SECTION LAN

LAN SYSTEM

CONTENTS

CAN

PRECAUTIONS

PFP:00001

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

AKS007WY

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

AKS0058H

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-6, "CAN Communication Unit" .

Precautions For Trouble Diagnosis

AKS0058I

CAN SYSTEM

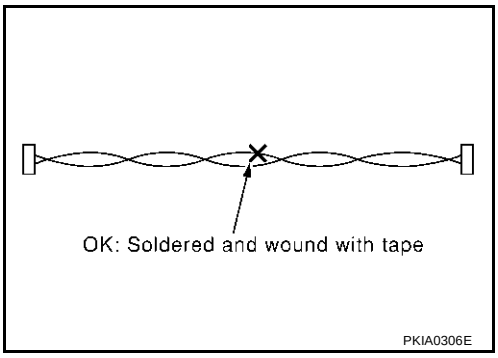
- Do not apply voltage of 7.0V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0V or less.
- Be sure to turn ignition switch off and disconnect negative battery terminal before checking the circuit.

Precautions For Harness Repair

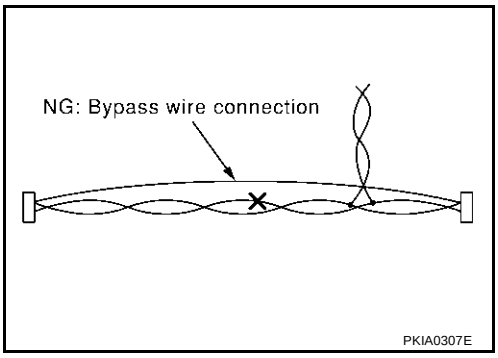
AKS0058J

CAN SYSTEM

- 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.)



CAN COMMUNICATION

PFP:23710

System Description

AKS007GA

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

AKS007Z4

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

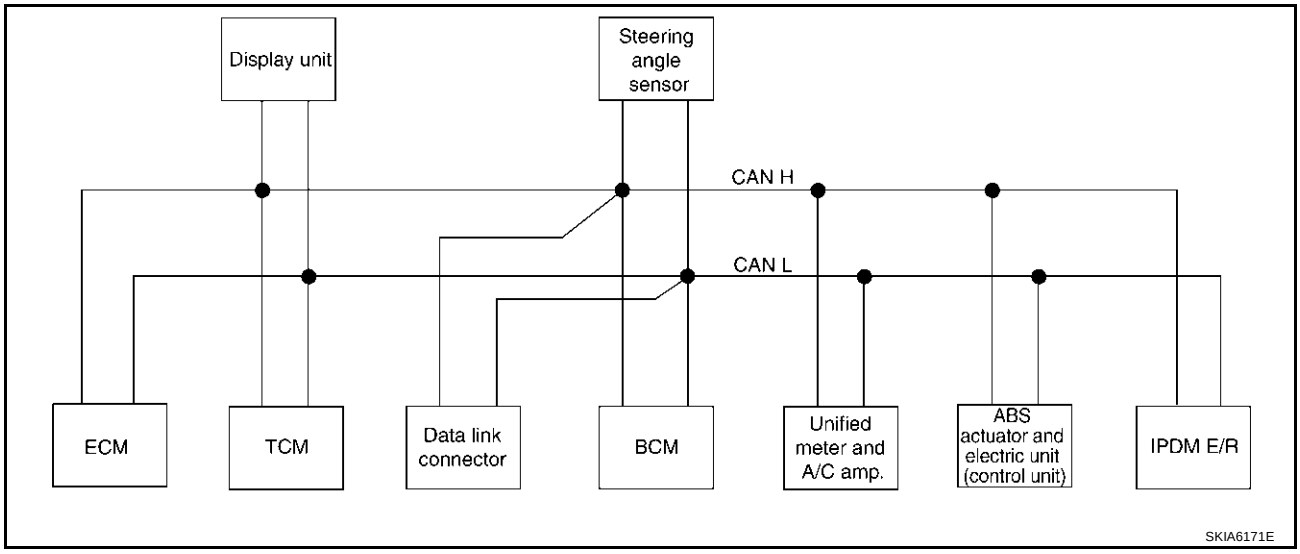
Body type	Wagon					
Axle	2WD			AWD		
Engine	VQ35DE			VQ35DE/VK45DE		
Transmission	A/T					
Brake control	VDC					
Navigation system			×			×
Low tire pressure warning system			×			×
ICC system			×			×
Intelligent Key system			×			×
Automatic drive positioner		×	×		×	×
CAN system type	1	2	3	4	5	6
CAN system trouble diagnosis	LAN-20	LAN-51	LAN-86	LAN-132	LAN-166	LAN-205

×: Applicable

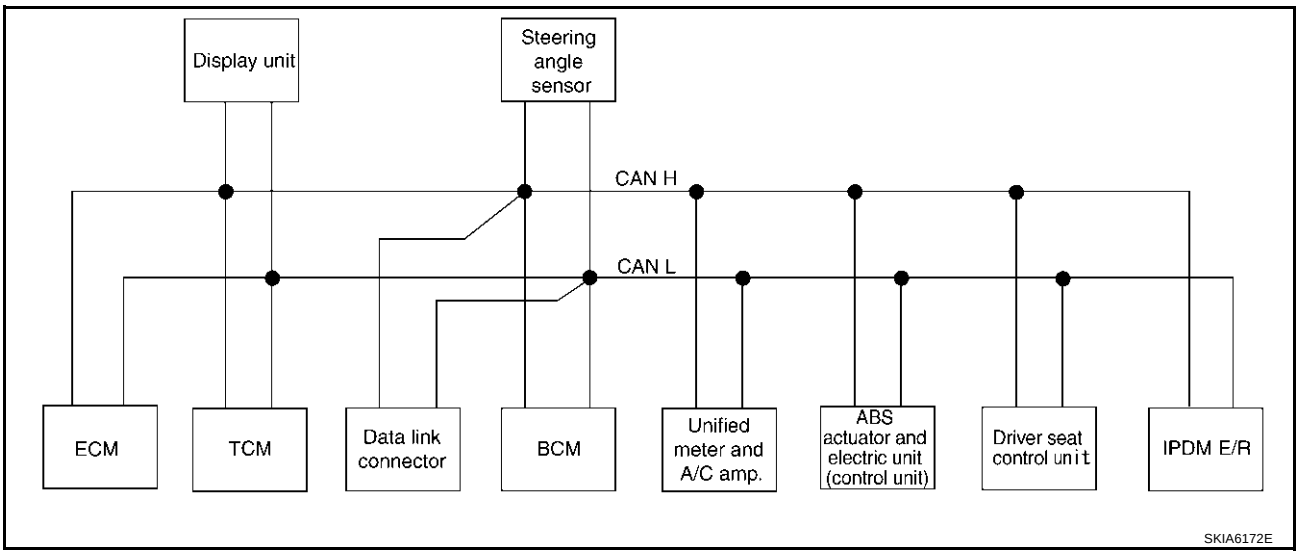
TYPE 1/TYPE2

System Diagram

- Type1



- Type2



Input/output Signal Chart

T: Transmit R: Receive

Signals	ECM	TCM	Display unit	BCM	Steering angle sensor	Unified meter and A/C amp.	ABS actuator and electric unit (control unit)	Driver seat control unit	IPDM E/R
Engine speed signal	T	R	R			R	R		
Engine status signal	T			R					
Engine coolant temperature signal	T	R				R			
A/T self-diagnosis signal	R	T							
Accelerator pedal position signal	T	R					R		
Closed throttle position signal	T	R							
Wide open throttle position signal	T	R							
Battery voltage 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			
ABS operation signal	R						T		
TCS operation signal	R						T		
VDC operation signal	R						T		
Fuel consumption monitor signal	T		R			R			
Input shaft revolution signal	R	T							
Output shaft revolution signal	R	T							
A/C switch signal	R			T					
A/C compressor request signal	T								R
A/C relay status signal	R								T
A/C compressor feedback signal	T					R			
Blower fan motor switch signal	R			T					

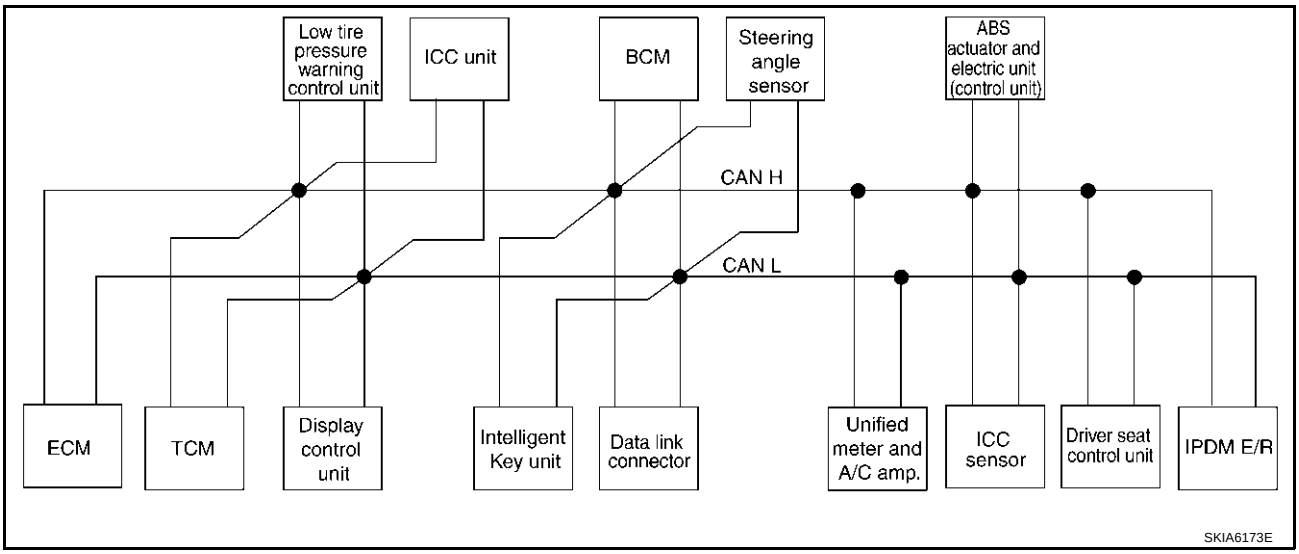
Signals	ECM	TCM	Dis-play unit	BCM	Steer-ing angle sensor	Unified meter and A/C amp.	ABS actua-tor and electric unit (con-trol unit)	Driver seat control unit	IPDM E/R
A/C control signal			T			R			
			R			T			
Cooling fan speed request signal	T								R
Cooling fan speed signal	R								T
Position light request signal			R	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 light request signal				T					R
Day time running light request signal				T		R			
Turn LED burnout status signal				R		T			
Vehicle speed signal						R	T		
	R	R	R	R		T		R	
Sleep wake up signal				T		R		R	R
Door switch signal			R	T		R		R	R
Turn indicator signal				T		R			
Key fob ID signal				T				R	
Key fob door unlock signal				T				R	
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			T			
ASCD operation signal	T	R							
ASCD OD cancel request	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		
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	R				R	
A/T CHECK indicator lamp signal		T				R			

Signals	ECM	TCM	Dis-play unit	BCM	Steer-ing angle sensor	Unified meter and A/C amp.	ABS actua-tor and electric unit (con-trol unit)	Driver seat control unit	IPDM E/R
A/T position indicator lamp signal		T				R			
A/T shift schedule change demand signal		R					T		
Manual mode signal		R				T			
Not manual mode signal		R				T			
Manual mode shift up signal		R				T			
Manual mode shift down signal		R				T			
Manual mode indicator signal		T				R			
Distance to empty signal			R			T			
Hand brake switch				R		T			

TYPE 3

System Diagram

- Type3



Input/output Signal Chart

T: Transmit R: Receive

Signals	ECM	TCM	Dis-play con-trol unit	Low tire pres-sure warn-ing con-trol unit	ICC unit	Intelli-gent Key unit	BCM	Steering angle sen-sor	Uni-fied meter and A/C amp.	ICC sen-sor	ABS actu-ator and elec-tric unit (con-trol unit)	Driver seat con-trol unit	IPDM E/R
Engine speed signal	T	R	R		R				R		R		
Engine status signal	T						R						
Engine coolant tempera-ture signal	T	R			R				R				
A/T self-diagnosis signal	R	T											

Signals	ECM	TCM	Display control unit	Low tire pressure warning control unit	ICC unit	Intelligent Key unit	BCM	Steering angle sensor	Unified meter and A/C amp.	ICC sensor	ABS actuator and electric unit (control unit)	Driver seat control unit	IPDM E/R
Accelerator pedal position signal	T	R			R						R		
Closed throttle position signal	T	R			R								
Wide open throttle position signal	T	R											
Battery voltage signal	T	R											
Key switch signal							T					R	
Ignition switch signal							T					R	R
P range signal		T			R						R	R	
Stop lamp switch signal		R							T				
ABS operation signal	R				R						T		
TCS operation signal	R				R						T		
VDC operation signal	R				R						T		
Fuel consumption monitor signal	T		R						R				
Input shaft revolution signal	R	T			R								
Output shaft revolution signal	R	T			R								
A/C switch signal	R						T						
A/C compressor request signal	T												R
A/C relay status signal	R												T
A/C compressor feedback signal	T								R				
Blower fan motor switch signal	R						T						
A/C control signal			T						R				
			R						T				
Cooling fan speed signal	R												T
Position light request signal	R						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 light request signal							T						R
Day time running light request signal							T		R				

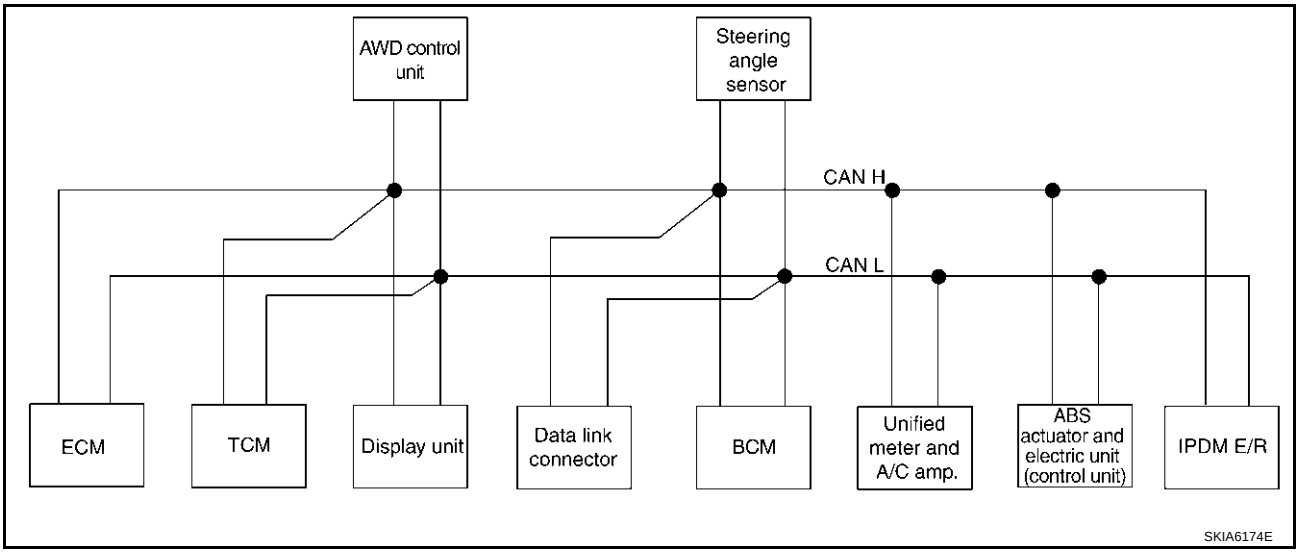
Signals	ECM	TCM	Display control unit	Low tire pressure warning control unit	ICC unit	Intelligent Key unit	BCM	Steering angle sensor	Unified meter and A/C amp.	ICC sensor	ABS actuator and electric unit (control unit)	Driver seat control unit	IPDM E/R
Turn LED burnout status signal							R		T				
Vehicle speed signal					R				R		T		
	R	R	R	R		R	R		T	R		R	
Sleep wake up signal							T		R			R	R
						T	R						
Door switch signal			R			R	T		R			R	R
Turn indicator signal							T		R				
Key fob ID signal							T					R	
Key fob door unlock signal							T					R	
Oil pressure switch signal							R						T
							T		R				
Buzzer output signal							T		R				
						T			R				
					T				R				
Fuel level sensor signal	R								T				
Fuel level low warning signal			R						T				
ICC operation signal	R				T								
Front wiper request signal					R		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			R	T									
ABS warning lamp signal					R				R		T		
VDC OFF indicator lamp signal					R				R		T		
SLIP indicator lamp signal									R		T		

Signals	ECM	TCM	Display control unit	Low tire pressure warning control unit	ICC unit	Intelligent Key unit	BCM	Steering angle sensor	Unified meter and A/C amp.	ICC sensor	ABS actuator and electric unit (control unit)	Driver seat control unit	IPDM E/R
Brake warning lamp signal									R		T		
System setting signal			T			R						R	
Distance to empty signal			R						T				
Hand brake switch signal							R		T				
Door lock/unlock request signal						T	R						
Door lock/unlock status signal						R	T						
Starter permission signal						T	R						
Back door open request signal						T	R						
Power window open request signal						T	R						
Alarm request signal						T	R						
Key warning signal						T			R				
ICC sensor signal					R					T			
ICC warning lamp signal					T				R				
ICC system display signal					T				R				
Current gear position signal		T			R						R		
Steering switch signal	T				R								
ASCD operation signal	T	R											
ASCD OD cancel request	T	R											
ICC OD cancel request	R	R			T								
A/T CHECK indicator lamp signal		T							R				
A/T position indicator lamp signal		T							R				
A/T shift schedule change demand signal		R									T		
Manual mode signal		R							T				
Not manual mode signal		R							T				
Manual mode shift up signal		R							T				
Manual mode shift down signal		R							T				
Manual mode indicator signal		T			R				R				
Ignition knob switch signal						T	R						

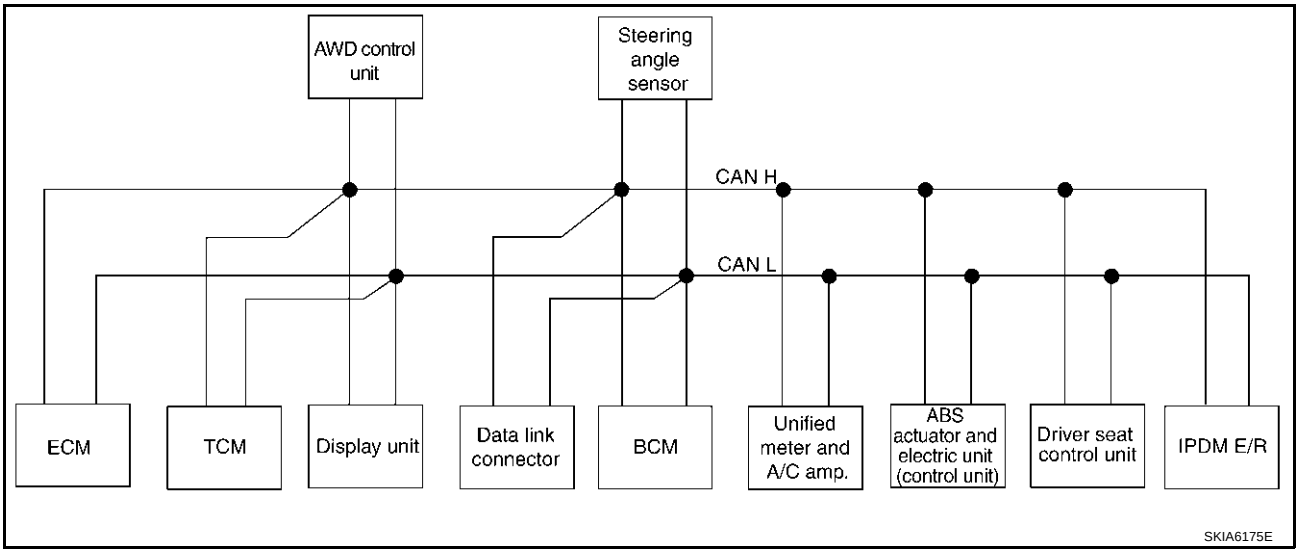
TYPE 4/TYPE5

System Diagram

- Type4



- Type5



Input/output Signal Chart

T: Transmit R: Receive

Signals	ECM	TCM	Display unit	AWD control unit	BCM	Steering angle sensor	Unified meter and A/C amp.	ABS actuator and electric unit (control unit)	Driver seat control unit	IPDM E/R
A/T self-diagnosis signal	R	T								
ABS operation signal	R			R				T		
TCS operation signal	R							T		
VDC operation signal	R			R				T		
Stop lamp switch signal		R		R			T			
Battery voltage signal	T	R								

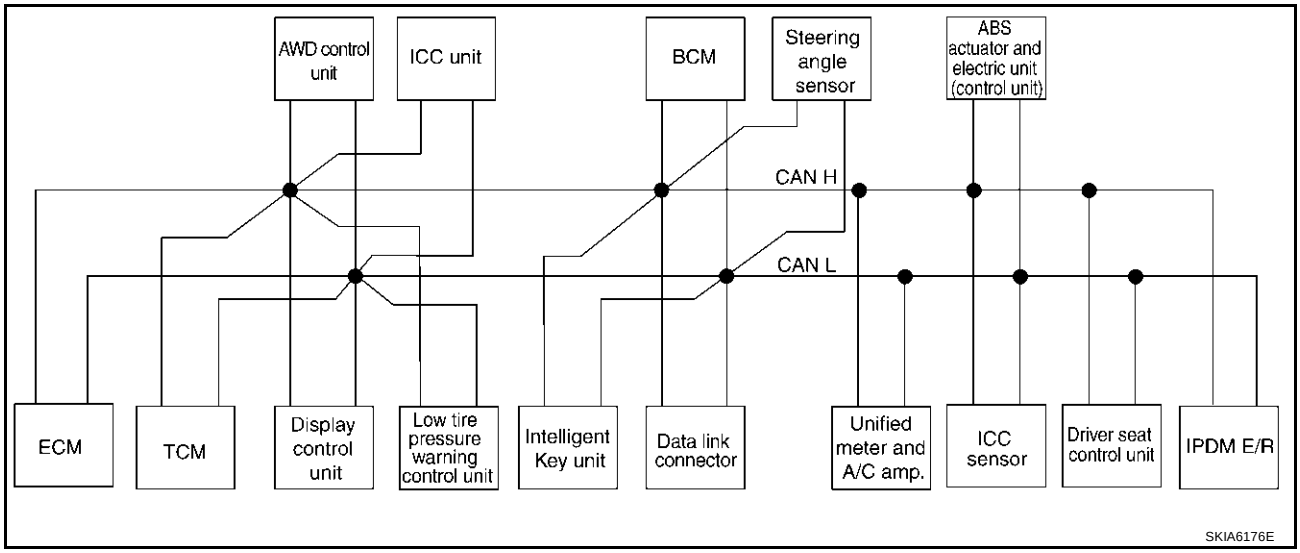
Signals	ECM	TCM	Display unit	AWD control unit	BCM	Steering angle sensor	Unified meter and A/C amp.	ABS actuator and electric unit (control unit)	Driver seat control unit	IPDM E/R
Key switch signal					T				R	
Ignition switch signal					T				R	R
P range signal		T						R	R	
Closed throttle position signal	T	R								
Wide open throttle position signal	T	R								
Engine speed signal	T	R	R	R			R	R		
Engine status signal	T				R					
Engine coolant temperature signal	T	R					R			
Accelerator pedal position signal	T	R		R				R		
Fuel consumption monitor signal	T		R				R			
Input shaft revolution signal	R	T								
Output shaft revolution signal	R	T								
A/C switch signal	R				T					
A/C compressor request signal	T									R
A/C relay status signal	R									T
A/C compressor feedback signal	T						R			
Blower fan motor switch signal	R				T					
A/C control signal			T				R			
			R				T			
Cooling fan speed signal	R									T
Position light request signal			R		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 light request signal					T					R
Day time running light request signal					T		R			
Turn LED burnout status signal					R		T			
Vehicle speed signal							R	T		
	R	R	R		R		T		R	
Sleep wake up signal					T		R		R	R
Door switch signal			R		T		R		R	R
Turn indicator signal					T		R			
Key fob ID signal					T				R	
Key fob door unlock signal					T				R	
Oil pressure switch signal					R					T
					T		R			
Buzzer output signal					T		R			

Signals	ECM	TCM	Display unit	AWD control unit	BCM	Steering angle sensor	Unified meter and A/C amp.	ABS actuator and electric unit (control unit)	Driver seat control unit	IPDM E/R
Fuel level sensor signal	R						T			
Fuel level low warning 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
Steering angle sensor signal						T		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		R				R	
AWD warning lamp signal				T			R			
AWD lock indicator lamp signal				T			R			
Distance to empty signal			R				T			
Hand brake switch signal				R	R		T			
ASCD operation signal	T	R								
ASCD OD cancel request	T	R								
A/T CHECK indicator lamp signal		T					R			
A/T position indicator lamp signal		T					R			
A/T shift schedule change demand signal		R						T		
Manual mode signal		R					T			
Not manual mode signal		R					T			
Manual mode shift up signal		R					T			
Manual mode shift down signal		R					T			
Manual mode indicator signal		T					R			

TYPE 6

System Diagram

- Type6



Input/output Signal Chart

T: Transmit R: Receive

Signals	ECM	TCM	Display control unit	Low tire pressure warning control unit	AWD control unit	ICC unit	Intelligent Key unit	BCM	Steering angle sensor	Unified meter and A/C amp.	ICC sensor	ABS actuator and electric unit (control unit)	Driver seat control unit	IPDM E/R
A/T self-diagnosis signal	R	T												
ABS operation signal	R				R	R						T		
TCS operation signal	R					R						T		
VDC operation signal	R				R	R					R	T		
Stop lamp switch signal		R			R					T				
Battery voltage signal	T	R												
Key switch signal								T					R	
Ignition switch signal								T					R	R
P range signal		T				R						R	R	
Closed throttle position signal	T	R				R								
Wide open throttle position signal	T	R												
Engine speed signal	T	R	R		R	R				R		R		
Engine status signal	T							R						
Engine coolant temperature signal	T	R				R				R				
Accelerator pedal position signal	T	R			R	R						R		
Fuel consumption monitor signal	T		R							R				
A/T self-diagnosis signal	R	T												
Input shaft revolution signal	R	T				R								
Output shaft revolution signal	R	T				R								
A/C switch signal	R							T						
A/C compressor request signal	T													R
A/C relay status signal	R													T
A/C compressor feedback signal	T									R				
Blower fan motor switch signal	R							T						
A/C control signal			T							R				
			R							T				
Cooling fan speed signal	R													T
Position light request signal			R					T		R				R
Low beam request signal								T						R
Low beam status signal	R													T
High beam request signal								T		R				R

Signals	ECM	TCM	Display control unit	Low tire pressure warning control unit	AWD control unit	ICC unit	Intelligent Key unit	BCM	Steering angle sensor	Unified meter and A/C amp.	ICC sensor	ABS actuator and electric unit (control unit)	Driver seat control unit	IPDM E/R
High beam status signal	R													T
Front fog light request signal								T						R
Day time running light request signal								T		R				
Turn LED burnout status signal								R		T				
Vehicle speed signal						R				R		T		
	R	R	R	R			R	R		T	R		R	
Sleep wake up signal								T		R			R	R
							T	R						
Door switch signal			R				R	T		R			R	R
Key fob ID signal								T					R	
Key fob door unlock signal								T					R	
Oil pressure switch signal								R						T
								T		R				
Buzzer output signal								T		R				
							T			R				
						T				R				
Fuel level sensor signal	R									T				
Fuel level low warning signal			R							T				
ICC operation signal	R					T								
Front wiper request signal						R		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			R	T										
ABS warning lamp signal						R				R		T		
VDC OFF indicator lamp signal						R				R		T		
SLIP indicator lamp signal										R		T		

Signals	ECM	TCM	Display control unit	Low tire pressure warning control unit	AWD control unit	ICC unit	Intelligent Key unit	BCM	Steering angle sensor	Unified meter and A/C amp.	ICC sensor	ABS actuator and electric unit (control unit)	Driver seat control unit	IPDM E/R
Brake warning lamp signal										R		T		
System setting signal			T				R						R	
AWD warning lamp signal					T					R				
AWD lock indicator lamp signal					T					R				
Distance to empty signal			R							T				
Hand brake switch signal					R			R		T				
Door lock/unlock request signal							T	R						
Door lock/unlock status signal							R	T						
Starter permission signal							T	R						
Back door open request signal							T	R						
Power window open request signal							T	R						
Alarm request signal							T	R						
Key warning signal							T			R				
ICC sensor signal						R					T			
ICC warning lamp signal						T				R				
ICC system display signal						T				R				
Current gear position signal		T				R						R		
Steering switch signal	T					R								
ASCD operation signal	T	R												
ASCD OD cancel request	T	R												
ICC OD cancel request	R	R				T								
A/T CHECK indicator lamp signal		T								R				
A/T position indicator lamp signal		T								R				
A/T shift schedule change demand signal		R										T		
Manual mode signal		R								T				
Not manual mode signal		R								T				
Manual mode shift up signal		R								T				
Manual mode shift down signal		R								T				
Manual mode indicator signal		T								R				
Ignition knob switch signal							T	R						

CAN SYSTEM (TYPE 1)

PFP:23710

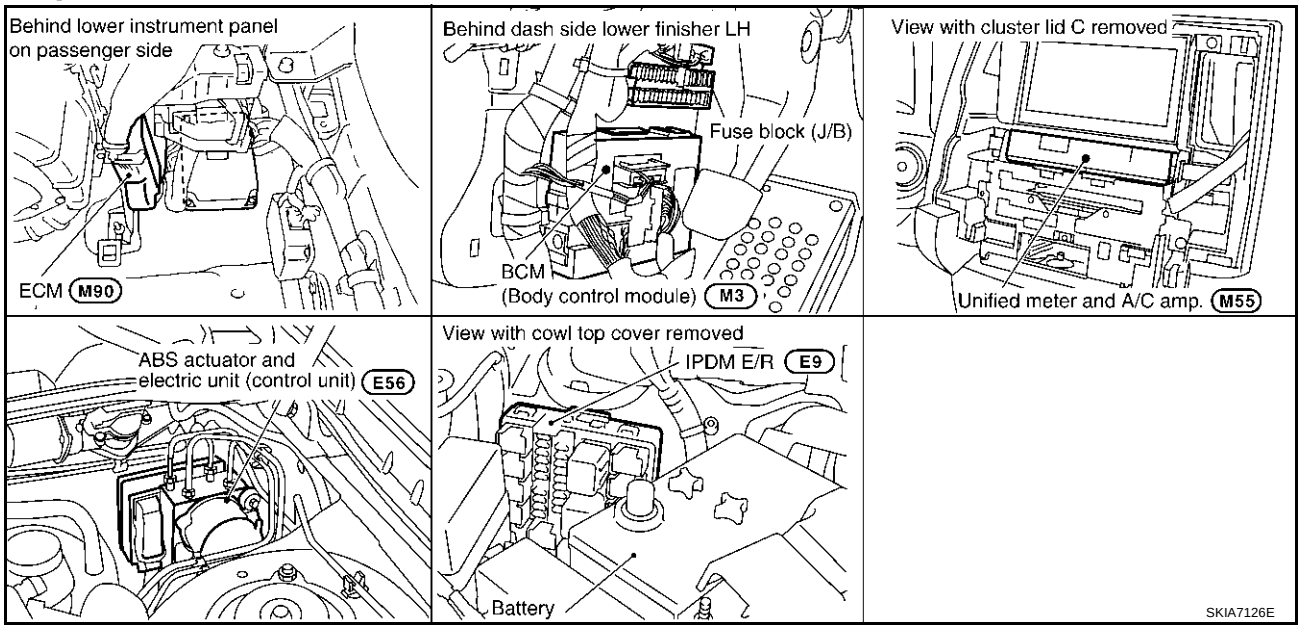
System Description

AKS007Q0

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.

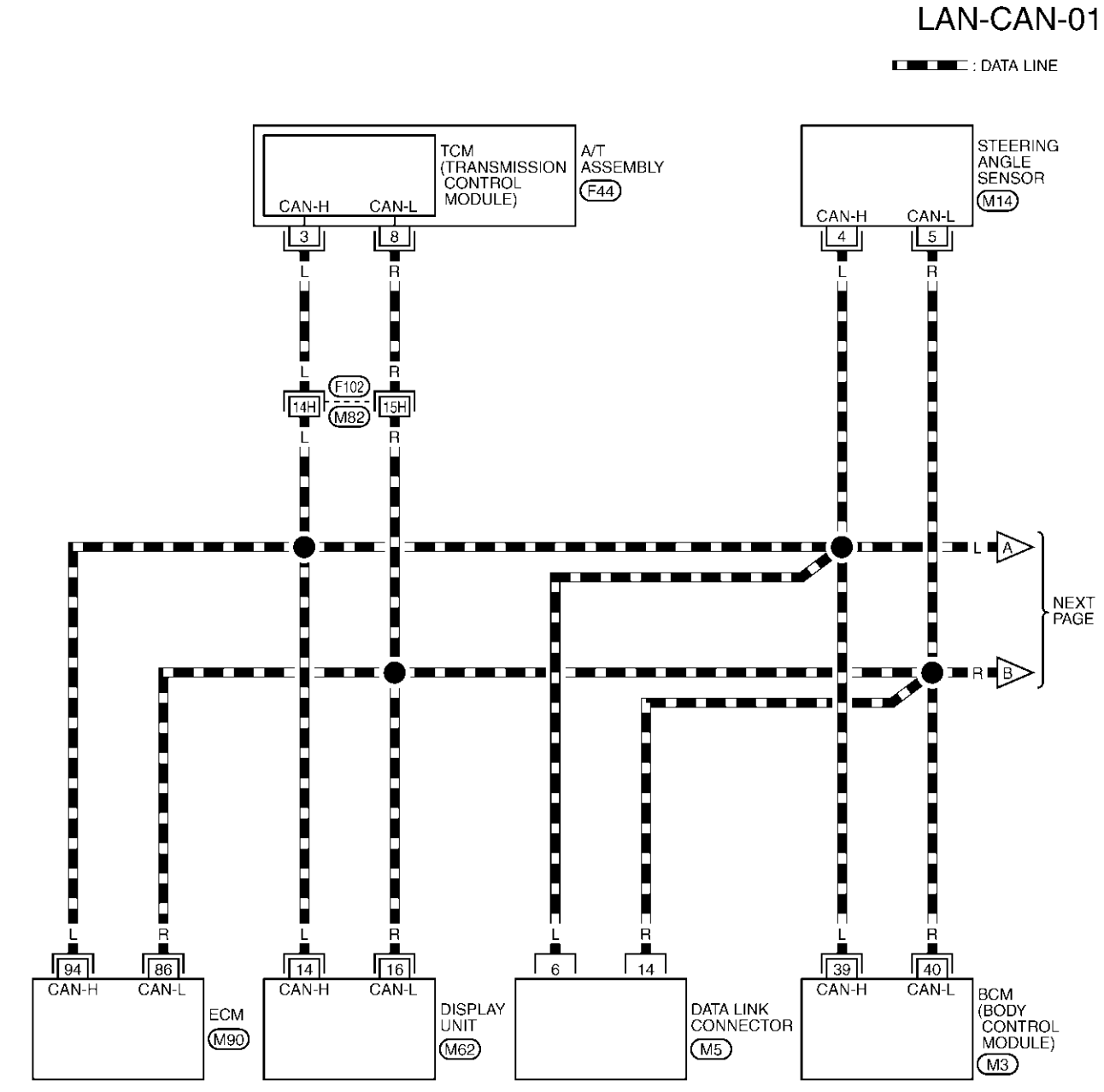
Component Parts and Harness Connector Location

AKS007Q1



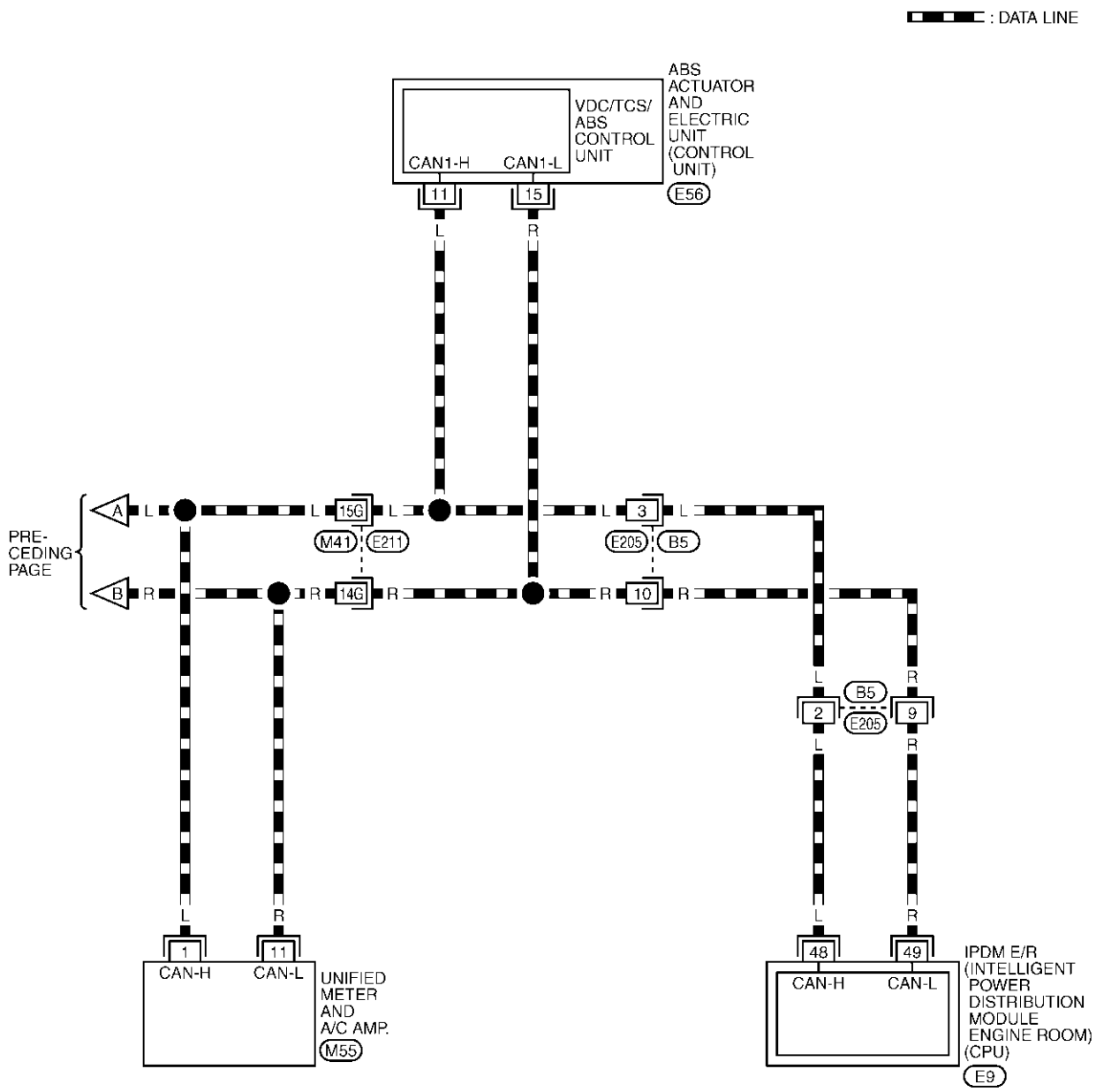
Wiring Diagram - CAN -

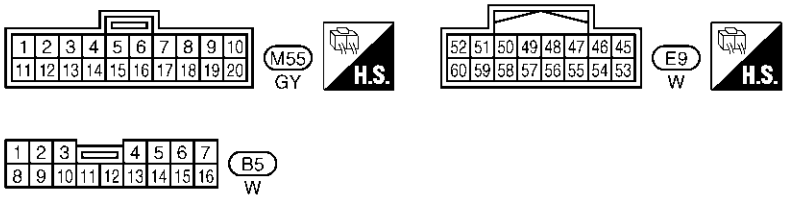
AKS007Q3



TKWM0657E

LAN-CAN-02





REFER TO THE FOLLOWING.

E211 -SUPER MULTIPLE JUNCTION (SMJ)

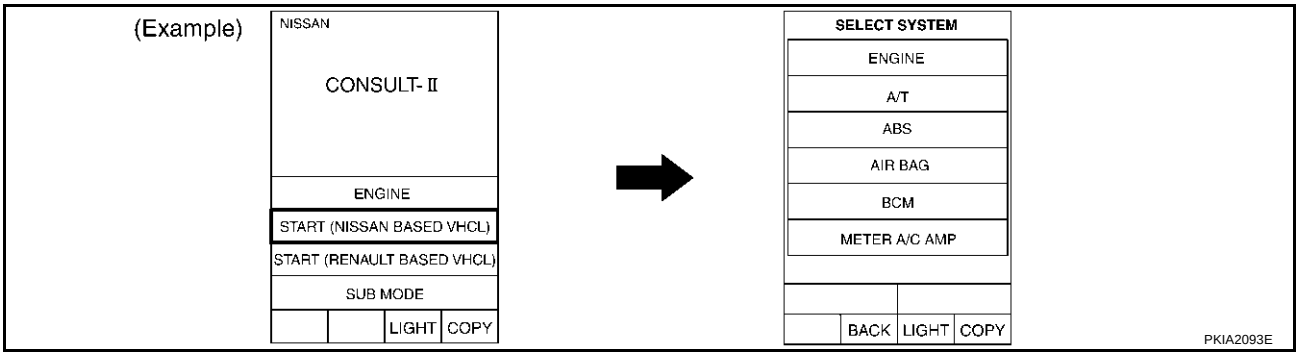
E56 -ELECTRICAL UNITS

TKWH0247E

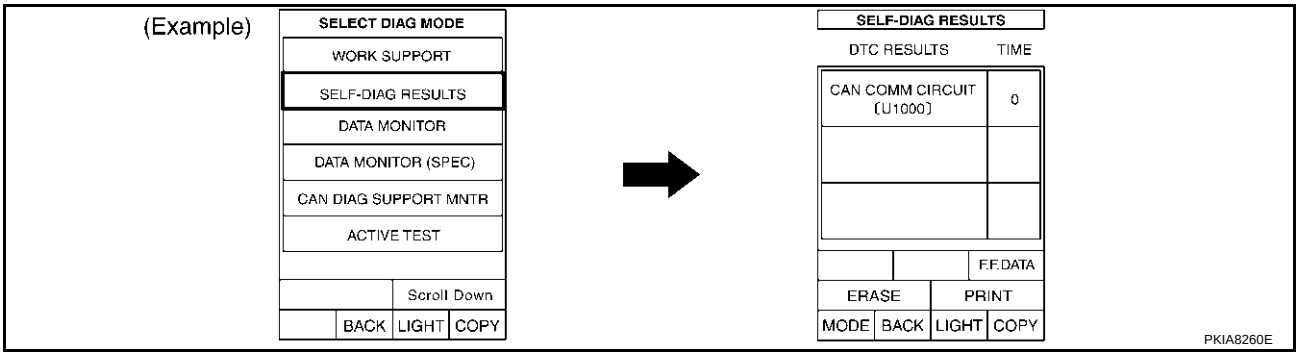
Work Flow

AKS00C4A

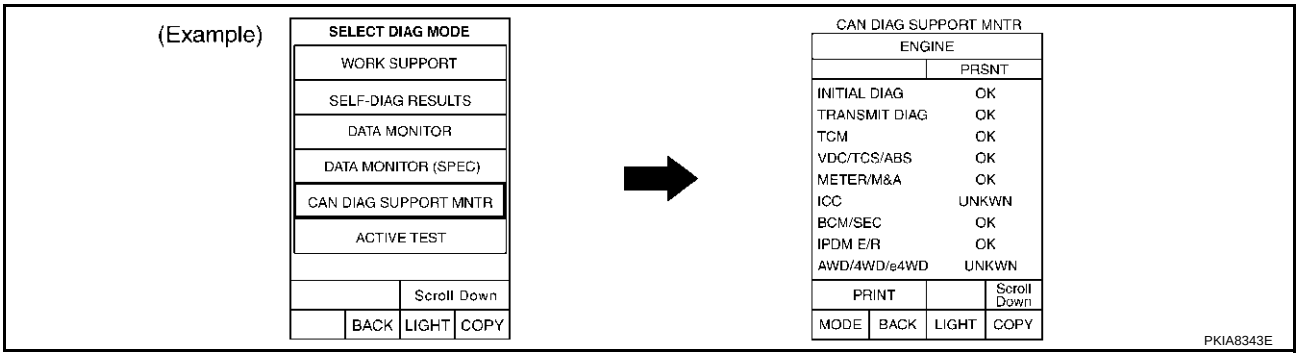
1. When there are no indications of “BCM”, “METER A/C AMP” or “IPDM E/R” on “SELECT SYSTEM” display of CONSULT-II, print the “SELECT SYSTEM”.



2. Print all the data of “SELF-DIAG RESULTS” for “ENGINE”, “A/T”, “BCM”, “METER A/C AMP”, “ABS”, and “IPDM E/R” displayed on CONSULT-II.



3. Print all the data of “CAN DIAG SUPPORT MNTR” for “ENGINE”, “A/T”, “BCM”, “METER A/C AMP”, “ABS”, and “IPDM E/R” displayed on CONSULT-II.



4. Attach the printed sheet of “SELECT SYSTEM”, “SELF-DIAG RESULTS” and “CAN DIAG SUPPORT MNTR” onto the check sheet. Refer to LAN-25, "CHECK SHEET" .
5. 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-25, "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.
6. Check CAN communication line of the integrated display system. Refer to AV-97, "CAN Communication Line Inspection" .
7. Attach the CAN DIAG MONITOR check sheet onto the check sheet. Refer to LAN-25, "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-25, "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-97, "CAN Communication Line Inspection" .

9. According to the check sheet results (example), start inspection. Refer to LAN-27, "CHECK SHEET RESULTS (EXAMPLE)" .

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	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	CAN 2	–	CAN 5	–	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	UNKWN	–	–	–	–

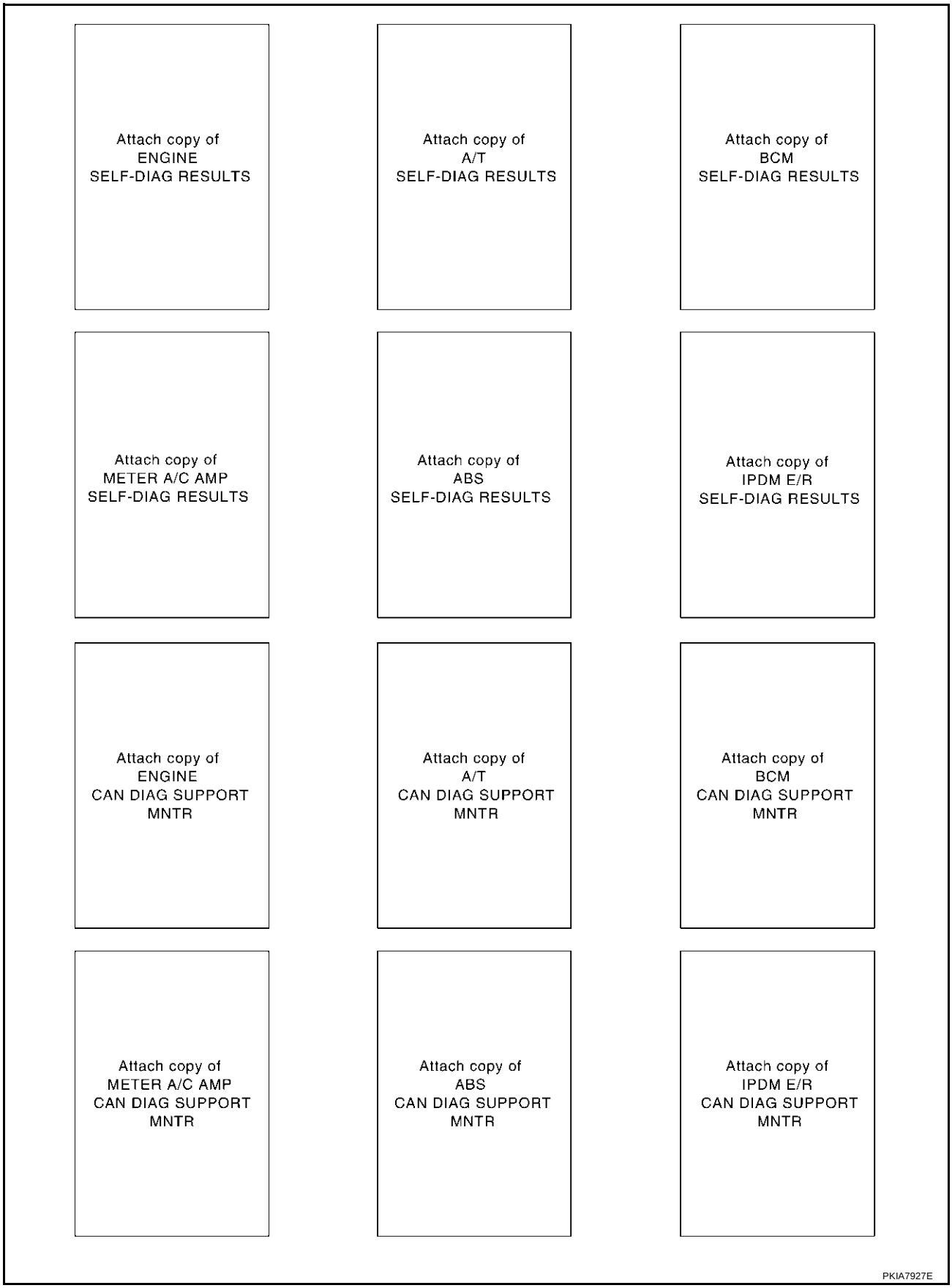
Symptoms :

Attach copy of
SELECT SYSTEM

Attach copy of
SELECT SYSTEM

Attach copy of
display unit
CAN DIAG MONITOR check sheet

PKIA7926E


Attach copy of
ENGINE
SELF-DIAG RESULTS
Attach copy of
A/T
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
IPDM E/R
SELF-DIAG RESULTS
Attach copy of
ENGINE
CAN DIAG SUPPORT
MNTR
Attach copy of
A/T
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
Attach copy of
IPDM E/R
CAN DIAG SUPPORT
MNTR
PKIA7927E

CHECK SHEET RESULTS (EXAMPLE)

NOTE:

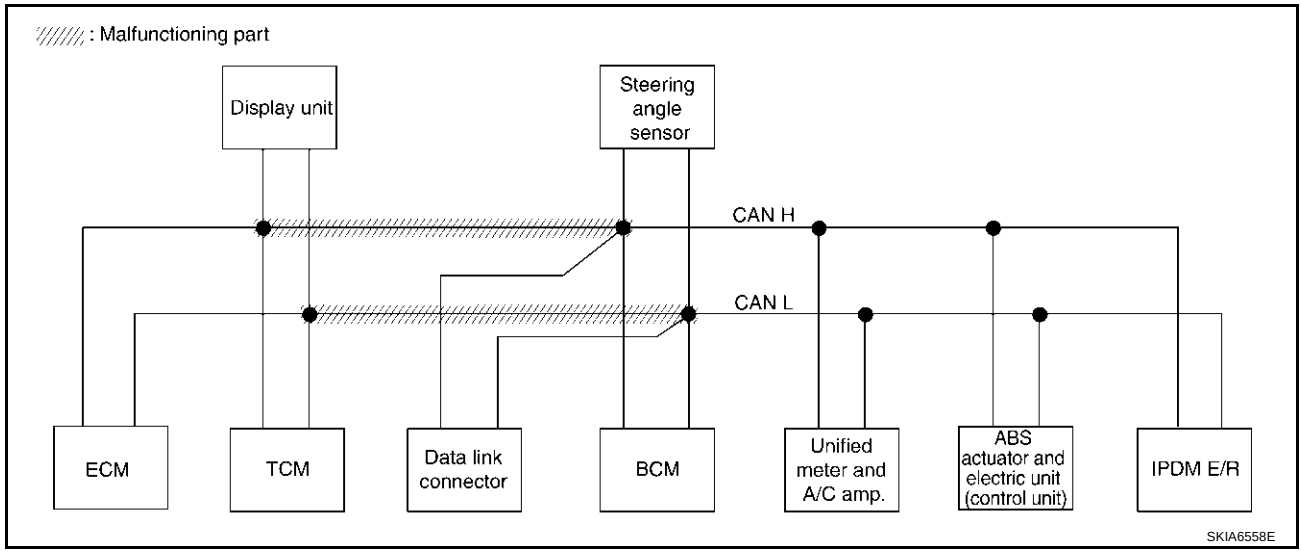
If “NG” is displayed on “INITIAL DIAG (Initial diagnosis)” or “CAN COMM” for the diagnosed control unit, replace the control unit.

Case 1

Check harness between TCM and data link connector. Refer to LAN-40, "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	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	CAN 2	–	CAN 5	–	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	UNKWN	–	–	–	–

PKIA7928E

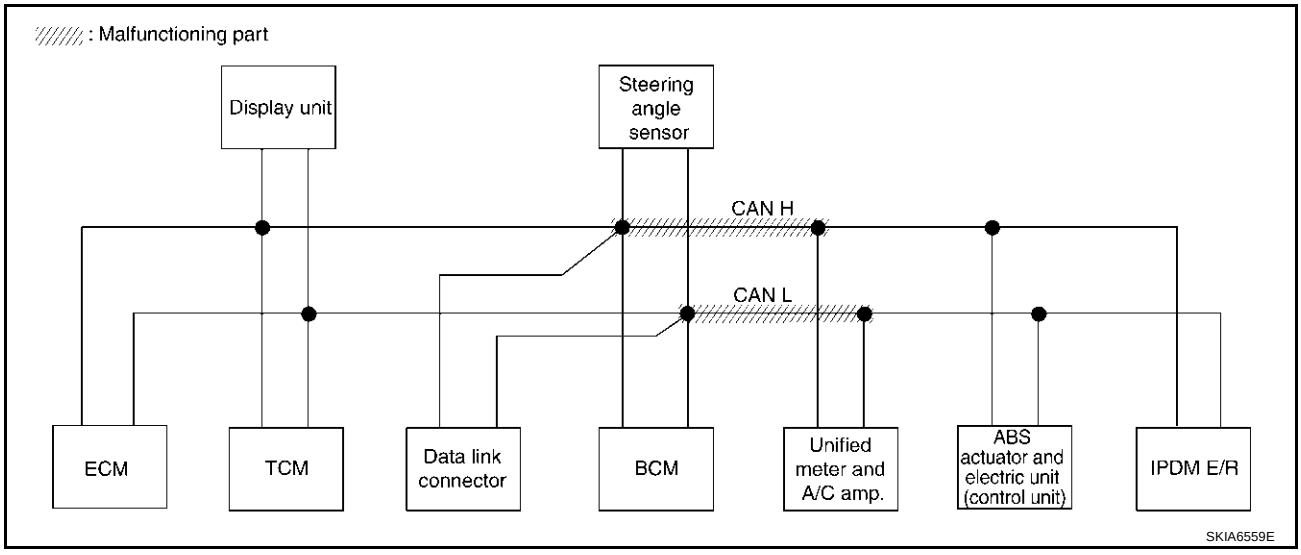


Case 2

Check harness between data link connector and unified meter and A/C amp. Refer to LAN-40, "Circuit Check Between Data Link Connector and Unified Meter and A/C Amp." .

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

PKIA7929E



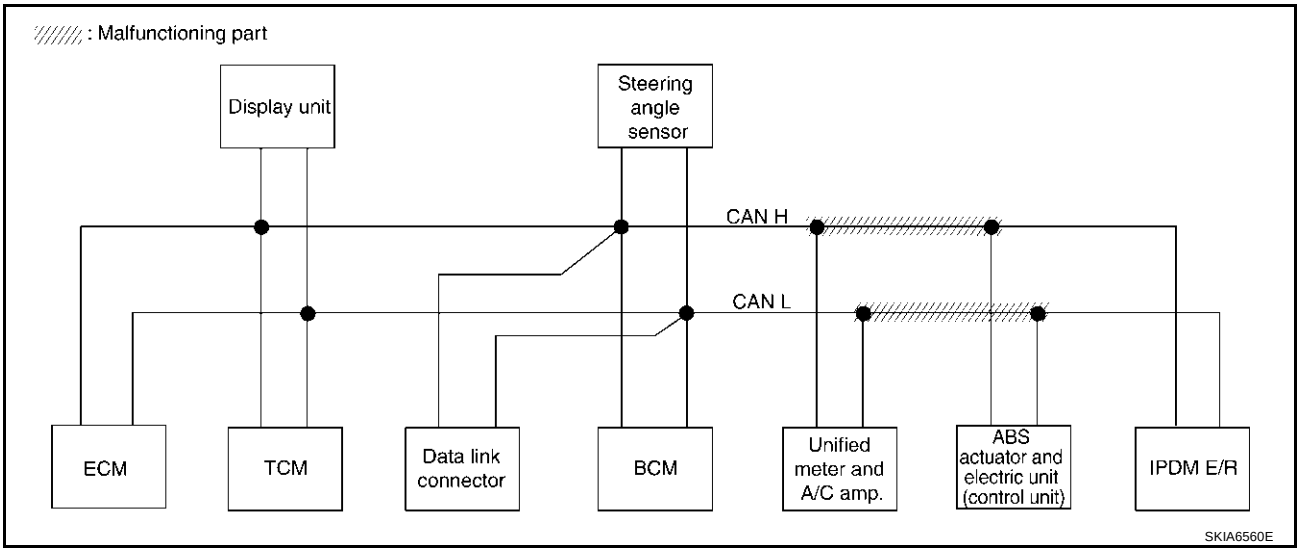
SKIA6559E

Case 3

Check harness between unified meter and A/C amp. and ABS actuator and electric unit (control unit). Refer to LAN-41, "Circuit Check Between Unified Meter and A/C Amp. 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	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	CAN 2	–	CAN 5	–	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	UNKWN	–	–	–	–

PKIA7930E

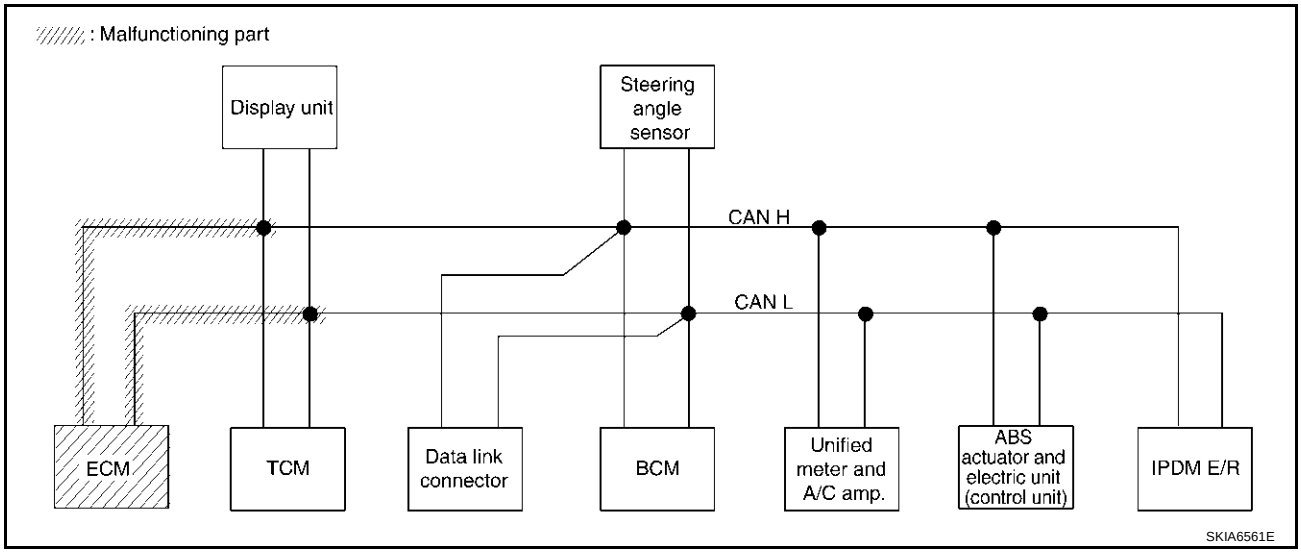


Case 4

Check ECM circuit. Refer to LAN-41, "ECM Circuit Check" .

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

PKIA7931E

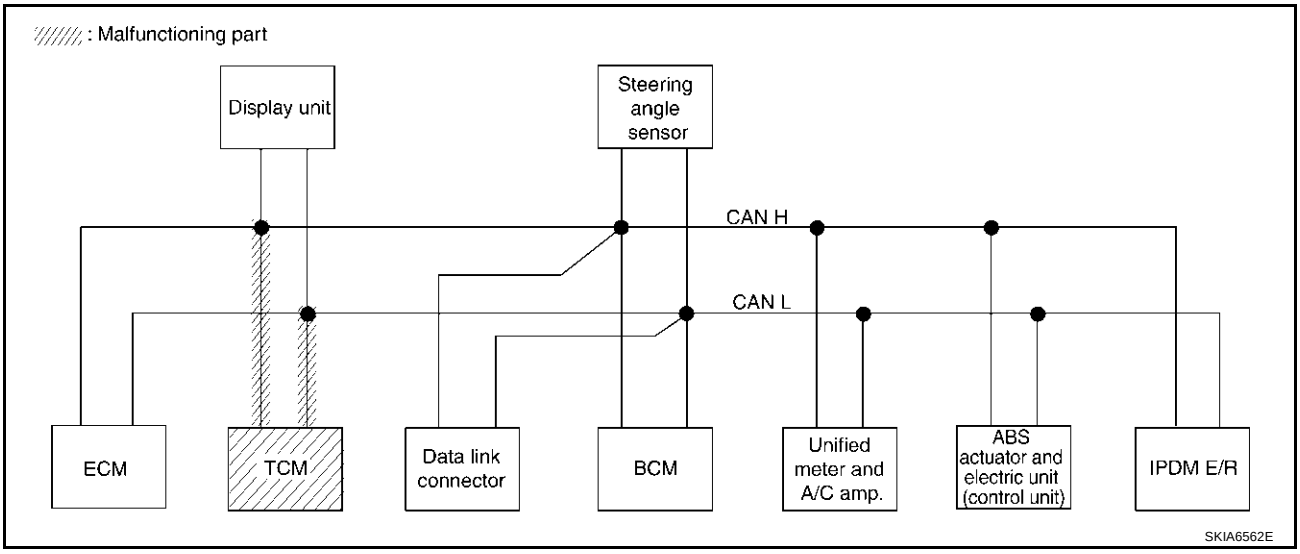


Case 5

Check TCM circuit. Refer to LAN-42, "TCM Circuit Check" .

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

PKIA7932E

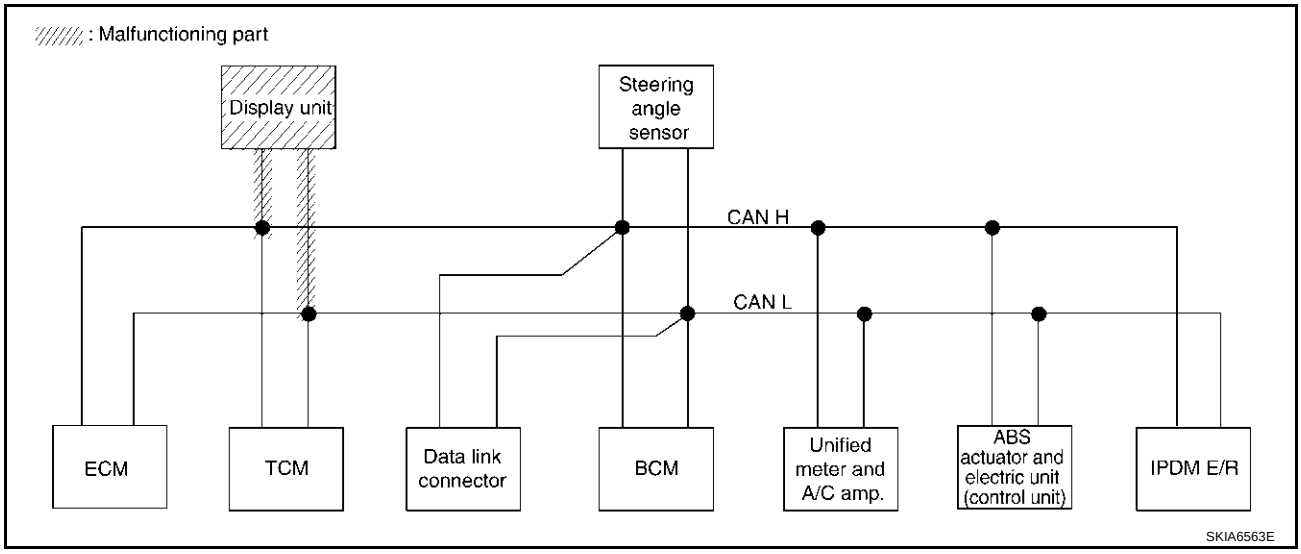


Case 6

Check display unit circuit. Refer to LAN-42, "Display Unit Circuit Check" .

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

PKIA7933E

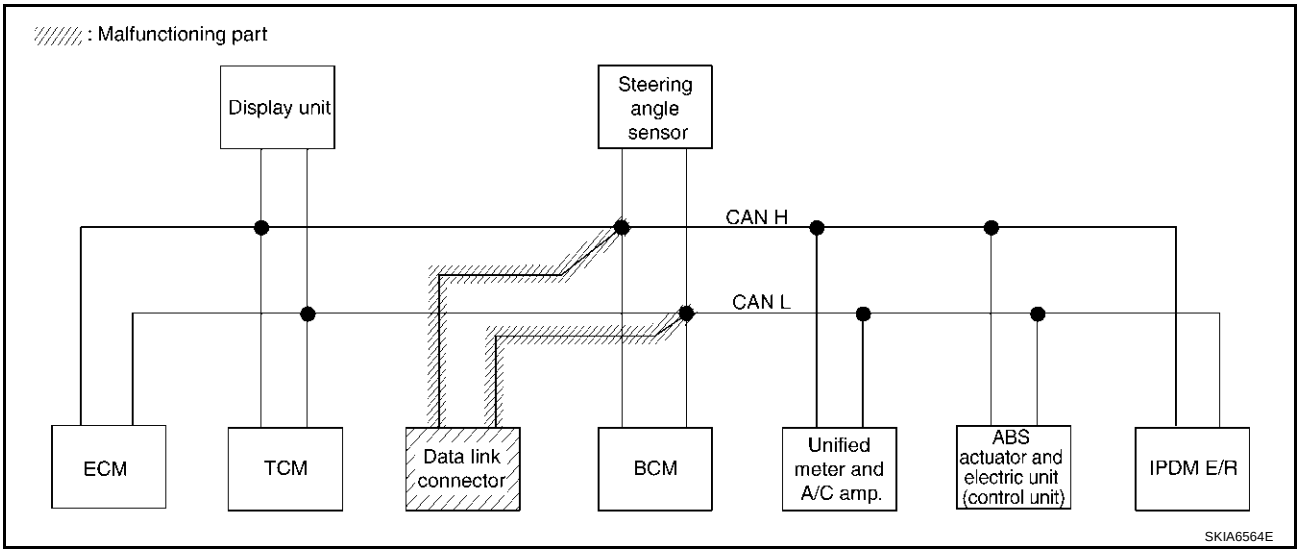


Case 7

Check data link connector circuit. Refer to LAN-43, "Data Link Connector Circuit Check" .

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

PKIA7934E



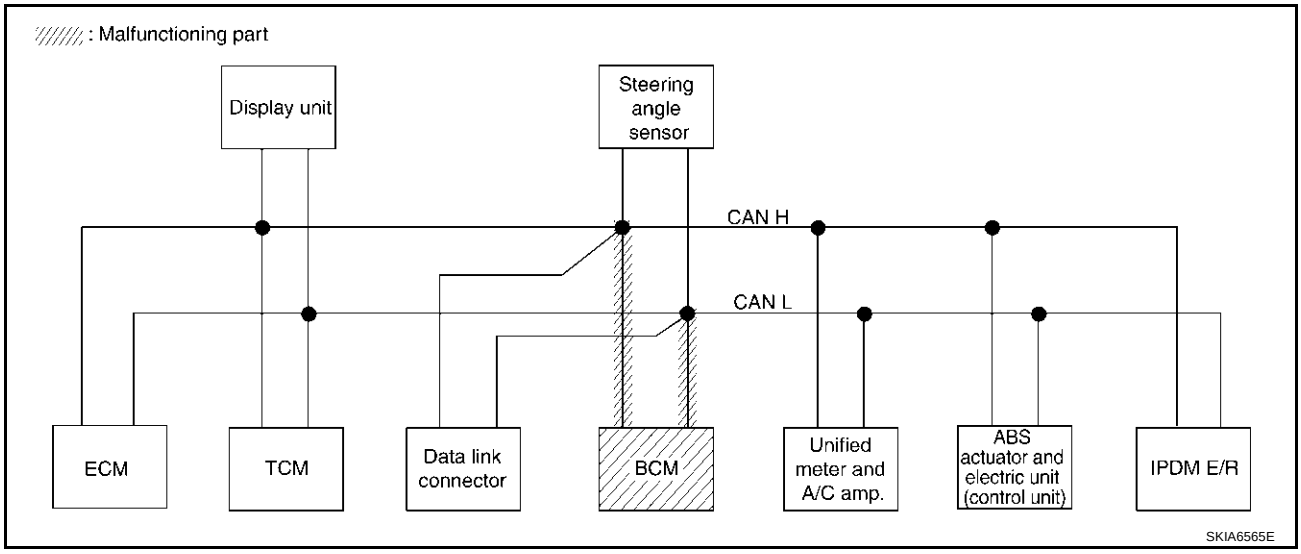
SKIA6564E

Case 8

Check BCM circuit. Refer to LAN-43, "BCM Circuit Check" .

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

PKIA7935E

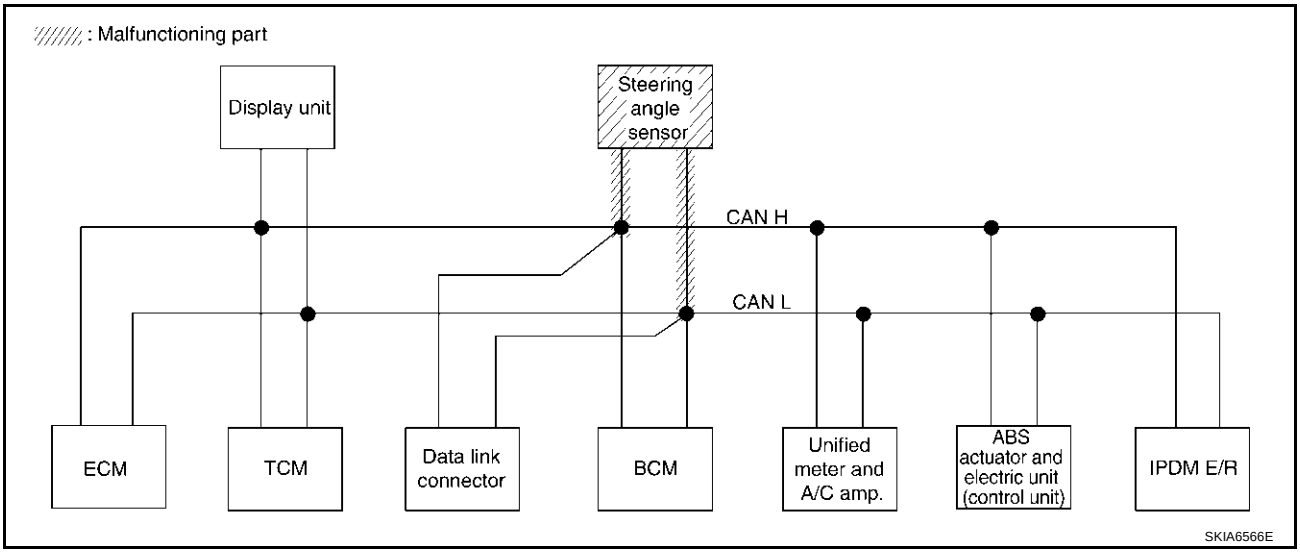


Case 9

Check steering angle sensor circuit. Refer to LAN-44, "Steering Angle Sensor Circuit Check" .

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

PKIA7936E

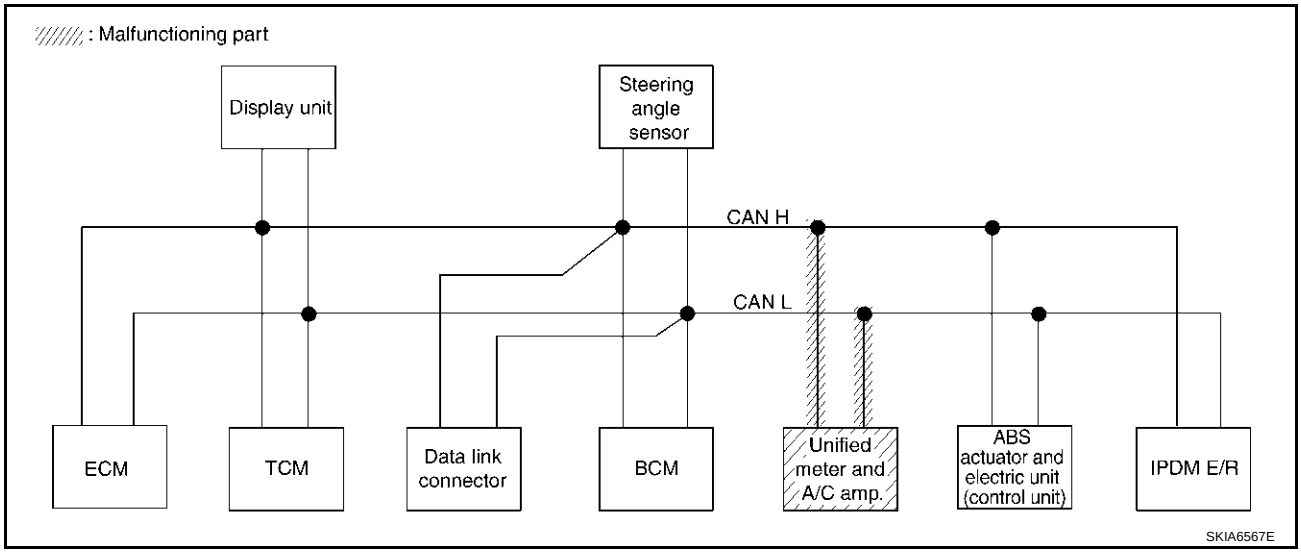


Case 10

Check unified meter and A/C amp. circuit. Refer to LAN-44, "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	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	CAN 2	–	CAN 5	–	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	UNKWN	–	–	–	–

PKIA7937E

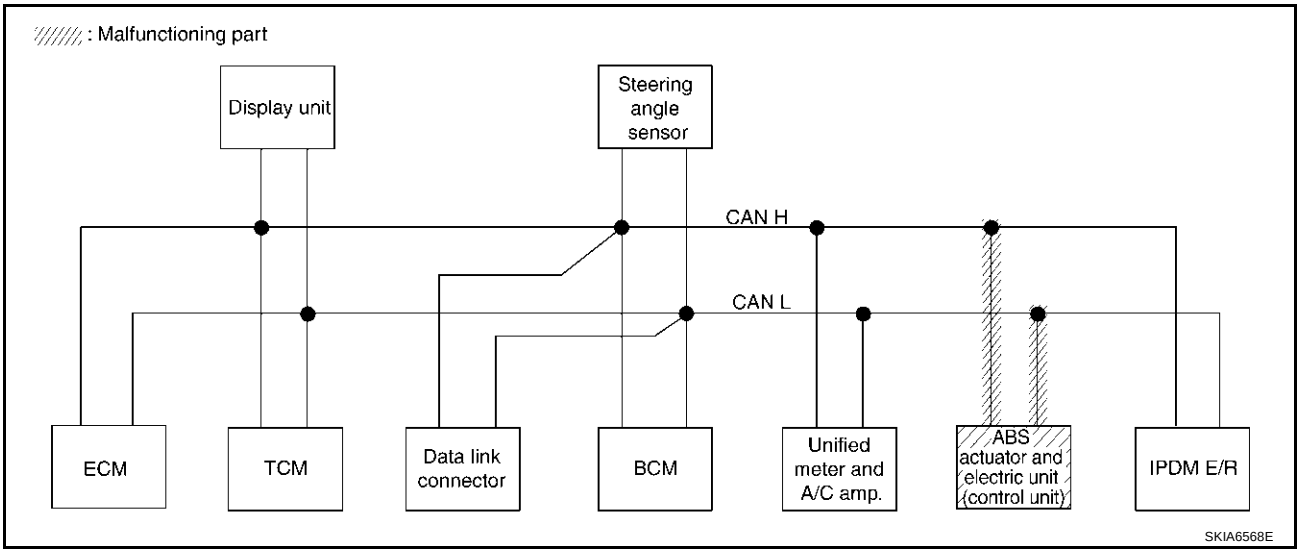


Case 11

Check ABS actuator and electric unit (control unit) circuit. Refer to LAN-45, "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	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	CAN 2	–	CAN 5	–	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	UNKWN	–	–	–	–

PKIA7938E

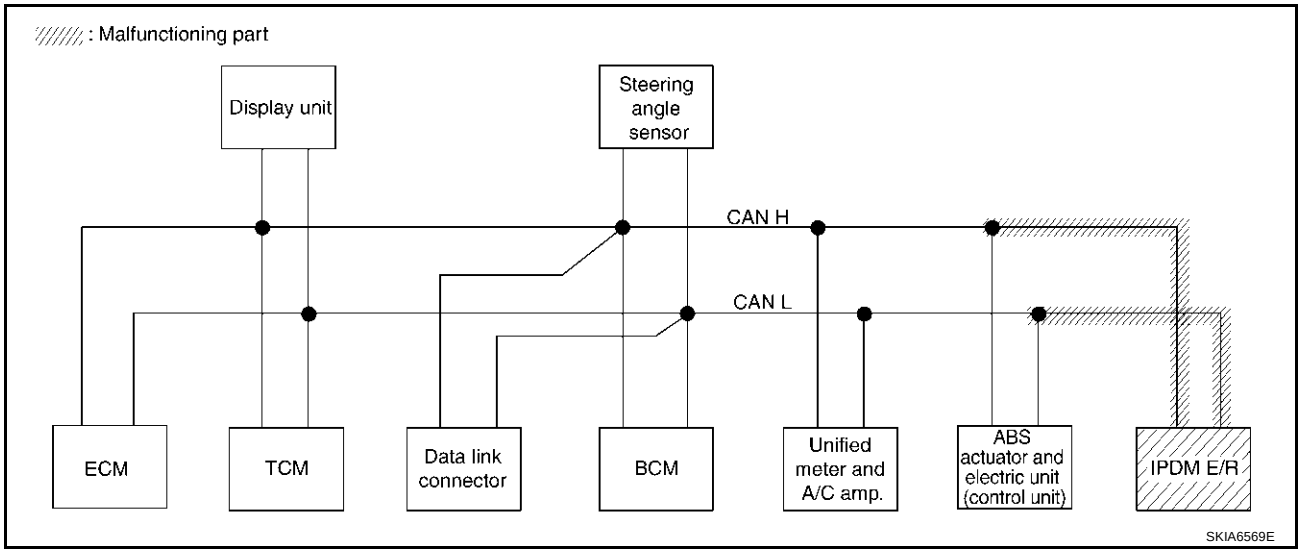


Case 12

Check IPDM E/R circuit. Refer to LAN-45, "IPDM E/R Circuit Check" .

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

PKIA7939E



Case 13

Check CAN communication circuit. Refer to LAN-46, "CAN Communication Circuit Check" .

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

PKIA7940E

Case 14

Check IPDM E/R ignition relay circuit continuously sticks “OFF”. Refer to LAN-50, "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	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	CAN 2	–	CAN 5	–	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	UNKWN	–	–	–	–

PKIA7942E

Case 15

Check IPDM E/R ignition relay circuit continuously sticks “ON”. Refer to LAN-50, "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	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN ✓	–	–	–	–	UNKWN ✓	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	CAN 2	–	CAN 5	–	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN ✓	UNKWN	–	–	UNKWN ✓	–	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	UNKWN	–	–	–	–

PKIA7941E

Circuit Check Between TCM and Data Link Connector

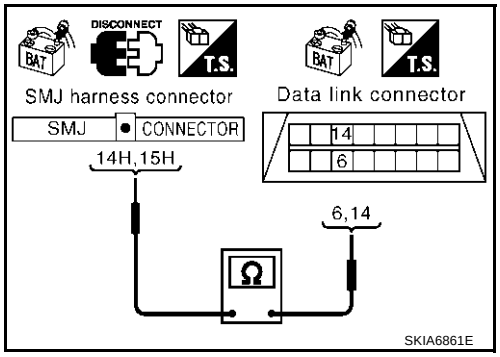
AKS007Q5

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 14H (L), 15H (R) and data link connector M5 terminals 6 (L), 14 (R).

14H (L) - 6 (L) : Continuity should exist.

15H (R) - 14 (R) : Continuity should exist.



SKIA6861E

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-23, "Work Flow" .

NG >> Repair harness.

Circuit Check Between Data Link Connector and Unified Meter and A/C Amp.

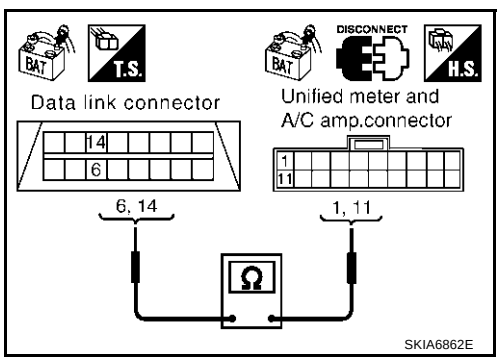
AKS007Q6

1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and unified meter and A/C amp. connector.
4. Check continuity between data link connector M5 terminals 6 (L), 14 (R) and unified meter and A/C amp. harness connector M55 terminals 1 (L), 11 (R).

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

14 (R) - 11 (R) : Continuity should exist.



SKIA6862E

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-23, "Work Flow" .

NG >> Repair harness.

Circuit Check Between Unified Meter and A/C Amp. and ABS Actuator and Electric Unit (Control Unit)

AKS007Q7

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 M41
- Harness connector E211

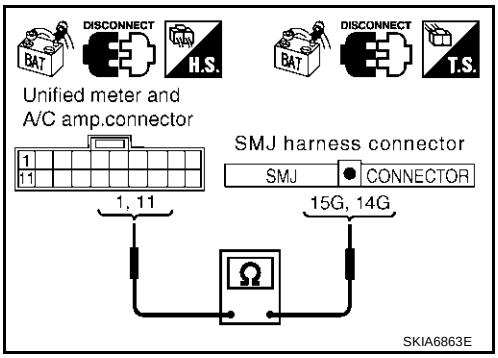
OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector and harness connector M41.
2. Check continuity between unified meter and A/C amp. harness connector M55 terminals 1 (L), 11 (R) and harness connector M41 terminals 15G (L), 14G (R).

1 (L) - 15G (L) : Continuity should exist.
11 (R) - 14G (R) : Continuity should exist.



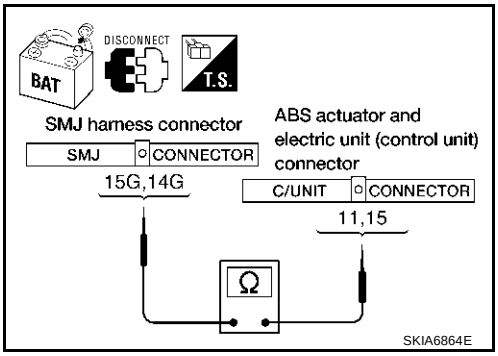
OK or NG

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 E211 terminals 15G (L), 14G (R) and ABS actuator and electric unit (control unit) harness connector E56 terminals 11 (L), 15 (R).

15G (L) - 11 (L) : Continuity should exist.
14G (R) - 15 (R) : Continuity should exist.



OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-23, "Work Flow" .
NG >> Repair harness.

ECM Circuit Check

AKS007Q8

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.

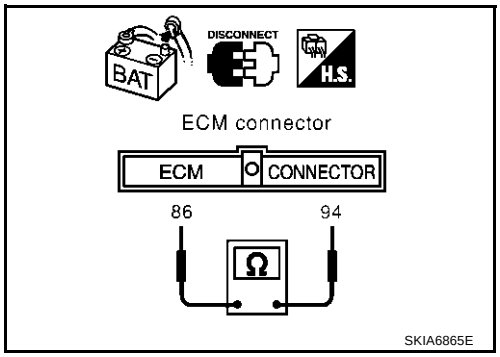
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M90 terminals 94 (L) and 86 (R).

94 (L) - 86 (R) : Approx. 108 - 132Ω

OK or NG

OK >> Replace ECM.
NG >> Repair harness between ECM and harness connector M82.



TCM Circuit Check

AKS007Q9

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).

- A/T assembly connector
- Harness connector F102
- Harness connector M82

OK or NG

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

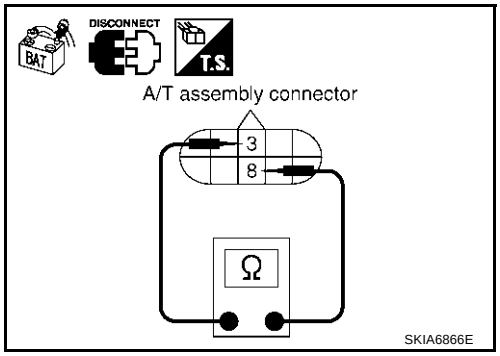
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect A/T assembly connector.
2. Check resistance between A/T assembly harness connector F44 terminals 3 (L) and 8 (R).

3 (L) - 8 (R) : Approx. 54 - 66Ω

OK or NG

OK >> Replace A/T assembly.
NG >> Repair harness between A/T assembly and display unit.



Display Unit Circuit Check

AKS007QA

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).

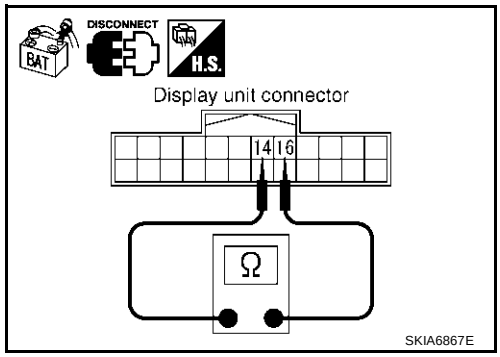
OK or NG

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 M62 terminals 14 (L) and 16 (R).

14 (L) - 16 (R) : Approx. 54 - 66Ω



OK or NG

OK >> Replace display unit.
NG >> Repair harness between display unit and harness connector M82.

Data Link Connector Circuit Check

AKS007QB

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).

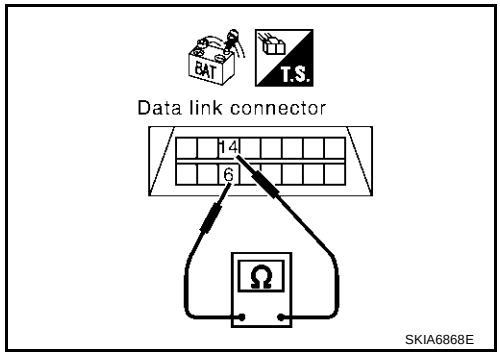
OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M5 terminals 6 (L) and 14 (R).

6 (L) - 14 (R) : Approx. 54 - 66Ω



OK or NG

OK >> Diagnose again. Refer to LAN-23, "Work Flow" .
NG >> Repair harness between data link connector and BCM.

BCM Circuit Check

AKS007QC

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

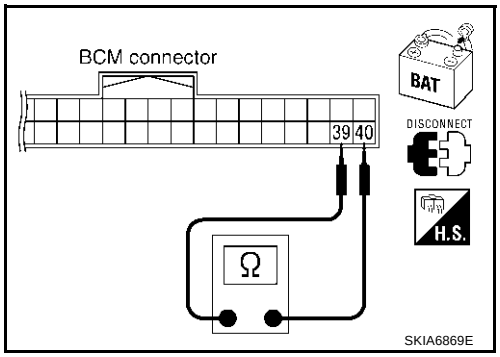
1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M3 terminals 39 (L) and 40 (R).

39 (L) - 40 (R) **: Approx. 54 - 66Ω**

OK or NG

OK >> Replace BCM. Refer to BCS-28, "Removal and Installation of BCM" .

NG >> Repair harness between BCM and data link connector.



Steering Angle Sensor Circuit Check

AKS007QD

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

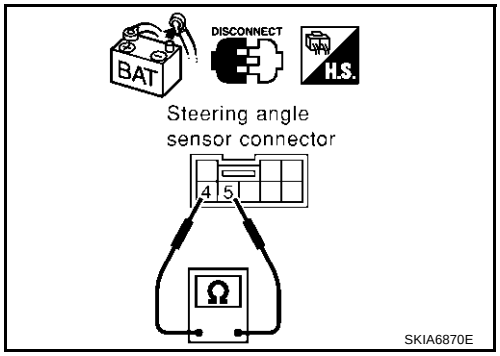
1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M14 terminals 4 (L) and 5 (R).

4 (L) - 5 (R) **: Approx. 54 - 66Ω**

OK or NG

OK >> Replace steering angle sensor.

NG >> Repair harness between steering angle sensor and data link connector.



Unified Meter and A/C Amp. Circuit Check

AKS007QE

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

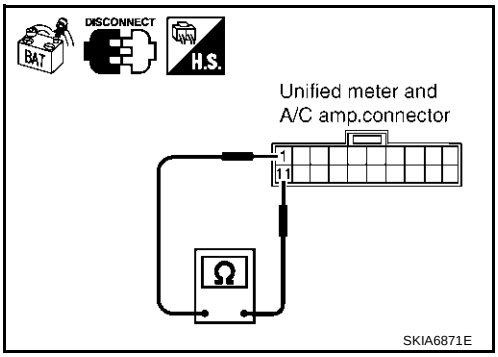
OK >> GO TO 2.

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 M55 terminals 1 (L) and 11 (R).

1 (L) - 11 (R) : 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 harness connector M41.

ABS Actuator and Electric Unit (Control Unit) Circuit Check

AKS007QF

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).

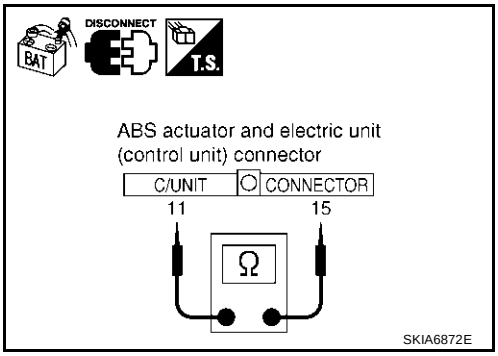
OK or NG

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 E56 terminals 11 (L) and 15 (R).

11 (L) - 15 (R) : 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 harness connector E205.

IPDM E/R Circuit Check

AKS007QG

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).

- IPDM E/R connector
- Harness connector E205
- Harness connector B5

OK or NG

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

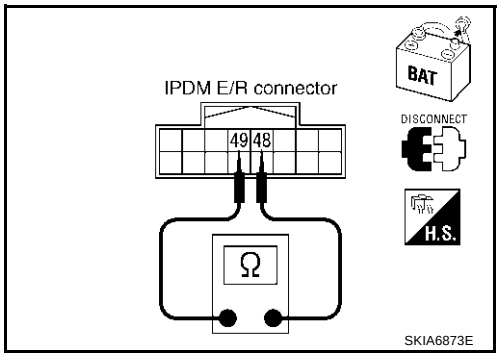
2. CHECK HARNESS FOR OPEN CIRCUIT

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

48 (L) - 49 (R) : 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

AKS007QH

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, sensor side, meter side, control unit side and harness side).

- ECM
- A/T assembly
- Display unit
- BCM
- Steering angle sensor
- 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 A/T assembly

OK or NG

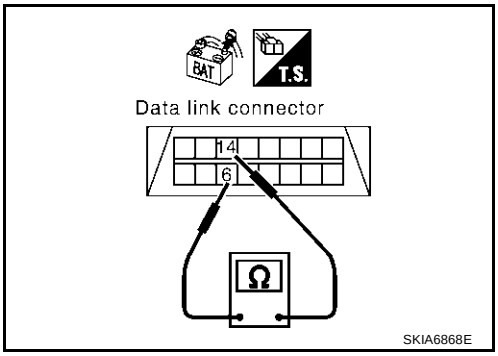
OK >> GO TO 2.
NG >> Repair terminal or connector.

2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
- ECM connector
- Harness connector M82
- Display unit connector
- BCM connector
- Steering angle sensor connector
- Unified meter and A/C amp. connector
- Harness connector M41

2. Check continuity between data link connector M5 terminals 6 (L) and 14 (R).

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



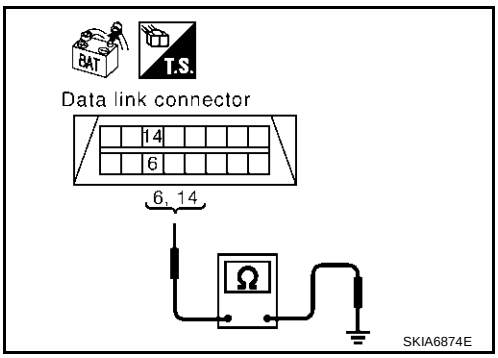
OK or NG

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 steering angle sensor.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M41.

3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M5 terminals 6 (L), 14 (R) and ground.

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



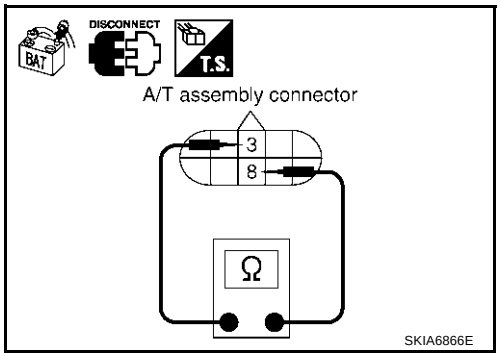
OK or NG

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 steering angle sensor.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M41.

4. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect A/T assembly connector.
2. Check continuity between A/T assembly harness connector F44 terminals 3 (L) and 8 (R).

3 (L) - 8 (R) : Continuity should not exist.



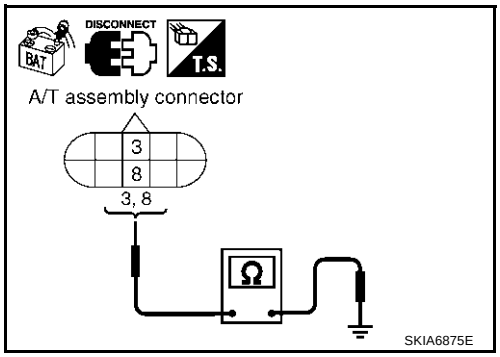
OK or NG

OK >> GO TO 5.
NG >> Repair harness between A/T assembly and harness connector F102.

5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between A/T assembly harness connector F44 terminals 3 (L), 8 (R) and ground.

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



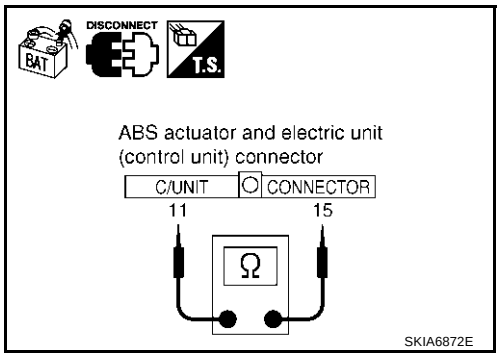
OK or NG

OK >> GO TO 6.
NG >> Repair harness between A/T assembly and harness connector F102.

6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector and harness connector E205.
2. Check continuity between ABS actuator and electric unit (control unit) harness connector E56 terminals 11 (L) and 15 (R).

11 (L) - 15 (R) : Continuity should not exist.



OK or NG

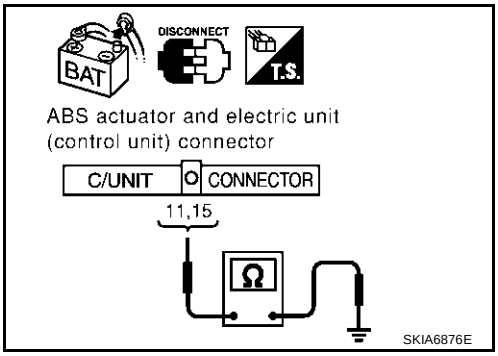
OK >> GO TO 7.
NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between ABS actuator and electric unit (control unit) and harness connector E211.
- Harness between ABS actuator and electric unit (control unit) and harness connector E205.

7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between ABS actuator and electric unit (control unit) harness connector E56 terminals 11 (L), 15 (R) and ground.

11 (L) - Ground : Continuity should not exist.
15 (R) - Ground : Continuity should not exist.



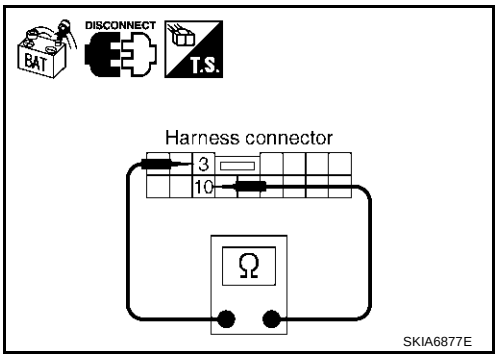
OK or NG

OK >> GO TO 8.
NG >> Check the following harnesses. If any harness is damaged, repair the harness.
- Harness between ABS actuator and electric unit (control unit) and harness connector E211.
- Harness between ABS actuator and electric unit (control unit) and harness connector E205.

8. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B5 terminals 3 (L) and 10 (R).

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



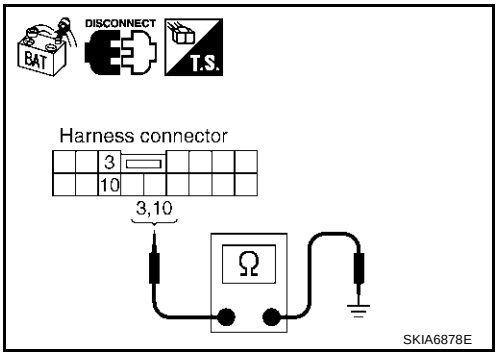
OK or NG

OK >> GO TO 9.
NG >> Repair harness between harness connector B5 and harness connector B5.

9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B5 terminals 3 (L), 10 (R) and ground.

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



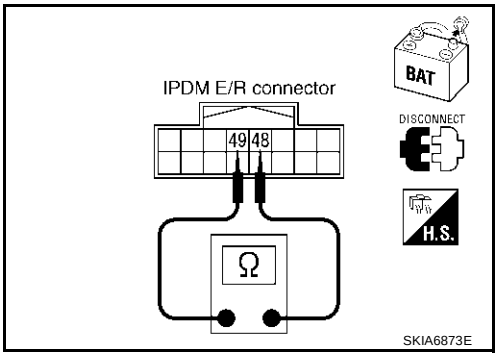
OK or NG

OK >> GO TO 10.
NG >> Repair harness between harness connector B5 and harness connector B5.

10. CHECK HARNESS FOR SHORT CIRCUIT

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

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



OK or NG

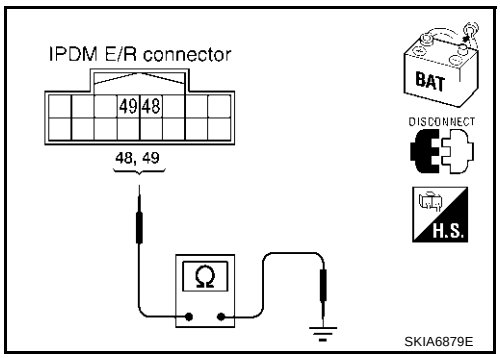
OK >> GO TO 11.
NG >> Repair harness between IPDM E/R and harness connector E205.

11. CHECK HARNESS FOR SHORT CIRCUIT

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

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

49 (R) - Ground : Continuity should not exist.



OK or NG

OK >> GO TO 12.

NG >> Repair harness between IPDM E/R and harness connector E205.

12. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to LAN-50, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION" .

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-23, "Work Flow" .

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

IPDM E/R Ignition Relay Circuit Check

AKS007QI

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

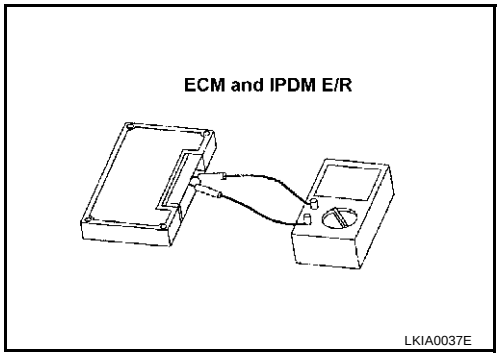
- IPDM E/R power supply circuit. Refer to PG-43, "IPDM E/R Power/Ground Circuit Inspection" .
- Ignition power supply circuit. Refer to PG-12, "IGNITION POWER SUPPLY - IGNITION SW. IN “ON” AND/OR “START”" .

Component Inspection

AKS007QJ

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

CAN SYSTEM (TYPE 2)

PFP:23710

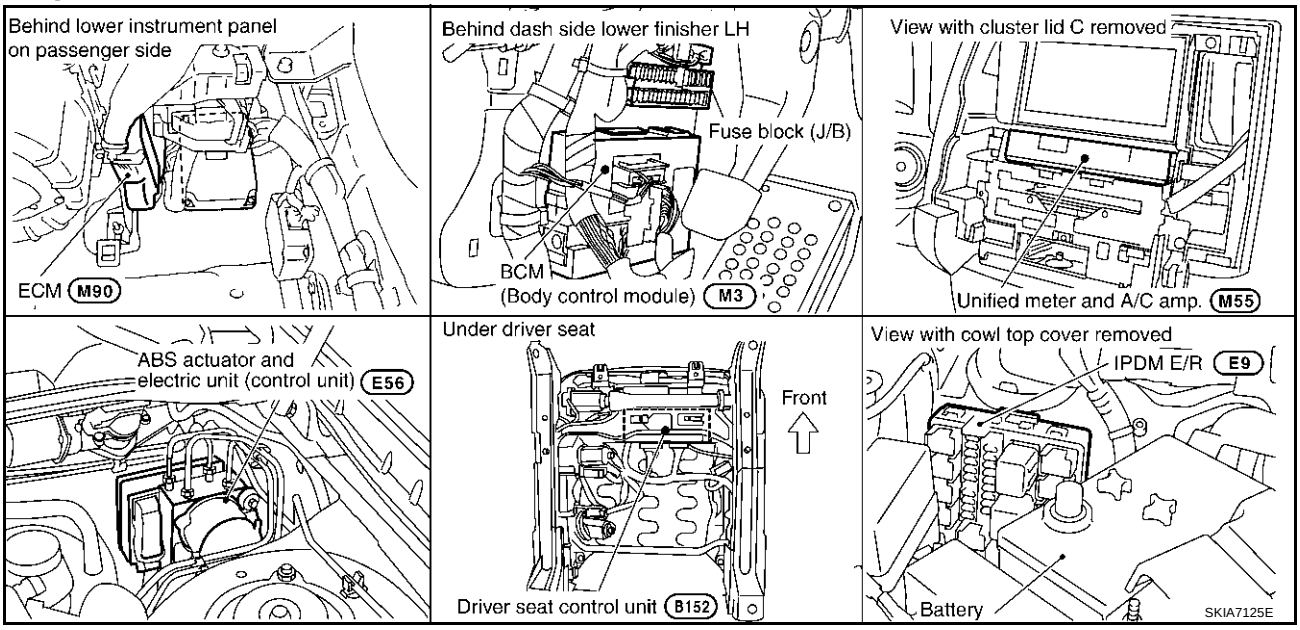
System Description

AKS007R4

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

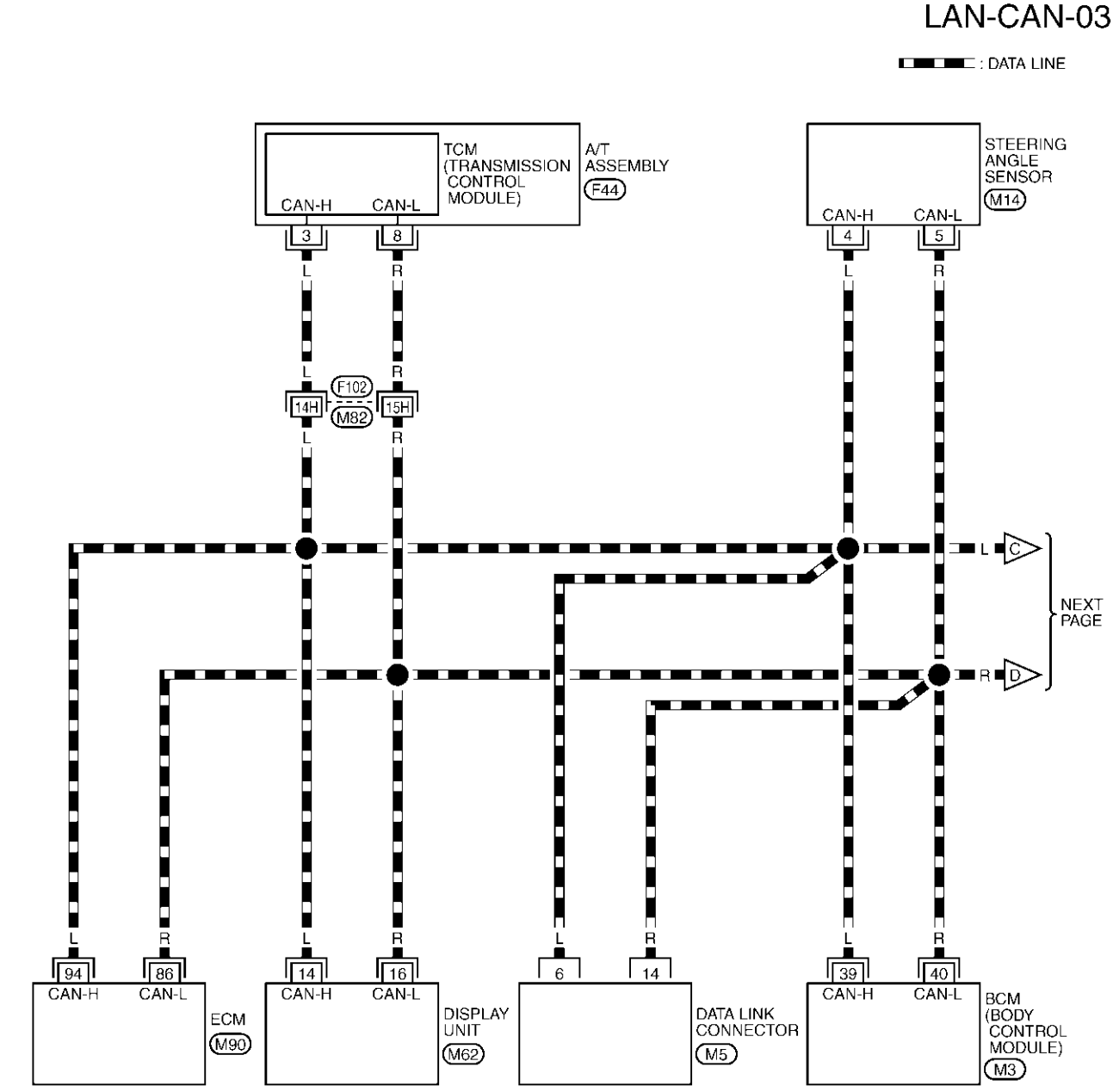
AKS007R5



Wiring Diagram - CAN -

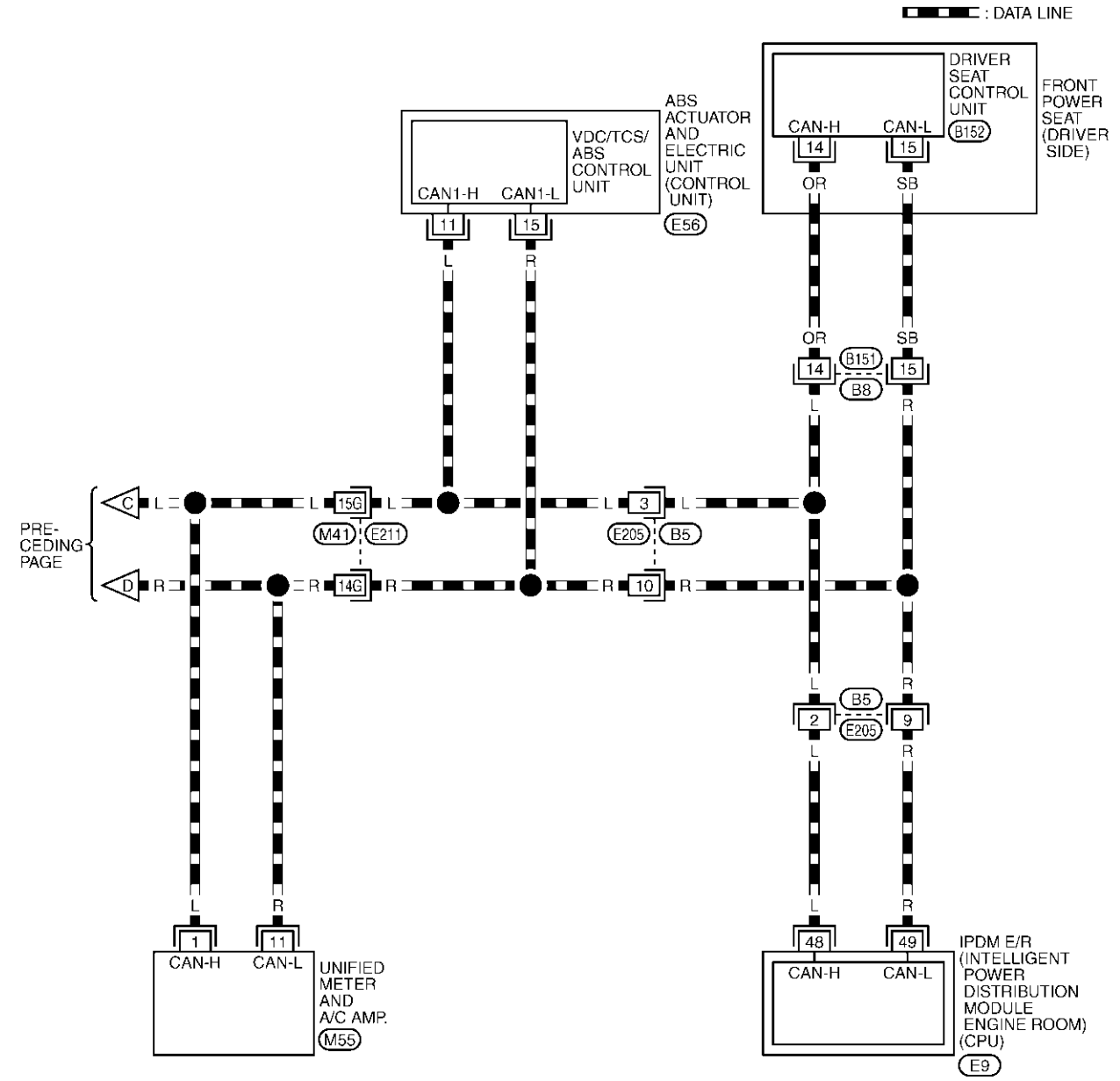
AKS007R7

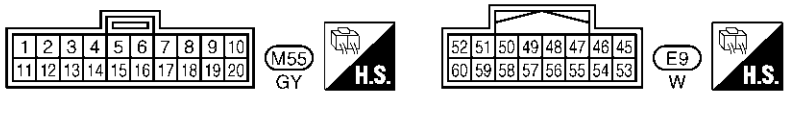
LAN-CAN-03

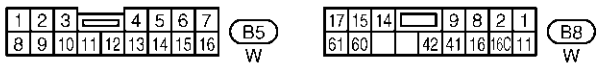


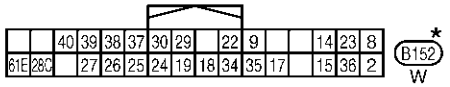
TKWM0659E

LAN-CAN-04









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

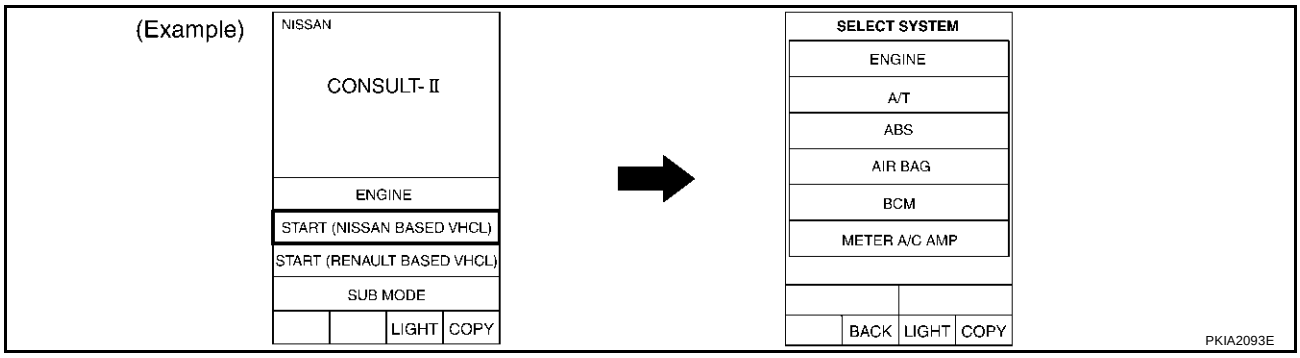
REFER TO THE FOLLOWING.
E211 -SUPER MULTIPLE JUNCTION (SMJ)
E56 -ELECTRICAL UNITS

TKWH0248E

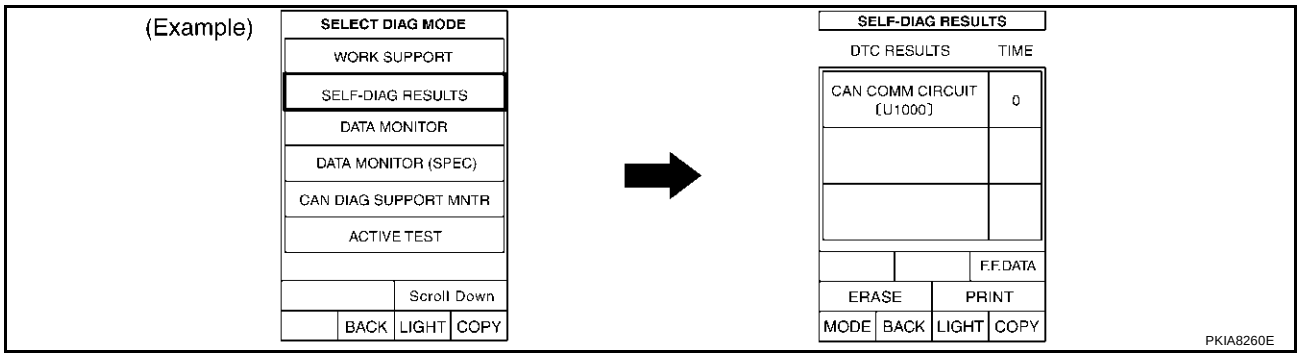
Work Flow

AKS00C4B

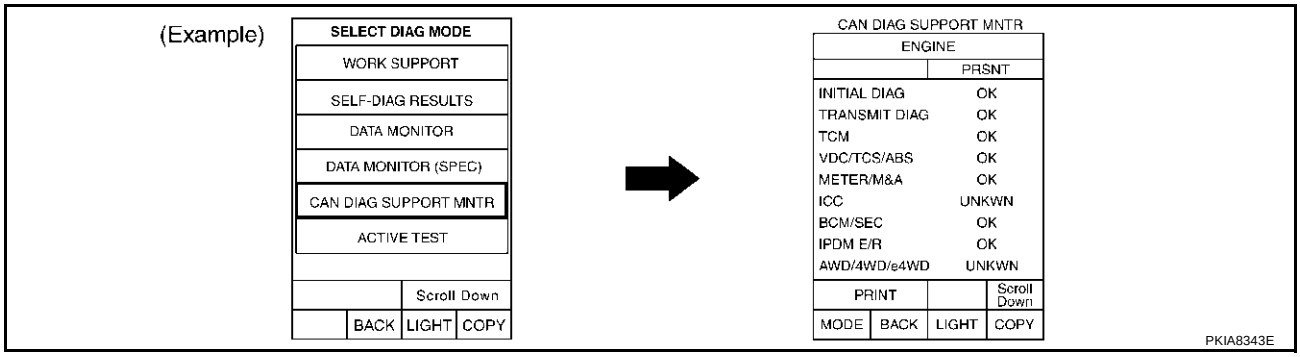
1. When there are no indications of “BCM”, “METER A/C AMP”, “AUTO DRIVE POS.” or “IPDM E/R” on “SELECT SYSTEM” display of CONSULT-II, print the “SELECT SYSTEM”.



2. Print all the data of “SELF-DIAG RESULTS” for “ENGINE”, “A/T”, “BCM”, “METER A/C AMP”, “ABS”, “AUTO DRIVE POS.”, and “IPDM E/R” displayed on CONSULT-II.



3. Print all the data of “CAN DIAG SUPPORT MNTR” for “ENGINE”, “A/T”, “BCM”, “METER A/C AMP”, “ABS”, “AUTO DRIVE POS.”, and “IPDM E/R” displayed on CONSULT-II.



4. Attach the printed sheet of “SELECT SYSTEM”, “SELF-DIAG RESULTS” and “CAN DIAG SUPPORT MNTR” onto the check sheet. Refer to LAN-56, "CHECK SHEET" .
5. 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-56, "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.
6. Check CAN communication line of the integrated display system. Refer to AV-97, "CAN Communication Line Inspection" .
7. Attach the CAN DIAG MONITOR check sheet onto the check sheet. Refer to LAN-56, "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-56, "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-97, "CAN Communication Line Inspection" .

9. According to the check sheet results (example), start inspection. Refer to LAN-58, "CHECK SHEET RESULTS (EXAMPLE)" .

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	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	CAN 2	–	CAN 5	–	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–	–	–
AUTO DRIVE POS.	No indication	NG	UNKWN	–	UNKWN	–	UNKWN	–	UNKWN	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	UNKWN	–	–	–	–

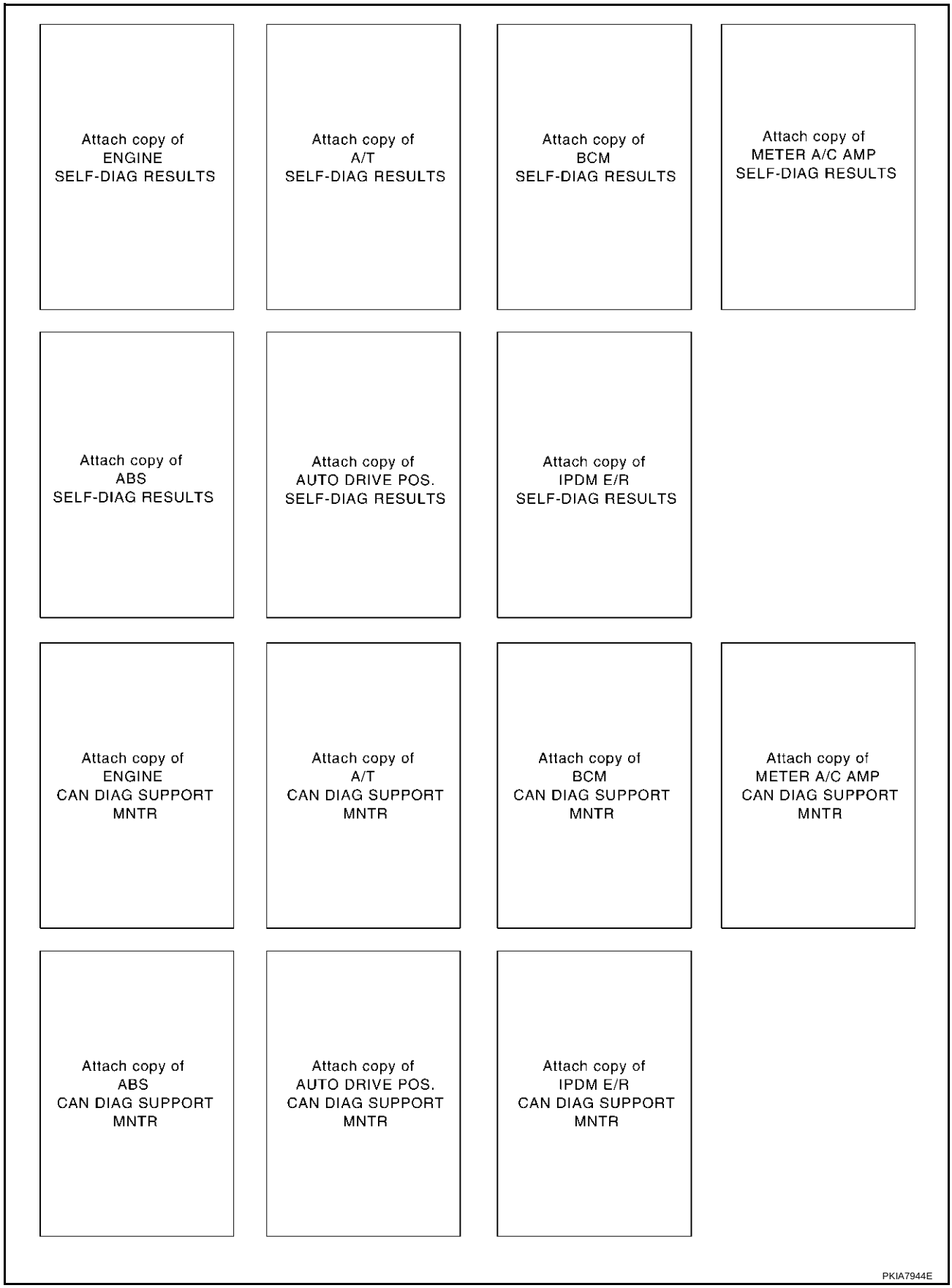
Symptoms :

Attach copy of
SELECT SYSTEM

Attach copy of
SELECT SYSTEM

Attach copy of
display unit
CAN DIAG MONITOR check sheet

PKIA7943E


Attach copy of
ENGINE
SELF-DIAG RESULTS
Attach copy of
A/T
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
AUTO DRIVE POS.
SELF-DIAG RESULTS
Attach copy of
IPDM E/R
SELF-DIAG RESULTS
Attach copy of
ENGINE
CAN DIAG SUPPORT
MNTR
Attach copy of
A/T
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
Attach copy of
AUTO DRIVE POS.
CAN DIAG SUPPORT
MNTR
Attach copy of
IPDM E/R
CAN DIAG SUPPORT
MNTR
PKIA7944E

CHECK SHEET RESULTS (EXAMPLE)

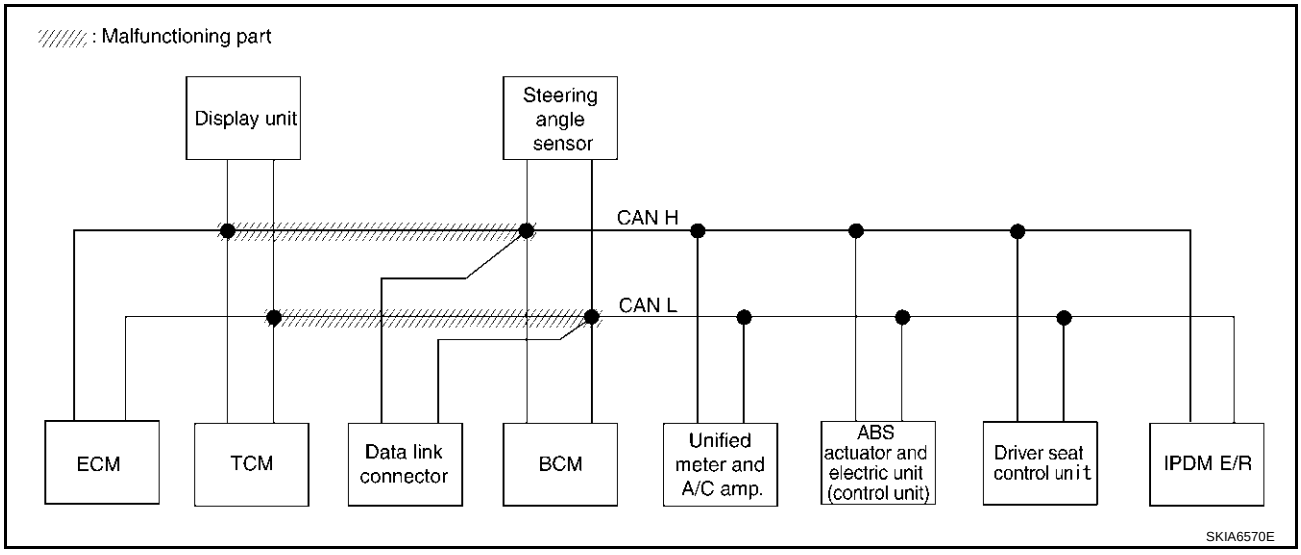
NOTE:
If “NG” is displayed on “INITIAL DIAG (Initial diagnosis)” or “CAN COMM” for the diagnosed control unit, replace the control unit.

Case 1

Check harness between TCM and data link connector. Refer to LAN-73, "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	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	UNKWN ✓
A/T	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN ✓	UNKWN ✓	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2 ✓	—	CAN 5 ✓	—	CAN 7 ✓
BCM	No indication	NG	UNKWN	UNKWN ✓	—	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN ✓	UNKWN ✓	UNKWN ✓	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN ✓	—	—	UNKWN	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN ✓	—	UNKWN	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN ✓	—	—	UNKWN	—	—	—	—

PKIA7945E

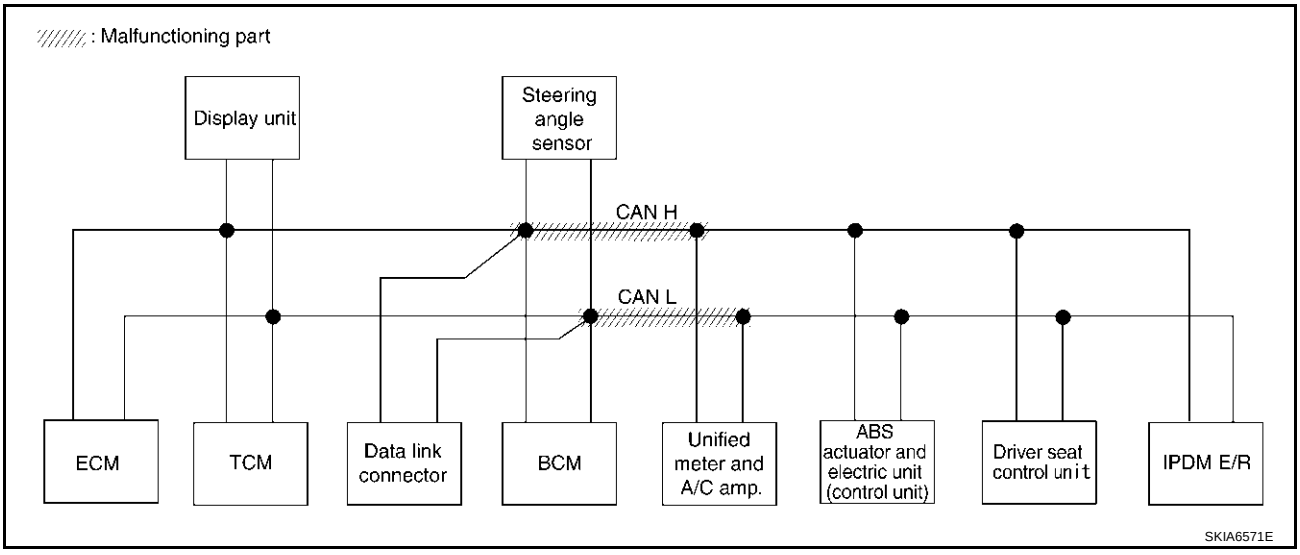


Case 2

Check harness between data link connector and unified meter and A/C amp. Refer to LAN-73, "Circuit Check Between Data Link Connector and Unified Meter and A/C Amp." .

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

PKIA7946E

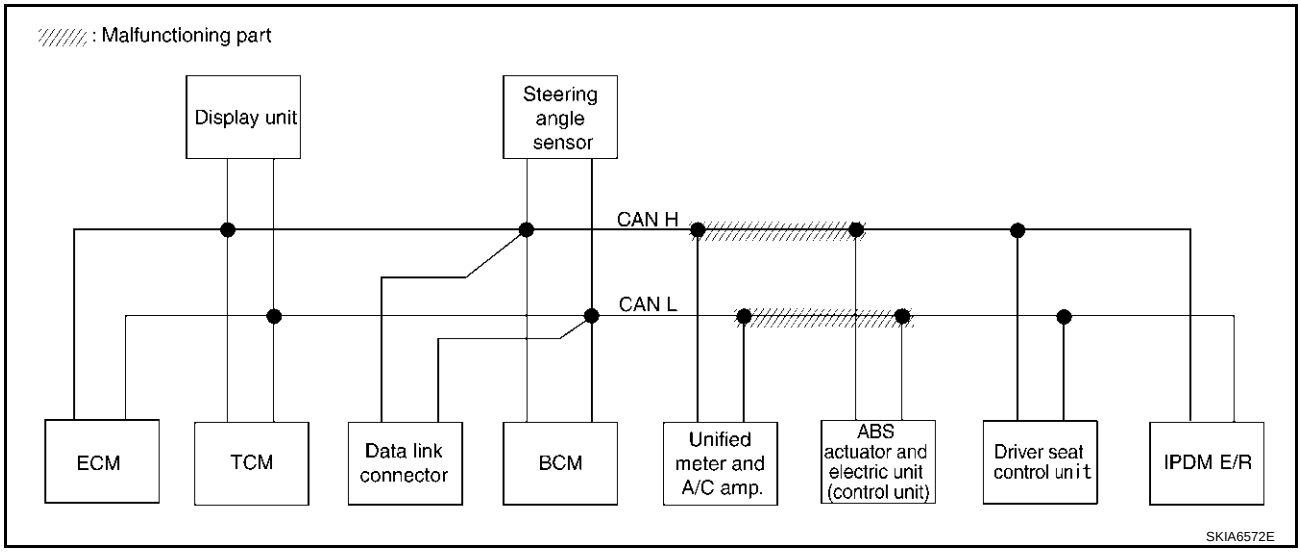


Case 3

Check harness between unified meter and A/C amp. and ABS actuator and electric unit (control unit). Refer to LAN-74, "Circuit Check Between Unified Meter and A/C Amp. 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	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	CAN 2	–	CAN 5	–	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–	–	–
AUTO DRIVE POS.	No indication	NG	UNKWN	–	UNKWN	–	UNKWN	–	UNKWN	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	UNKWN	–	–	–	–

PKIA7947E



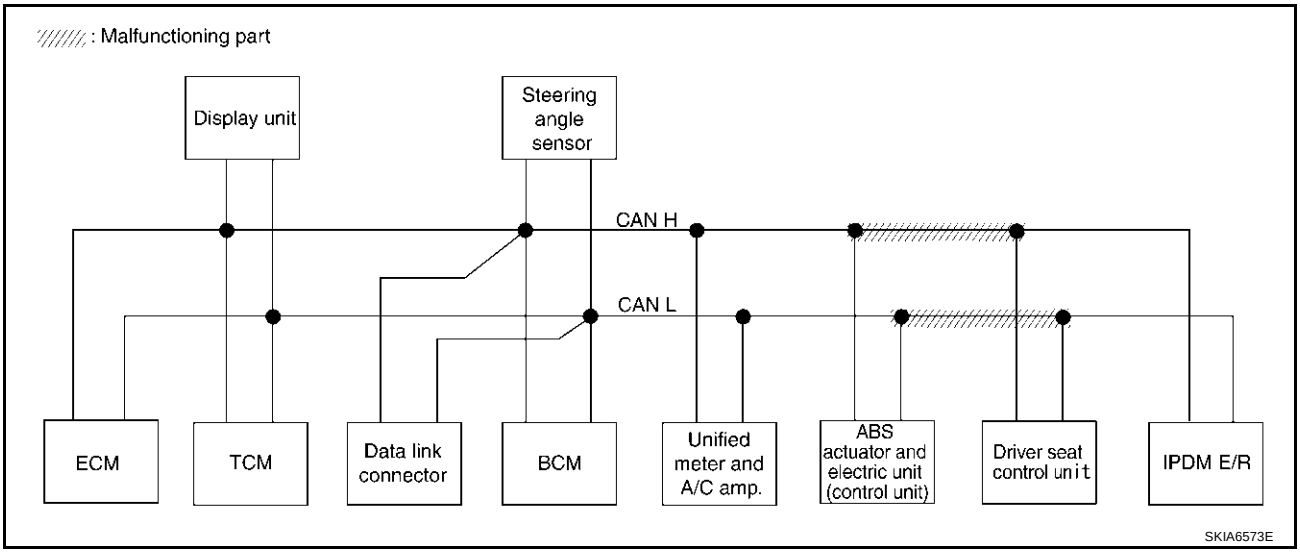
SKIA6572E

Case 4

Check harness between ABS actuator and electric unit (control unit) and driver seat control unit. Refer to LAN-75, "Circuit Check Between ABS Actuator and Electric Unit (Control Unit) and Driver Seat Control Unit" .

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

PKIA7948E



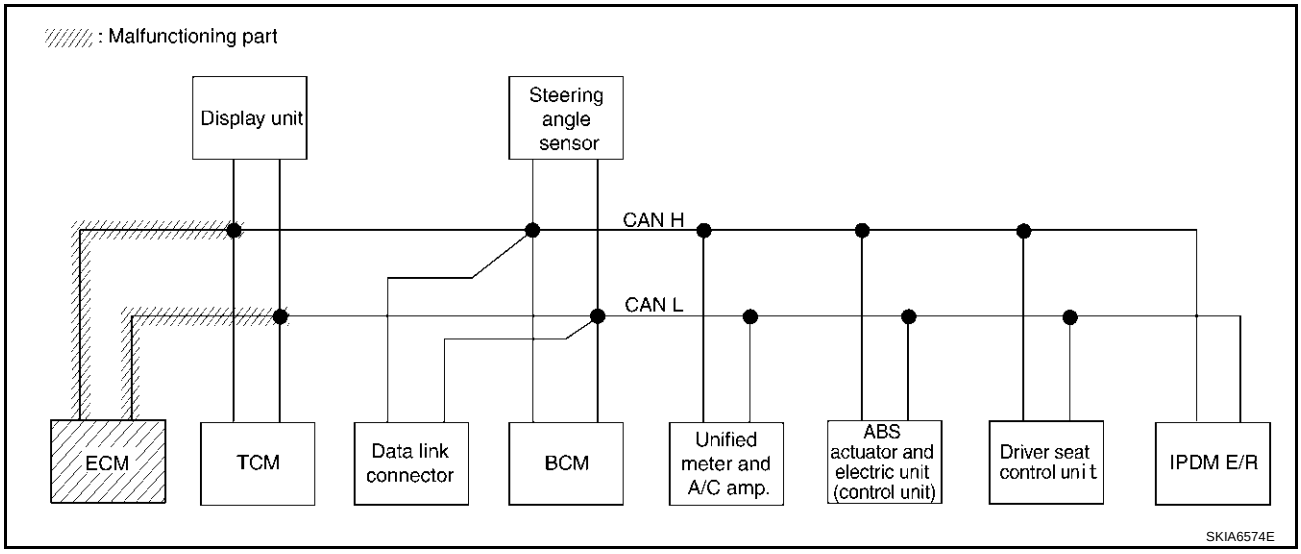
SKIA6573E

Case 5

Check ECM circuit. Refer to LAN-75, "ECM Circuit Check" .

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

PKIA7949E



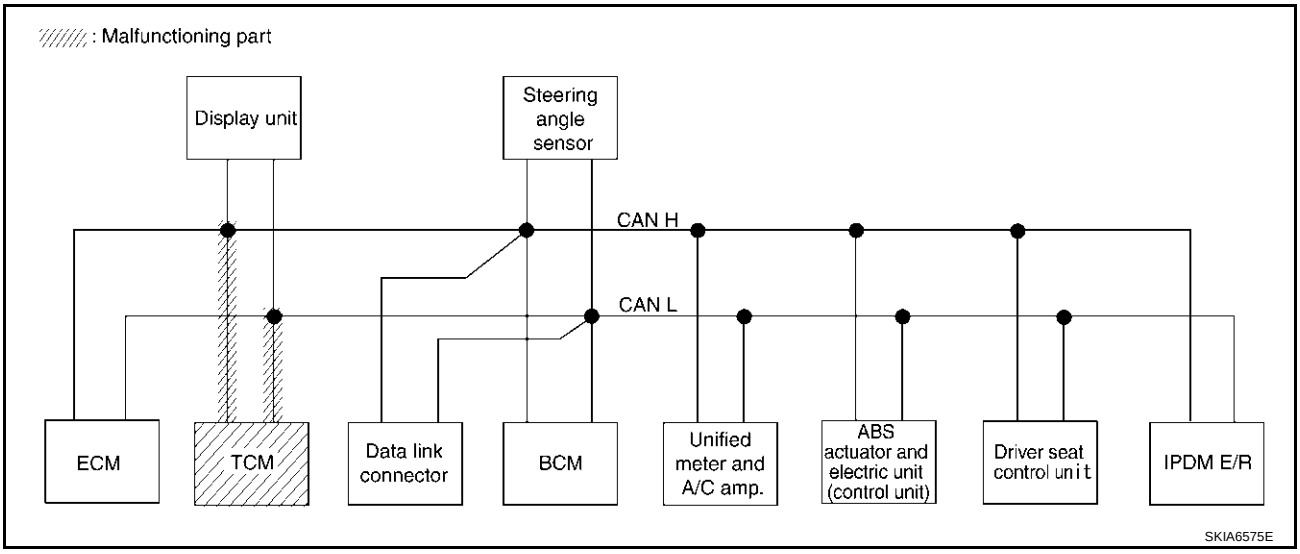
SKIA6574E

Case 6

Check TCM circuit. Refer to LAN-76, "TCM Circuit Check" .

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

PKIA7950E

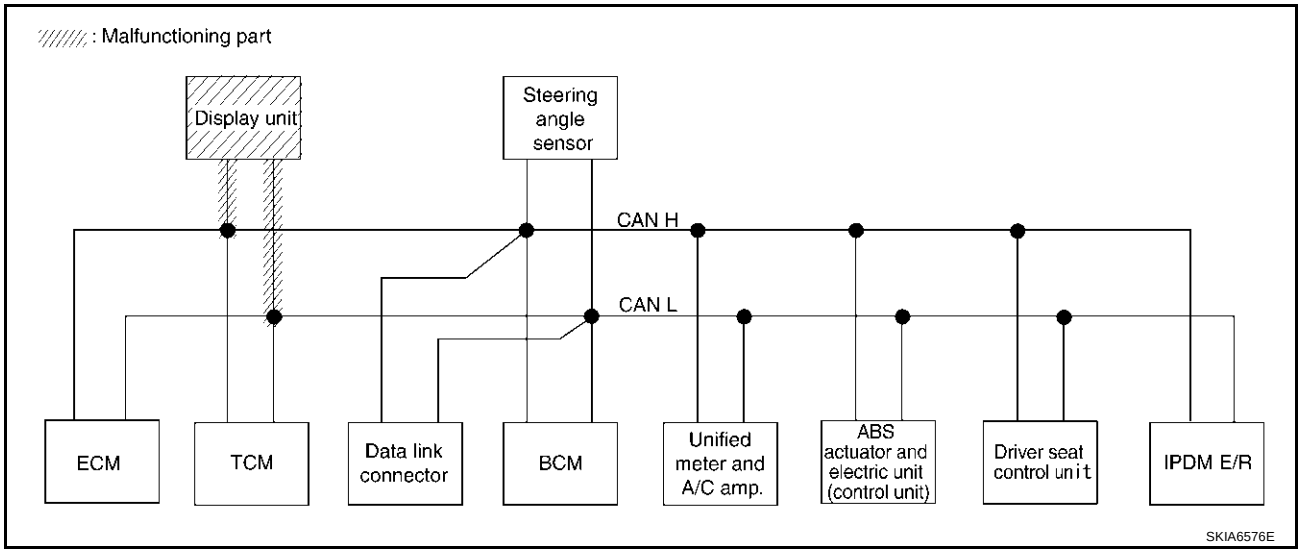


Case 7

Check display unit circuit. Refer to LAN-76, "Display Unit Circuit Check" .

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

PKIA7951E

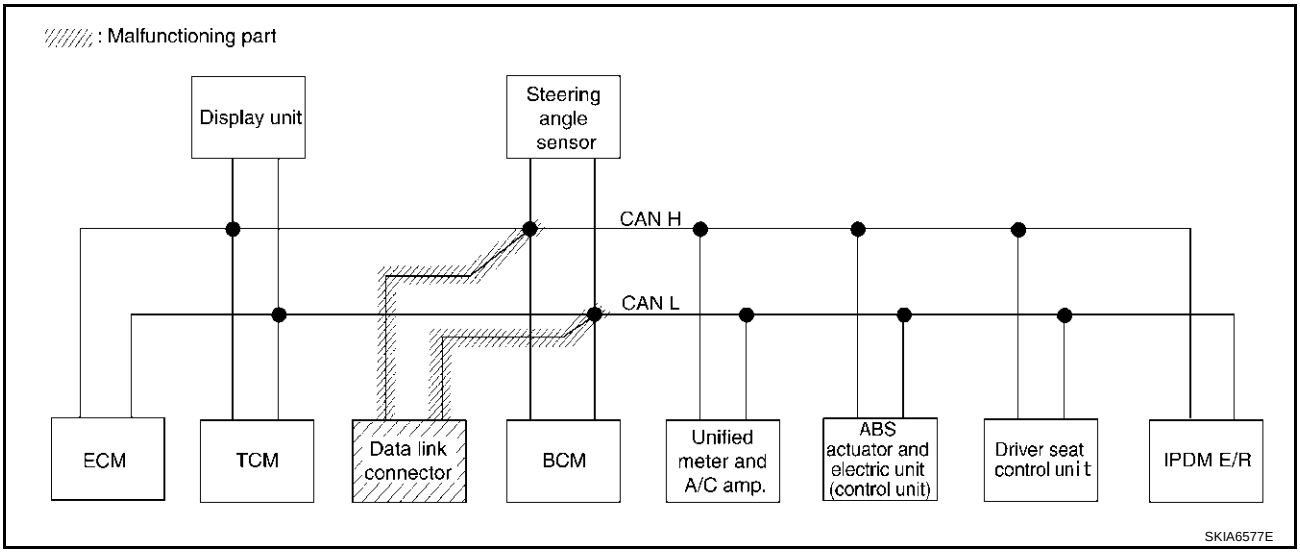


Case 8

Check data link connector circuit. Refer to LAN-77, "Data Link Connector Circuit Check" .

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

PKIA7952E

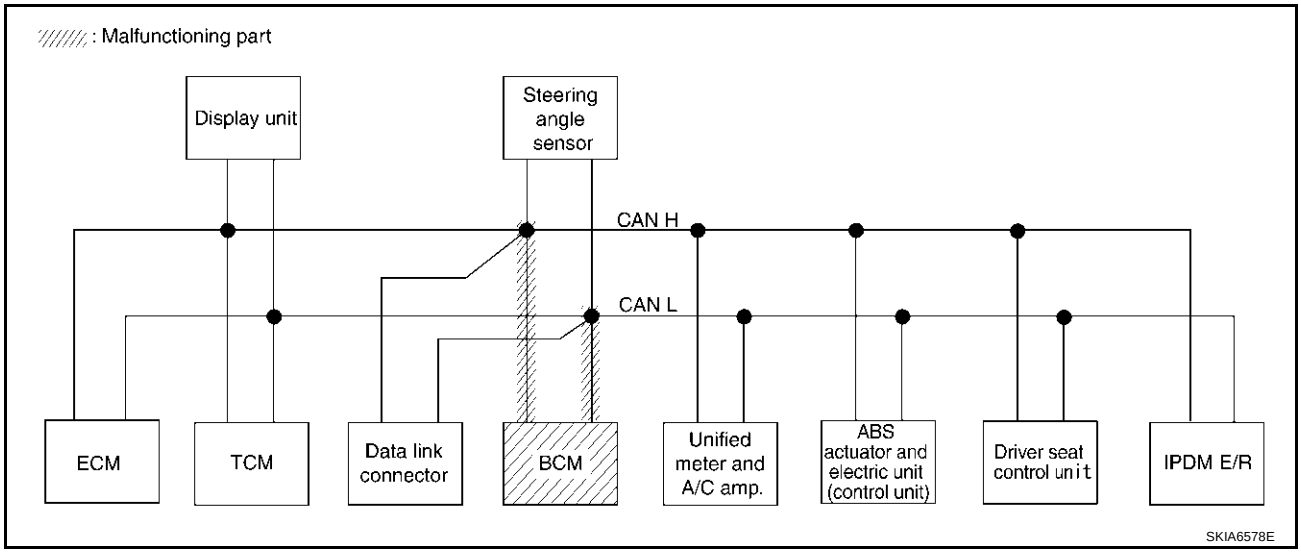


Case 9

Check BCM circuit. Refer to LAN-77, "BCM Circuit Check" .

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

PKIA7953E



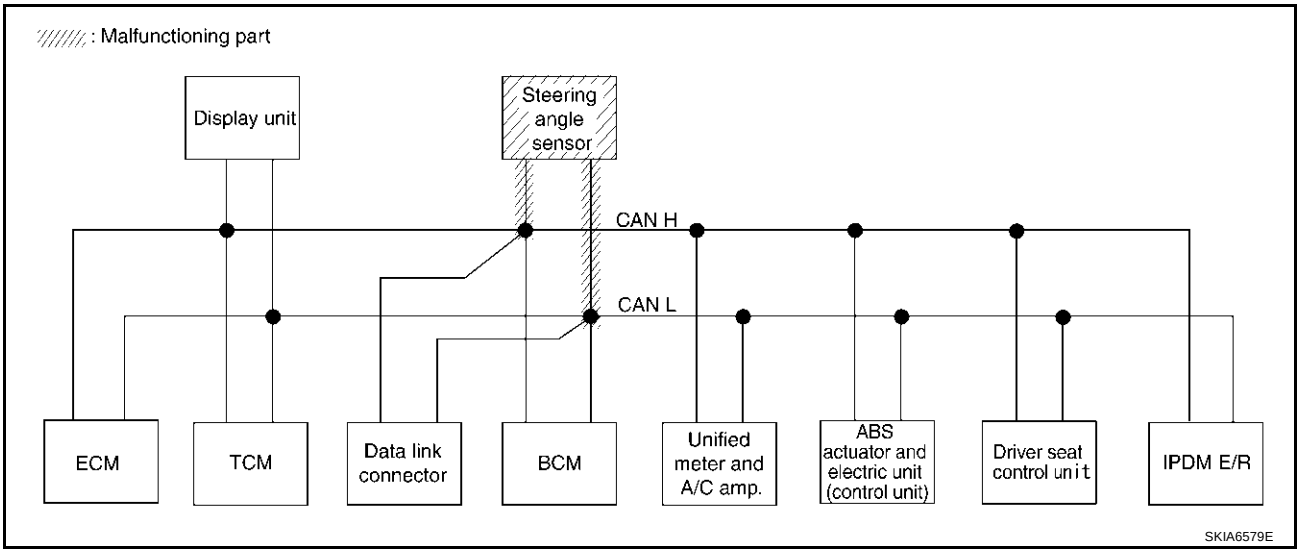
SKIA6578E

Case 10

Check steering angle sensor circuit. Refer to LAN-78, "Steering Angle Sensor Circuit Check" .

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

PKIA7954E

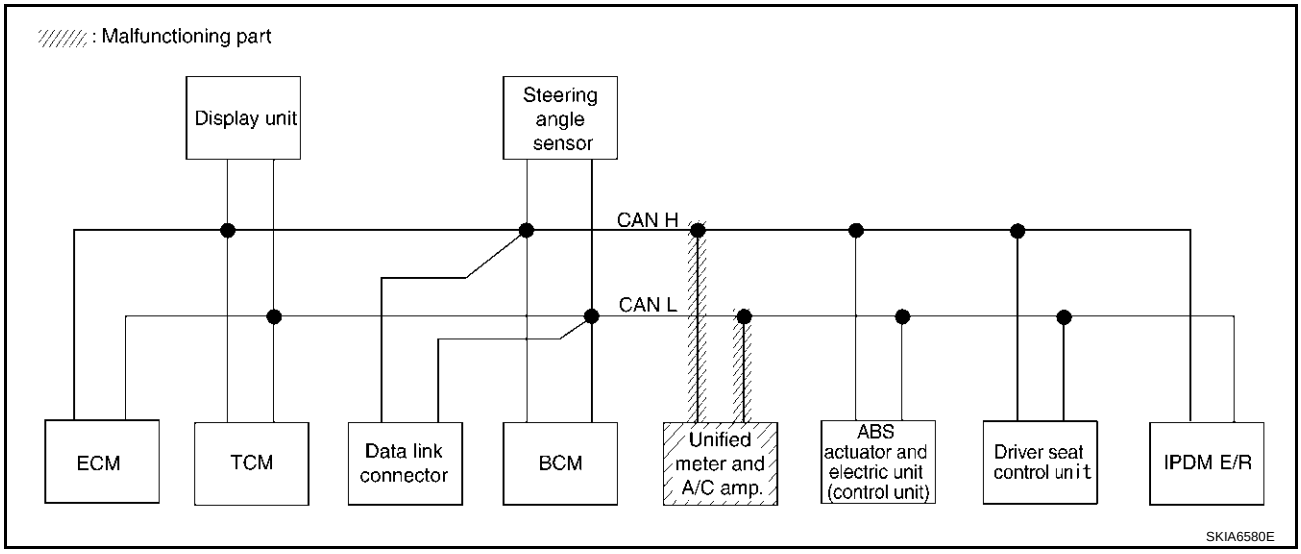


Case 11

Check unified meter and A/C amp. circuit. Refer to LAN-78, "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	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	CAN 2	–	CAN 5	–	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–	–	–
AUTO DRIVE POS.	No indication	NG	UNKWN	–	UNKWN	–	UNKWN	–	UNKWN	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	UNKWN	–	–	–	–

PKIA7955E

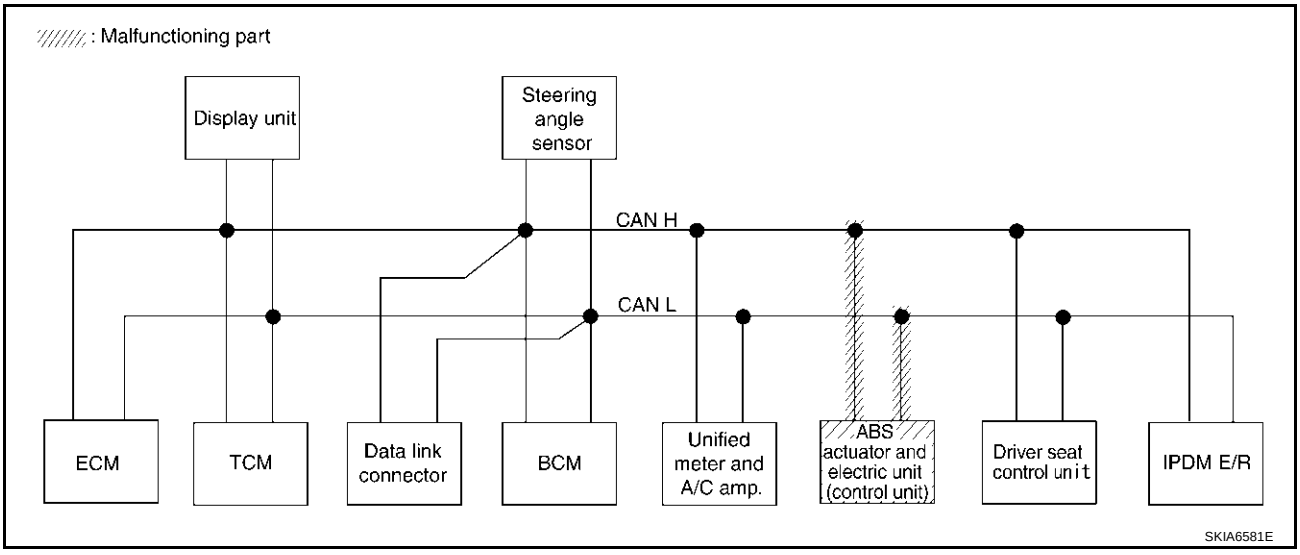


Case 12

Check ABS actuator and electric unit (control unit) circuit. Refer to LAN-79, "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	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	CAN 2	–	CAN 5	–	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–	–	–
AUTO DRIVE POS.	No indication	NG	UNKWN	–	UNKWN	–	UNKWN	–	UNKWN	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	UNKWN	–	–	–	–

PKIA7956E



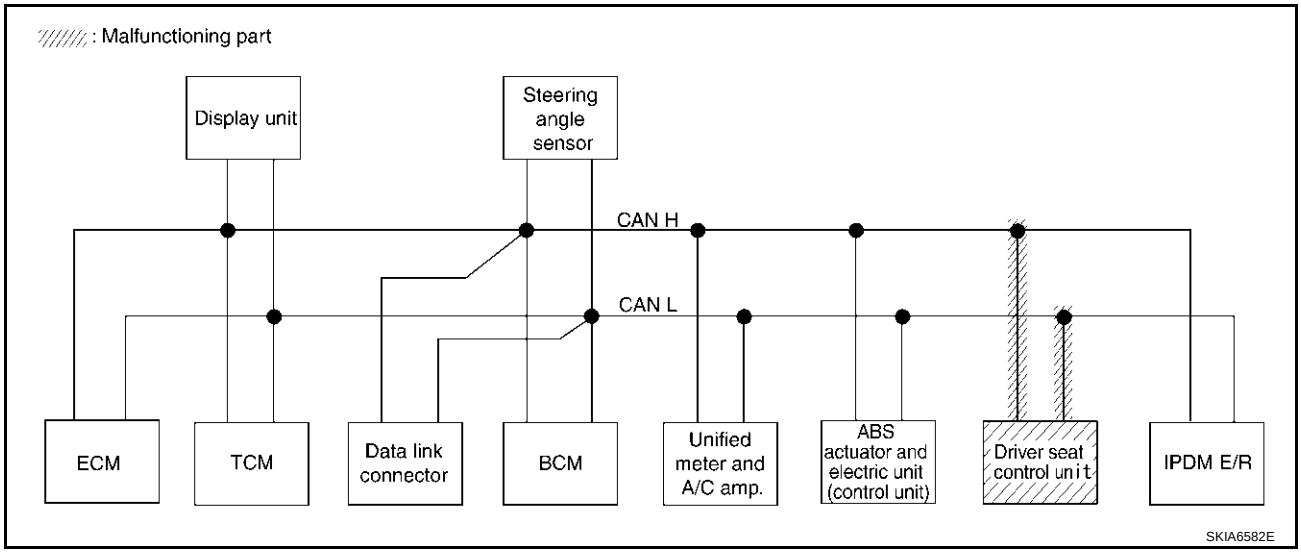
SKIA6581E

Case 13

Check driver seat control unit circuit. Refer to LAN-79, "Driver Seat Control Unit Circuit Check" .

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

PKIA7957E

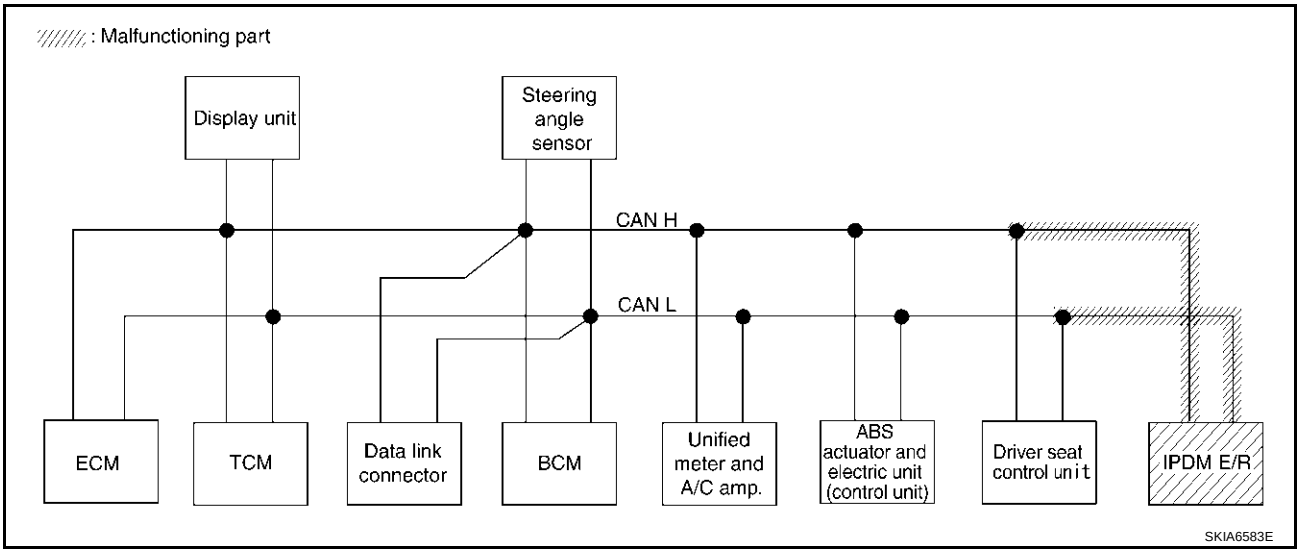


Case 14

Check IPDM E/R circuit. Refer to LAN-80, "IPDM E/R Circuit Check" .

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

PKIA7958E



Case 15

Check CAN communication circuit. Refer to LAN-81, "CAN Communication Circuit Check" .

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

PKIA7959E

Case 16

Check IPDM E/R ignition relay circuit continuously sticks “OFF”. Refer to LAN-85, "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	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	CAN 2	–	CAN 5	–	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–	–	–
AUTO DRIVE POS.	No indication	NG	UNKWN	–	UNKWN	–	UNKWN	–	UNKWN	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	UNKWN	–	–	–	–

PKIA7961E

Case 17

Check IPDM E/R ignition relay circuit continuously sticks “ON”. Refer to LAN-85, "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	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	CAN 2	–	CAN 5	–	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–	–	–
AUTO DRIVE POS.	No indication	NG	UNKWN	–	UNKWN	–	UNKWN	–	UNKWN	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	UNKWN	–	–	–	–

PKIA7960E

Circuit Check Between TCM and Data Link Connector

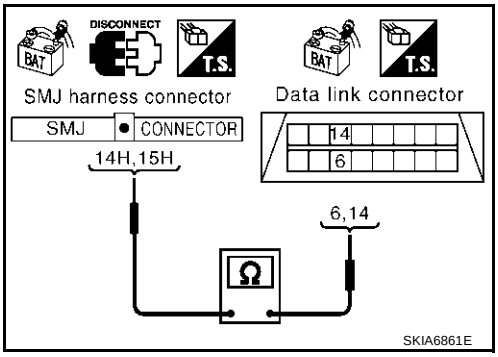
AKS007R9

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 14H (L), 15H (R) and data link connector M5 terminals 6 (L), 14 (R).

14H (L) - 6 (L) : Continuity should exist.

15H (R) - 14 (R) : Continuity should exist.



OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-54, "Work Flow" .

NG >> Repair harness.

Circuit Check Between Data Link Connector and Unified Meter and A/C Amp.

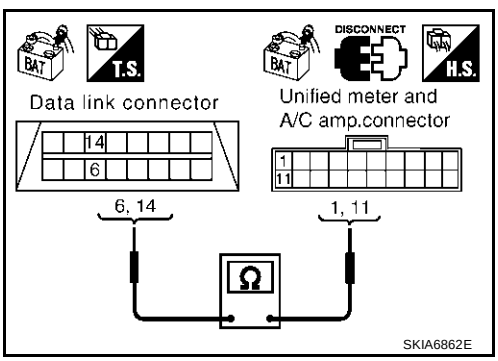
AKS007RA

1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and unified meter and A/C amp. connector.
4. Check continuity between data link connector M5 terminals 6 (L), 14 (R) and unified meter and A/C amp. harness connector M55 terminals 1 (L), 11 (R).

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

14 (R) - 11 (R) : Continuity should exist.



OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-54, "Work Flow" .

NG >> Repair harness.

Circuit Check Between Unified Meter and A/C Amp. and ABS Actuator and Electric Unit (Control Unit)

AKS007RB

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 M41
- Harness connector E211

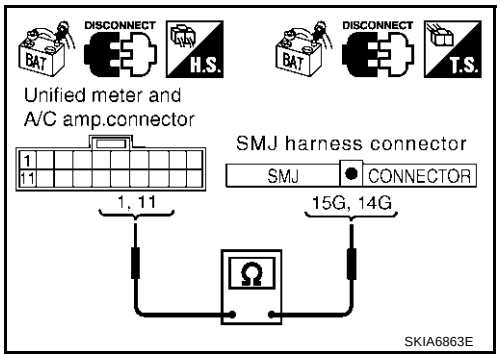
OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector and harness connector M41.
2. Check continuity between unified meter and A/C amp. harness connector M55 terminals 1 (L), 11 (R) and harness connector M41 terminals 15G (L), 14G (R).

1 (L) - 15G (L) : Continuity should exist.
11 (R) - 14G (R) : Continuity should exist.



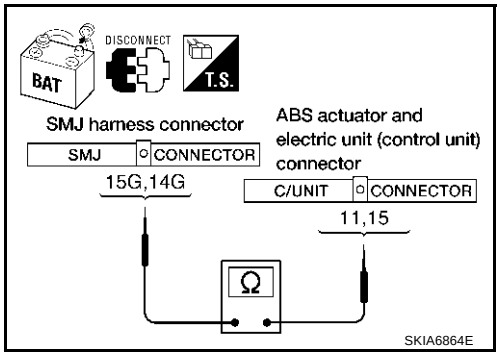
OK or NG

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 E211 terminals 15G (L), 14G (R) and ABS actuator and electric unit (control unit) harness connector E56 terminals 11 (L), 15 (R).

15G (L) - 11 (L) : Continuity should exist.
14G (R) - 15 (R) : Continuity should exist.



OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-54, "Work Flow" .
NG >> Repair harness.

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

AKS007RQ

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 E205
- Harness connector B5

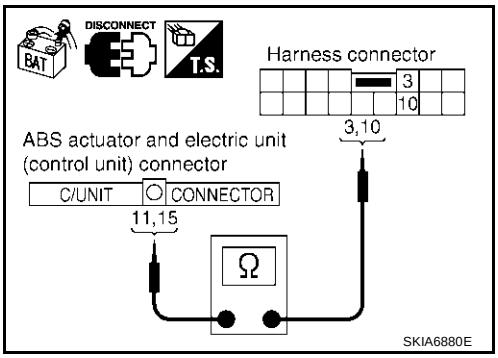
OK or NG

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 and harness connector E205.
2. Check continuity between ABS actuator and electric unit (control unit) harness connector E56 terminals 11 (L), 15 (R) and harness connector E205 terminals 3 (L), 10 (R).

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



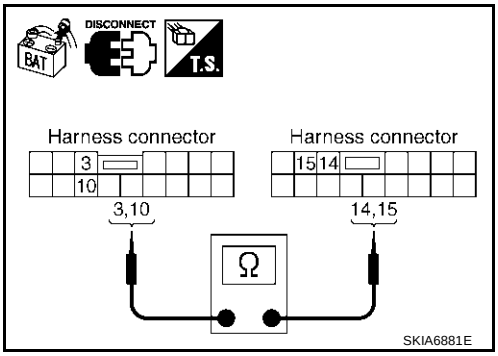
OK or NG

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

3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B8.
2. Check continuity between harness connector B5 terminals 3 (L), 10 (R) and harness connector B8 terminals 14 (L), 15 (R).

3 (L) - 14 (L) : Continuity should exist.
10 (R) - 15 (R) : Continuity should exist.



OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-54, "Work Flow" .
NG >> Repair harness.

ECM Circuit Check

AKS007RC

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.

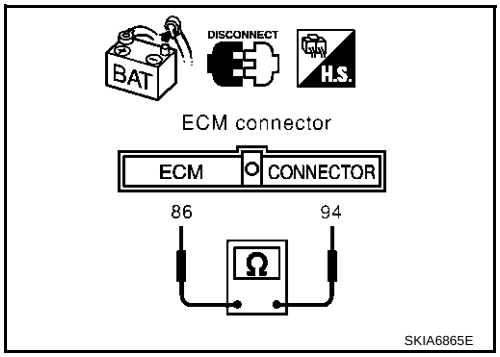
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M90 terminals 94 (L) and 86 (R).

94 (L) - 86 (R) : Approx. 108 - 132Ω

OK or NG

OK >> Replace ECM.
NG >> Repair harness between ECM and harness connector M82.



TCM Circuit Check

AKS007RD

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).

- A/T assembly connector
- Harness connector F102
- Harness connector M82

OK or NG

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

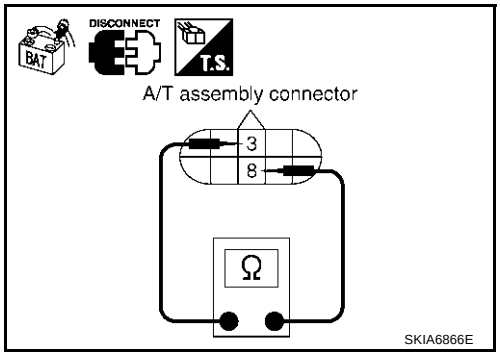
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect A/T assembly connector.
2. Check resistance between A/T assembly harness connector F44 terminals 3 (L) and 8 (R).

3 (L) - 8 (R) : Approx. 54 - 66Ω

OK or NG

OK >> Replace A/T assembly.
NG >> Repair harness between A/T assembly and display unit.



Display Unit Circuit Check

AKS007RE

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.

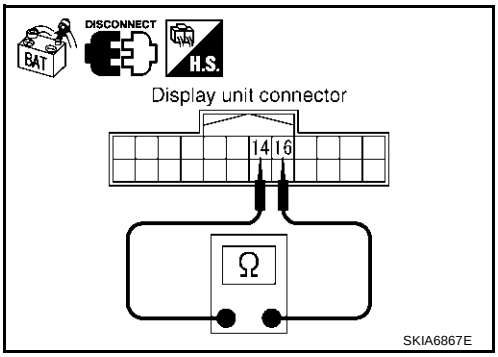
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect display unit connector.
2. Check resistance between display unit harness connector M62 terminals 14 (L) and 16 (R).

14 (L) - 16 (R) : Approx. 54 - 66Ω

OK or NG

OK >> Replace display unit.
NG >> Repair harness between display unit and harness connector M82.



Data Link Connector Circuit Check

AKS007RF

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.

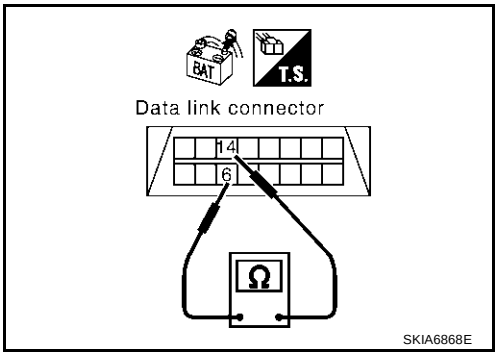
2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M5 terminals 6 (L) and 14 (R).

6 (L) - 14 (R) : Approx. 54 - 66Ω

OK or NG

OK >> Diagnose again. Refer to LAN-54, "Work Flow" .
NG >> Repair harness between data link connector and BCM.



BCM Circuit Check

AKS007RG

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.

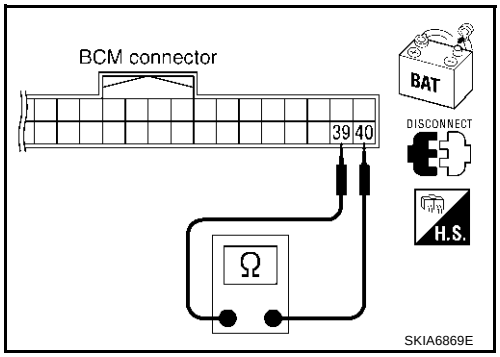
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M3 terminals 39 (L) and 40 (R).

39 (L) - 40 (R) : Approx. 54 - 66Ω

OK or NG

OK >> Replace BCM. Refer to BCS-28, "Removal and Installation of BCM" .
NG >> Repair harness between BCM and data link connector.



Steering Angle Sensor Circuit Check

AKS007RH

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.

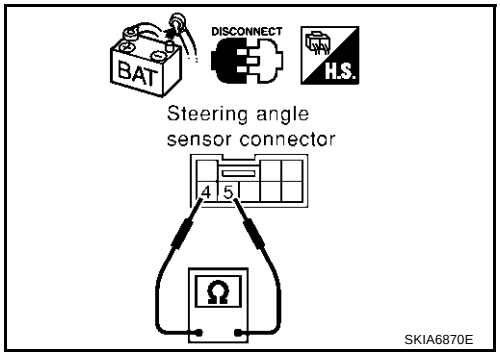
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M14 terminals 4 (L) and 5 (R).

4 (L) - 5 (R) : Approx. 54 - 66Ω

OK or NG

OK >> Replace steering angle sensor.
NG >> Repair harness between steering angle sensor and data link connector.



Unified Meter and A/C Amp. Circuit Check

AKS007RI

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).

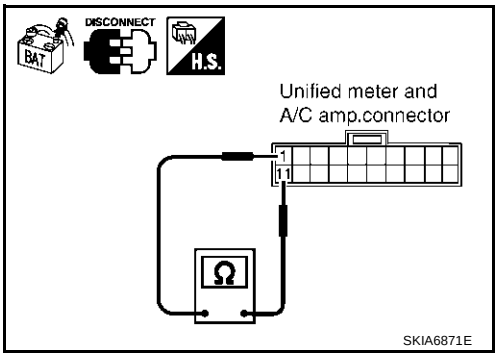
OK or NG

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 M55 terminals 1 (L) and 11 (R).

1 (L) - 11 (R) : 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 harness connector M41.

ABS Actuator and Electric Unit (Control Unit) Circuit Check

AKS007RJ

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).

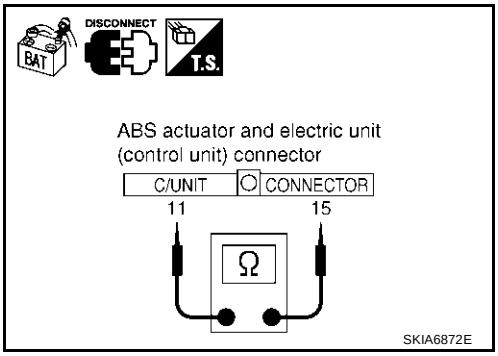
OK or NG

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 E56 terminals 11 (L) and 15 (R).

11 (L) - 15 (R) : 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 harness connector E205.

Driver Seat Control Unit Circuit Check

AKS007RK

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 B151
- Harness connector B8

OK or NG

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

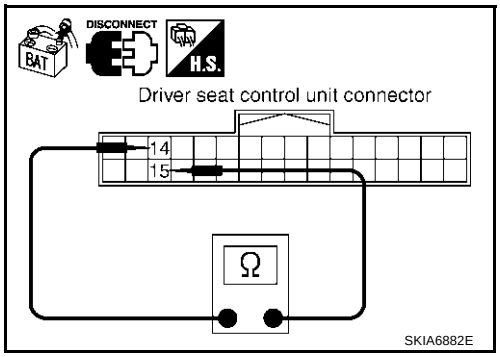
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect driver seat control unit connector.
2. Check resistance between driver seat control unit harness connector B152 terminals 14 (OR) and 15 (SB).

14 (OR) - 15 (SB) : Approx. 54 - 66Ω

OK or NG

OK >> Replace driver seat control unit.
NG >> Repair harness between driver seat control unit and harness connector B5.



IPDM E/R Circuit Check

AKS007RL

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).

- IPDM E/R connector
- Harness connector E205
- Harness connector B5

OK or NG

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

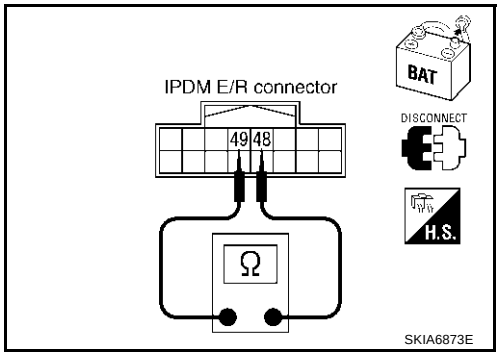
2. CHECK HARNESS FOR OPEN CIRCUIT

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

48 (L) - 49 (R) : Approx. 108 - 132Ω

OK or NG

OK >> Replace IPDM E/R.
NG >> Repair harness between IPDM E/R and harness connector B8.



CAN Communication Circuit Check

AKS007RM

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, sensor side, meter side, control unit side and harness side).

- ECM
- A/T assembly
- Display unit
- BCM
- Steering angle sensor
- Unified meter and A/C amp.
- ABS actuator and electric unit (control unit)
- Driver seat control unit
- IPDM E/R
- Between ECM and IPDM E/R
- Between ECM and A/T assembly

OK or NG

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

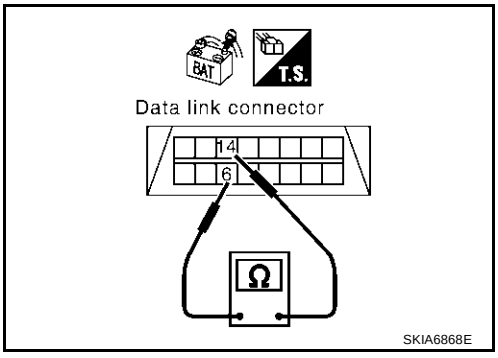
2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.

– ECM connector
– Harness connector M82
– Display unit connector
– BCM connector
– Steering angle sensor connector
– Unified meter and A/C amp. connector
– Harness connector M41

2. Check continuity between data link connector M5 terminals 6 (L) and 14 (R).

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



OK or NG

OK >> GO TO 3.
NG >> Check the following harnesses. If any harness is damaged, repair the harness.

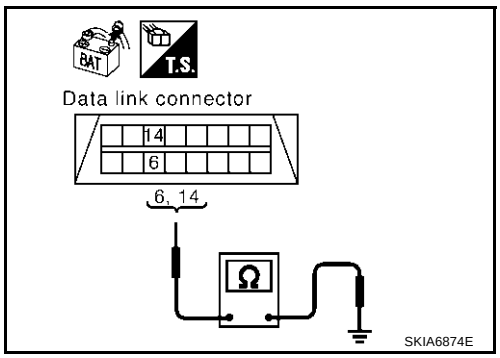
- Harness between data link connector and ECM.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display unit.
- Harness between data link connector and BCM.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M41.

3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M5 terminals 6 (L), 14 (R) and ground.

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

14 (R) - Ground : Continuity should not exist.



OK or NG

OK >> GO TO 4.

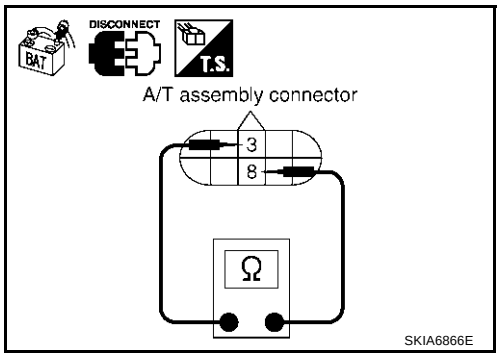
NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- 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 steering angle sensor.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M41.

4. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect A/T assembly connector.
2. Check continuity between A/T assembly harness connector F44 terminals 3 (L) and 8 (R).

3 (L) - 8 (R) : Continuity should not exist.



OK or NG

OK >> GO TO 5.

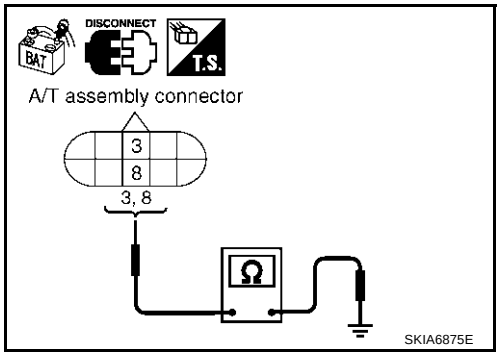
NG >> Repair harness between A/T assembly and harness connector F102.

5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between A/T assembly harness connector F44 terminals 3 (L), 8 (R) and ground.

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

8 (R) - Ground : Continuity should not exist.



OK or NG

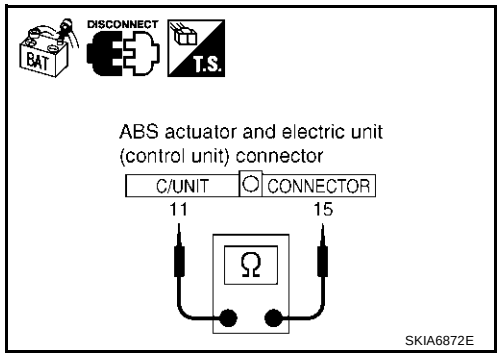
OK >> GO TO 6.

NG >> Repair harness between A/T assembly and harness connector F102.

6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector and harness connector E205.
2. Check continuity between ABS actuator and electric unit (control unit) harness connector E56 terminals 11 (L) and 15 (R).

11 (L) - 15 (R) : Continuity should not exist.



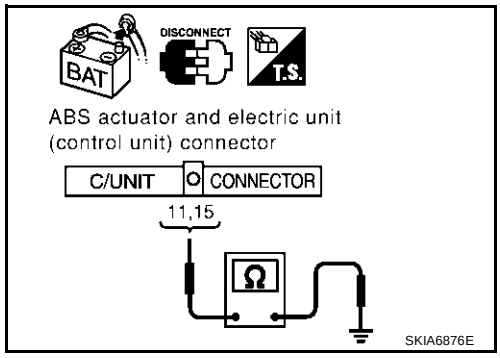
OK or NG

OK >> GO TO 7.
NG >> Check the following harnesses. If any harness is damaged, repair the harness.
- Harness between ABS actuator and electric unit (control unit) and harness connector E211.
- Harness between ABS actuator and electric unit (control unit) and harness connector E205.

7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between ABS actuator and electric unit (control unit) harness connector E56 terminals 11 (L), 15 (R) and ground.

11 (L) - Ground : Continuity should not exist.
15 (R) - Ground : Continuity should not exist.



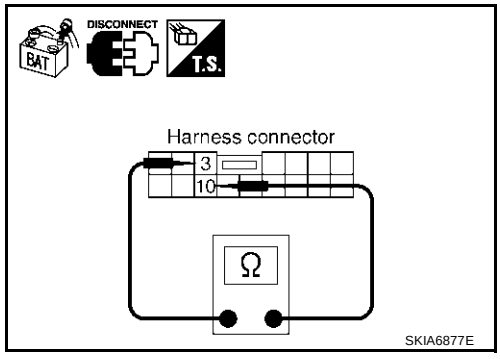
OK or NG

OK >> GO TO 8.
NG >> Check the following harnesses. If any harness is damaged, repair the harness.
- Harness between ABS actuator and electric unit (control unit) and harness connector E211.
- Harness between ABS actuator and electric unit (control unit) and harness connector E205.

8. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B8.
2. Check continuity between harness connector B5 terminals 3 (L) and 10 (R).

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



OK or NG

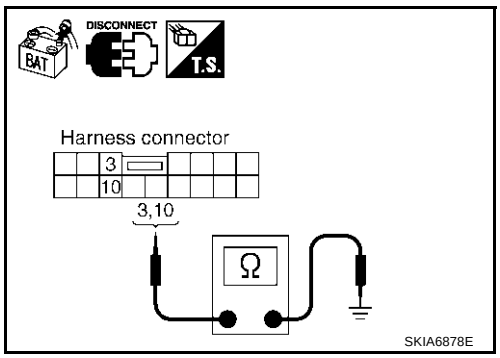
OK >> GO TO 9.
NG >> Check the following harnesses. If any harness is damaged, repair the harness.
- Harness between harness connector B5 and harness connector B5.
- Harness between harness connector B5 and harness connector B8.

9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B5 terminals 3 (L), 10 (R) and ground.

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

10 (R) - Ground : Continuity should not exist.



OK or NG

OK >> GO TO 10.

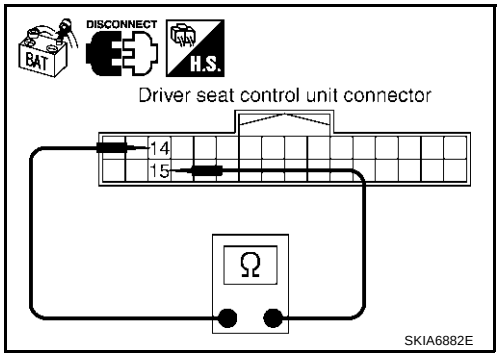
NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between harness connector B5 and harness connector B5.
- Harness between harness connector B5 and harness connector B8.

10. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect driver seat control unit connector.
2. Check continuity between driver seat control unit harness connector B152 terminals 14 (OR) and 15 (SB).

14 (OR) - 15 (SB) : Continuity should not exist.



OK or NG

OK >> GO TO 11.

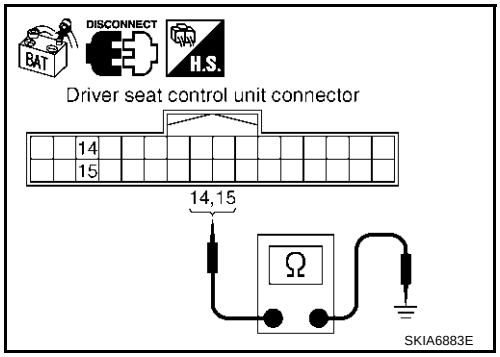
NG >> Repair harness between driver seat control unit and harness connector B151.

11. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between driver seat control unit harness connector B152 terminals 14 (OR), 15 (SB) and ground.

14 (OR) - Ground : Continuity should not exist.

15 (SB) - Ground : Continuity should not exist.



OK or NG

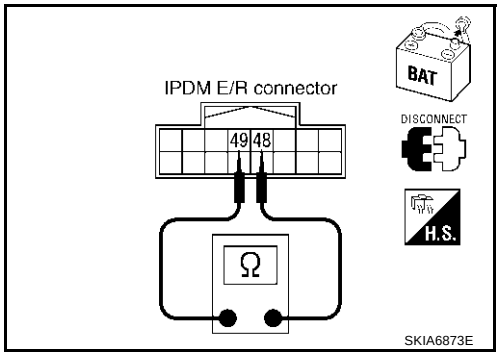
OK >> GO TO 12.

NG >> Repair harness between driver seat control unit and harness connector B151.

12. CHECK HARNESS FOR SHORT CIRCUIT

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

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



OK or NG

OK >> GO TO 13.

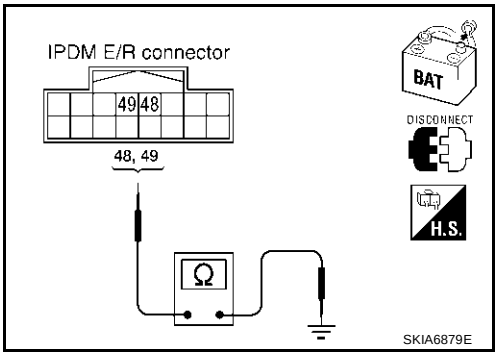
NG >> Repair harness between IPDM E/R and harness connector E205.

13. CHECK HARNESS FOR SHORT CIRCUIT

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

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

49 (R) - Ground : Continuity should not exist.



OK or NG

OK >> GO TO 14.

NG >> Repair harness between IPDM E/R and harness connector E205.

14. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to LAN-85, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION" .

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-54, "Work Flow" .

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

IPDM E/R Ignition Relay Circuit Check

AKS007RN

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

- IPDM E/R power supply circuit. Refer to PG-43, "IPDM E/R Power/Ground Circuit Inspection" .
- Ignition power supply circuit. Refer to PG-12, "IGNITION POWER SUPPLY - IGNITION SW. IN “ON” AND/OR “START”" .

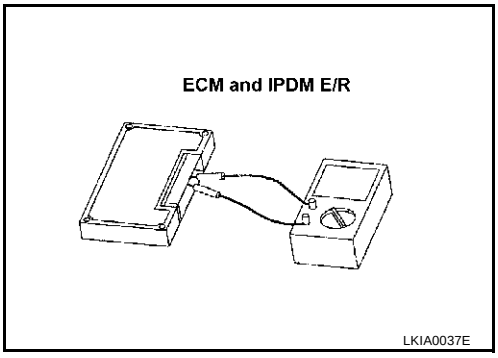
Component Inspection

AKS007RO

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



CAN SYSTEM (TYPE 3)

PFP:23710

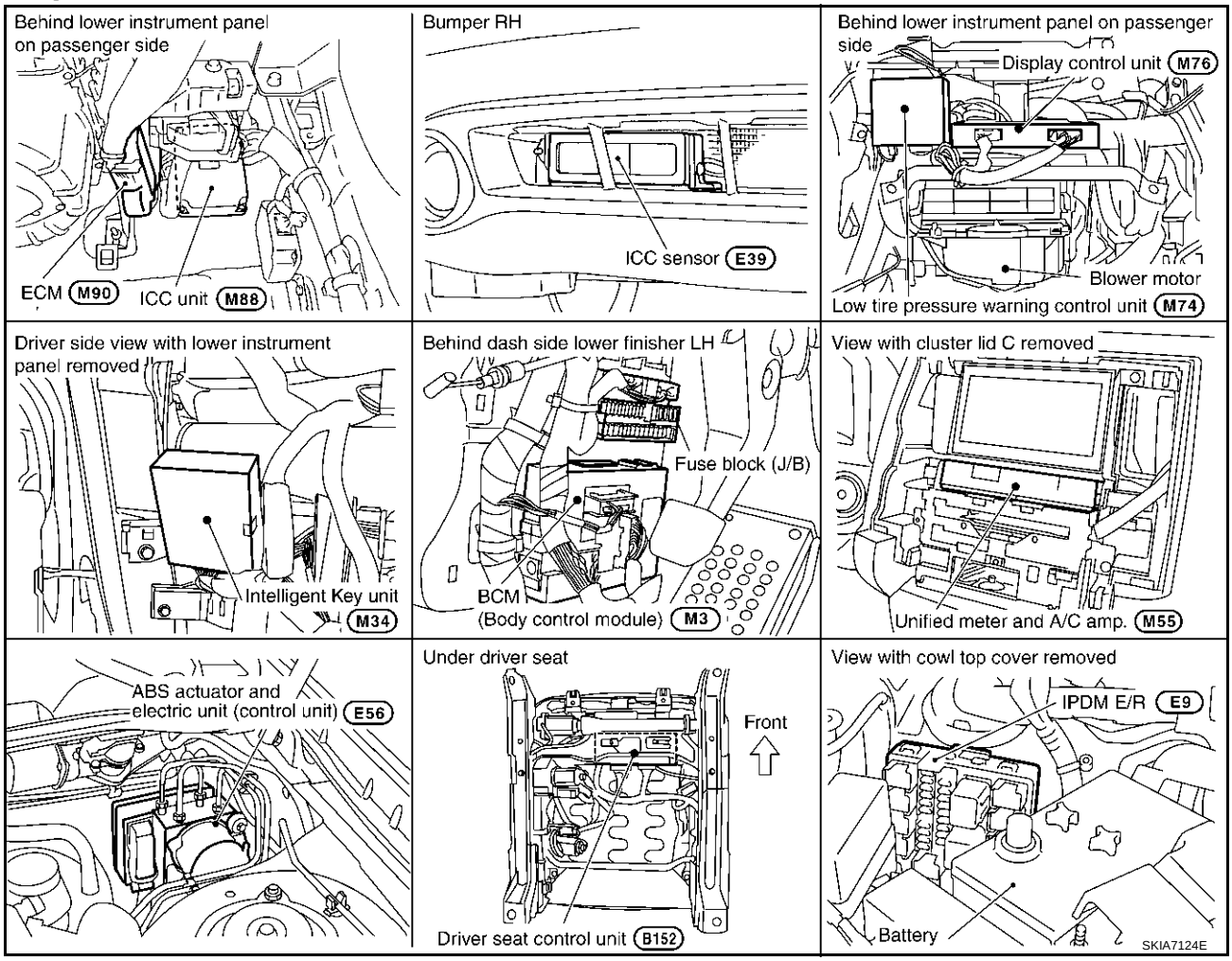
System Description

AKS007RR

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.

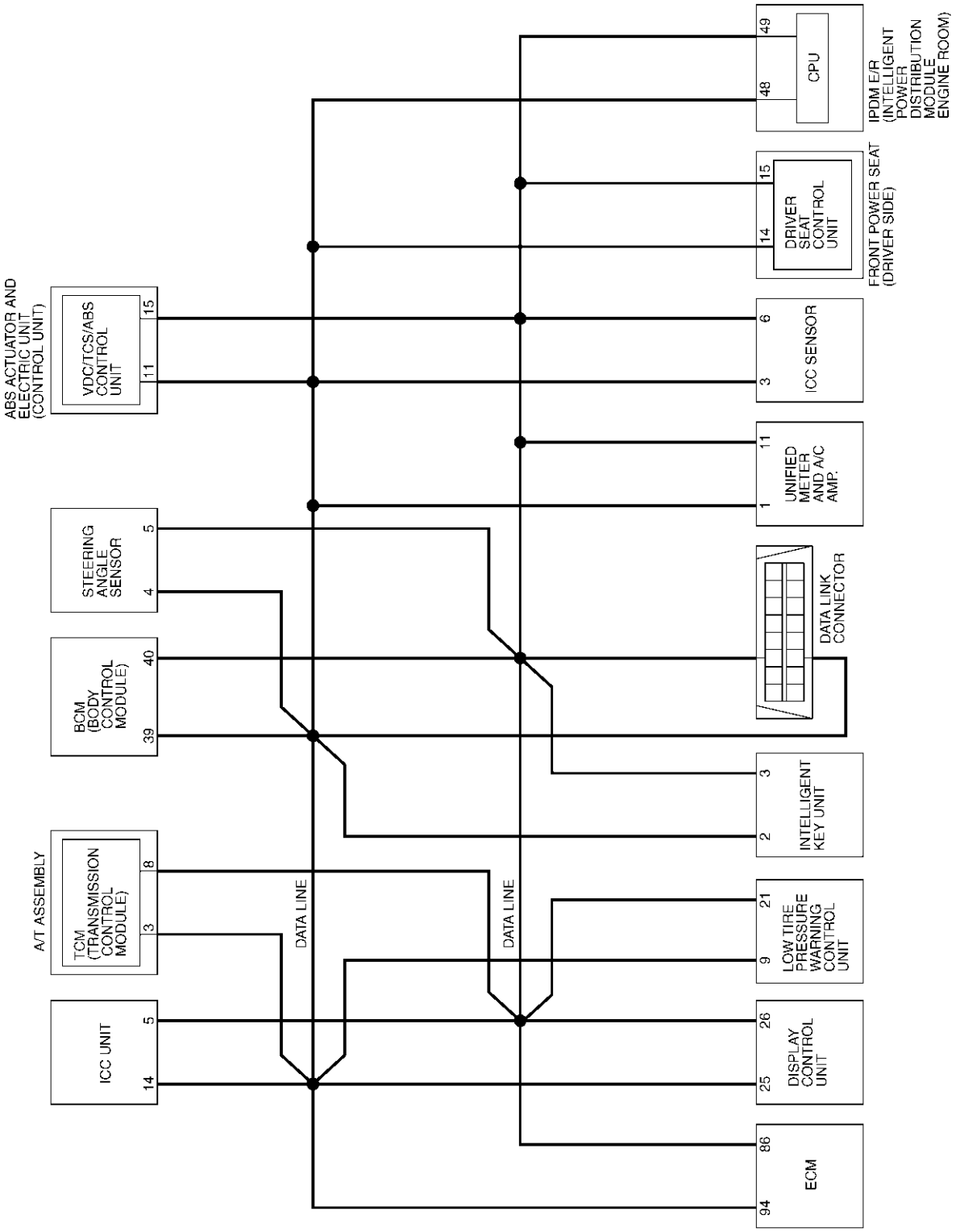
Component Parts and Harness Connector Location

AKS007RS



Schematic

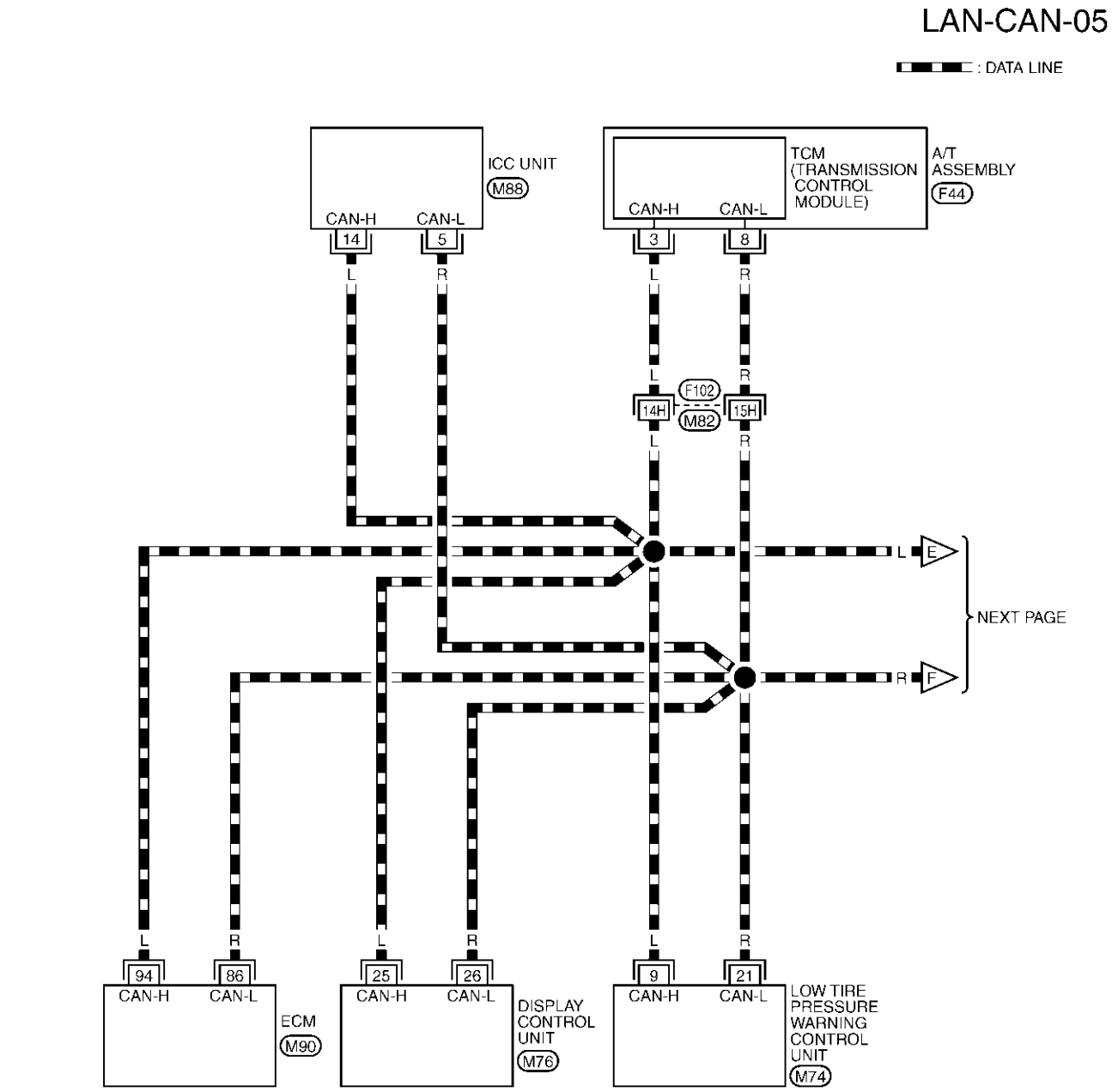
AKS007RT

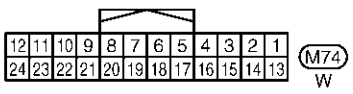


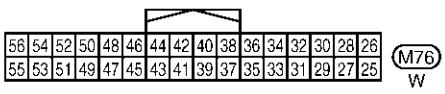
TKWM0661E

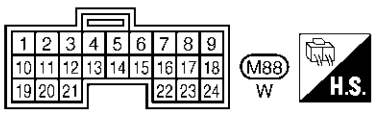
Wiring Diagram - CAN -

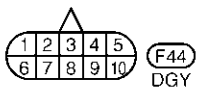
AKS007RU







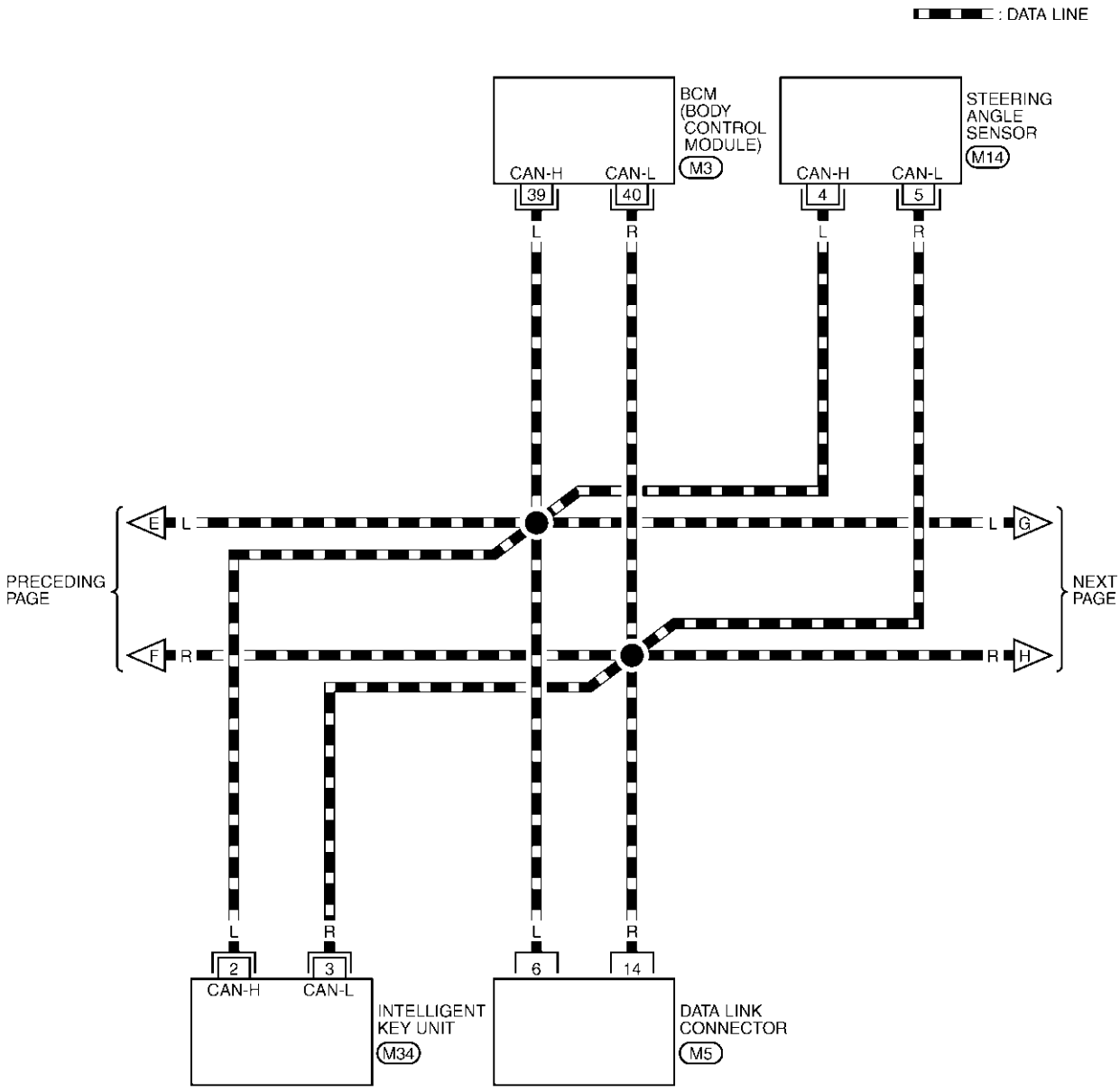


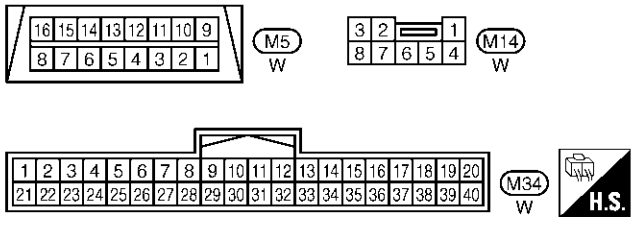


REFER TO THE FOLLOWING.
F102 -SUPER MULTIPLE JUNCTION (SMJ)
M90 -ELECTRICAL UNITS

TKWM0747E

LAN-CAN-06

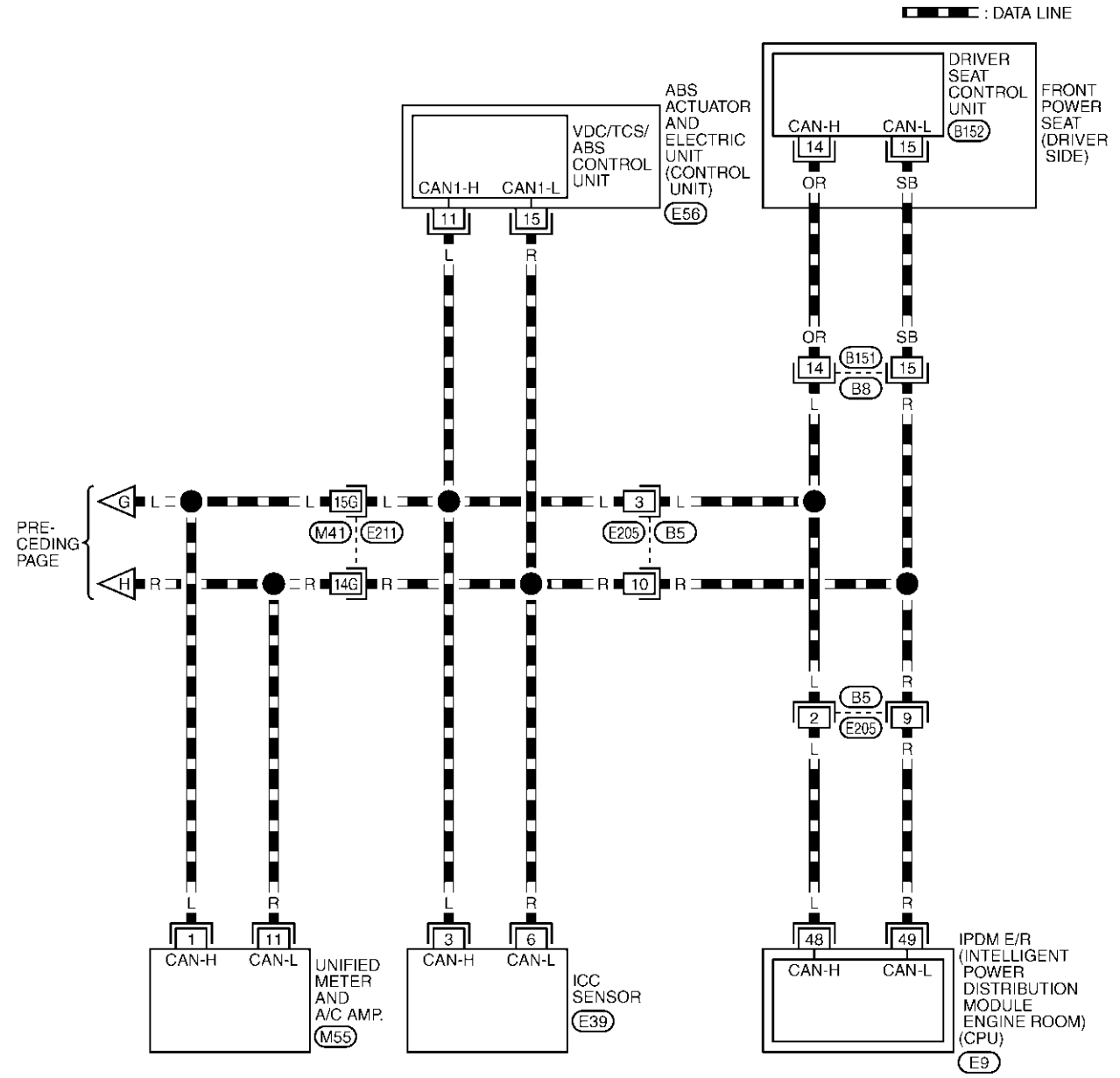


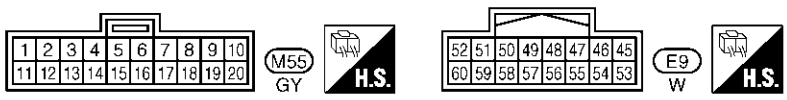


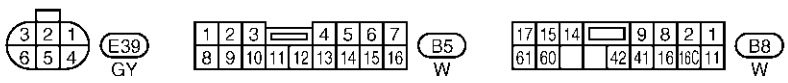
REFER TO THE FOLLOWING.
M3 -ELECTRICAL UNITS

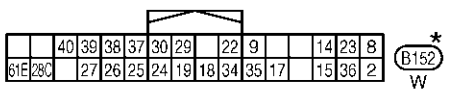
TKWM0748E

LAN-CAN-07









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

REFER TO THE FOLLOWING.

E211 -SUPER MULTIPLE JUNCTION (SMJ)

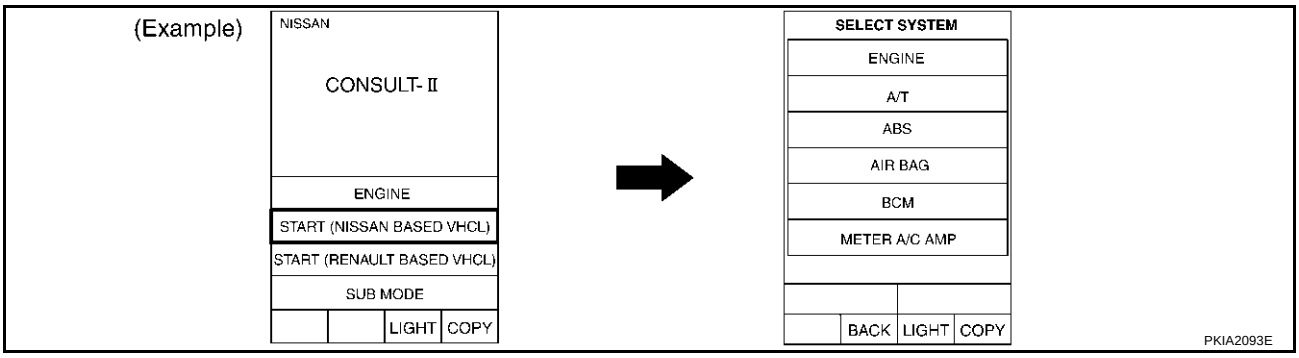
E56 -ELECTRICAL UNITS

TKWH0249E

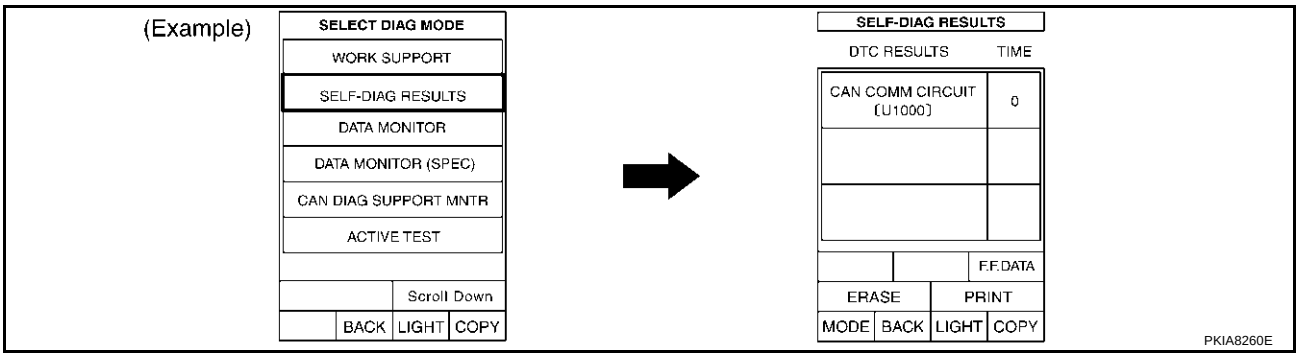
Work Flow

AKS00C4C

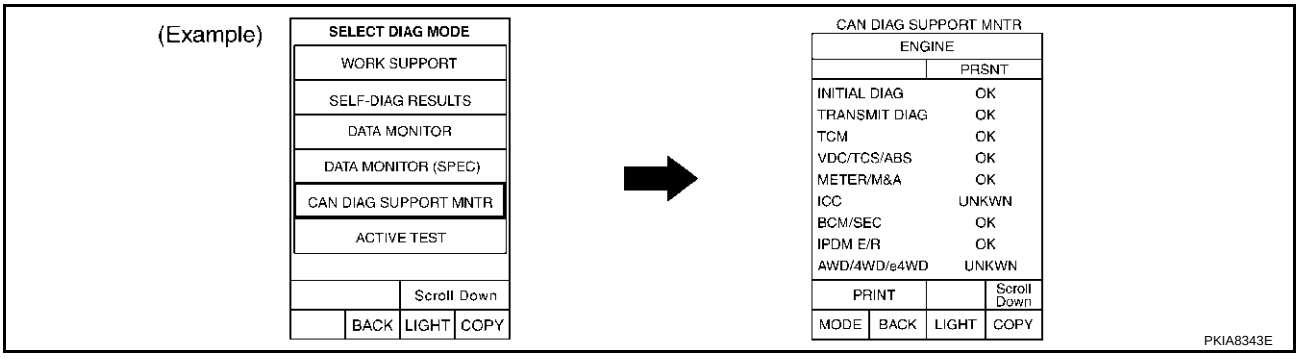
1. When there are no indications of “AIR PRESSURE MONITOR”, “INTELLIGENT KEY”, “BCM”, “METER A/C AMP”, “AUTO DRIVE POS.” or “IPDM E/R” on “SELECT SYSTEM” display of CONSULT-II, print the “SELECT SYSTEM”.



2. Print all the data of “SELF-DIAG RESULTS” for “ENGINE”, “A/T”, “AIR PRESSURE MONITOR”, “ICC”, “INTELLIGENT KEY”, “BCM”, “METER A/C AMP”, “ABS”, “AUTO DRIVE POS.”, and “IPDM E/R” displayed on CONSULT-II.



3. Print all the data of “CAN DIAG SUPPORT MNTR” for “ENGINE”, “A/T”, “AIR PRESSURE MONITOR”, “ICC”, “INTELLIGENT KEY”, “BCM”, “METER A/C AMP”, “ABS”, “AUTO DRIVE POS.”, and “IPDM E/R” displayed on CONSULT-II.



4. Attach the printed sheet of “SELECT SYSTEM”, “SELF-DIAG RESULTS” and “CAN DIAG SUPPORT MNTR” onto the check sheet. Refer to LAN-93, "CHECK SHEET" .
5. 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-93, "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.
6. Check CAN communication line of the navigation system. Refer to AV-184, "CAN Communication Line Check" .

7. Attach the CAN DIAG SUPPORT MONITOR check sheet onto the check sheet. Refer to LAN-93, "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-93, "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-184, "CAN Communication Line Check" .
9. According to the check sheet results (example), start inspection. Refer to LAN-96, "CHECK SHEET RESULTS (EXAMPLE)" .

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	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—	—

Symptoms :

Attach copy of SELECT SYSTEM

Attach copy of SELECT SYSTEM

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

Attach copy of
ENGINE
SELF-DIAG RESULTS

Attach copy of
A/T
SELF-DIAG RESULTS

Attach copy of
AIR PRESSURE
MONITOR
SELF-DIAG RESULTS

Attach copy of
ICC
SELF-DIAG RESULTS

Attach copy of
INTELLIGENT KEY
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
AUTO DRIVE POS.
SELF-DIAG RESULTS

Attach copy of
IPDM E/R
SELF-DIAG RESULTS

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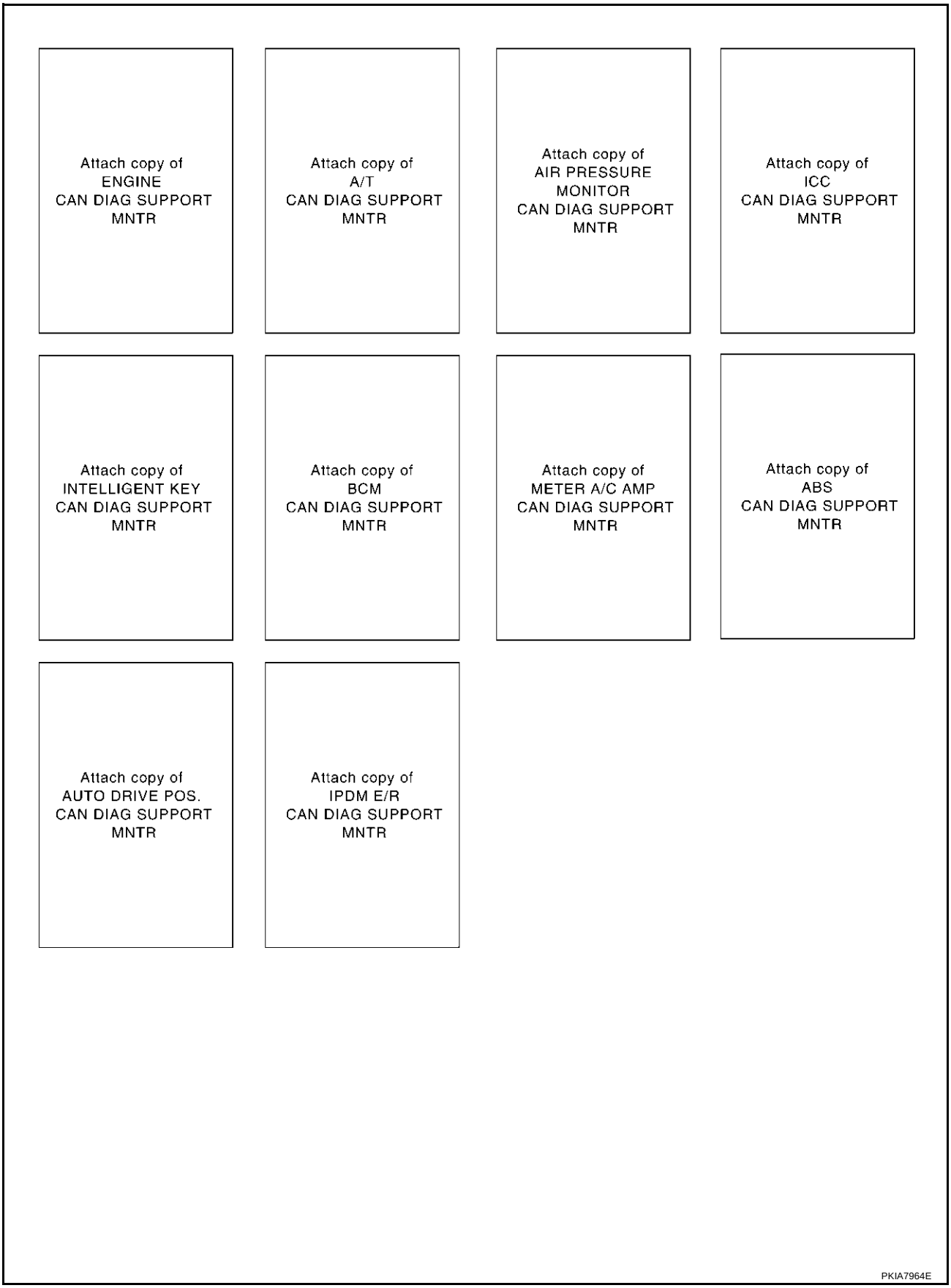
Attach copy of
ENGINE
CAN DIAG SUPPORT
MNTR
Attach copy of
A/T
CAN DIAG SUPPORT
MNTR
Attach copy of
AIR PRESSURE
MONITOR
CAN DIAG SUPPORT
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IPDM E/R
CAN DIAG SUPPORT
MNTR
PKIA7964E

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-115, "Circuit Check Between TCM and Data Link Connector" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR													
		Initial diagnosis	Transmit diagnosis	Receive diagnosis											
				ECM	TCM	DISPLAY	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	–	UNKWN	–	UNKWN	UNKWN
A/T	–	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	–	–	–	–	–	–	–	–	UNKWN	–	–	–
ICC	–	NG	UNKWN	UNKWN	UNKWN	–	–	–	–	UNKWN	–	–	UNKWN	UNKWN	–
INTELLIGENT KEY	No indication	–	UNKWN	–	–	–	–	–	–	UNKWN	–	–	–	–	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	UNKWN	–	–	UNKWN	–	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	–	–	–
AUTO DRIVE POS.	No indication	NG	UNKWN	–	UNKWN	–	–	–	–	UNKWN	–	UNKWN	–	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	–	–	–	–

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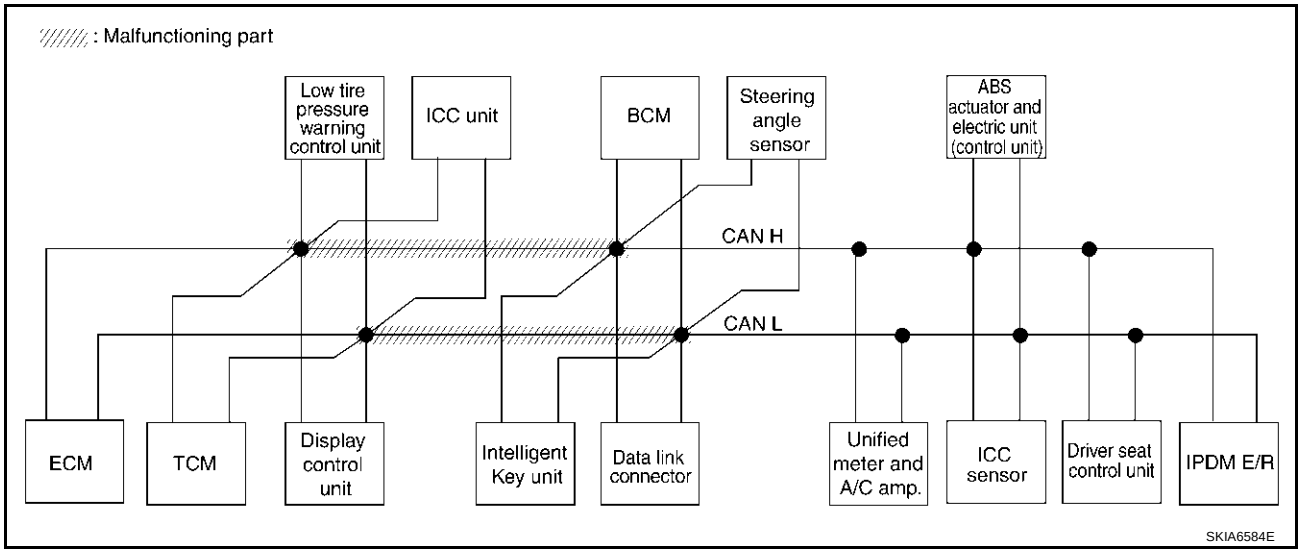

Case 2

Check harness between data link connector and unified meter and A/C amp. Refer to LAN-116, "Circuit Check Between Data Link Connector and Unified Meter and A/C Amp." .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR													
		Initial diagnosis	Transmit diagnosis	Receive diagnosis											
				ECM	TCM	DISPLAY	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	–	UNKWN	–	UNKWN	UNKWN
A/T	–	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	–	–	–	–	–	–	–	–	UNKWN	–	–	–
ICC	–	NG	UNKWN	UNKWN	UNKWN	–	–	–	–	UNKWN	–	–	UNKWN	UNKWN	–
INTELLIGENT KEY	No indication	–	UNKWN	–	–	–	–	–	–	UNKWN	–	–	–	–	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	UNKWN	–	–	UNKWN	–	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	–	–	–
AUTO DRIVE POS.	No indication	NG	UNKWN	–	UNKWN	–	–	–	–	UNKWN	–	UNKWN	–	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	–	–	–	–

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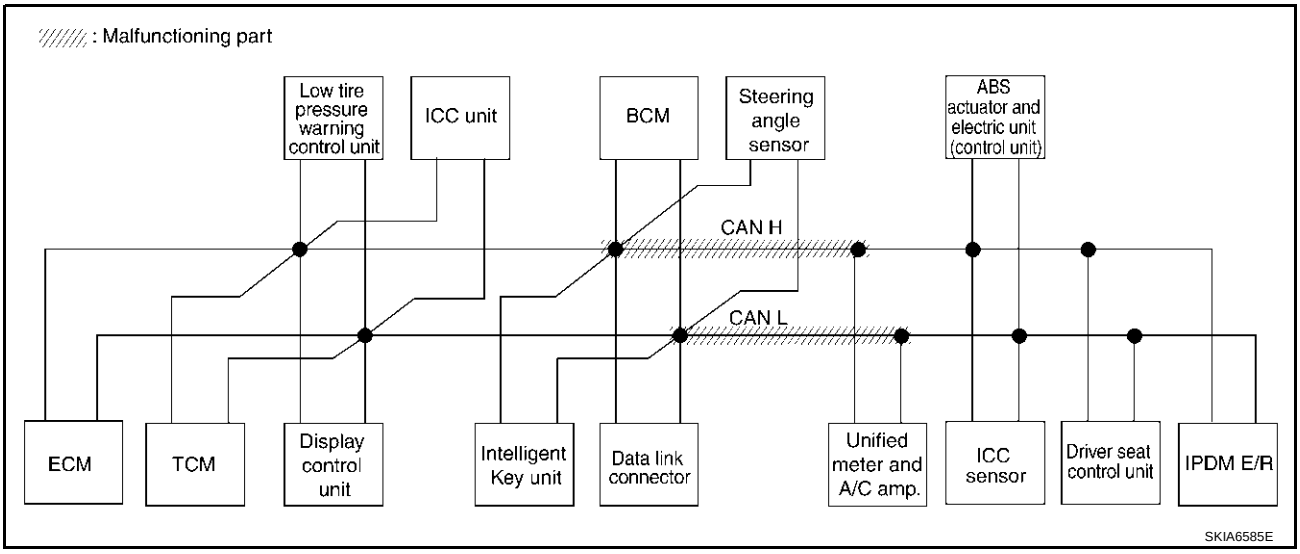

Case 3

Check harness between unified meter and A/C amp. and ABS actuator and electric unit (control unit). Refer to LAN-116, "Circuit Check Between Unified Meter and A/C Amp. and ABS Actuator and Electric Unit (Control Unit)" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR													
		Initial diagnosis	Transmit diagnosis	Receive diagnosis											
				ECM	TCM	DISPLAY	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN ✓	UNKWN ✓
A/T	—	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 ✓
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN ✓	UNKWN ✓	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN ✓
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN ✓	—
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN ✓	—	—	—	—	—	UNKWN ✓	—	—	—	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—	—

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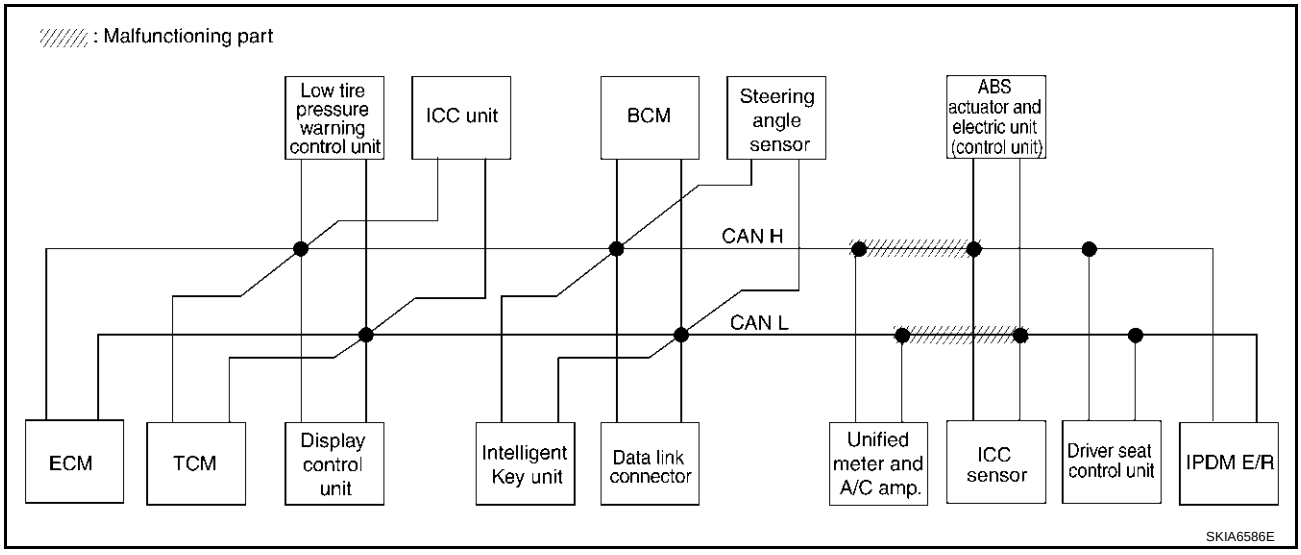

Case 4

Check harness between ABS actuator and electric unit (control unit) and driver seat control unit. Refer to LAN-117, "Circuit Check Between ABS Actuator and Electric Unit (Control Unit) and Driver Seat Control Unit" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR													
		Initial diagnosis	Transmit diagnosis	Receive diagnosis											
				ECM	TCM	DISPLAY	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	–	UNKWN	–	UNKWN	UNKWN ✓
A/T	–	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 ✓
AIR PRESSURE MONITOR	No indication	NG	UNKWN	–	–	–	–	–	–	–	–	UNKWN	–	–	–
ICC	–	NG	UNKWN	UNKWN	UNKWN	–	–	–	–	UNKWN	–	–	UNKWN	UNKWN	–
INTELLIGENT KEY	No indication	–	UNKWN	–	–	–	–	–	–	UNKWN	–	–	–	–	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	UNKWN	–	–	UNKWN	–	–	UNKWN ✓
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	–	–	–
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	–	UNKWN	–	–	–	–	UNKWN	–	UNKWN	–	–	–
IPDM E/R	No indication ✓	–	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	–	–	–	–

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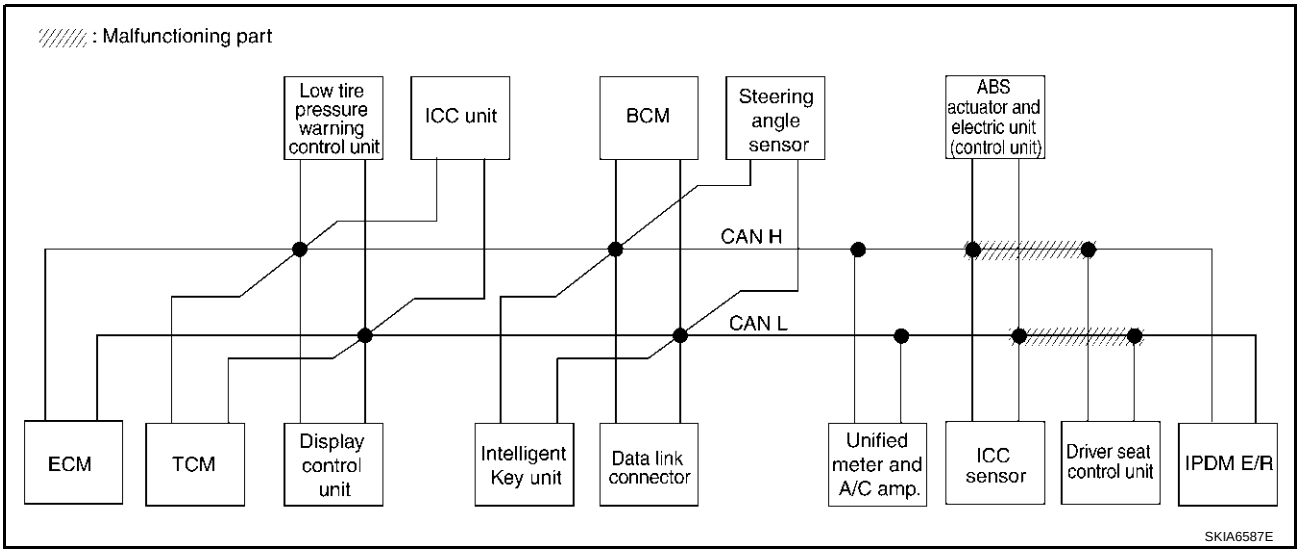

Case 5

Check ECM circuit. Refer to LAN-118, "ECM Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR													
		Initial diagnosis	Transmit diagnosis	Receive diagnosis											
				ECM	TCM	DISPLAY	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	–	UNKWN	–	UNKWN	UNKWN
A/T	–	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	–	–	–	–	–	–	–	–	UNKWN	–	–	–
ICC	–	NG	UNKWN	UNKWN	UNKWN	–	–	–	–	UNKWN	–	–	UNKWN	UNKWN	–
INTELLIGENT KEY	No indication	–	UNKWN	–	–	–	–	–	–	UNKWN	–	–	–	–	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	UNKWN	–	–	UNKWN	–	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	–	–	–
AUTO DRIVE POS.	No indication	NG	UNKWN	–	UNKWN	–	–	–	–	UNKWN	–	UNKWN	–	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	–	–	–	–

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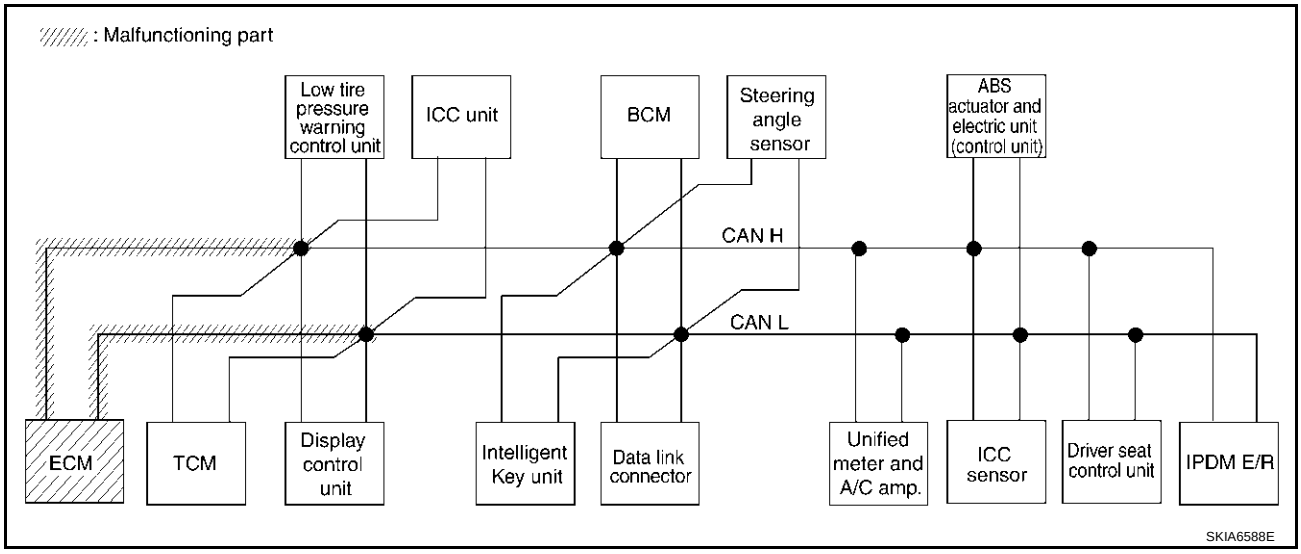

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Case 6

Check TCM circuit. Refer to LAN-118, "TCM Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR													
		Initial diagnosis	Transmit diagnosis	Receive diagnosis											
				ECM	TCM	DISPLAY	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—	—

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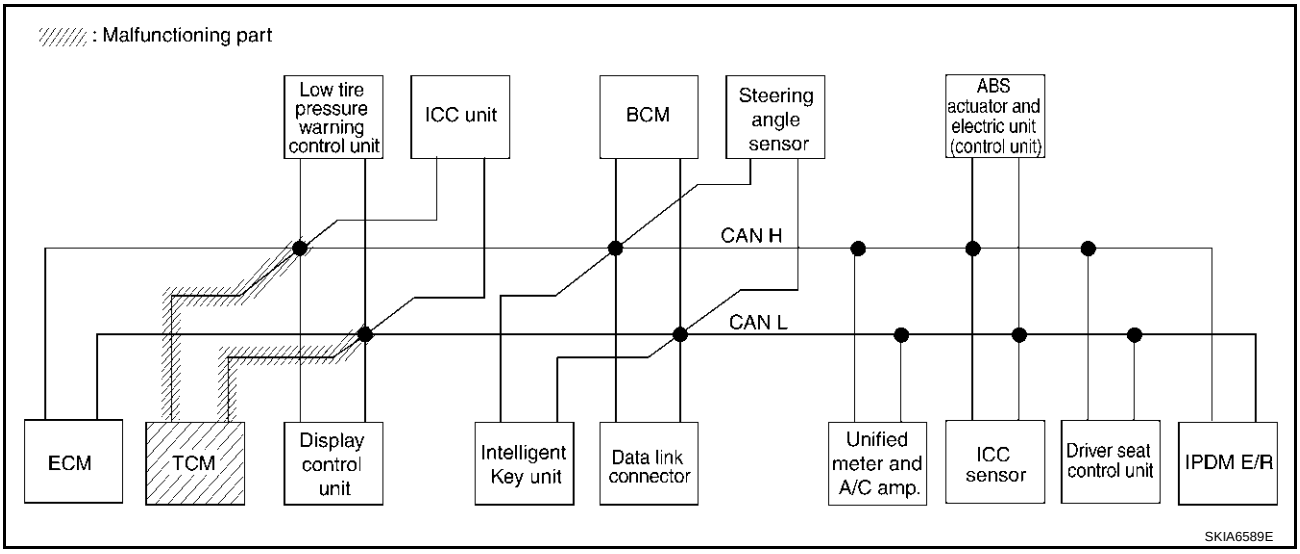

Case 7

Check display control unit circuit. Refer to LAN-119, "Display Control Unit Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR													
		Initial diagnosis	Transmit diagnosis	Receive diagnosis											
				ECM	TCM	DISPLAY	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—	—

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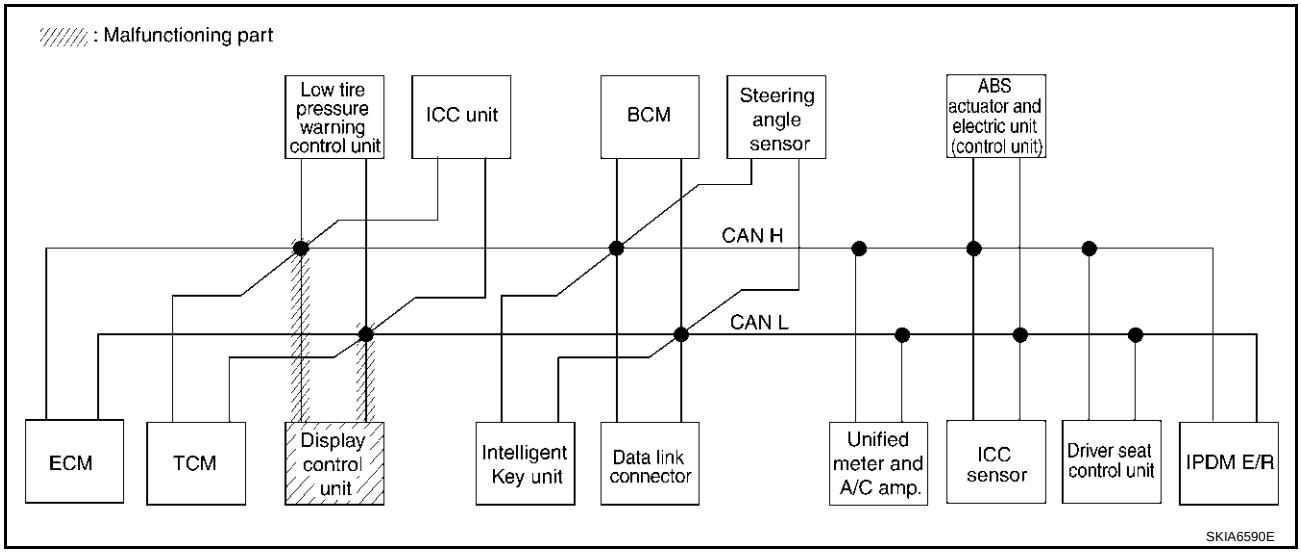

Case 8

Check low tire pressure warning control unit circuit. Refer to LAN-119, "Low Tire Pressure Warning Control Unit Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR														
		Initial diagnosis	Transmit diagnosis	Receive diagnosis												
				ECM	TCM	DISPLAY	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—	—

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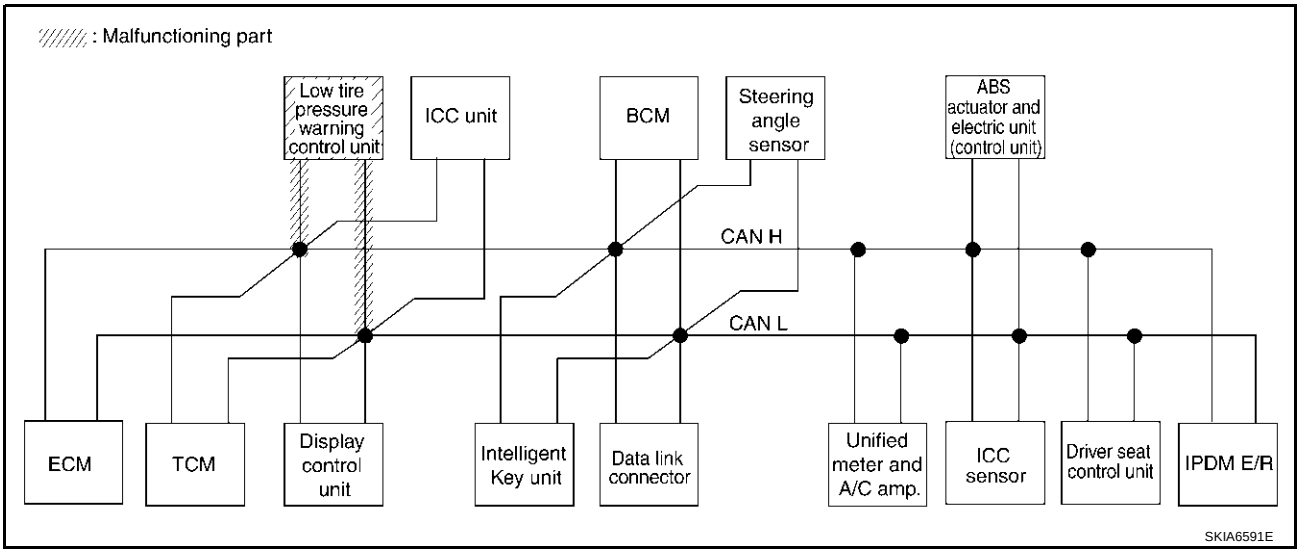

Case 9

Check ICC unit circuit. Refer to LAN-120, "ICC Unit Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR													
		Initial diagnosis	Transmit diagnosis	Receive diagnosis											
				ECM	TCM	DISPLAY	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	–	UNKWN	–	UNKWN	UNKWN
A/T	–	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	–	–	–	–	–	–	–	–	UNKWN	–	–	–
ICC	–	NG	UNKWN	UNKWN	UNKWN	–	–	–	–	UNKWN	–	–	UNKWN	UNKWN	–
INTELLIGENT KEY	No indication	–	UNKWN	–	–	–	–	–	–	UNKWN	–	–	–	–	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	UNKWN	–	–	UNKWN	–	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	–	–	–
AUTO DRIVE POS.	No indication	NG	UNKWN	–	UNKWN	–	–	–	–	UNKWN	–	UNKWN	–	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	–	–	–	–

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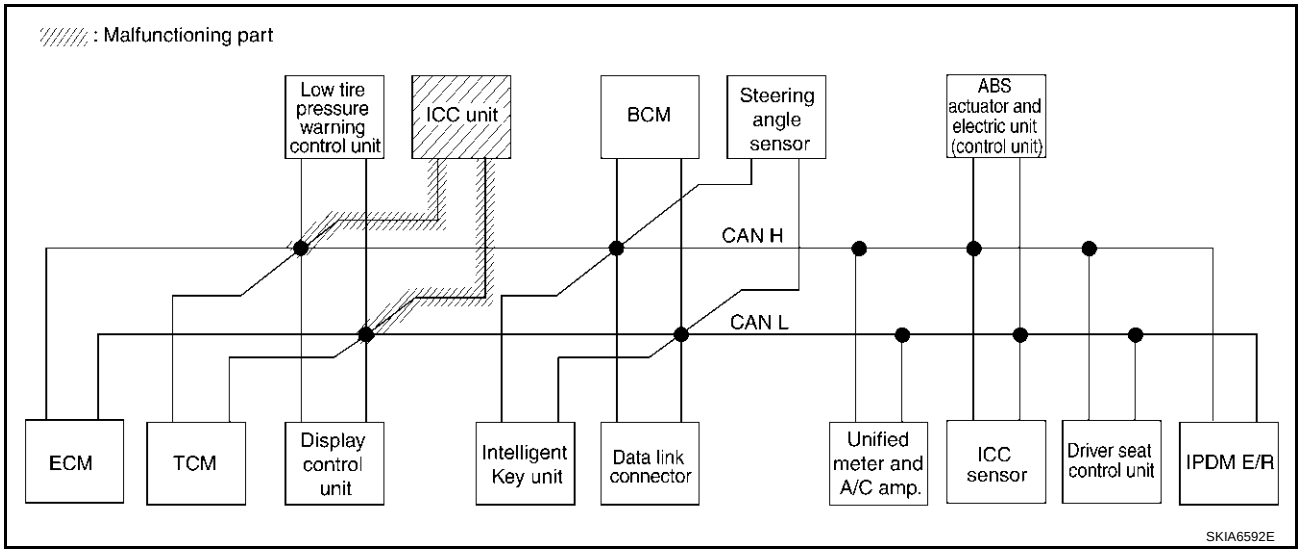
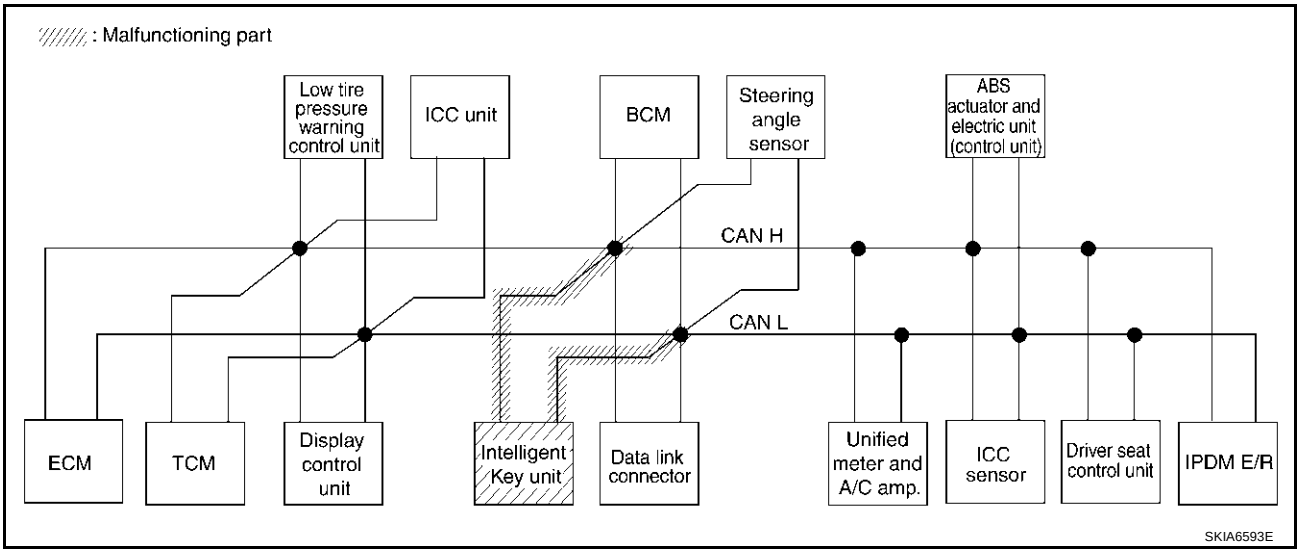


Case 10

Check Intelligent Key unit circuit. Refer to LAN-120, "Intelligent Key Unit Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR													
		Initial diagnosis	Transmit diagnosis	Receive diagnosis											
				ECM	TCM	DISPLAY	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	–	UNKWN	–	UNKWN	UNKWN
A/T	–	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	–	–	–	–	–	–	–	–	UNKWN	–	–	–
ICC	–	NG	UNKWN	UNKWN	UNKWN	–	–	–	–	UNKWN	–	–	UNKWN	UNKWN	–
INTELLIGENT KEY	No indication	–	UNKWN	–	–	–	–	–	–	UNKWN	–	–	–	–	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	UNKWN	–	–	UNKWN	–	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	–	–	–
AUTO DRIVE POS.	No indication	NG	UNKWN	–	UNKWN	–	–	–	–	UNKWN	–	UNKWN	–	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	–	–	–	–

PKIA7973E



SKIA6593E

Case 11

Check data link connector circuit. Refer to LAN-121, "Data Link Connector Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR													
		Initial diagnosis	Transmit diagnosis	Receive diagnosis											
				ECM	TCM	DISPLAY	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—	—

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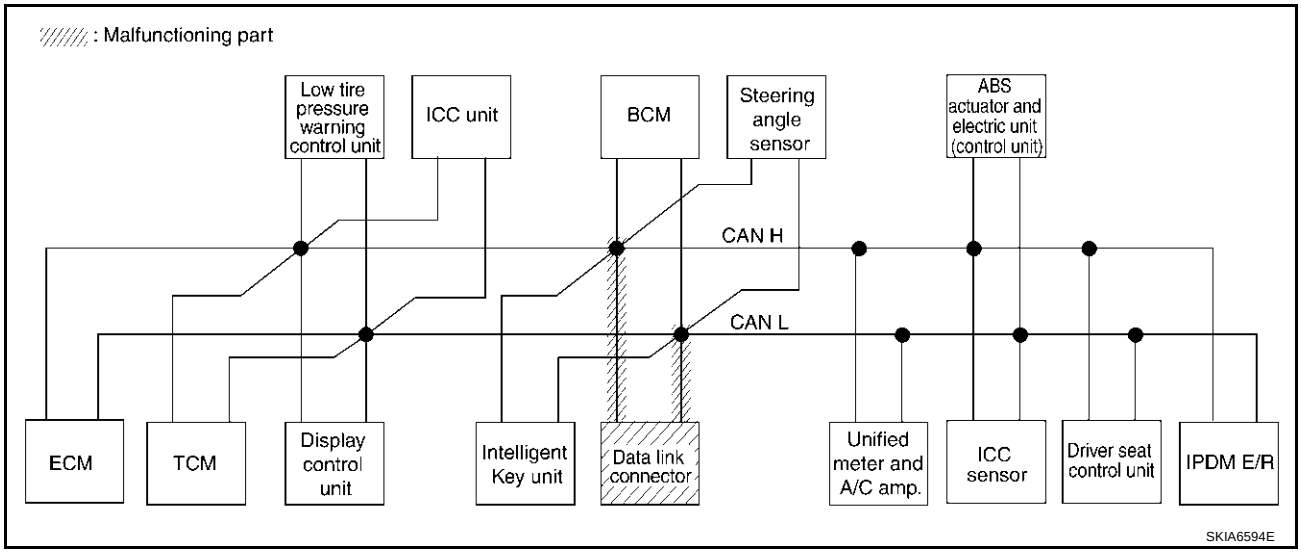

SKIA6594E

Case 12

Check BCM circuit. Refer to LAN-121, "BCM Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR													
		Initial diagnosis	Transmit diagnosis	Receive diagnosis											
				ECM	TCM	DISPLAY	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	–	UNKWN	–	UNKWN	UNKWN
A/T	–	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	–	–	–	–	–	–	–	–	UNKWN	–	–	–
ICC	–	NG	UNKWN	UNKWN	UNKWN	–	–	–	–	UNKWN	–	–	UNKWN	UNKWN	–
INTELLIGENT KEY	No indication	–	UNKWN	–	–	–	–	–	–	UNKWN	–	–	–	–	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	UNKWN	–	–	UNKWN	–	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	–	–	–
AUTO DRIVE POS.	No indication	NG	UNKWN	–	UNKWN	–	–	–	–	UNKWN	–	UNKWN	–	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	–	–	–	–

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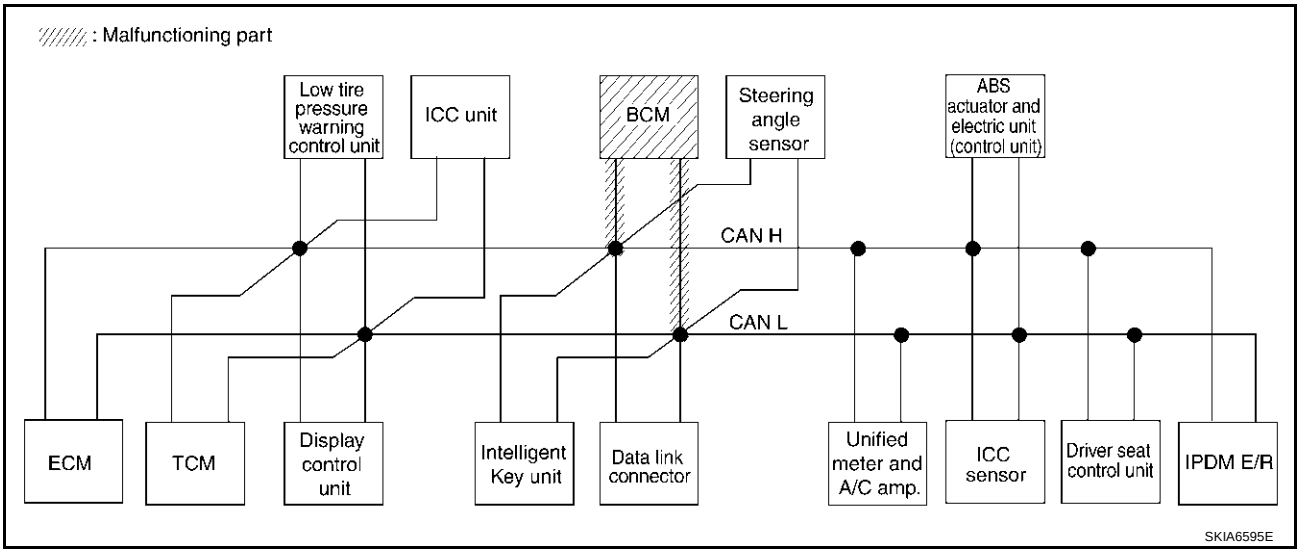

Case 13

Check steering angle sensor circuit. Refer to LAN-122, "Steering Angle Sensor Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR													
		Initial diagnosis	Transmit diagnosis	Receive diagnosis											
				ECM	TCM	DISPLAY	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—	—

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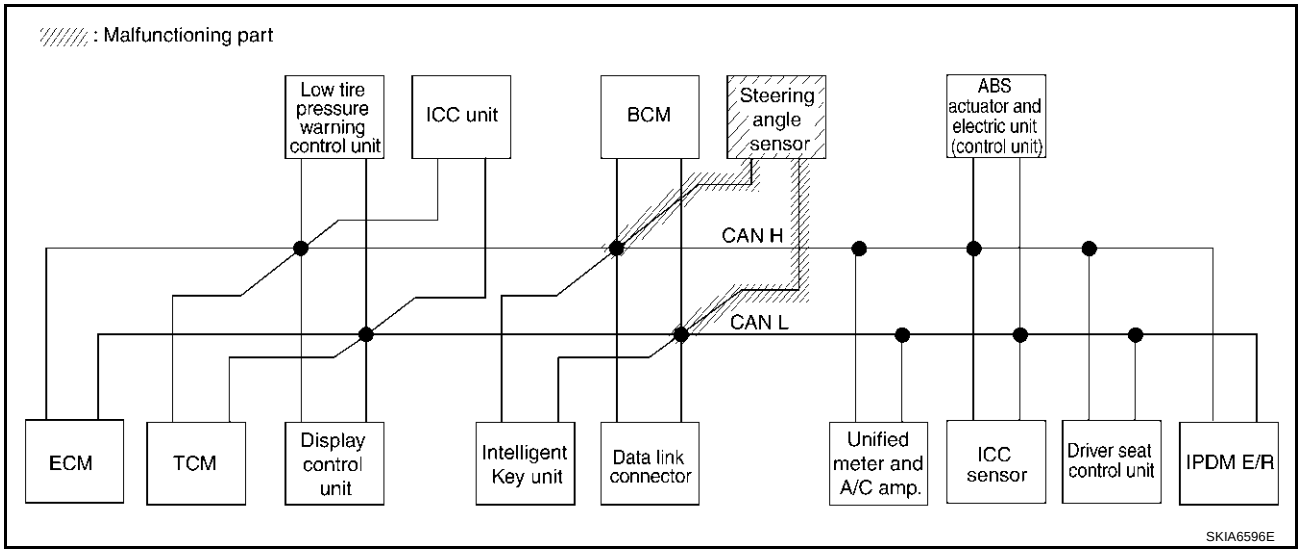

Case 14

Check unified meter and A/C amp. circuit. Refer to LAN-122, "Unified Meter and A/C Amp. Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR													
		Initial diagnosis	Transmit diagnosis	Receive diagnosis											
				ECM	TCM	DISPLAY	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—	—

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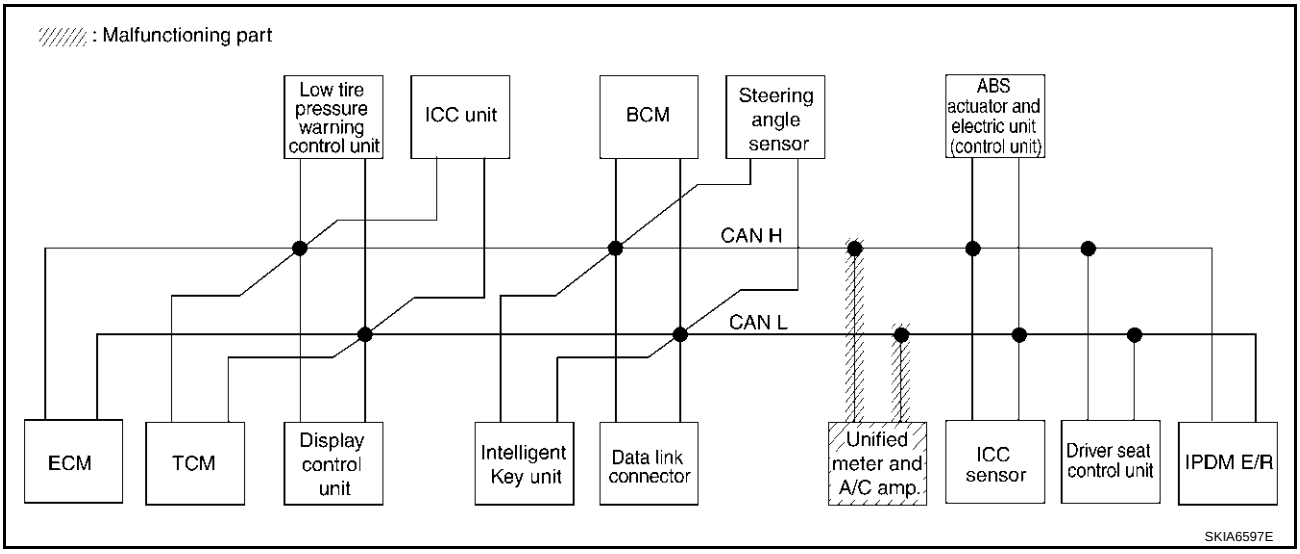


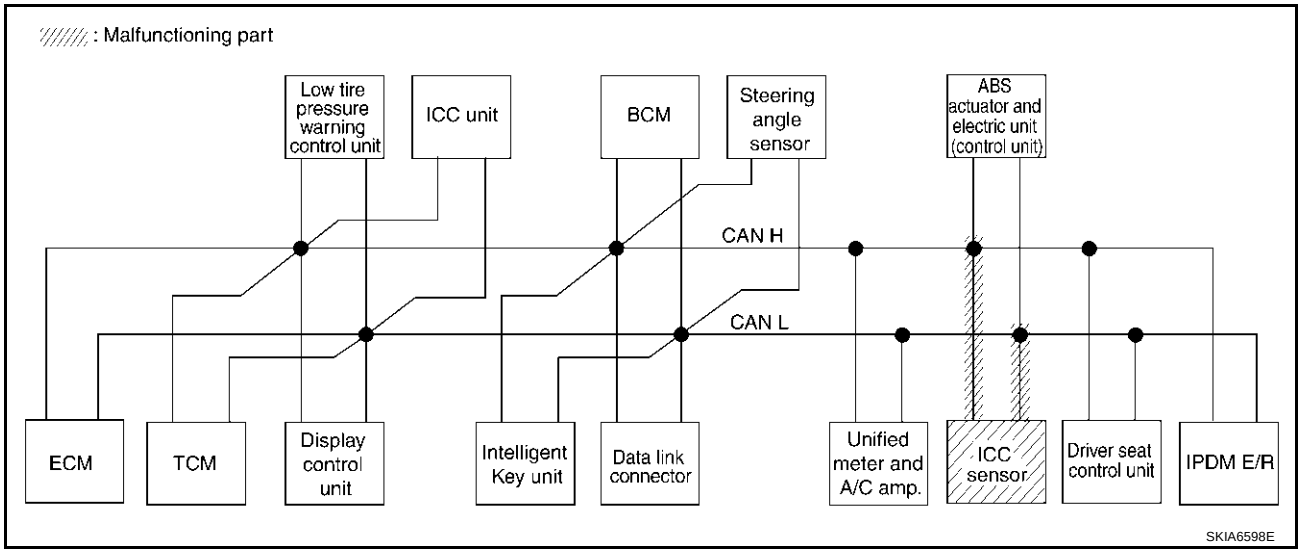
SKIA6597E

Case 15

Check ICC sensor circuit. Refer to LAN-123, "ICC Sensor Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR													
		Initial diagnosis	Transmit diagnosis	Receive diagnosis											
				ECM	TCM	DISPLAY	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—	—

PKIA7978E



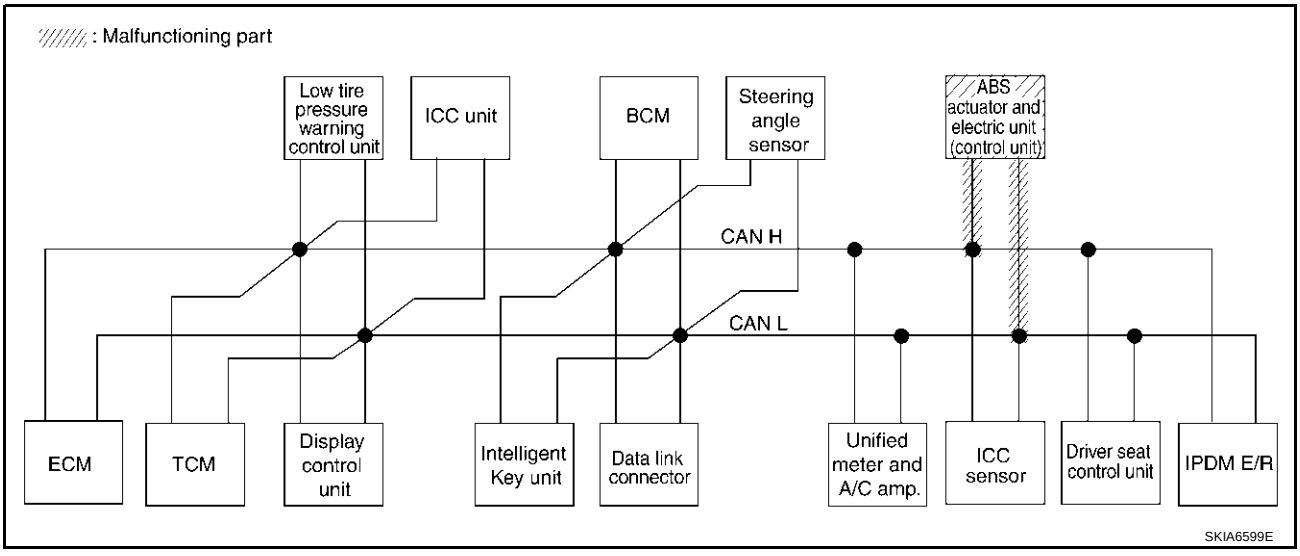
SKIA6598E

Case 16

Check ABS actuator and electric unit (control unit) circuit. Refer to LAN-123, "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	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—	—

PKIA7979E



Case 17

Check driver seat control unit circuit. Refer to LAN-124, "Driver Seat Control Unit Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR													
		Initial diagnosis	Transmit diagnosis	Receive diagnosis											
				ECM	TCM	DISPLAY	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—	—

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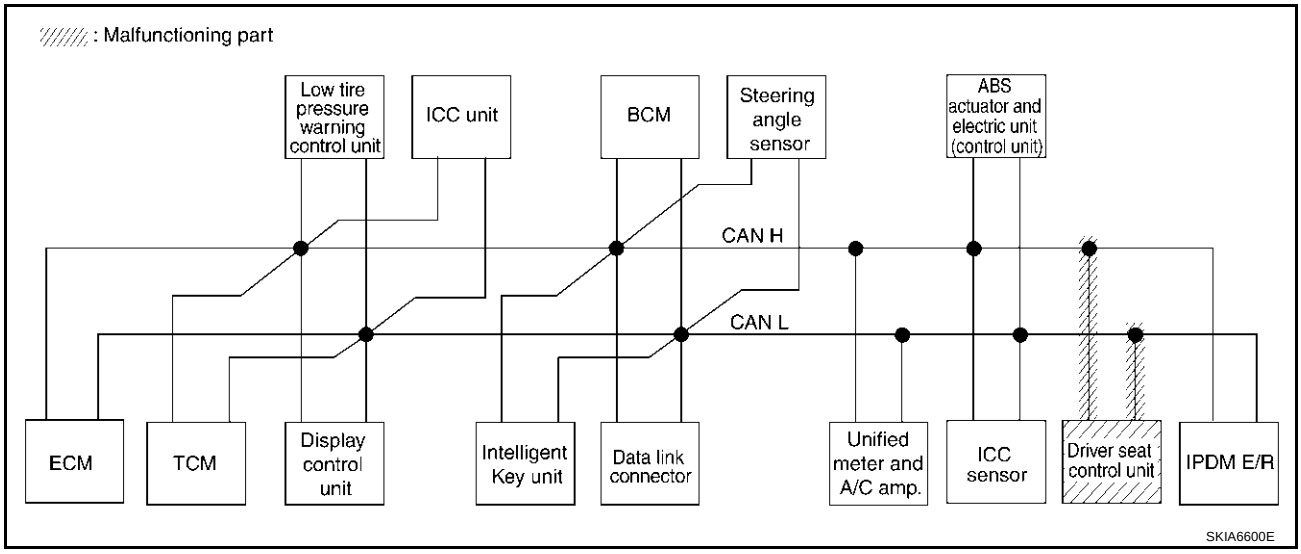

Case 18

Check IPDM E/R circuit. Refer to LAN-125, "IPDM E/R Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR													
		Initial diagnosis	Transmit diagnosis	Receive diagnosis											
				ECM	TCM	DISPLAY	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—	—

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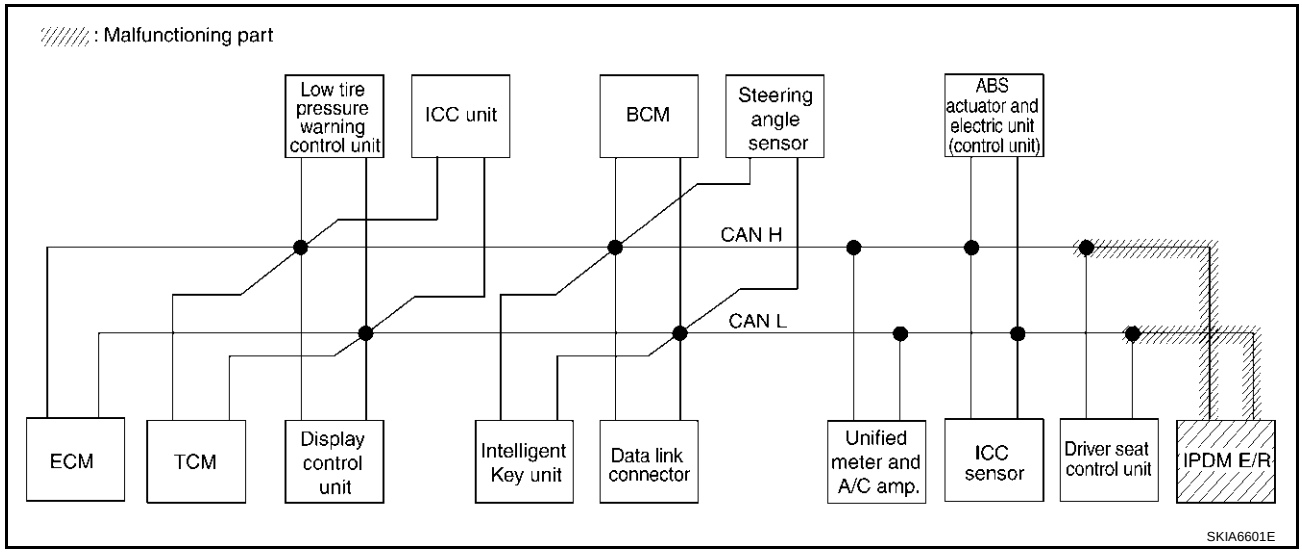


SKIA6601E

Case 19

Check CAN communication circuit. Refer to LAN-126, "CAN Communication Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR														
		Initial diagnosis	Transmit diagnosis	Receive diagnosis												
				ECM	TCM	DISPLAY	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—	—

PKIA7982E

Case 20

Check IPDM E/R ignition relay circuit continuously sticks “OFF”. Refer to LAN-131, "IPDM E/R Ignition Relay Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR														
		Initial diagnosis	Transmit diagnosis	Receive diagnosis												
				ECM	TCM	DISPLAY	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—	—

PKIA7984E

Case 21

Check IPDM E/R ignition relay circuit continuously sticks “ON”. Refer to LAN-131, "IPDM E/R Ignition Relay Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR													
		Initial diagnosis	Transmit diagnosis	Receive diagnosis											
				ECM	TCM	DISPLAY	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—	—

PKIA7983E

Circuit Check Between TCM and Data Link Connector

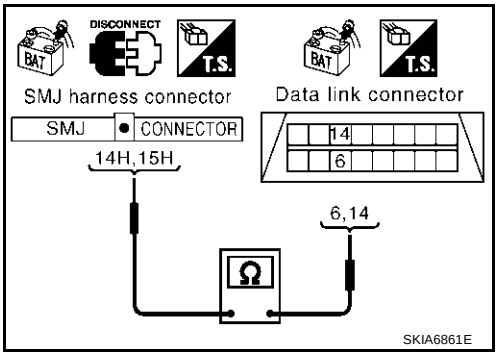
AKS007RW

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 14H (L), 15H (R) and data link connector M5 terminals 6 (L), 14 (R).

14H (L) - 6 (L) : Continuity should exist.

15H (R) - 14 (R) : Continuity should exist.



OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-91, "Work Flow" .

NG >> Repair harness.

Circuit Check Between Data Link Connector and Unified Meter and A/C Amp.

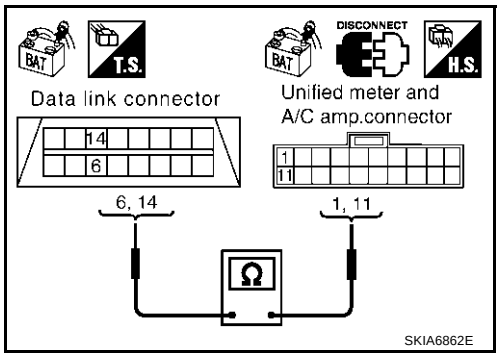
AKS007RX

1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and unified meter and A/C amp. connector.
4. Check continuity between data link connector M5 terminals 6 (L), 14 (R) and unified meter and A/C amp. harness connector M55 terminals 1 (L), 11 (R).

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

14 (R) - 11 (R) : Continuity should exist.



OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-91, "Work Flow" .

NG >> Repair harness.

Circuit Check Between Unified Meter and A/C Amp. and ABS Actuator and Electric Unit (Control Unit)

AKS007RY

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 M41
- Harness connector E211

OK or NG

OK >> GO TO 2.

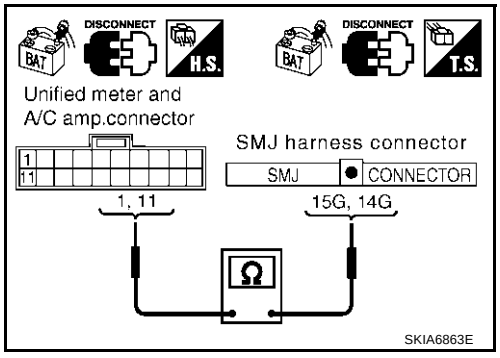
NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector and harness connector M41.
2. Check continuity between unified meter and A/C amp. harness connector M55 terminals 1 (L), 11 (R) and harness connector M41 terminals 15G (L), 14G (R).

1 (L) - 15G (L) : Continuity should exist.

11 (R) - 14G (R) : Continuity should exist.



OK or NG

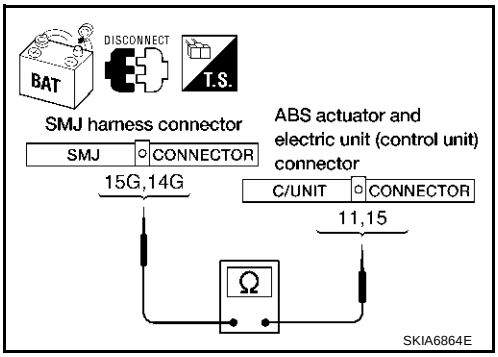
OK >> GO TO 3.

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 E211 terminals 15G (L), 14G (R) and ABS actuator and electric unit (control unit) harness connector E56 terminals 11 (L), 15 (R).

15G (L) - 11 (L) : Continuity should exist.
14G (R) - 15 (R) : Continuity should exist.



OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-91, "Work Flow" .
NG >> Repair harness.

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

AKS007RZ

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 E205
- Harness connector B5

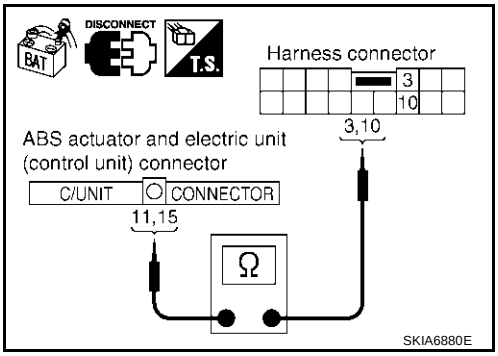
OK or NG

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 and harness connector E205.
2. Check continuity between ABS actuator and electric unit (control unit) harness connector E56 terminals 11 (L), 15 (R) and harness connector E205 terminals 3 (L), 10 (R).

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



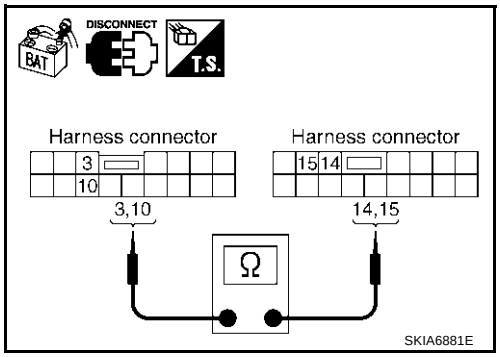
OK or NG

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

3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B8.
2. Check continuity between harness connector B5 terminals 3 (L), 10 (R) and harness connector B8 terminals 14 (L), 15 (R).

3 (L) - 14 (L) : Continuity should exist.
10 (R) - 15 (R) : Continuity should exist.



OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-91, "Work Flow" .
NG >> Repair harness.

ECM Circuit Check

AKS007S0

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).

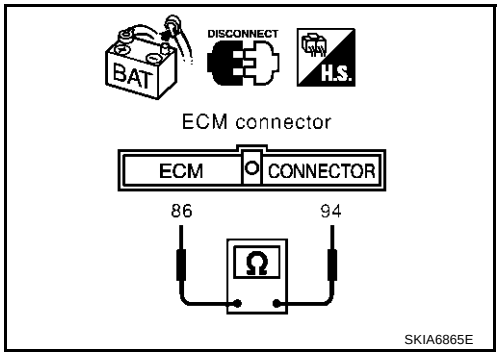
OK or NG

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 M90 terminals 94 (L) and 86 (R).

94 (L) - 86 (R) : Approx. 108 - 132Ω



OK or NG

OK >> Replace ECM.
NG >> Repair harness between ECM and harness connector M82.

TCM Circuit Check

AKS007S1

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).

- A/T assembly connector
- Harness connector F102
- Harness connector M82

OK or NG

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

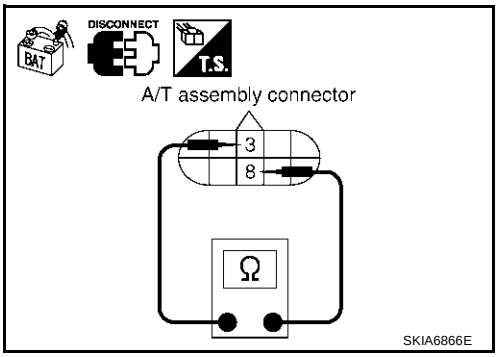
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect A/T assembly connector.
2. Check resistance between A/T assembly harness connector F44 terminals 3 (L) and 8 (R).

3 (L) - 8 (R) : Approx. 54 - 66Ω

OK or NG

OK >> Replace A/T assembly.
NG >> Repair harness between A/T assembly and display control unit.



Display Control Unit Circuit Check

AKS007S2

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.

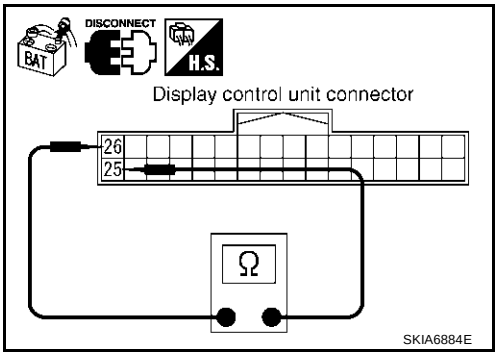
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect display control unit connector.
2. Check resistance between display control unit harness connector M76 terminals 25 (L) and 26 (R).

25 (L) - 26 (R) : Approx. 54 - 66Ω

OK or NG

OK >> Replace display control unit.
NG >> Repair harness between display control unit and harness connector M82.



Low Tire Pressure Warning Control Unit Circuit Check

AKS007S3

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.

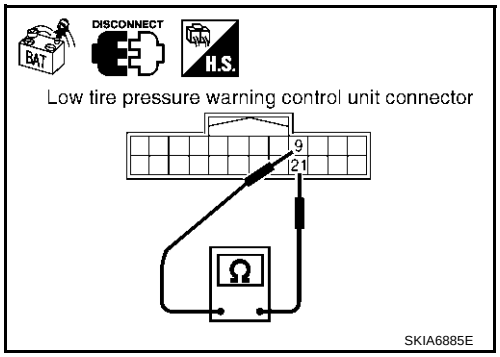
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect low tire pressure warning control unit connector.
2. Check resistance between low tire pressure warning control unit harness connector M74 terminals 9 (L) and 21 (R).

9 (L) - 21 (R) : 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 harness connector M82.



ICC Unit Circuit Check

AKS007S4

1. CHECK CONNECTOR

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

OK or NG

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

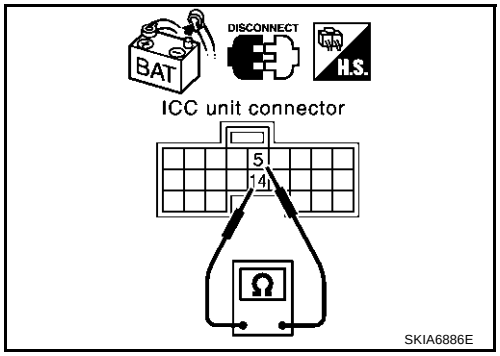
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ICC unit connector.
2. Check resistance between ICC unit harness connector M88 terminals 14 (L) and 5 (R).

14 (L) - 5 (R) : Approx. 54 - 66Ω

OK or NG

OK >> Replace ICC unit.
NG >> Repair harness between ICC unit and harness connector M82.



Intelligent Key Unit Circuit Check

AKS007S5

1. CHECK CONNECTOR

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

OK or NG

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

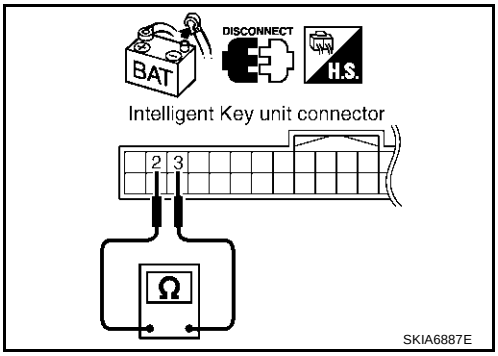
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect Intelligent Key unit connector.
2. Check resistance between Intelligent Key unit harness connector M34 terminals 2 (L) and 3 (R).

2 (L) - 3 (R) : Approx. 54 - 66Ω

OK or NG

OK >> Replace Intelligent Key unit.
NG >> Repair harness between Intelligent Key unit and data link connector.



Data Link Connector Circuit Check

AKS007S6

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.

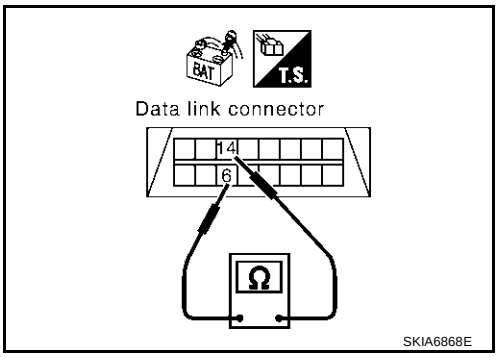
2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M5 terminals 6 (L) and 14 (R).

6 (L) - 14 (R) : Approx. 54 - 66Ω

OK or NG

OK >> Diagnose again. Refer to LAN-91, "Work Flow" .
NG >> Repair harness between data link connector and BCM.



BCM Circuit Check

AKS007S7

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.

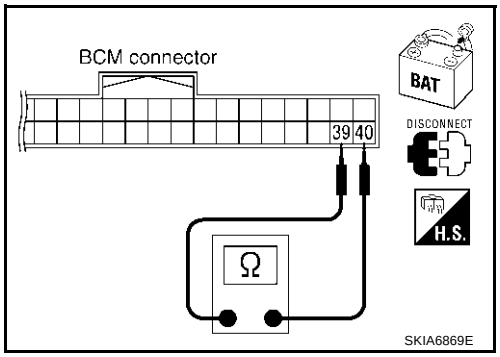
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M3 terminals 39 (L) and 40 (R).

39 (L) - 40 (R) : Approx. 54 - 66Ω

OK or NG

OK >> Replace BCM. Refer to BCS-28, "Removal and Installation of BCM" .
NG >> Repair harness between BCM and data link connector.



Steering Angle Sensor Circuit Check

AKS007S8

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.

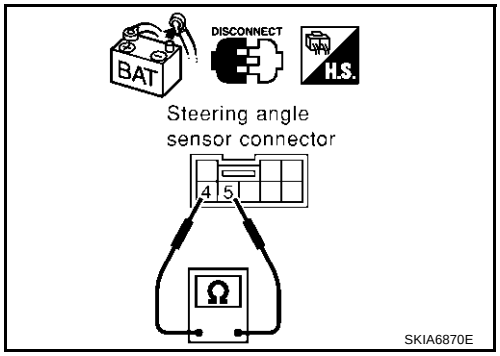
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M14 terminals 4 (L) and 5 (R).

4 (L) - 5 (R) : Approx. 54 - 66Ω

OK or NG

OK >> Replace steering angle sensor.
NG >> Repair harness between steering angle sensor and data link connector.



Unified Meter and A/C Amp. Circuit Check

AKS007S9

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).

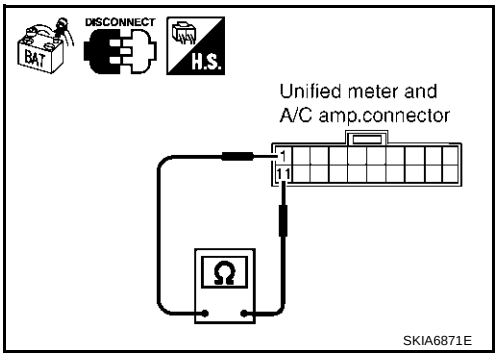
OK or NG

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 M55 terminals 1 (L) and 11 (R).

1 (L) - 11 (R) : 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 harness connector M41.

ICC Sensor Circuit Check

AKS007SA

1. CHECK CONNECTOR

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

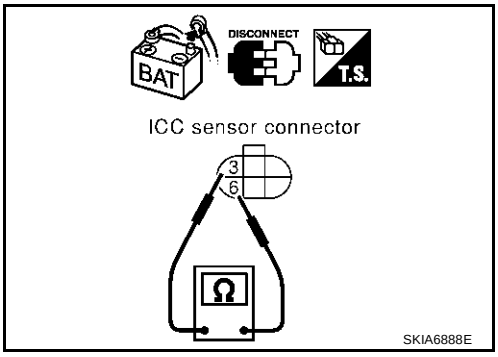
OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ICC sensor connector.
2. Check resistance between ICC sensor harness connector E39 terminals 3 (L) and 6 (R).

3 (L) - 6 (R) : Approx. 54 - 66Ω



OK or NG

OK >> Replace ICC sensor.
NG >> Repair harness between ICC sensor and ABS actuator and electric unit (control unit).

ABS Actuator and Electric Unit (Control Unit) Circuit Check

AKS007SB

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).

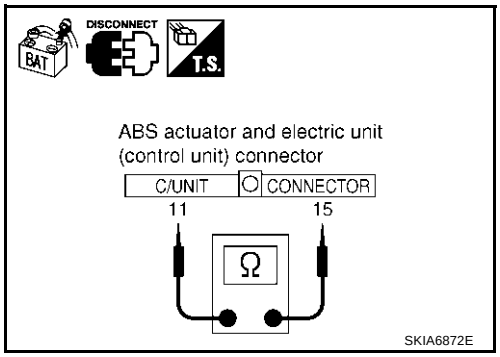
OK or NG

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 E56 terminals 11 (L) and 15 (R).

11 (L) - 15 (R) : 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 ICC sensor.

Driver Seat Control Unit Circuit Check

AKS007SC

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 B151
- Harness connector B8

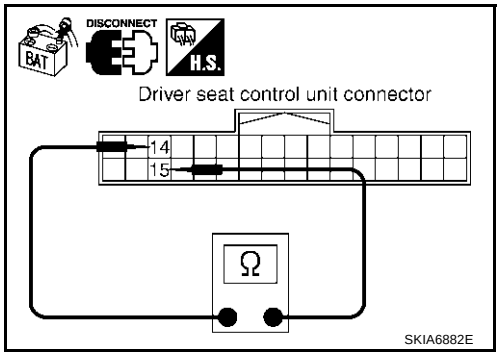
OK or NG

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 B152 terminals 14 (OR) and 15 (SB).

14 (OR) - 15 (SB) : Approx. 54 - 66Ω



OK or NG

OK >> Replace driver seat control unit.
NG >> Repair harness between driver seat control unit and harness connector B5.

IPDM E/R Circuit Check

AKS007SD

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).

- IPDM E/R connector
- Harness connector E205
- Harness connector B5

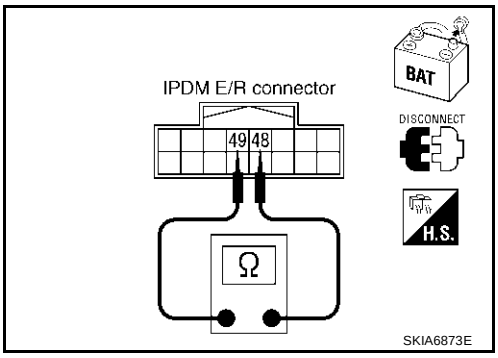
OK or NG

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 (R).

48 (L) - 49 (R) : Approx. 108 - 132Ω



OK or NG

OK >> Replace IPDM E/R.
NG >> Repair harness between IPDM E/R and harness connector B8.

CAN Communication Circuit Check

AKS007SE

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, sensor side, meter side and harness side).

- ECM
- A/T assembly
- Display control unit
- Low tire pressure warning control unit
- ICC unit
- Intelligent Key unit
- BCM
- Steering angle sensor
- Unified meter and A/C amp.
- ICC sensor
- ABS actuator and electric unit (control unit)
- Driver seat control unit
- IPDM E/R
- Between ECM and IPDM E/R
- Between ECM and A/T assembly

OK or NG

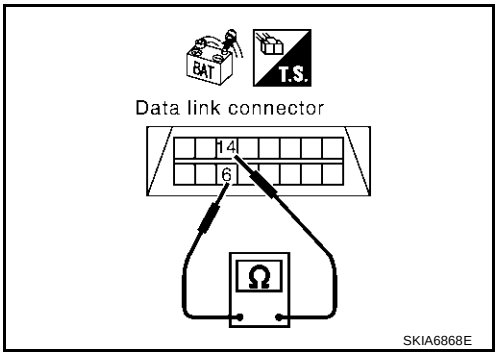
OK >> GO TO 2.
NG >> Repair terminal or connector.

2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
- ECM connector
- Harness connector M82
- Display control unit connector
- Low tire pressure warning control unit connector
- ICC unit connector
- Intelligent Key unit connector
- BCM connector
- Steering angle sensor connector
- Unified meter and A/C amp. connector
- Harness connector M41

2. Check continuity between data link connector M5 terminals 6 (L) and 14 (R).

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



OK or NG

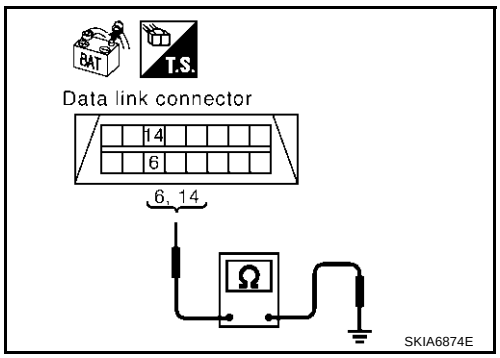
OK >> GO TO 3.

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 low tire pressure warning control unit.
- Harness between data link connector and ICC unit.
- Harness between data link connector and Intelligent Key unit.
- Harness between data link connector and BCM.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M41.

3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M5 terminals 6 (L), 14 (R) and ground.

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



OK or NG

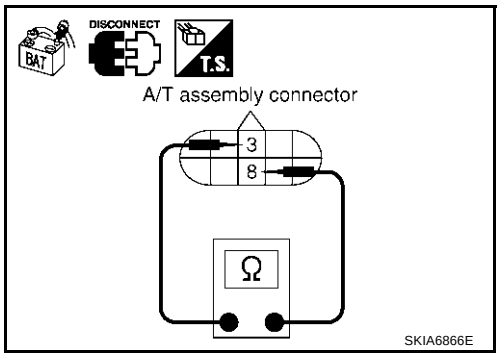
OK >> GO TO 4.
NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- 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 low tire pressure warning control unit.
- Harness between data link connector and ICC unit.
- Harness between data link connector and Intelligent Key unit.
- Harness between data link connector and BCM.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M41.

4. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect A/T assembly connector.
2. Check continuity between A/T assembly harness connector F44 terminals 3 (L) and 8 (R).

3 (L) - 8 (R) : Continuity should not exist.



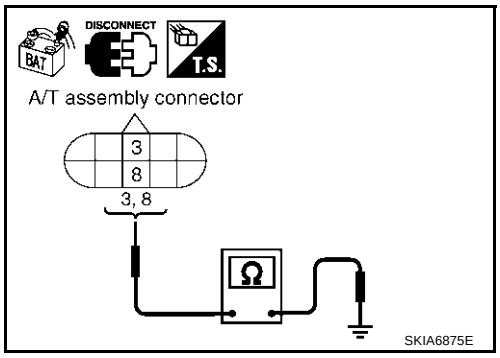
OK or NG

OK >> GO TO 5.
NG >> Repair harness between A/T assembly and harness connector F102.

5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between A/T assembly harness connector F44 terminals 3 (L), 8 (R) and ground.

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



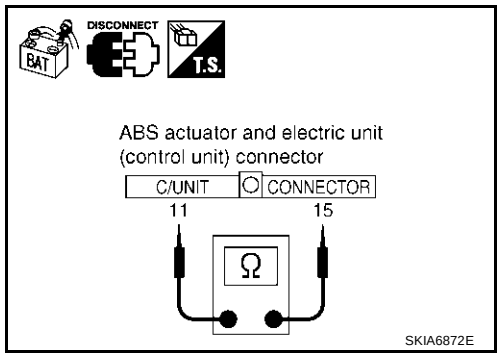
OK or NG

OK >> GO TO 6.
NG >> Repair harness between A/T assembly and harness connector F102.

6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector, ICC sensor connector and harness connector E205.
2. Check continuity between ABS actuator and electric unit (control unit) harness connector E56 terminals 11 (L) and 15 (R).

11 (L) - 15 (R) : Continuity should not exist.



OK or NG

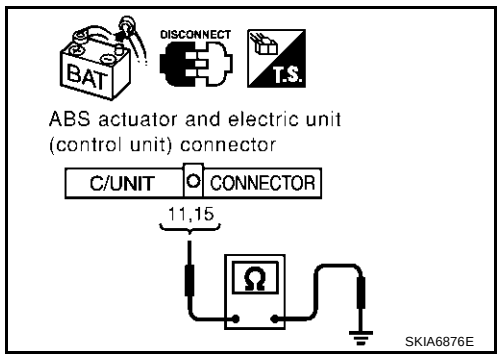
OK >> GO TO 7.
NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between ABS actuator and electric unit (control unit) and harness connector E211.
- Harness between ABS actuator and electric unit (control unit) and harness connector E205.
- Harness between ABS actuator and electric unit (control unit) and ICC sensor.

7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between ABS actuator and electric unit (control unit) harness connector E56 terminals 11 (L), 15 (R) and ground.

11 (L) - Ground : Continuity should not exist.
15 (R) - Ground : Continuity should not exist.



OK or NG

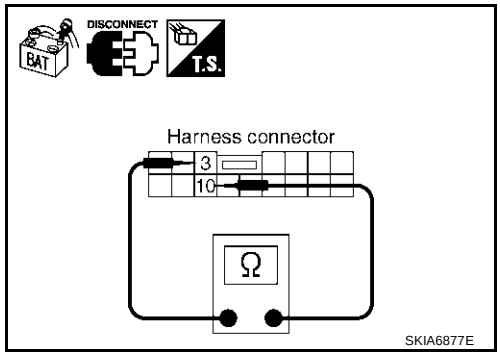
OK >> GO TO 8.
NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between ABS actuator and electric unit (control unit) and harness connector E211.
- Harness between ABS actuator and electric unit (control unit) and harness connector E205.
- Harness between ABS actuator and electric unit (control unit) and ICC sensor.

8. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B8.
2. Check continuity between harness connector B5 terminals 3 (L) and 10 (R).

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



OK or NG

OK >> GO TO 9.
NG >> Check the following harnesses. If any harness is damaged, repair the harness.

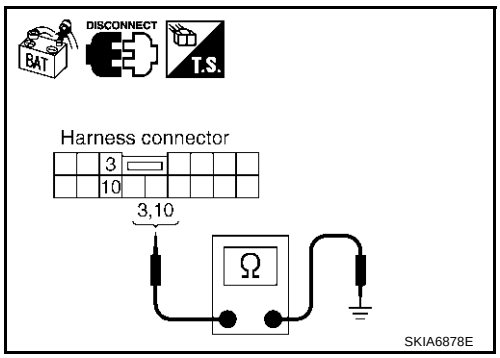
- Harness between harness connector B5 and harness connector B5.
- Harness between harness connector B5 and harness connector B8.

9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B5 terminals 3 (L), 10 (R) and ground.

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

10 (R) - Ground : Continuity should not exist.



OK or NG

OK >> GO TO 10.

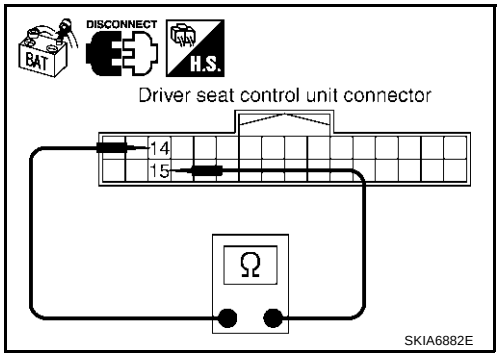
NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between harness connector B5 and harness connector B5.
- Harness between harness connector B5 and harness connector B8.

10. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect driver seat control unit connector.
2. Check continuity between driver seat control unit harness connector B152 terminals 14 (OR) and 15 (SB).

14 (OR) - 15 (SB) : Continuity should not exist.



OK or NG

OK >> GO TO 11.

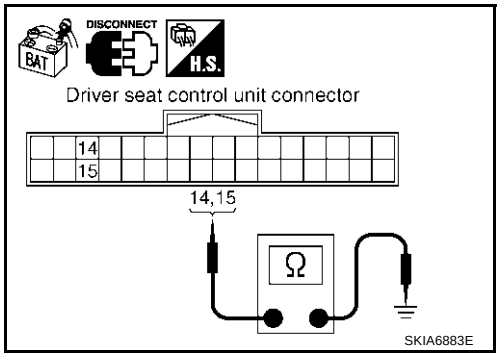
NG >> Repair harness between driver seat control unit and harness connector B151.

11. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between driver seat control unit harness connector B152 terminals 14 (OR), 15 (SB) and ground.

14 (OR) - Ground : Continuity should not exist.

15 (SB) - Ground : Continuity should not exist.



OK or NG

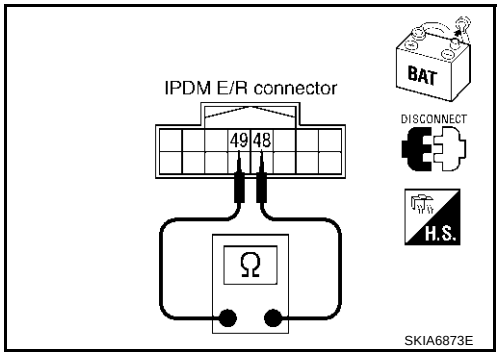
OK >> GO TO 12.

NG >> Repair harness between driver seat control unit and harness connector B151.

12. CHECK HARNESS FOR SHORT CIRCUIT

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

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



OK or NG

OK >> GO TO 13.

NG >> Repair harness between IPDM E/R and harness connector E205.

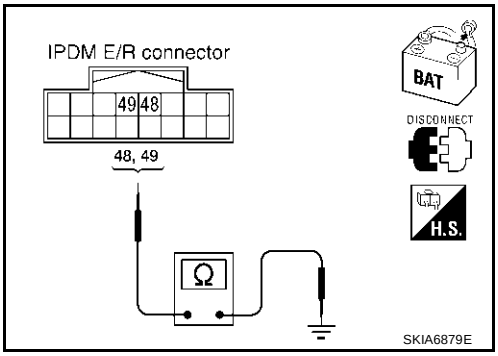
13. CHECK HARNESS FOR SHORT CIRCUIT

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

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

OK or NG

OK >> GO TO 14.
NG >> Repair harness between IPDM E/R and harness connector E205.



14. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to LAN-131, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION" .

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-91, "Work Flow" .
NG >> Replace ECM and/or IPDM E/R.

IPDM E/R Ignition Relay Circuit Check

AKS007SF

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

- IPDM E/R power supply circuit. Refer to PG-43, "IPDM E/R Power/Ground Circuit Inspection" .
- Ignition power supply circuit. Refer to PG-12, "IGNITION POWER SUPPLY - IGNITION SW. IN “ON” AND/OR “START”" .

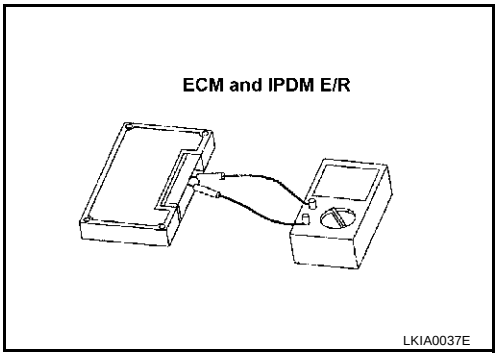
Component Inspection

AKS007SG

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



CAN SYSTEM (TYPE 4)

PFP:23710

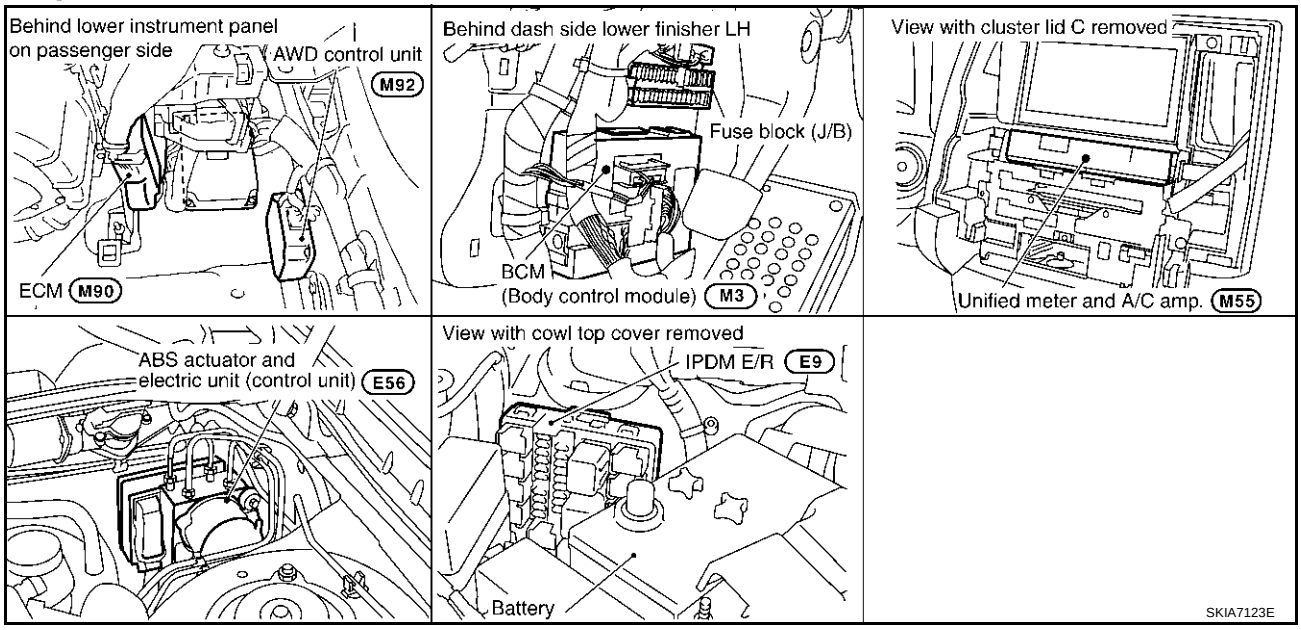
System Description

AKS007SH

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.

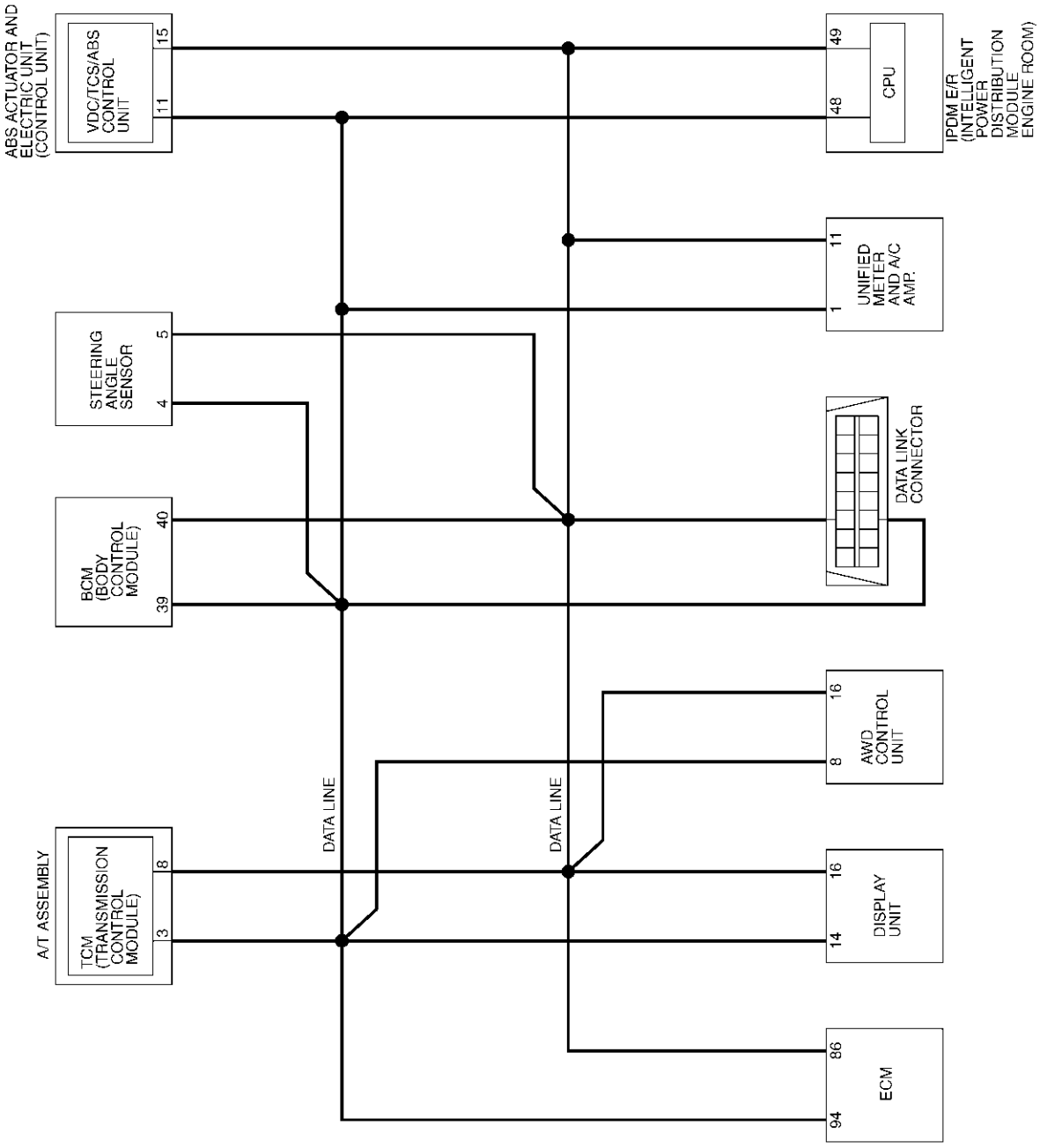
Component Parts and Harness Connector Location

AKS007SI



Schematic

AKS007SJ



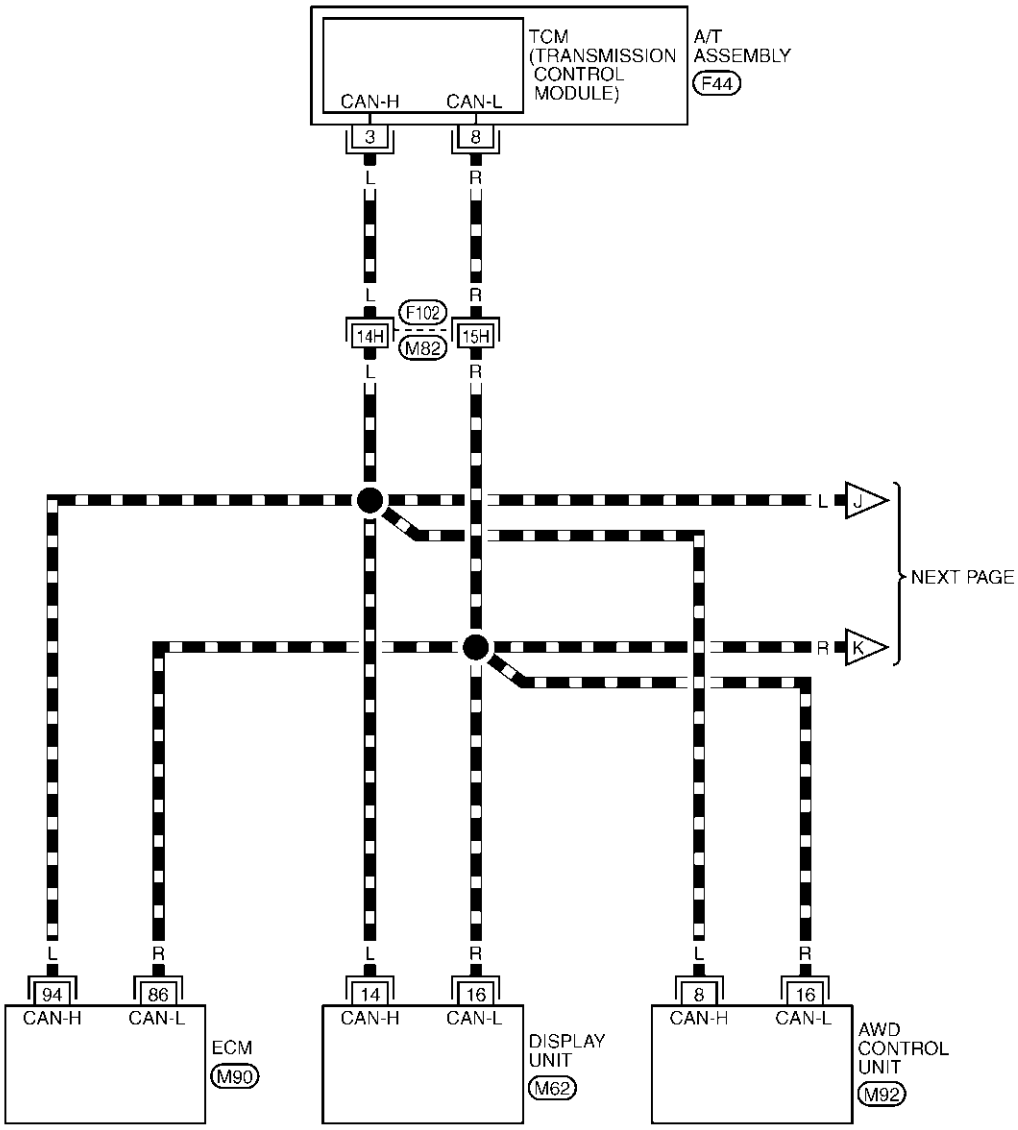
TKWM0750E

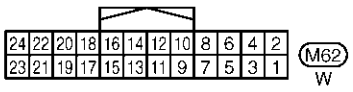
Wiring Diagram - CAN -

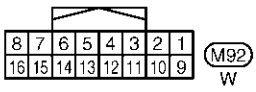
AKS007SK

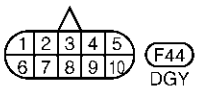
LAN-CAN-08

: DATA LINE







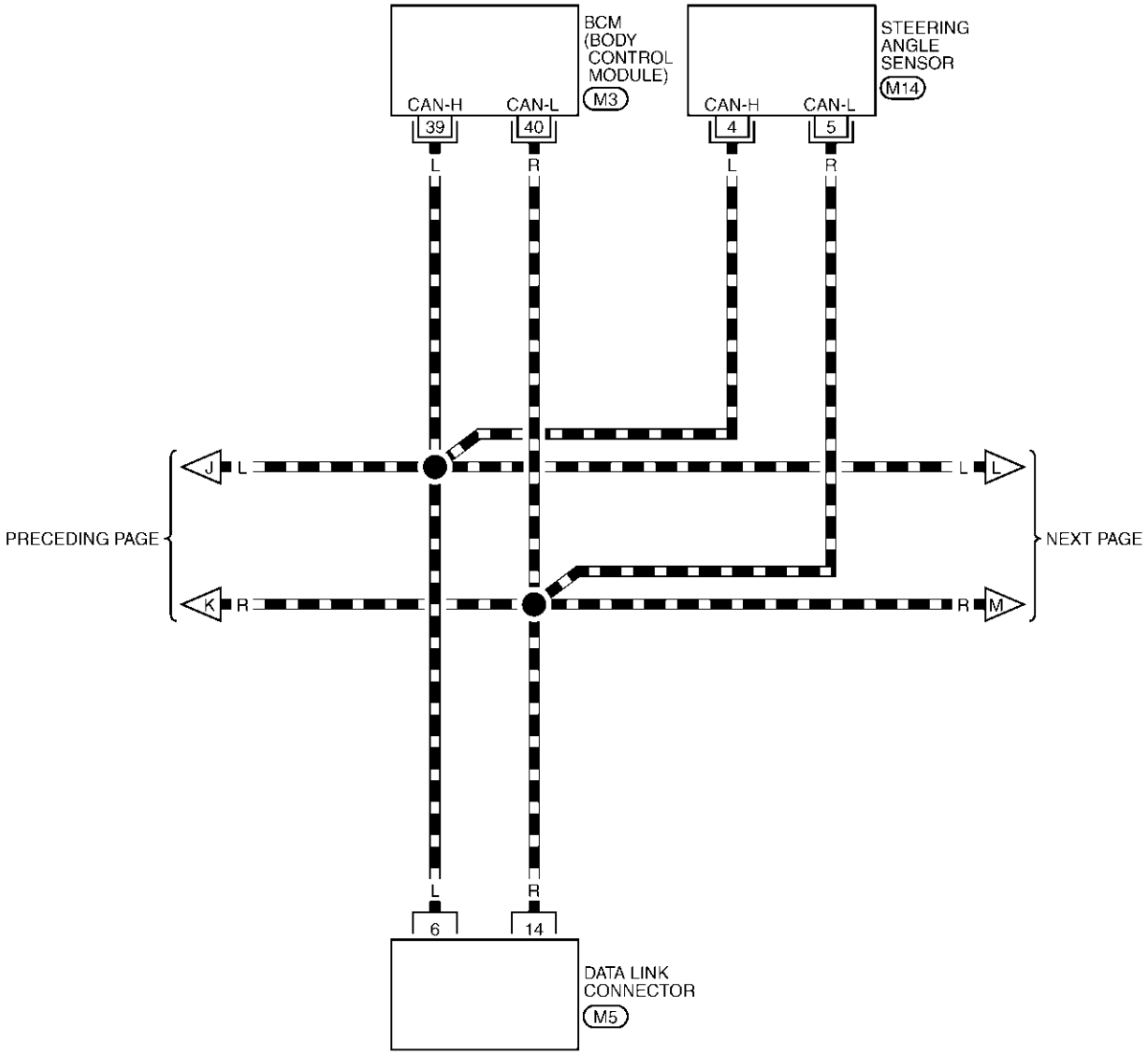


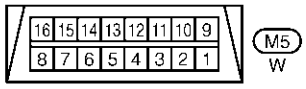
REFER TO THE FOLLOWING.
F102 -SUPER MULTIPLE JUNCTION (SMJ)
M90 -ELECTRICAL UNITS

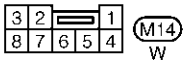
TKWM0751E

LAN-CAN-09

: DATA LINE





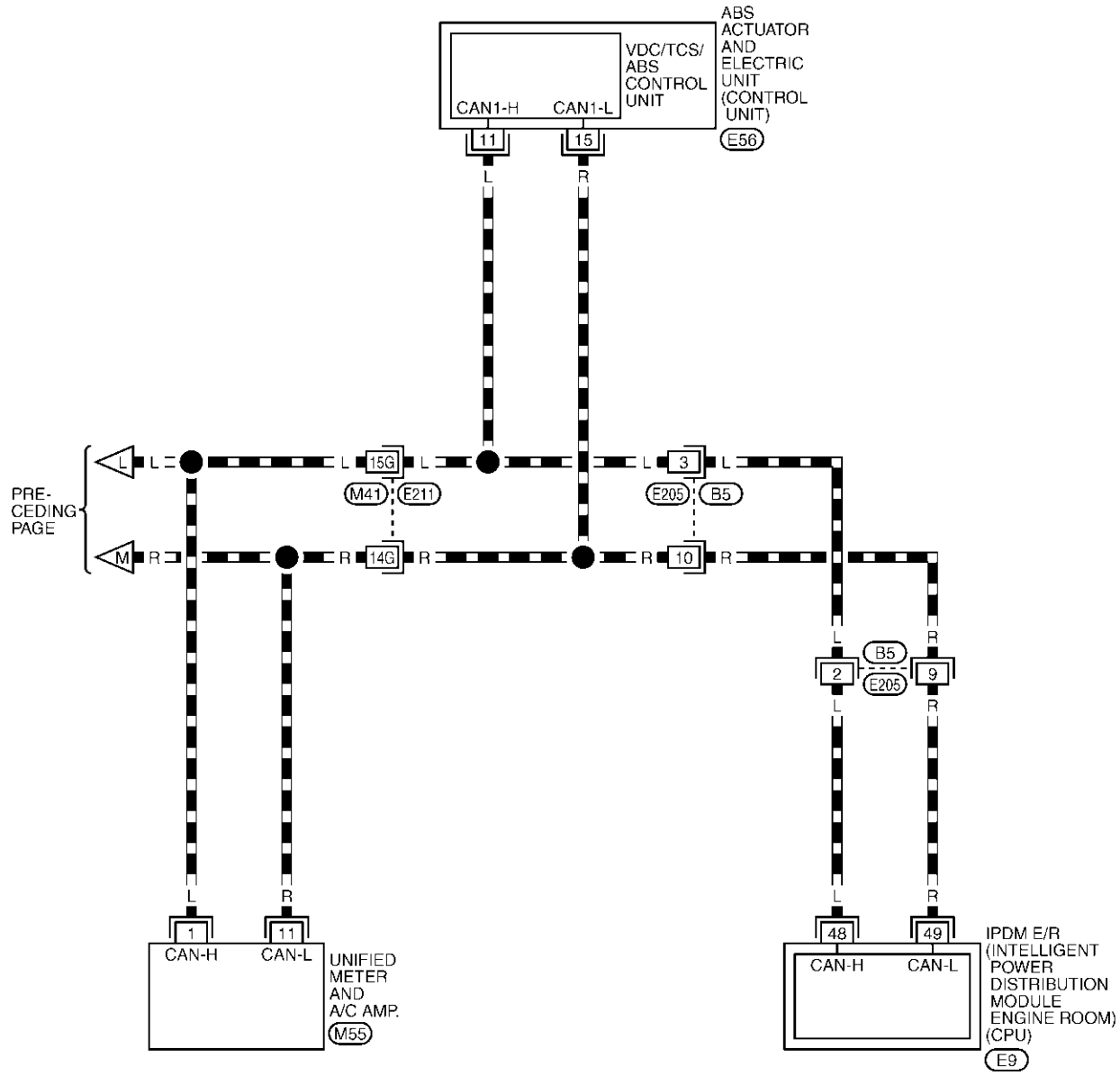


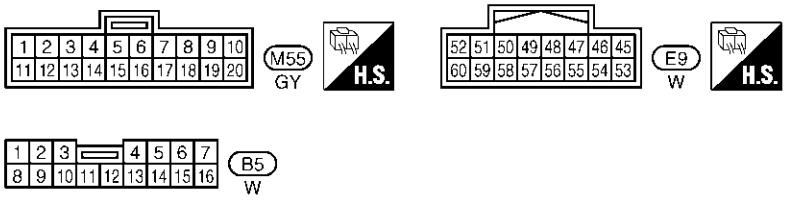
REFER TO THE FOLLOWING.
M3 -ELECTRICAL UNITS

TKWM0752E

LAN-CAN-10

: DATA LINE





REFER TO THE FOLLOWING.

E211 -SUPER MULTIPLE JUNCTION (SMJ)

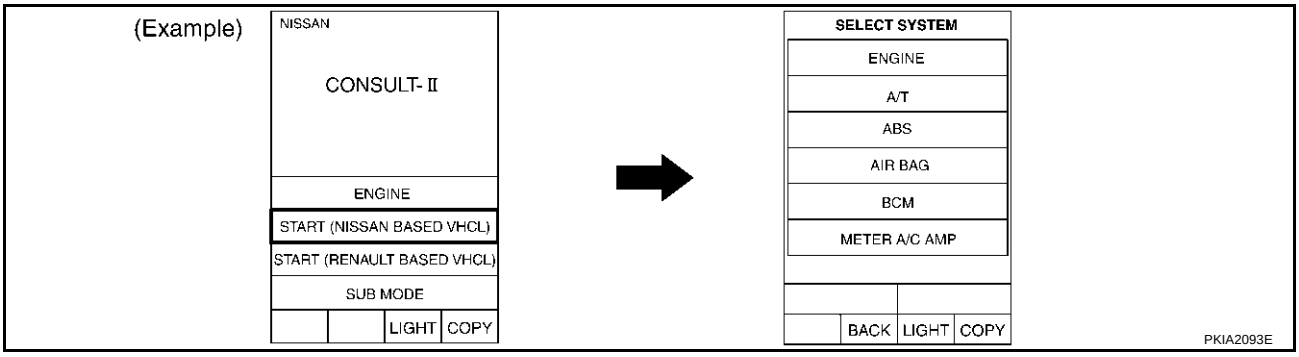
E56 -ELECTRICAL UNITS

TKWH0250E

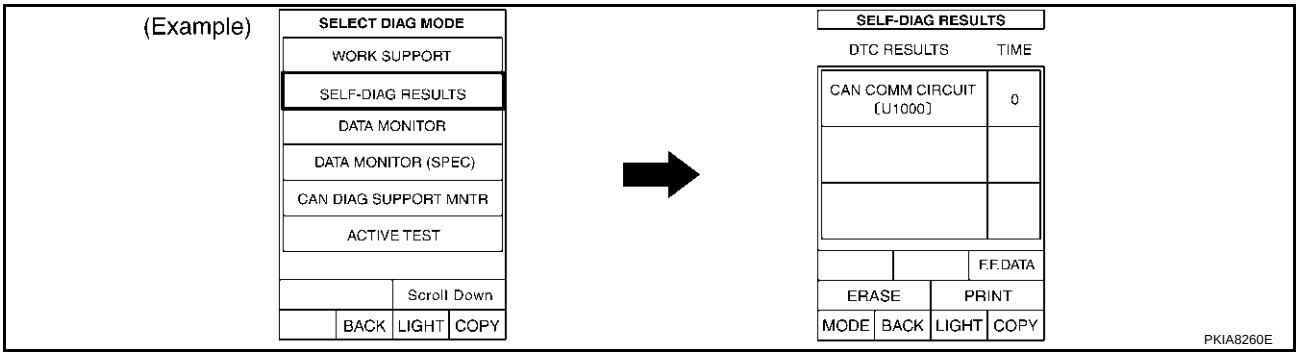
Work Flow

AKS00C4D

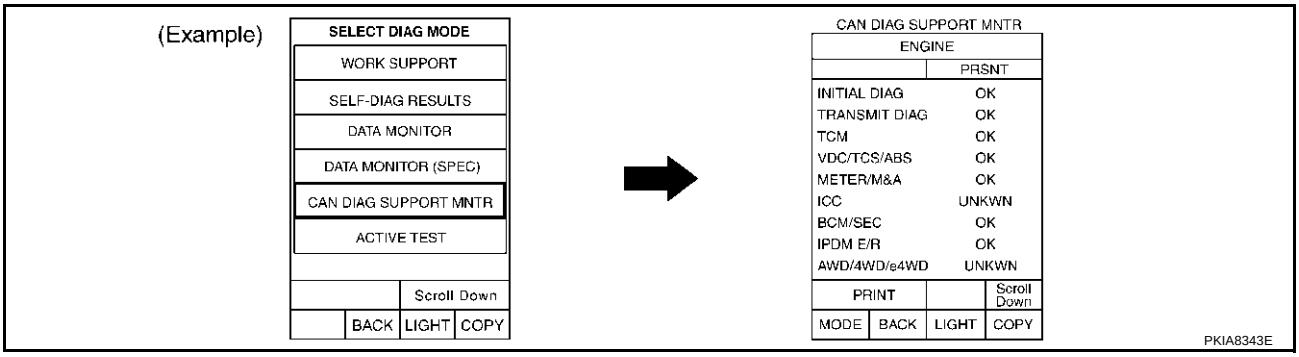
1. When there are no indications of “BCM”, “METER A/C AMP” or “IPDM E/R” on “SELECT SYSTEM” display of CONSULT-II, print the “SELECT SYSTEM”.



2. Print all the data of “SELF-DIAG RESULTS” for “ENGINE”, “A/T”, “ALL MODE AWD/4WD”, “BCM”, “METER A/C AMP”, “ABS”, and “IPDM E/R” displayed on CONSULT-II.



3. Print all the data of “CAN DIAG SUPPORT MNTR” for “ENGINE”, “A/T”, “ALL MODE AWD/4WD”, “BCM”, “METER A/C AMP”, “ABS”, and “IPDM E/R” displayed on CONSULT-II.



4. Attach the printed sheet of “SELECT SYSTEM”, “SELF-DIAG RESULTS” and “CAN DIAG SUPPORT MNTR” onto the check sheet. Refer to LAN-139, "CHECK SHEET" .
5. 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-139, "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.
6. Check CAN communication line of the integrated display system. Refer to AV-97, "CAN Communication Line Inspection" .
7. Attach the CAN DIAG MONITOR check sheet onto the check sheet. Refer to LAN-139, "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-139, "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-97, "CAN Communication Line Inspection" .

9. According to the check sheet results (example), start inspection. Refer to LAN-141, "CHECK SHEET RESULTS (EXAMPLE)" .

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	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	–	CAN 2	–	CAN 5	–	CAN 7
ALL MODE AWD/4WD	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	UNKWN	–	UNKWN	–	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	–	UNKWN	–	–	–	–

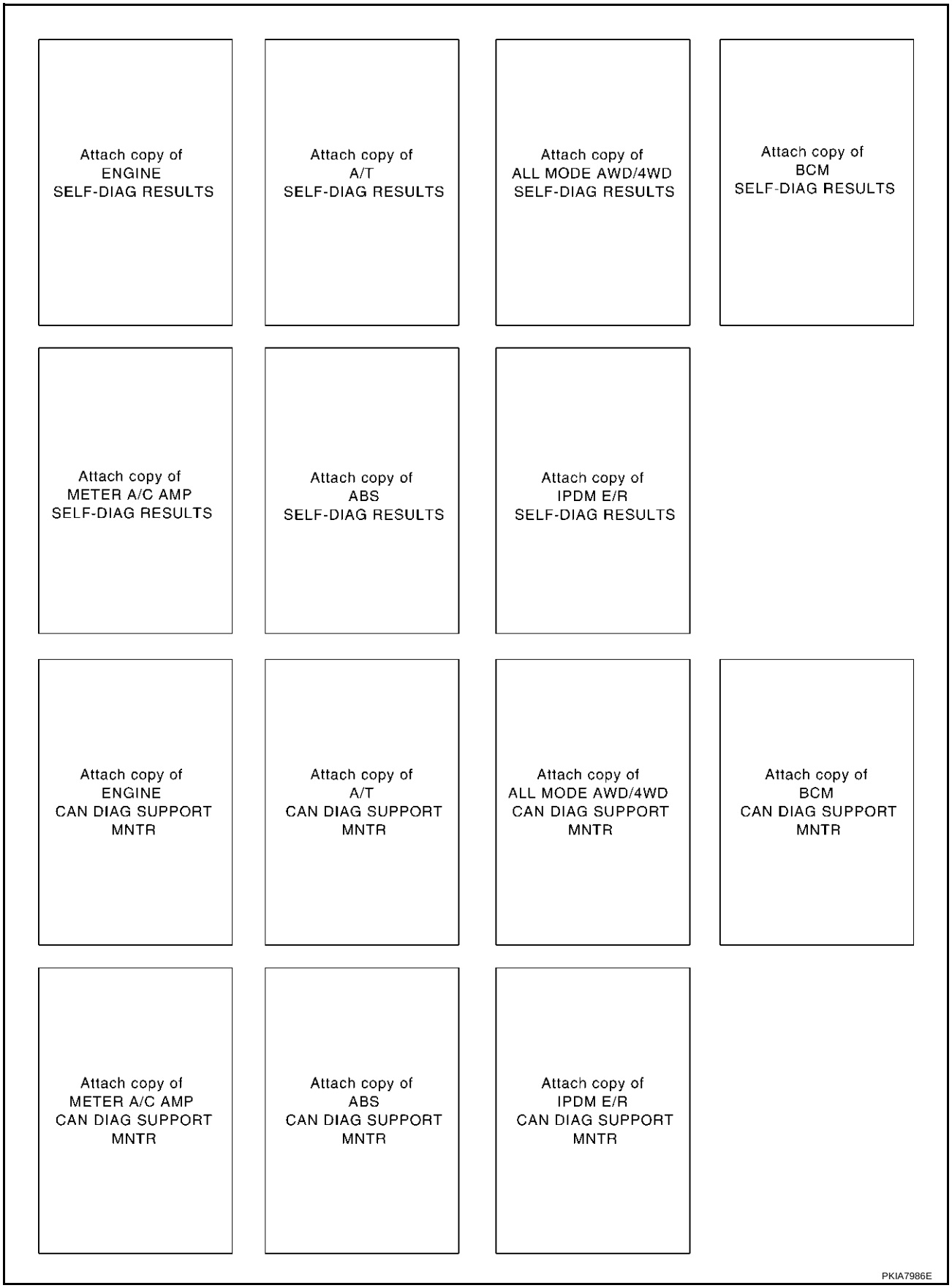
Symptoms :

Attach copy of
SELECT SYSTEM

Attach copy of
SELECT SYSTEM

Attach copy of
display unit
CAN DIAG MONITOR check sheet

PKIA7985E


Attach copy of
ENGINE
SELF-DIAG RESULTS
Attach copy of
A/T
SELF-DIAG RESULTS
Attach copy of
ALL MODE AWD/4WD
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
IPDM E/R
SELF-DIAG RESULTS
Attach copy of
ENGINE
CAN DIAG SUPPORT
MNTR
Attach copy of
A/T
CAN DIAG SUPPORT
MNTR
Attach copy of
ALL MODE AWD/4WD
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
Attach copy of
IPDM E/R
CAN DIAG SUPPORT
MNTR
PKIA7986E

CHECK SHEET RESULTS (EXAMPLE)

NOTE:

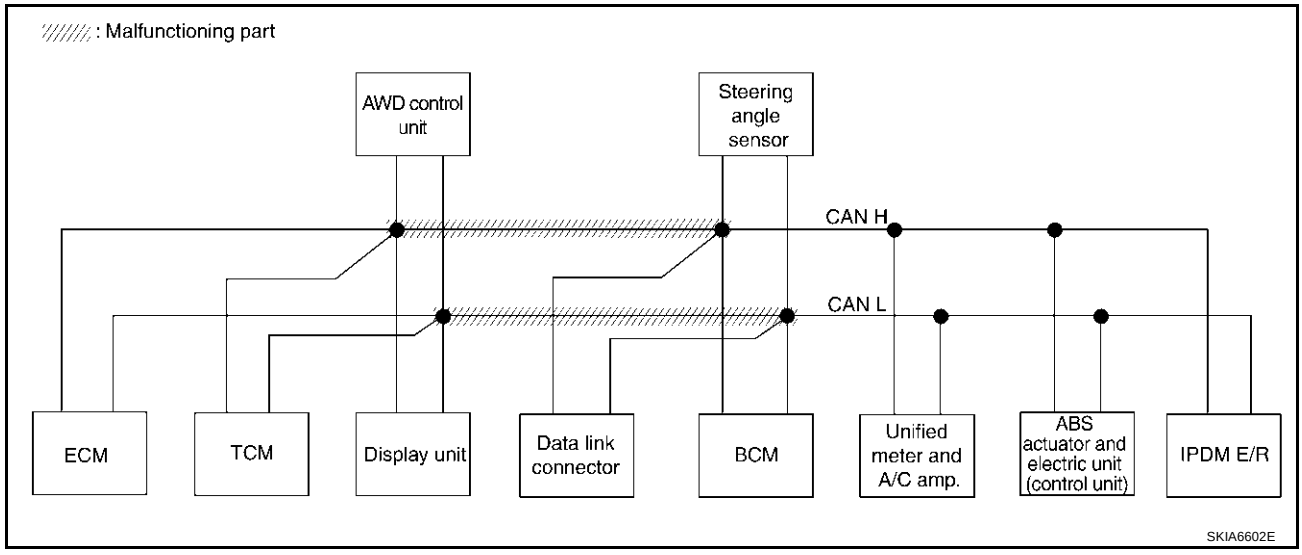
If “NG” is displayed on “INITIAL DIAG (Initial diagnosis)” or “CAN COMM” for the diagnosed control unit, replace the control unit.

Case 1

Check harness between TCM and data link connector. Refer to LAN-155, "Circuit Check Between TCM and Data Link Connector" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	–	CAN 2	–	CAN 5	–	CAN 7
ALL MODE AWD/4WD	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	UNKWN	–	UNKWN	–	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	–	UNKWN	–	–	–	–

PKIA7987E

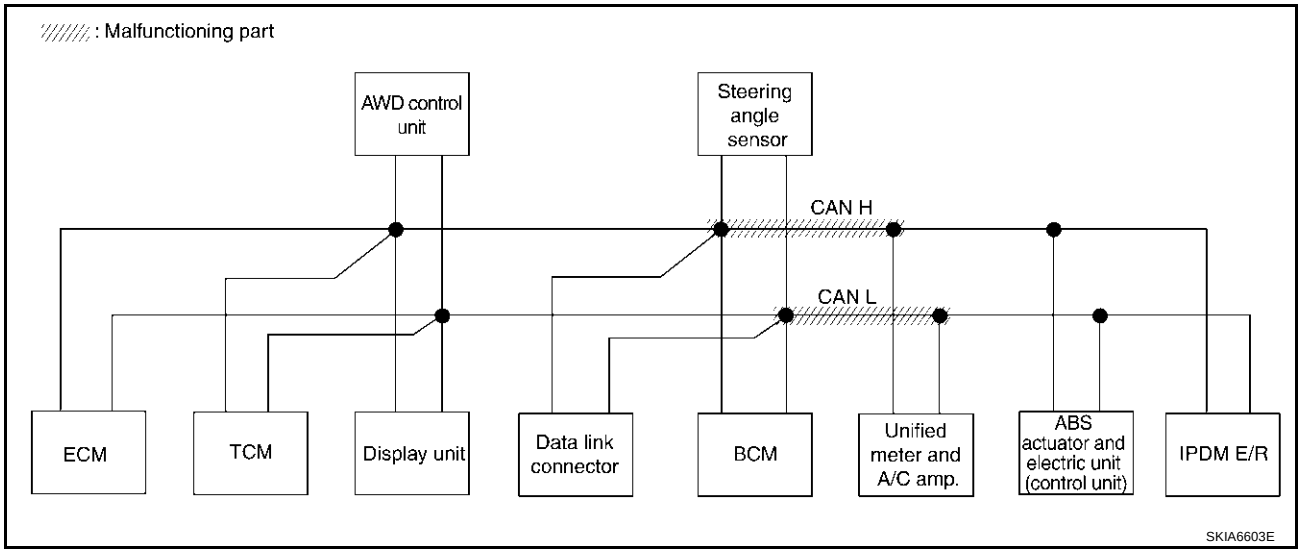


Case 2

Check harness between data link connector and unified meter and A/C amp. Refer to LAN-155, "Circuit Check Between Data Link Connector and Unified Meter and A/C Amp." .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	–	CAN 2	–	CAN 5	–	CAN 7
ALL MODE AWD/4WD	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	UNKWN	–	UNKWN	–	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	–	UNKWN	–	–	–	–

PKIA7988E

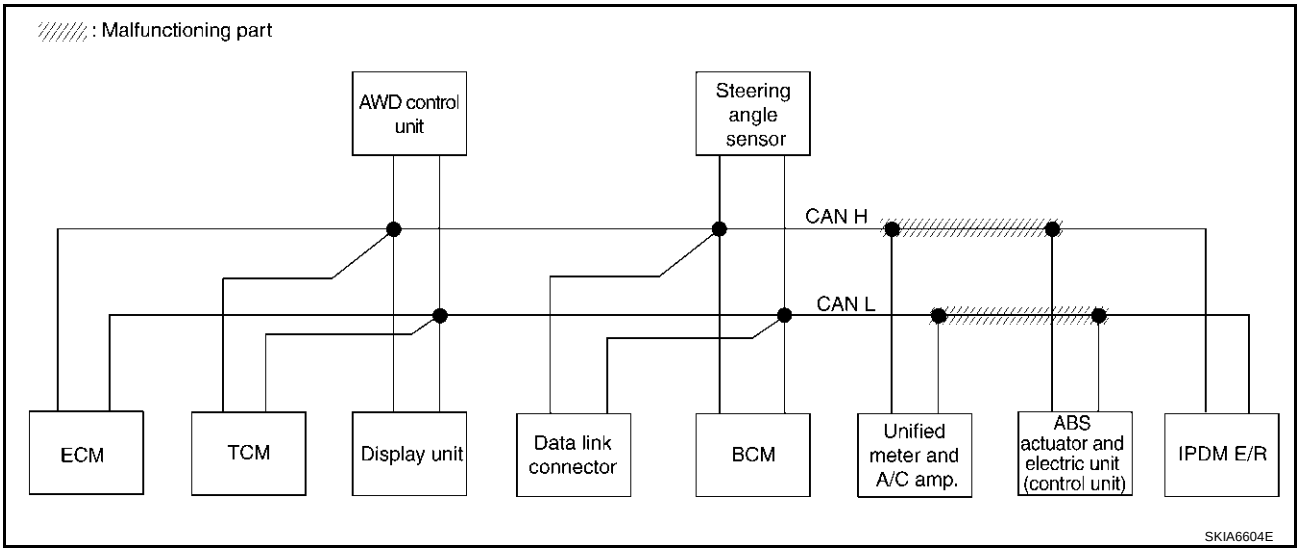


Case 3

Check harness between unified meter and A/C amp. and ABS actuator and electric unit (control unit). Refer to LAN-156, "Circuit Check Between Unified Meter and A/C Amp. and ABS Actuator and Electric Unit (Control Unit)" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	–	CAN 2	–	CAN 5	–	CAN 7
ALL MODE AWD/4WD	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	UNKWN	–	UNKWN	–	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	–	UNKWN	–	–	–	–

PKIA7989E

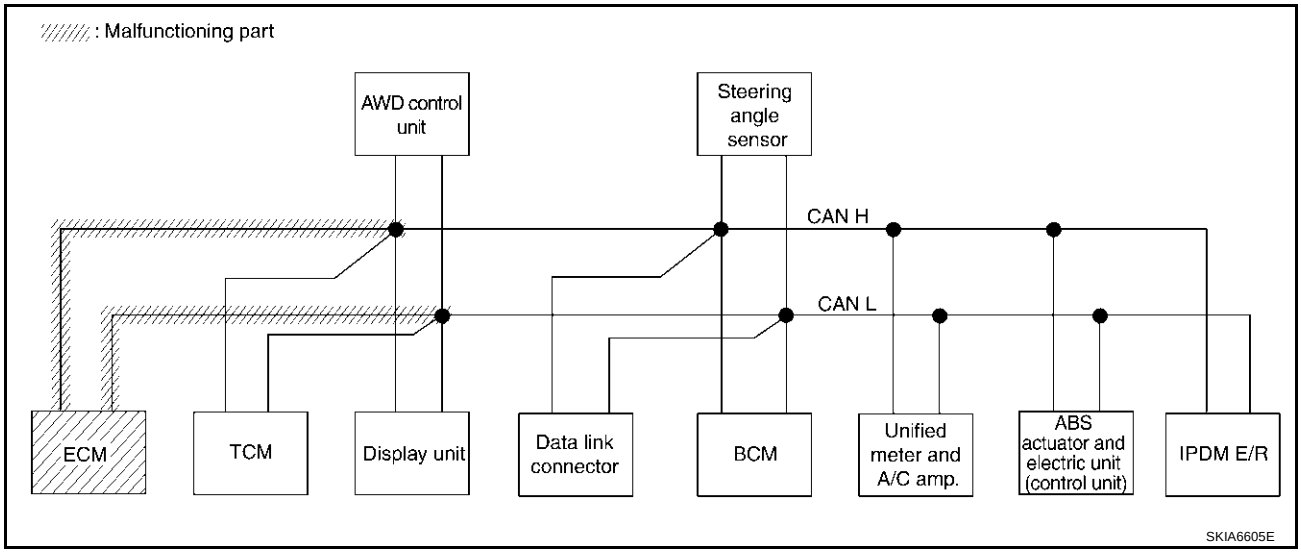


Case 4

Check ECM circuit. Refer to LAN-156, "ECM Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	—	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	—	CAN 2	—	CAN 5	—	CAN 7
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	UNKWN	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

PKIA7990E

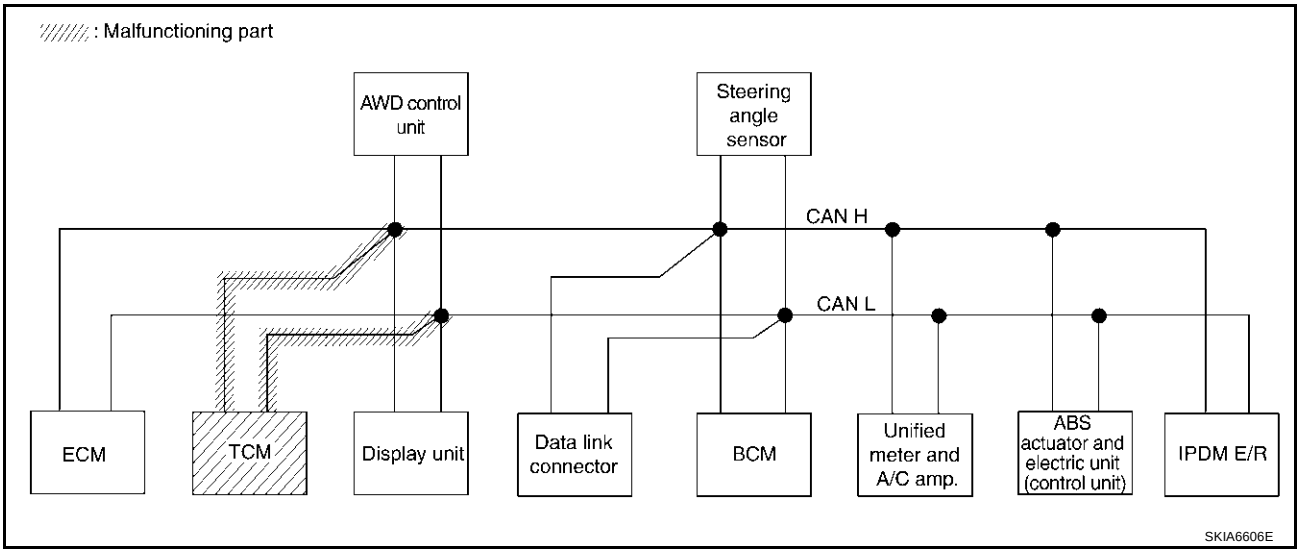


Case 5

Check TCM circuit. Refer to LAN-157, "TCM Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	–	CAN 2	–	CAN 5	–	CAN 7
ALL MODE AWD/4WD	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	UNKWN	–	UNKWN	–	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	–	UNKWN	–	–	–	–

PKIA7991E

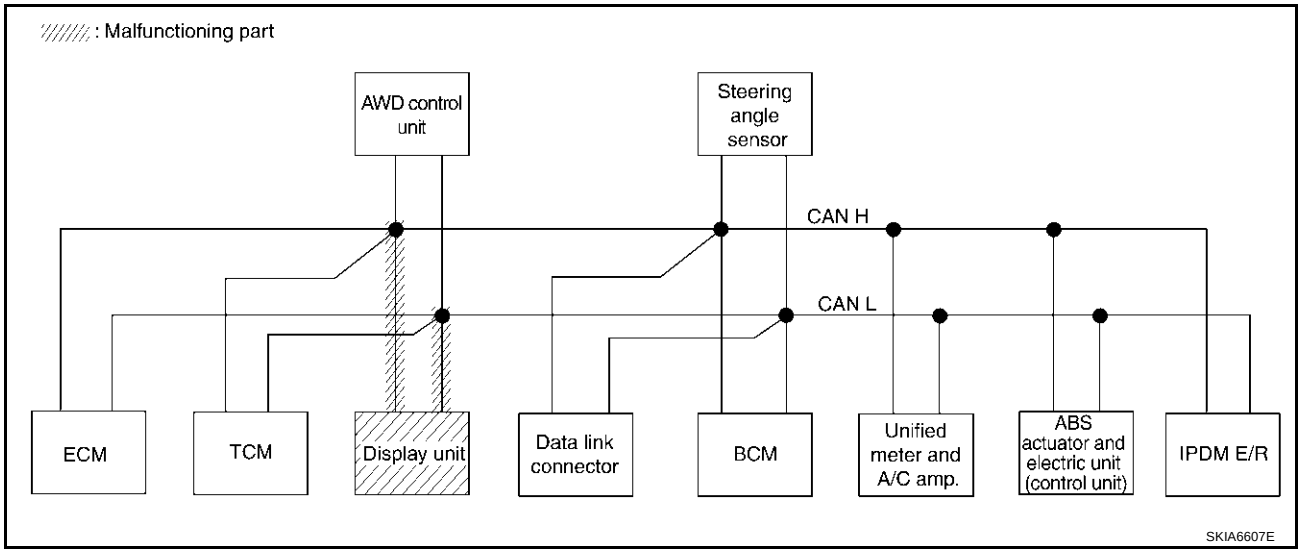


Case 6

Check display unit circuit. Refer to LAN-157, "Display Unit Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	—	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	UNKWN	—
Display unit	—	CAN COMM	CAN 1 ✓	CAN 3 ✓	—	—	—	CAN 2 ✓	—	CAN 5 ✓	—	CAN 7 ✓
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	UNKWN	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

PKIA7992E

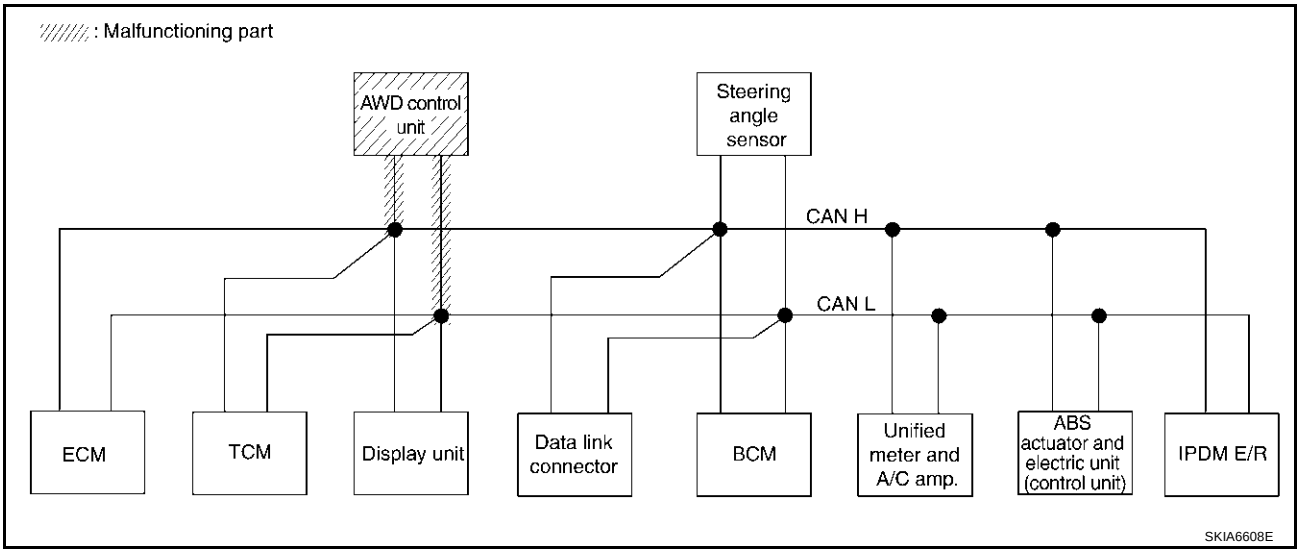


Case 7

Check AWD control unit circuit. Refer to LAN-158, "AWD Control Unit Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	–	CAN 2	–	CAN 5	–	CAN 7
ALL MODE AWD/4WD	–	NG	UNKWN ✓	UNKWN ✓	–	–	–	–	–	UNKWN ✓	UNKWN ✓	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	UNKWN ✓	–	UNKWN	–	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	–	UNKWN	–	–	–	–

PKIA7993E

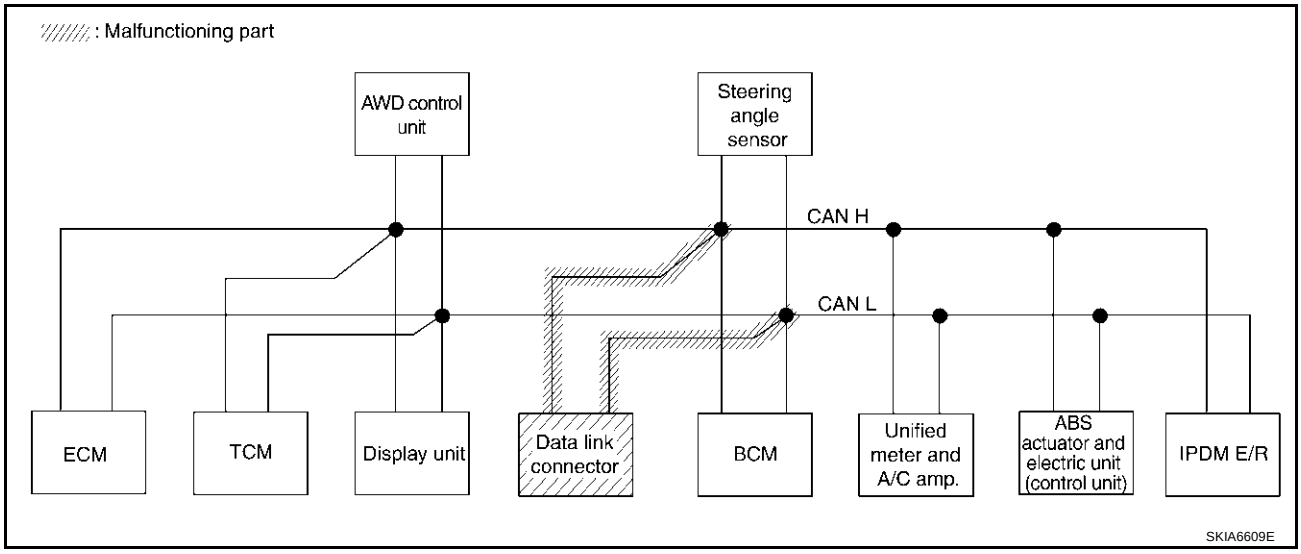


Case 8

Check data link connector circuit. Refer to LAN-158, "Data Link Connector Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	–	CAN 2	–	CAN 5	–	CAN 7
ALL MODE AWD/4WD	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	UNKWN	–	UNKWN	–	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	–	UNKWN	–	–	–	–

PKIA7994E

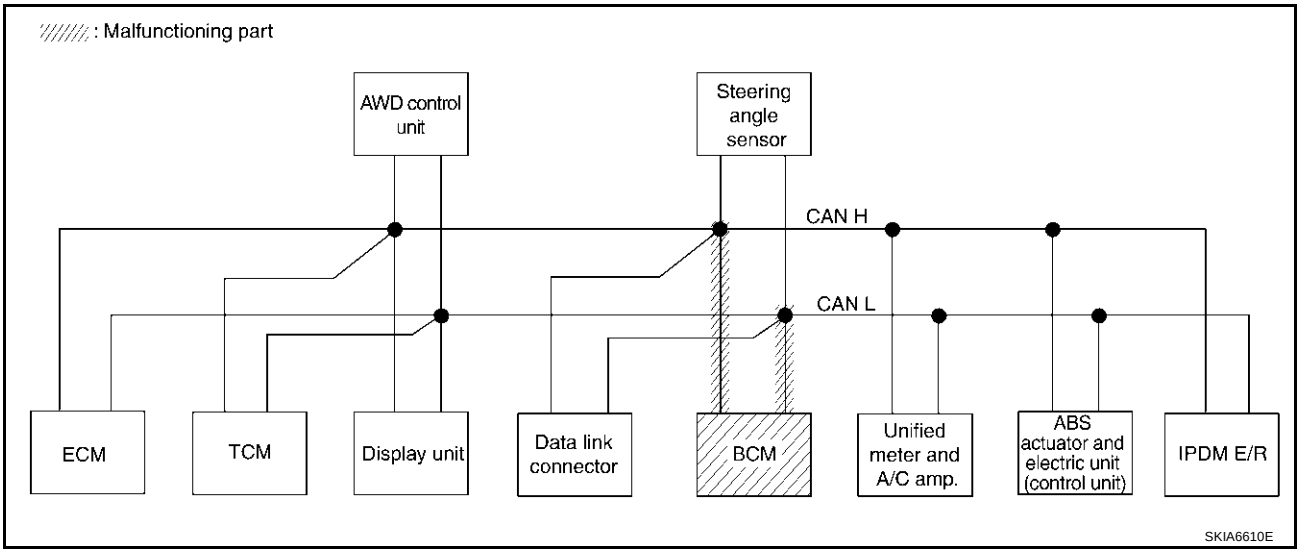


Case 9

Check BCM circuit. Refer to LAN-159, "BCM Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	–	CAN 2	–	CAN 5	–	CAN 7
ALL MODE AWD/4WD	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	UNKWN	–	UNKWN	–	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	–	UNKWN	–	–	–	–

PKIA7995E

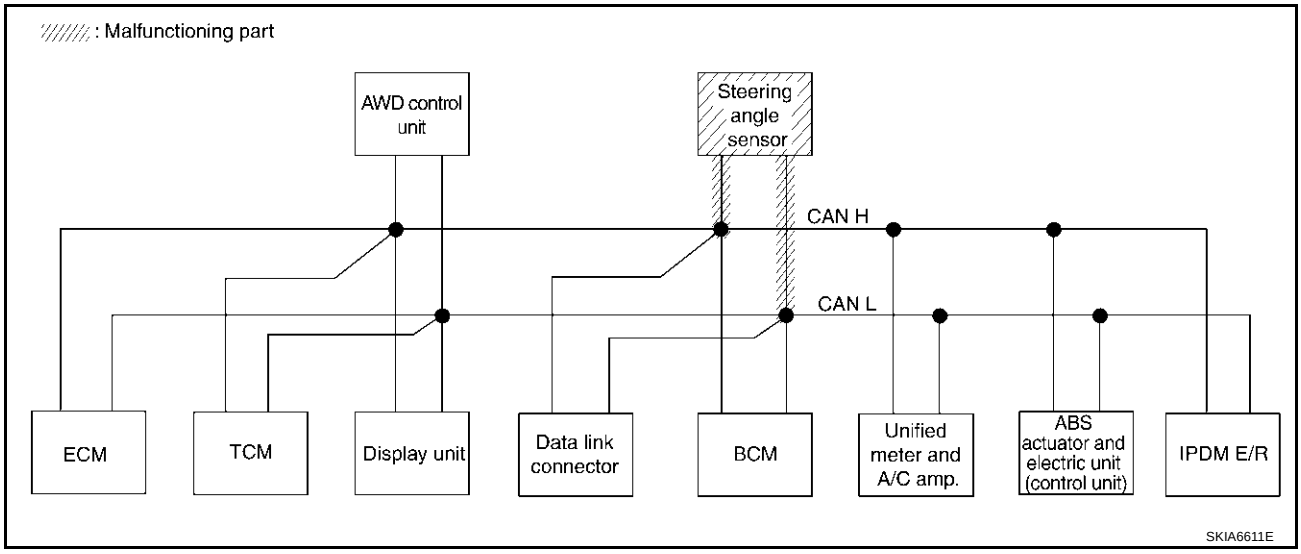


Case 10

Check steering angle sensor circuit. Refer to LAN-159, "Steering Angle Sensor Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	–	CAN 2	–	CAN 5	–	CAN 7
ALL MODE AWD/4WD	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	UNKWN	–	UNKWN	–	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	–	UNKWN	–	–	–	–

PKIA7996E

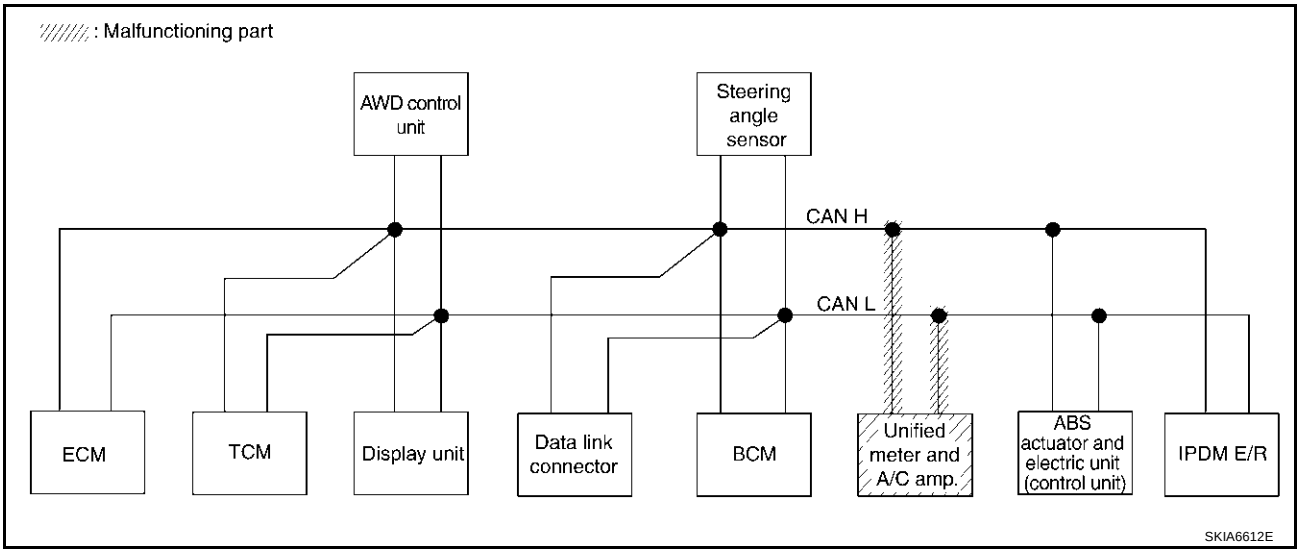


Case 11

Check unified meter and A/C amp. circuit. Refer to LAN-160, "Unified Meter and A/C Amp. Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	–	CAN 2	–	CAN 5	–	CAN 7
ALL MODE AWD/4WD	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	UNKWN	–	UNKWN	–	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	–	UNKWN	–	–	–	–

PKIA7997E

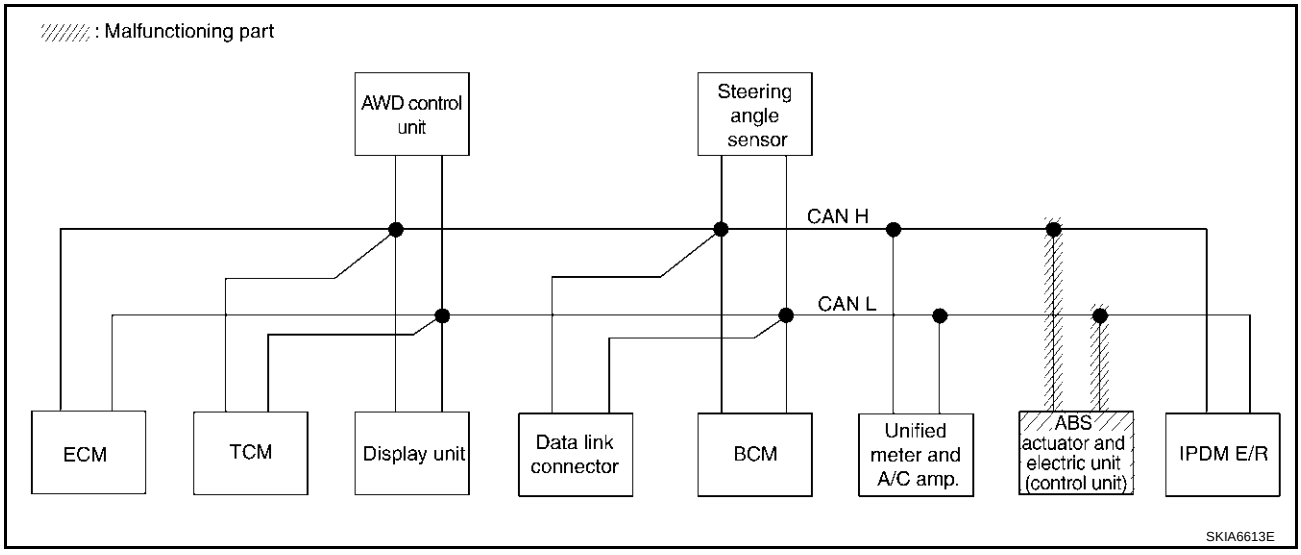


Case 12

Check ABS actuator and electric unit (control unit) circuit. Refer to LAN-160, "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	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	—	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	—	CAN 2	—	CAN 5	—	CAN 7
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	UNKWN	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

PKIA7998E

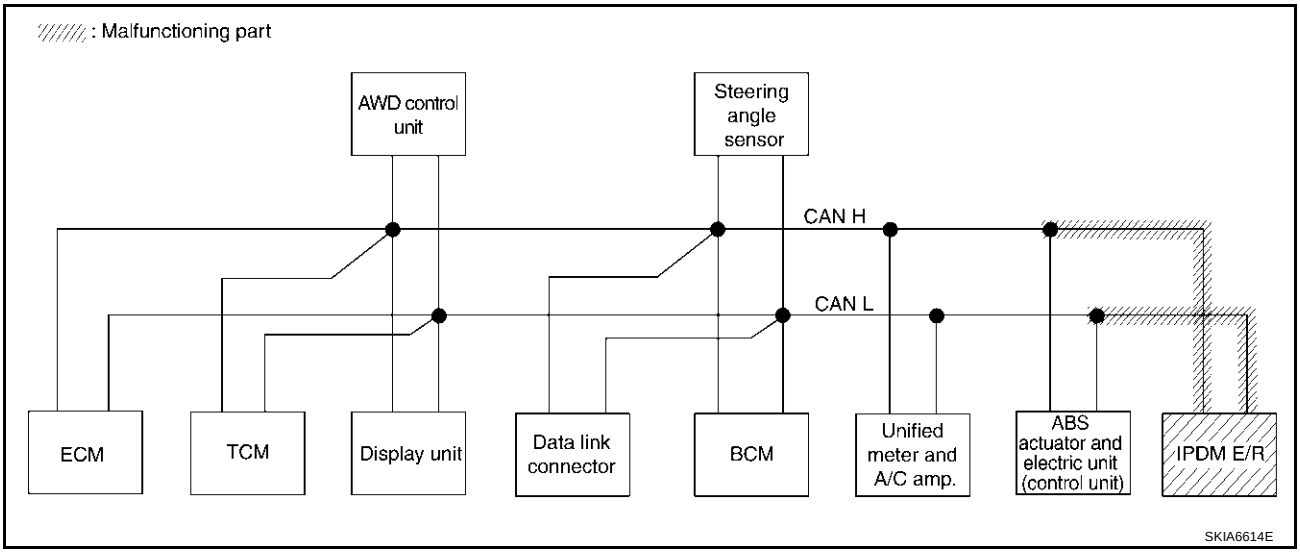


Case 13

Check IPDM E/R circuit. Refer to LAN-161, "IPDM E/R Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	UNKWN	UNKWN ✓
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	–	CAN 2	–	CAN 5	–	CAN 7 ✓
ALL MODE AWD/4WD	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	UNKWN ✓
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	UNKWN	–	UNKWN	–	–	–
IPDM E/R	No indication ✓	–	UNKWN	UNKWN	–	–	–	UNKWN	–	–	–	–

PKIA7999E



Case 14

Check CAN communication circuit. Refer to LAN-162, "CAN Communication Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	–	CAN 2	–	CAN 5	–	CAN 7
ALL MODE AWD/4WD	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	UNKWN	–	UNKWN	–	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	–	UNKWN	–	–	–	–

PKIA8000E

Case 15

Check IPDM E/R ignition relay circuit continuously sticks “OFF”. Refer to LAN-165, "IPDM E/R Ignition Relay Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	–	CAN 2	–	CAN 5	–	CAN 7
ALL MODE AWD/4WD	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	UNKWN	–	UNKWN	–	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	–	UNKWN	–	–	–	–

PKIA8002E

Case 16

Check IPDM E/R ignition relay circuit continuously sticks “ON”. Refer to LAN-165, "IPDM E/R Ignition Relay Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN ✓	–	–	–	–	–	UNKWN ✓	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	–	CAN 2	–	CAN 5	–	CAN 7
ALL MODE AWD/4WD	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN ✓	UNKWN	–	UNKWN ✓	–	UNKWN ✓	–	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	–	UNKWN	–	–	–	–

PKIA8001E

Circuit Check Between TCM and Data Link Connector

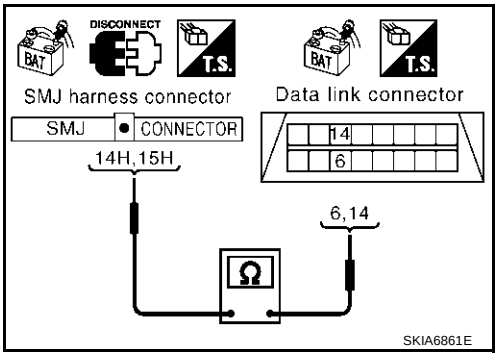
AKS007SM

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 14H (L), 15H (R) and data link connector M5 terminals 6 (L), 14 (R).

14H (L) - 6 (L) : Continuity should exist.

15H (R) - 14 (R) : Continuity should exist.



OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-137, "Work Flow" .

NG >> Repair harness.

Circuit Check Between Data Link Connector and Unified Meter and A/C Amp.

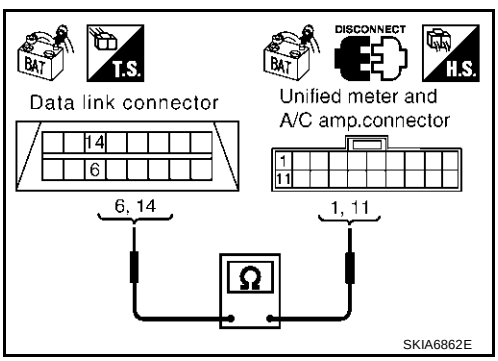
AKS007SN

1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and unified meter and A/C amp. connector.
4. Check continuity between data link connector M5 terminals 6 (L), 14 (R) and unified meter and A/C amp. harness connector M55 terminals 1 (L), 11 (R).

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

14 (R) - 11 (R) : Continuity should exist.



OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-137, "Work Flow" .

NG >> Repair harness.

Circuit Check Between Unified Meter and A/C Amp. and ABS Actuator and Electric Unit (Control Unit)

AKS007SO

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 M41
- Harness connector E211

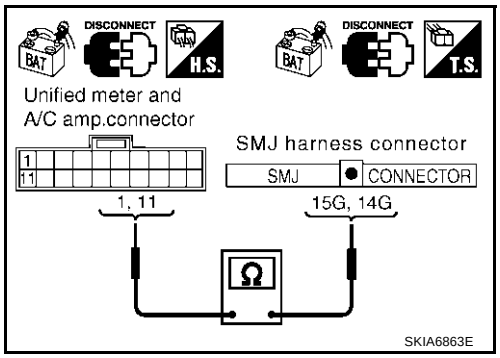
OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector and harness connector M41.
2. Check continuity between unified meter and A/C amp. harness connector M55 terminals 1 (L), 11 (R) and harness connector M41 terminals 15G (L), 14G (R).

1 (L) - 15G (L) : Continuity should exist.
11 (R) - 14G (R) : Continuity should exist.



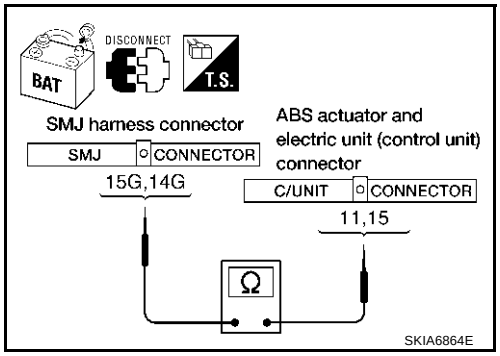
OK or NG

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 E211 terminals 15G (L), 14G (R) and ABS actuator and electric unit (control unit) harness connector E56 terminals 11 (L), 15 (R).

15G (L) - 11 (L) : Continuity should exist.
14G (R) - 15 (R) : Continuity should exist.



OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-137, "Work Flow" .
NG >> Repair harness.

ECM Circuit Check

AKS007SP

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.

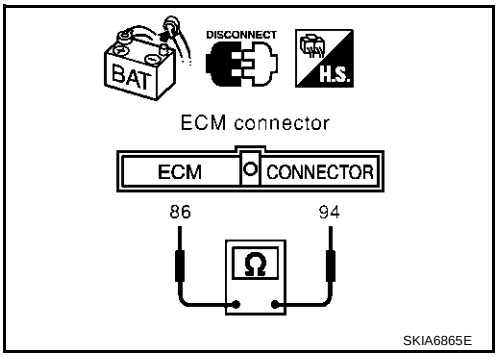
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M90 terminals 94 (L) and 86 (R).

94 (L) - 86 (R) : Approx. 108 - 132Ω

OK or NG

OK >> Replace ECM.
NG >> Repair harness between ECM and harness connector M82.



TCM Circuit Check

AKS007SQ

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).

- A/T assembly connector
- Harness connector F102
- Harness connector M82

OK or NG

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

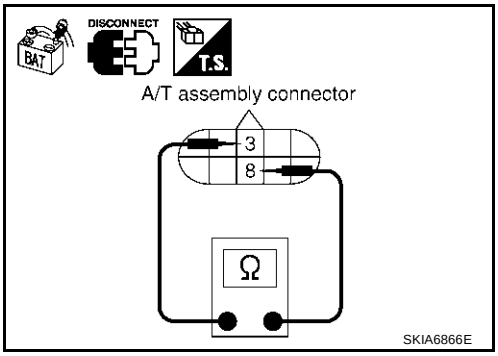
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect A/T assembly connector.
2. Check resistance between A/T assembly harness connector F44 terminals 3 (L) and 8 (R).

3 (L) - 8 (R) : Approx. 54 - 66Ω

OK or NG

OK >> Replace A/T assembly.
NG >> Repair harness between A/T assembly and display unit.



Display Unit Circuit Check

AKS007SR

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).

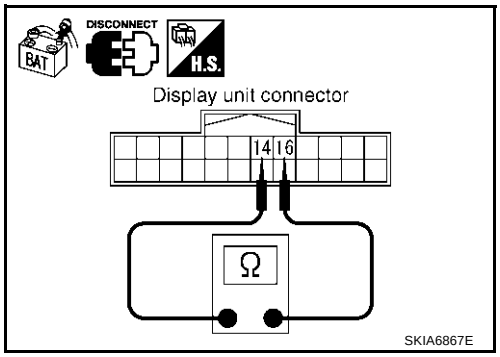
OK or NG

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 M62 terminals 14 (L) and 16 (R).

14 (L) - 16 (R) : Approx. 54 - 66Ω



OK or NG

OK >> Replace display unit.
NG >> Repair harness between display unit and harness connector M82.

AWD Control Unit Circuit Check

AKS007UD

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).

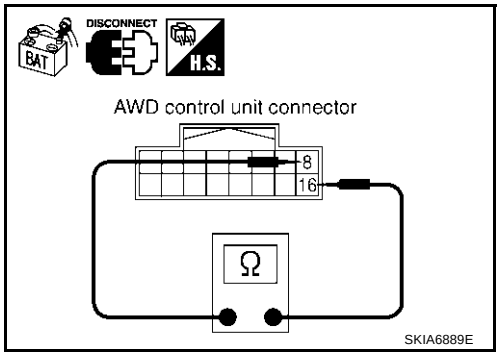
OK or NG

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 M92 terminals 8 (L) and 16 (R).

8 (L) - 16 (R) : Approx. 54 - 66Ω



OK or NG

OK >> Replace AWD control unit.
NG >> Repair harness between AWD control unit and harness connector M82.

Data Link Connector Circuit Check

AKS007SS

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.

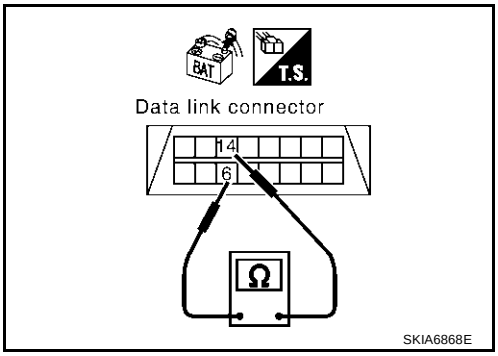
2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M5 terminals 6 (L) and 14 (R).

6 (L) - 14 (R) : Approx. 54 - 66Ω

OK or NG

OK >> Diagnose again. Refer to LAN-137, "Work Flow" .
NG >> Repair harness between data link connector and BCM.



BCM Circuit Check

AKS007ST

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.

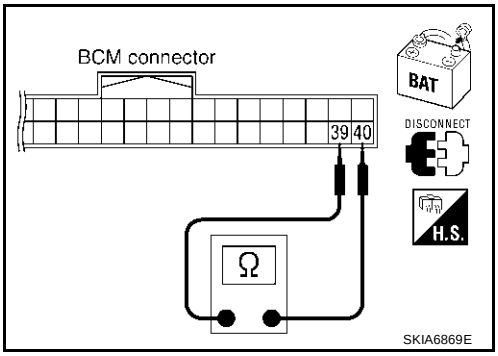
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M3 terminals 39 (L) and 40 (R).

39 (L) - 40 (R) : Approx. 54 - 66Ω

OK or NG

OK >> Replace BCM. Refer to BCS-28, "Removal and Installation of BCM" .
NG >> Repair harness between BCM and data link connector.



Steering Angle Sensor Circuit Check

AKS007SU

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.

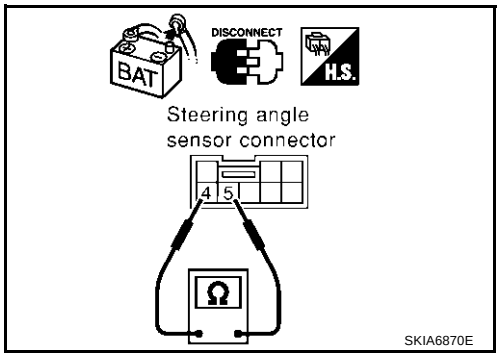
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M14 terminals 4 (L) and 5 (R).

4 (L) - 5 (R) : Approx. 54 - 66Ω

OK or NG

OK >> Replace steering angle sensor.
NG >> Repair harness between steering angle sensor and data link connector.



Unified Meter and A/C Amp. Circuit Check

AKS007SV

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.

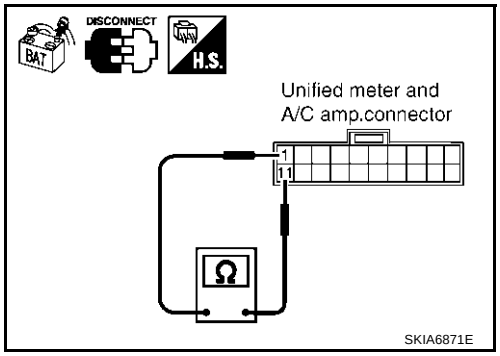
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M55 terminals 1 (L) and 11 (R).

1 (L) - 11 (R) : 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 harness connector M41.



ABS Actuator and Electric Unit (Control Unit) Circuit Check

AKS007SW

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.

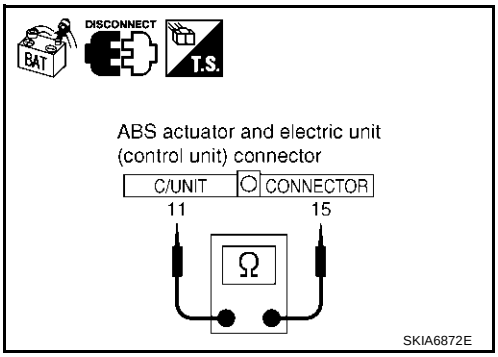
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E56 terminals 11 (L) and 15 (R).

11 (L) - 15 (R) : 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 harness connector E205.



IPDM E/R Circuit Check

AKS007SX

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).

- IPDM E/R connector
- Harness connector E205
- Harness connector B5

OK or NG

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

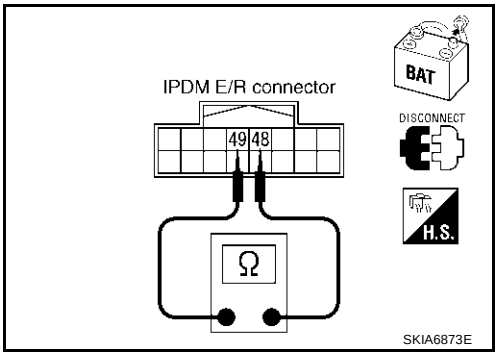
2. CHECK HARNESS FOR OPEN CIRCUIT

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

48 (L) - 49 (R) : 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

AKS007SY

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, control unit side, sensor side, meter side and harness side).

- ECM
- A/T assembly
- Display unit
- AWD control unit
- BCM
- Steering angle sensor
- 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 A/T assembly

OK or NG

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

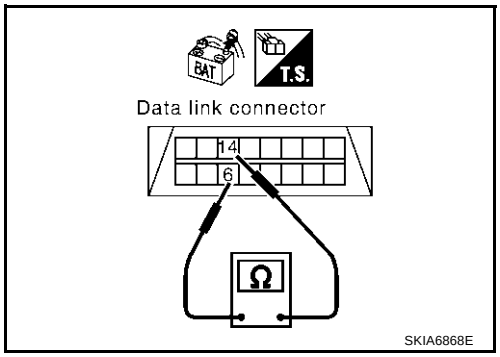
2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.

- ECM connector
- Harness connector M82
- Display unit connector
- AWD control unit connector
- BCM connector
- Steering angle sensor connector
- Unified meter and A/C amp. connector
- Harness connector M41

2. Check continuity between data link connector M5 terminals 6 (L) and 14 (R).

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



OK or NG

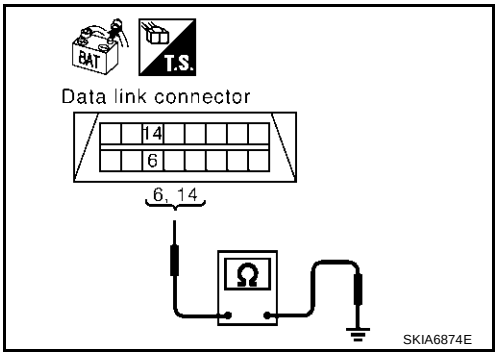
OK >> GO TO 3.
NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- 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 AWD control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M41.

3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M5 terminals 6 (L), 14 (R) and ground.

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



OK or NG

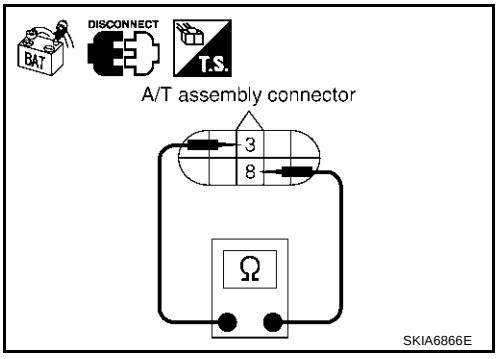
OK >> GO TO 4.
NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- 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 AWD control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M41.

4. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect A/T assembly connector.
2. Check continuity between A/T assembly harness connector F44 terminals 3 (L) and 8 (R).

3 (L) - 8 (R) : Continuity should not exist.



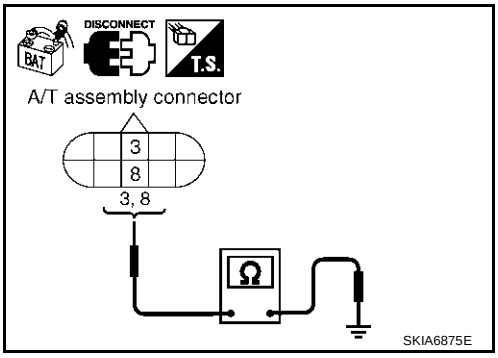
OK or NG

OK >> GO TO 5.
NG >> Repair harness between A/T assembly and harness connector F102.

5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between A/T assembly harness connector F44 terminals 3 (L), 8 (R) and ground.

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



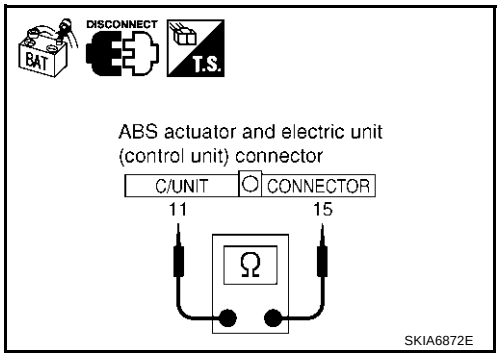
OK or NG

OK >> GO TO 6.
NG >> Repair harness between A/T assembly and harness connector F102.

6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector and harness connector E205.
2. Check continuity between ABS actuator and electric unit (control unit) harness connector E56 terminals 11 (L) and 15 (R).

11 (L) - 15 (R) : Continuity should not exist.



OK or NG

OK >> GO TO 7.

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

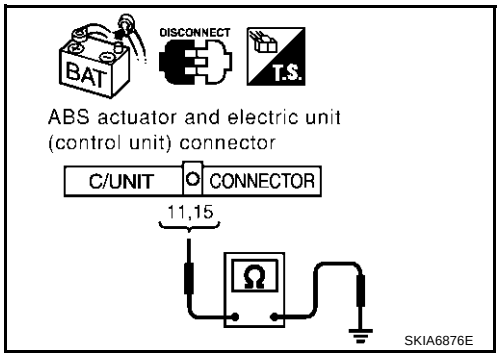
- Harness between ABS actuator and electric unit (control unit) and harness connector E211.
- Harness between ABS actuator and electric unit (control unit) and harness connector E205.

7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between ABS actuator and electric unit (control unit) harness connector E56 terminals 11 (L), 15 (R) and ground.

11 (L) - Ground : Continuity should not exist.

15 (R) - Ground : Continuity should not exist.



OK or NG

OK >> GO TO 8.

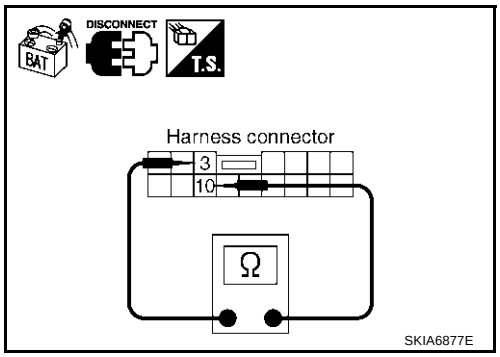
NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between ABS actuator and electric unit (control unit) and harness connector E211.
- Harness between ABS actuator and electric unit (control unit) and harness connector E205.

8. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B5 terminals 3 (L) and 10 (R).

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



OK or NG

OK >> GO TO 9.

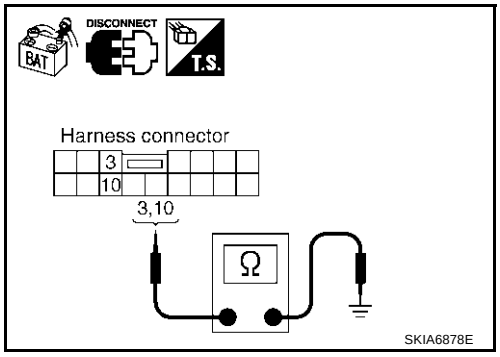
NG >> Repair harness between harness connector B5 and harness connector B5.

9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B5 terminals 3 (L), 10 (R) and ground.

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

10 (R) - Ground : Continuity should not exist.



OK or NG

OK >> GO TO 10.

NG >> Repair harness between harness connector B5 and harness connector B5.

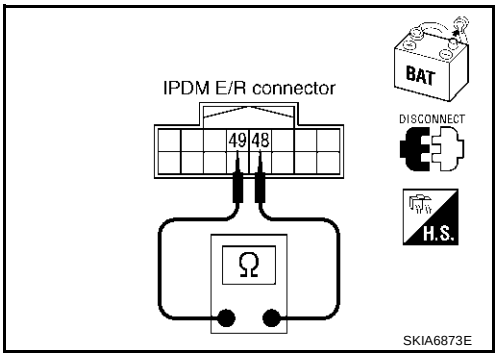
10. CHECK HARNESS FOR SHORT CIRCUIT

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

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

OK or NG

OK >> GO TO 11.
NG >> Repair harness between IPDM E/R and harness connector E205.



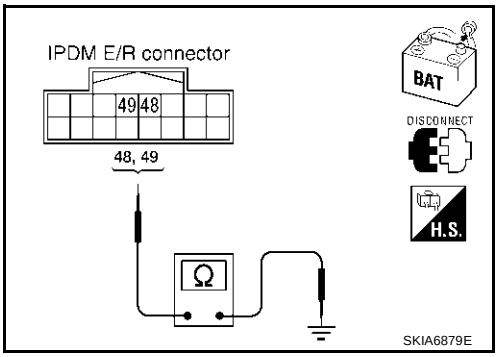
11. CHECK HARNESS FOR SHORT CIRCUIT

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

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

OK or NG

OK >> GO TO 12.
NG >> Repair harness between IPDM E/R and harness connector E205.



12. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to LAN-165, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION" .

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-137, "Work Flow" .
NG >> Replace ECM and/or IPDM E/R.

IPDM E/R Ignition Relay Circuit Check

AKS007SZ

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

- IPDM E/R power supply circuit. Refer to PG-43, "IPDM E/R Power/Ground Circuit Inspection" .
- Ignition power supply circuit. Refer to PG-12, "IGNITION POWER SUPPLY - IGNITION SW. IN “ON” AND/OR “START”" .

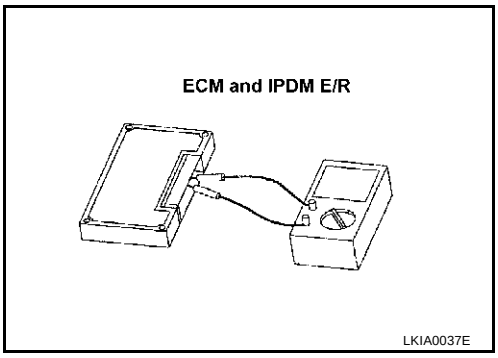
Component Inspection

AKS007T0

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



CAN SYSTEM (TYPE 5)

PFP:23710

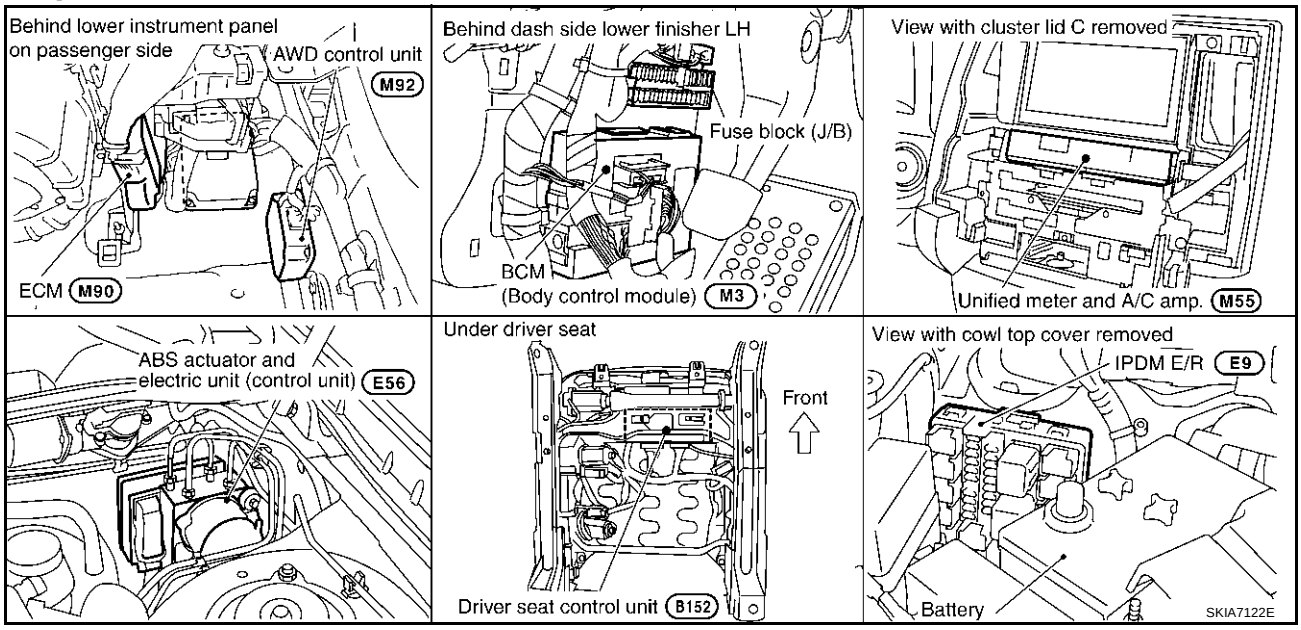
System Description

AKS007T1

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.

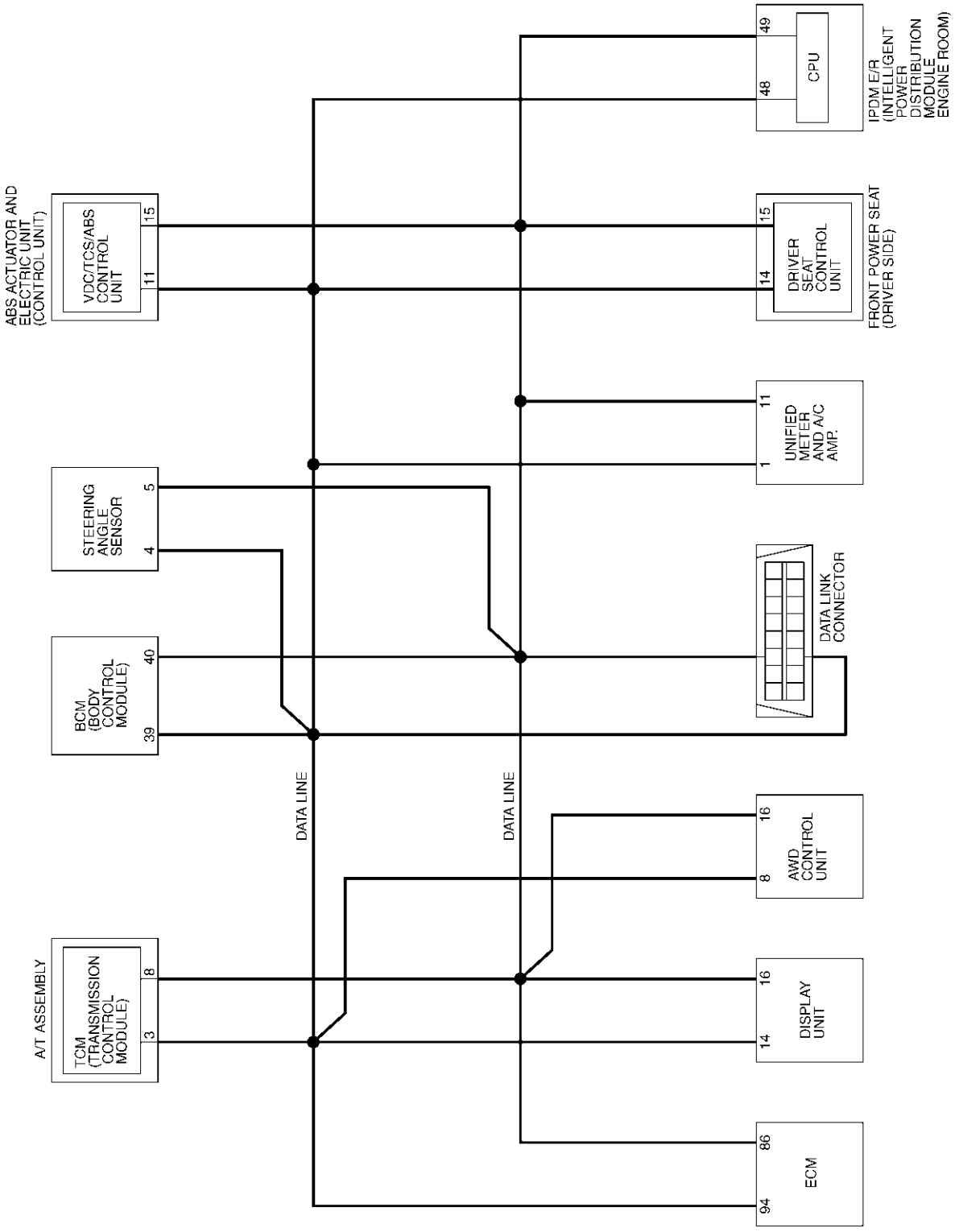
Component Parts and Harness Connector Location

AKS007T2



Schematic

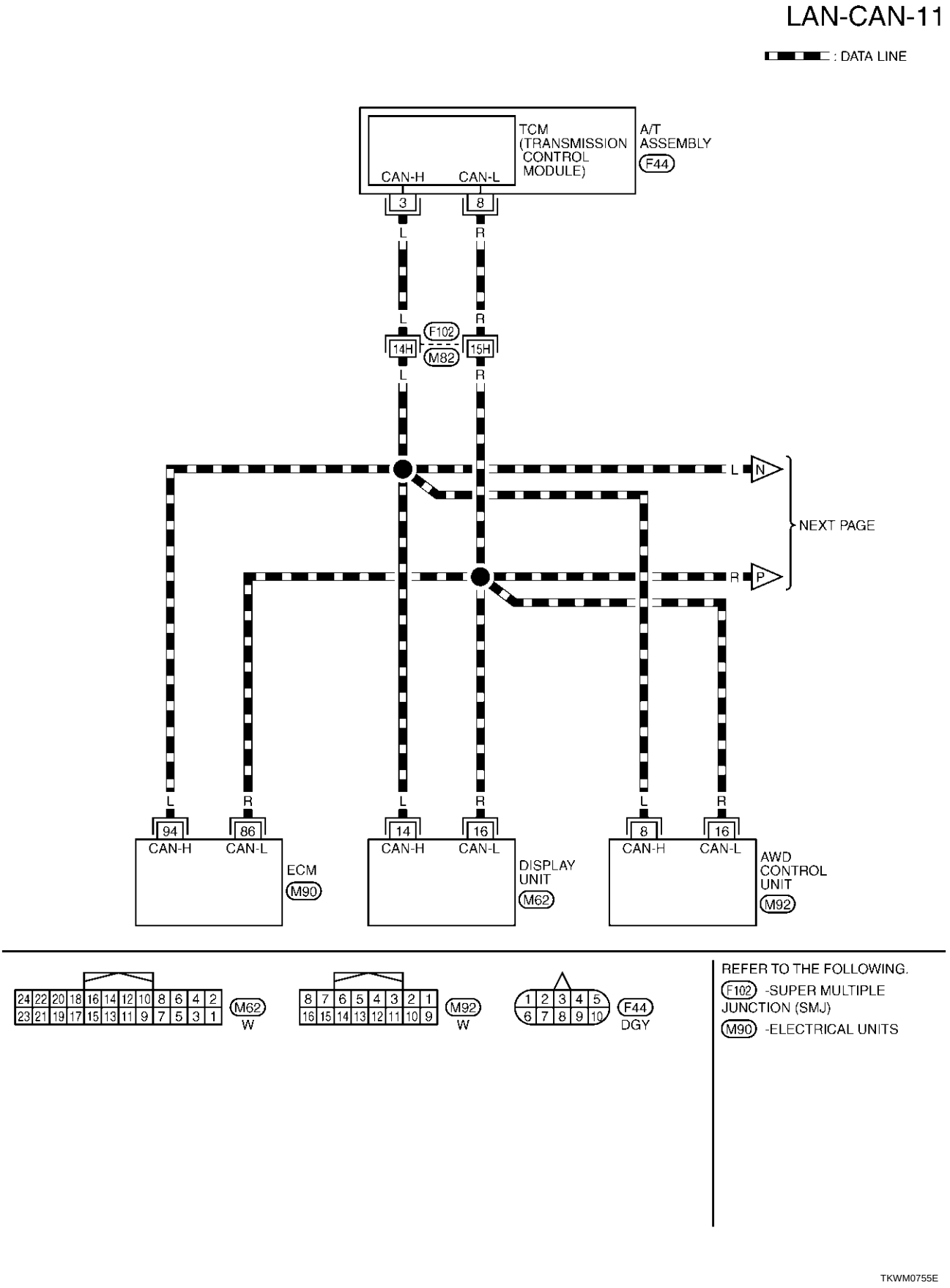
AKS007T3



TKWM0754E

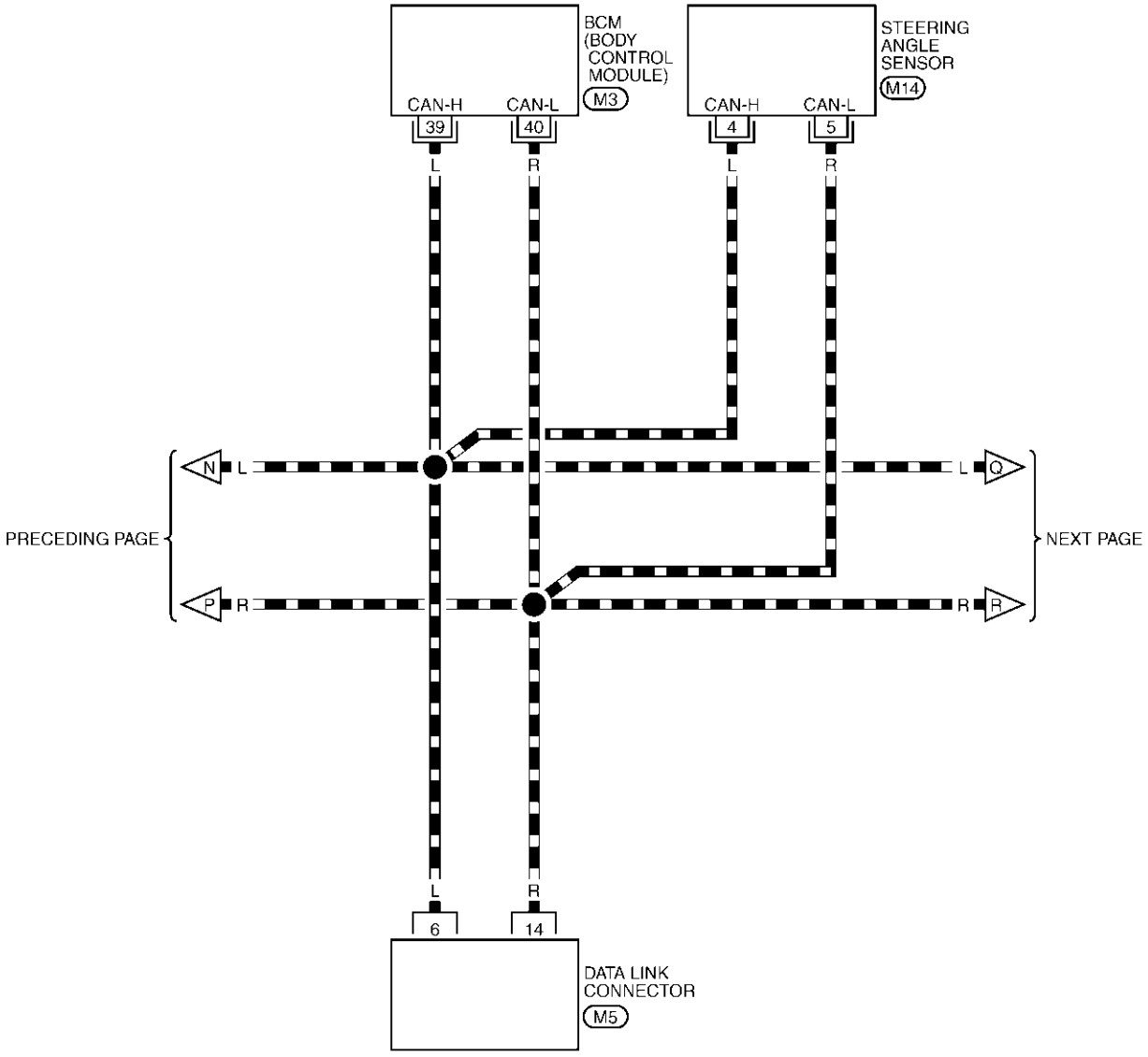
Wiring Diagram - CAN -

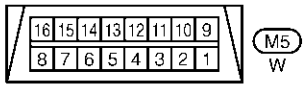
AKS007T4

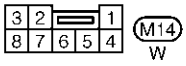


LAN-CAN-12

: DATA LINE



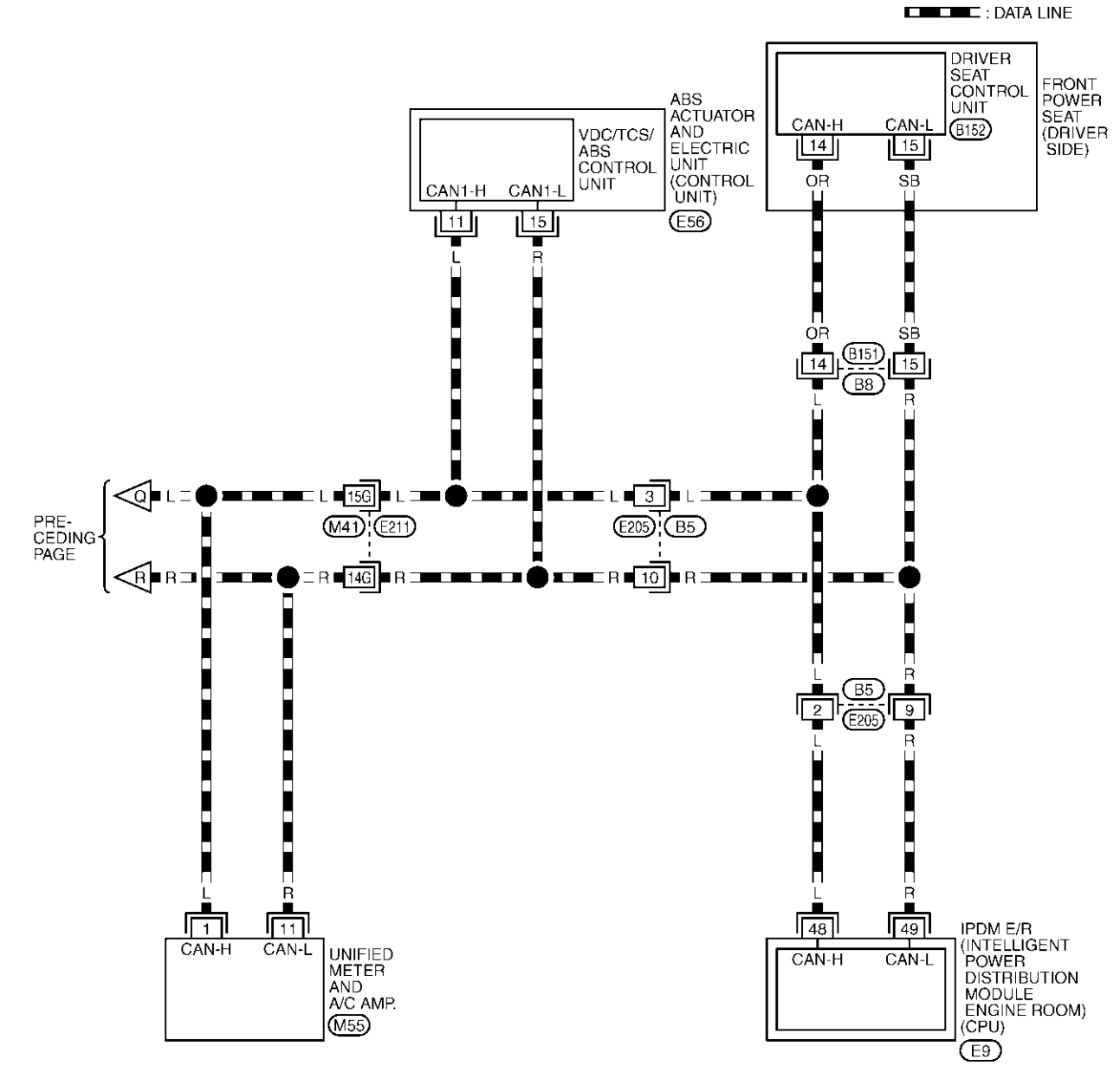


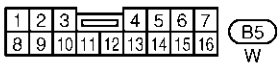


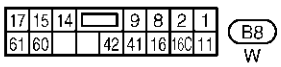
REFER TO THE FOLLOWING.
M3 -ELECTRICAL UNITS

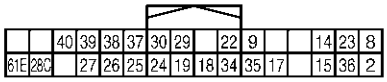
TKWM0756E

LAN-CAN-13









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

REFER TO THE FOLLOWING.

E211 -SUPER MULTIPLE JUNCTION (SMJ)

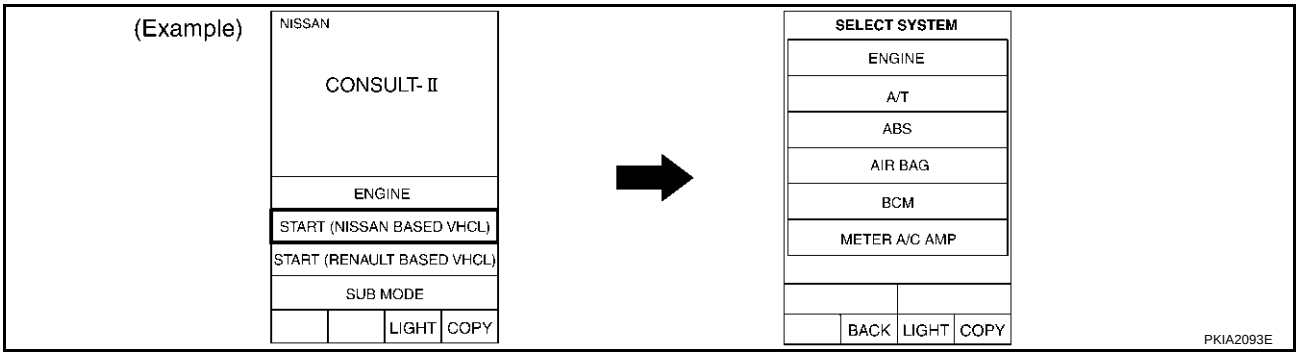
E56 -ELECTRICAL UNITS

TKWH0251E

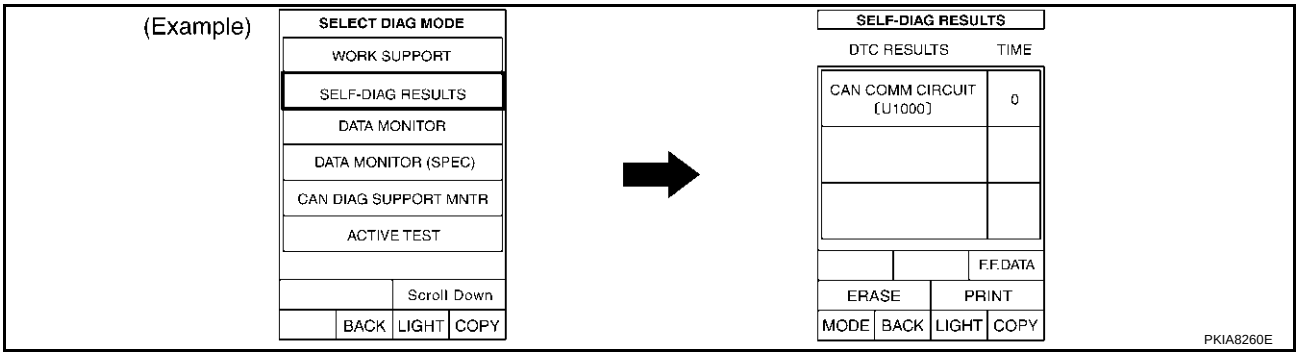
Work Flow

AKS00C4E

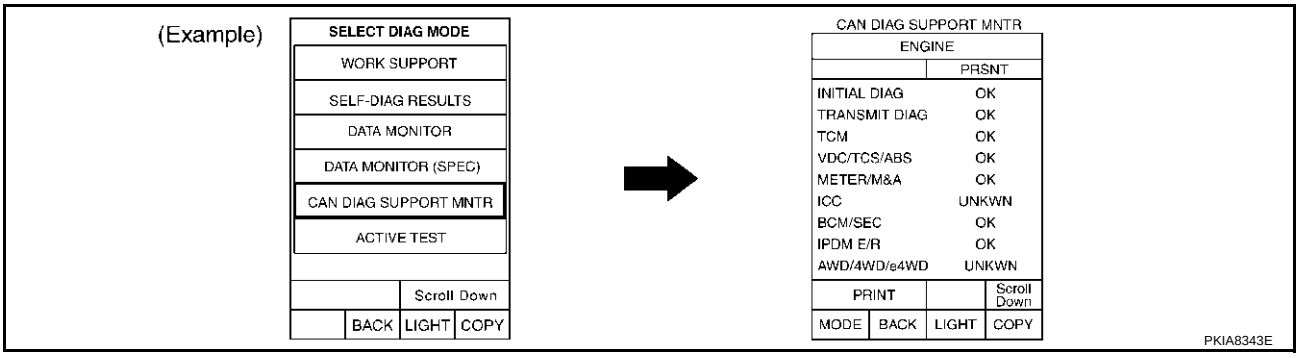
1. When there are no indications of “BCM”, “METER A/C AMP”, “AUTO DRIVE POS.” or “IPDM E/R” on “SELECT SYSTEM” display of CONSULT-II, print the “SELECT SYSTEM”.



2. Print all the data of “SELF-DIAG RESULTS” for “ENGINE”, “A/T”, “ALL MODE AWD/4WD”, “BCM”, “METER A/C AMP”, “ABS”, “AUTO DRIVE POS.”, and “IPDM E/R” displayed on CONSULT-II.



3. Print all the data of “CAN DIAG SUPPORT MNTR” for “ENGINE”, “A/T”, “ALL MODE AWD/4WD”, “BCM”, “METER A/C AMP”, “ABS”, “AUTO DRIVE POS.”, and “IPDM E/R” displayed on CONSULT-II.



4. Attach the printed sheet of “SELECT SYSTEM”, “SELF-DIAG RESULTS” and “CAN DIAG SUPPORT MNTR” onto the check sheet. Refer to LAN-173, "CHECK SHEET" .
5. 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-173, "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.
6. Check CAN communication line of the integrated display system. Refer to AV-97, "CAN Communication Line Inspection" .
7. Attach the CAN DIAG MONITOR check sheet onto the check sheet. Refer to LAN-173, "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-173, "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-97, "CAN Communication Line Inspection" .

9. According to the check sheet results (example), start inspection. Refer to LAN-175, "CHECK SHEET RESULTS (EXAMPLE)" .

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	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	–	CAN 2	–	CAN 5	–	CAN 7
ALL MODE AWD/4WD	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	UNKWN	–	UNKWN	–	–	–
AUTO DRIVE POS.	No indication	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	–	UNKWN	–	–	–	–

Symptoms :

Attach copy of
SELECT SYSTEM

Attach copy of
SELECT SYSTEM

Attach copy of
display unit
CAN DIAG MONITOR check sheet

PKIA8003E

Attach copy of ENGINE SELF-DIAG RESULTS	Attach copy of A/T SELF-DIAG RESULTS	Attach copy of ALL MODE AWD/4WD 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 AUTO DRIVE POS. SELF-DIAG RESULTS	Attach copy of IPDM E/R SELF-DIAG RESULTS
Attach copy of ENGINE CAN DIAG SUPPORT MNTR	Attach copy of A/T CAN DIAG SUPPORT MNTR	Attach copy of ALL MODE AWD/4WD 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	Attach copy of AUTO DRIVE POS. CAN DIAG SUPPORT MNTR	Attach copy of IPDM E/R CAN DIAG SUPPORT MNTR

PKIA8004E

CHECK SHEET RESULTS (EXAMPLE)

NOTE:

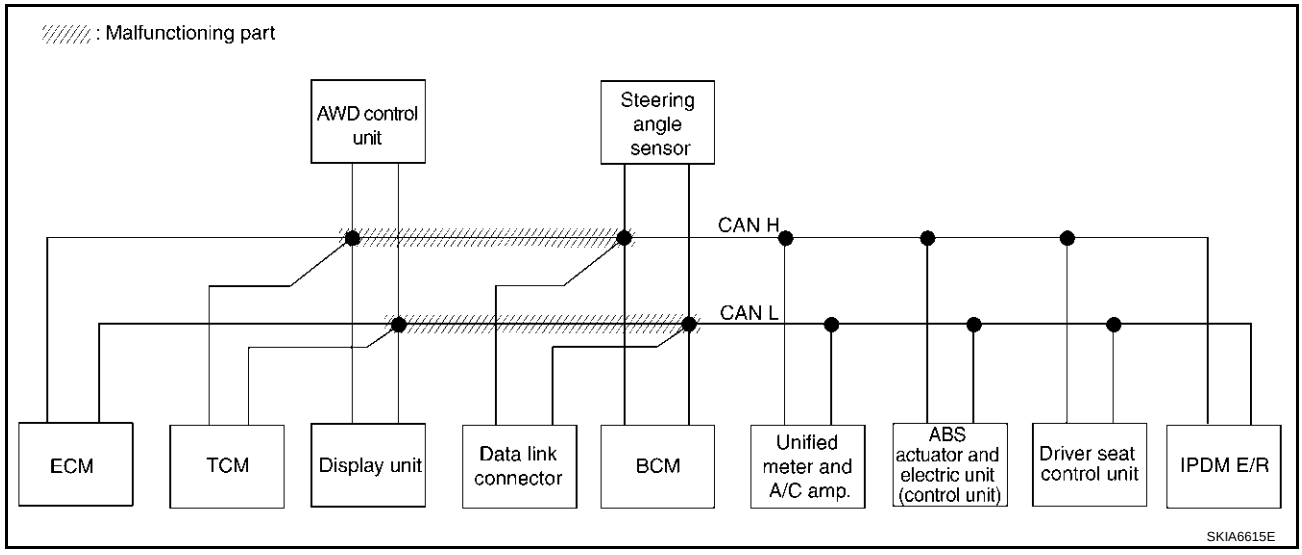
If “NG” is displayed on “INITIAL DIAG (Initial diagnosis)” or “CAN COMM” for the diagnosed control unit, replace the control unit.

Case 1

Check harness between TCM and data link connector. Refer to LAN-191, "Circuit Check Between TCM and Data Link Connector" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	–	CAN 2	–	CAN 5	–	CAN 7
ALL MODE AWD/4WD	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	UNKWN	–	UNKWN	–	–	–
AUTO DRIVE POS.	No indication	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	–	UNKWN	–	–	–	–

PKIA8005E

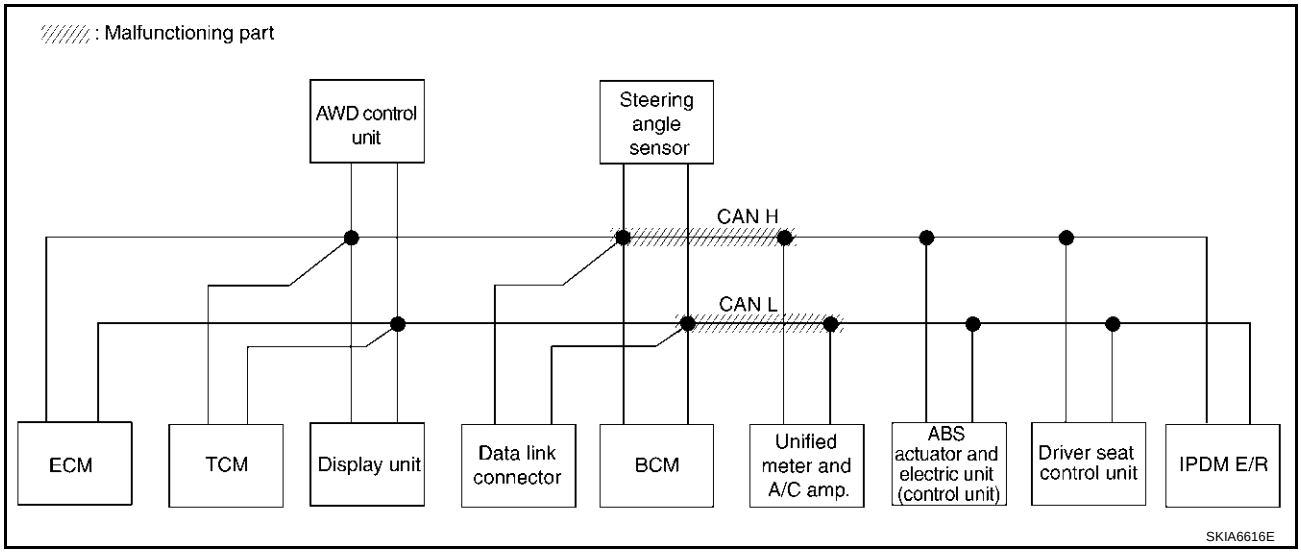


Case 2

Check harness between data link connector and unified meter and A/C amp. Refer to LAN-191, "Circuit Check Between Data Link Connector and Unified Meter and A/C Amp." .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	—	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	—	CAN 2	—	CAN 5	—	CAN 7
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	UNKWN	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	UNKWN	—	UNKWN	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

PKIA8006E

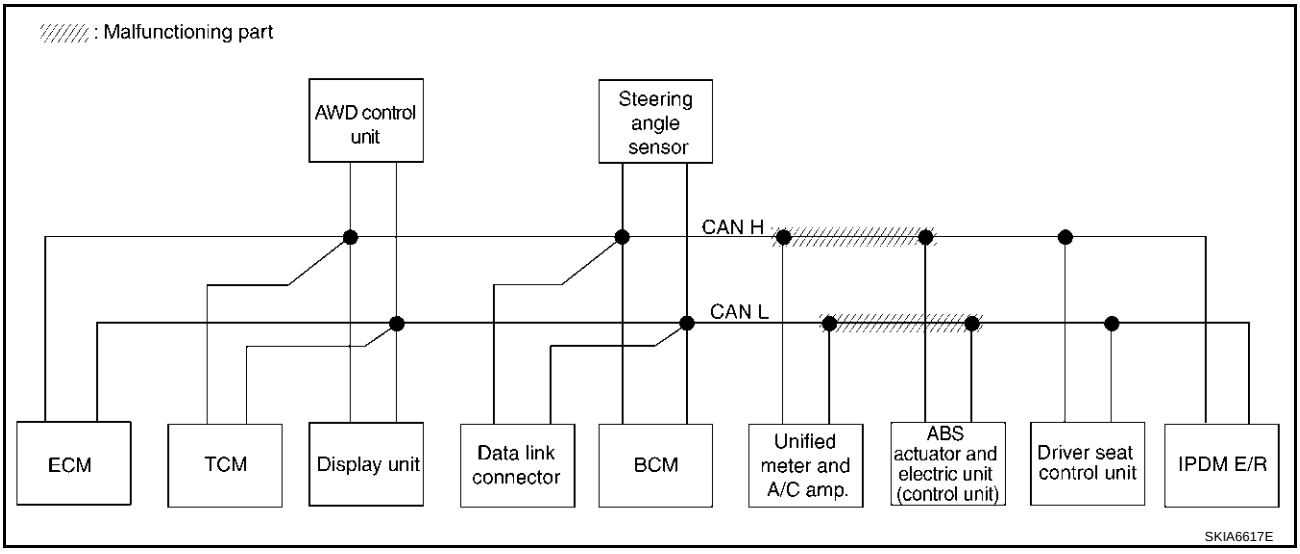


Case 3

Check harness between unified meter and A/C amp. and ABS actuator and electric unit (control unit). Refer to LAN-192, "Circuit Check Between Unified Meter and A/C Amp. and ABS Actuator and Electric Unit (Control Unit)" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	–	CAN 2	–	CAN 5	–	CAN 7
ALL MODE AWD/4WD	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	UNKWN	–	UNKWN	–	–	–
AUTO DRIVE POS.	No indication	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	–	UNKWN	–	–	–	–

PKIA8007E

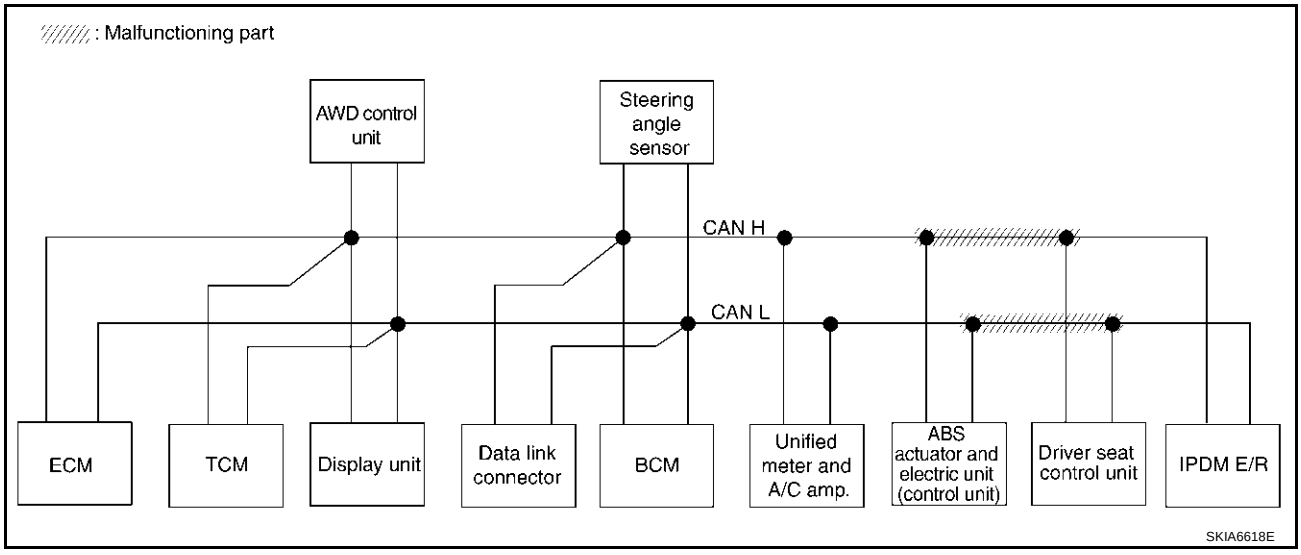


Case 4

Check harness between ABS actuator and electric unit (control unit) and driver seat control unit. Refer to LAN-193, "Circuit Check Between ABS Actuator and Electric Unit (Control Unit) and Driver Seat Control Unit" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	–	CAN 2	–	CAN 5	–	CAN 7
ALL MODE AWD/4WD	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	UNKWN	–	UNKWN	–	–	–
AUTO DRIVE POS.	No indication	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	–	UNKWN	–	–	–	–

PKIA8008E

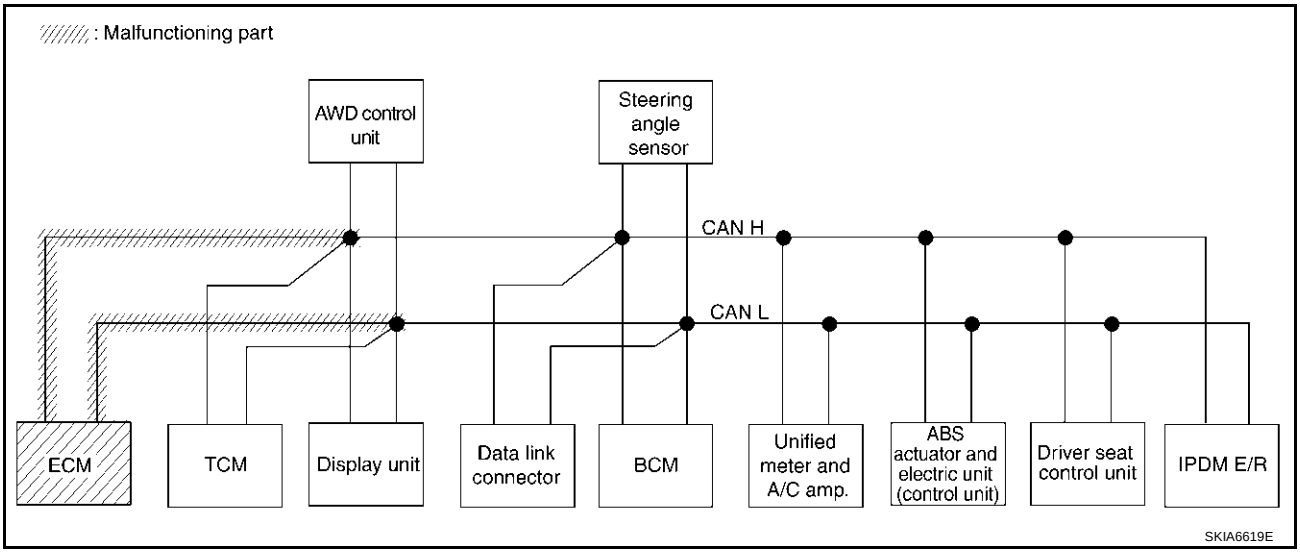


Case 5

Check ECM circuit. Refer to LAN-193, "ECM Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	–	CAN 2	–	CAN 5	–	CAN 7
ALL MODE AWD/4WD	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	UNKWN	–	UNKWN	–	–	–
AUTO DRIVE POS.	No indication	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	–	UNKWN	–	–	–	–

PKIA8009E

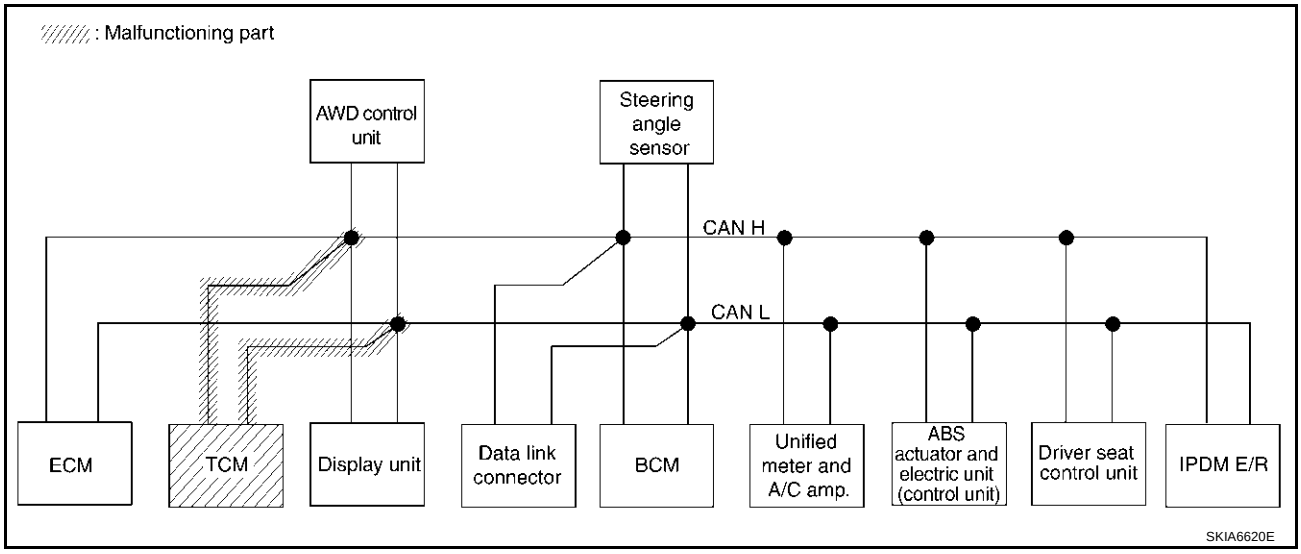


Case 6

Check TCM circuit. Refer to LAN-194, "TCM Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN ✓	–	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN ✓	UNKWN ✓	–	–	–	–	–	UNKWN ✓	UNKWN ✓	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	–	CAN 2	–	CAN 5	–	CAN 7
ALL MODE AWD/4WD	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN ✓	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN ✓	–	UNKWN	–	UNKWN	–	–	–
AUTO DRIVE POS.	No indication	NG	UNKWN	–	UNKWN ✓	–	–	UNKWN	–	UNKWN	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	–	UNKWN	–	–	–	–

PKIA8010E

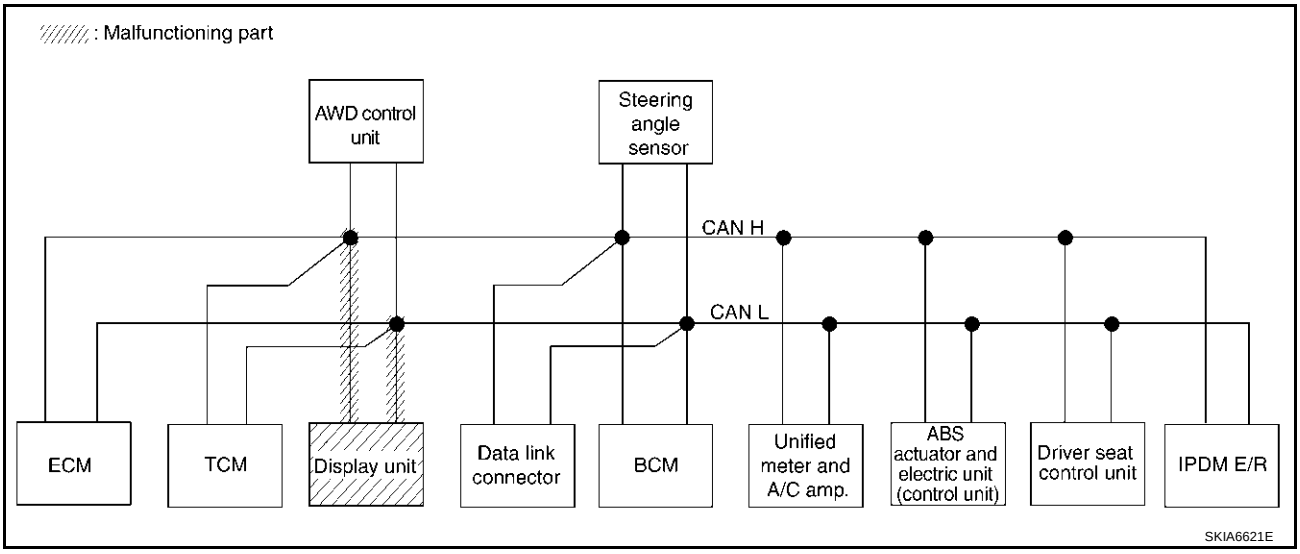


Case 7

Check display unit circuit. Refer to LAN-194, "Display Unit Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1 ✓	CAN 3 ✓	–	–	–	CAN 2 ✓	–	CAN 5 ✓	–	CAN 7 ✓
ALL MODE AWD/4WD	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	UNKWN	–	UNKWN	–	–	–
AUTO DRIVE POS.	No indication	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	–	UNKWN	–	–	–	–

PKIA8011E

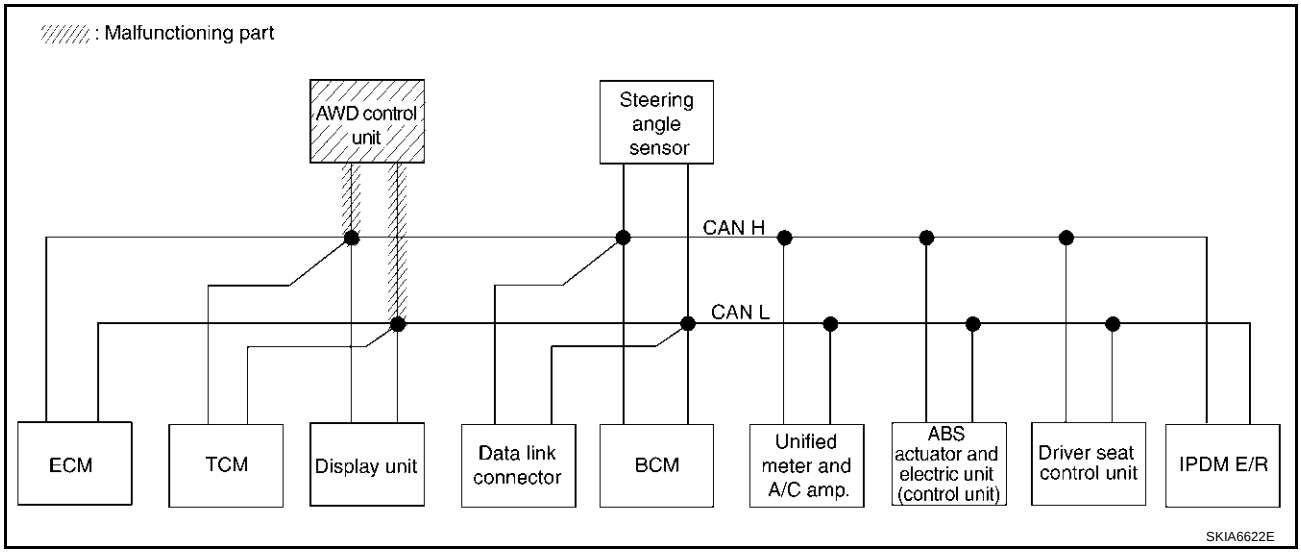


Case 8

Check AWD control unit circuit. Refer to LAN-195, "AWD Control Unit Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	–	CAN 2	–	CAN 5	–	CAN 7
ALL MODE AWD/4WD	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	UNKWN	–	UNKWN	–	–	–
AUTO DRIVE POS.	No indication	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	–	UNKWN	–	–	–	–

PKIA8012E

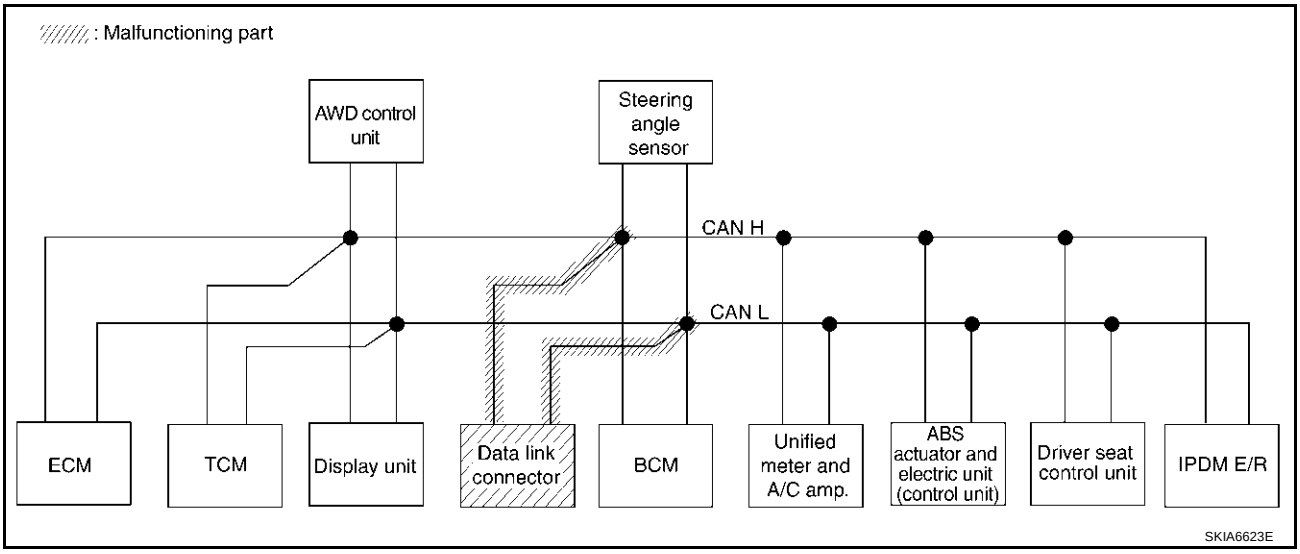


Case 9

Check data link connector circuit. Refer to LAN-195, "Data Link Connector Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	–	CAN 2	–	CAN 5	–	CAN 7
ALL MODE AWD/4WD	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	UNKWN	–	UNKWN	–	–	–
AUTO DRIVE POS.	No indication	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	–	UNKWN	–	–	–	–

PKIA8013E

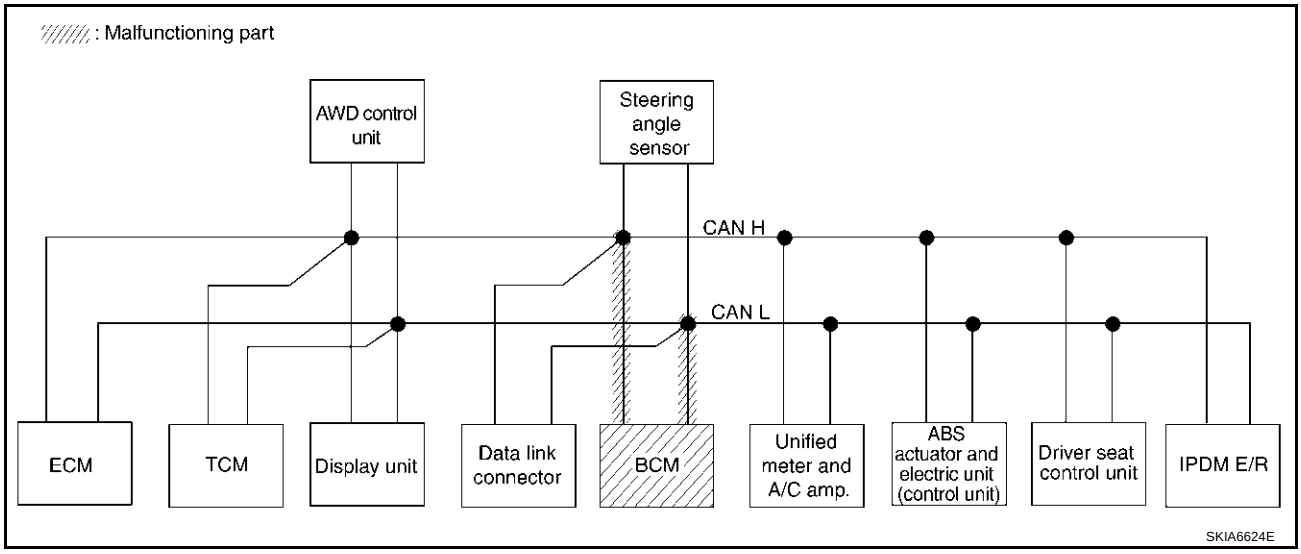


Case 10

Check BCM circuit. Refer to LAN-196, "BCM Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	—	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	—	CAN 2	—	CAN 5	—	CAN 7
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	UNKWN	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	UNKWN	—	UNKWN	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

PKIA8014E

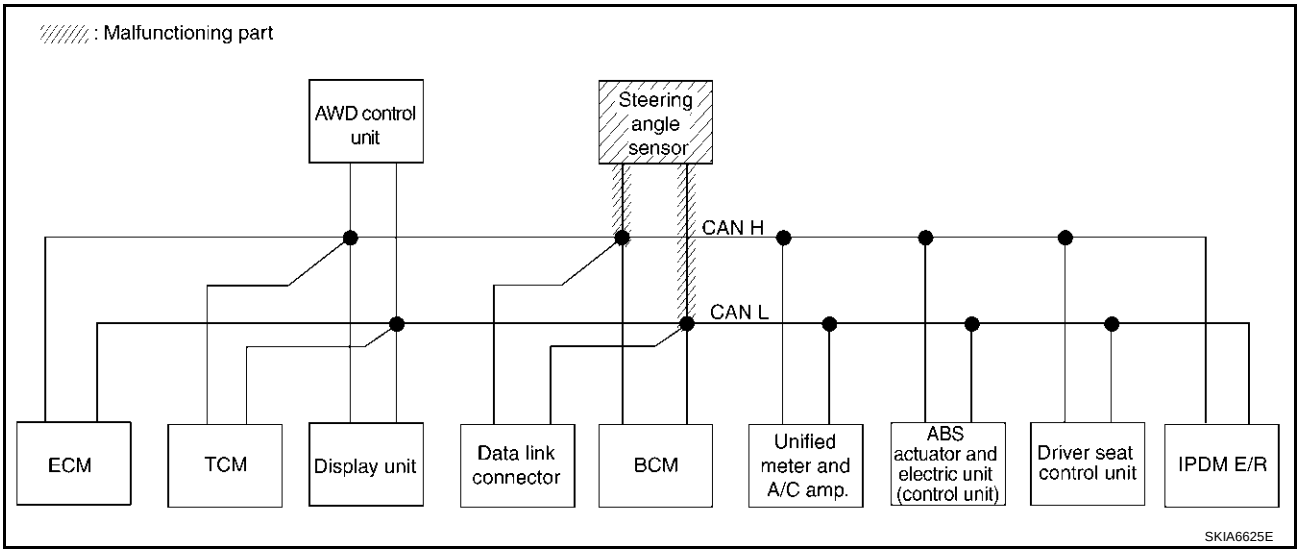


Case 11

Check steering angle sensor circuit. Refer to LAN-196, "Steering Angle Sensor Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	–	CAN 2	–	CAN 5	–	CAN 7
ALL MODE AWD/4WD	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	UNKWN	–	UNKWN	–	–	–
AUTO DRIVE POS.	No indication	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	–	UNKWN	–	–	–	–

PKIA8015E

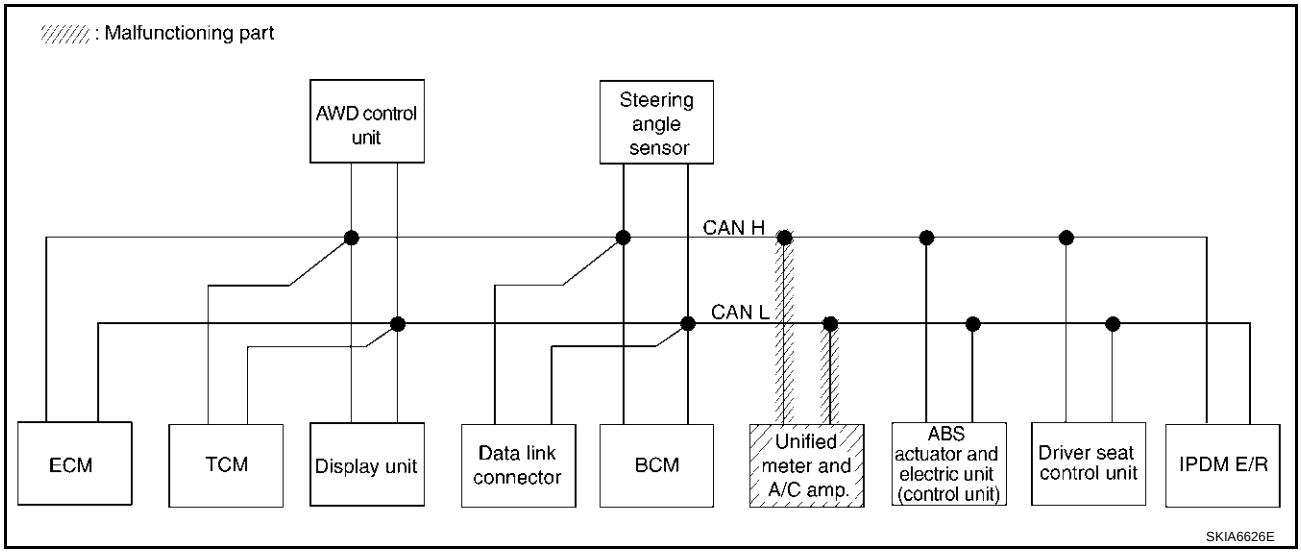


Case 12

Check unified meter and A/C amp. circuit. Refer to LAN-197, "Unified Meter and A/C Amp. Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	–	CAN 2	–	CAN 5	–	CAN 7
ALL MODE AWD/4WD	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	UNKWN	–	UNKWN	–	–	–
AUTO DRIVE POS.	No indication	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	–	UNKWN	–	–	–	–

PKIA8016E

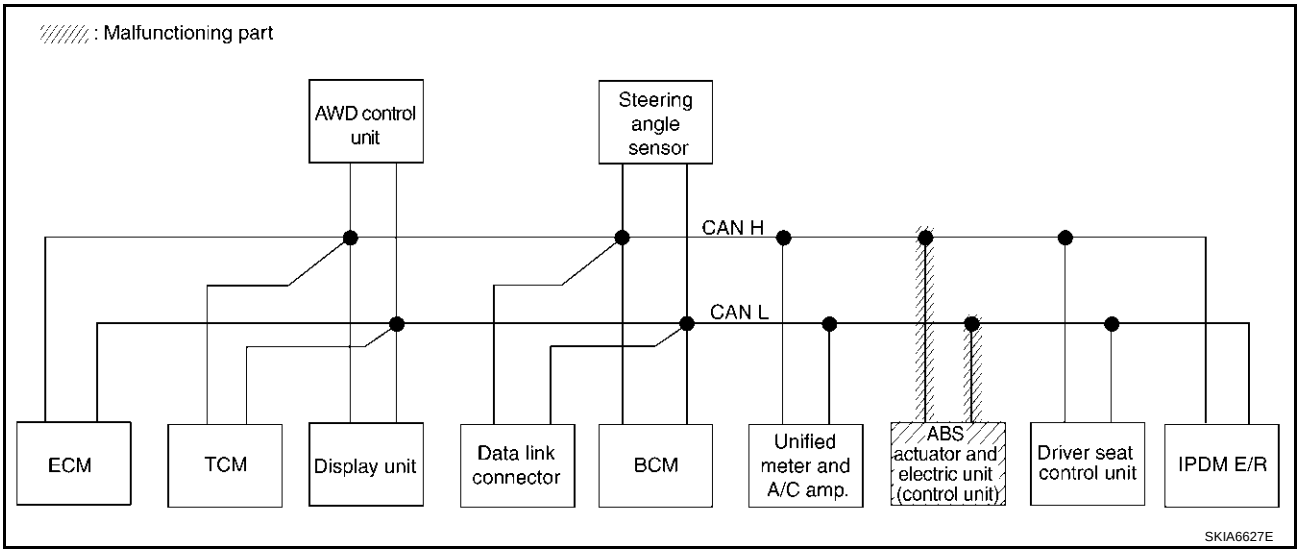


Case 13

Check ABS actuator and electric unit (control unit) circuit. Refer to LAN-197, "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	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	–	CAN 2	–	CAN 5	–	CAN 7
ALL MODE AWD/4WD	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	UNKWN	–	UNKWN	–	–	–
AUTO DRIVE POS.	No indication	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	–	UNKWN	–	–	–	–

PKIA8017E

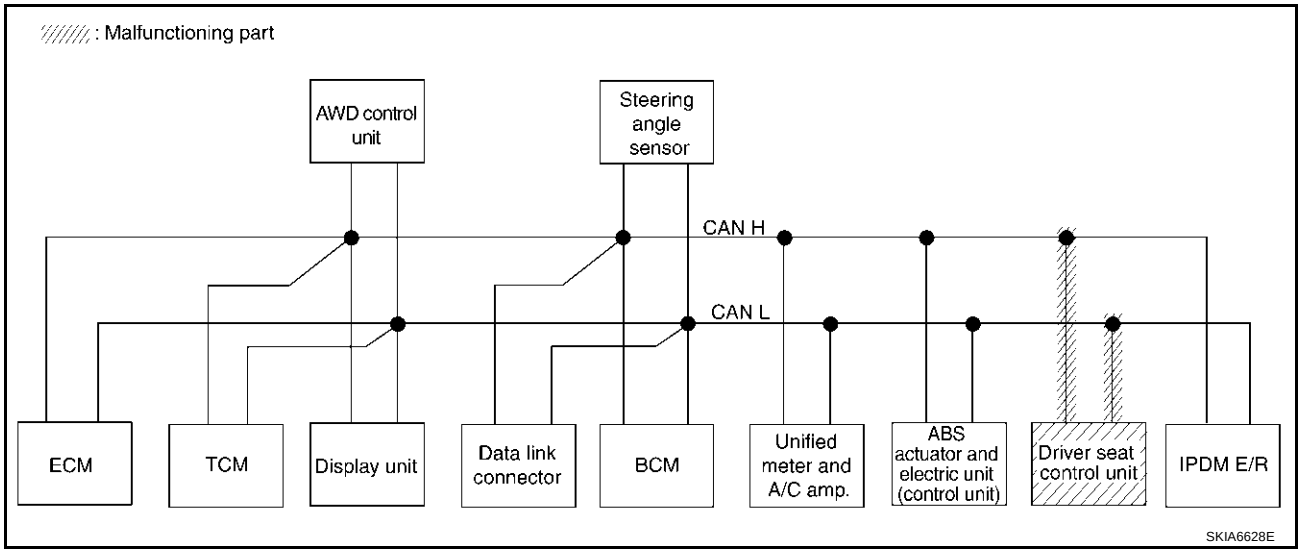


Case 14

Check driver seat control unit circuit. Refer to LAN-198, "Driver Seat Control Unit Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	—	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	—	CAN 2	—	CAN 5	—	CAN 7
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	UNKWN	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	UNKWN	—	UNKWN	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

PKIA8018E

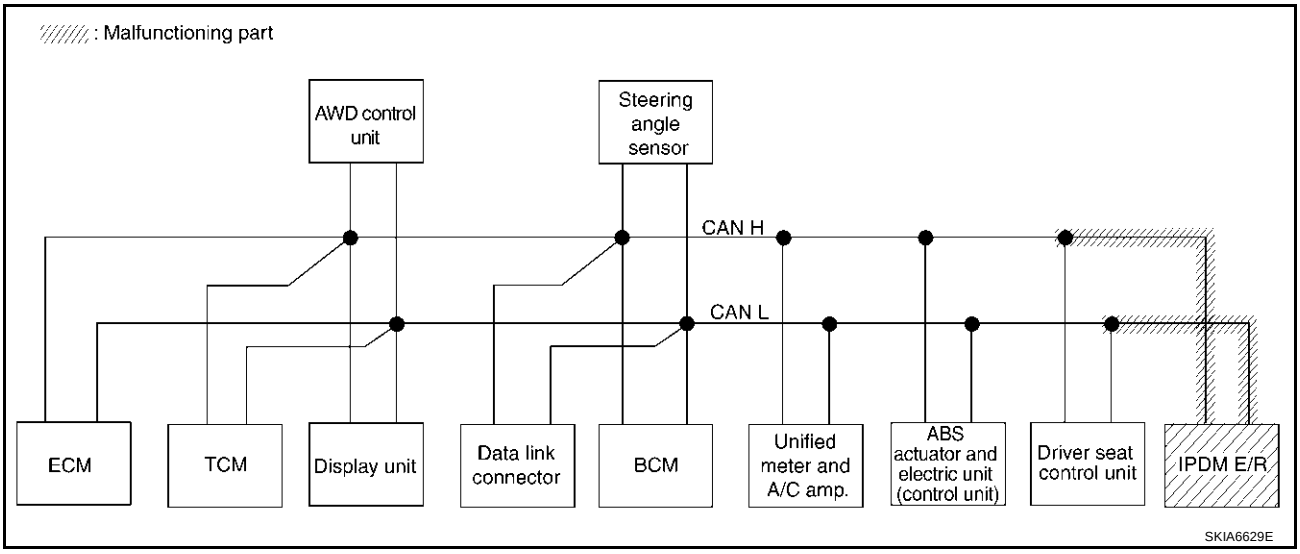


Case 15

Check IPDM E/R circuit. Refer to LAN-199, "IPDM E/R Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	UNKWN	UNKWN ✓
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	–	CAN 2	–	CAN 5	–	CAN 7 ✓
ALL MODE AWD/4WD	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	UNKWN ✓
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	UNKWN	–	UNKWN	–	–	–
AUTO DRIVE POS.	No indication	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	–	–
IPDM E/R	No indication ✓	–	UNKWN	UNKWN	–	–	–	UNKWN	–	–	–	–

PKIA8019E



Case 16

Check CAN communication circuit. Refer to LAN-199, "CAN Communication Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	—	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	—	CAN 2	—	CAN 5	—	CAN 7
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	UNKWN	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	UNKWN	—	UNKWN	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

PKIA8020E

Case 17

Check IPDM E/R ignition relay circuit continuously sticks “OFF”. Refer to LAN-204, "IPDM E/R Ignition Relay Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	—	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	—	CAN 2	—	CAN 5	—	CAN 7
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	UNKWN	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	UNKWN	—	UNKWN	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

PKIA8022E

Case 18

Check IPDM E/R ignition relay circuit continuously sticks “ON”. Refer to LAN-204, "IPDM E/R Ignition Relay Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	–	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
Display unit	–	CAN COMM	CAN 1	CAN 3	–	–	–	CAN 2	–	CAN 5	–	CAN 7
ALL MODE AWD/4WD	–	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	UNKWN	–
BCM	No indication	NG	UNKWN	UNKWN	–	–	–	–	–	UNKWN	–	UNKWN
METER A/C AMP	No indication	–	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	–	–	UNKWN	–
ABS	–	NG	UNKWN	UNKWN	UNKWN	–	UNKWN	–	UNKWN	–	–	–
AUTO DRIVE POS.	No indication	NG	UNKWN	–	UNKWN	–	–	UNKWN	–	UNKWN	–	–
IPDM E/R	No indication	–	UNKWN	UNKWN	–	–	–	UNKWN	–	–	–	–

PKIA8021E

Circuit Check Between TCM and Data Link Connector

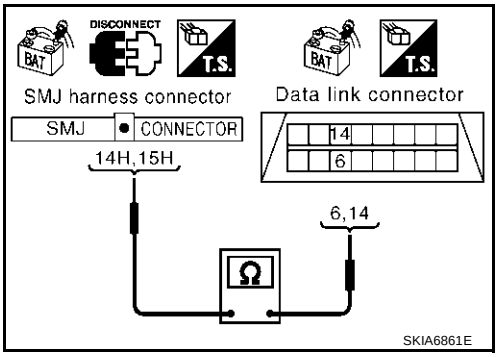
AKS007T6

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 14H (L), 15H (R) and data link connector M5 terminals 6 (L), 14 (R).

14H (L) - 6 (L) : Continuity should exist.

15H (R) - 14 (R) : Continuity should exist.



OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-171, "Work Flow" .

NG >> Repair harness.

Circuit Check Between Data Link Connector and Unified Meter and A/C Amp.

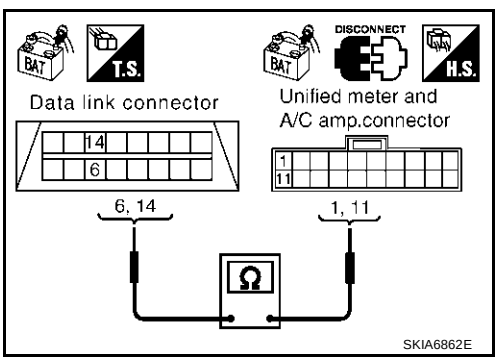
AKS007T7

1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and unified meter and A/C amp. connector.
4. Check continuity between data link connector M5 terminals 6 (L), 14 (R) and unified meter and A/C amp. harness connector M55 terminals 1 (L), 11 (R).

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

14 (R) - 11 (R) : Continuity should exist.



OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-171, "Work Flow" .

NG >> Repair harness.

Circuit Check Between Unified Meter and A/C Amp. and ABS Actuator and Electric Unit (Control Unit)

AKS007T8

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 M41
- Harness connector E211

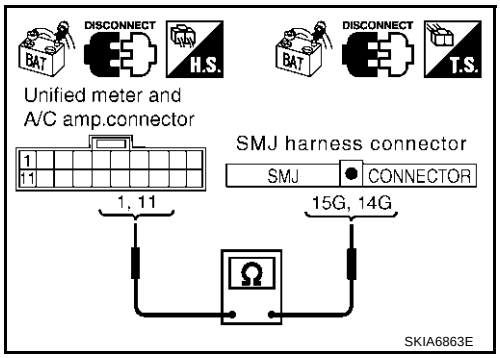
OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector and harness connector M41.
2. Check continuity between unified meter and A/C amp. harness connector M55 terminals 1 (L), 11 (R) and harness connector M41 terminals 15G (L), 14G (R).

1 (L) - 15G (L) : Continuity should exist.
11 (R) - 14G (R) : Continuity should exist.



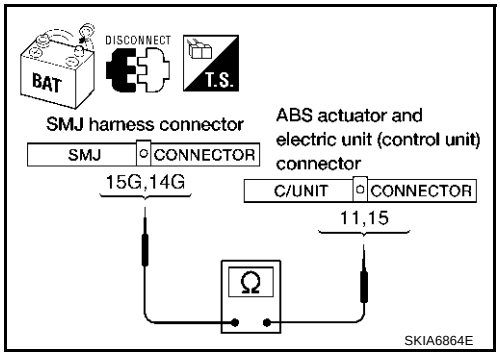
OK or NG

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 E211 terminals 15G (L), 14G (R) and ABS actuator and electric unit (control unit) harness connector E56 terminals 11 (L), 15 (R).

15G (L) - 11 (L) : Continuity should exist.
14G (R) - 15 (R) : Continuity should exist.



OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-171, "Work Flow" .
NG >> Repair harness.

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

AKS007T9

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 E205
- Harness connector B5

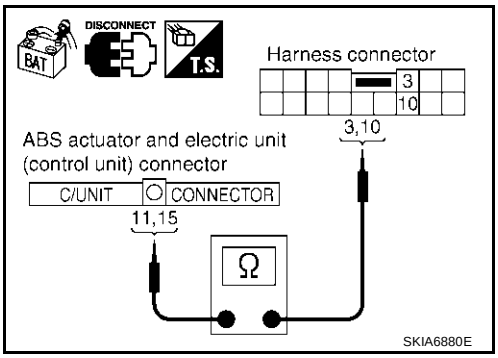
OK or NG

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 and harness connector E205.
2. Check continuity between ABS actuator and electric unit (control unit) harness connector E56 terminals 11 (L), 15 (R) and harness connector E205 terminals 3 (L), 10 (R).

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



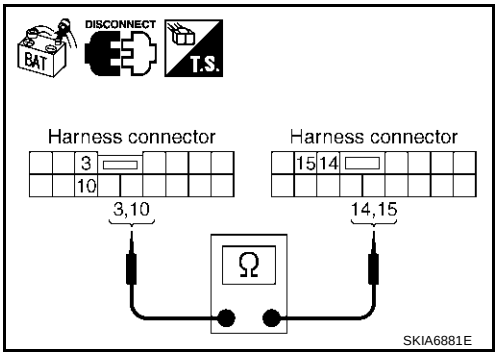
OK or NG

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

3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B8.
2. Check continuity between harness connector B5 terminals 3 (L), 10 (R) and harness connector B8 terminals 14 (L), 15 (R).

3 (L) - 14 (L) : Continuity should exist.
10 (R) - 15 (R) : Continuity should exist.



OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-171, "Work Flow" .
NG >> Repair harness.

ECM Circuit Check

AKS007TA

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.

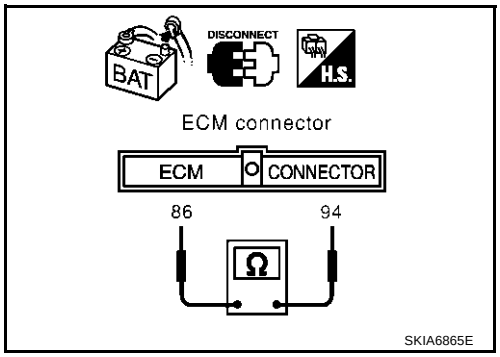
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M90 terminals 94 (L) and 86 (R).

94 (L) - 86 (R) : Approx. 108 - 132Ω

OK or NG

OK >> Replace ECM.
NG >> Repair harness between ECM and harness connector M82.



TCM Circuit Check

AKS007TB

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).

- A/T assembly connector
- Harness connector F102
- Harness connector M82

OK or NG

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

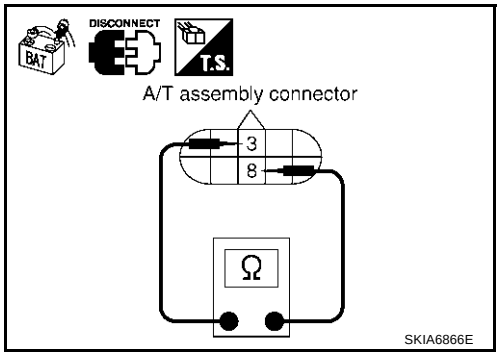
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect A/T assembly connector.
2. Check resistance between A/T assembly harness connector F44 terminals 3 (L) and 8 (R).

3 (L) - 8 (R) : Approx. 54 - 66Ω

OK or NG

OK >> Replace A/T assembly.
NG >> Repair harness between A/T assembly and display unit.



Display Unit Circuit Check

AKS007TC

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.

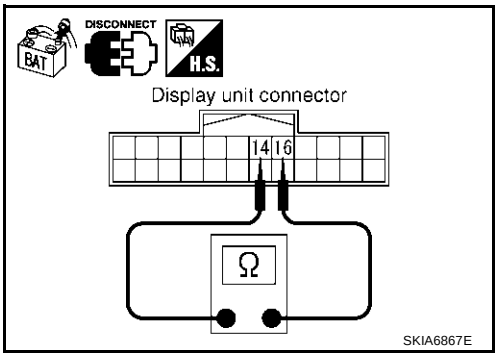
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect display unit connector.
2. Check resistance between display unit harness connector M62 terminals 14 (L) and 16 (R).

14 (L) - 16 (R) : Approx. 54 - 66Ω

OK or NG

OK >> Replace display unit.
NG >> Repair harness between display unit and harness connector M82.



AWD Control Unit Circuit Check

AKS007UE

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.

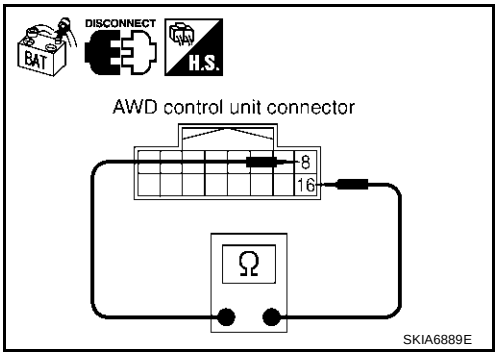
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect AWD control unit connector.
2. Check resistance between AWD control unit harness connector M92 terminals 8 (L) and 16 (R).

8 (L) - 16 (R) : Approx. 54 - 66Ω

OK or NG

OK >> Replace AWD control unit.
NG >> Repair harness between AWD control unit and harness connector M82.



Data Link Connector Circuit Check

AKS007TD

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.

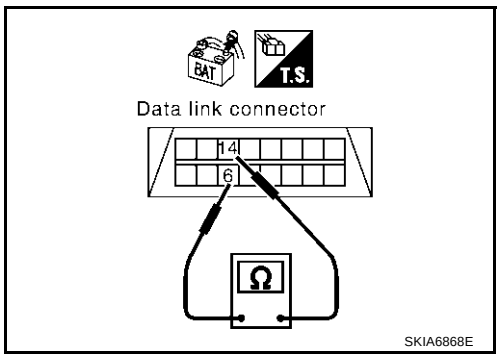
2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M5 terminals 6 (L) and 14 (R).

6 (L) - 14 (R) : Approx. 54 - 66Ω

OK or NG

OK >> Diagnose again. Refer to LAN-171, "Work Flow" .
NG >> Repair harness between data link connector and BCM.



BCM Circuit Check

AKS007TE

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.

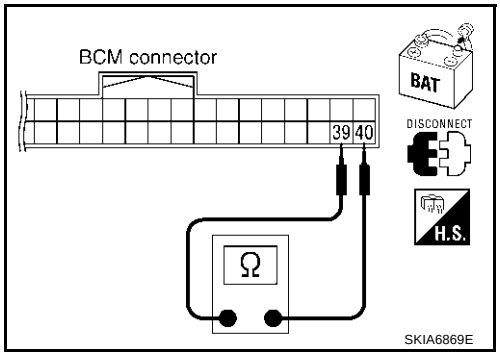
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M3 terminals 39 (L) and 40 (R).

39 (L) - 40 (R) : Approx. 54 - 66Ω

OK or NG

OK >> Replace BCM. Refer to BCS-28, "Removal and Installation of BCM" .
NG >> Repair harness between BCM and data link connector.



Steering Angle Sensor Circuit Check

AKS007TF

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.

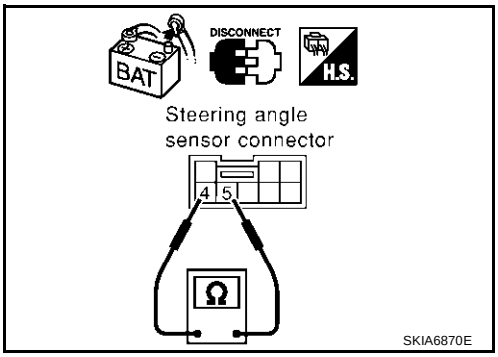
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M14 terminals 4 (L) and 5 (R).

4 (L) - 5 (R) : Approx. 54 - 66Ω

OK or NG

OK >> Replace steering angle sensor.
NG >> Repair harness between steering angle sensor and data link connector.



Unified Meter and A/C Amp. Circuit Check

AKS007TG

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.

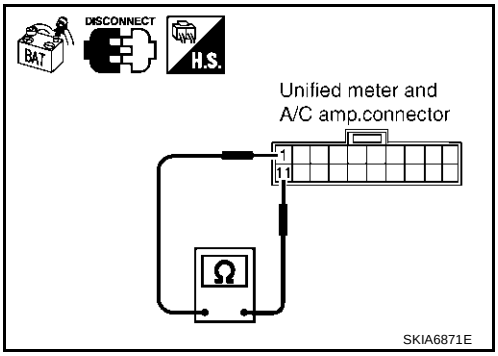
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M55 terminals 1 (L) and 11 (R).

1 (L) - 11 (R) : 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 harness connector M41.



ABS Actuator and Electric Unit (Control Unit) Circuit Check

AKS007TH

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).

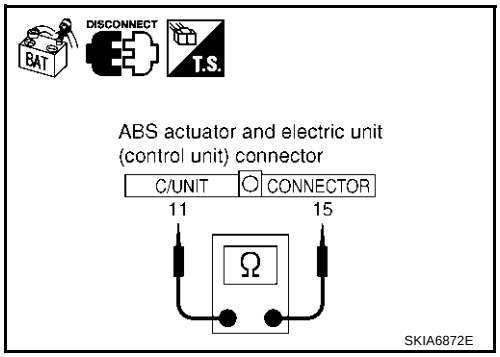
OK or NG

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 E56 terminals 11 (L) and 15 (R).

11 (L) - 15 (R) : 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 harness connector E205.

Driver Seat Control Unit Circuit Check

AKS007TI

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 B151
- Harness connector B8

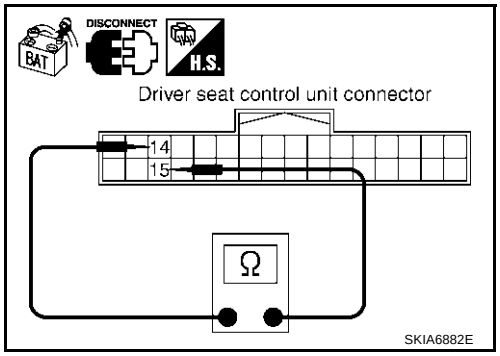
OK or NG

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 B152 terminals 14 (OR) and 15 (SB).

14 (OR) - 15 (SB) : Approx. 54 - 66Ω



OK or NG

OK >> Replace driver seat control unit.
NG >> Repair harness between driver seat control unit and harness connector B5.

IPDM E/R Circuit Check

AKS007TJ

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).

- IPDM E/R connector
- Harness connector E205
- Harness connector B5

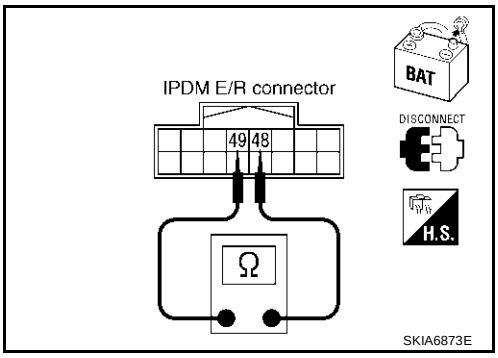
OK or NG

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 (R).

48 (L) - 49 (R) : Approx. 108 - 132Ω



OK or NG

OK >> Replace IPDM E/R.
NG >> Repair harness between IPDM E/R and harness connector B8.

CAN Communication Circuit Check

AKS007TK

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, control unit side, sensor side, meter side and harness side).

- ECM
- A/T assembly
- Display unit
- AWD control unit
- BCM
- Steering angle sensor
- Unified meter and A/C amp.
- ABS actuator and electric unit (control unit)
- Driver seat control unit
- IPDM E/R
- Between ECM and IPDM E/R
- Between ECM and A/T assembly

OK or NG

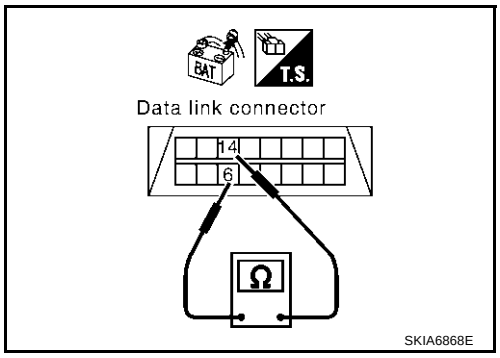
OK >> GO TO 2.
NG >> Repair terminal or connector.

2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
- ECM connector
- Harness connector M82
- Display unit connector
- AWD control unit connector
- BCM connector
- Steering angle sensor connector
- Unified meter and A/C amp. connector
- Harness connector M41

2. Check continuity between data link connector M5 terminals 6 (L) and 14 (R).

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



OK or NG

OK >> GO TO 3.

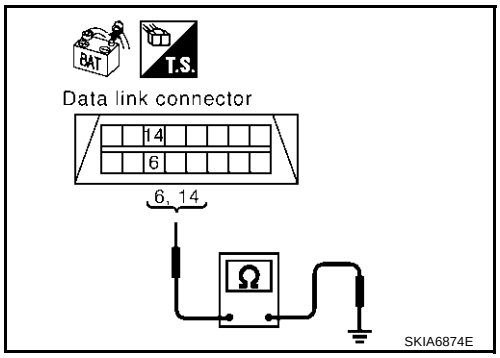
NG >> Check the following harnesses. If any harness is damaged, repair the harness.
- Harness between data link connector and ECM.
- Harness between data link connector and harness connector M82.
- Harness between data link connector and display unit.
- Harness between data link connector and AWD control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M41.

3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M5 terminals 6 (L), 14 (R) and ground.

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

14 (R) - 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 AWD control unit.
- Harness between data link connector and BCM.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M41.

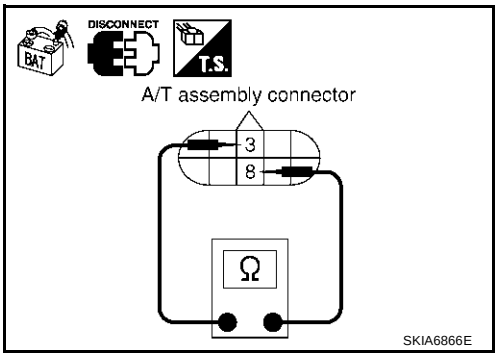
4. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect A/T assembly connector.
2. Check continuity between A/T assembly harness connector F44 terminals 3 (L) and 8 (R).

3 (L) - 8 (R) : Continuity should not exist.

OK or NG

OK >> GO TO 5.
NG >> Repair harness between A/T assembly and harness connector F102.



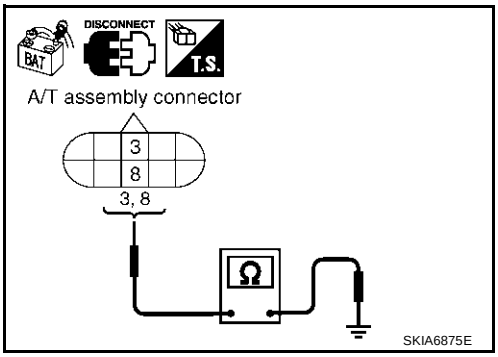
5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between A/T assembly harness connector F44 terminals 3 (L), 8 (R) and ground.

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

OK or NG

OK >> GO TO 6.
NG >> Repair harness between A/T assembly and harness connector F102.



6. CHECK HARNESS FOR SHORT CIRCUIT

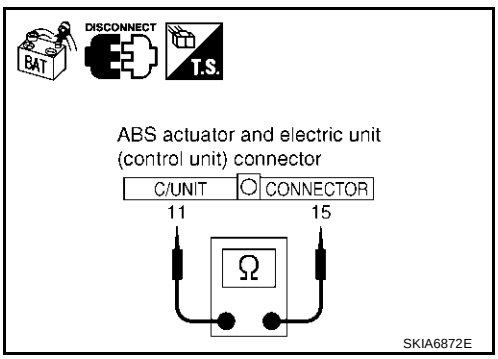
1. Disconnect ABS actuator and electric unit (control unit) connector and harness connector E205.
2. Check continuity between ABS actuator and electric unit (control unit) harness connector E56 terminals 11 (L) and 15 (R).

11 (L) - 15 (R) : Continuity should not exist.

OK or NG

OK >> GO TO 7.
NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between ABS actuator and electric unit (control unit) and harness connector E211.
- Harness between ABS actuator and electric unit (control unit) and harness connector E205.

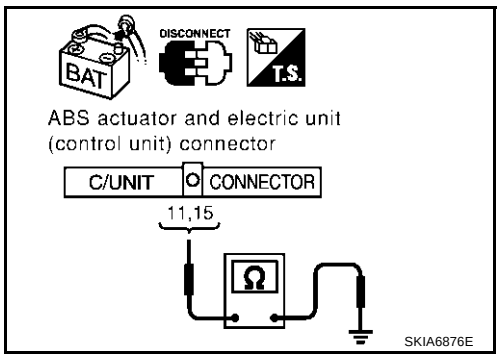


7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between ABS actuator and electric unit (control unit) harness connector E56 terminals 11 (L), 15 (R) and ground.

11 (L) - Ground : Continuity should not exist.

15 (R) - Ground : Continuity should not exist.



OK or NG

OK >> GO TO 8.

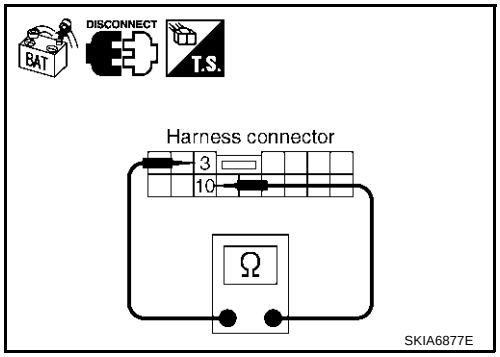
NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between ABS actuator and electric unit (control unit) and harness connector E211.
- Harness between ABS actuator and electric unit (control unit) and harness connector E205.

8. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B8.
2. Check continuity between harness connector B5 terminals 3 (L) and 10 (R).

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



OK or NG

OK >> GO TO 9.

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

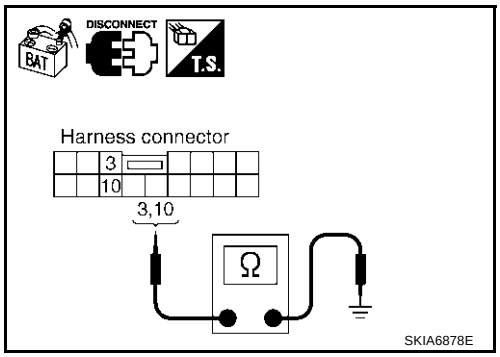
- Harness between harness connector B5 and harness connector B5.
- Harness between harness connector B5 and harness connector B8.

9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B5 terminals 3 (L), 10 (R) and ground.

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

10 (R) - 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 harness connector B5 and harness connector B5.
- Harness between harness connector B5 and harness connector B8.

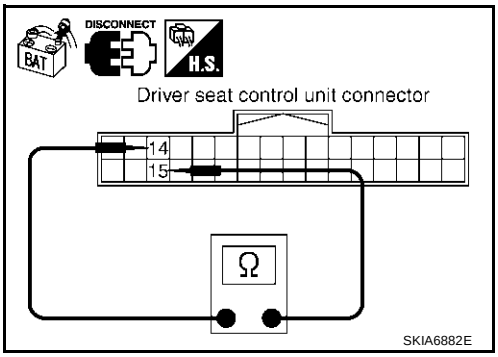
10. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect driver seat control unit connector.
2. Check continuity between driver seat control unit harness connector B152 terminals 14 (OR) and 15 (SB).

14 (OR) - 15 (SB) : Continuity should not exist.

OK or NG

OK >> GO TO 11.
NG >> Repair harness between driver seat control unit and harness connector B151.



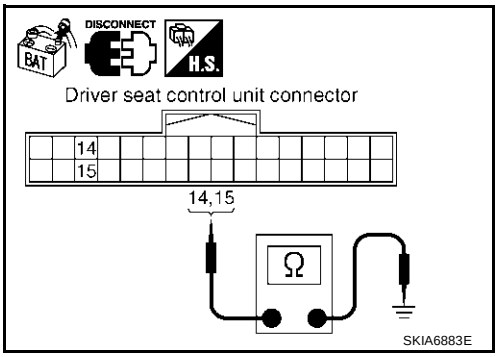
11. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between driver seat control unit harness connector B152 terminals 14 (OR), 15 (SB) and ground.

14 (OR) - Ground : Continuity should not exist.
15 (SB) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 12.
NG >> Repair harness between driver seat control unit and harness connector B151.



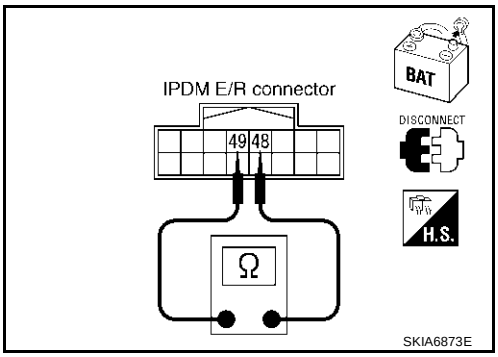
12. CHECK HARNESS FOR SHORT CIRCUIT

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

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

OK or NG

OK >> GO TO 13.
NG >> Repair harness between IPDM E/R and harness connector E205.



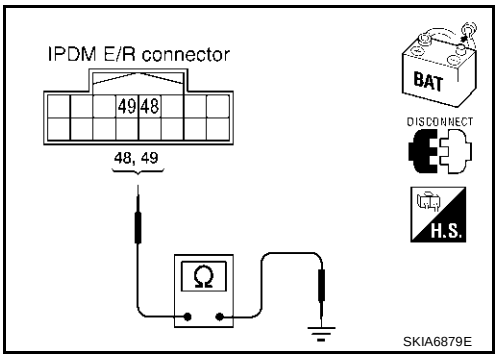
13. CHECK HARNESS FOR SHORT CIRCUIT

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

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

OK or NG

OK >> GO TO 14.
NG >> Repair harness between IPDM E/R and harness connector E205.



14. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to LAN-204, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION" .

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-171, "Work Flow" .
NG >> Replace ECM and/or IPDM E/R.

IPDM E/R Ignition Relay Circuit Check

AKS007TL

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

- IPDM E/R power supply circuit. Refer to PG-43, "IPDM E/R Power/Ground Circuit Inspection" .
- Ignition power supply circuit. Refer to PG-12, "IGNITION POWER SUPPLY - IGNITION SW. IN “ON” AND/OR “START”" .

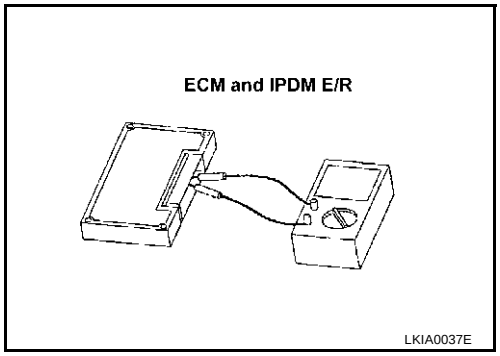
Component Inspection

AKS007TM

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



CAN SYSTEM (TYPE 6)

PFP:23710

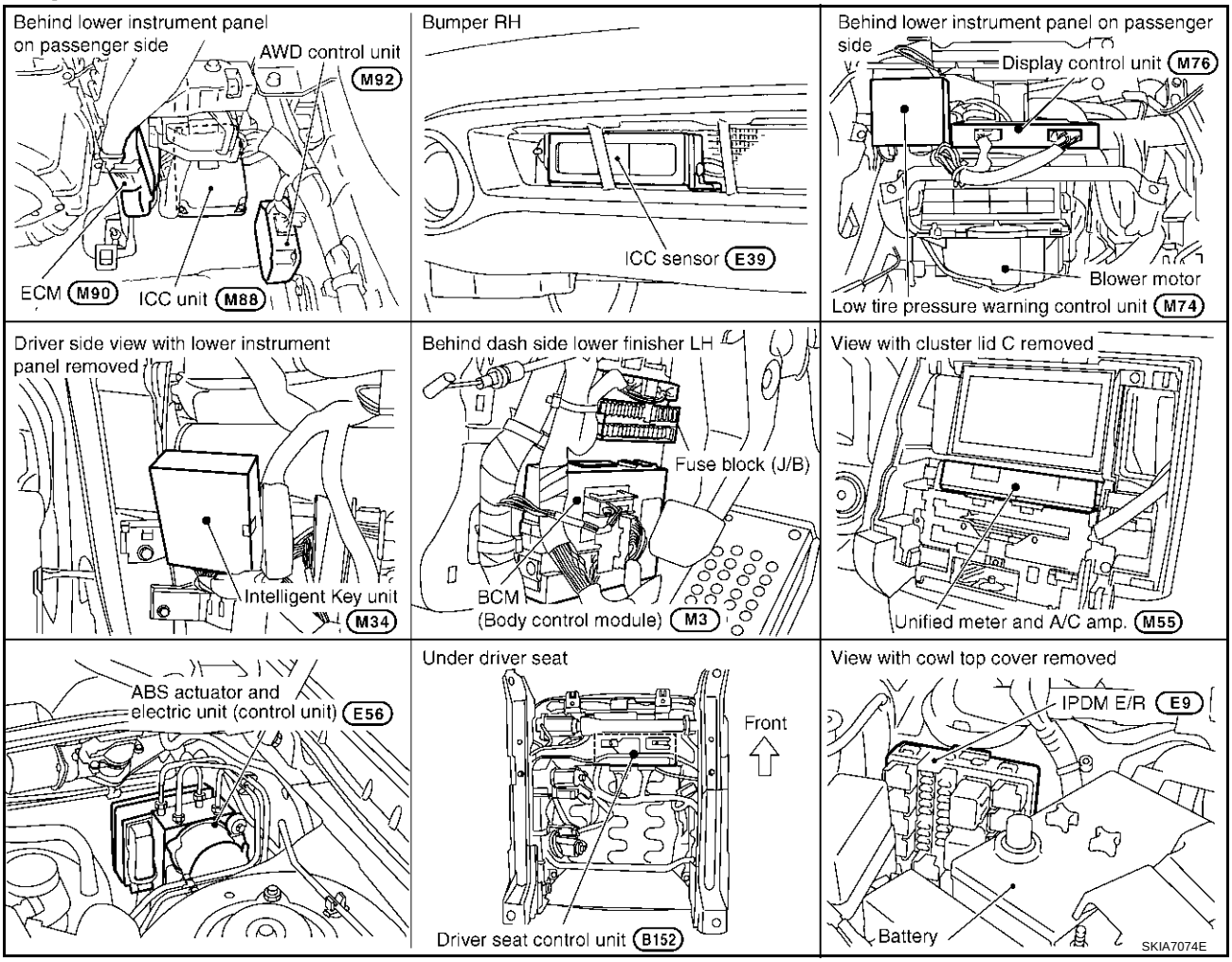
System Description

AKS007TN

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.

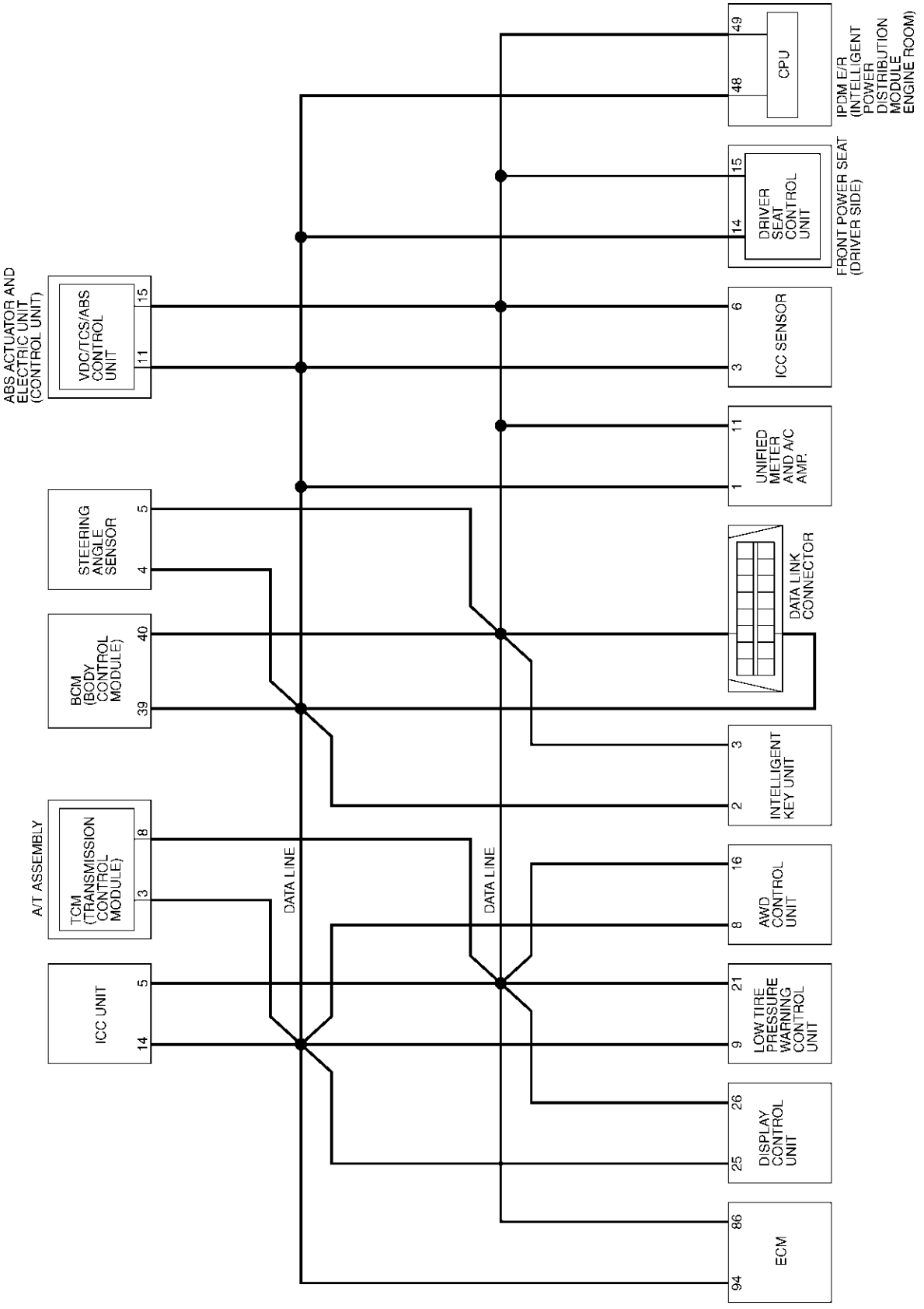
Component Parts and Harness Connector Location

AKS007TO



Schematic

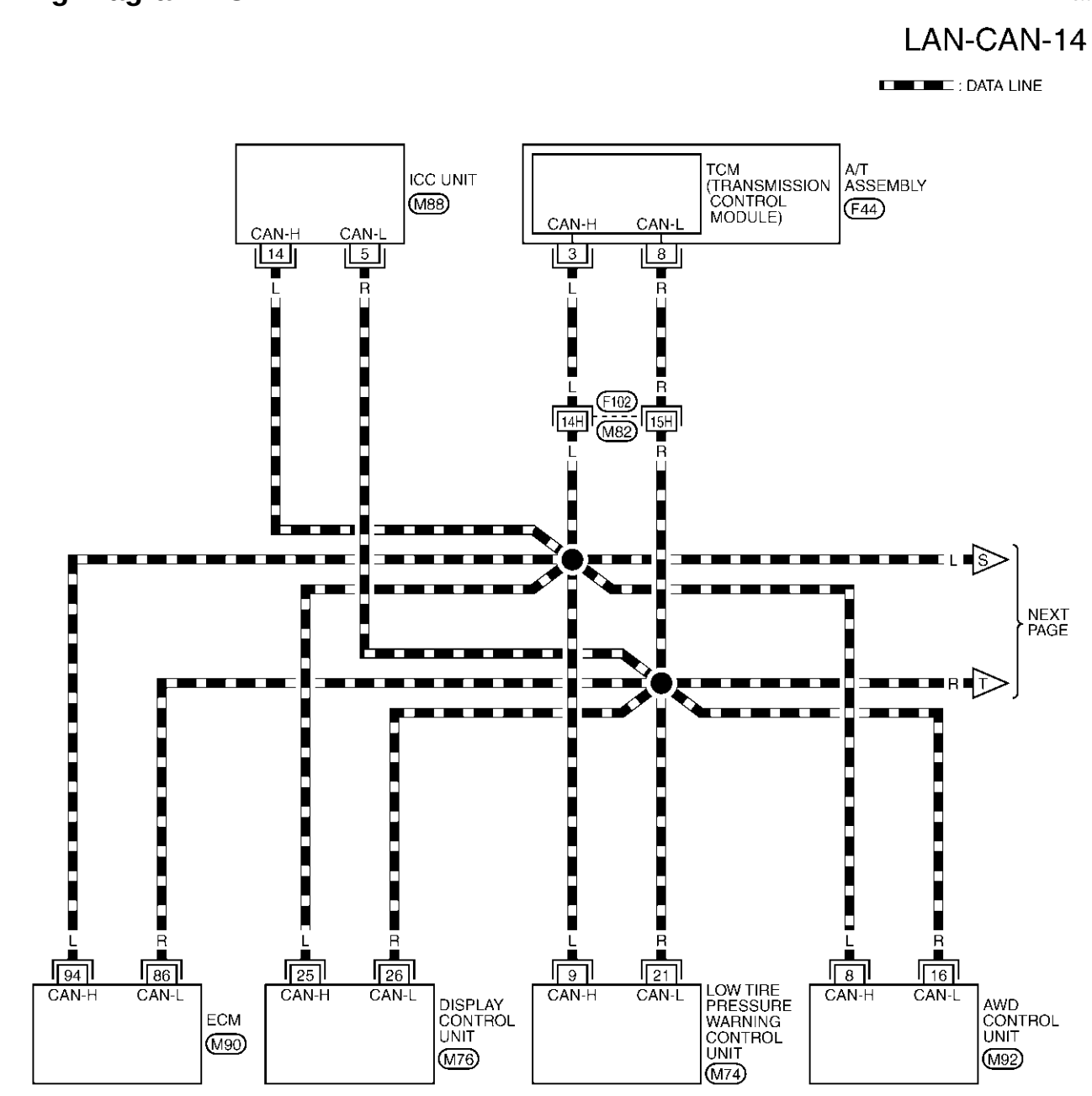
AKS007TP



TKWM0758E

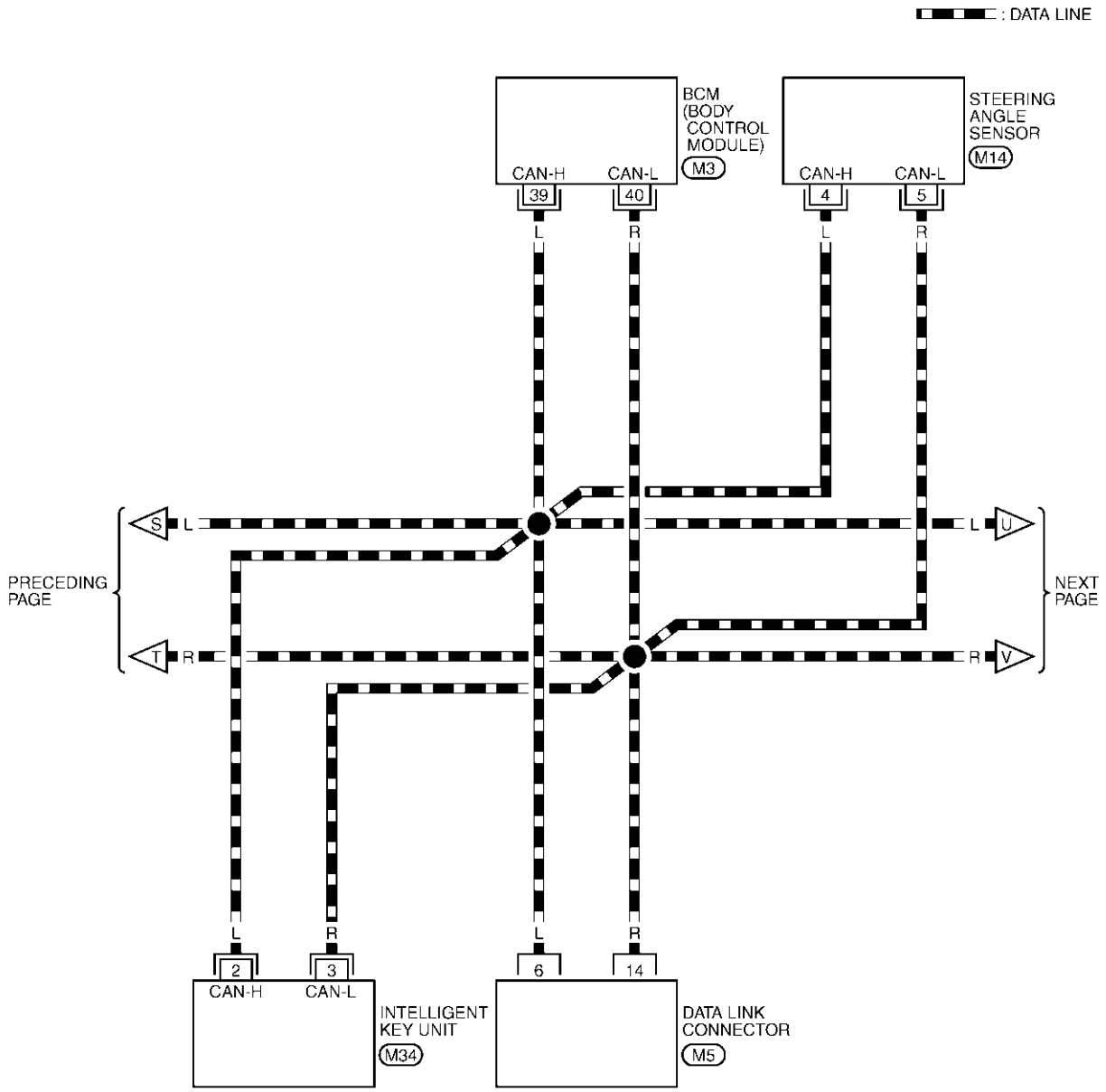
Wiring Diagram - CAN -

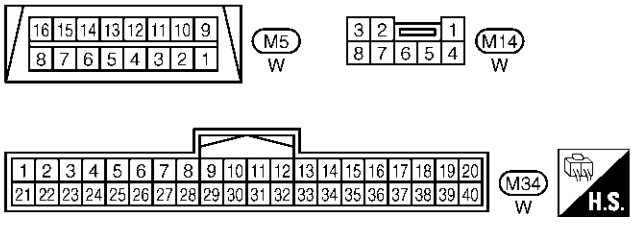
AKS007TQ



TKWM0759E

LAN-CAN-15

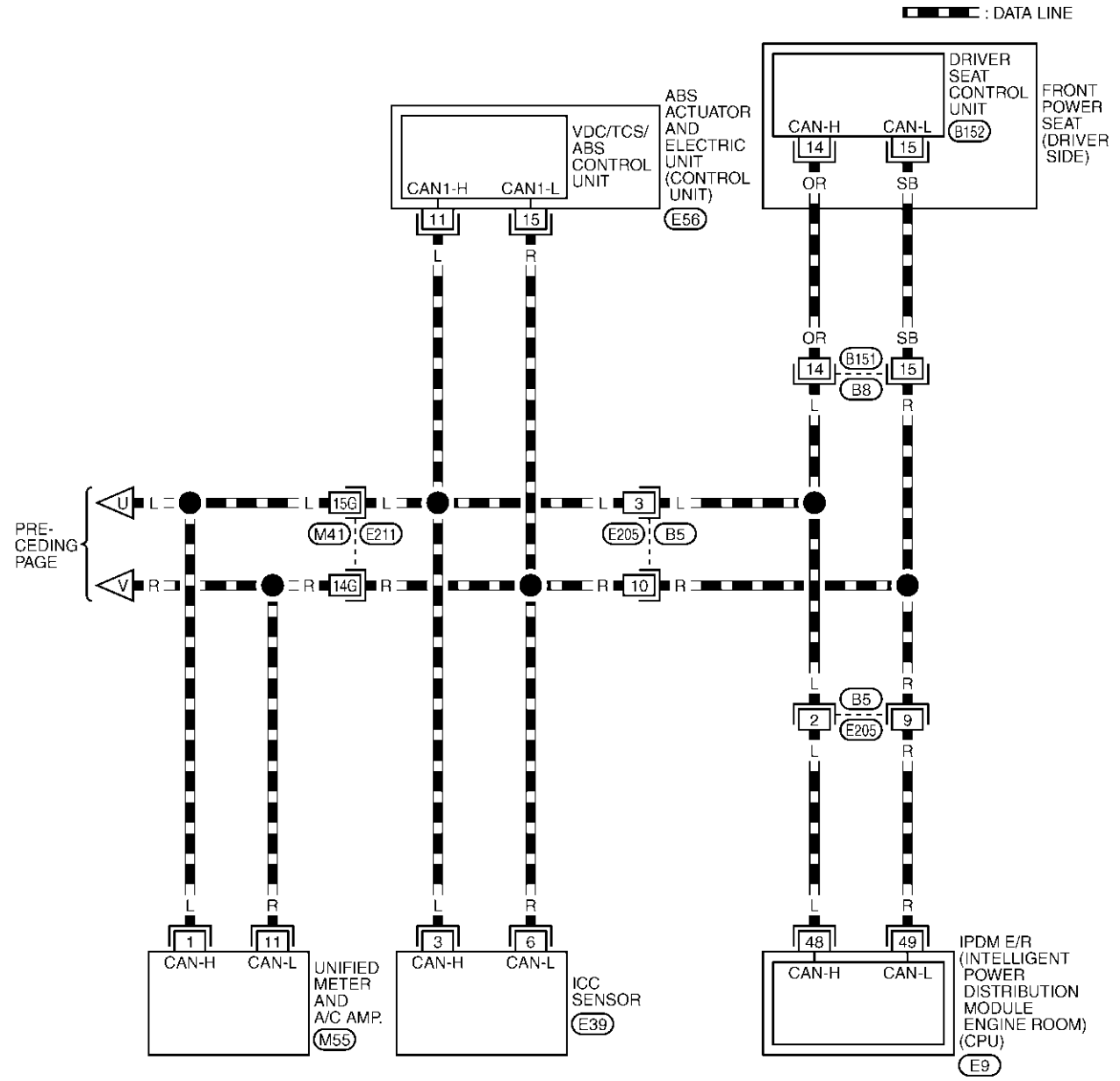


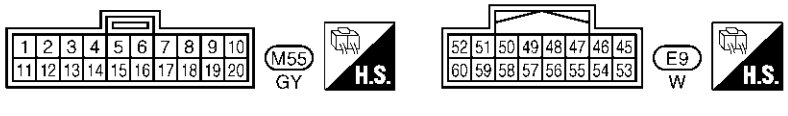


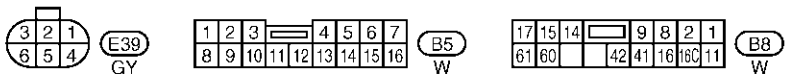
REFER TO THE FOLLOWING.
(M3) -ELECTRICAL UNITS

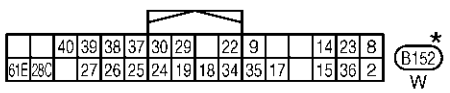
TKWM0760E

LAN-CAN-16









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

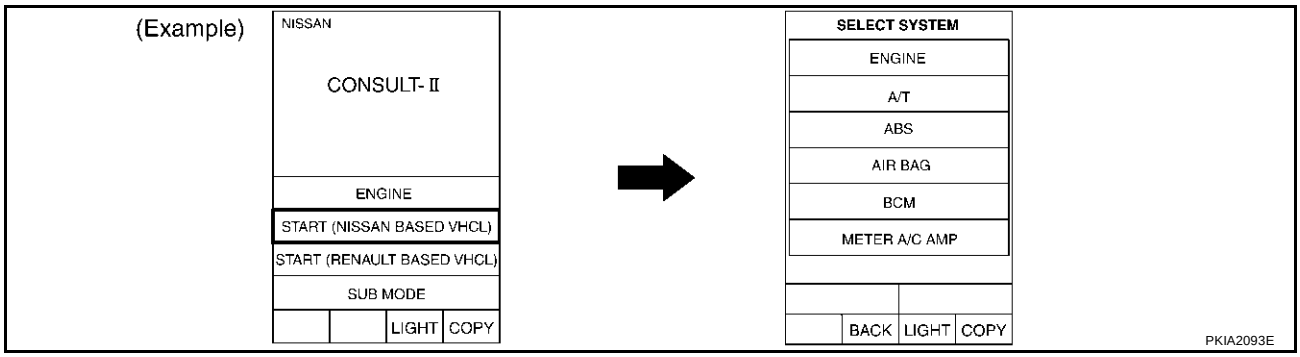
REFER TO THE FOLLOWING.
E211 -SUPER MULTIPLE JUNCTION (SMJ)
E56 -ELECTRICAL UNITS

TKWH0252E

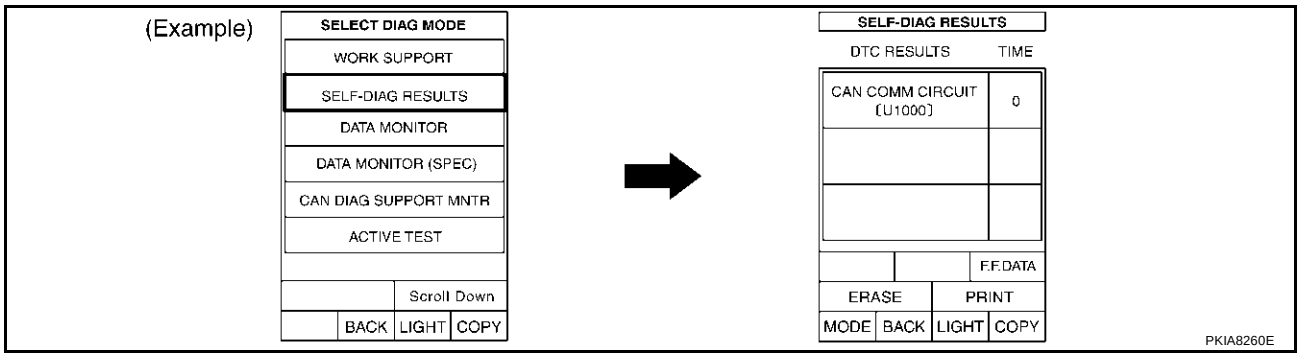
Work Flow

AKS00C4F

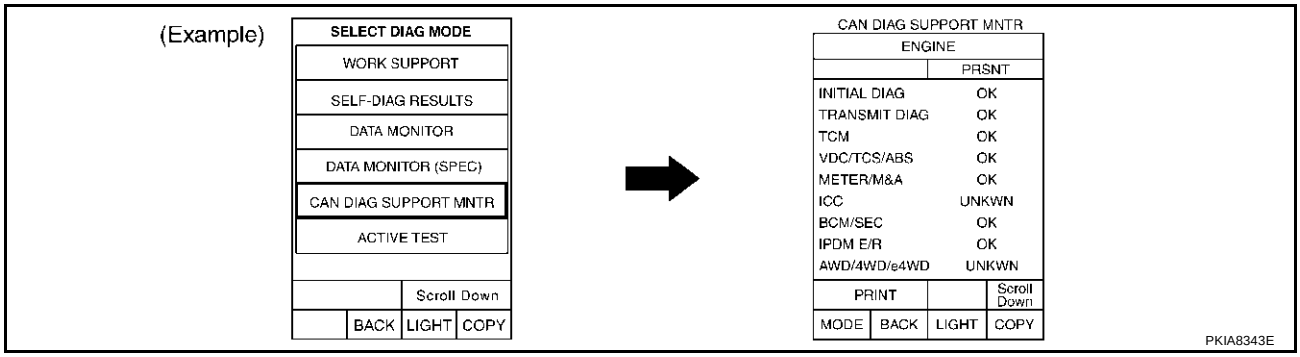
1. When there are no indications of “AIR PRESSURE MONITOR”, “INTELLIGENT KEY”, “BCM”, “METER A/C AMP”, “AUTO DRIVE POS.” or “IPDM E/R” on “SELECT SYSTEM” display of CONSULT-II, print the “SELECT SYSTEM”.



2. Print all the data of “SELF-DIAG RESULTS” for “ENGINE”, “A/T”, “AIR PRESSURE MONITOR”, “ALL MODE AWD/4WD”, “ICC”, “INTELLIGENT KEY”, “BCM”, “METER A/C AMP”, “ABS”, “AUTO DRIVE POS.”, and “IPDM E/R” displayed on CONSULT-II.



3. Print all the data of “CAN DIAG SUPPORT MNTR” for “ENGINE”, “A/T”, “AIR PRESSURE MONITOR”, “ALL MODE AWD/4WD”, “ICC”, “INTELLIGENT KEY”, “BCM”, “METER A/C AMP”, “ABS”, “AUTO DRIVE POS.”, and “IPDM E/R” displayed on CONSULT-II.



4. Attach the printed sheet of “SELECT SYSTEM”, “SELF-DIAG RESULTS” and “CAN DIAG SUPPORT MNTR” onto the check sheet. Refer to LAN-212, "CHECK SHEET" .
5. 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-212, "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.
6. Check CAN communication line of the navigation system. Refer to AV-184, "CAN Communication Line Check" .

7. Attach the CAN DIAG SUPPORT MONITOR check sheet onto the check sheet. Refer to LAN-212, "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-212, "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-184, "CAN Communication Line Check" .
9. According to the check sheet results (example), start inspection. Refer to LAN-215, "CHECK SHEET RESULTS (EXAMPLE)" .

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	TIRE-P	AWD /4WD	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	UNKWN	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—

Symptoms :

Attach copy of SELECT SYSTEM

Attach copy of SELECT SYSTEM

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

Attach copy of
ENGINE
SELF-DIAG RESULTS

Attach copy of
A/T
SELF-DIAG RESULTS

Attach copy of
AIR PRESSURE
MONITOR
SELF-DIAG RESULTS

Attach copy of
ALL MODE AWD/4WD
SELF-DIAG RESULTS

Attach copy of
ICC
SELF-DIAG RESULTS

Attach copy of
INTELLIGENT KEY
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
AUTO DRIVE POS.
SELF-DIAG RESULTS

Attach copy of
IPDM E/R
SELF-DIAG RESULTS

PKIA8024E

Attach copy of
ENGINE
CAN DIAG SUPPORT
MNTR

Attach copy of
A/T
CAN DIAG SUPPORT
MNTR

Attach copy of
AIR PRESSURE
MONITOR
CAN DIAG SUPPORT
MNTR

Attach copy of
ALL MODE AWD/4WD
CAN DIAG SUPPORT
MNTR

Attach copy of
ICC
CAN DIAG SUPPORT
MNTR

Attach copy of
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MNTR

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MNTR

Attach copy of
ABS
CAN DIAG SUPPORT
MNTR

Attach copy of
AUTO DRIVE POS.
CAN DIAG SUPPORT
MNTR

Attach copy of
IPDM E/R
CAN DIAG SUPPORT
MNTR

PKIA8025E

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-236, "Circuit Check Between TCM and Data Link Connector" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR														
		Initial diagnosis	Transmit diagnosis	Receive diagnosis												
				ECM	TCM	DISPLAY	TIRE-P	AWD /4WD	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	—	UNKWN ✓	—	UNKWN ✓	—	UNKWN ✓	UNKWN ✓
A/T	—	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 ✓
AIR PRESSURE MONITOR	No indication	NG ✓	UNKWN	—	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—	UNKWN ✓	—	UNKWN ✓	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN ✓	—	—	UNKWN ✓	UNKWN ✓	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN ✓	—	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN ✓	UNKWN ✓	UNKWN ✓	UNKWN ✓	UNKWN ✓	UNKWN ✓	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN ✓	—	—	UNKWN ✓	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN ✓	—	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN ✓	—	—	—	—	—	—	UNKWN	—	—	—	—	—

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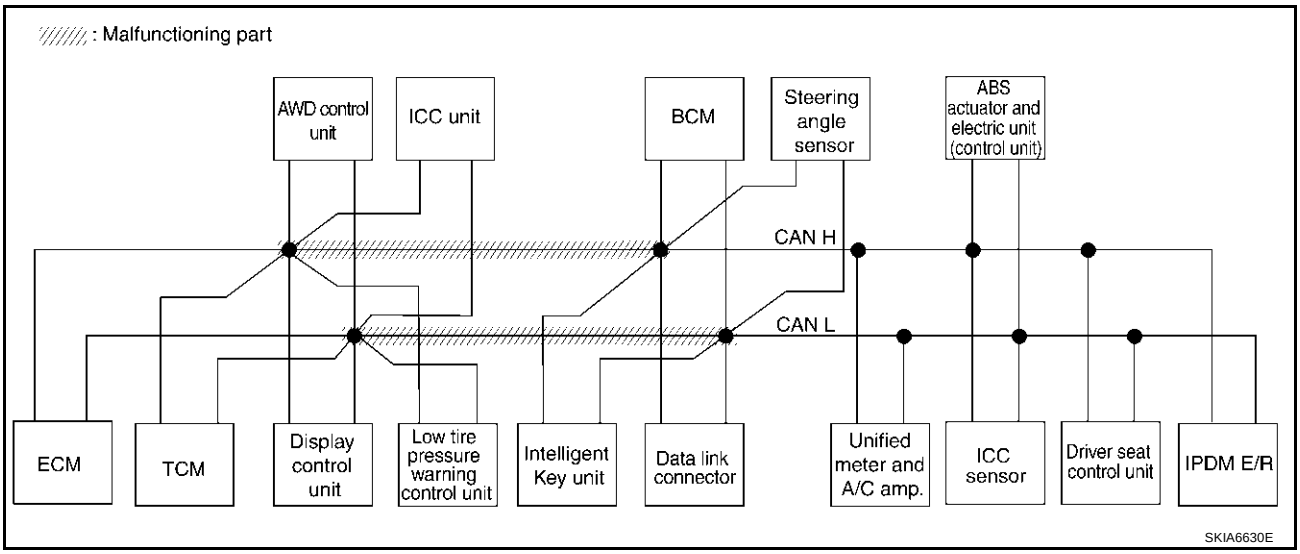

Case 2

Check harness between data link connector and unified meter and A/C amp. Refer to LAN-237, "Circuit Check Between Data Link Connector and Unified Meter and A/C Amp." .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR														
		Initial diagnosis	Transmit diagnosis	Receive diagnosis												
				ECM	TCM	DISPLAY	TIRE-P	AWD /4WD	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	UNKWN	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—

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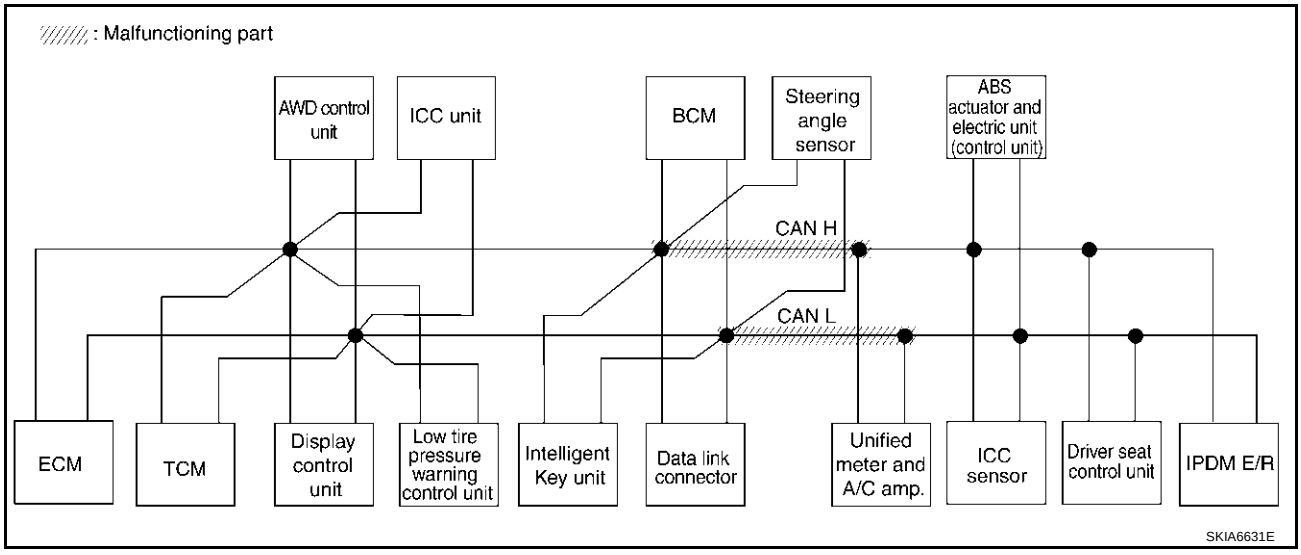

Case 3

Check harness between unified meter and A/C amp. and ABS actuator and electric unit (control unit). Refer to LAN-237, "Circuit Check Between Unified Meter and A/C Amp. and ABS Actuator and Electric Unit (Control Unit)" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR															
		Initial diagnosis	Transmit diagnosis	Receive diagnosis													
				ECM	TCM	DISPLAY	TIRE-P	AWD /4WD	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	UNKWN	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—

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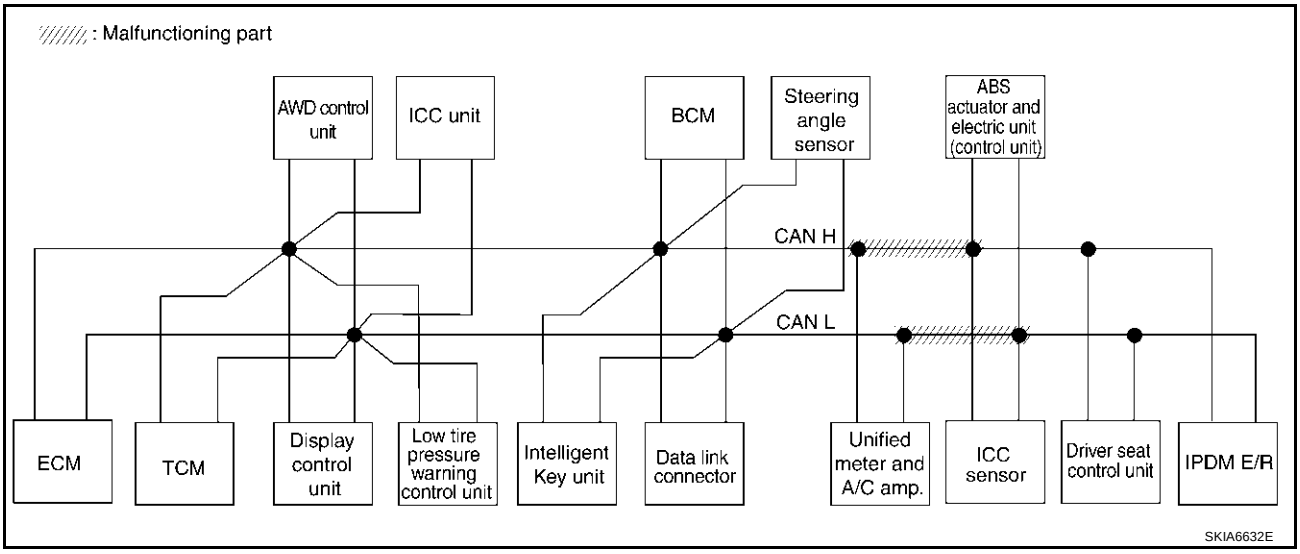

Case 4

Check harness between ABS actuator and electric unit (control unit) and driver seat control unit. Refer to LAN-238, "Circuit Check Between ABS Actuator and Electric Unit (Control Unit) and Driver Seat Control Unit" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR														
		Initial diagnosis	Transmit diagnosis	Receive diagnosis												
				ECM	TCM	DISPLAY	TIRE-P	AWD /4WD	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	UNKWN	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—

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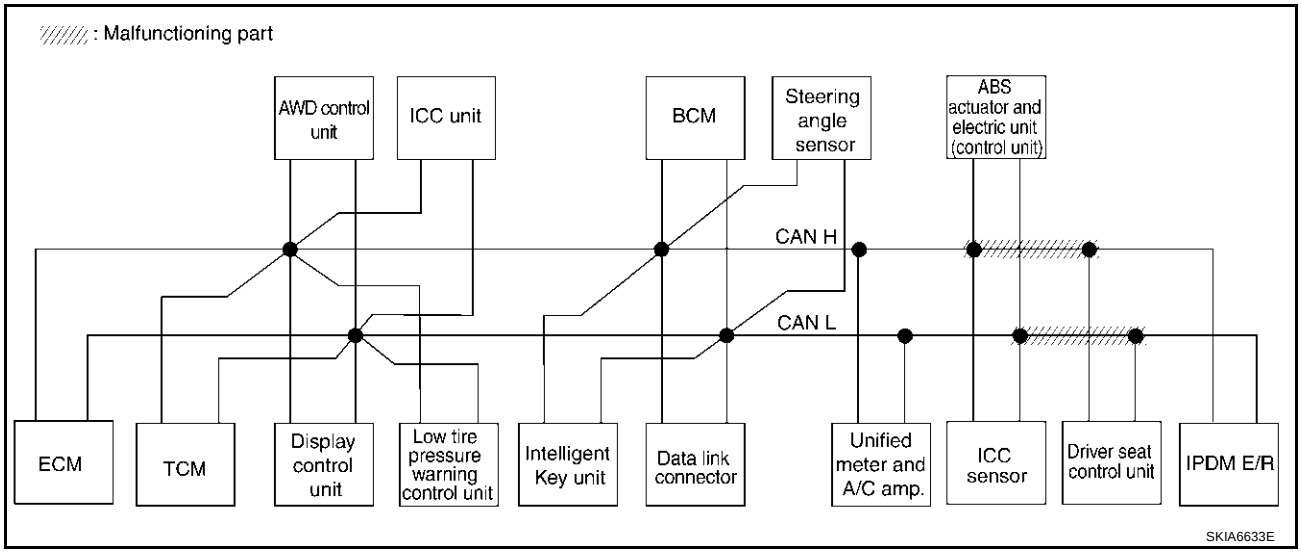

Case 5

Check ECM circuit. Refer to LAN-239, "ECM Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR														
		Initial diagnosis	Transmit diagnosis	Receive diagnosis												
				ECM	TCM	DISPLAY	TIRE-P	AWD /4WD	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	UNKWN	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—

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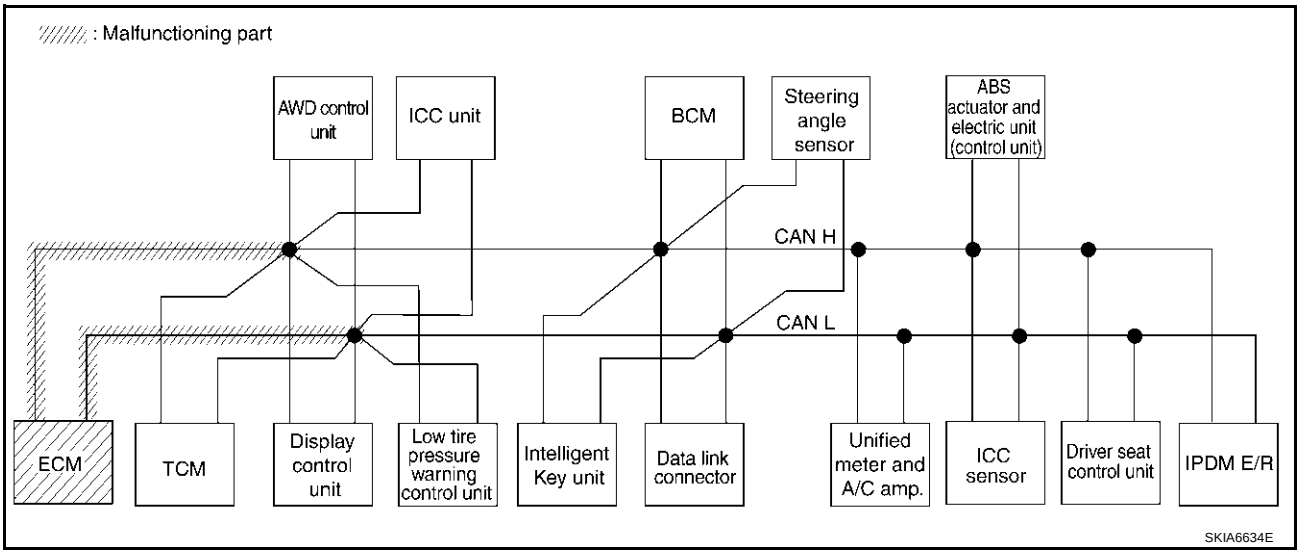

Case 6

Check TCM circuit. Refer to LAN-239, "TCM Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR														
		Initial diagnosis	Transmit diagnosis	Receive diagnosis												
				ECM	TCM	DISPLAY	TIRE-P	AWD /4WD	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	UNKWN	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—

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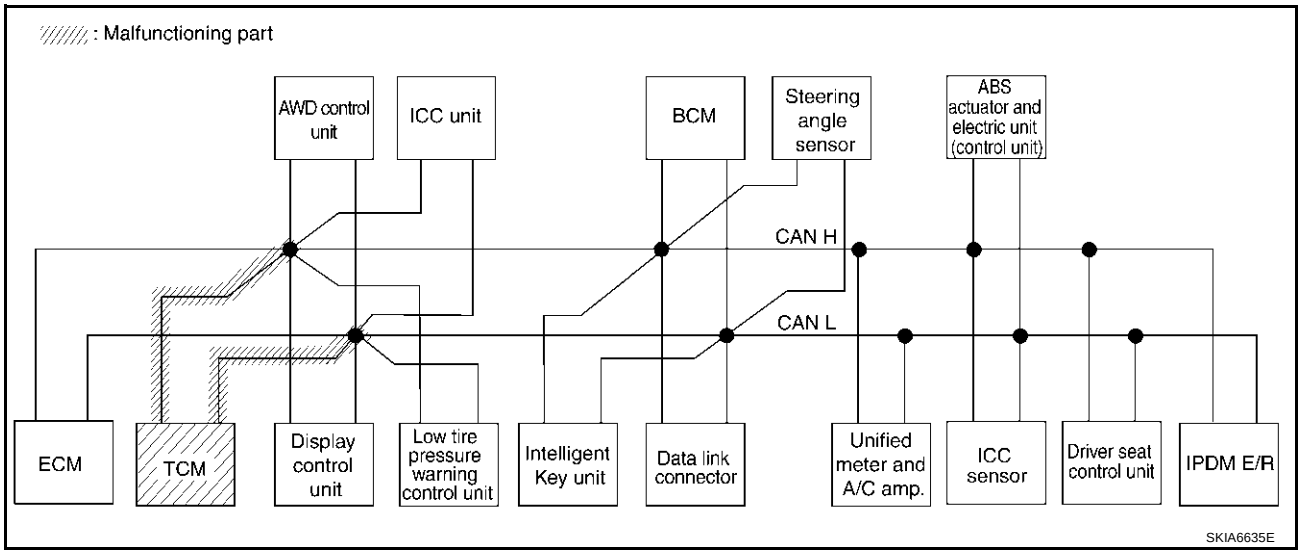

Case 7

Check display control unit circuit. Refer to LAN-240, "Display Control Unit Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR														
		Initial diagnosis	Transmit diagnosis	Receive diagnosis												
				ECM	TCM	DISPLAY	TIRE-P	AWD /4WD	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	UNKWN	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—

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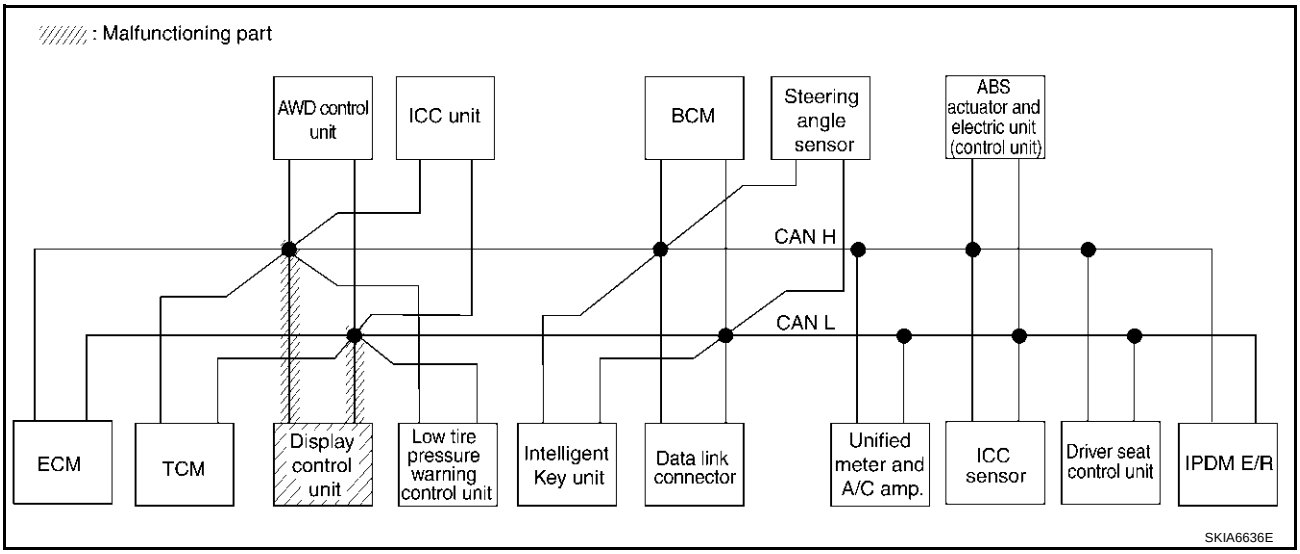

Case 8

Check low tire pressure warning control unit circuit. Refer to LAN-240, "Low Tire Pressure Warning Control Unit Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR															
		Initial diagnosis	Transmit diagnosis	Receive diagnosis													
				ECM	TCM	DISPLAY	TIRE-P	AWD /4WD	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	UNKWN	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—

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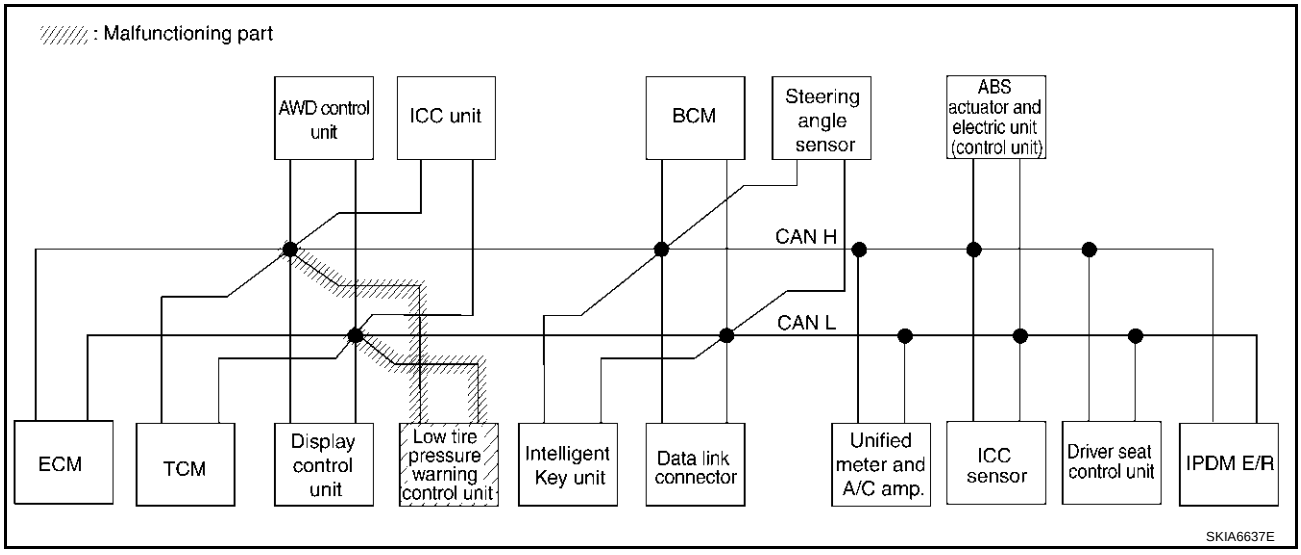

Case 9

Check AWD control unit circuit. Refer to LAN-241, "AWD Control Unit Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR															
		Initial diagnosis	Transmit diagnosis	Receive diagnosis													
				ECM	TCM	DISPLAY	TIRE-P	AWD /4WD	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	UNKWN	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—

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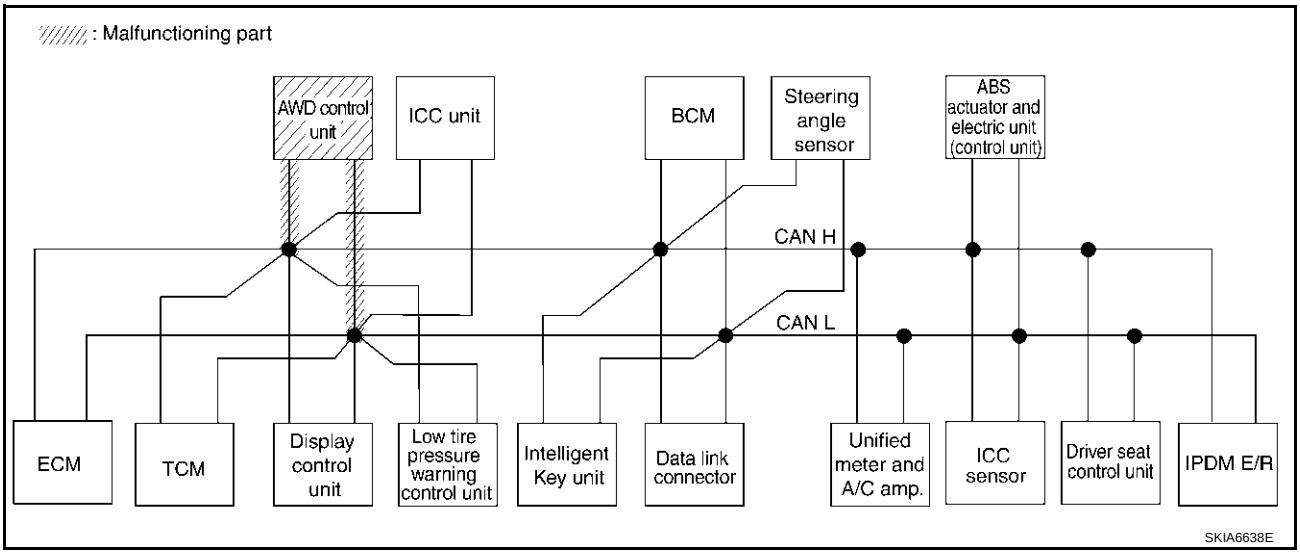

Case 10

Check ICC unit circuit. Refer to LAN-241, "ICC Unit Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR															
		Initial diagnosis	Transmit diagnosis	Receive diagnosis													
				ECM	TCM	DISPLAY	TIRE-P	AWD /4WD	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	UNKWN	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—

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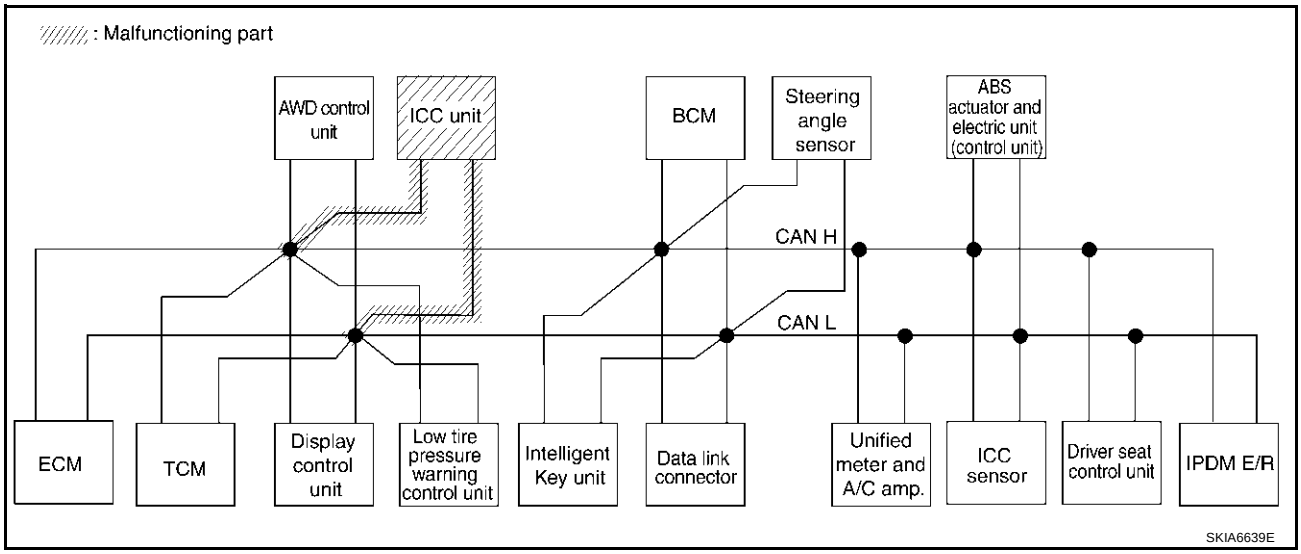

Case 11

Check Intelligent Key unit circuit. Refer to LAN-242, "Intelligent Key Unit Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR															
		Initial diagnosis	Transmit diagnosis	Receive diagnosis													
				ECM	TCM	DISPLAY	TIRE-P	AWD /4WD	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	UNKWN	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—

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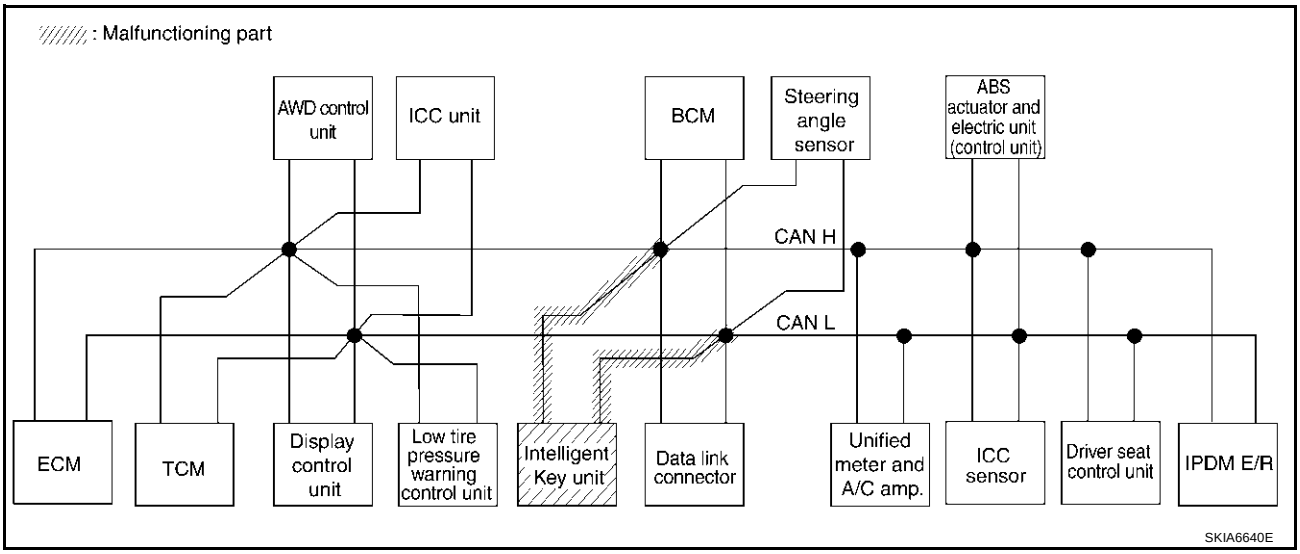

Case 12

Check data link connector circuit. Refer to LAN-242, "Data Link Connector Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR															
		Initial diagnosis	Transmit diagnosis	Receive diagnosis													
				ECM	TCM	DISPLAY	TIRE-P	AWD /4WD	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	UNKWN	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication ✓	—	UNKWN	—	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—

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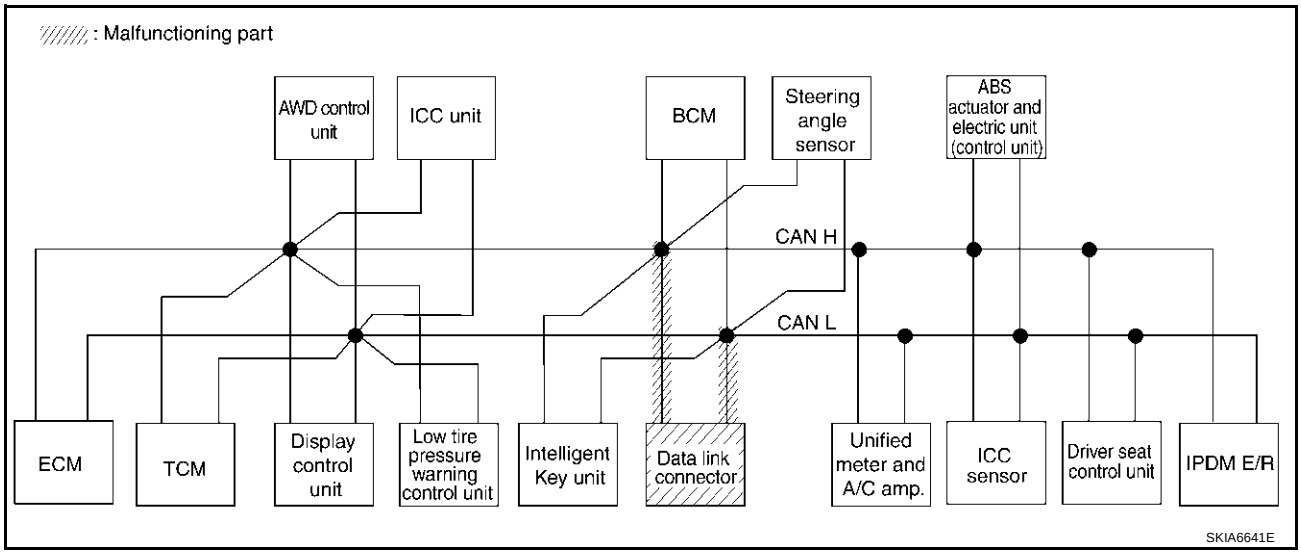

Case 13

Check BCM circuit. Refer to LAN-243, "BCM Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR															
		Initial diagnosis	Transmit diagnosis	Receive diagnosis													
				ECM	TCM	DISPLAY	TIRE-P	AWD /4WD	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	UNKWN	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—

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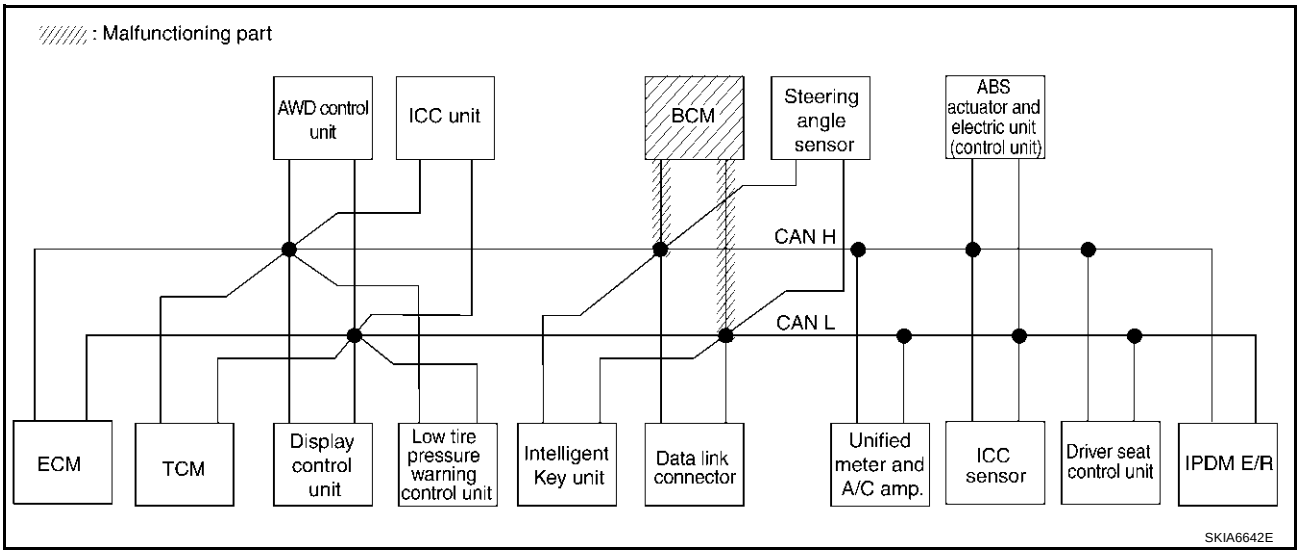

Case 14

Check steering angle sensor circuit. Refer to LAN-243, "Steering Angle Sensor Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR															
		Initial diagnosis	Transmit diagnosis	Receive diagnosis													
				ECM	TCM	DISPLAY	TIRE-P	AWD /4WD	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	UNKWN	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—

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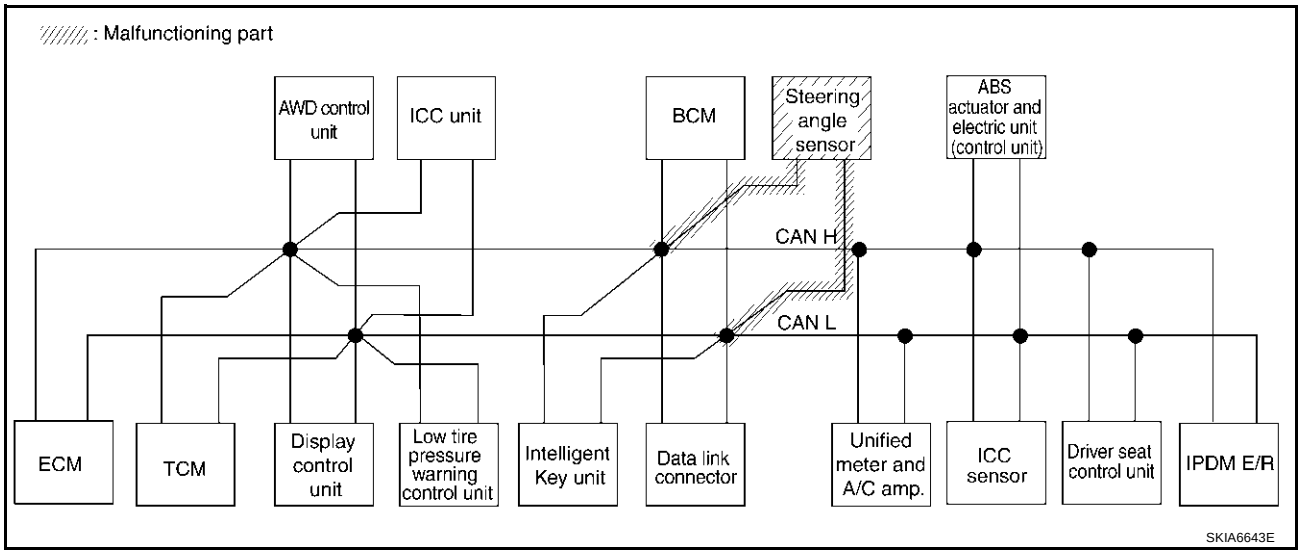

Case 15

Check unified meter and A/C amp. circuit. Refer to LAN-244, "Unified Meter and A/C Amp. Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR														
		Initial diagnosis	Transmit diagnosis	Receive diagnosis												
				ECM	TCM	DISPLAY	TIRE-P	AWD /4WD	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	UNKWN	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—

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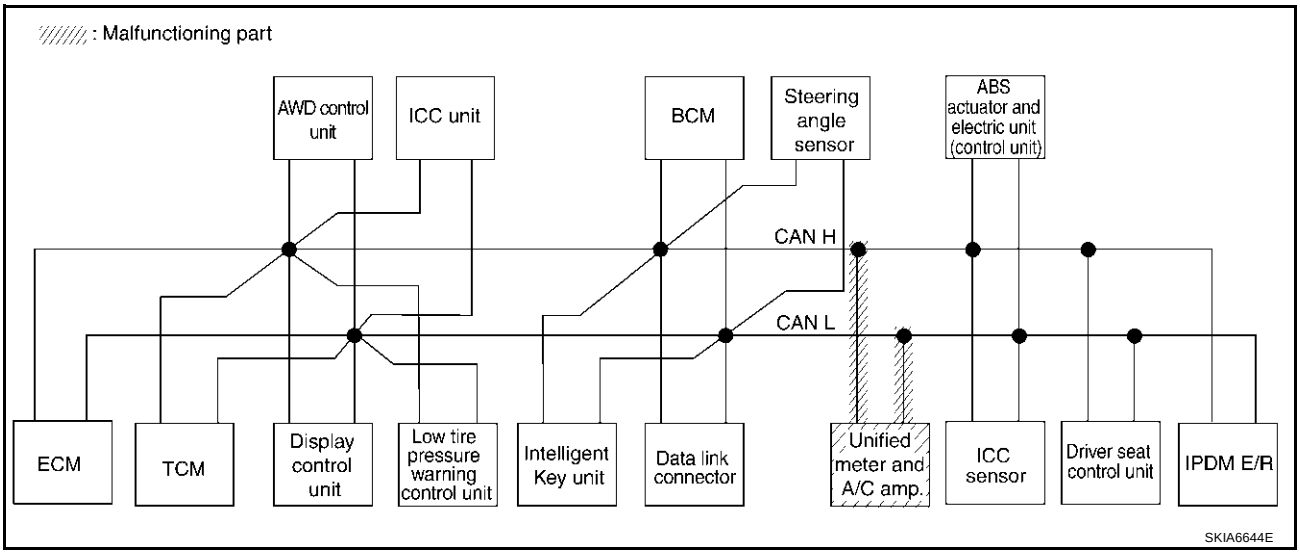

Case 16

Check ICC sensor circuit. Refer to LAN-244, "ICC Sensor Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR															
		Initial diagnosis	Transmit diagnosis	Receive diagnosis													
				ECM	TCM	DISPLAY	TIRE-P	AWD /4WD	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	UNKWN	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—

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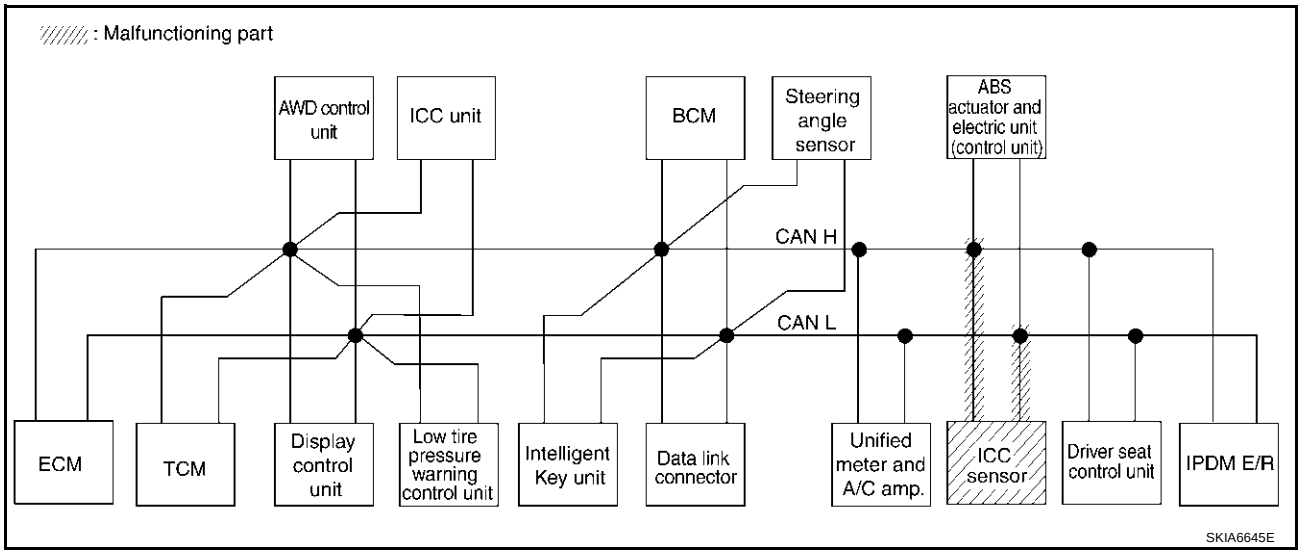
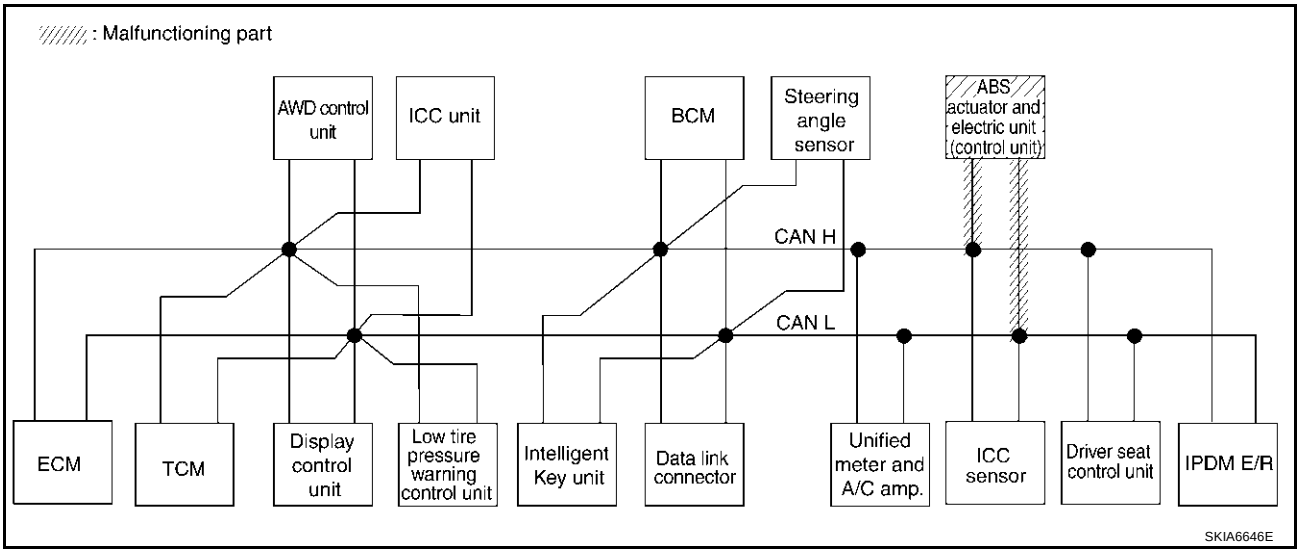


Case 17

Check ABS actuator and electric unit (control unit) circuit. Refer to LAN-245, "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	TIRE-P	AWD /4WD	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	UNKWN	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—

PKIA8042E

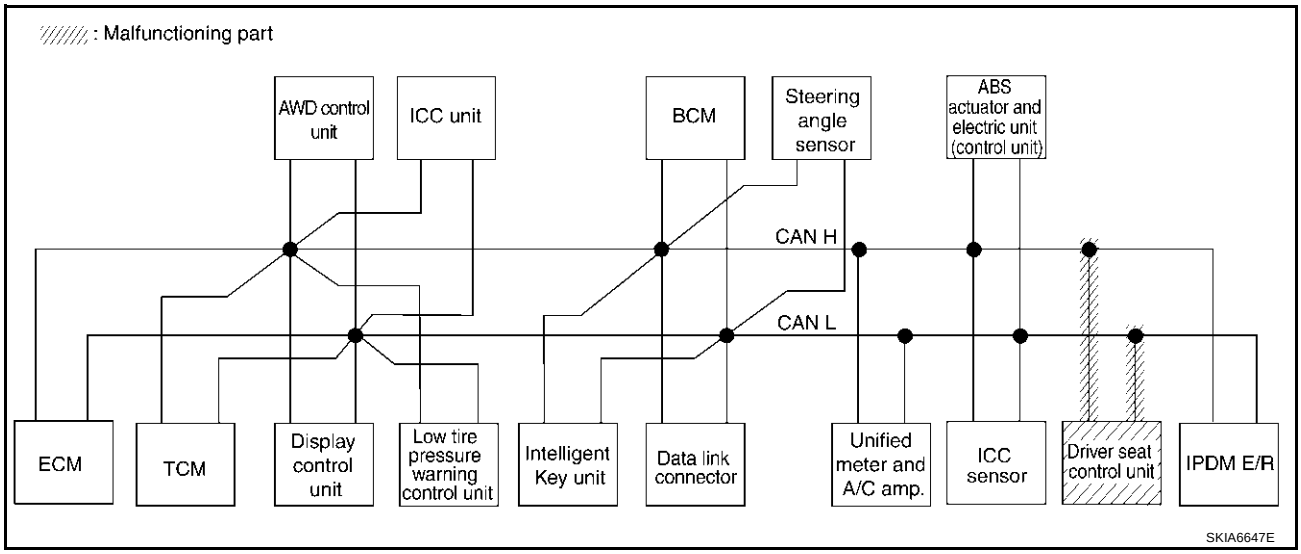


Case 18

Check driver seat control unit circuit. Refer to LAN-245, "Driver Seat Control Unit Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR															
		Initial diagnosis	Transmit diagnosis	Receive diagnosis													
				ECM	TCM	DISPLAY	TIRE-P	AWD /4WD	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	UNKWN	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—

PKIA8043E



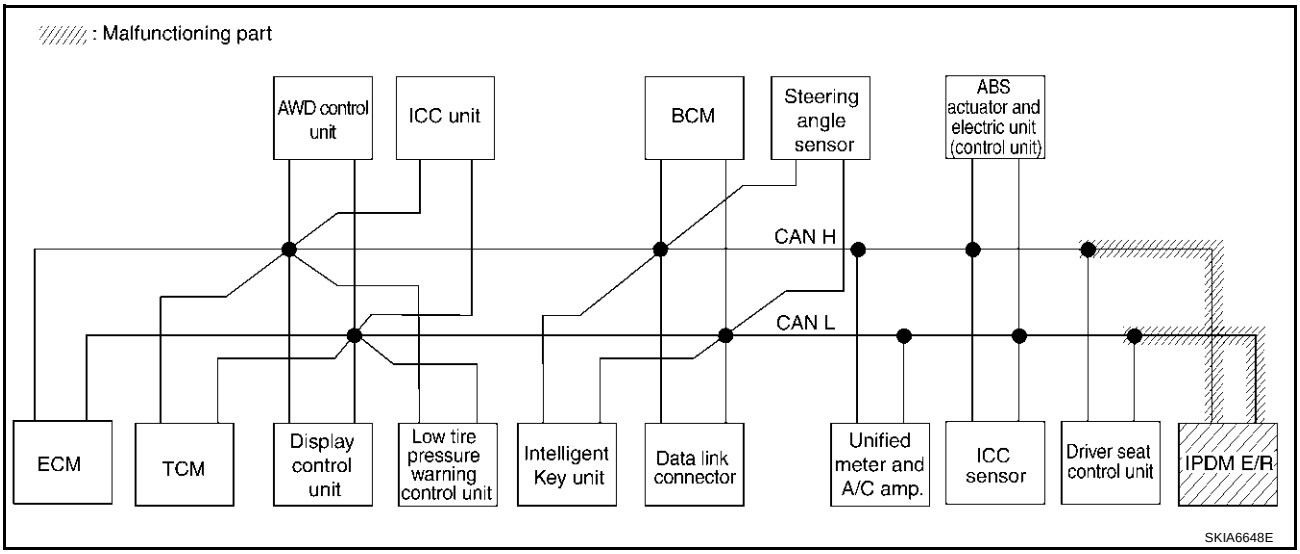
SKIA6647E

Case 19

Check IPDM E/R circuit. Refer to LAN-246, "IPDM E/R Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR															
		Initial diagnosis	Transmit diagnosis	Receive diagnosis													
				ECM	TCM	DISPLAY	TIRE-P	AWD /4WD	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN ✓
A/T	—	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 ✓
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	UNKWN	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN ✓
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—

PKIA8044E



Case 20

Check CAN communication circuit. Refer to LAN-247, "CAN Communication Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR														
		Initial diagnosis	Transmit diagnosis	Receive diagnosis												
				ECM	TCM	DISPLAY	TIRE-P	AWD /4WD	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	UNKWN	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—

PKIA8045E

Case 21

Check IPDM E/R ignition relay circuit continuously sticks “OFF”. Refer to LAN-252, "IPDM E/R Ignition Relay Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR														
		Initial diagnosis	Transmit diagnosis	Receive diagnosis												
				ECM	TCM	DISPLAY	TIRE-P	AWD /4WD	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	✓	—	—	—	UNKWN	—	UNKWN	—	UNKWN	—	✓	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	✓	—
ICC	—	NG	UNKWN	UNKWN	✓	—	—	—	—	—	UNKWN	—	—	UNKWN	✓	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	✓	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	✓	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	✓	—	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—

PKIA8047E

Case 22

Check IPDM E/R ignition relay circuit continuously sticks “ON”. Refer to LAN-252, "IPDM E/R Ignition Relay Circuit Check" .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR														
		Initial diagnosis	Transmit diagnosis	Receive diagnosis												
				ECM	TCM	DISPLAY	TIRE-P	AWD /4WD	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	UNKWN	—
ICC	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	UNKWN	—
INTELLIGENT KEY	No indication	—	UNKWN	—	—	—	—	—	—	—	UNKWN	—	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—	—	—

PKIA8046E

Circuit Check Between TCM and Data Link Connector

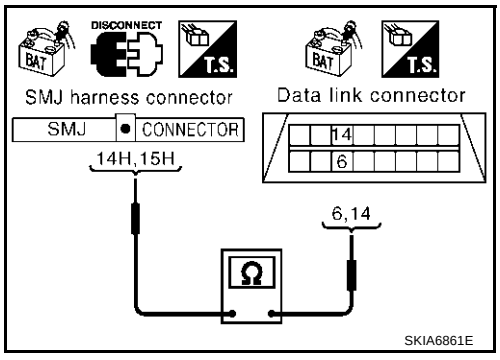
AKS007TS

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 14H (L), 15H (R) and data link connector M5 terminals 6 (L), 14 (R).

14H (L) - 6 (L) : Continuity should exist.

15H (R) - 14 (R) : Continuity should exist.



OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-210, "Work Flow" .

NG >> Repair harness.

Circuit Check Between Data Link Connector and Unified Meter and A/C Amp.

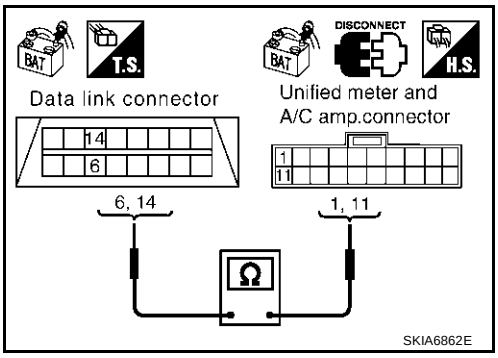
AKS007TT

1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and unified meter and A/C amp. connector.
4. Check continuity between data link connector M5 terminals 6 (L), 14 (R) and unified meter and A/C amp. harness connector M55 terminals 1 (L), 11 (R).

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

14 (R) - 11 (R) : Continuity should exist.



OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-210, "Work Flow" .

NG >> Repair harness.

Circuit Check Between Unified Meter and A/C Amp. and ABS Actuator and Electric Unit (Control Unit)

AKS007TU

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 M41
- Harness connector E211

OK or NG

OK >> GO TO 2.

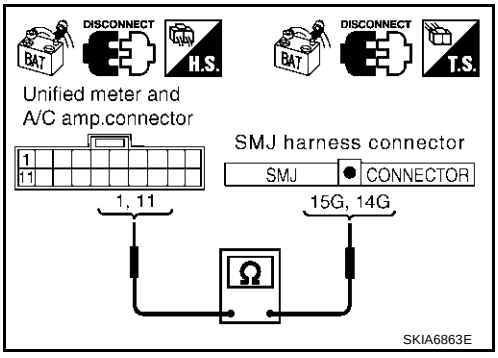
NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector and harness connector M41.
2. Check continuity between unified meter and A/C amp. harness connector M55 terminals 1 (L), 11 (R) and harness connector M41 terminals 15G (L), 14G (R).

1 (L) - 15G (L) : Continuity should exist.

11 (R) - 14G (R) : Continuity should exist.



OK or NG

OK >> GO TO 3.

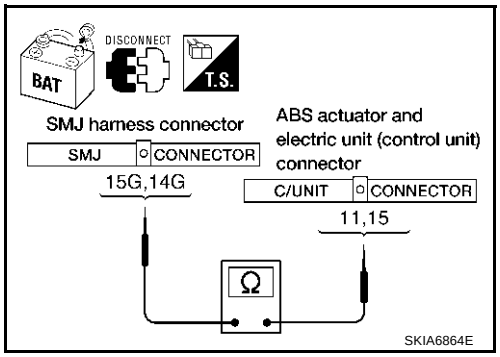
NG >> Repair harness.

3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E211 terminals 15G (L), 14G (R) and ABS actuator and electric unit (control unit) harness connector E56 terminals 11 (L), 15 (R).

15G (L) - 11 (L) : Continuity should exist.

14G (R) - 15 (R) : Continuity should exist.



OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-210, "Work Flow" .

NG >> Repair harness.

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

AKS007TV

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 E205
- Harness connector B5

OK or NG

OK >> GO TO 2.

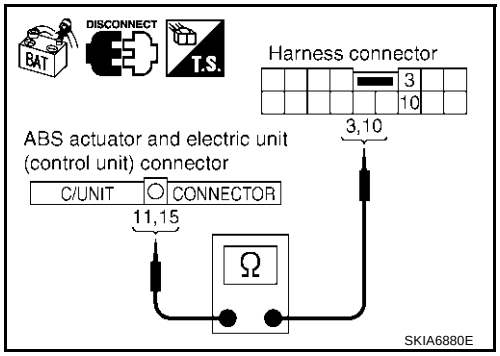
NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector and harness connector E205.
2. Check continuity between ABS actuator and electric unit (control unit) harness connector E56 terminals 11 (L), 15 (R) and harness connector E205 terminals 3 (L), 10 (R).

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

15 (R) - 10 (R) : Continuity should exist.



OK or NG

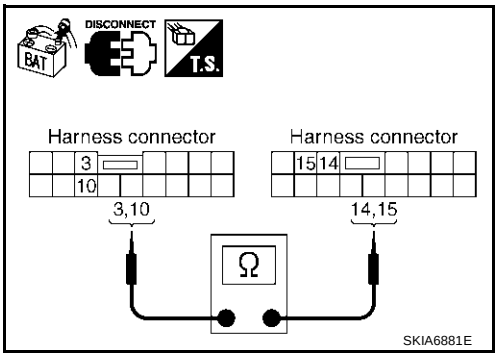
OK >> GO TO 3.

NG >> Repair harness.

3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B8.
2. Check continuity between harness connector B5 terminals 3 (L), 10 (R) and harness connector B8 terminals 14 (L), 15 (R).

3 (L) - 14 (L) : Continuity should exist.
10 (R) - 15 (R) : Continuity should exist.



OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-210, "Work Flow" .
NG >> Repair harness.

ECM Circuit Check

AKS007TW

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).

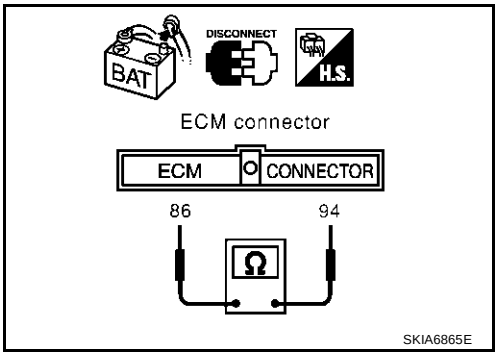
OK or NG

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 M90 terminals 94 (L) and 86 (R).

94 (L) - 86 (R) : Approx. 108 - 132Ω



OK or NG

OK >> Replace ECM.
NG >> Repair harness between ECM and harness connector M82.

TCM Circuit Check

AKS007TX

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).

- A/T assembly connector
- Harness connector F102
- Harness connector M82

OK or NG

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

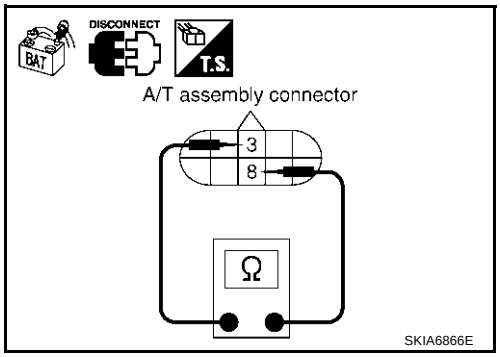
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect A/T assembly connector.
2. Check resistance between A/T assembly harness connector F44 terminals 3 (L) and 8 (R).

3 (L) - 8 (R) : Approx. 54 - 66Ω

OK or NG

OK >> Replace A/T assembly.
NG >> Repair harness between A/T assembly and display control unit.



Display Control Unit Circuit Check

AKS007TY

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.

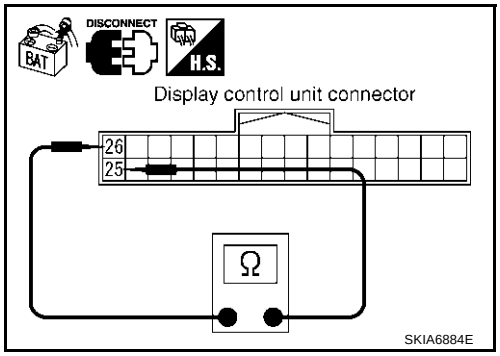
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect display control unit connector.
2. Check resistance between display control unit harness connector M76 terminals 25 (L) and 26 (R).

25 (L) - 26 (R) : Approx. 54 - 66Ω

OK or NG

OK >> Replace display control unit.
NG >> Repair harness between display control unit and harness connector M82.



Low Tire Pressure Warning Control Unit Circuit Check

AKS007TZ

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.

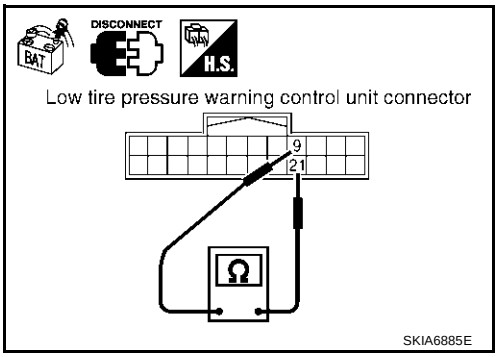
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect low tire pressure warning control unit connector.
2. Check resistance between low tire pressure warning control unit harness connector M74 terminals 9 (L) and 21 (R).

9 (L) - 21 (R) : 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 harness connector M82.



AWD Control Unit Circuit Check

AKS007UF

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.

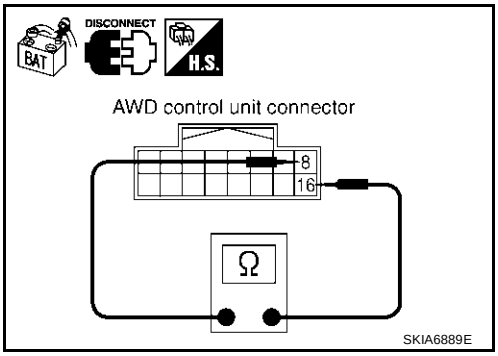
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect AWD control unit connector.
2. Check resistance between AWD control unit harness connector M92 terminals 8 (L) and 16 (R).

8 (L) - 16 (R) : Approx. 54 - 66Ω

OK or NG

OK >> Replace AWD control unit.
NG >> Repair harness between AWD control unit and harness connector M82.



ICC Unit Circuit Check

AKS007U0

1. CHECK CONNECTOR

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

OK or NG

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

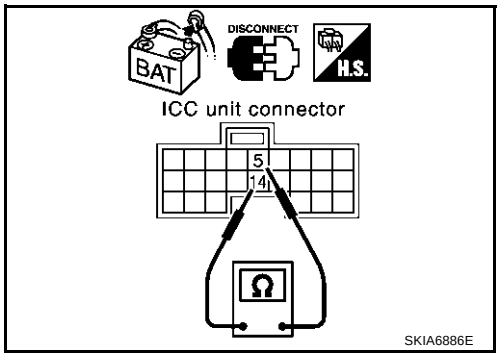
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ICC unit connector.
2. Check resistance between ICC unit harness connector M88 terminals 14 (L) and 5 (R).

14 (L) - 5 (R) : Approx. 54 - 66Ω

OK or NG

OK >> Replace ICC unit.
NG >> Repair harness between ICC unit and harness connector M82.



Intelligent Key Unit Circuit Check

AKS007U1

1. CHECK CONNECTOR

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

OK or NG

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

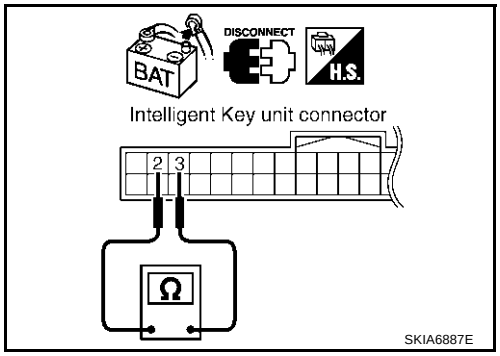
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect Intelligent Key unit connector.
2. Check resistance between Intelligent Key unit harness connector M34 terminals 2 (L) and 3 (R).

2 (L) - 3 (R) : Approx. 54 - 66Ω

OK or NG

OK >> Replace Intelligent Key unit.
NG >> Repair harness between Intelligent Key unit and data link connector.



Data Link Connector Circuit Check

AKS007U2

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.

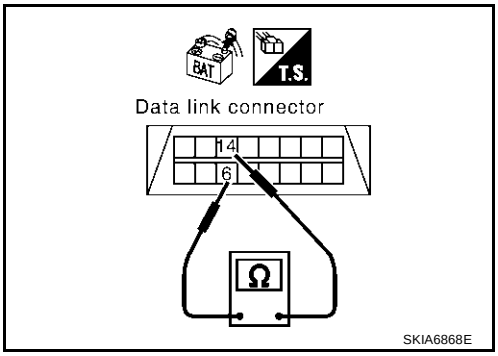
2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M5 terminals 6 (L) and 14 (R).

6 (L) - 14 (R) : Approx. 54 - 66Ω

OK or NG

OK >> Diagnose again. Refer to LAN-210, "Work Flow" .
NG >> Repair harness between data link connector and BCM.



BCM Circuit Check

AKS007U3

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.

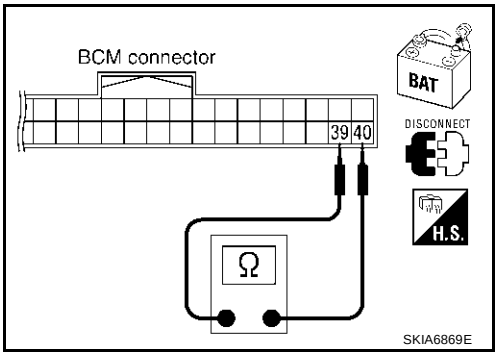
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M3 terminals 39 (L) and 40 (R).

39 (L) - 40 (R) : Approx. 54 - 66Ω

OK or NG

OK >> Replace BCM. Refer to BCS-28, "Removal and Installation of BCM" .
NG >> Repair harness between BCM and data link connector.



Steering Angle Sensor Circuit Check

AKS007U4

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.

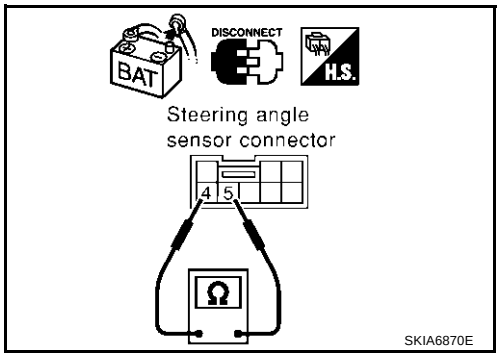
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M14 terminals 4 (L) and 5 (R).

4 (L) - 5 (R) : Approx. 54 - 66Ω

OK or NG

OK >> Replace steering angle sensor.
NG >> Repair harness between steering angle sensor and data link connector.



Unified Meter and A/C Amp. Circuit Check

AKS007U5

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.

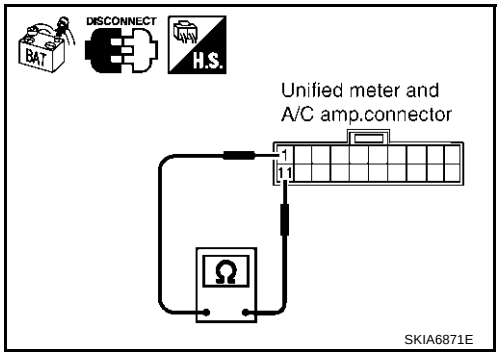
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M55 terminals 1 (L) and 11 (R).

1 (L) - 11 (R) : 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 harness connector M41.



ICC Sensor Circuit Check

AKS007U6

1. CHECK CONNECTOR

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

OK or NG

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

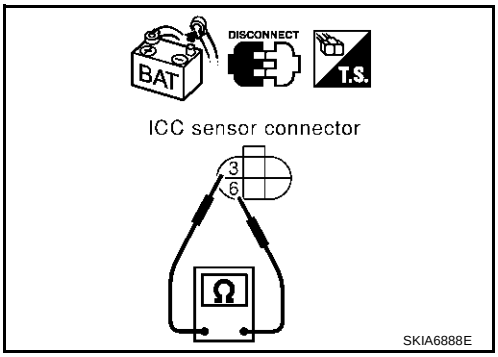
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ICC sensor connector.
2. Check resistance between ICC sensor harness connector E39 terminals 3 (L) and 6 (R).

3 (L) - 6 (R) : Approx. 54 - 66Ω

OK or NG

OK >> Replace ICC sensor.
NG >> Repair harness between ICC sensor and ABS actuator and electric unit (control unit).



ABS Actuator and Electric Unit (Control Unit) Circuit Check

AKS007U7

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.

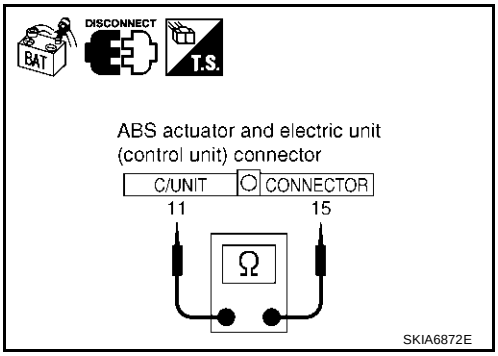
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E56 terminals 11 (L) and 15 (R).

11 (L) - 15 (R) : 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 ICC sensor.



Driver Seat Control Unit Circuit Check

AKS007U8

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 B151
- Harness connector B8

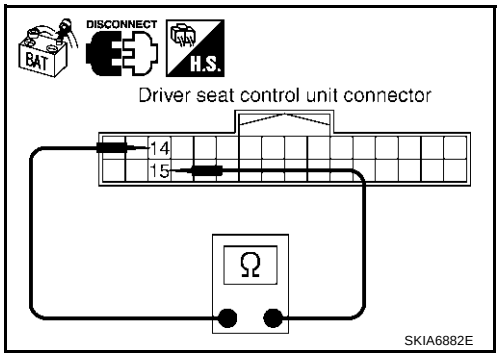
OK or NG

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 B152 terminals 14 (OR) and 15 (SB).

14 (OR) - 15 (SB) : Approx. 54 - 66Ω



OK or NG

OK >> Replace driver seat control unit.
NG >> Repair harness between driver seat control unit and harness connector B5.

IPDM E/R Circuit Check

AKS007U9

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).

- IPDM E/R connector
- Harness connector E205
- Harness connector B5

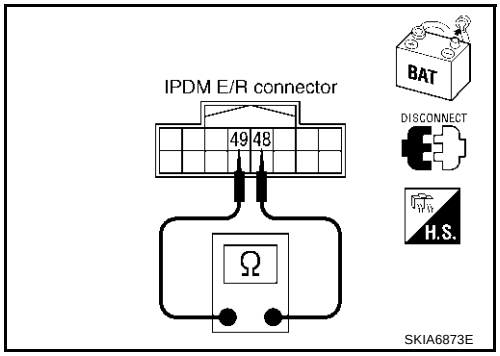
OK or NG

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 (R).

48 (L) - 49 (R) : Approx. 108 - 132Ω



OK or NG

OK >> Replace IPDM E/R.
NG >> Repair harness between IPDM E/R and harness connector B8.

CAN Communication Circuit Check

AKS007UA

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, sensor side, meter side and harness side).

- ECM
- A/T assembly
- Display control unit
- AWD control unit
- Low tire pressure warning control unit
- ICC unit
- Intelligent Key unit
- BCM
- Steering angle sensor
- Unified meter and A/C amp.
- ICC sensor
- ABS actuator and electric unit (control unit)
- Driver seat control unit
- IPDM E/R
- Between ECM and IPDM E/R
- Between ECM and A/T assembly

OK or NG

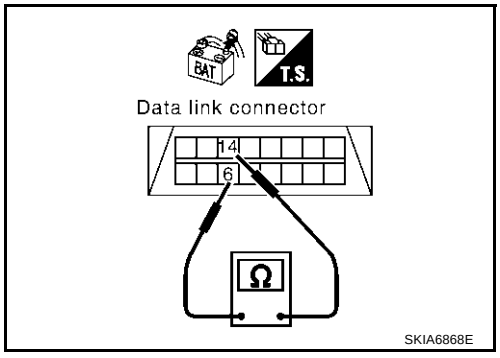
OK >> GO TO 2.
NG >> Repair terminal or connector.

2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
- ECM connector
- Harness connector M82
- Display control unit connector
- Low tire pressure warning control unit connector
- AWD control unit connector
- ICC unit connector
- Intelligent Key unit connector
- BCM connector
- Steering angle sensor connector
- Unified meter and A/C amp. connector
- Harness connector M41

2. Check continuity between data link connector M5 terminals 6 (L) and 14 (R).

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



OK or NG

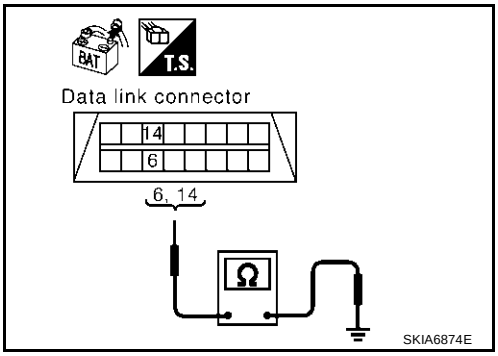
OK >> GO TO 3.

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 low tire pressure warning control unit.
- Harness between data link connector and AWD control unit.
- Harness between data link connector and ICC unit.
- Harness between data link connector and Intelligent Key unit.
- Harness between data link connector and BCM.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M41.

3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M5 terminals 6 (L), 14 (R) and ground.

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



OK or NG

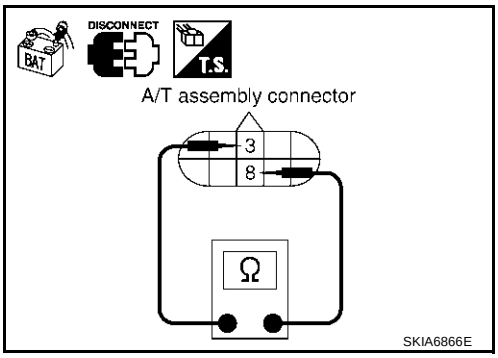
OK >> GO TO 4.
NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- 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 low tire pressure warning control unit.
- Harness between data link connector and AWD control unit.
- Harness between data link connector and ICC unit.
- Harness between data link connector and Intelligent Key unit.
- Harness between data link connector and BCM.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M41.

4. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect A/T assembly connector.
2. Check continuity between A/T assembly harness connector F44 terminals 3 (L) and 8 (R).

3 (L) - 8 (R) : Continuity should not exist.



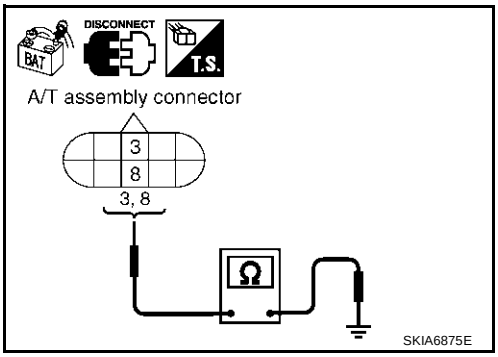
OK or NG

OK >> GO TO 5.
NG >> Repair harness between A/T assembly and harness connector F102.

5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between A/T assembly harness connector F44 terminals 3 (L), 8 (R) and ground.

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



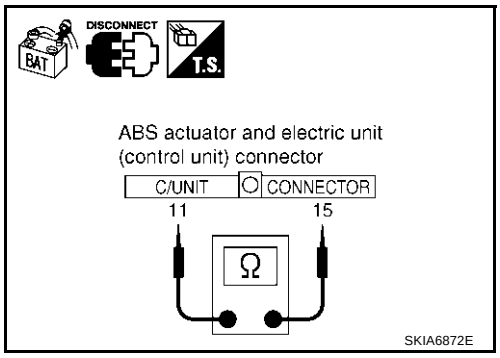
OK or NG

OK >> GO TO 6.
NG >> Repair harness between A/T assembly and harness connector F102.

6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector, ICC sensor connector and harness connector E205.
2. Check continuity between ABS actuator and electric unit (control unit) harness connector E56 terminals 11 (L) and 15 (R).

11 (L) - 15 (R) : Continuity should not exist.



OK or NG

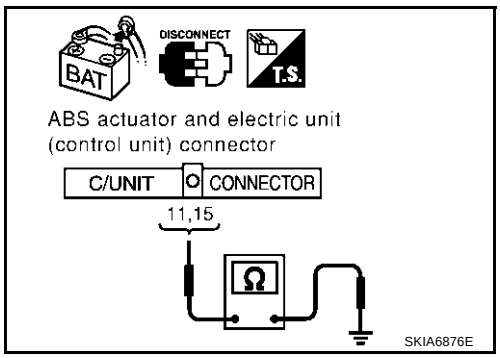
OK >> GO TO 7.
NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between ABS actuator and electric unit (control unit) and harness connector E211.
- Harness between ABS actuator and electric unit (control unit) and harness connector E205.
- Harness between ABS actuator and electric unit (control unit) and ICC sensor.

7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between ABS actuator and electric unit (control unit) harness connector E56 terminals 11 (L), 15 (R) and ground.

11 (L) - Ground : Continuity should not exist.
15 (R) - Ground : Continuity should not exist.



OK or NG

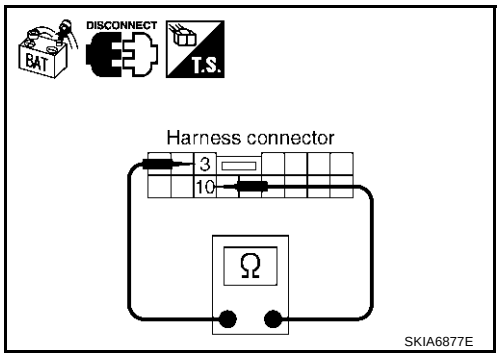
OK >> GO TO 8.
NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between ABS actuator and electric unit (control unit) and harness connector E211.
- Harness between ABS actuator and electric unit (control unit) and harness connector E205.
- Harness between ABS actuator and electric unit (control unit) and ICC sensor.

8. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B8.
2. Check continuity between harness connector B5 terminals 3 (L) and 10 (R).

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



OK or NG

OK >> GO TO 9.
NG >> Check the following harnesses. If any harness is damaged, repair the harness.

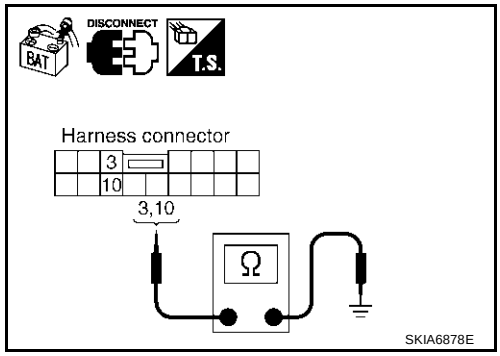
- Harness between harness connector B5 and harness connector B5.
- Harness between harness connector B5 and harness connector B8.

9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B5 terminals 3 (L), 10 (R) and ground.

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

10 (R) - Ground : Continuity should not exist.



OK or NG

OK >> GO TO 10.

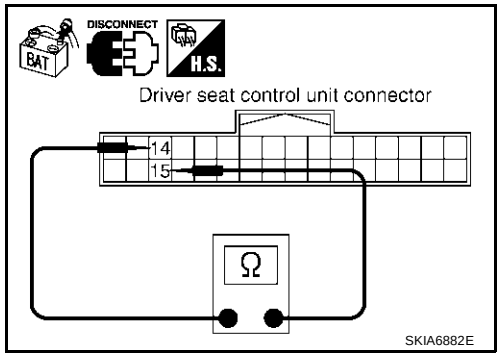
NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between harness connector B5 and harness connector B5.
- Harness between harness connector B5 and harness connector B8.

10. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect driver seat control unit connector.
2. Check continuity between driver seat control unit harness connector B152 terminals 14 (OR) and 15 (SB).

14 (OR) - 15 (SB) : Continuity should not exist.



OK or NG

OK >> GO TO 11.

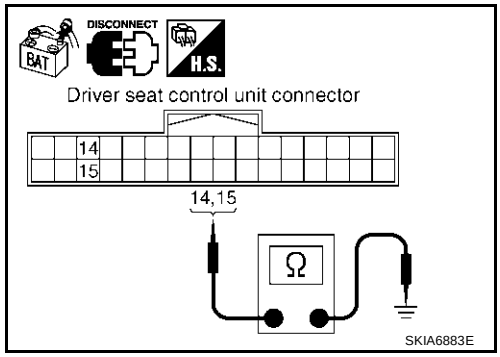
NG >> Repair harness between driver seat control unit and harness connector B151.

11. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between driver seat control unit harness connector B152 terminals 14 (OR), 15 (SB) and ground.

14 (OR) - Ground : Continuity should not exist.

15 (SB) - Ground : Continuity should not exist.



OK or NG

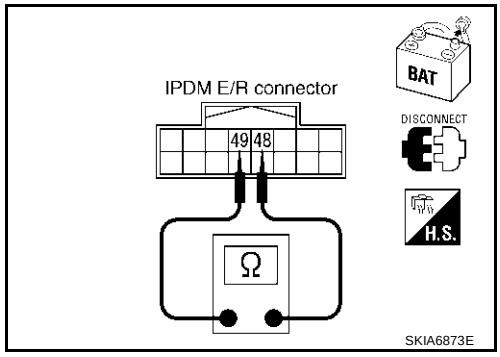
OK >> GO TO 12.

NG >> Repair harness between driver seat control unit and harness connector B151.

12. CHECK HARNESS FOR SHORT CIRCUIT

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

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



OK or NG

OK >> GO TO 13.

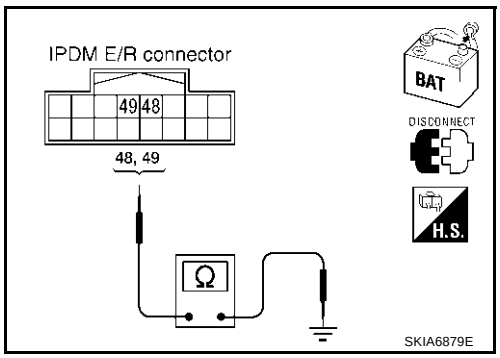
NG >> Repair harness between IPDM E/R and harness connector E205.

13. CHECK HARNESS FOR SHORT CIRCUIT

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

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

49 (R) - Ground : Continuity should not exist.



OK or NG

OK >> GO TO 14.

NG >> Repair harness between IPDM E/R and harness connector E205.

14. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to LAN-252, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION" .

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-210, "Work Flow" .

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

IPDM E/R Ignition Relay Circuit Check

AKS007UB

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

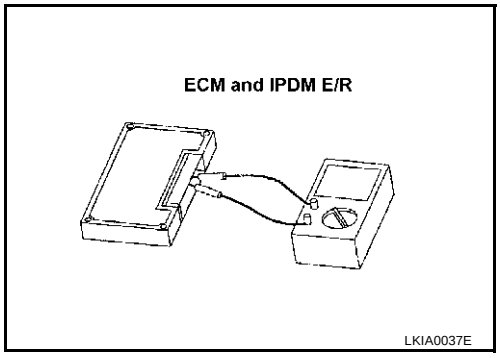
- IPDM E/R power supply circuit. Refer to PG-43, "IPDM E/R Power/Ground Circuit Inspection" .
- Ignition power supply circuit. Refer to PG-12, "IGNITION POWER SUPPLY - IGNITION SW. IN “ON” AND/OR “START”" .

Component Inspection

AKS007UC

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