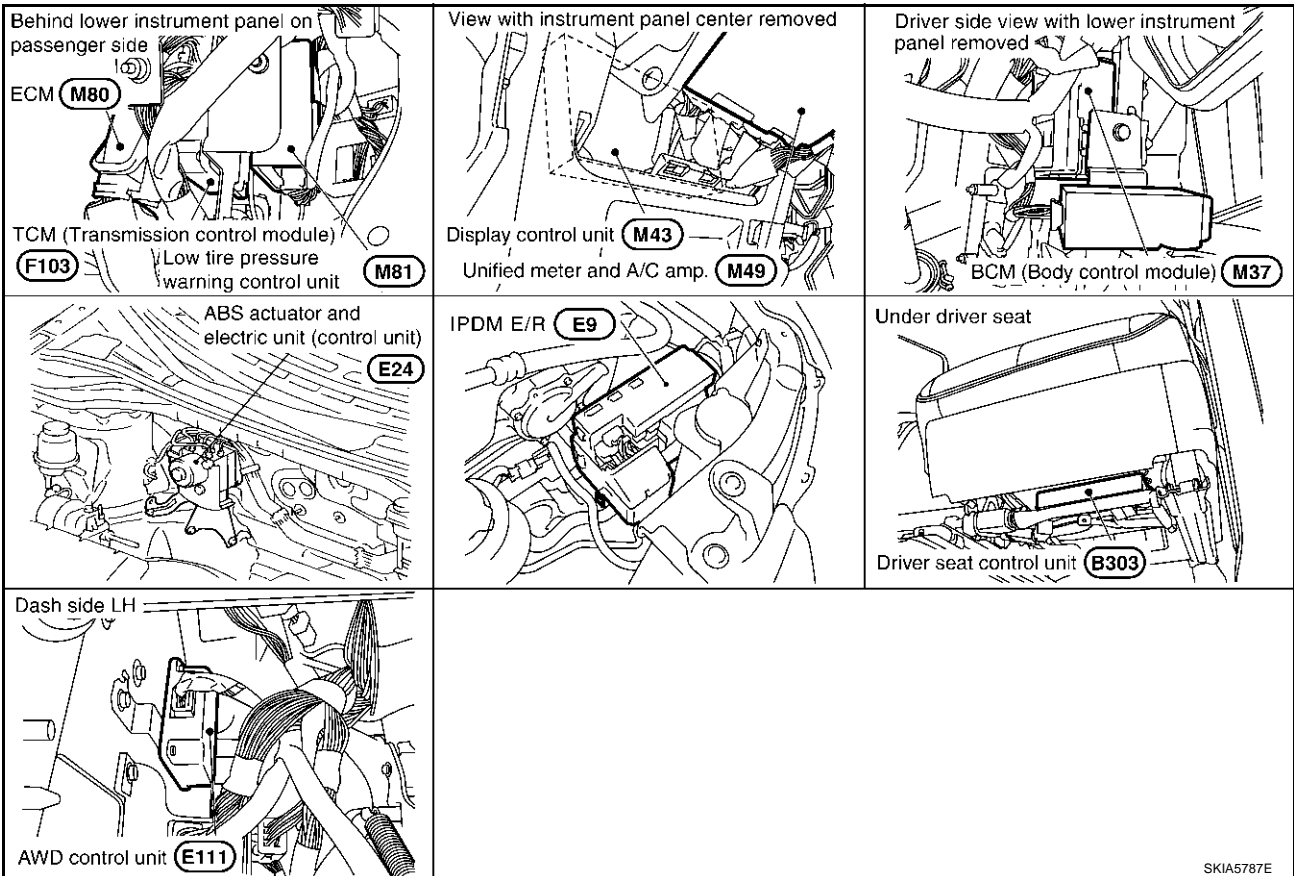
### System Description

AKS0078H

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

### Component Parts and Harness Connector Location

AKS0078I



SKIA578E

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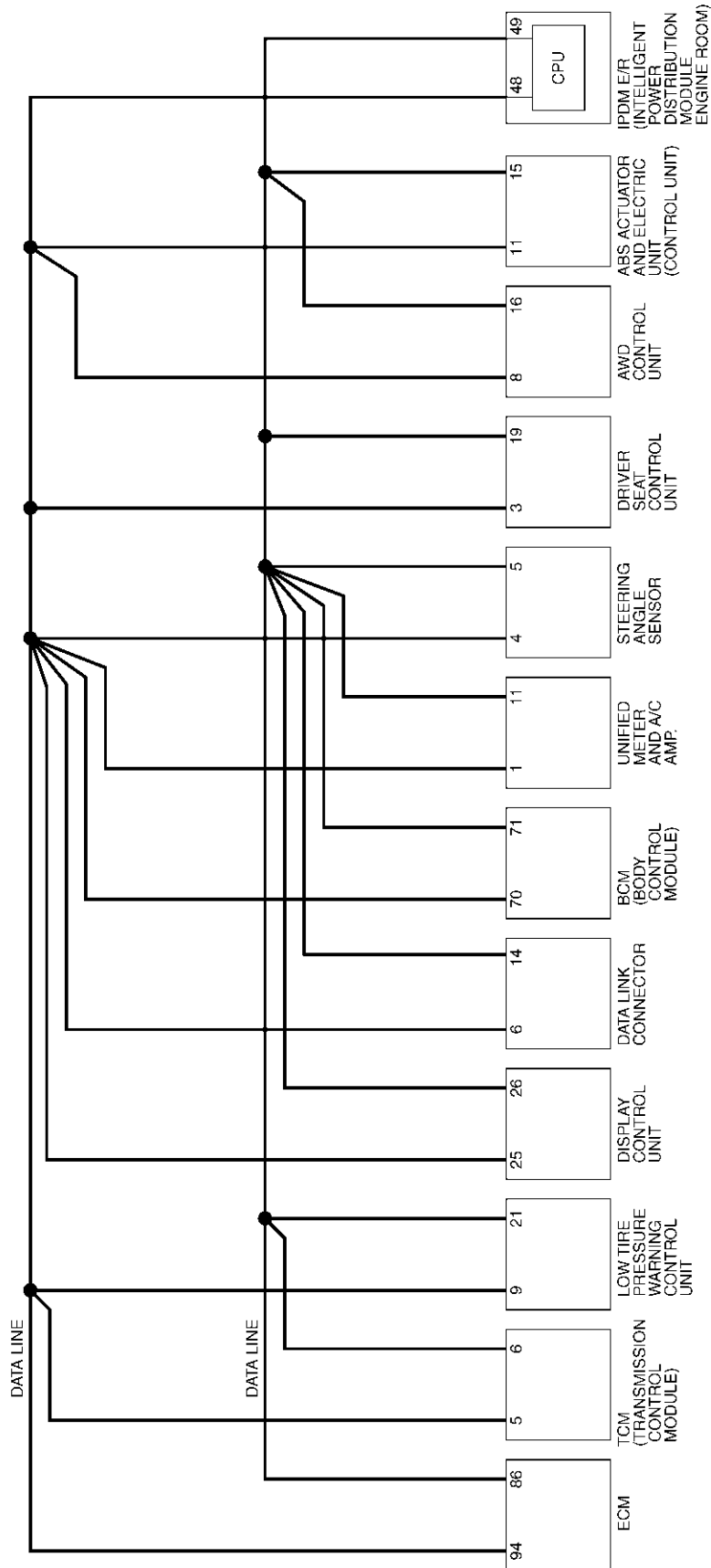
LAN

# CAN SYSTEM (TYPE 32)

[CAN]

## Schematic

AKS0078J



TKWA1047E

# CAN SYSTEM (TYPE 32)

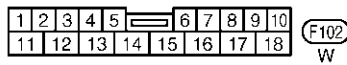
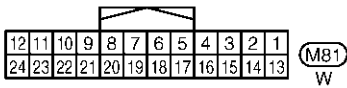
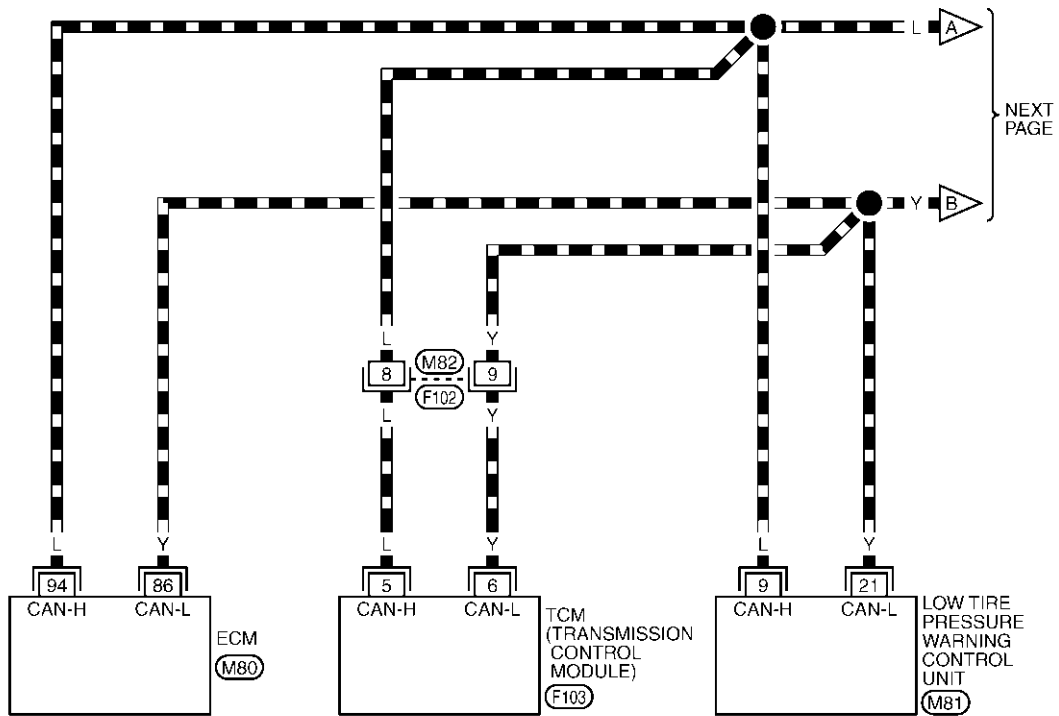
[CAN]

## Wiring Diagram - CAN -

AKS0078K

### LAN-CAN-94

▬ : DATA LINE

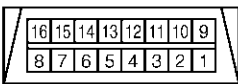
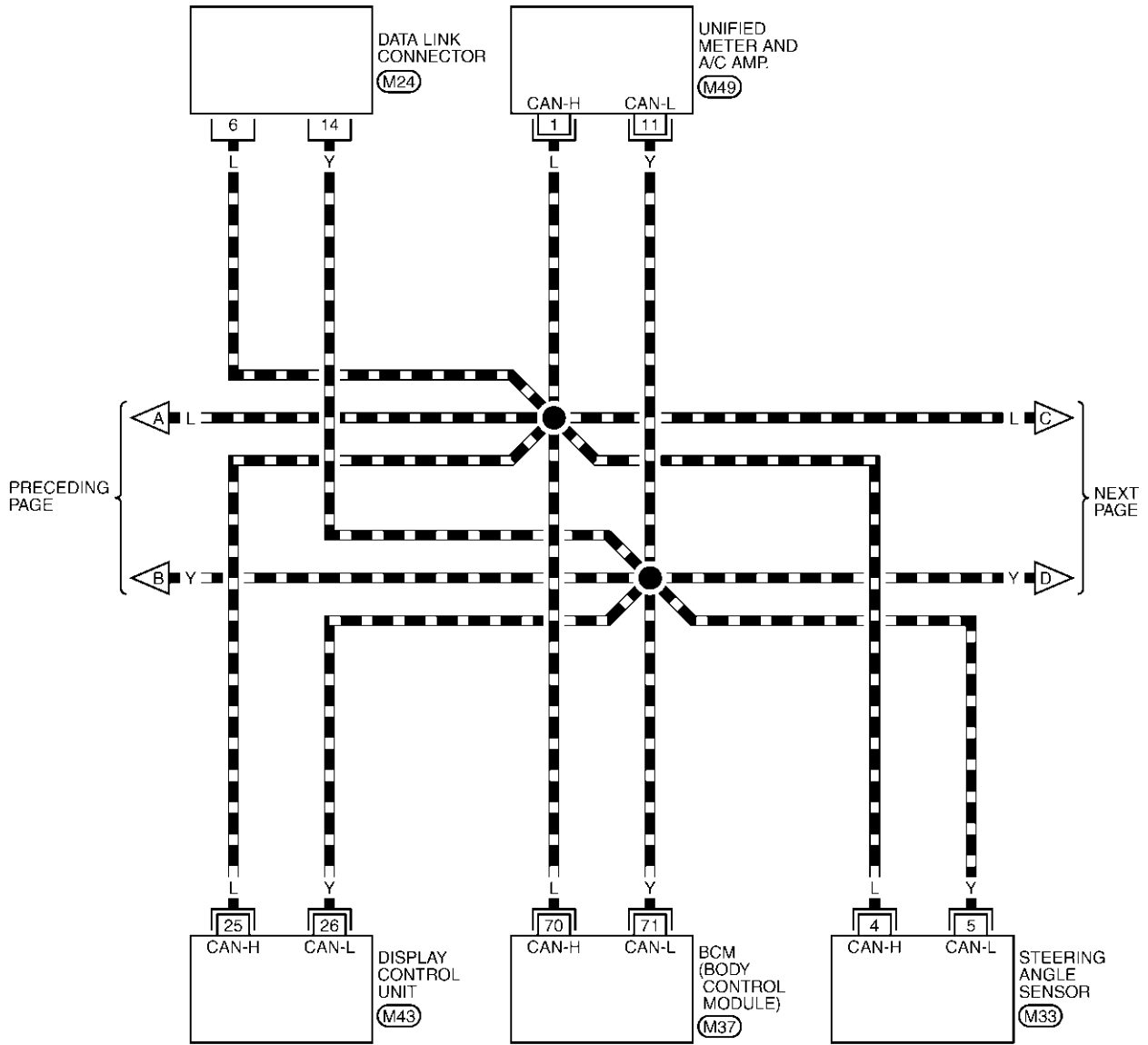


REFER TO THE FOLLOWING.  
 (M80), (F103) -ELECTRICAL UNITS

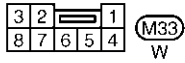
TKWA1048E

## LAN-CAN-95

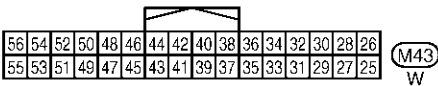
▬ : DATA LINE



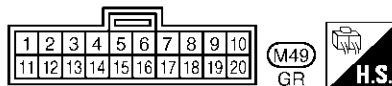
M24  
W



M33  
W



M43  
W



M49  
GR



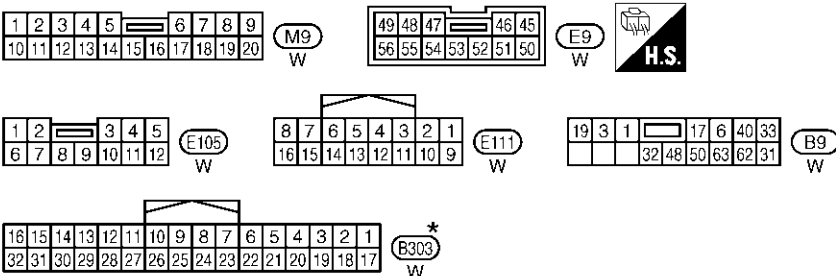
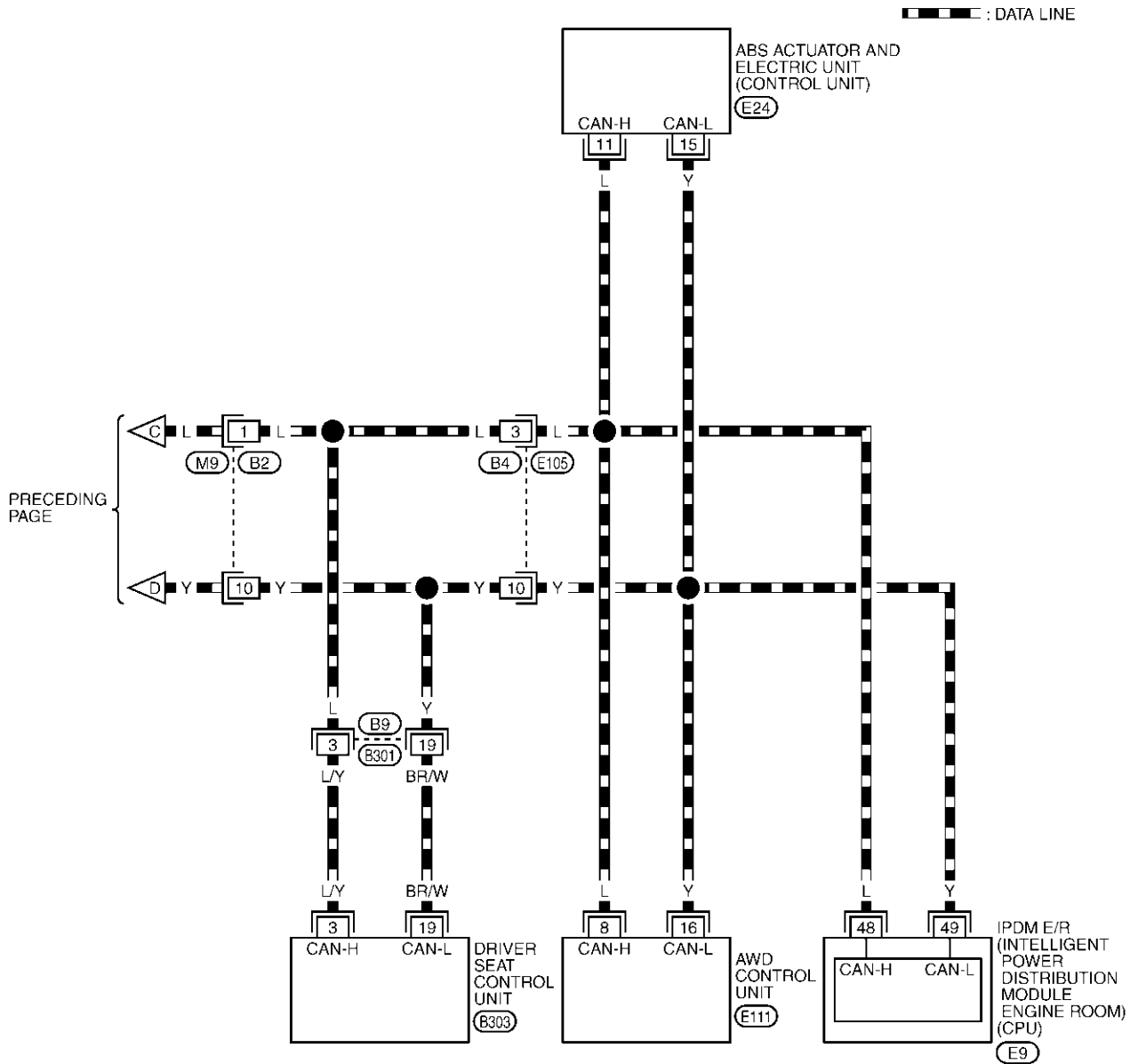
REFER TO THE FOLLOWING.  
M33 -ELECTRICAL UNITS

# CAN SYSTEM (TYPE 32)

[CAN]

LAN-CAN-96

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REFER TO THE FOLLOWING.  
E24 -ELECTRICAL UNITS

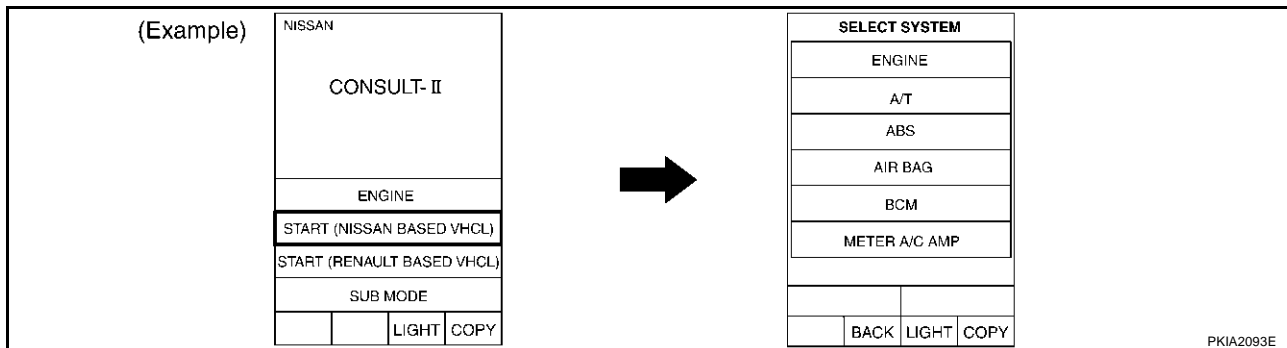
\*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

TKWA1050E

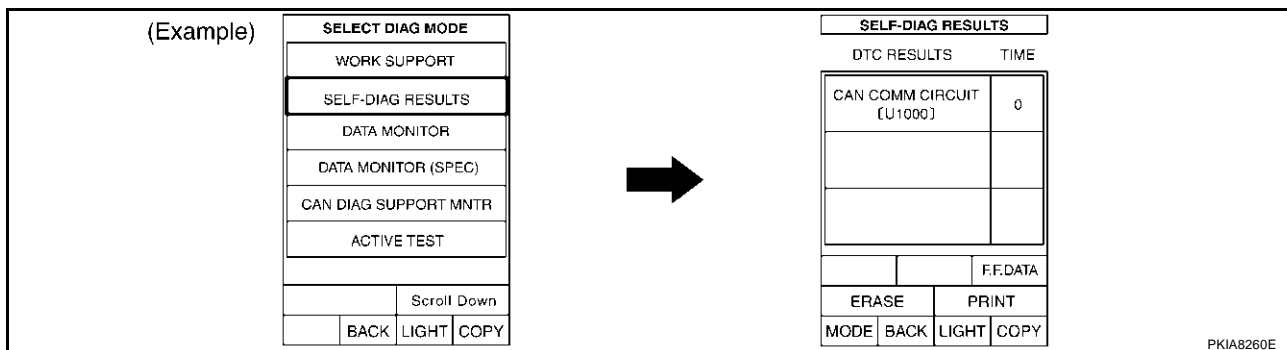
## Work Flow

AKS00C5X

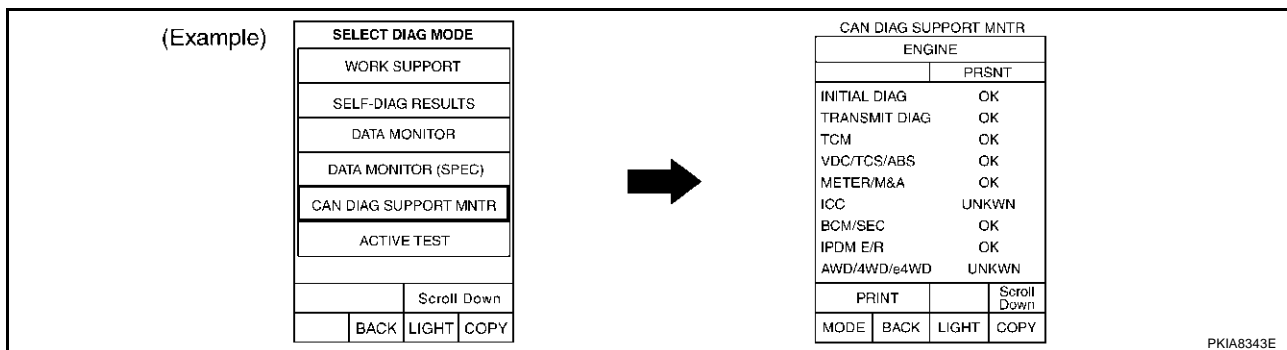
- When there are no indications of "TRANSMISSION", "AIR PRESSURE MONITOR", "METER A/C AMP" or "AUTO DRIVE POS." on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "AUTO DRIVE POS.", "ALL MODE AWD/4WD" and "ABS" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "AUTO DRIVE POS.", "ALL MODE AWD/4WD" and "ABS" displayed on CONSULT-II.



- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-1094, "CHECK SHEET"](#) .
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "V" onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-1094, "CHECK SHEET"](#) .

**NOTE:**

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual.  
So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the navigation system. Refer to [AV-203, "CAN Communication Line Check"](#) .



## CAN SYSTEM (TYPE 32)

[CAN]

7. Attach the CAN DIAG SUPPORT MONITOR check sheet onto the check sheet. Refer to [LAN-1094, "CHECK SHEET"](#) .
8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG SUPPORT MONITOR check sheet. Refer to [LAN-1094, "CHECK SHEET"](#) .  
**NOTE:**  
If "NG" is displayed on "CAN COMM" as "CAN DIAG SUPPORT MONITOR" for the diagnosed control unit, replace the control unit. Refer to [AV-203, "CAN Communication Line Check"](#) .
9. According to the check sheet results (example), start inspection. Refer to [LAN-1096, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

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LAN

L

M

# CAN SYSTEM (TYPE 32)

[CAN]

## CHECK SHEET

### NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

Check sheet table		CAN DIAG SUPPORT MNTR											
SELECT SYSTEM screen		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

Attach copy of  
display control unit  
CAN DIAG SUPPORT MONITOR check sheet

PKIB1088E

# CAN SYSTEM (TYPE 32)

[CAN]

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Attach copy of  
ENGINE  
SELF-DIAG RESULTS

Attach copy of  
TRANSMISSION  
SELF-DIAG RESULTS

Attach copy of  
AIR PRESSURE  
MONITOR  
SELF-DIAG RESULTS

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
METER A/C AMP  
SELF-DIAG RESULTS

Attach copy of  
AUTO DRIVE POS.  
SELF-DIAG RESULTS

Attach copy of  
ALL MODE AWD/4WD  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

Attach copy of  
ENGINE  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
TRANSMISSION  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
AIR PRESSURE  
MONITOR  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
BCM  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
METER A/C AMP  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
AUTO DRIVE POS.  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ALL MODE AWD/4WD  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ABS  
CAN DIAG SUPPORT  
MNTR

PKIB0899E

# CAN SYSTEM (TYPE 32)

[CAN]

## CHECK SHEET RESULTS (EXAMPLE)

### NOTE:

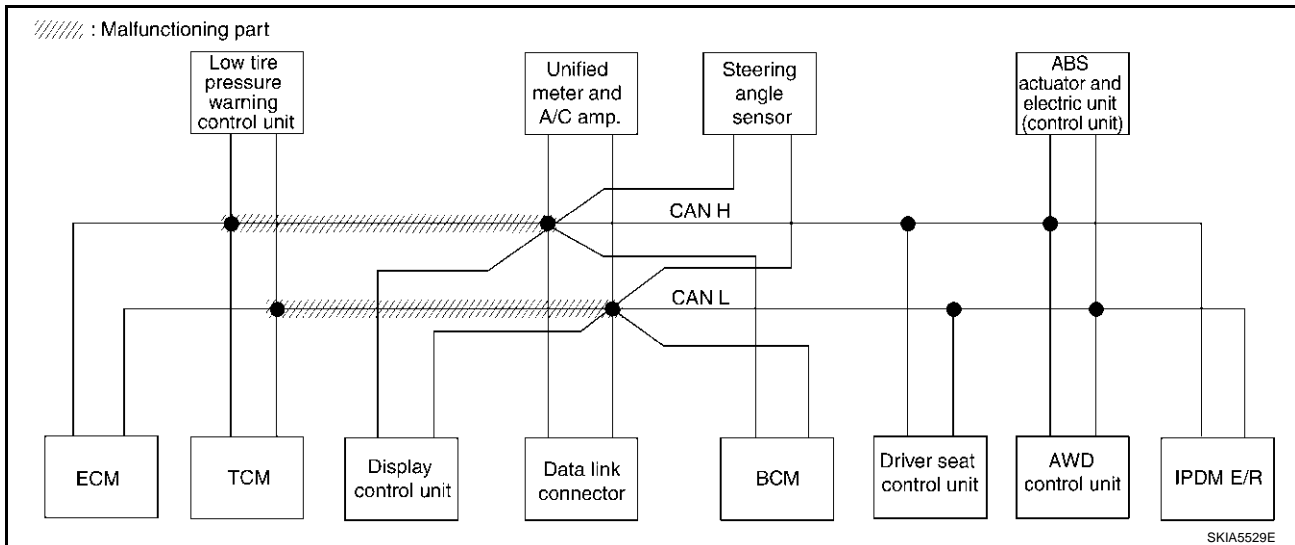
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

### Case 1

Check harness between TCM and data link connector. Refer to [LAN-1112, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1089E



SKIA5529E

# CAN SYSTEM (TYPE 32)

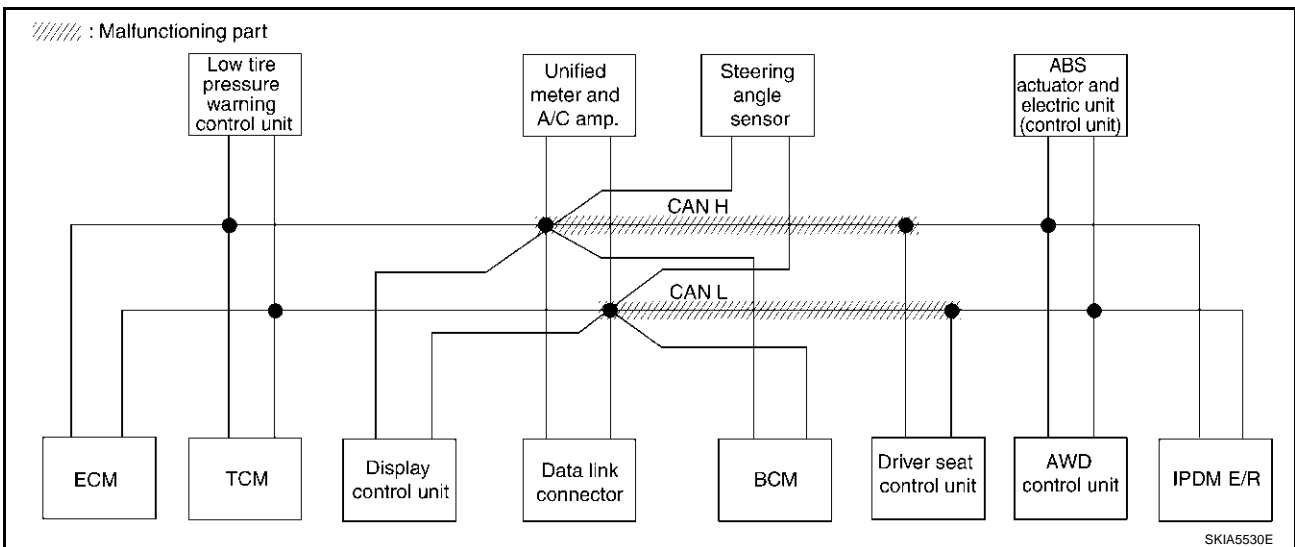
[CAN]

## Case 2

Check harness between data link connector and driver seat control unit. Refer to [LAN-1112, "Circuit Check Between Data Link Connector and Driver Seat Control Unit"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1090E



LAN

# CAN SYSTEM (TYPE 32)

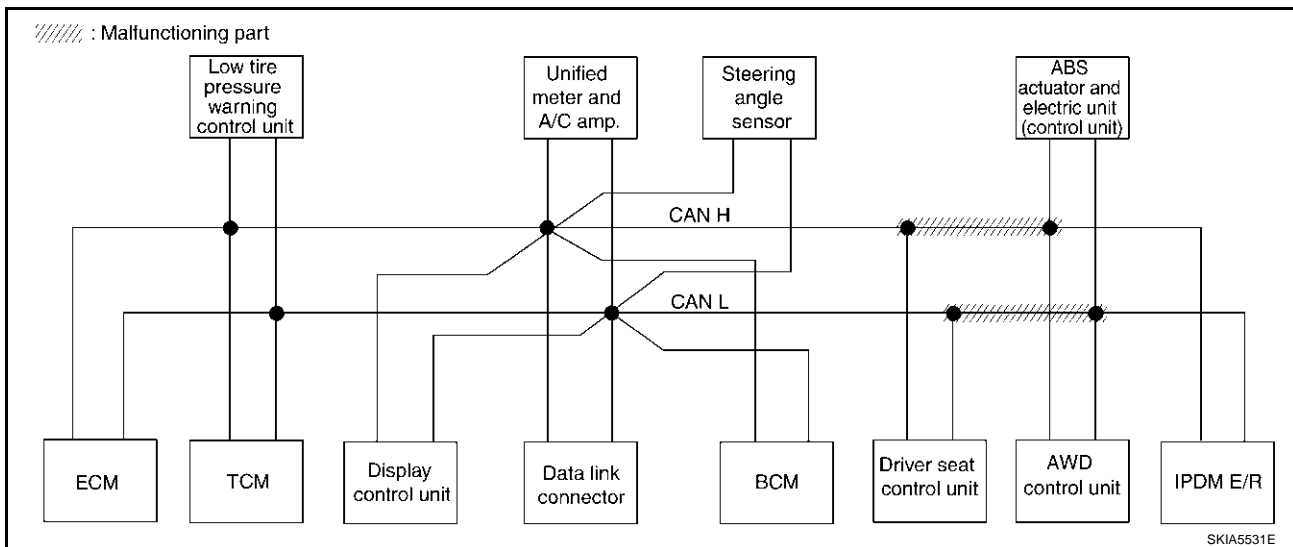
[CAN]

## Case 3

Check harness between driver seat control unit and ABS actuator and electric unit (control unit). Refer to LAN-1113, "Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit)".

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1091E



SKIA5531E

# CAN SYSTEM (TYPE 32)

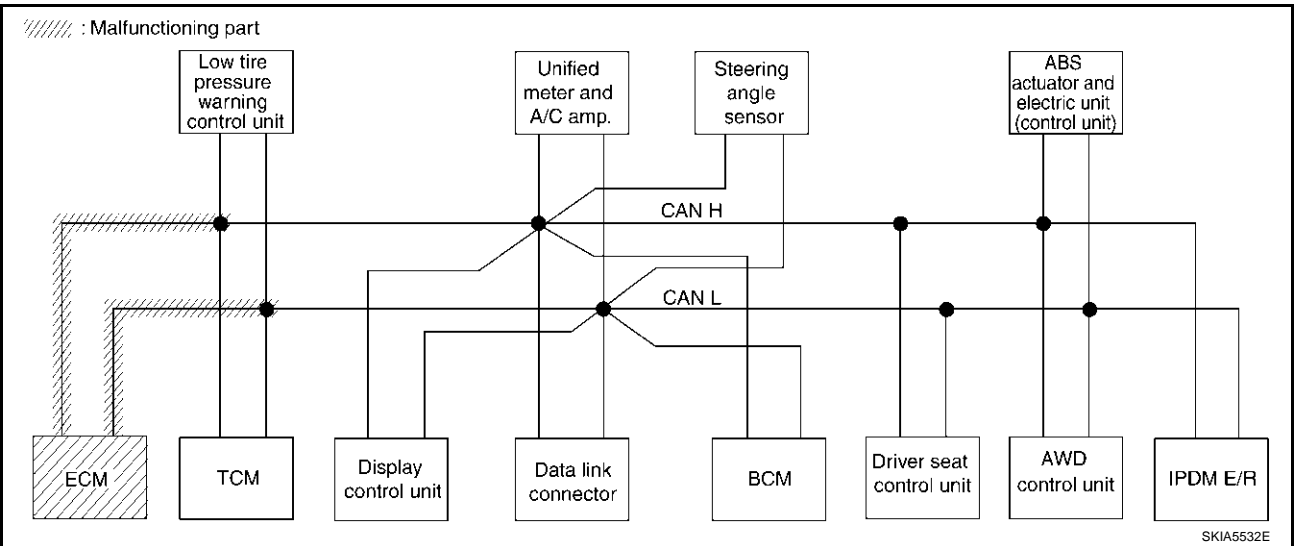
[CAN]

## Case 4

Check ECM circuit. Refer to [LAN-1114, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1092E



LAN

# CAN SYSTEM (TYPE 32)

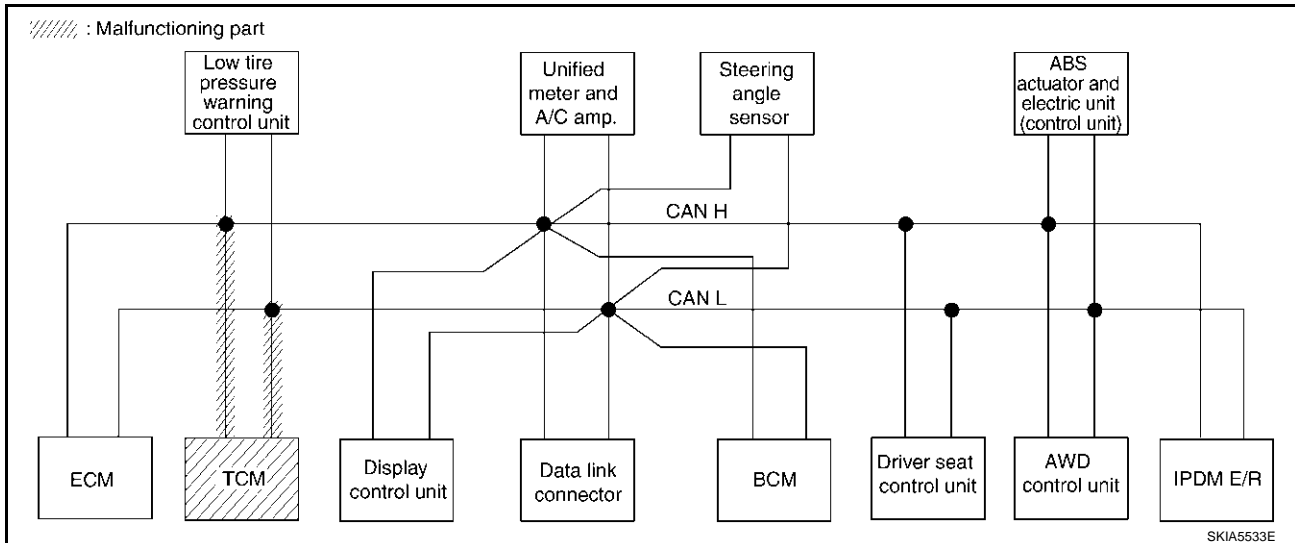
[CAN]

## Case 5

Check TCM circuit. Refer to [LAN-1114, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1093E





# CAN SYSTEM (TYPE 32)

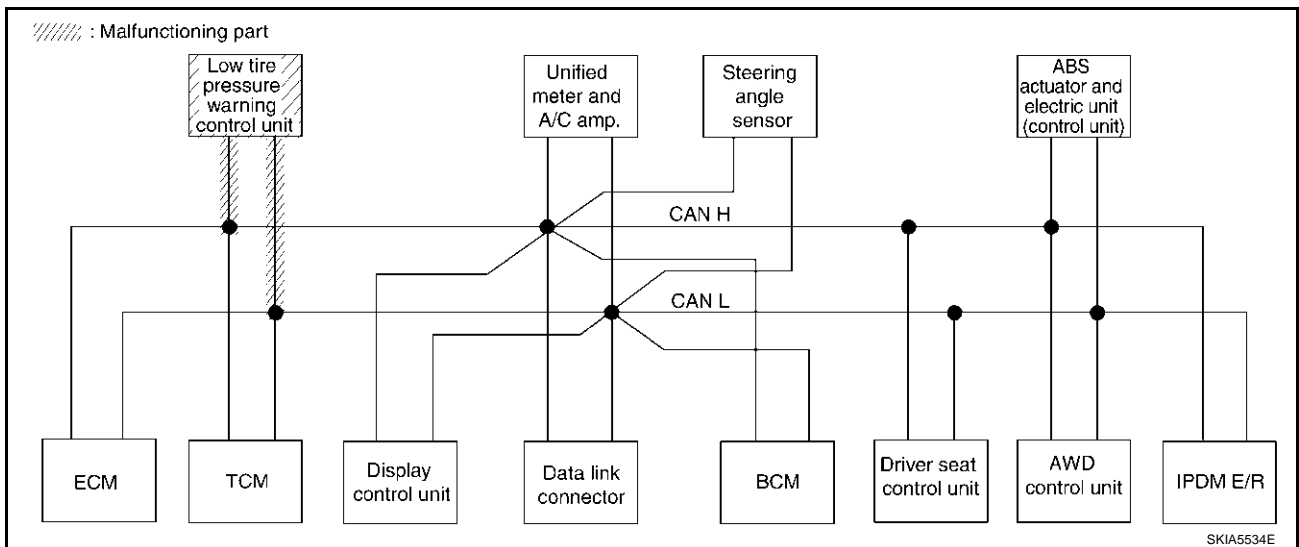
[CAN]

## Case 6

Check low tire pressure warning control unit circuit. Refer to [LAN-1115, "Low Tire Pressure Warning Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1094E



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# CAN SYSTEM (TYPE 32)

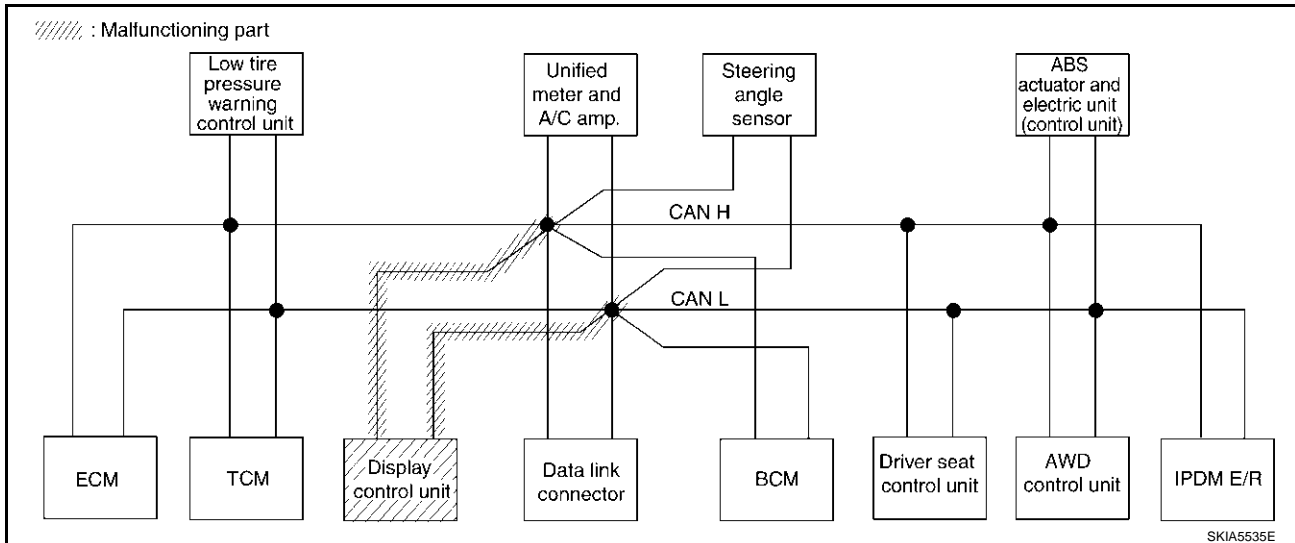
[CAN]

## Case 7

Check display control unit circuit. Refer to [LAN-1115, "Display Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CRC 1 ✓	CAN CRC 3 ✓	—	CAN CRC 6 ✓	—	CAN CRC 2 ✓	CAN CRC 5 ✓	—	—	—	CAN CRC 7 ✓
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1095E



# CAN SYSTEM (TYPE 32)

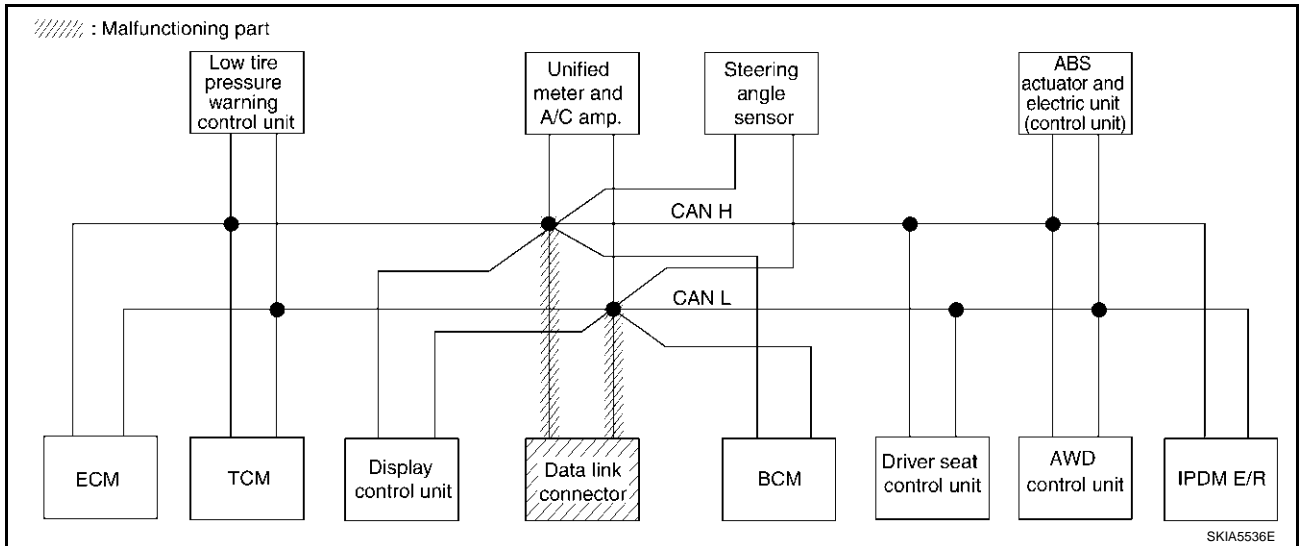
[CAN]

## Case 8

Check data link connector circuit. Refer to [LAN-1116, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1096E



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# CAN SYSTEM (TYPE 32)

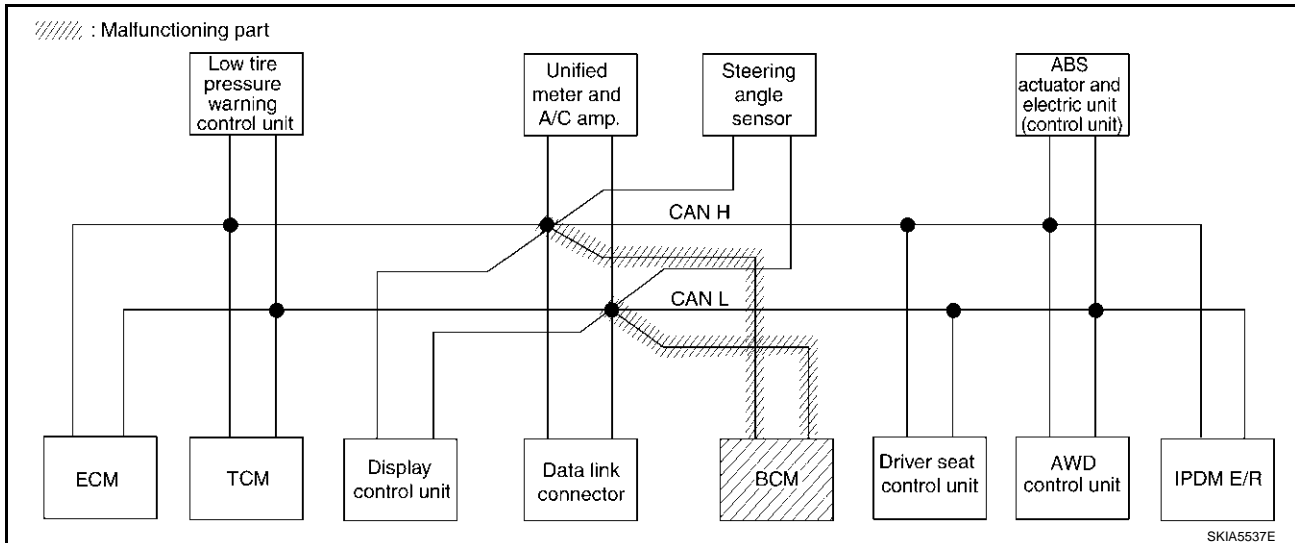
[CAN]

## Case 9

Check BCM circuit. Refer to [LAN-1116, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

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# CAN SYSTEM (TYPE 32)

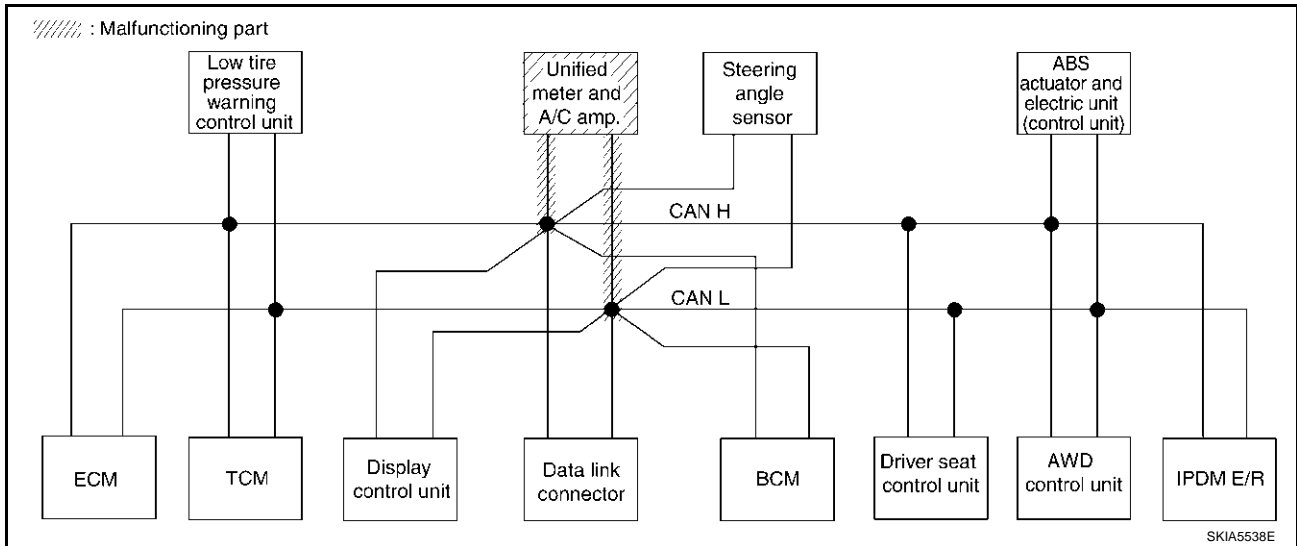
[CAN]

## Case 10

Check unified meter and A/C amp. circuit. Refer to [LAN-1117, "Unified Meter and A/C Amp. Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

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# CAN SYSTEM (TYPE 32)

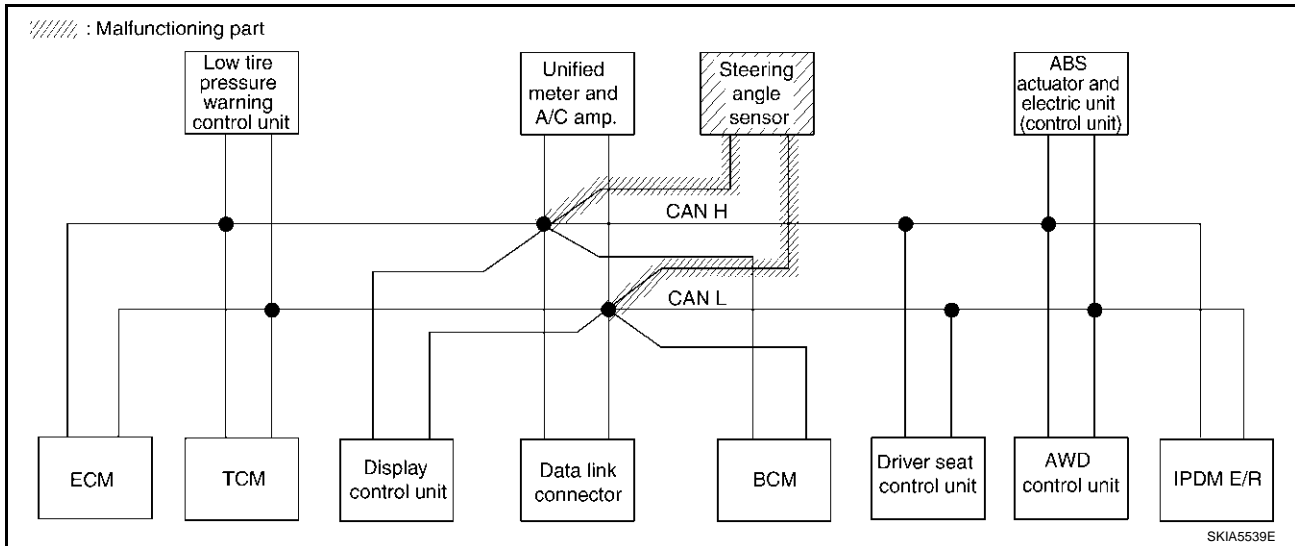
[CAN]

## Case 11

Check steering angle sensor circuit. Refer to [LAN-1117, "Steering Angle Sensor Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1099E



# CAN SYSTEM (TYPE 32)

[CAN]

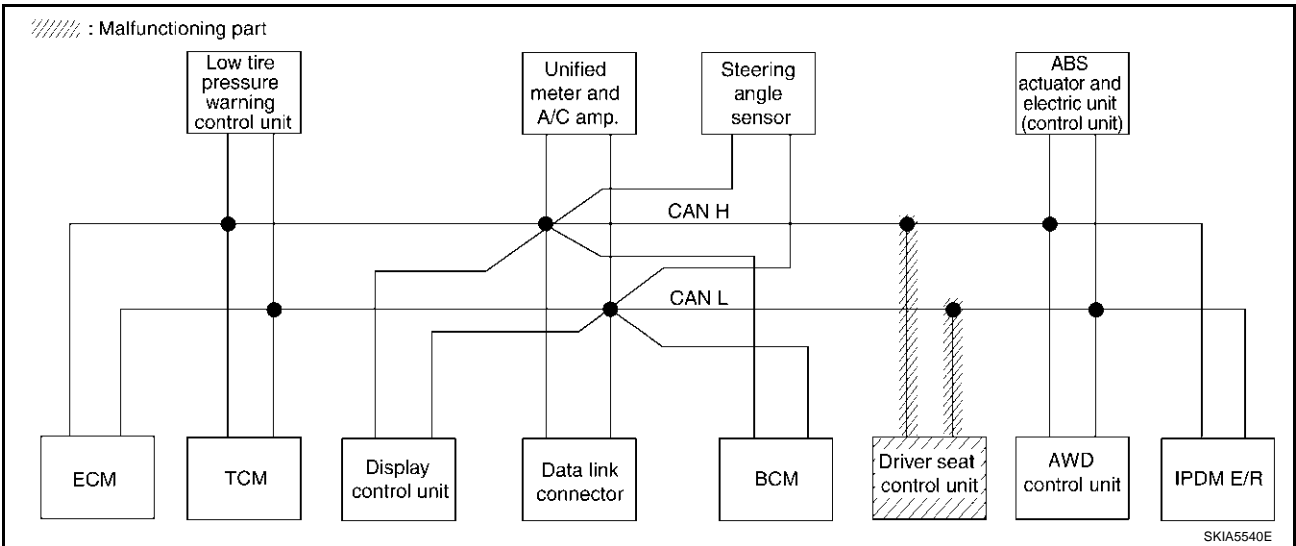
## Case 12

Check driver seat control unit circuit. Refer to [LAN-1118, "Driver Seat Control Unit Circuit Check"](#) .

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SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1100E



# CAN SYSTEM (TYPE 32)

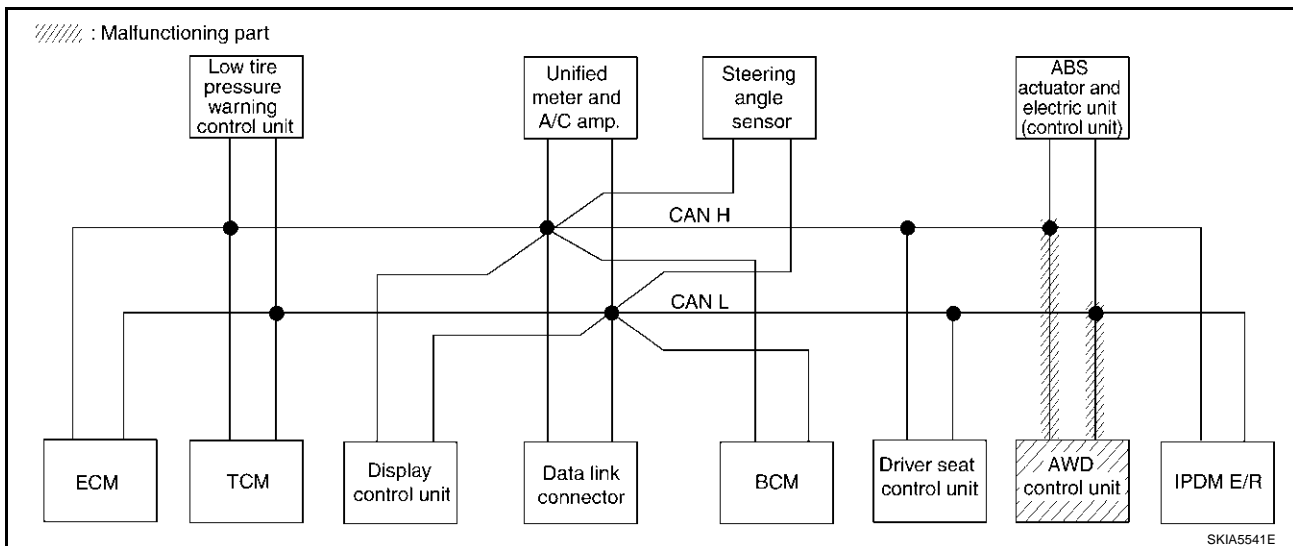
[CAN]

## Case 13

Check AWD control unit circuit. Refer to [LAN-1118, "AWD Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

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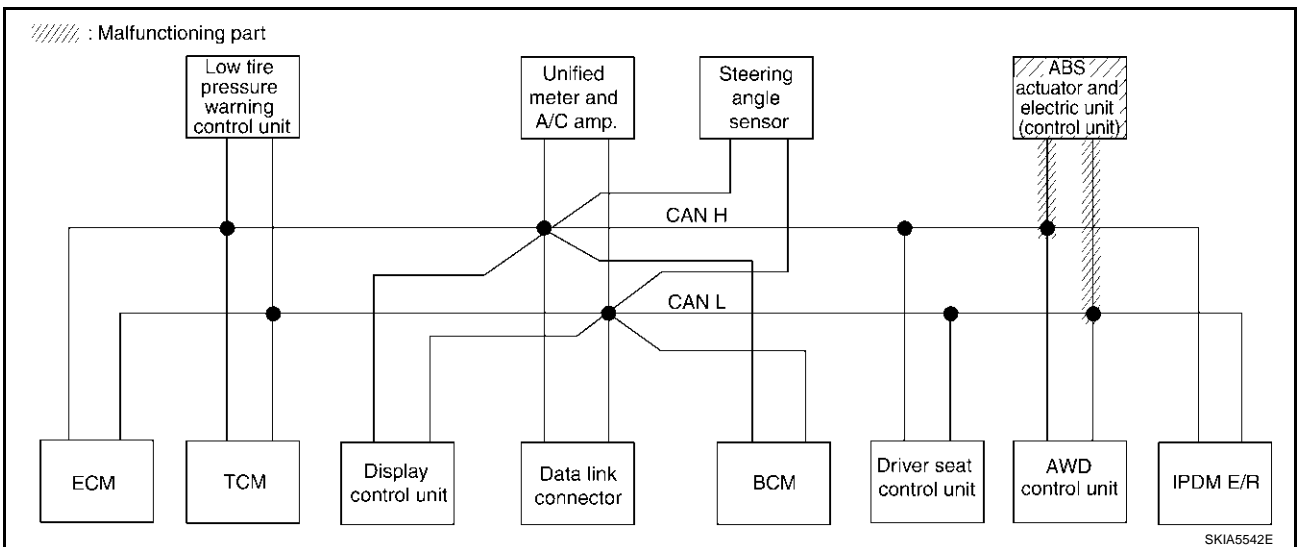


## Case 14

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-1119, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UN <del>✓</del> KN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UN <del>✓</del> KN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UN <del>✓</del> KN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UN <del>✓</del> KN	—
ABS	—	NG	UN <del>✓</del> KN	UN <del>✓</del> KN	UN <del>✓</del> KN	—	—	—	—	UN <del>✓</del> KN	UN <del>✓</del> KN	—	—

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# CAN SYSTEM (TYPE 32)

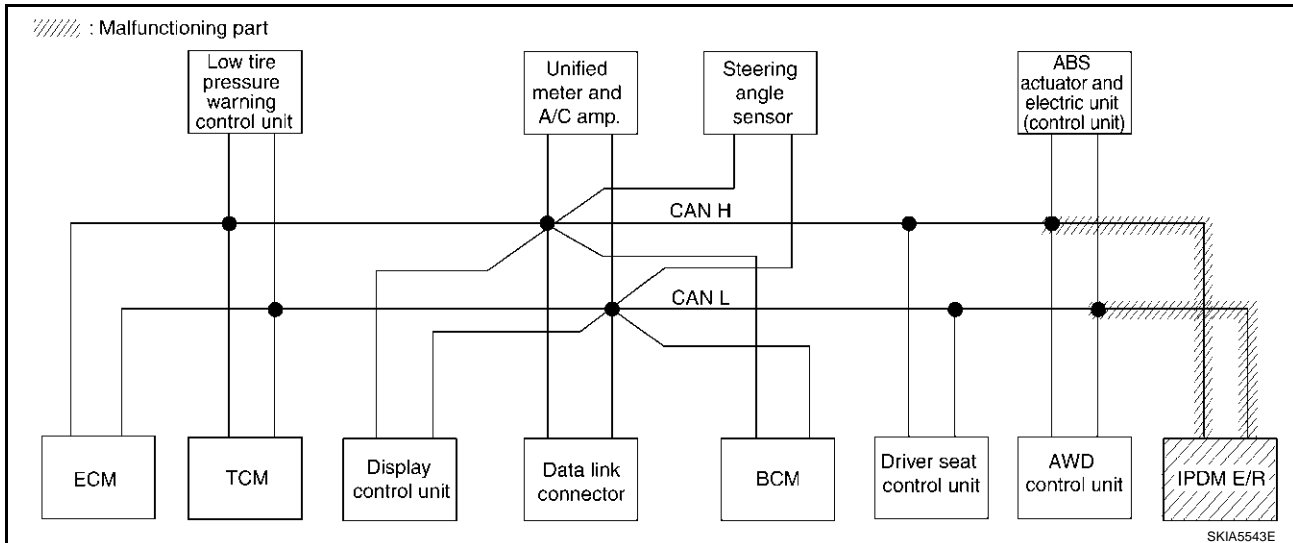
[CAN]

## Case 15

Check IPDM E/R circuit. Refer to [LAN-1119, "IPDM E/R Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

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## Case 16

Check CAN communication circuit. Refer to [LAN-1120, "CAN Communication Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—

PKIB1104E

# CAN SYSTEM (TYPE 32)

[CAN]

## Case 17

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-1124, "IPDM E/R Ignition Relay Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW	—	UNKW	—	—	UNKW	UNKW	—	UNKW	UNKW	UNKW
TRANSMISSION	No indication	NG	UNKW	UNKW	—	—	—	—	UNKW	—	—	UNKW	—
AIR PRESSURE MONITOR	No indication	NG	UNKW	—	—	—	—	—	UNKW	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKW	UNKW	—	—	—	—	UNKW	—	—	—	UNKW
METER A/C AMP	No indication	—	UNKW	UNKW	UNKW	UNKW	UNKW	UNKW	—	—	UNKW	UNKW	—
AUTO DRIVE POS.	No indication	NG	UNKW	—	UNKW	—	—	UNKW	UNKW	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKW	UNKW	—	—	—	—	UNKW	—	—	UNKW	—
ABS	—	NG	UNKW	UNKW	UNKW	—	—	—	—	UNKW	UNKW	—	—

PKIB1105E

## Case 18

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-1124, "IPDM E/R Ignition Relay Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW	—	UNKW	—	—	UNKW	UNKW	—	UNKW	UNKW	UNKW
TRANSMISSION	No indication	NG	UNKW	UNKW	—	—	—	—	UNKW	—	—	UNKW	—
AIR PRESSURE MONITOR	No indication	NG	UNKW	—	—	—	—	—	UNKW	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	—	NG	UNKW	UNKW	—	—	—	—	UNKW	—	—	—	UNKW
METER A/C AMP	No indication	—	UNKW	UNKW	UNKW	UNKW	UNKW	UNKW	—	—	UNKW	UNKW	—
AUTO DRIVE POS.	No indication	NG	UNKW	—	UNKW	—	—	UNKW	UNKW	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKW	UNKW	—	—	—	—	UNKW	—	—	UNKW	—
ABS	—	NG	UNKW	UNKW	UNKW	—	—	—	—	UNKW	UNKW	—	—

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## Circuit Check Between TCM and Data Link Connector

### 1. CHECK HARNESS FOR OPEN CIRCUIT

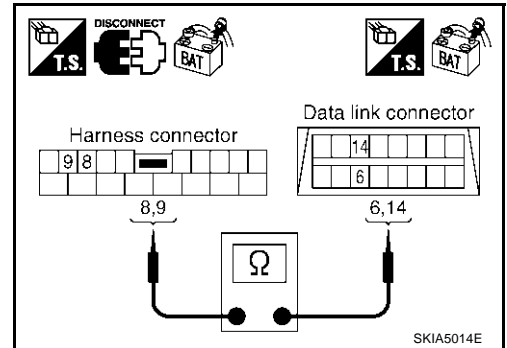
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

**8 (L) - 6 (L) : Continuity should exist.**

**9 (Y) - 14 (Y) : Continuity should exist.**

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-1092, "Work Flow"](#) .
- NG >> Repair harness.



## Circuit Check Between Data Link Connector and Driver Seat Control Unit

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).

- Harness connector M9
- Harness connector B2

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

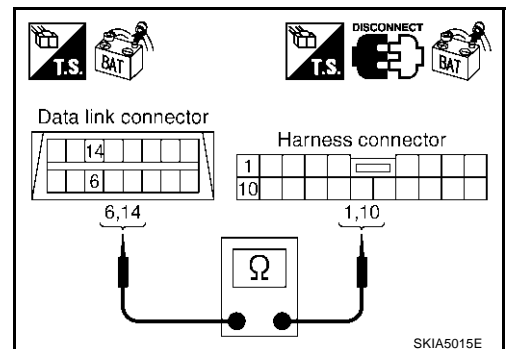
1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

**6 (L) - 1 (L) : Continuity should exist.**

**14 (Y) - 10 (Y) : Continuity should exist.**

OK or NG

- OK >> GO TO 3.
- NG >> Repair harness.



### 3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

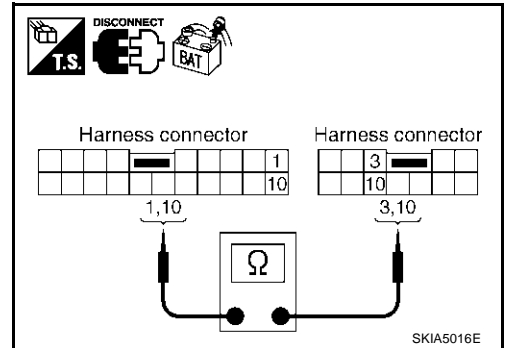
**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-1092, "Work Flow"](#).

NG >> Repair harness.



## Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit)

AKS00780

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).

- Harness connector B4
- Harness connector E105

#### OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B2 and harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

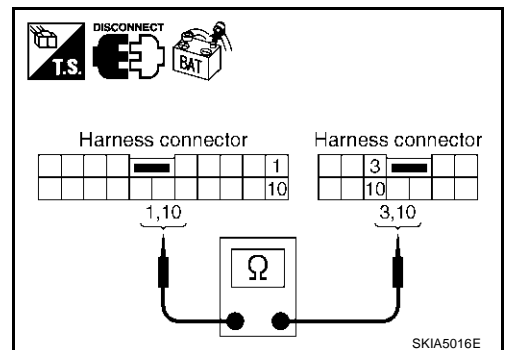
**1 (L) - 3 (L) : Continuity should exist.**

**10 (Y) - 10 (Y) : Continuity should exist.**

#### OK or NG

OK >> GO TO 3.

NG >> Repair harness.



LAN

L

M

### 3. CHECK HARNESS FOR OPEN CIRCUIT

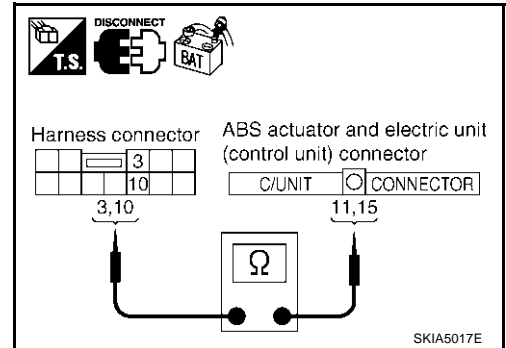
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

**3 (L) - 11 (L) : Continuity should exist.**

**10 (Y) - 15 (Y) : Continuity should exist.**

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-1092, "Work Flow"](#) .
- NG >> Repair harness.



SKIA5017E

AKS0078P

### ECM Circuit Check

#### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

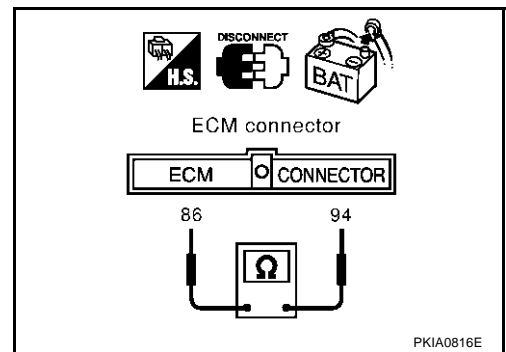
### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

**94 (L) - 86 (Y) : Approx. 108 - 132Ω**

OK or NG

- OK >> Replace ECM.
- NG >> Repair harness between ECM and TCM.



PKIA0816E

AKS0078Q

### TCM Circuit Check

#### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
  - TCM connector
  - Harness connector F102
  - Harness connector M82

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

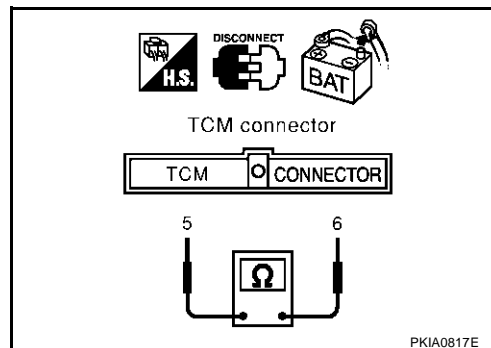
1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace TCM.  
 NG >> Repair harness between TCM and low tire pressure warning control unit.



## Low Tire Pressure Warning Control Unit Circuit Check

AKS0078R

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of low tire pressure warning control unit for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

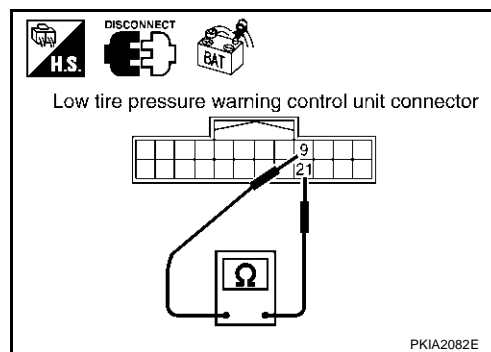
1. Disconnect low tire pressure warning control unit connector.
2. Check resistance between low tire pressure warning control unit harness connector M81 terminals 9 (L) and 21 (Y).

**9 (L) - 21 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace low tire pressure warning control unit.  
 NG >> Repair harness between low tire pressure warning control unit and TCM.



## Display Control Unit Circuit Check

AKS0078S

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display control unit for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

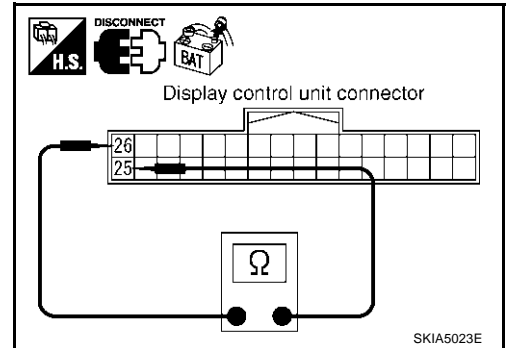
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect display control unit connector.
2. Check resistance between display control unit harness connector M43 terminals 25 (L) and 26 (Y).

**25 (L) - 26 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace display control unit.  
 NG >> Repair harness between display control unit and data link connector.



AKS0078T

## Data Link Connector Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

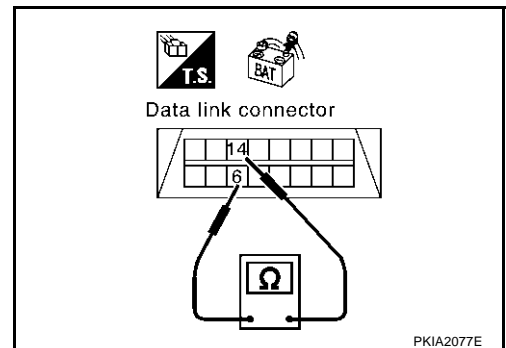
## 2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

**6 (L) - 14 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Diagnose again. Refer to [LAN-1092, "Work Flow"](#).  
 NG >> Repair harness between data link connector and BCM.



AKS0078U

## BCM Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.



## 2. CHECK HARNESS FOR OPEN CIRCUIT

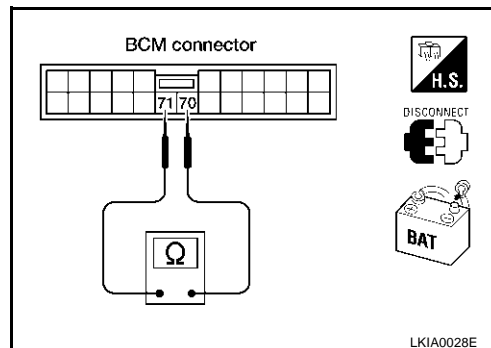
1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M37 terminals 70 (L) and 71 (Y).

**70 (L) - 71 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace BCM. Refer to [BCS-36, "Removal and Installation of BCM"](#).
- NG >> Repair harness between BCM and data link connector.



AKS0078V

## Unified Meter and A/C Amp. Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

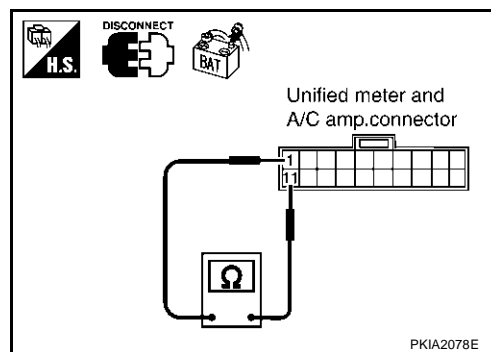
1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

**1 (L) - 11 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace unified meter and A/C amp.
- NG >> Repair harness between unified meter and A/C amp. and data link connector.



AKS0078W

## Steering Angle Sensor Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of steering angle sensor for damage, bend and loose connection (sensor side and harness side).

### OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

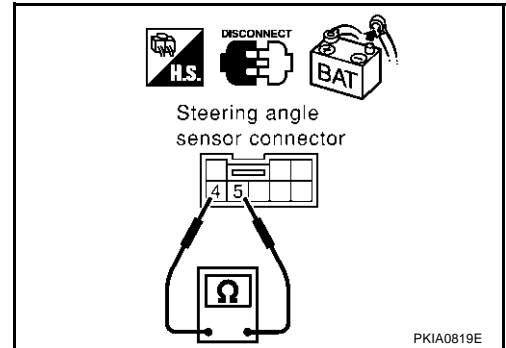
1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M33 terminals 4 (L) and 5 (Y).

**4 (L) - 5 (Y)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace steering angle sensor.  
 NG >> Repair harness between steering angle sensor and data link connector.



## Driver Seat Control Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control unit side and harness side).
  - Driver seat control unit connector
  - Harness connector B301
  - Harness connector B9

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

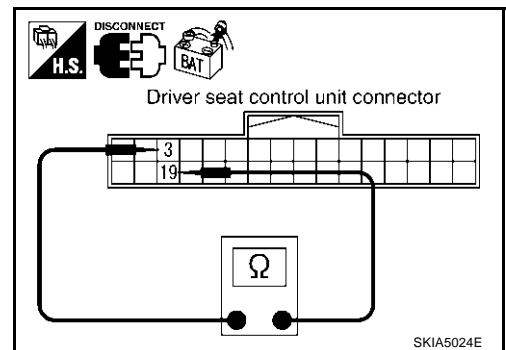
1. Disconnect driver seat control unit connector.
2. Check resistance between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

**3 (L/Y) - 19 (BR/W)**

**: Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace driver seat control unit.  
 NG >> Repair harness between driver seat control unit and harness connector B4.



## AWD Control Unit Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of AWD control unit for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

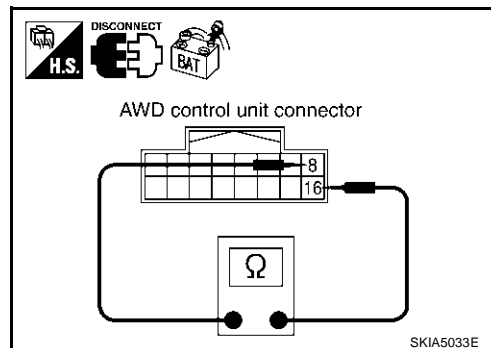
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect AWD control unit connector.
2. Check resistance between AWD control unit harness connector E111 terminals 8 (L) and 16 (Y).

**8 (L) - 16 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace AWD control unit.  
 NG >> Repair harness between AWD control unit and IPDM E/R.



## ABS Actuator and Electric Unit (Control Unit) Circuit Check

AKS0078Z

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

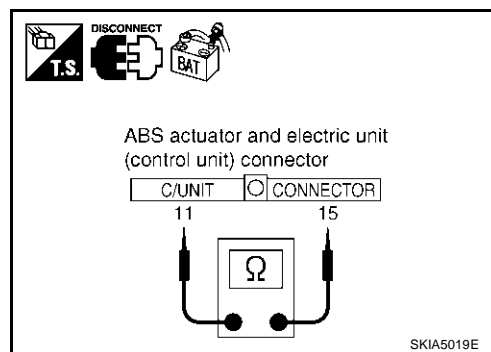
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

**11 (L) - 15 (Y) : Approx. 54 - 66Ω**

### OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).  
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



## IPDM E/R Circuit Check

AKS00790

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

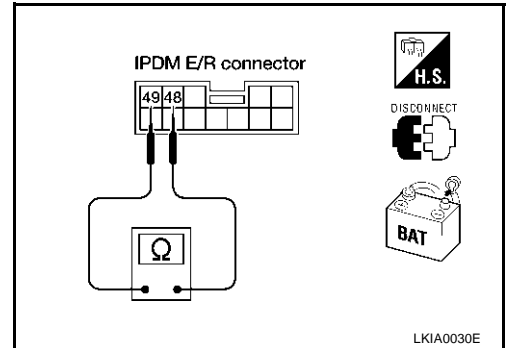
1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

**48 (L) - 49 (Y)**

**: Approx. 108 - 132Ω**

### OK or NG

- OK >> Replace IPDM E/R.  
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



## CAN Communication Circuit Check

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, meter side, sensor side and harness side).

- ECM
- TCM
- Low tire pressure warning control unit
- Display control unit
- BCM
- Unified meter and A/C amp.
- Steering angle sensor
- Driver seat control unit
- AWD control unit
- ABS actuator and electric unit (control unit)
- IPDM E/R
- Between ECM and IPDM E/R
- Between ECM and TCM
- Between ECM and driver seat control unit

### OK or NG

- OK >> GO TO 2.  
 NG >> Repair terminal or connector.

AKS00791

## 2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
  - ECM connector
  - Low tire pressure warning control unit connector
  - Harness connector M82
  - Display control unit connector
  - BCM connector
  - Unified meter and A/C amp. connector
  - Steering angle sensor connector
  - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

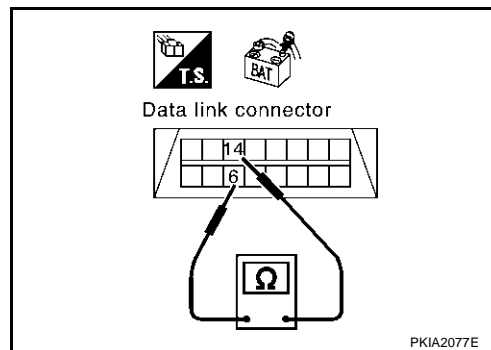
**6 (L) - 14 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 3.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M9.



## 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

**6 (L) - Ground : Continuity should not exist.**

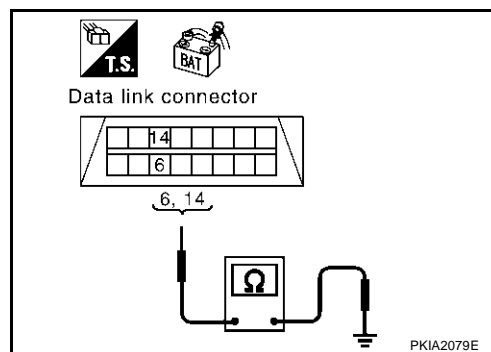
**14 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M9.



#### 4. CHECK HARNESS FOR SHORT CIRCUIT

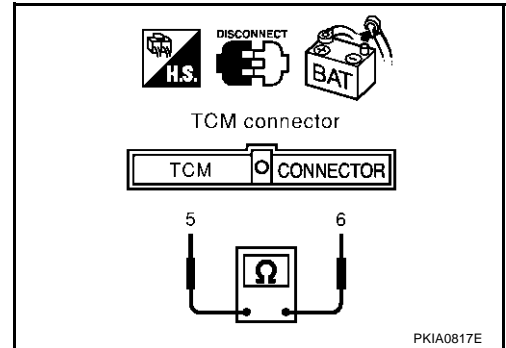
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

**5 (L) - 6 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 5.

NG >> Repair harness between TCM and harness connector F102.



#### 5. CHECK HARNESS FOR SHORT CIRCUIT

- Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

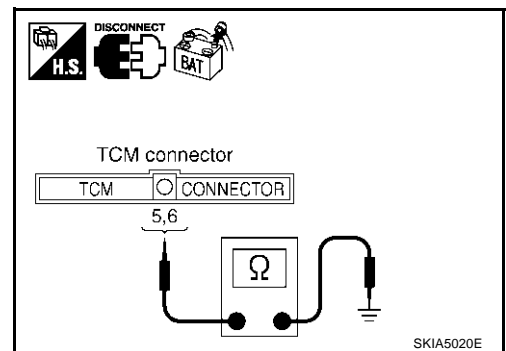
**5 (L) - Ground : Continuity should not exist.**

**6 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 6.

NG >> Repair harness between TCM and harness connector F102.



#### 6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B4 and harness connector B9.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

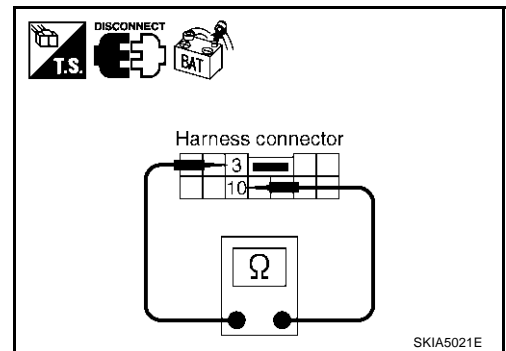
**3 (L) - 10 (Y) : Continuity should not exist.**

OK or NG

OK >> GO TO 7.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Repair harness between harness connector B4 and harness connector B2.
- Repair harness between harness connector B4 and harness connector B9.



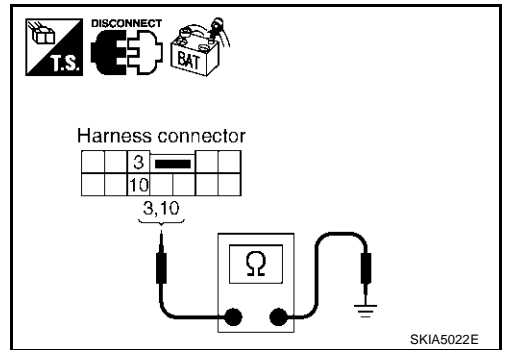
**7. CHECK HARNESS FOR SHORT CIRCUIT**

Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

- 3 (L) - Ground : Continuity should not exist.**
- 10 (Y) - Ground : Continuity should not exist.**

OK or NG

- OK >> GO TO 8.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Repair harness between harness connector B4 and harness connector B2.
  - Repair harness between harness connector B4 and harness connector B9.



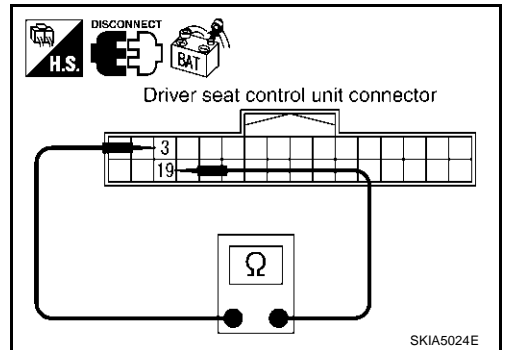
**8. CHECK HARNESS FOR SHORT CIRCUIT**

1. Disconnect driver seat control unit connector.
2. Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

- 3 (L/Y) - 19 (BR/W) : Continuity should not exist.**

OK or NG

- OK >> GO TO 9.
- NG >> Repair harness between driver seat control unit and harness connector B301.



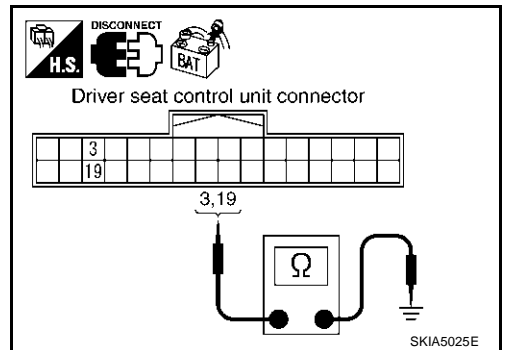
**9. CHECK HARNESS FOR SHORT CIRCUIT**

Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y), 19 (BR/W) and ground.

- 3 (L/Y) - Ground : Continuity should not exist.**
- 19 (BR/W) - Ground : Continuity should not exist.**

OK or NG

- OK >> GO TO 10.
- NG >> Repair harness between driver seat control unit and harness connector B301.



A  
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C  
D  
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F  
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H  
I  
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L  
M

LAN

## 10. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect AWD control unit connector, ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

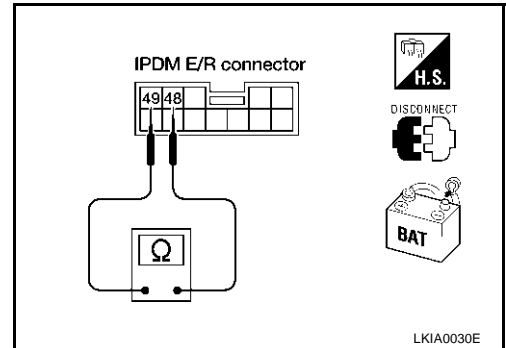
**48 (L) - 49 (Y) : Continuity should not exist.**

### OK or NG

OK >> GO TO 11.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 11. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

**48 (L) - Ground : Continuity should not exist.**

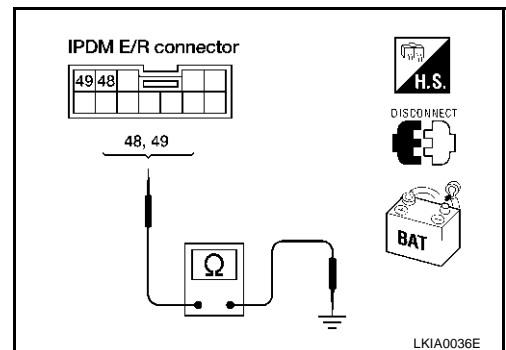
**49 (Y) - Ground : Continuity should not exist.**

### OK or NG

OK >> GO TO 12.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E105.



## 12. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-1125, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

### OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-1092, "Work Flow"](#).

NG >> Replace ECM and/or IPDM E/R.

### IPDM E/R Ignition Relay Circuit Check

AKS00792

Check the following. If no malfunction is found, replace the IPDM E/R.

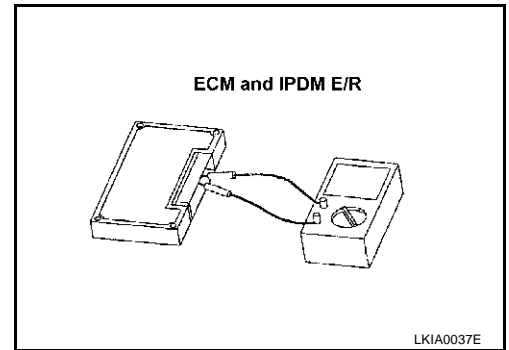
- IPDM E/R power supply circuit. Refer to [PG-45, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#).



## Component Inspection ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value ( $\Omega$ ) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



A  
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C  
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