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PRECAUTIONS PFP:00001

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

KS007WV

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 Man-

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.
- Diagnose CAN communication system. Refer to <u>LAN-6, "CAN Communication Unit"</u>.

Precautions For Trouble Diagnosis CAN SYSTEM

AKS00581

- 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

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Precautions For Harness Repair CAN SYSTEM

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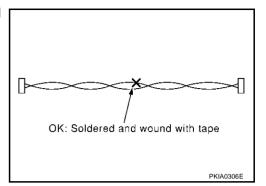
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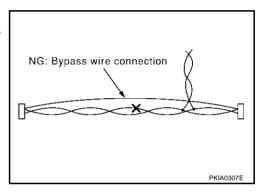
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Solder the repaired parts, and wrap with tape. [Frays of twisted line must be within 110 mm (4.33 in)]



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



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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

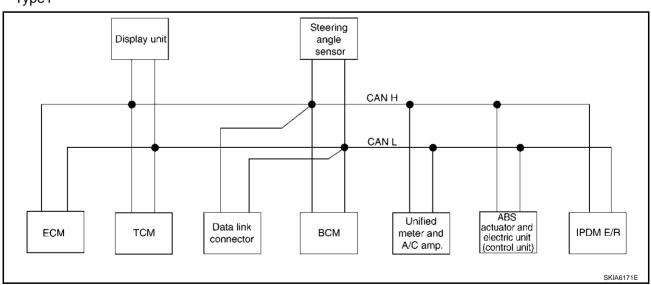
Go to CAN system, when selecting your car model from the following table.

Body type		Wagon										
Axle		2WD			AWD							
Engine	VQ35DE VQ35DE/VK45DE											
Transmission			А	/T								
Brake control			V	DC								
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						

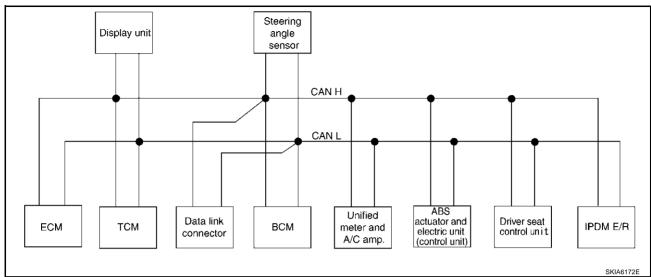
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TYPE 1/TYPE2 System Diagram

Type1







Input/output Signal Chart

iipadoatpat oigilai oilait							T: T	ransmit R	: Receiv
Signals	ECM	ТСМ	Dis- play unit	ВСМ	Steer- ing 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	Т	R	R			R	R		
Engine status signal	Т			R					
Engine coolant temperature signal	Т	R				R			
A/T self-diagnosis signal	R	Т							
Accelerator pedal position signal	Т	R					R		
Closed throttle position signal	Т	R							
Wide open throttle position signal	Т	R							
Battery voltage signal	Т	R							
Key switch signal				Т				R	
Ignition switch signal				Т				R	R
P range signal		Т					R	R	
Stop lamp switch signal		R				Т			
ABS operation signal	R						Т		
TCS operation signal	R						Т		
VDC operation signal	R						Т		
Fuel consumption monitor signal	Т		R			R			
Input shaft revolution signal	R	Т							
Output shaft revolution signal	R	Т							
A/C switch signal	R			Т					
A/C compressor request signal	Т								R
A/C relay status signal	R								Т
A/C compressor feedback signal	Т					R			
Blower fan motor switch signal	R			Т					

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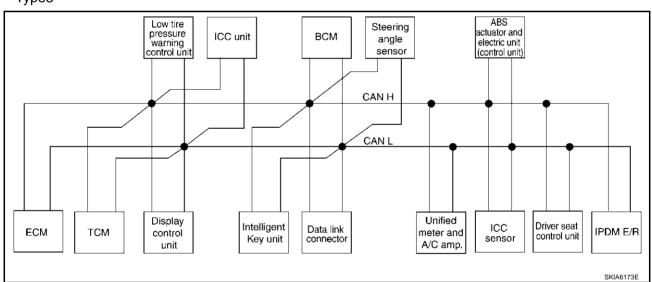
									[CAN
Signals	ECM	ТСМ	Dis- play unit	всм	Steer- ing angle sensor	Unified meter and A/ C amp.	ABS actuator and electric unit (control unit)	Driver seat control unit	IPDM E/R
A/C control signal			Т			R			
			R			Т			
Cooling fan speed request signal	Т								R
Cooling fan speed signal	R								Т
Position light request signal			R	Т		R			R
Low beam request signal				Т					R
Low beam status signal	R								T
High beam request signal				Т		R			R
High beam status signal	R								T
Front fog light request signal				Т					R
Day time running light request signal				Т		R			
Turn LED burnout status signal				R		Т			
Vehicle speed signal						R	Т		
vornois apassa signai	R	R	R	R		Т		R	
Sleep wake up signal				Т		R		R	R
Door switch signal			R	Т		R		R	R
Turn indicator signal				Т		R			
Key fob ID signal				Т				R	
Key fob door unlock signal				Т				R	
Oil pressure switch signal				R					Т
Oii pressure switch signal				Т		R			
Buzzer output signal				Т		R			
Fuel level sensor signal	R					Т			
Fuel level low warning signal			R			Т			
ASCD operation signal	Т	R							
ASCD OD cancel request	Т	R							
Front wiper request signal				Т					R
Front wiper stop position signal				R					Т
Rear window defogger switch signal				Т					R
Rear window defogger control signal	R		R	R					Т
Hood switch signal				R					Т
Theft warning horn request signal				Т					R
Horn chirp signal				Т					R
Steering angle sensor signal					Т		R		
ABS warning lamp signal						R	Т		
VDC OFF indicator lamp signal						R	Т		
SLIP indicator lamp signal						R	Т		
Brake warning lamp signal						R	Т		
System setting signal		<u> </u>	Т	R			<u> </u>	R	
A/T CHECK indicator lamp signal		Т				R			

[CAN]

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

TYPE 3 System Diagram

Type3



Input/output Signal Chart

T: Transmit R: Receive

Signals	ECM	ТСМ	Dis- play con- trol unit	Low tire pres- sure warn- ing con- trol unit	ICC unit	Intelli- gent Key unit	всм	Steeri ng angle sen- sor	Unified meter and A/C amp.	ICC sen- sor	ABS actuator and electric unit (control unit)	Driver seat con- trol unit	IPDM E/R
Engine speed signal	Т	R	R		R				R		R		
Engine status signal	Т						R						
Engine coolant tempera- ture signal	Т	R			R				R				
A/T self-diagnosis signal	R	Т											

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Signals	ECM	ТСМ	Dis- play con- trol unit	Low tire pres- sure warn- ing con- trol unit	ICC unit	Intelli- gent Key unit	всм	Steeri ng angle sen- sor	Unified meter and A/C amp.	ICC sen- sor	ABS actuator and electric unit (control unit)	Driver seat con- trol unit	IPDM E/R
Accelerator pedal position signal	Т	R			R						R		
Closed throttle position signal	Т	R			R								
Wide open throttle position signal	Т	R											
Battery voltage signal	Т	R											
Key switch signal							Т					R	
Ignition switch signal							Т					R	R
P range signal		Т			R						R	R	
Stop lamp switch signal		R							Т				
ABS operation signal	R				R						Т		
TCS operation signal	R				R						Т		
VDC operation signal	R				R						Т		
Fuel consumption monitor signal	Т		R						R				
Input shaft revolution signal	R	Т			R								
Output shaft revolution signal	R	Т			R								
A/C switch signal	R						Т						
A/C compressor request signal	Т												R
A/C relay status signal	R												Т
A/C compressor feed- back signal	Т								R				
Blower fan motor switch signal	R						Т						
A/C control signal			Т						R				
A/C control signal			R						Т				
Cooling fan speed signal	R												Т
Position light request signal	R						Т		R				R
Low beam request signal							Т						R
Low beam status signal	R												Т
High beam request signal							Т		R				R
High beam status signal	R												Т
Front fog light request signal							Т						R
Day time running light request signal							Т		R				

[CAN]

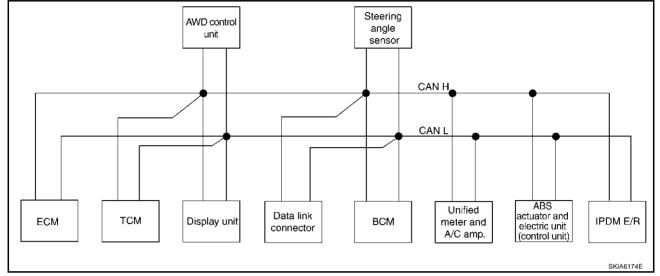
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Signals	ECM	ТСМ	Dis- play con- trol unit	Low tire pres- sure warn- ing con- trol unit	ICC unit	Intelli- gent Key unit	всм	Steeri ng angle sen- sor	Unified meter and A/C amp.	ICC sen- sor	ABS actuator and electric unit (control unit)	Driver seat con- trol unit	IPDM E/R	1
Turn LED burnout status signal							R		Т					ı
Vehicle speed signal					R				R		Т			-
vornoio opoca digital	R	R	R	R		R	R		Т	R		R		
Sleep wake up signal						Т	T R		R			R	R	
Door switch signal			R			R	Т		R			R	R	
Turn indicator signal							Т		R					
Key fob ID signal							Т					R		
Key fob door unlock sig- nal							Т					R		(
Oil pressure switch sig-							R						Т	
nal							Т		R					
							Т		R					
Buzzer output signal						Т			R					
					Т				R					
Fuel level sensor signal	R								Т					
Fuel level low warning signal			R						Т					
ICC operation signal	R				Т									
Front wiper request sig- nal					R		Т						R	L
Front wiper stop position signal							R						Т	
Rear window defogger switch signal							Т						R	
Rear window defogger control signal	R		R				R						Т	
Hood switch signal							R						Т	
Theft warning horn request signal							Т						R	
Horn chirp signal							Т						R	
Steering angle sensor signal								Т			R			
Tire pressure signal				Т					R					
Tire pressure data signal			R	Т										
ABS warning lamp signal					R				R		Т			
VDC OFF indicator lamp signal					R				R		Т			
SLIP indicator lamp sig-									R		Т			

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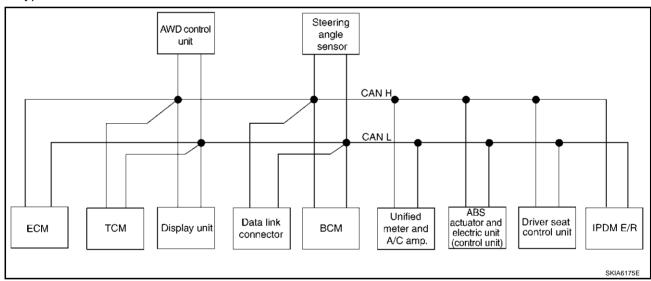
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Signals	ECM	ТСМ	Dis- play con- trol unit	Low tire pres- sure warn- ing con- trol unit	ICC unit	Intelli- gent Key unit	всм	Steeri ng angle sen- sor	Uni- fied meter and A/C amp.	ICC sen- sor	ABS actu- ator and elec- tric unit (con- trol unit)	Driver seat con- trol unit	IPDM E/R
Brake warning lamp sig- nal									R		Т		
System setting signal			Т			R						R	
Distance to empty signal			R						Т				
Hand brake switch signal							R		Т				
Door lock/unlock request signal						Т	R						
Door lock/unlock status signal						R	Т						
Starter permission signal						Т	R						
Back door open request signal						Т	R						
Power window open request signal						Т	R						
Alarm request signal						Т	R						
Key warning signal						Т			R				
ICC sensor signal					R					Т			
ICC warning lamp signal					Т				R				
ICC system display signal					Т				R				
Current gear position signal		Т			R						R		
Steering switch signal	Т				R								
ASCD operation signal	Т	R											
ASCD OD cancel request	Т	R											
ICC OD cancel request	R	R			Т								
A/T CHECK indicator lamp signal		Т							R				
A/T position indicator lamp signal		Т							R				
A/T shift schedule change demand signal		R									Т		
Manual mode signal		R							Т				
Not manual mode signal		R							Т				
Manual mode shift up signal		R							Т				
Manual mode shift down signal		R							Т				
Manual mode indicator signal		Т			R				R				
Ignition knob switch signal						Т	R						

TYPE 4/TYPE5 System Diagram

• Type4



Type5



Input/output Signal Chart

Signals	ECM	ТСМ	Dis- play unit	AWD con- trol unit	всм	Steer- ing angle sensor	Uni- fied meter and A/ C amp.	ABS actuator and electric unit (control unit)	Driver seat con- trol unit	IPDM E/R
A/T self-diagnosis signal	R	Т								
ABS operation signal	R			R				Т		
TCS operation signal	R							Т		
VDC operation signal	R			R				Т		
Stop lamp switch signal		R		R			T			
Battery voltage signal	Т	R								

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Signals	ECM	тсм	Dis- play unit	AWD con- trol unit	всм	Steer- ing angle sensor	Unified meter and A/C amp.	ABS actua- tor and elec- tric unit (con- trol unit)	Driver seat con- trol unit	IPDM E/R
Key switch signal					Т				R	
Ignition switch signal					Т				R	R
P range signal		T						R	R	
Closed throttle position signal	Т	R								
Wide open throttle position signal	Т	R								
Engine speed signal	Т	R	R	R			R	R		
Engine status signal	Т				R					
Engine coolant temperature signal	Т	R					R			
Accelerator pedal position signal	Т	R		R				R		
Fuel consumption monitor signal	Т		R				R			
Input shaft revolution signal	R	Т								
Output shaft revolution signal	R	Т								
A/C switch signal	R				Т					
A/C compressor request signal	Т									R
A/C relay status signal	R									Т
A/C compressor feedback signal	Т						R			
Blower fan motor switch signal	R				Т					
A/C control signal			T				R			
A/C control signal			R				Т			
Cooling fan speed signal	R									T
Position light request signal			R		Т		R			R
Low beam request signal					Т					R
Low beam status signal	R									Т
High beam request signal					Т		R			R
High beam status signal	R									T
Front fog light request signal					Т					R
Day time running light request signal					Т		R			
Turn LED burnout status signal					R		T			
Vehicle speed signal							R	T		
vollide speed signal	R	R	R		R		Т		R	
Sleep wake up signal					Т		R		R	R
Door switch signal			R		Т		R		R	R
Turn indicator signal					Т		R			
Key fob ID signal					Т				R	
Key fob door unlock signal					Т				R	
Oil pressure switch signal					R T		R			Т
					T		R			

[CAN]

								ABS		CAN
Signals	ECM	TCM	Dis- play unit	AWD con- trol unit	всм	Steer- ing angle sensor	Unified meter and A/ C amp.	actua- tor and elec- tric unit (con- trol unit)	Driver seat con- trol unit	IPDM E/R
Fuel level sensor signal	R						Т			
Fuel level low warning signal			R				Т			
Front wiper request signal					Т					R
Front wiper stop position signal					R					Т
Rear window defogger switch signal					Т					R
Rear window defogger control signal	R		R		R					Т
Hood switch signal					R					Т
Theft warning horn request signal					Т					R
Horn chirp signal					Т					R
Steering angle sensor signal						Т		R		
ABS warning lamp signal							R	T		
VDC OFF indicator lamp signal							R	Т		
SLIP indicator lamp signal							R	T		
Brake warning lamp signal							R	T		
System setting signal			Т		R				R	
AWD warning lamp signal				Т			R			
AWD lock indicator lamp signal				Т			R			
Distance to empty signal			R				Т			
Hand brake switch signal				R	R		Т			
ASCD operation signal	Т	R								
ASCD OD cancel request	Т	R								
A/T CHECK indicator lamp signal		Т					R			
A/T position indicator lamp signal		Т					R			
A/T shift schedule change demand signal		R						Т		
Manual mode signal		R					Т			
Not manual mode signal		R					Т			
Manual mode shift up signal		R					Т			
Manual mode shift down signal		R					Т			
Manual mode indicator signal		Т					R			

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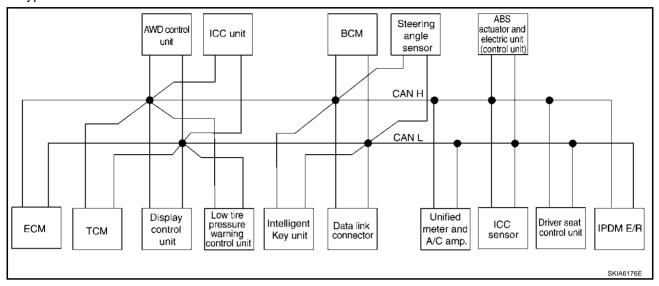
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System Diagram

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Input/output	Signal	Chart
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	П				T T		П				T:	Transm	nit R: F	Receive
Signals	ECM	ТСМ	Dis- play con- trol unit	Low tire pres- sure warn ing con- trol unit	AWD con- trol unit	ICC unit	Intel- ligen t Key unit	всм	Stee ring angl e sen- sor	Unified mete rand A/C amp.	ICC sen- sor	ABS actuator and electric unit (control unit)	Driv er seat con- trol unit	IPD M E/ R
A/T self-diagnosis signal	R	Т												
ABS operation signal	R				R	R						Т		
TCS operation signal	R					R						Т		
VDC operation signal	R				R	R					R	Т		
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		Т				R						R	R	
Closed throttle position signal	Т	R				R								
Wide open throttle position signal	Т	R												
Engine speed signal	Т	R	R		R	R				R		R		
Engine status signal	Т							R						
Engine coolant temperature signal	Т	R				R				R				
Accelerator pedal position signal	Т	R			R	R						R		
Fuel consumption monitor signal	Т		R							R				
A/T self-diagnosis signal	R	Т												
Input shaft revolution signal	R	Т				R								
Output shaft revolution signal	R	Т				R								
A/C switch signal	R							Т						
A/C compressor request signal	Т													R
A/C relay status signal	R													Т
A/C compressor feedback signal	Т									R				
Blower fan motor switch signal	R							Т						
A/C control signal			T R							R T				
Cooling fan speed signal	R													Т
Position light request signal			R					Т		R				R
Low beam request signal								Т						R
Low beam status signal	R													Т
High beam request signal								Т		R				R

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Signals	ECM	тсм	Dis- play con- trol unit	Low tire pres- sure warn ing con- trol unit	AWD con- trol unit	ICC unit	Intelligen t Key unit	всм	Stee ring angl e sen- sor	Unified mete rand A/C amp.	ICC sen- sor	ABS actuator and electric unit (control unit)	Driv er seat con- trol unit	IPD M E/ R
High beam status signal	R													Т
Front fog light request signal								Т						R
Day time running light request signal								Т		R				
Turn LED burnout status signal								R		Т				
Vehicle speed signal	R	R	R	R		R	R	R		R T	R	Т	R	
								Т		R			R	R
Sleep wake up signal							Т	R						
Door switch signal			R				R	Т		R			R	R
Key fob ID signal								Т					R	
Key fob door unlock signal								Т					R	
Oil pressure switch signal								R T		R				Т
Buzzer output signal						Т	Т	Т		R R R				
Fuel level sensor signal	R									Т				
Fuel level low warning signal			R							Т				
ICC operation signal	R					Т								
Front wiper request signal						R		Т						R
Front wiper stop position signal								R						Т
Rear window defogger switch signal								Т						R
Rear window defogger control signal	R		R					R						Т
Hood switch signal								R						Т
Theft warning horn request signal								Т						R
Horn chirp signal								Т						R
Steering angle sensor signal									Т			R		
Tire pressure signal				Т		·				R				
Tire pressure data signal			R	Т										
ABS warning lamp signal						R				R		Т		
VDC OFF indicator lamp signal						R				R		Т		
SLIP indicator lamp signal										R		Т		

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														<u> </u>
Signals	ECM	тсм	Dis- play con- trol unit	Low tire pres- sure warn ing con- trol unit	AWD con- trol unit	ICC unit	Intel- ligen t Key unit	всм	Stee ring angl e sen- sor	Unified mete rand A/C amp.	ICC sen- sor	ABS actuator and electric unit (control unit)	Driv er seat con- trol unit	IPD M E/ R
Brake warning lamp signal										R		Т		
System setting signal			Т				R						R	
AWD warning lamp signal					Т					R				
AWD lock indicator lamp signal					Т					R				
Distance to empty signal			R							Т				
Hand brake switch signal					R			R		Т				
Door lock/unlock request signal							Т	R						
Door lock/unlock status signal							R	Т						
Starter permission signal							Т	R						
Back door open request signal							Т	R						
Power window open request signal							Т	R						
Alarm request signal							Т	R						
Key warning signal							Т			R				
ICC sensor signal						R					Т			
ICC warning lamp signal						Т				R				
ICC system display signal						Т				R				
Current gear position signal		Т				R						R		
Steering switch signal	Т					R								
ASCD operation signal	Т	R												
ASCD OD cancel request	Т	R												
ICC OD cancel request	R	R				Т								
A/T CHECK indicator lamp signal		Т								R				
A/T position indicator lamp signal		Т								R				
A/T shift schedule change demand signal		R										Т		
Manual mode signal		R								Т				
Not manual mode signal		R								Т				
Manual mode shift up signal		R								Т				
Manual mode shift down signal		R								Т				
Manual mode indicator signal		Т								R				
Ignition knob switch signal							Т	R						

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CAN SYSTEM (TYPE 1)

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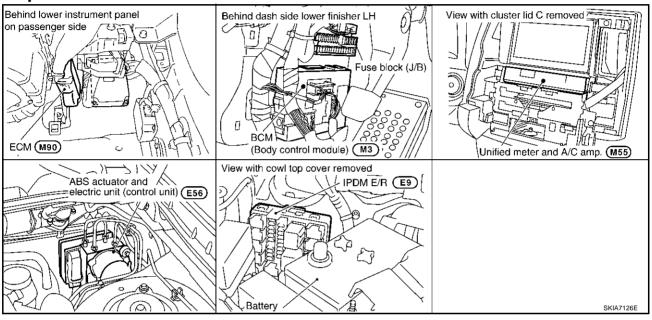
System Description

AK\$00700

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

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AKS007Q3

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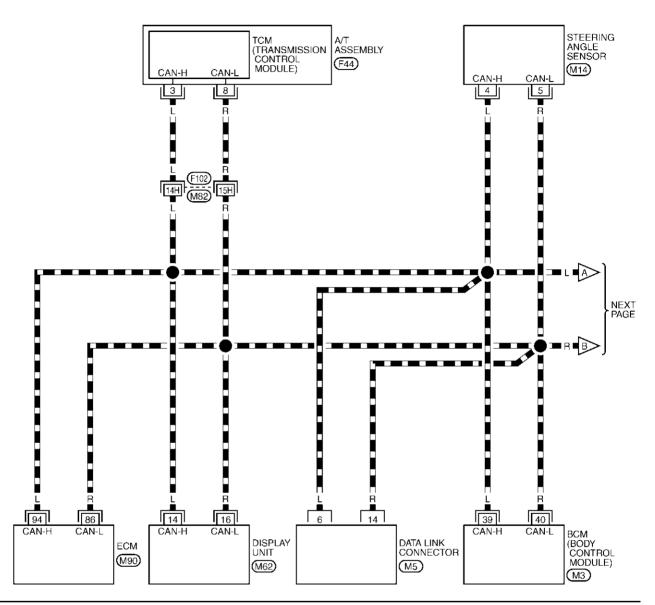
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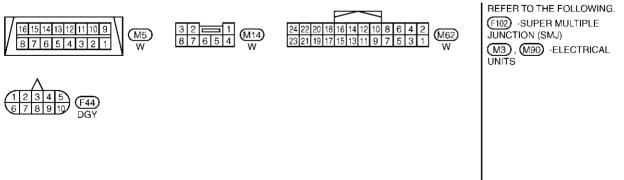
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LAN-CAN-01

: DATA LINE





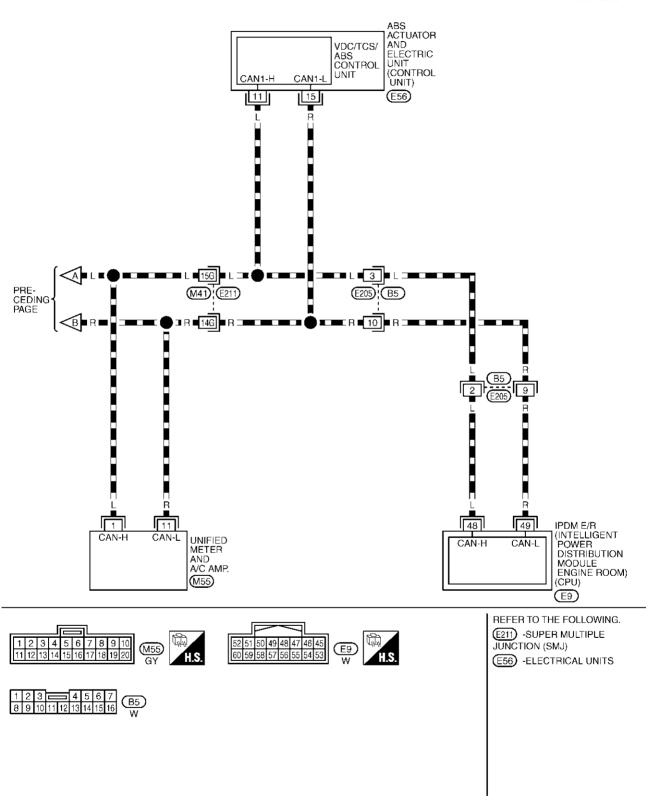
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LAN-CAN-02

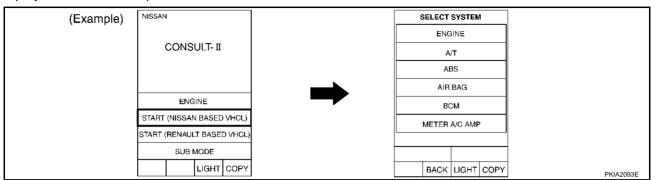
: DATA LINE



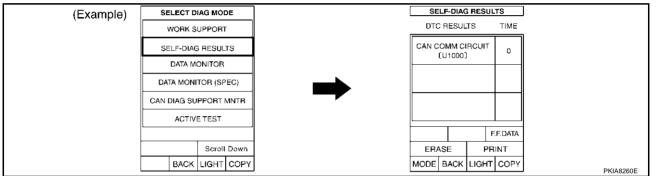
TKWH0247E

Work Flow

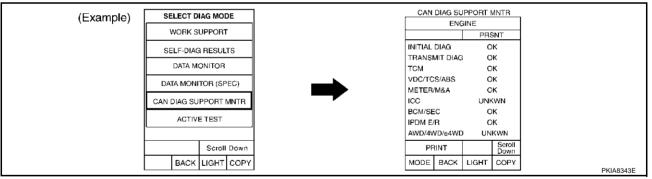
1. When there are no indications of "BCM", "METER A/C AMP" or "IPDM E/R" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



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.



- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to <u>LAN-25</u>, "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.
- Check CAN communication line of the integrated display system. Refer to <u>AV-97, "CAN Communication Line Inspection"</u>.
- Attach the CAN DIAG MONITOR check sheet onto the check sheet. Refer to LAN-25, "CHECK SHEET".
- Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG MONITOR check sheet. Refer to <u>LAN-25</u>, "CHECK SHEET".

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CAN SYSTEM (TYPE 1)

[CAN]

NOTE:

- If "NG" is displayed on "CAN COMM" as "CAN DIAG MNTR" for the diagnosed control unit, replace the control unit. Refer to $\underline{\text{AV-97, "CAN Communication Line Inspection"}}$.
- 9. According to the check sheet results (example), start inspection. Refer to LAN-27, "CHECK SHEET RESULTS (EXAMPLE)".

CAN SYSTEM (TYPE 1)

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CHECK SHEET

NOTE:

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

Check sheet table					CA	N DIAG SU	PPORT MN	ITR			
SELECT SYST	EM screen	Initial	Transmit				Receive of			,	
		diagnosis		ECM	тсм	DISPLAY	BCM/SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/F
ENGINE	_	NG	UNKWN	ı	UNKWN	_	UNKWN	1	UNKWN	UNKWN	UNKWN
A/T	_	NG	UNKWN	UNKWN	_	_			UNKWN	UNKWN	_
Display unit	1	CAN COMM	CAN 1	CAN 3	_	_	CAN 2	ı	CAN 5	_	CAN 7
всм	No indication	NG	UNKWN	UNKWN	_	_	1	1	UNKWN	_	UNKWN
METER A/C AMP	No indication	-	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	-	_	UNKWN	_
ABS	_	NG	UNKWN	UNKWN	UNKWN	_	_	UNKWN	_	_	_
PDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	_	_	_	_
			ach copy (ECT SYST				ttach copy LECT SYS				
			C/	C	tach copy display uni MONITOR	t	eet				

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Attach copy of	Attach copy of	Attach copy of
ENGINE	A/T	BCM
SELF-DIAG RESULTS	SELF-DIAG RESULTS	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	Attach copy of	Attach copy of
METER A/C AMP	ABS	IPDM E/R
CAN DIAG SUPPORT	CAN DIAG SUPPORT	CAN DIAG SUPPORT
MNTR	MNTR	MNTR

CHECK SHEET RESULTS (EXAMPLE)

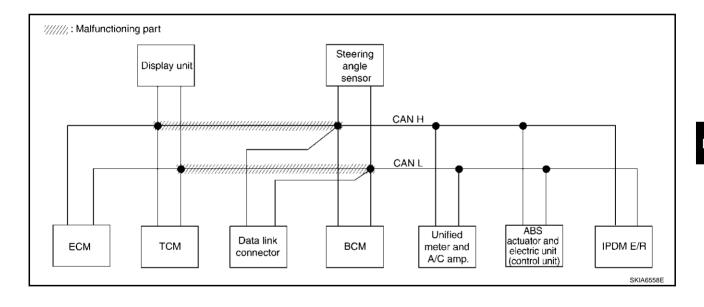
NOTE:

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 <u>LAN-40</u>, "Circuit Check Between TCM and <u>Data Link Connector"</u>.

					CA	N DIAG SU	PPORT MN	ITR			
SELECT SYST	FM screen	Initial	Transmit				Receive of	diagnosis			
022201 0101	Elli Sorcon	diagnosis	diagnosis	ECM	тсм	DISPLAY	BCM/SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/F
ENGINE	_	NG	UNKWN	_	UNKWN	=	UNK WN	_	Π ΝΚ ΜΝ	UNK WN	UN₩WN
A/T	_	NG	UNKWN	UNKWN	_	_	-	_	UNKWN	UNKWN	_
Display unit	_	CAN COMM	CAN 1	CAN 3	_	_	C4/12	_	C ₩15	_	CAN 7
всм	No indication	NG	UNKWN	UNKWN	_	_	-	_	UNKWN	_	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNK WN	UNK/WN	UNKWN	_	_	UNKWN	_
ABS	_	NG	UNKWN	UNKWN	UNK/WN	_	_	UNKWN	_	_	-
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	_	_	_	_



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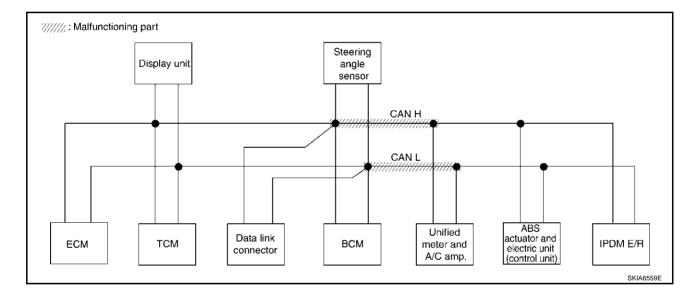
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Case 2
Check harness between data link connector and unified meter and A/C amp. Refer to LAN-40, "Circuit Check Between Data Link Connector and Unified Meter and A/C Amp.".

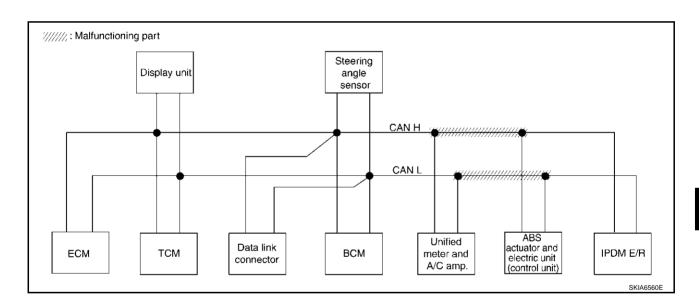
					CAI	N DIAG SU	PPORT MN	ITR			
SELECT SYST	FM screen	Initial	Transmit				Receive of	liagnosis			
022201 0101	Elii Sorcon	diagnosis	diagnosis	ECM	ТСМ	DISPLAY	BCM/SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/F
ENGINE	_	NG	UNKWN	_	UNKWN	_	UNKWN	_	UNK WN	Π ΝΚ (ΜΝ	UNKWN
A/T	_	NG	UNKWN	UNKWN	_	_	_	_	UNKWN	UNKWN	_
Display unit	_	CAN COMM	CAN 1	CAN 3	_	_	CAN 2	_	C ₩15	_	CAN 7
ВСМ	No indication	NG	UNKWN	UNKWN	_	_	_	_	UNKWN	_	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	_	UNKWN	_
ABS	_	NG	UNKWN	UNION	UNKWN	_	_	UNK WN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	_	_	_	_



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)".

					CA	N DIAG SU	PPORT MN				
SELECT SYST	EM screen	Initial	Transmit				Receive of	diagnosis			
0===0.0.0.	00.00	diagnosis	diagnosis	ECM	тсм	DISPLAY	BCM/SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	_	NG	UNKWN	_	UNKWN	_	UNKWN	_	UNKWN	UNK WN	UNKWN
A/T	_	NG	UNKWN	UNKWN	-	=	_	_	UNKWN	Π ΝΚ ⁄ΛΝ	=
Display unit	_	CAN COMM	CAN 1	CAN 3	_	_	CAN 2	_	CAN 5	_	CAN 7
ВСМ	No indication	NG	UNKWN	UNKWN	_	_	_	_	UNKWN	_	UNK WN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	_	UNK/WN	-
ABS	_	NG	UNKWN	UNKWN	UNKWN	_	_	UNKWN	_	_	ı
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	_	_	_	_



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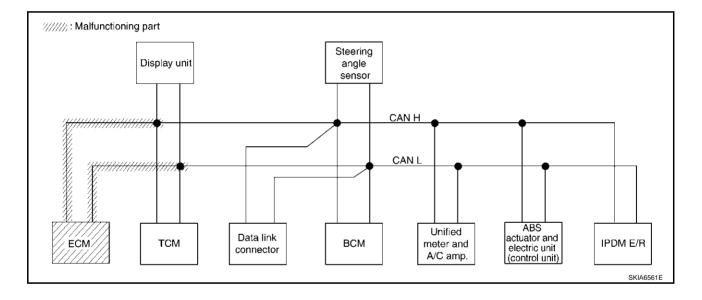
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Case 4
Check ECM circuit. Refer to LAN-41, "ECM Circuit Check".

					CAI	N DIAG SU	PPORT MN	ITR			
SELECT SYST	FM screen	Initial	Transmit				Receive of	diagnosis			
022201 0101	Elw solcon	diagnosis	diagnosis	ECM	ТСМ	DISPLAY	BCM/SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/F
ENGINE	_	NG	∩ M MN	_	Π ΝΚ ΜΝ	_	Π ΝΚ ΜΝ	_	UNIVAN	UNK WN	UNKWN
A/T	_	NG	UNKWN	UNKWN	_	-	_	_	UNKWN	UNKWN	=
Display unit	_	CAN COMM	CAN 1	сұ∕із	_	_	CAN 2	_	CAN 5	_	CAN 7
BCM	No indication	NG	UNKWN	NURW N	_	_	_	_	UNKWN	_	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNR WN	UNKWN	UNKWN	UNKWN	_	_	UNKWN	_
ABS	_	NG	UNKWN	UNKWN	UNKWN	_	_	UNKWN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNIMN	_	_	UNKWN	_	_	_	_



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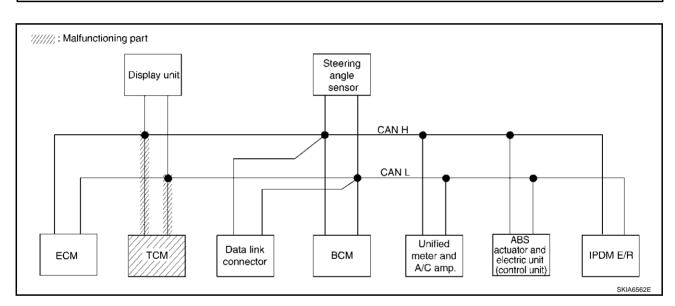
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Case 5
Check TCM circuit. Refer to LAN-42, "TCM Circuit Check".

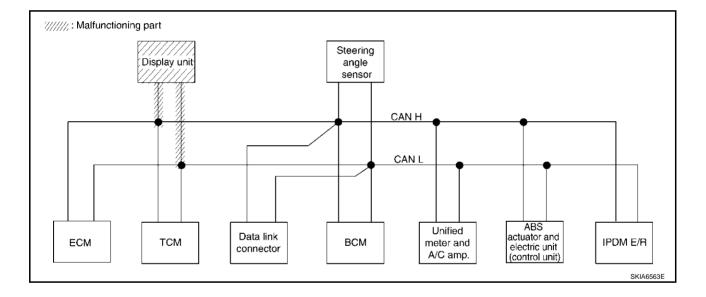
					CA	N DIAG SU	PPORT MN				
SELECT SYST	EM screen	Initial	Transmit				Receive of	diagnosis			
		diagnosis	diagnosis	ECM	тсм	DISPLAY	BCM/SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/f
ENGINE	_	NG	UNKWN		UNK WN	_	UNKWN	-	UNKWN	UNKWN	UNKWN
A/T	_	NG	UN A MN	UNION	-	=	_	_	UNIWN	UNK WN	=
Display unit	_	CAN COMM	CAN 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	UNK WN	UNKWN	UNKWN	_	=	UNKWN	_
ABS	_	NG	UNKWN	UNKWN	UNKWN	_	_	UNKWN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	_	_	_	_



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Case 6
Check display unit circuit. Refer to <u>LAN-42</u>, "<u>Display Unit Circuit Check</u>".

					CAI	N DIAG SU	PPORT MN	ITR			
SELECT SYST	EM screen	laitial	Transmit				Receive o	liagnosis			
00000	LIW SCIECT	Initial diagnosis	Transmit diagnosis	ECM	ТСМ	DISPLAY	BCM/SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/F
ENGINE	_	NG	UNKWN	_	UNKWN		UNKWN	_	UNKWN	UNKWN	UNKWN
A/T	_	NG	UNKWN	UNKWN	_	_	-	_	UNKWN	UNKWN	=
Display unit	_	CAN COMM	C4 / 1 1	СМЗ	_	_	CAN 2	_	CAN 5	_	CAN 7
ВСМ	No indication	NG	UNKWN	UNKWN	_	_	_	_	UNKWN	_	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNK WN	UNKWN	_	_	UNKWN	_
ABS	_	NG	UNKWN	UNKWN	UNKWN	_	_	UNKWN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	_	_	_	_



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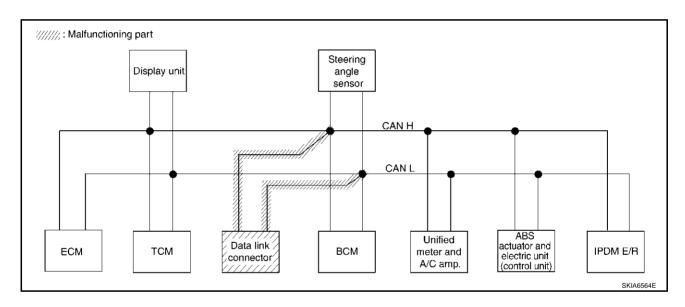
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Case 7
Check data link connector circuit. Refer to <u>LAN-43</u>, "Data Link Connector Circuit Check".

					CA	N DIAG SU	PPORT MN	ITR			
SELECT SYST	EM screen	Initial	Transmit				Receive of	diagnosis			
		diagnosis	diagnosis	ECM	тсм	DISPLAY	BCM/SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/f
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
ВСМ	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	_	_	_	_

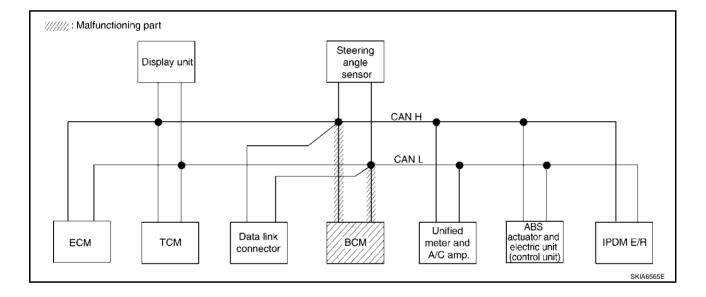


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Case 8
Check BCM circuit. Refer to <u>LAN-43, "BCM Circuit Check"</u>.

					CAI	N DIAG SU	PPORT MN	ITR			
SELECT SYST	FM screen	Initial	Transmit				Receive of	liagnosis			
022201 0101	Em sorcon	diagnosis	Transmit diagnosis	ECM	ТСМ	DISPLAY	BCM/SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/f
ENGINE	_	NG	UNKWN	_	UNKWN	_	UNK WN	_	UNKWN	UNKWN	UNKWN
A/T	_	NG	UNKWN	UNKWN	_	-	_	_	UNKWN	UNKWN	=
Display unit	_	CAN COMM	CAN 1	CAN 3	_	_	CAN 2	_	CAN 5	_	CAN 7
ВСМ	No indication	NG	UNKWN	UNKWN	_	_	_	_	UNKWN	_	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	∩ NK WN	_	_	UNKWN	_
ABS	_	NG	UNKWN	UNKWN	UNKWN	_	_	UNKWN	_	_	-
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNK WN	_	_	_	_



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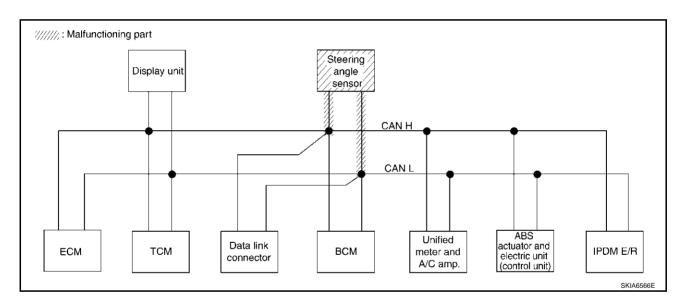
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Case 9
Check steering angle sensor circuit. Refer to <u>LAN-44</u>, "Steering Angle Sensor Circuit Check".

					CA	N DIAG SU	PPORT MN				
SELECT SYST	EM screen	Initial	Transmit				Receive of	diagnosis			
		diagnosis	diagnosis	ECM	тсм	DISPLAY	BCM/SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/F
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
ВСМ	No indication	NG	UNKWN	UNKWN	_	_	_	_	UNKWN	_	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	_	UNKWN	-
ABS	_	NG	UNKWN	UNKWN	UNKWN	_	_	NNKWN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	_	_	_	_



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Case 10
Check unified meter and A/C amp. circuit. Refer to <u>LAN-44, "Unified Meter and A/C Amp. Circuit Check"</u>.

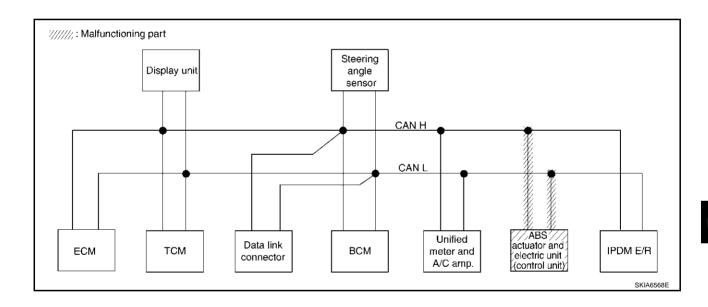
					CAI	N DIAG SU	PPORT MN	ITR			
SELECT SYST	EM screen	laitial	Transmit				Receive of	diagnosis			
00000	LIW SCIECT	Initial diagnosis	Transmit diagnosis	ECM	ТСМ	DISPLAY	BCM/SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/I
ENGINE	_	NG	UNKWN	_	UNKWN	_	UNKWN	_	Π ИΚ ΜИ	UNKWN	UNKWN
A/T	_	NG	UNKWN	UNKWN	_	=	-	_	Π ИΚ ΜИ	UNKWN	_
Display unit	_	CAN COMM	CAN 1	CAN 3	_	_	CAN 2	_	CAN 5	_	CAN 7
ВСМ	No indication	NG	UNKWN	UNKWN	_	_	_	_	NNKWN	_	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	_	_	_	_

//////: Malfunctioning part Steering Display unit angle sensor CAN H CAN L ABS actuator and electric unit (control unit) Unified Data link ECM TCM ВСМ meter and IPDM E/R connector A/C amp. SKIA6567E

Case 11

Check ABS actuator and electric unit (control unit) circuit. Refer to <u>LAN-45</u>, "ABS Actuator and Electric Unit (Control Unit) Circuit Check".

					CA	N DIAG SU	PPORT MN	ITR			
SELECT SYST	FM screen	Initial	Transmit				Receive of	diagnosis			
OLLLO1 O101	EIW SOICCIT	diagnosis	Transmit diagnosis	ECM	тсм	DISPLAY	BCM/SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/I
ENGINE	_	NG	UNKWN	_	UNKWN	_	UNKWN	_	UNKWN	UNI WN	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	_	_	UNK WN	_
ABS	_	NG	UNK WN	UNKWN	UNK/WN	_	_	UNK WN	_	_	-
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	_	_	_	_



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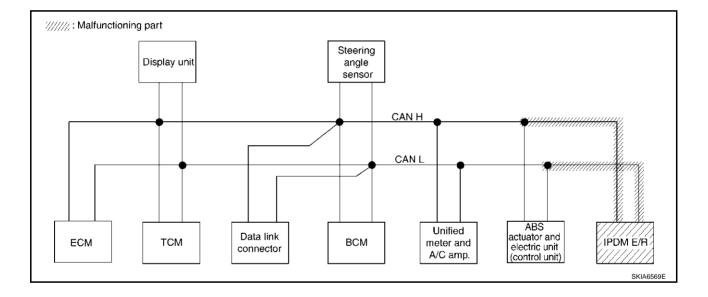
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Case 12
Check IPDM E/R circuit. Refer to LAN-45, "IPDM E/R Circuit Check".

					CAI	N DIAG SU	PPORT MN	ITR			
SELECT SYST	FM screen	Initial	Transmit				Receive of	diagnosis			
022201 0101	Em sorcen	diagnosis	diagnosis	ECM	ТСМ	DISPLAY	BCM/SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/F
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
ВСМ	No indication	NG	UNKWN	UNKWN	_	_	_	_	UNKWN	_	UNIV
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	_	_	_	_



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Case 13

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

					CA	N DIAG SU	PPORT MN	ITR			
SELECT SYST	FM screen	Initial	Transmit				Receive o	diagnosis			
022201 0101	Elw solcon	diagnosis	diagnosis	ECM	тсм	DISPLAY	BCM/SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/f
ENGINE	_	NG	Ω ΝΚΙ ΛΝ	_	UNR WN	_	UNK WN	_	NAMA	NURWN	UNNWN
A/T	_	NG	UNK W N	UNKWN	-	=	_	_	Π ИΚ ₩И	NNKWN	=
Display unit	_	CAN COMM	CAN 1	C 4√ 13	_	_	CAN 2	_	CAN 5	_	CM 7
всм	No indication	NG	UNKWN	UNKWN	_	_	_	_	UNKWN	_	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	_	UNKWN	_
ABS	_	NG	UNK WN	UNRWN	UNKWN	_	_	NNNMN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	_	_	_	_

Case 14

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to $\underline{\text{LAN-50, "IPDM E/R Ignition Relay Circuit Check"}}$.

					CA	N DIAG SU	PPORT MN	ITR			
SELECT SYST	FM screen	Initial	Transmit				Receive of	diagnosis			
022201 0101	EW SOICCH	diagnosis	Transmit diagnosis	ECM	тсм	DISPLAY	BCM/SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/F
ENGINE	_	NG	UNKWN	_	UN A WN	_	UNKWN	1	UNKWN	UN A WN	UNKWN
A/T	_	NG	UNKWN	UNKWN	_	-	1		UNKWN	UNKWN	-
Display unit	_	CAN COMM	CAN 1	CAN 3	_	_	CAN 2	_	CAN 5	_	CAN 7
всм	No indication	NG	UNKWN	UNKWN	_	_	-	-	UNKWN	_	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	Π ΜΑ ΜΝ	UNKWN	UNKWN	_	_	Π ΝΚ (ΜΝ	_
ABS	-	NG	UNKWN	UNKWN	UNKWN	_	-	UNKWN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	_	_	-	_

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Case 15

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to <u>LAN-50</u>, "IPDM E/R Ignition Relay Circuit Check".

					CAI	N DIAG SU	PPORT MN	ITR			
SELECT SYST	FM screen	laitial	Transmit				Receive of	diagnosis			
022201 0101	EW SOICEN	Initial diagnosis	Transmit diagnosis	ECM	тсм	DISPLAY	BCM/SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/F
ENGINE	_	NG	UNKWN	_	UNKWN	_	UNKWN	_	UNKWN	UNKWN	UNKWN
A/T	_	NG	UNKWN	UNKWN	_	_	_	_	NUKWN	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	UNIVWN	UNKWN	_	_	UNIONN	_	_	-
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	_	_	_	_

Circuit Check Between TCM and Data Link Connector

AKS007Q5

1. CHECK HARNESS FOR OPEN CIRCUIT

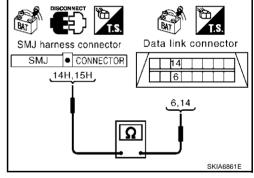
- 1. Turn ignition switch OFF.
- 2. Disconnect the negative battery terminal.
- 3. Disconnect ECM connector and harness connector M82.
- Check continuity between harness connector M82 terminals 14H (L), 15H (R) and data link connector M5 terminals 6 (L), 14 (R).

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 $\underline{\mathsf{LAN-23}}$, "Work Flow".

NG >> Repair harness.



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

1. CHECK HARNESS FOR OPEN CIRCUIT

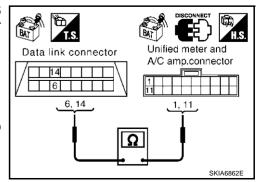
- 1. Turn ignition switch OFF.
- Disconnect the negative battery terminal.
- 3. Disconnect ECM connector and unified meter and A/C amp. connector.
- Check continuity between data link connector M5 terminals 6 (L), 14 (R) and unified meter and A/C amp. harness connector M55 terminals 1 (L), 11 (R).

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-23, "Work Flow" .

NG >> Repair harness.



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

1. CHECK CONNECTOR

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

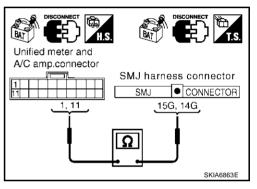
11 (R) - 14G (R)

: 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.

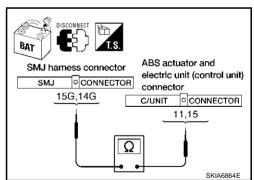
14G (R) - 15 (R)

: Continuity should exist.

OK or NG

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

NG >> Repair harness.



AKS007Q8

ECM Circuit Check

1. CHECK CONNECTOR

- Turn ignition switch OFF.
- 2. Disconnect the negative battery terminal.
- 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.

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$\overline{2}$. CHECK HARNESS FOR OPEN CIRCUIT

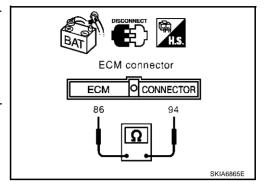
- 1. Disconnect ECM connector.
- 2. Check resistance between ECM harness connector M90 terminals 94 (L) and 86 (R).

94 (L) - 86 (R) : Approx. 108 - 132Ω

OK or NG

OK >> Replace ECM.

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



AKS007Q9

TCM Circuit Check

1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the negative battery terminal.
- 3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
- 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.
- Check resistance between A/T assembly harness connector F44 terminals 3 (L) and 8 (R).

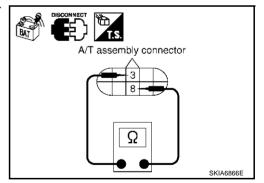
3 (L) - 8 (R) : Approx. 54 -
$$66\Omega$$

OK or NG

NG

OK >> Replace A/T assembly.

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



Display Unit Circuit Check

1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the negative battery terminal.
- 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.

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$\overline{2}$. CHECK HARNESS FOR OPEN CIRCUIT

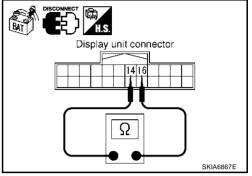
- 1. Disconnect display unit connector.
- Check resistance between display unit harness connector M62 terminals 14 (L) and 16 (R).

14 (L) - 16 (R) : Approx. 54 -
$$66\Omega$$

OK or NG

OK >> Replace display unit.

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



Data Link Connector Circuit Check

1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- Disconnect the negative battery terminal.
- 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

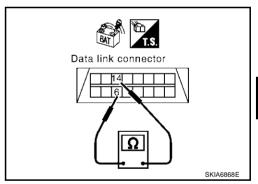
Check resistance between data link connector M5 terminals 6 (L) and 14 (R).

6 (L) - 14 (R) : Approx.
$$54 - 66\Omega$$

OK or NG

OK >> Diagnose again. Refer to LAN-23, "Work Flow".

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



BCM Circuit Check

1. CHECK CONNECTOR

- Turn ignition switch OFF.
- Disconnect the negative battery terminal.
- 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.

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$\overline{2}$. CHECK HARNESS FOR OPEN CIRCUIT

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

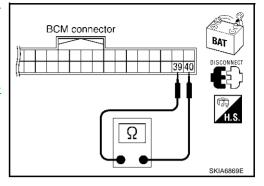
39 (L) - 40 (R)

: Approx. 54 - 66 Ω

OK or NG

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

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



AKS007QD

Steering Angle Sensor Circuit Check

1. CHECK CONNECTOR

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

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

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

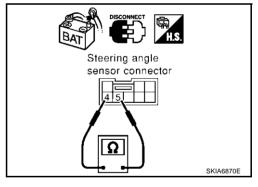
: Approx. 54 - 66 Ω

OK or NG

OK

>> Replace steering angle sensor.

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



AKS007QE

Unified Meter and A/C Amp. Circuit Check

1. CHECK CONNECTOR

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

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

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$\overline{2}$. 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).

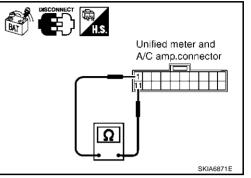
: Approx. 54 - 66 Ω

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

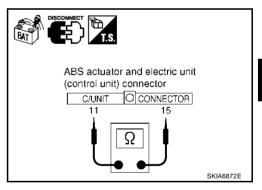
- 1. Disconnect ABS actuator and electric unit (control unit) connector.
- 2. Check resistance between ABS actuator and electric unit (control unit) harness connector E56 terminals 11 (L) and 15 (R).

: Approx. 54 - 66 Ω

OK or NG

OK NG >> Replace ABS actuator and electric unit (control unit).

>> Repair harness between ABS actuator and electric unit (control unit) and harness connector E205.



AKS007QG

IPDM E/R Circuit Check

1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the negative battery terminal.
- 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.

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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)

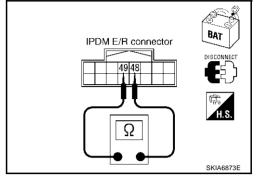
: Approx. 108 - 132 Ω

OK or NG

OK >> Replace IPDM E/R.

NG

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



AKS007QH

CAN Communication Circuit Check

1. CHECK CONNECTOR

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

В

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
- 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.

$oldsymbol{3}_{ ext{-}}$ check harness for short circuit

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

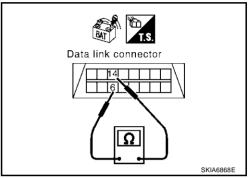
> 6 (L) - Ground : Continuity should not exist. 14 (R) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 4.

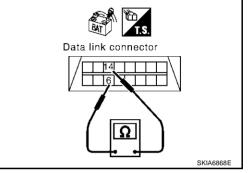
NG

- >> 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.



Data link connector

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4. CHECK HARNESS FOR SHORT CIRCUIT

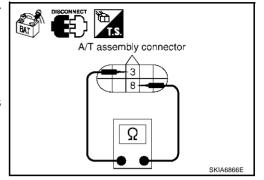
- 1. Disconnect A/T assembly connector.
- 2. Check continuity between A/T assembly harness connector F44 terminals 3 (L) and 8 (R).

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.

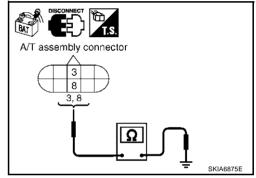
3 (L) - Ground : Continuity should not exist.8 (R) - Ground : Continuity should not exist.

OK or NG

NG

OK >> GO TO 6.

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



6. CHECK HARNESS FOR SHORT CIRCUIT

- 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.

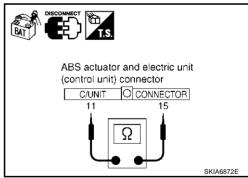
OK or NG

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OK >> GO TO 7.

>> 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.



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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.

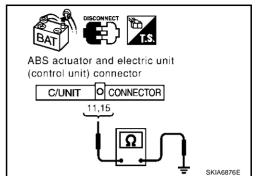
11 (L) - Ground : Continuity should not exist. 15 (R) - Ground : Continuity should not exist.

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).

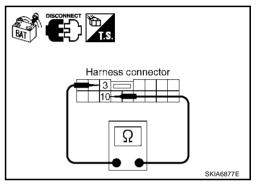
3 (L) - 10 (R) : Continuity should not exist.

OK or NG

OK >> GO TO 9.

NG >> Repair ha

>> 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.

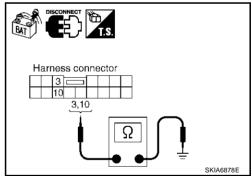
3 (L) - Ground : Continuity should not exist.10 (R) - Ground : Continuity should not exist.

OK or NG

NG

OK >> GO TO 10.

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



10. CHECK HARNESS FOR SHORT CIRCUIT

- 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

NG

OK >> GO TO 11.

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

IPDM E/R connector

DISCONNECT

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11. CHECK HARNESS FOR SHORT CIRCUIT

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

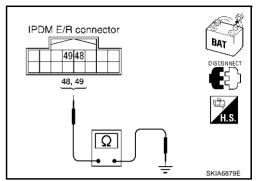
> 48 (L) - Ground : Continuity should not exist. 49 (R) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 12.

NG >> Repair harness between IPDM E/R and harness con-

nector 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

AKS007Q

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

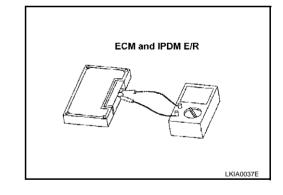
- IPDM E/R power supply circuit. Refer to PG-43, "IPDM E/R Power/Ground Circuit Inspection".
- Ignition power supply circuit. Refer to PG-12, "IGNITION POWER SUPPLY IGNITION SW. IN "ON" AND/OR "START"

Component Inspection ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

AKSOOZO I

- 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	100 - 132



[CAN]

CAN SYSTEM (TYPE 2)

PFP:23710

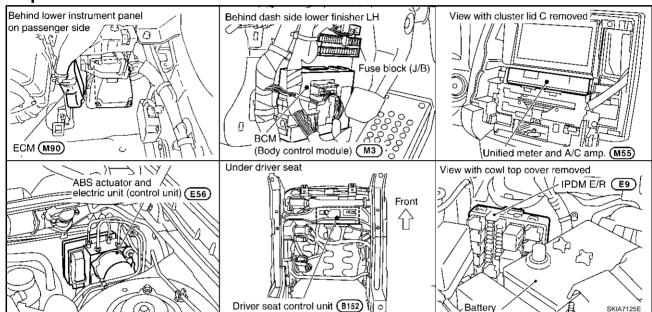
System Description

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



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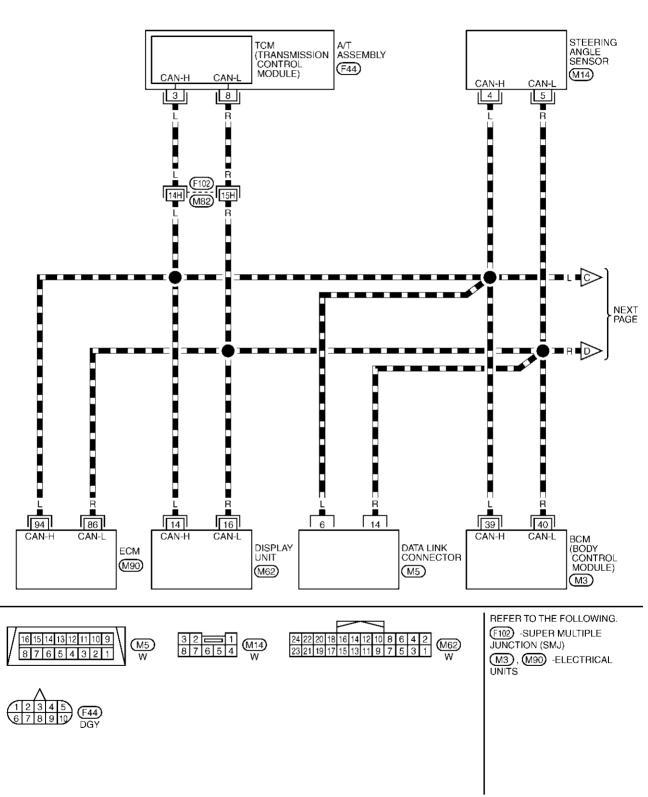
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Wiring Diagram - CAN -

AKS007R7

LAN-CAN-03

: DATA LINE



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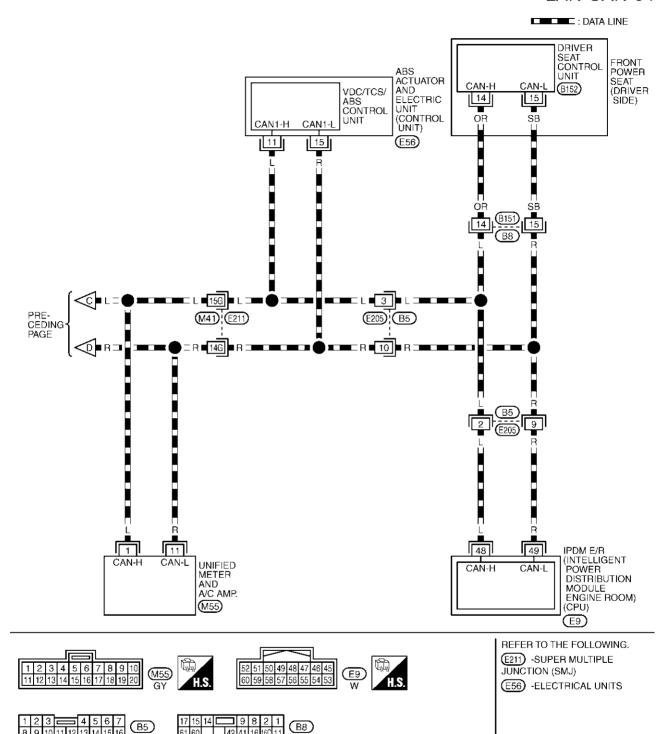
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LAN-CAN-04

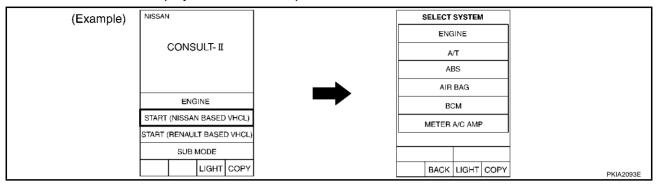


TKWH0248E

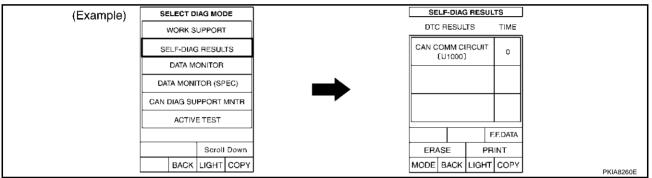
*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

Work Flow

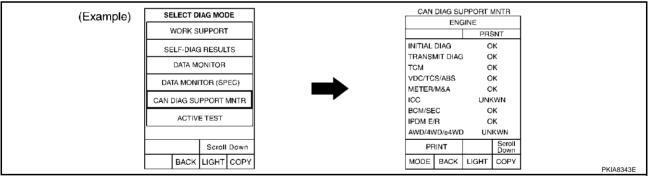
 When there are no indications of "BCM", "METER A/C AMP", "AUTO DRIVE POS." or "IPDM E/R" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



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.



 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.



- 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 <u>LAN-56</u>, "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 <u>AV-97, "CAN Communication</u> Line Inspection".
- 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".

CAN SYSTEM (TYPE 2)

[CAN]

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)".

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CHECK SHEET

NOTE:

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

AUTO DRIVE POS. No indication NG UNKWN - UNKWN - UNKWN						CAI	N DIAG SU	PPORT MN				
No indication	SELECT SYST	EM screen			ECM	тсм	DISPLAY					IPDM E/F
Attach copy of display unit	=NGINE	_	·									
Attach copy of display unit												
Attach copy of display unit Atta										-		
Attach copy of display unit Attach copy of display unit												
Attach copy of display unit Select System Attach copy of display unit Attach copy of dis							UNKWN	UNKWN	_		UNKWN	
Attach copy of SELECT SYSTEM Attach copy of display unit	ABS								UNKWN	_		
Attach copy of SELECT SYSTEM Attach copy of SELECT SYSTEM Attach copy of display unit		No indication			_		_	UNKWN		UNKWN	_	_
Attach copy of SELECT SYSTEM Attach copy of SELECT SYSTEM Attach copy of display unit	PDM E/R		_	UNKWN	UNKWN	_	_		_		_	_
display unit												

Attach copy of ENGINE SELF-DIAG RESULTS	Attach copy of	Attach copy of	Attach copy of
	A/T	BCM	METER A/C AMP
	SELF-DIAG RESULTS	SELF-DIAG RESULTS	SELF-DIAG RESULTS
Attach copy of	Attach copy of	Attach copy of	
ABS	AUTO DRIVE POS.	IPDM E/R	
SELF-DIAG RESULTS	SELF-DIAG RESULTS	SELF-DIAG RESULTS	
Attach copy of	Attach copy of	Attach copy of	Attach copy of
ENGINE	A/T	BCM	METER A/C AMP
CAN DIAG SUPPORT	CAN DIAG SUPPORT	CAN DIAG SUPPORT	CAN DIAG SUPPORT
MNTR	MNTR	MNTR	MNTR
Attach copy of	Attach copy of	Attach copy of	
ABS	AUTO DRIVE POS.	IPDM E/R	
CAN DIAG SUPPORT	CAN DIAG SUPPORT	CAN DIAG SUPPORT	
MNTR	MNTR	MNTR	

Revision; 2004 April LAN-57 2003 FX

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CHECK SHEET RESULTS (EXAMPLE)

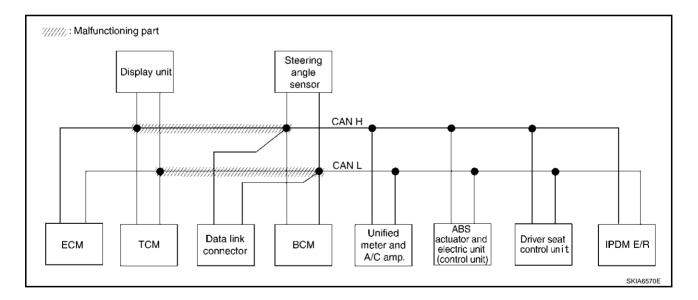
NOTE:

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

Case 1

Check harness between TCM and data link connector. Refer to <u>LAN-73</u>, "Circuit Check Between TCM and <u>Data Link Connector"</u>.

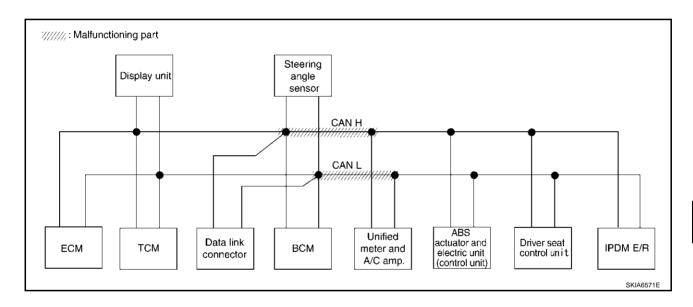
					CAI	N DIAG SU	PPORT MN	ITR			
SELECT SYST	FM screen	Initial	Transmit				Receive o	liagnosis			
322231 3131		diagnosis	diagnosis	ECM	тсм	DISPLAY	BCM/SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/F
ENGINE	_	NG	UNKWN	_	UNKWN	_	Π ИΝ ΜΝ	_	Ω ΝΚ ⁄ΜΝ	Π ИΚ ΑΝΙ	Π Μ ΜΝ
A/T	_	NG	UNKWN	UNKWN	_	_	-	_	NNKWN	NNKWN	_
Display unit	_	CAN COMM	CAN 1	CAN 3	_	_	CAN 2	_	CAV 5	_	CAN 7
всм	No indication	NG	UNKWN	NAR WN	_	_	_	_	UNKWN	_	UNKWN
METER A/C AMP	No indication	_	UNKWN	∩ ИК МИ	∩ M MN	UNIMWN	UNKWN	_	_	UNKWN	_
ABS	_	NG	UNKWN	NNN MN	Π ИΚ ⁄ΜИ	_	_	UNKWN	_	_	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	UNISWN	_	UNKWN	_	UNKWN	_	_
IPDM E/R	No indication	_	UNKWN	UNI W N	_	_	UNKWN	_	_	_	_



Case 2

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

					CAI	N DIAG SU	PPORT MN	ITR			
SELECT SYST	FM screen	Initial	Transmit				Receive o	liagnosis			
022201 0101		diagnosis	diagnosis	ECM	тсм	DISPLAY	BCM/SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	_	NG	UNKWN	_	UNKWN	_	UNKWN	_	UN K WN	UN ™ WN	Π ΜΑ ΜΝ
A/T	_	NG	UNKWN	UNKWN	-	_	_	_	UNK WN	UNIX WN	_
Display unit	_	CAN COMM	CAN 1	CAN 3	-	_	CAN 2	_	CAV 5	_	CAN 7
ВСМ	No indication	NG	UNKWN	UNKWN	_	_	_	_	UNIVAN	_	UNK WN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_		UNKWN	_
ABS	_	NG	UNKWN	NNA MN	UN K ₩N	_	_	UNKWN	_	_	-
AUTO DRIVE POS.	No indication	NG	UNKWN	_	UNKWN	_	UNKWN	_	UNKWN	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	_	_	_	_



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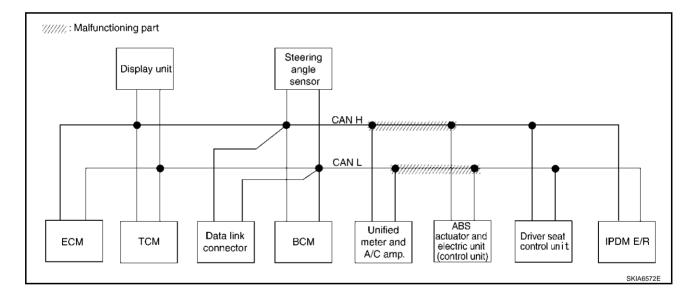
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Case 3

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)".

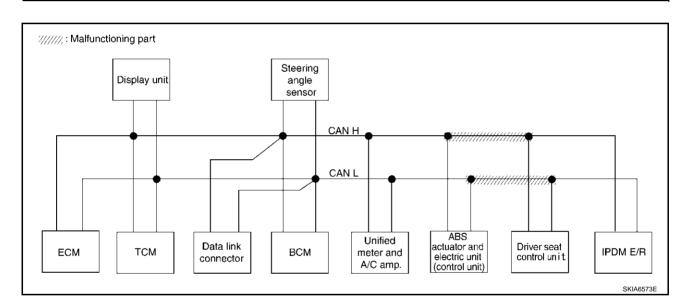
					CAI	N DIAG SU	PPORT MN	ITR			
SELECT SYST	EM screen	Initial	Transmit				Receive o	liagnosis			
322231 3131		diagnosis	diagnosis	ECM	тсм	DISPLAY	BCM/SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	_	NG	UNKWN	1	UNKWN		UNKWN	_	UNKWN	UNKWN	NNA MN
A/T	_	NG	UNKWN	UNKWN	_	_	_	_	UNKWN	∩ иК {\mathbb{A}N	_
Display unit	_	CAN COMM	CAN 1	CAN 3	_	_	CAN 2	_	CAN 5	_	CAN 7
всм	No indication	NG	UNKWN	UNKWN	_	_	-	_	UNKWN	_	NNK WN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	_	UNION	_
ABS	_	NG	UNKWN	NNR MN	UNK WN	_	_	UNKWN	_	_	-
AUTO DRIVE POS.	No indication	NG	UNKWN	_	UNKWN	_	UNKWN	_	UNKWN	_	-
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	-	_	_	_



Case 4

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

					CAI	N DIAG SU	PPORT MN	ITR			
SELECT SYST	FM screen	Initial	Transmit				Receive o	liagnosis			
322231 3131		diagnosis	diagnosis	ECM	тсм	DISPLAY	BCM/SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/F
ENGINE	1	NG	UNKWN	_	UNKWN		UNKWN	_	UNKWN	UNKWN	UN K WN
A/T	_	NG	UNKWN	UNKWN		-	_	_	UNKWN	UNKWN	1
Display unit	_	CAN COMM	CAN 1	CAN 3	_	_	CAN 2	_	CAN 5	_	CAN 7
всм	No indication	NG	UNKWN	UNKWN		-	_	_	UNKWN	_	UNK WN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	_	UNKWN	ı
ABS	_	NG	UNKWN	UNKWN	UNKWN	1	_	UNKWN	1	_	1
AUTO DRIVE POS.	No indication	NG	UNKWN	_	UNKWN	_	UNKWN	_	UNKWN	_	-
IPDM E/R	No indication	_	UNKWN	UNKWN	_	=	UNKWN	_	_	_	_



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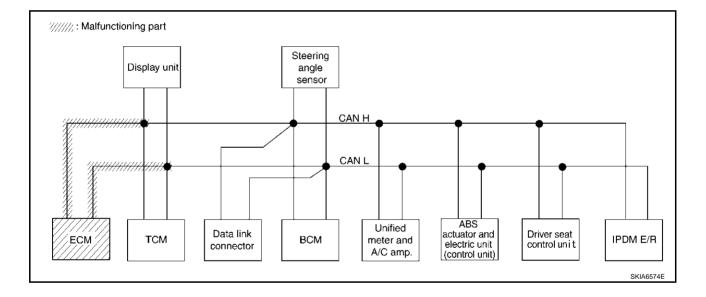
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Case 5
Check ECM circuit. Refer to <u>LAN-75</u>, "ECM Circuit Check".

					CAI	N DIAG SU	PPORT MN	ITR			
SELECT SYST	EM screen	Initial	Transmit				Receive o	liagnosis			
322231 3131		diagnosis	diagnosis	ECM	тсм	DISPLAY	BCM/SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/F
ENGINE	_	NG	UNIXWN	_	UNKWN		UNIMON	_	UNIVAN	UNIVWN	NNA MN
A/T	_	NG	UNKWN	UNI WN	_	_	_	_	UNKWN	UNKWN	_
Display unit	_	CAN COMM	CAN 1	с₩з	_	_	CAN 2	_	CAN 5	_	CAN 7
всм	No indication	NG	UNKWN	NNRMN	_	_	-	_	UNKWN	_	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNIVAN	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	UNIWN	_	_	UNKWN	_	_	_	_



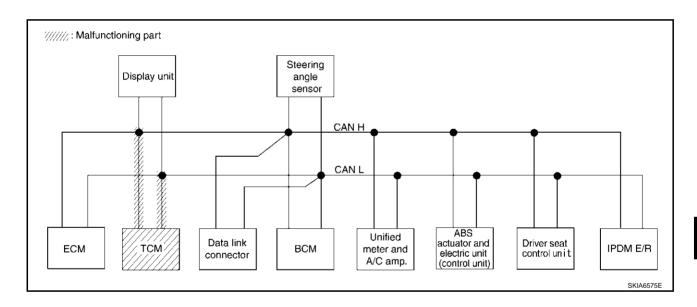
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Case 6
Check TCM circuit. Refer to LAN-76, "TCM Circuit Check".

					CA	N DIAG SU	PPORT MN	ITR			
SELECT SYST	EM screen	Initial	Transmit				Receive o	liagnosis			
022201 0101		diagnosis	diagnosis	ECM	тсм	DISPLAY	BCM/SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/I
ENGINE	_	NG	UNKWN	_	UNKWN	_	UNKWN	_	UNKWN	UNKWN	UNKWN
A/T	_	NG	UNKWN	UNI WN	_	_	-	_	NMMN	UNION	-
Display unit	_	CAN COMM	CAN 1	CAN 3	_	_	CAN 2	_	CAN 5	_	CAN 7
ВСМ	No indication	NG	UNKWN	UNKWN	_	_	-	_	UNKWN	_	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UN W WN	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 unit circuit. Refer to <u>LAN-76</u>, "<u>Display Unit Circuit Check</u>".

					CAI	N DIAG SU	PPORT MN	ITR			
SELECT SYST	EM screen	Initial	Transmit				Receive o	liagnosis			
022201 0101		diagnosis	diagnosis	ECM	тсм	DISPLAY	BCM/SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/F
ENGINE	_	NG	UNKWN	_	UNKWN	l	UNKWN	_	UNKWN	UNKWN	UNKWN
A/T	_	NG	UNKWN	UNKWN	_	_	_	_	UNKWN	UNKWN	_
Display unit	_	CAN COMM	C4 V 11	CM 3	_	_	CAN 2	_	CAN 5	_	CAN 7
всм	No indication	NG	UNKWN	UNKWN	_	_	_	_	UNKWN	_	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNI S WN	UNKWN	-	_	UNKWN	ı
ABS	_	NG	UNKWN	UNKWN	UNKWN	1	_	UNKWN	ı	_	ı
AUTO DRIVE POS.	No indication	NG	UNKWN	_	UNKWN	_	UNKWN	_	UNKWN	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	_	_	_	_

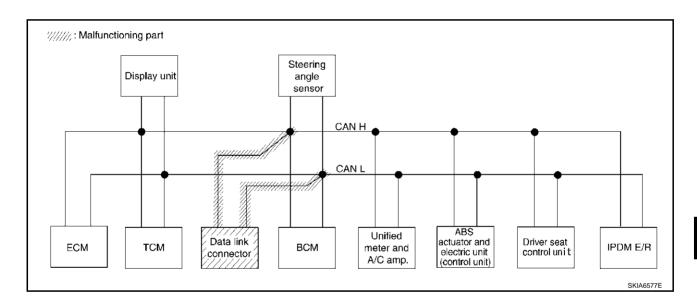
//////: Malfunctioning part Steering Display unit angle sensor CAN H CAN L ABS actuator and electric unit (control unit) Unified Data link Driver seat control unit ЕСМ TCM всм IPDM E/R meter and connector A/C amp. SKIA6576E

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Case 8
Check data link connector circuit. Refer to <u>LAN-77</u>, "Data Link Connector Circuit Check".

					CA	N DIAG SU	PPORT MN	ITR			
SELECT SYST	EM screen	Initial	Transmit				Receive of	liagnosis			
022201 0101		diagnosis	diagnosis	ECM	тсм	DISPLAY	BCM/SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/F
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
всм	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	_	_	_	_



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Case 9
Check BCM circuit. Refer to <u>LAN-77</u>, "BCM Circuit Check".

					CAI	N DIAG SU	PPORT MN	ITR						
SELECT SYST	FM screen	Initial	Transmit				Receive o	liagnosis						
OLLEGI GIGI	Elw sorcon	diagnosis	diagnosis	ECM	тсм	DISPLAY	BCM/SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/F			
ENGINE	_	NG	UNKWN	1	UNKWN		Π ИΝ ΜΝ	_	UNKWN	UNKWN	UNKWN			
A/T	_	NG	UNKWN	UNKWN	_	_	_	_	UNKWN	UNKWN	_			
Display unit	_	CAN COMM	CAN 1	CAN 3	_	_	C ₩ 2	_	CAN 5	_	CAN 7			
всм	No indication	NG	·						_	UNKWN				
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNI A MN	_	_	UNKWN	_			
ABS	_	NG	UNKWN	UNKWN	UNKWN	_	_	UNKWN	_	_	-			
AUTO DRIVE POS.	No indication	NG	UNKWN	_	UNKWN	_	Ω ΝΚ ₩Ν	_	UNKWN	_	_			
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNK W N	_	_					

//////: Malfunctioning part Steering Display unit angle sensor CAN H CAN L ABS actuator and electric unit (control unit) Unified Data link Driver seat control unit ЕСМ TCM IPDM E/R всм meter and connector A/C amp. SKIA6578E

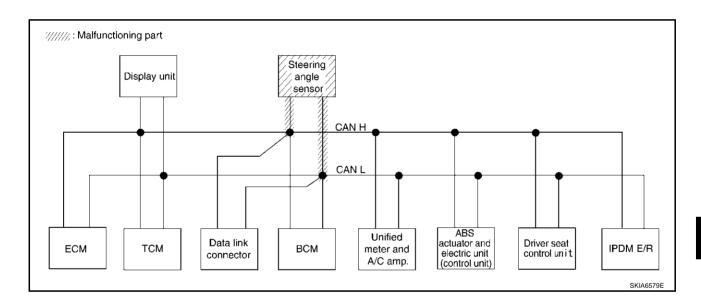
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Case 10
Check steering angle sensor circuit. Refer to <u>LAN-78</u>, "Steering Angle Sensor Circuit Check".

					CA	N DIAG SU	PPORT MN	ITR			
SELECT SYST	FM screen	Initial	Transmit				Receive o	liagnosis			
OLLLOT GTGT	LIVI SOFCOTI	diagnosis	diagnosis	ECM	ТСМ	DISPLAY	BCM/SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/
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
ВСМ	No indication	NG	UNKWN	UNKWN	_	_	-	_	UNKWN	_	UNKWI
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	_	_	_	_



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Case 11
Check unified meter and A/C amp. circuit. Refer to <u>LAN-78</u>, "Unified Meter and A/C Amp. Circuit Check".

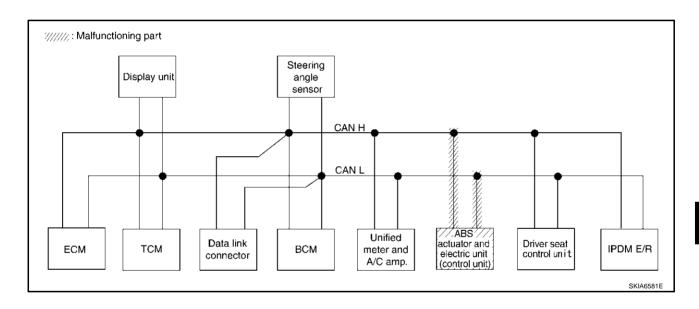
					CAI	N DIAG SU	PPORT MN	ITR			
SELECT SYST	EM screen	Initial	Transmit				Receive o	liagnosis			
322231 3131		diagnosis	diagnosis	ECM	тсм	DISPLAY	BCM/SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/F
ENGINE	_	NG	UNKWN		UNKWN	_	UNKWN	_	UNK WN	UNKWN	UNKWN
A/T	_	NG	UNKWN	UNKWN	_	_	_	_	η νί≹ γνν	UNKWN	_
Display unit	_	CAN COMM	CAN 1	CAN 3	_	_	CAN 2	_	CAN 5	_	CAN 7
всм	No indication	NG	UNKWN	UNKWN	_	_	_	_	∩ NR WN	_	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	_	Ω ΝΚ ⁄ΜΝ	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	-	_	UNKWN	_	_	_	_

//////: Malfunctioning part Steering Display unit angle sensor CAN H CAN L ABS actuator and Unified Data link Driver seat control unit ЕСМ TCM всм IPDM E/R meter and electric unit (control unit) connector A/C amp. SKIA6580E

Case 12

Check ABS actuator and electric unit (control unit) circuit. Refer to <u>LAN-79</u>, "ABS Actuator and Electric Unit (Control Unit) Circuit Check".

					CAI	N DIAG SU	PPORT MN	TR			
SELECT SYST	FM screen	Initial	Transmit				Receive o	liagnosis			
OLLLOT OTOT	LIW SOICCII	diagnosis	diagnosis	ECM	тсм	DISPLAY	BCM/SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/F
ENGINE	_	NG	UNKWN	_	UNKWN	ı	UNKWN	_	UNKWN	Π ΝΚ (ΜΝ	UNKWN
A/T	_	NG	UNKWN	UNKWN		1	_	_	UNKWN	UNKWN	-
Display unit	_	CAN COMM	CAN 1	CAN 3	_	_	CAN 2	_	CAN 5	_	CAN 7
ВСМ	No indication	NG	UNKWN	UNKWN	_	_	_	_	UNKWN	_	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	_	UNKWN	-
ABS	_	NG	UNKWN	UNKWN	∩NA MN	_	_	UNK WN	_	_	-
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 driver seat control unit circuit. Refer to <u>LAN-79</u>, "<u>Driver Seat Control Unit Circuit Check"</u>.

					CAI	N DIAG SU	PPORT MN	ITR			
SELECT SYST	FM screen	Initial	Transmit				Receive o	liagnosis			
OLLEGI GIGI	LIW SOFCOII	diagnosis	diagnosis	ECM	тсм	DISPLAY	BCM/SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/F
ENGINE	1	NG	UNKWN	_	UNKWN	ı	UNKWN	_	UNKWN	UNKWN	UNKWN
A/T	_	NG	UNKWN	UNKWN		1	_	_	UNKWN	UNKWN	l
Display unit	_	CAN COMM	CAN 1	CAN 3	_	-	CAN 2	_	CAN 5	_	CAN 7
всм	No indication	NG	UNKWN	UNKWN	_	ı	_	_	UNKWN	_	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	-	_	UNKWN	1
ABS	_	NG	UNKWN	UNKWN	UNKWN	1	_	UNKWN	ı	_	ı
AUTO DRIVE POS.	No indication	NG	UNKWN	_	UNKWN	1	UNKWN	_	UNKWN	_	-
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	_	_	_	_

//////: Malfunctioning part Steering Display unit angle sensor CAN H CAN L ABS actuator and Unified Data link Driver seat control un i t ЕСМ TCM всм IPDM E/R meter and electric unit (control unit) connector A/C amp. SKIA6582E

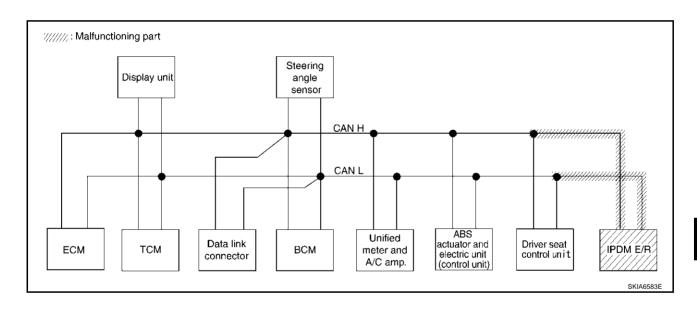
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Case 14
Check IPDM E/R circuit. Refer to LAN-80, "IPDM E/R Circuit Check".

					CA	N DIAG SU	PPORT MN	ITR			
SELECT SYST	FM screen	Initial	Transmit				Receive o	liagnosis			
022201 0101		diagnosis	diagnosis	ECM	тсм	DISPLAY	BCM/SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/F
ENGINE	_	NG	UNKWN	-	UNKWN	-	UNKWN		UNKWN	UNKWN	NNAMN
A/T	_	NG	UNKWN	UNKWN			_	_	UNKWN	UNKWN	_
Display unit	_	CAN COMM	CAN 1	CAN 3	_	_	CAN 2	_	CAN 5	_	CAN 7
ВСМ	No indication	NG	UNKWN	UNKWN	-	_	_	_	UNKWN	_	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	_	UNKWN	_
ABS	_	NG	UNKWN	UNKWN	UNKWN	1	_	UNKWN	1	_	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	UNKWN	_	UNKWN	_	UNKWN	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	1	_	UNKWN	_	_	_	_



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Case 15

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

					CAI	N DIAG SU	PPORT MN	ITR			
SELECT SYST	EM screen	Initial	Transmit				Receive o	liagnosis			
022201 0101		diagnosis	diagnosis	ECM	тсм	DISPLAY	BCM/SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/F
ENGINE	_	NG	UNIAMN		UNKWN	_	UNIVWN	_	UNKWN	UNKWN	UNKWN
A/T	_	NG	Π ΛΙΆ ΛΑΝ	Ω ΝΚ ΑΝ	_	_	_	_	UN A WN	UNI W MN	_
Display unit	_	CAN COMM	CAN 1	CAN 3	_	_	C 4/1 2	_	C4/15	_	CAN 7
всм	No indication	NG	UNKWN	UNKWN	_	_	_	_	UNKWN	_	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	-	_	UNKWN	1
ABS	_	NG	UNK WN	UNKWN	NNKWN	_	_	NNKWN	1	_	ı
AUTO DRIVE POS.	No indication	NG	UNKWN	_	UNKWN	_	UNKWN	_	UNKWN	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	_	_	_	_

Case 16

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to <u>LAN-85, "IPDM E/R Ignition Relay Circuit Check"</u>.

					CAI	N DIAG SU	PPORT MN	JTR			
SELECT SYST	EM screen	 Initial	Transmit				Receive o	diagnosis			
022207 0701		diagnosis	diagnosis	ECM	тсм	DISPLAY	BCM/SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	1	NG	UNKWN	_	UNKWN	_	UNKWN	_	UNKWN	Π ИΚ ΑΝΙ	UNKWN
A/T	_	NG	UNKWN	UNKWN	l	_	_	_	UNKWN	UNKWN	_
Display unit	_	CAN COMM	CAN 1	CAN 3	_	_	CAN 2	_	CAN 5	_	CAN 7
всм	No indication	NG	UNKWN	JNKWN UNKWN						_	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UN A WN	UNKWN	UNKWN	_	_	Π ИΚ ₩И	_
ABS	_	NG	UNKWN	UNKWN	UNKWN	_	_	UNKWN	_	_	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	UNKWN	_	UNKWN	_	UNKWN	_	_
IPDM E/R	No indication	_	UNKWN	JNKWN UNKWN						_	
		· · · · · ·									PKIA7961E

Case 17

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to <u>LAN-85</u>, "IPDM E/R Ignition Relay Circuit Check".

	I				CAI	N DIAG SU	PPORT MN	TR			
SELECT SYST	FM screen	Initial	Transmit				Receive d	liagnosis			
	Elw sorcon	diagnosis	diagnosis	ECM	ТСМ	DISPLAY	BCM/SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/
ENGINE	_	NG	UNKWN	-	UNKWN	_	UNKWN	_	UNKWN	UNKWN	UNKWN
A/T	_	NG	UNKWN	UNK WN	_	_	_	_	UN W WN	UNKWN	_
Display unit	_	CAN COMM	CAN 1	CAN 3	_	_	CAN 2	_	CAN 5	_	CAN 7
всм	No indication	NG	UNKWN	UNKWN	_	_	_	_	UNKWN	_	UNKWI
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	_	UNKWN	_
ABS	_	NG	UNKWN	UN K ₩N	UNKWN	_	_	υ νκ ⁄νν	_	_	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	UNKWN	_	UNKWN	_	UNKWN	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	-	UNKWN	_	_	_	_

Circuit Check Between TCM and Data Link Connector

1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.

- 2. Disconnect the negative battery terminal.
- 3. Disconnect ECM connector and harness connector M82.
- 4. Check continuity between harness connector M82 terminals 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 <u>LAN-54</u>, "Work Flow".

NG >> Repair harness.

SMJ CONNECTOR 14H, 15H SKIA6861E

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

1. CHECK HARNESS FOR OPEN CIRCUIT

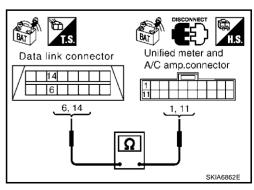
- 1. Turn ignition switch OFF.
- 2. Disconnect the negative battery terminal.
- 3. Disconnect ECM connector and unified meter and A/C amp. connector.
- Check continuity between data link connector M5 terminals 6 (L), 14 (R) and unified meter and A/C amp. harness connector M55 terminals 1 (L), 11 (R).

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.



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

1. CHECK CONNECTOR

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

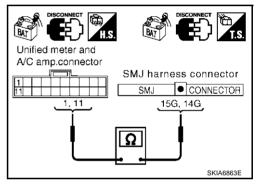
: Continuity should exist.

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).

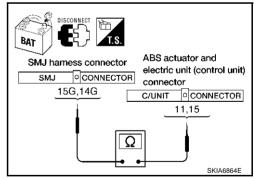
15G (L) - 11 (L) 14G (R) - 15 (R) : Continuity should exist.

: Continuity should exist.

OK or NG

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

NG >> Repair harness.



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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.
- 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

- Disconnect ABS actuator and electric unit (control unit) connector and harness connector E205.
- 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).

: Continuity should exist.

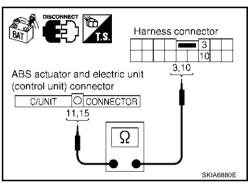
15 (R) - 10 (R)

: Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair harness.



$oldsymbol{3}$. 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.

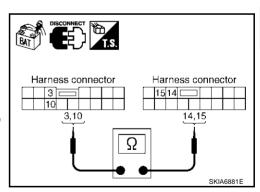
10 (R) - 15 (R)

: 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

1. CHECK CONNECTOR

Turn ignition switch OFF.

- 2. Disconnect the negative battery terminal.
- 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. LAN

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$\overline{2}$. CHECK HARNESS FOR OPEN CIRCUIT

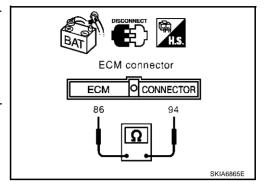
- 1. Disconnect ECM connector.
- 2. Check resistance between ECM harness connector M90 terminals 94 (L) and 86 (R).

94 (L) - 86 (R) : Approx. $108 - 132\Omega$

OK or NG

OK >> Replace ECM.

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



AKS007RD

TCM Circuit Check

1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the negative battery terminal.
- 3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
- 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.
- Check resistance between A/T assembly harness connector F44 terminals 3 (L) and 8 (R).

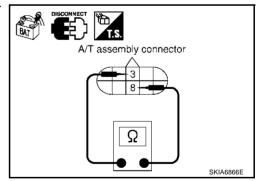
3 (L) - 8 (R) : Approx. 54 -
$$66\Omega$$

OK or NG

NG

OK >> Replace A/T assembly.

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



Display Unit Circuit Check

1. CHECK CONNECTOR

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

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

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$\overline{2}$. CHECK HARNESS FOR OPEN CIRCUIT

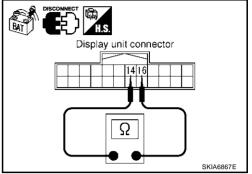
- 1. Disconnect display unit connector.
- Check resistance between display unit harness connector M62 terminals 14 (L) and 16 (R).

14 (L) - 16 (R) : Approx. 54 -
$$66\Omega$$

OK or NG

OK >> Replace display unit.

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



Data Link Connector Circuit Check

1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- Disconnect the negative battery terminal.
- 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

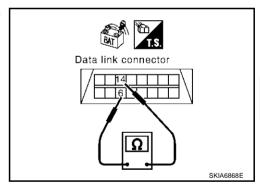
Check resistance between data link connector M5 terminals 6 (L) and 14 (R).

6 (L) - 14 (R) : Approx.
$$54 - 66\Omega$$

OK or NG

OK >> Diagnose again. Refer to LAN-54, "Work Flow".

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



BCM Circuit Check

1. CHECK CONNECTOR

- Turn ignition switch OFF.
- Disconnect the negative battery terminal.
- 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.

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$\overline{2}$. CHECK HARNESS FOR OPEN CIRCUIT

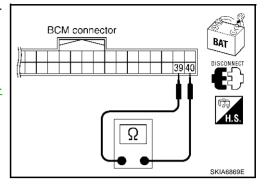
- 1. Disconnect BCM connector.
- 2. Check resistance between BCM harness connector M3 terminals 39 (L) and 40 (R).

: Approx. 54 - 66 Ω

OK or NG

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

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



AKS007RH

Steering Angle Sensor Circuit Check

1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the negative battery terminal.
- 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

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

: Approx. 54 - 66 Ω

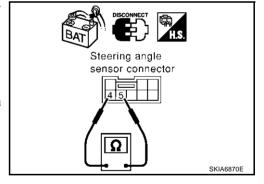
OK or NG

OK

>> Replace steering angle sensor.

NG >:

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



AKS007RI

Unified Meter and A/C Amp. Circuit Check

1. CHECK CONNECTOR

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

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

$\overline{2}$. CHECK HARNESS FOR OPEN CIRCUIT

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

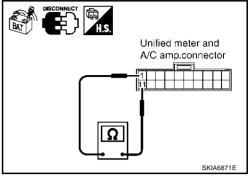
: Approx. 54 - 66 Ω

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.
- Disconnect the negative battery terminal.
- 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.
- Check resistance between ABS actuator and electric unit (control unit) harness connector E56 terminals 11 (L) and 15 (R).

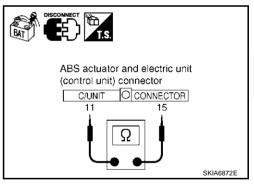
: Approx. 54 - 66 Ω

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.
- 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.

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2. CHECK HARNESS FOR OPEN CIRCUIT

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

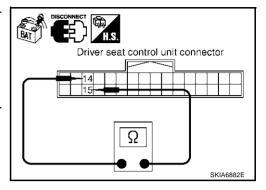
14 (OR) - 15 (SB) : Approx. 54 -
$$66\Omega$$

OK or NG

OK >> Replace driver seat control unit.

NG

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



AKS007RL

IPDM E/R Circuit Check

1. CHECK CONNECTOR

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

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

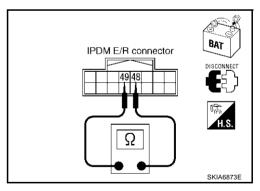
48 (L) - 49 (R) : Approx.
$$108 - 132\Omega$$

OK or NG

NG

OK >> Replace IPDM E/R.

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



CAN SYSTEM (TYPE 2)

[CAN]

AKS007RM

CAN Communication Circuit Check

1. CHECK CONNECTOR

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

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Data link connector

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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

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

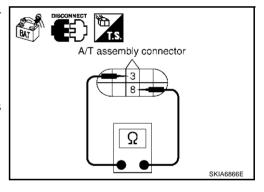
3 (L) - 8 (R) : Continuity should not exist.

OK or NG

OK >> GO TO 5.

NG >> Repair

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



Data link connector

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6, 14

5. CHECK HARNESS FOR SHORT CIRCUIT

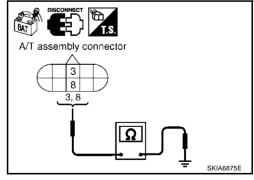
Check continuity between A/T assembly harness connector F44 terminals 3 (L), 8 (R) and ground.

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).

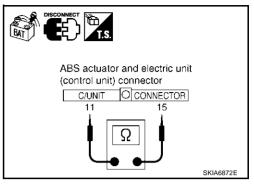
11 (L) - 15 (R) : Continuity should not exist.

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

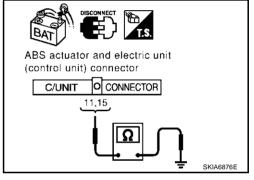
- 1. Disconnect harness connector B8.
- 2. Check continuity between harness connector B5 terminals 3 (L) and 10 (R).

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.



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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

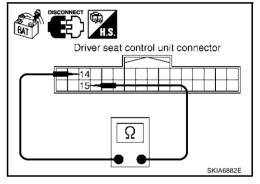
- 1. Disconnect driver seat control unit connector.
- Check continuity between driver seat control unit harness connector B152 terminals 14 (OR) and 15 (SB).

OK or NG

OK >> GO TO 11.

NG

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



Harness connector

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11. CHECK HARNESS FOR SHORT CIRCUIT

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

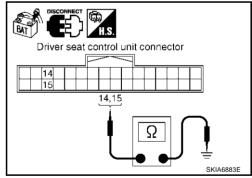
14 (OR) - Ground : Continuity should not exist. 15 (SB) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 12.

NG >> Repair hai

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



12. CHECK HARNESS FOR SHORT CIRCUIT

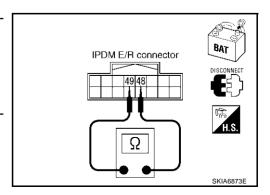
- 1. Disconnect IPDM E/R connector.
- 2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (R).

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.



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13. CHECK HARNESS FOR SHORT CIRCUIT

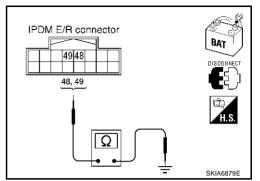
Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (R) and ground.

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 $\underline{\sf LAN-85}$, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION" . OK or NG

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

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

IPDM E/R Ignition Relay Circuit Check

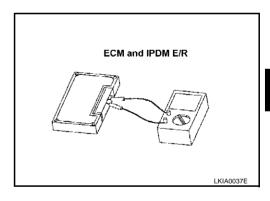
Check the following. If no malfunction is found, replace the IPDM E/R.

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

Component Inspection ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

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

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	100 - 132



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CAN SYSTEM (TYPE 3)

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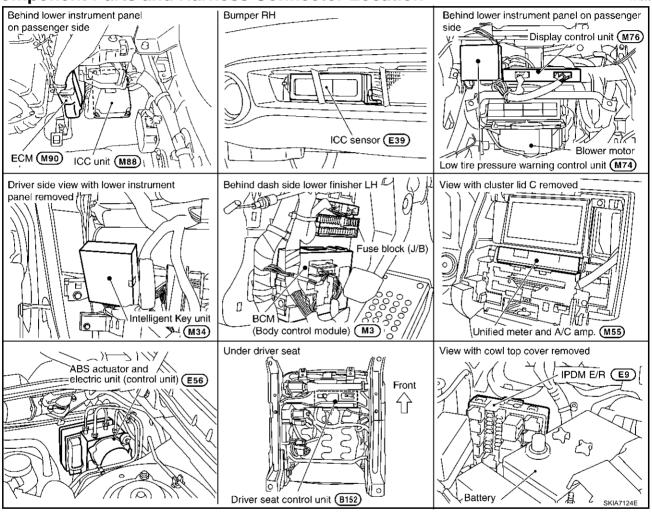
System Description

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

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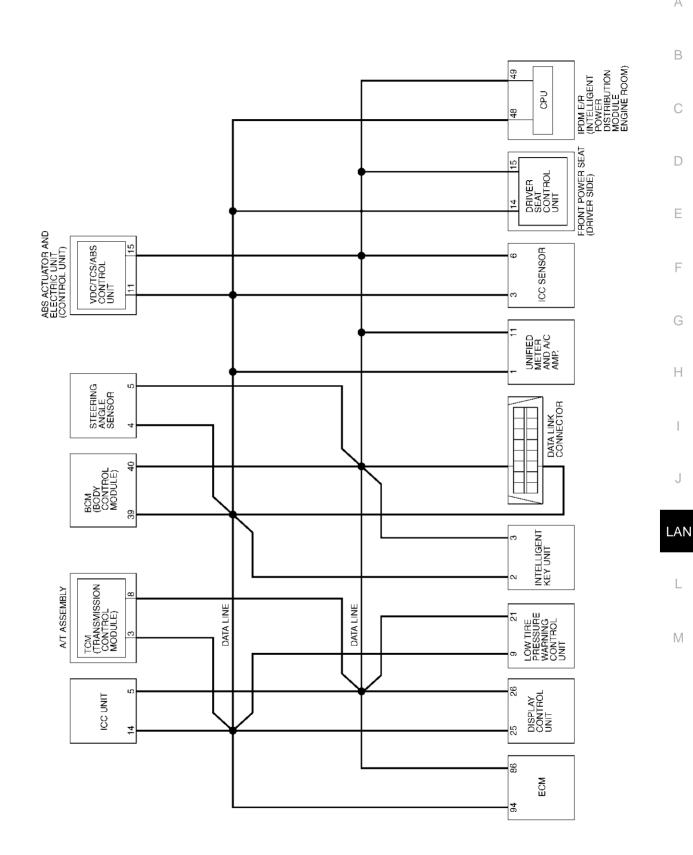
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Schematic AKS007RT



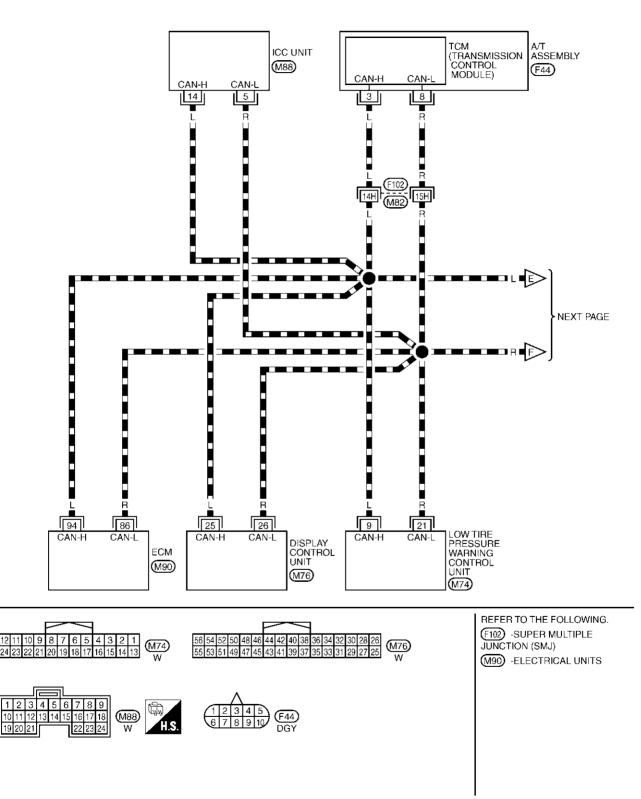
TKWM0661E

Wiring Diagram - CAN -

AKS007RU

LAN-CAN-05

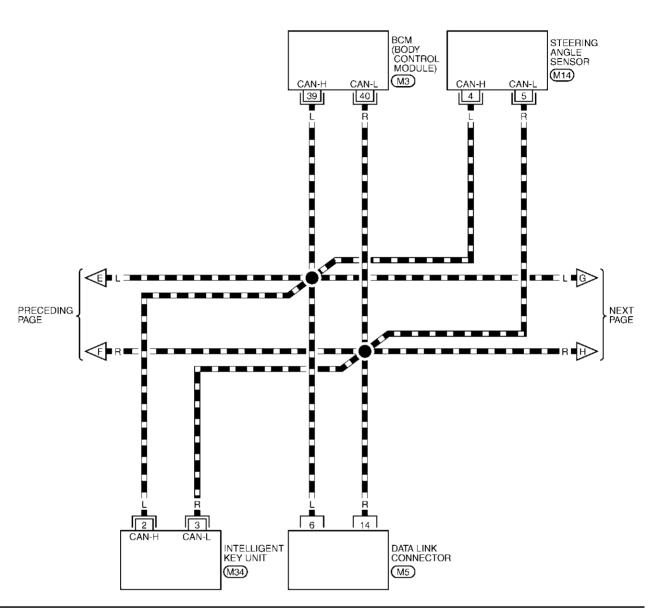
: DATA LINE

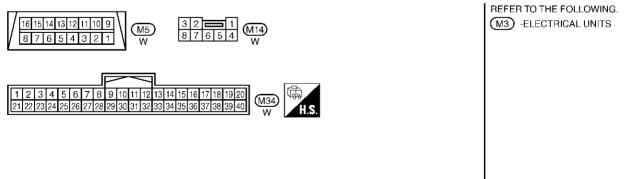


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: DATA LINE





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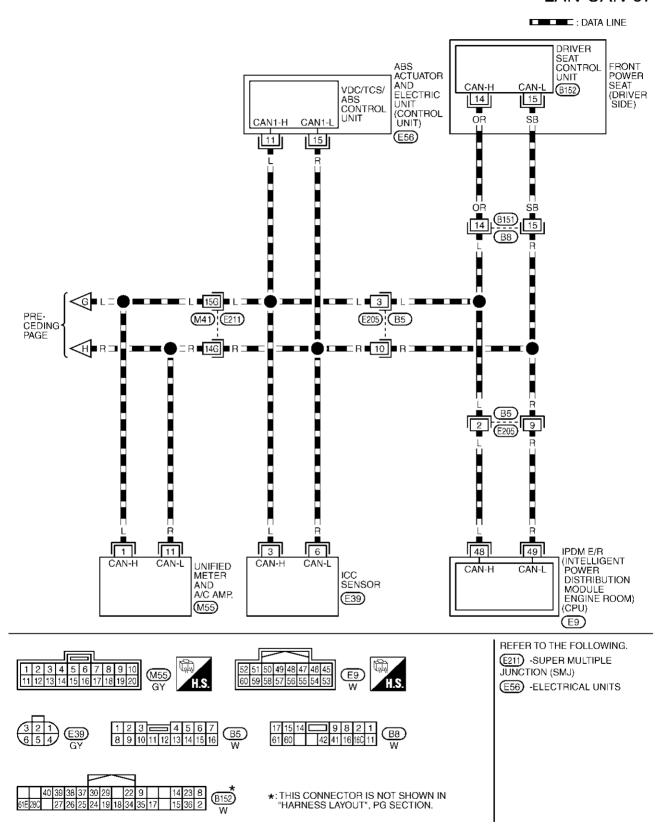
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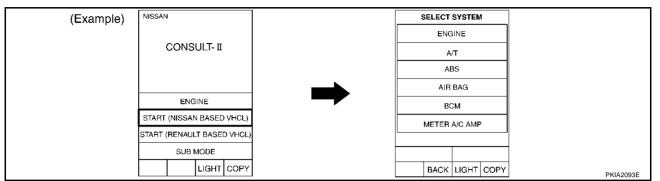


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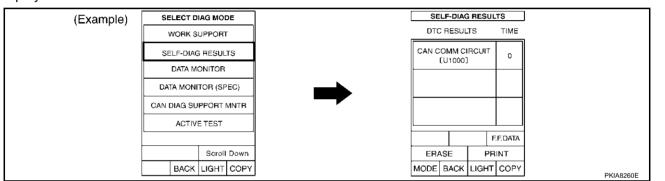
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Work Flow

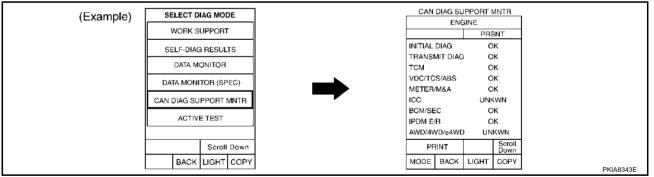
1. When there are no indications of "AIR PRESSURE MONITOR", "INTELLIGENT KEY", "BCM", "METER A/ C AMP", "AUTO DRIVE POS." or "IPDM E/R" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



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.



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.



- 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".
- 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".

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual. So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.
- Check CAN communication line of the navigation system. Refer to AV-184, "CAN Communication Line Check".

CAN SYSTEM (TYPE 3)

[CAN]

- 7. Attach the CAN DIAG SUPPORT MONITOR check sheet onto the check sheet. Refer to <u>LAN-93</u>, "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 <u>LAN-93</u>, "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)".

CAN SYSTEM (TYPE 3)

[CAN]

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CHECK SHEET

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

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Check sheet tab	le														
							CAN	DIAG SU							
SELECT SYSTE	EM screen	Initial	Transmit						Receive	diagnosis T	ı				
		diagnosis	diagnosis	ECM	тсм	DISPLAY	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	_	NG	UNKWN	Ī	UNKWN	_	1	UNKWN	_	UNKWN	_	UNKWN	_	UNKWN	UNKWN
A/T	_	NG	UNKWN	UNKWN	_	_	_	UNKWN	_	_	_	UNKWN	_	UNKWN	_
Display control unit	_	CAN COMM	CAN CIRC 1	CAN GIRC 3											CAN CIRC 7
AIR PRESSURE MONITOR	No indication	NG	UNKWN											_	_
ICC	_	NG	UNKWN	UNKWN	NKWN UNKWN — — — UNKWN — — UNKWN UNKW										_]
INTELLIGENT KEY	No indication	_	UNKWN	l	_	_	I	_	_	UNKWN	_	_	_	_	_
всм	No indication	NG	UNKWN	UNKWN	_	_	ı	_	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	1	UNKWN	_	-	_	_	UNKWN	_	UNKWN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	_	_	_	_
Symptoms :															
Cymptoms :															

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 MNTR

Attach copy of ICC CAN DIAG SUPPORT MNTR

Attach copy of INTELLIGENT KEY 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

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CHECK SHEET RESULTS (EXAMPLE)

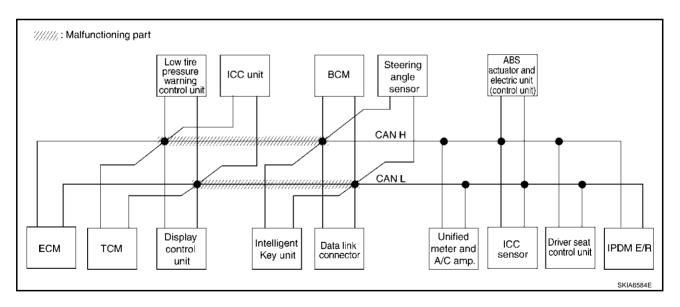
NOTE:

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

Case 1

Check harness between TCM and data link connector. Refer to <u>LAN-115</u>, "Circuit Check Between TCM and Data Link Connector" .

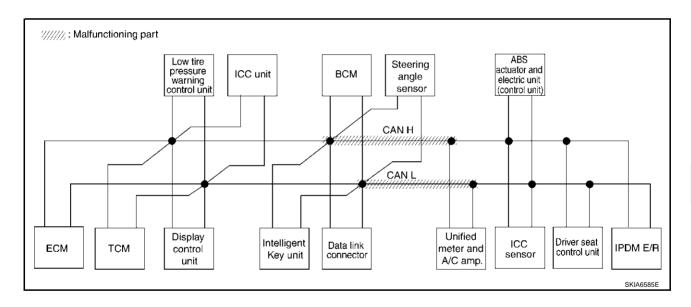
							CAN	DIAG SU	PPORT N	INTR					
SELECT SYSTE	-M screen	Initial	Transmit						Receive of	diagnosis					
			diagnosis	ECM	тсм	DISPLAY	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	_	NG	UNKWN	_	UNKWN	_	_	UNKWN	_	UNIONN	_	UNKWN	_	UNKWN	UNK
A/T	1	NG	UNKWN	UNKWN	_	_	l	UNKWN	ı	_	_	UNK WN	_	∩ M AN	_
Display control unit	1	CAN COMM	CAN CIRC 1	CAN CIRC 3	_	_	CAN CIRC 6	1	-	CANCAC 2	_	CANCAC 5	_	1	CANCA
AIR PRESSURE MONITOR	No indication	\$	UNKWN	_	_	_	-	_	_		_	UNKWN	_	_	_
ICC	ı	NG	UNKWN	UNKWN	UNKWN	_	ı	_	1	n νκ ∕νν	_	I	∩M R AM	NMANN	_
INTELLIGENT KEY	No indication	1	UNKWN	_	_	_	ı	_	1	UNKWN	_	1	_	1	_
ВСМ	No indication	Ŋ	UNKWN	UNK WN	_	_	I	_	UNKWN	-	_	UNKWN	_	ı	UNKW
METER A/C AMP	No indication	1	UNKWN	Π ИΚ ΜИ	UNKWN	Ω ΝΚ ΑΝ	UNKWN	UN K WN	UNKWN	UNKWN	_	1	_	UNKWN	_
ABS	-	NG	UNKWN	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	_	_	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	un k/ vn	_	_	_	_	UNKWN	_	UNKWN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	_	_	_	_



Case 2

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

							CAN	DIAG SU	PPORT N	INTR					
SELECT SYSTE	EM screen	Initial	Transmit						Receive of	diagnosis					
			diagnosis	ECM	тсм	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	ı	UNIVAN	_	UNKWN	UNIONI
A/T	_	NG	UNKWN	UNKWN	1	_	_	UNKWN	1	-	ı	UNIKWN	_	UNI W N	-
Display control unit	_	CAN COMM	CAN CIRC 1	CAN CIRC 3	ı	_	CAN CIRC 6	ı	ı	CAN CIRC 2	ı	CAN PIRC 5	_	ı	CANORC
AIR PRESSURE MONITOR	No indication	NG	UNKWN	_	_	_	_	_	-	_	-	UNI Y WN	_	-	_
ICC	_	NG	UNKWN	UNKWN	UNKWN	_	_	_	-	UNKWN	-	_	UNI S WN	UNK WN	_
INTELLIGENT KEY	No indication	ı	UNKWN	ı	ı	_	-	ı		UNKWN	ı	ı	_	ı	-
BCM	No indication	NG	UNKWN	UNKWN	-	_	-	-	UNKWN	1	I	UNIV	_	ı	UNION
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	-	_	_	UNKWN	_
ABS	_	NG	UNKWN	Ω ΝΑ ΑΜ	UNAWN	_	_	_	1	1	UNI S WN	-	_	-	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	UNKWN	_	_	_		UNKWN	-	UNKWN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	_	_	_	_



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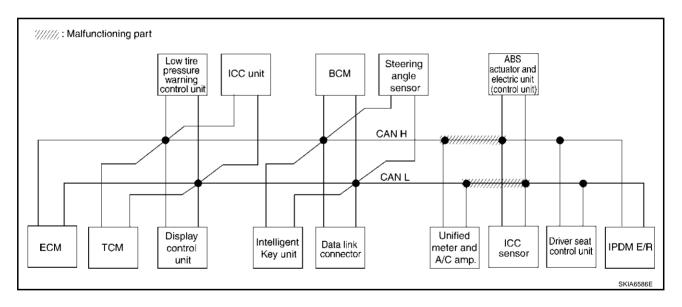
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Case 3

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)".

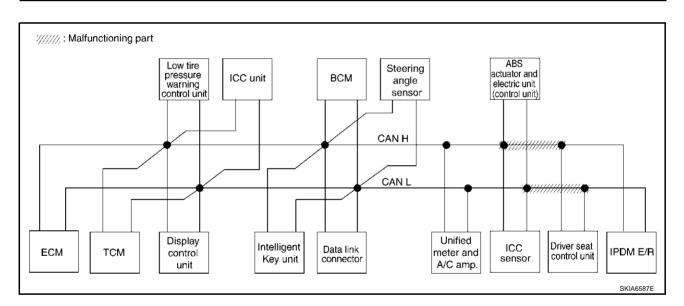
							CAN	DIAG SU	PPORT N	INTR					
SELECT SYSTE	M screen	Initial	Transmit						Receive o	diagnosis					
		diagnosis		ECM	тсм	DISPLAY	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	_	NG	UNKWN	ı	UNKWN	-	_	UNKWN	_	UNKWN	_	UNKWN	_	UNIVAN	UNION
A/T	-	NG	UNKWN	UNKWN	_	I	_	UNKWN	_	1	_	UNKWN	_	UNI WN	_
Display control unit	_	CAN COMM	CAN CIRC 1	CAN CIRC 3	_		CAN CIRC 6		_	CAN CIRC 2	_	CAN CIRC 5	_	_	CANCER
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	_	1	_	_	_	_	_	UNKWN	_	_	_
ICC	_	NG	UNKWN	UNKWN	UNKWN	I	_	_	_	UNKWN	_	1	UNI WN	UN ∳ WN	_
INTELLIGENT KEY	No indication	ı	UNKWN	ı	_	I	_	_	_	UNKWN	_	1	_	_	_
ВСМ	No indication	Ŋ	UNKWN	UNKWN	_	ı	_	1	UNKWN	l	_	UNKWN	_	_	UNIM
METER A/C AMP	No indication	1	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	1	_	UNIWN	_
ABS	_	NG	UNKWN	NKWN	UNKWN	_	_	_	_	_	UNIVAN	_	_	_	-
AUTO DRIVE POS.	No indication	NG	UNKWN	ı	UNKWN	-	_	_	_	UNKWN	_	UNKWN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	_	_	_	_



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".

							CAN	DIAG SU	PPORT N	INTR					
SELECT SYSTE	M screen	Initial	Transmit						Receive of	diagnosis					
322237 3737		diagnosis		ECM	тсм	DISPLAY	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	-	NG	UNKWN	ı	UNKWN	_	ı	UNKWN	_	UNKWN	_	UNKWN	_	UNKWN	UNIKWI
A/T	_	NG	UNKWN	UNKWN	ı	_	ı	UNKWN	_		_	UNKWN	_	UNKWN	
Display control unit	_	CAN COMM	CAN CIRC 1	CAN CIRC 3	_	_	CAN CIRC 6	1	_	CAN CIRC 2	_	CAN CIRC 5	_	_	CANOTEC
AIR PRESSURE MONITOR	No indication	NG	UNKWN	ı	ı	_	ı	1	_	1	_	UNKWN	_	I	1
ICC	_	NG	UNKWN	UNKWN	UNKWN	_	_	_	_	UNKWN	_	ı	UNKWN	UNKWN	_
INTELLIGENT KEY	No indication	_	UNKWN	-	_	_	_	_	_	UNKWN	_	-	_	_	_
всм	No indication	NG	UNKWN	UNKWN	ı	_			UNKWN	-	-	UNKWN	_	1	UN W WI
METER A/C AMP	No indication	ı	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	I	_	UNKWN	ı
ABS		NG	UNKWN	UNKWN	UNKWN	_	1	-	_	_	UNKWN	ı	_	_	_
AUTÓ DRIVE POS.	No indication	NG	UNKWN	1	UNKWN		_	-		UNKWN	_	UNKWN	_	_	
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	_	_	_	_



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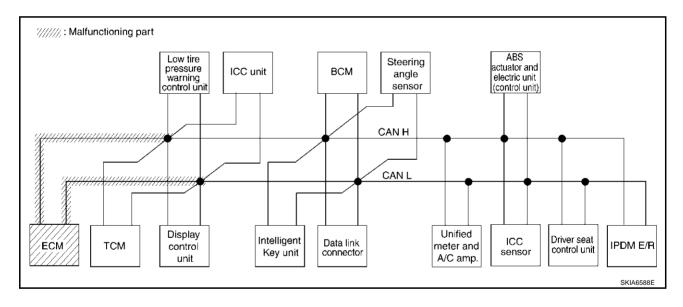
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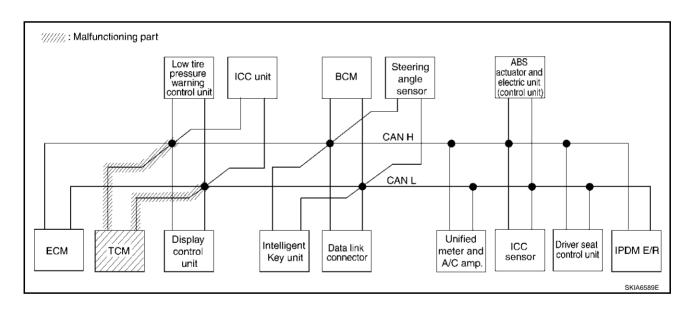
Case 5
Check ECM circuit. Refer to <u>LAN-118</u>, "ECM Circuit Check".

							CAN	DIAG SU	PPORT N	INTR					
SELECT SYSTE	M screen	Initial	Transmit						Receive of	diagnosis					
02220101011		diagnosis		ECM	тсм	DISPLAY	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	-	NG	NNRAN	_	UNIX WN	_	_	UNIVWN	_	UNIVAN	ı	UNKWN	_	UNKWN	UNIW
A/T	ı	NG	UNKWN	UNI WN	_	_	_	UNKWN	_	_	ı	UNKWN	_	UNKWN	ı
Display control unit	ı	CAN COMM	CAN CIRC 1	CANORC 3	_	_	CAN CIRC 6	_	-	CAN CIRC 2	1	CAN CIRC 5	_	-	CAN CIRC
AIR PRESSURE MONITOR	No indication	NG	UNKWN	_	_	_	_	_	_	_	-	UNKWN	_	_	-
ICC	_	NG	UNKWN	nuk (Mu	UNKWN	_	_	_	_	UNKWN	_	_	UNKWN	UNKWN	_
INTELLIGENT KEY	No indication	_	UNKWN	_	_	_	_	_	_	UNKWN	_	_	_	_	_
ВСМ	No indication	NG	UNKWN	UNK WN	_	_	_	_	UNKWN	_	_	UNKWN	_	_	UNKW
METER A/C AMP	No indication	_	UNKWN	UN WN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	I	_	_	UNKWN	I
ABS	-	NG	UNKWN	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	_	_	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	UNKWN	_	_	_	_	UNKWN	_	UNKWN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNK WN	_	_	_	_	_	UNKWN	_	_	_	_	_



Case 6
Check TCM circuit. Refer to <u>LAN-118</u>, "TCM Circuit Check".

							CAN	DIAG SU	PPORT N	INTR					
SELECT SYSTE	-M screen	Initial	Transmit						Receive of	diagnosis					
32223 / 37372		diagnosis		ECM	ТСМ	DISPLAY	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	_	NG	UNKWN	_	UNIVIN	_	_	UNKWN	_	UNKWN	_	UNKWN	_	UNKWN	UNKW
A/T	_	NG	n uk wu	UNAWN	_	_	_	UNIVAN	_	-	_	UN K WN	_	UNI WN	_
Display control unit		CAN COMM	CAN CIRC 1	CAN CIRC 3	_	_	CAN CIRC 6	_	-	CAN CIRC 2	1	CAN CIRC 5	_	-	CAN CIRC
AIR PRESSURE MONITOR	No indication	NG	UNKWN	_	_	_	_	_	_	_	ı	UNKWN	_	_	_
ICC	ı	NG	UNKWN	UNKWN	UNI WN	_	-	_	_	UNKWN	İ	ı	UNKWN	UNKWN	ı
INTELLIGENT KEY	No indication	_	UNKWN	-	_	_	_	_	_	UNKWN	1	ı	_	ı	1
BCM	No indication	NG	UNKWN	UNKWN	_	_	-	_	UNKWN	l	ı	UNKWN	_	1	UNKW
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNI WN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	ı	1	_	UNKWN	-
ABS	_	NG	UNKWN	UNKWN	UNRWN	_	_	_	_	_	UNKWN	_	_	_	_
AUTO DRIVE POS.	No indication	NG	UNKWN		UNK WN	_			_	UNKWN	1	UNKWN		_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	_	_	_	_



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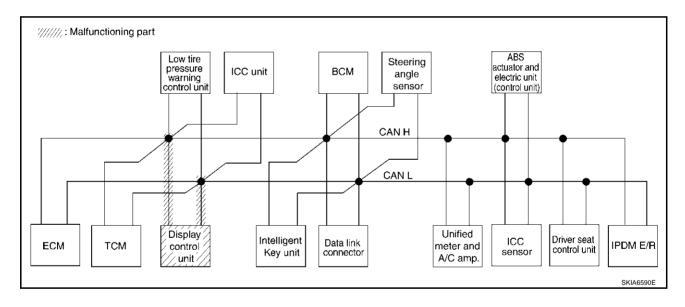
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Case 7
Check display control unit circuit. Refer to <u>LAN-119</u>, "<u>Display Control Unit Circuit Check</u>".

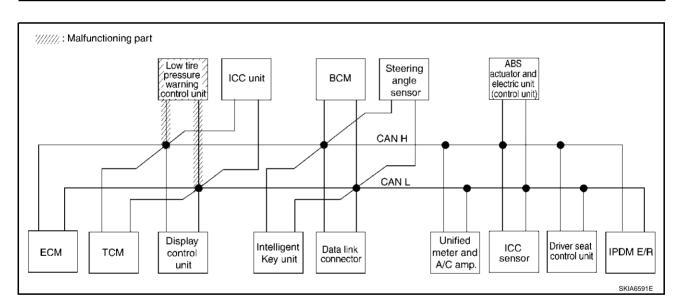
							CAN	DIAG SU	PPORT N	INTR					
SELECT SYSTE	M screen	Initial	Transmit						Receive o	diagnosis					
02220101012		diagnosis		ECM	тсм	DISPLAY	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	_	NG	UNKWN	_	UNKWN	_	1	UNKWN		UNKWN	_	UNKWN	_	UNKWN	UNKWN
A/T	_	NG	UNKWN	UNKWN	_	_	_	UNKWN	_	_	_	UNKWN	_	UNKWN	_
Display control unit	_	CAN COMM	CANORC 1	CANOTEC 3	_	_	CANORC 6	_	_	CAN PRC 2	_	CANCAC 5	_	_	CANCAC:
AIR PRESSURE MONITOR	No indication	NG	UNKWN	_	_	_	_	_	-	-	_	UNKWN	_	_	_
ICC	_	NG	UNKWN	UNKWN	UNKWN	_	_	_	-	UNKWN	_	_	UNKWN	UNKWN	_
INTELLIGENT KEY	No indication		UNKWN	_	_	_	_	_	ı	UNKWN	_	_	_	-	-
всм	No indication	NG	UNKWN	UNKWN	_	_	_	_	UNKWN		_	UNKWN	_	_	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	n uk ∖wu	UNKWN	UNKWN	UNKWN	UNKWN	_	_	_	UNKWN	_
ABS	_	NG	UNKWN	UNKWN	UNKWN	_	-	_		1	UNKWN	_	_	-	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	UNKWN	_	_	_	-	UNKWN	_	UNKWN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	_	-	UNKWN	_	_	_	_	_



Case 8

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

							CAN	DIAG SU	PPORT N	INTR					
SELECT SYSTE	M screen	Initial	Transmit						Receive o	diagnosis					
022201 07011			diagnosis	ECM	тсм	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	ĺ	NG	UNKWN	UNKWN	_	_	_	UNKWN	1	-	_	UNKWN	_	UNKWN	_
Display control unit	ı	CAN COMM	CAN CIRC 1	CAN CIRC 3	_	_	CANORC 6	_	ı	CAN CIRC 2	_	CAN CIRC 5	_	_	CAN CIRC 7
AIR PRESSURE MONITOR	No indication	NG	UNKWN	_	_	_	_	_	_	-	-	UNKWN	_	_	_
ICC	ı	NG	UNKWN	UNKWN	UNKWN	_	_	_	-	UNKWN	_	-	UNKWN	UNKWN	_
INTELLIGENT KEY	No indication	_	UNKWN	_	_	_	_	_	-	UNKWN	-	ı	_	_	_
всм	No indication	NG	UNKWN	UNKWN	_	_	_	_	UNKWN	_	_	UNKWN	_	_	UNKWN
METER A/C AMP	No indication	ı	UNKWN	UNKWN	UNKWN	UNKWN	UNIWN	UNKWN	UNKWN	UNKWN	_	ı	_	UNKWN	_
ABS	-	NG	UNKWN	UNKWN	UNKWN	_	_	_		-	UNKWN	ı	_	_	_
AUTO DRIVE POS.	No indication	NG	UNKWN	1	UNKWN	_	_	_	ı	UNKWN	_	UNKWN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	_	-	UNKWN	_	_	_	_	_



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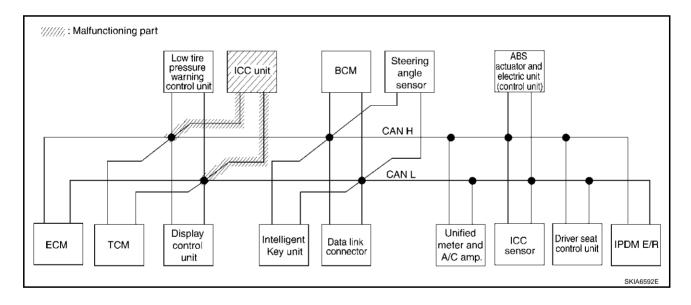
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Case 9
Check ICC unit circuit. Refer to <u>LAN-120</u>, "ICC Unit Circuit Check".

							CAN	DIAG SU	PPORT N	INTR					
SELECT SYSTE	M screen	Initial	Transmit						Receive of	diagnosis					
		diagnosis		ECM	тсм	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	_	_	UNIKWN	_	UNKWN	ı	UNKWN	_	UNKWN	UNKWN
A/T	1	NG	UNKWN	UNKWN	_	_	_	UNKWN	_	_	ı	UNKWN	_	UNKWN	ı
Display control unit	_	CAN COMM	CAN CIRC 1	CAN CIRC 3	_	_	CAN CIRC 6	_	_	CAN CIRC 2	ı	CAN CIRC 5	_	_	CAN CIRC 7
AIR PRESSURE MONITOR	No indication	NG	UNKWN	_	_	_	_	_	_	_	ı	UNKWN	_	_	1
ICC		NG	UNK WN	NNA MN	UNKWN	_	-	-	_	Π ΛΆ (MN	ı	_	UNIX WN	UN A NN	ı
INTELLIGENT KEY	No indication	-	UNKWN	_	_	_	_	_	_	UNKWN	ı	_	_	_	_
всм	No indication	NG	UNKWN	UNKWN	_	_	_	_	UNKWN	_	-	UNKWN	_	_	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNK WN	UNKWN	UNKWN	1	_	_	UNKWN	_
ABS	_	NG	UNKWN	UNKWN	unkwn	_	_	_	_	_	UNKWN	_	_	_	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	UNKWN	_	_	_	_	UNKWN	ı	UNKWN	_	_	
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	_		_	
														Р	KIA7972E



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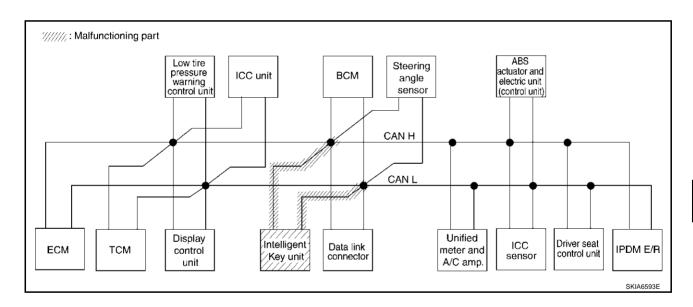
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Case 10
Check Intelligent Key unit circuit. Refer to <u>LAN-120</u>, "Intelligent Key Unit Circuit Check".

						CAN	DIAG SU	PPORT N	1NTR						
SELECT SYSTEM screen		Initial	Transmit						Receive o	diagnosis					
		diagnosis		ECM	тсм	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	ı	UNKWN	_	UNKWN	_	UNKWN	UNKWN
A/T	-	NG	UNKWN	UNKWN	_	_	_	UNKWN	1		_	UNKWN	_	UNKWN	_
Display control unit	-	CAN COMM	CAN CIRC 1	CAN CIRC 3	_	_	CAN CIRC 6	_	1	CAN CIRC 2	_	CAN CIRC 5	_	-	CAN CIRC 7
AIR PRESSURE MONITOR	No indication	NG	UNKWN	_	_	_	_	-	1		_	UNKWN	_	_	_
ICC	-	NG	UNKWN	UNKWN	UNKWN	_	_	_	-	UNKWN	-	=	UNKWN	UNKWN	-
INTELLIGENT KEY	No invication	_	UNKWN	_	_	_	_	_	_	UNKWN	_	-	_	-	_
всм	No indication	NG	UNKWN	UNKWN	_	_	_	_	UMMAN	1	_	UNKWN	_	_	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UM W MN	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	_	_	_	_	_

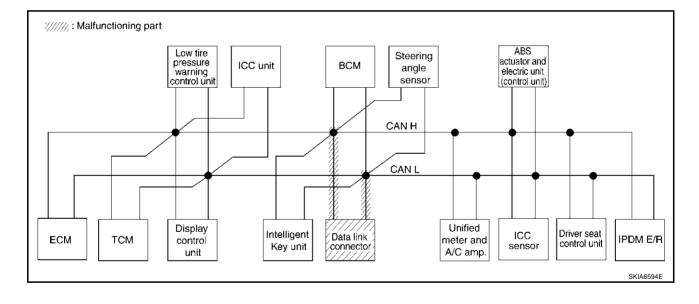


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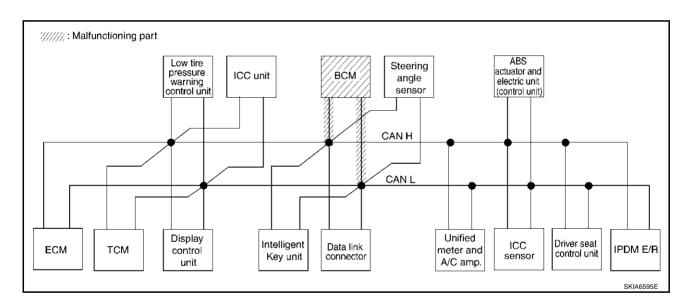
Case 11
Check data link connector circuit. Refer to <u>LAN-121</u>, "<u>Data Link Connector Circuit Check</u>".

							CAN	DIAG SU	PPORT N	INTR							
SELECT SYSTEM screen		Initial	Transmit	Receive diagnosis													
		diagnosis		ECM	тсм	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	ı	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	_	1	CAN CIRC 2	_	CAN CIRC 5	_		CAN CIRC :		
AIR PRESSURE MONITOR	No indication	NG	UNKWN	_	_	_	_	_	-	_	_	UNKWN	_	_	_		
ICC	-	NG	UNKWN	UNKWN	UNKWN	_	_	_	_	UNKWN	_	_	UNKWN	UNKWN	_		
INTELLIGENT KEY	No irrecation	_	UNKWN	_	_	_	-	_	I	UNKWN	_	_	_	_	_		
ВСМ	No incleation	NG	UNKWN	UNKWN	_	_	ı	_	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	_	_	_	_	_		



Case 12
Check BCM circuit. Refer to LAN-121, "BCM Circuit Check".

						CAN	DIAG SU	PPORT N	INTR								
SELECT SYSTEM screen		Initial	Transmit	Receive diagnosis													
		diagnosis		ECM	тсм	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	_	ı	UNKWN	_	UNKWN	_	UNKWN	_	UNKWN	UNKWI		
A/T	_	NG	UNKWN	UNKWN	-	_	ı	UNKWN	_	1	-	UNKWN	_	UNKWN	_		
Display control unit	_	CAN COMM	CAN CIRC 1	CAN CIRC 3	1	_	CAN CIRC 6	_	_	CANCIRC 2	-	CAN CIRC 5	_	_	CAN CIRC 1		
AIR PRESSURE MONITOR	No indication	NG	UNKWN	_	_	_		_	_	-	_	UNKWN	_	_	_		
ICC	_	NG	UNKWN	UNKWN	UNKWN	_	_	_	_	UNI WN	-	_	UNKWN	UNKWN	_		
INTELLIGENT KEY	No indication	_	UNKWN	_	_	_	_	_	_	UNK WN	_	_	_	_	_		
ВСМ	No indication	NG	UNKWN	UNKWN	_	_	_	_	UNKWN	_	_	UNKWN	_	_	UNKWN		
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNWWN	=	_	_	UNKWN	_		
ABS	_	NG	UNKWN	UNKWN	UNKWN	_	_	_	_	-	UNKWN	_	_	_	_		
AUTO DRIVE POS.	No indication	NG	UNKWN	_	UNKWN	_	_	_	_	UNKWN	_	UNKWN	_	_	_		
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	_	_	UNK WN	_	ı	_	_	_		



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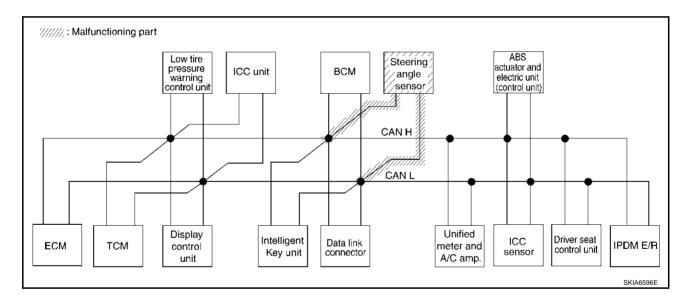
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Case 13
Check steering angle sensor circuit. Refer to <u>LAN-122</u>, "Steering Angle Sensor Circuit Check".

SELECT SYSTEM screen							CAN	DIAG SU	PPORT N	INTR						
		Initial	Transmit	Receive diagnosis												
			diagnosis	ECM	тсм	DISPLAY	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R	
ENGINE	1	NG	UNKWN	_	UNKWN	_	_	UNKWN	ı	UNKWN	ı	UNKWN	_	UNKWN	UNKWN	
A/T	_	NG	UNKWN	UNKWN	_	_	_	UNKWN	1	ı	ı	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	_	_	_	_	_	ı	-	I	UNKWN	_	_	_	
ICC	_	NG	UNKWN	UNKWN	UNKWN	_	_	_	ı	UNKWN	I	_	UNKWN	UNKWN	_	
INTELLIGENT KEY	No indication	_	UNKWN	_	_	_	_	_	1	UNKWN	-	_	_	_	_	
всм	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		_		_	1	UNKWN	_	_	_	_	_	
														Р	KIA7976E	



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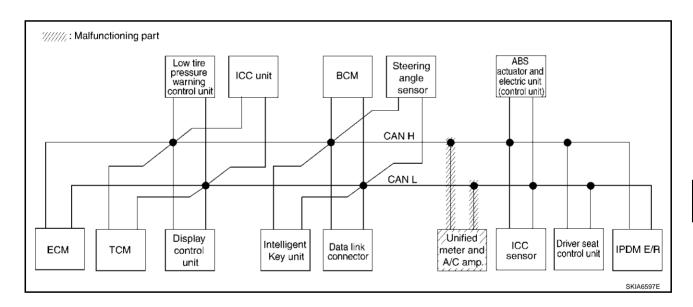
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Case 14
Check unified meter and A/C amp. circuit. Refer to LAN-122, "Unified Meter and A/C Amp. Circuit Check".

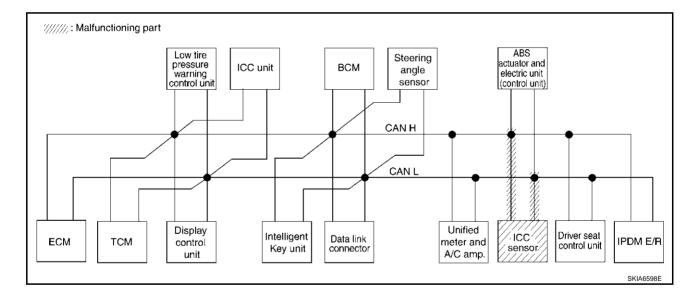
							CAN	DIAG SU	PPORT N	INTR					
SELECT SYSTE	-M screen	Initial	Transmit						Receive (diagnosis					
02220101011	IN SOIGE	diagnosis		ECM	тсм	DISPLAY	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	_	NG	UNKWN	-	UNKWN	_	_	UNKWN	_	UNKWN	_	UNIWN	_	UNKWN	UNKWN
A/T	_	NG	UNKWN	UNKWN	_	_	_	UNKWN	_	_	_	UNIV	_	UNKWN	_
Display control unit	_	CAN COMM	CAN CIRC 1	CAN CIRC 3	-	_	CAN CIRC 6		_	CAN CIRC 2	_	CAN PIRC 5	_	ı	CAN CIRC 7
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	_	_		_	_	_	-	UNIWN	_	_	_
ICC	_	NG	UNKWN	UNKWN	UNKWN	_	_	_		UNKWN	_	ı	UNKWN	UNKWN	_
INTELLIGENT KEY	No indication	_	UNKWN	-	_	_	_	_	_	UNKWN	_	-	_	_	_
ВСМ	No indication	NG	UNKWN	UNKWN	_	_	_	_	UNKWN	_	_	UNIVWN	_	_	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	_	UNIVERN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	_	_	_	_



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Case 15
Check ICC sensor circuit. Refer to LAN-123, "ICC Sensor Circuit Check".

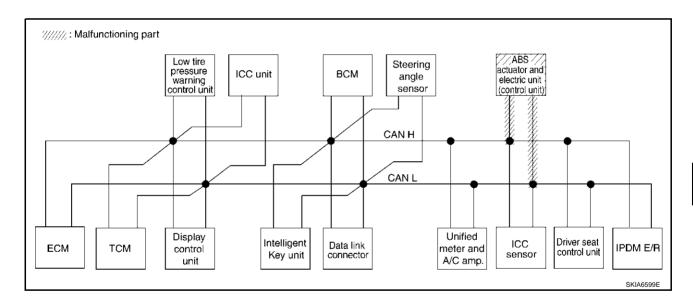
							CAN	DIAG SU	PPORT N	INTR					
SELECT SYSTE	EM screen	Initial	Transmit						Receive	diagnosis					
			diagnosis	ECM	тсм	DISPLAY	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	ı	NG	UNKWN	_	UNKWN	_	_	UNKWN	_	UNKWN	ı	UNKWN	_	UNKWN	UNKWN
A/T	ı	NG	UNKWN	UNKWN	_	_	_	UNKWN	_	-	ı	UNKWN	_	UNKWN	_
Display control unit	ı	CAN COMM	CAN CIRC 1	CAN CIRC 3	_	_	CAN CIRC 6	_	_	CAN CIRC 2	ı	CAN CIRC 5	_	_	CAN CIRC 7
AIR PRESSURE MONITOR	No indication	g	UNKWN	_	_	_	_	_	_	1	I	UNKWN	_	_	_
ICC	ı	NG	UNKWN	UNKWN	UNKWN	_	_	_	_	UNKWN	I	_	ONK NA	UNKWN	_
INTELLIGENT KEY	No indication	_	UNKWN	_	_	_	_	_	_	UNKWN	-	_	_	_	_
всм	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	ı	UNKWN	_	_	_
IPDM E/R	No indication	1	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	_	_	_	_
														Р	KIA7978E



Case 16

Check ABS actuator and electric unit (control unit) circuit. Refer to <u>LAN-123</u>, "ABS Actuator and Electric Unit (Control Unit) Circuit Check".

							CAN	DIAG SU	PPORT N	INTR					
SELECT SYSTE	-M screen	Initial	Transmit						Receive o	diagnosis					
022201 07010			diagnosis	ECM	тсм	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	_	UNIWN	UNKWI
A/T	ı	NG	UNKWN	UNKWN	_	_	_	UNKWN	1	ı	ı	UNKWN	_	Ω ΝΆ ΜΝ	_
Display control unit	-	CAN COMM	CAN CIRC 1	CAN CIRC 3	_	_	CAN CIRC 6	-	ı	CAN CIRC 2	ı	CAN CIRC 5	_	_	CAN CIRC
AIR PRESSURE MONITOR	No indication	NG	UNKWN	_	_	_	_	_	_	_	_	UNKWN	_	_	_
ICC	_	NG	UNKWN	UNKWN	UNKWN	_	_	_	ı	UNKWN	_	_	UNKWN	UNWWN	_
INTELLIGENT KEY	No indication	_	UNKWN		_	_	_	_	ı	UNKWN	1	_	_	_	_
всм	No indication	NG	UNKWN	UNKWN	_	_	_	-	UNKWN		ı	UNKWN	_	_	UNKWI
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	-	_	_	UNIVON	_
ABS	1	NG	n uk wu	UNION	n иk {ων	_	_	-	1	1	NMAN	_	_	_	_
AUTO DRIVE POS.	No indication	NG	UNKWN	1	UNKWN	_	_	-	ı	UNKWN	ı	UNKWN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_		_	_	UNKWN		_	_	_	_



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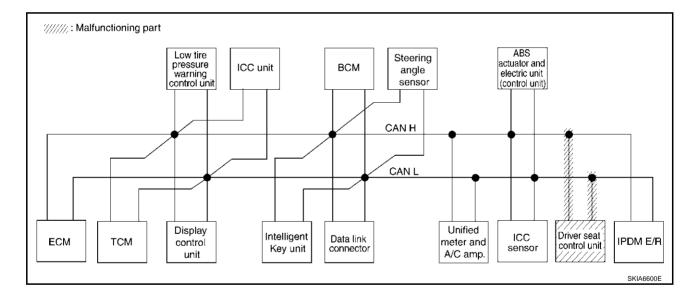
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Case 17
Check driver seat control unit circuit. Refer to <u>LAN-124</u>, "<u>Driver Seat Control Unit Circuit Check</u>".

							CAN	DIAG SU	PPORT N	INTR					
SELECT SYSTE	M screen	Initial	Transmit						Receive (diagnosis					
02220101011		diagnosis		ECM	тсм	DISPLAY	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	_	NG	UNKWN	ı	UNKWN	_	_	UNKWN	_	UNKWN	_	UNKWN	_	UNKWN	UNKWN
A/T	ı	NG	UNKWN	UNKWN	_	_	1	UNKWN	_	1	_	UNKWN	_	UNKWN	_
Display control unit	ı	CAN COMM	CAN CIRC 1	CAN CIRC 3	_	_	CAN CIRC 6	_	_	CAN CIRC 2	_	CAN CIRC 5	_	_	CAN CIRC 1
AIR PRESSURE MONITOR	No indication	NG	UNKWN	I	-	_	I	_	-	ı	_	UNKWN	_	_	_
ICC	-	NG	UNKWN	UNKWN	UNKWN	_	_	_	_	UNKWN	_	_	UNKWN	UNKWN	_
INTELLIGENT KEY	No indication	_	UNKWN	ı	_	_	ı	_	_	UNKWN	_	-	_	_	_
ВСМ	No indication	NG	UNKWN	UNKWN	_	_	ı	_	UNKWN	I	_	UNKWN	_	_	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	1	_	UNKWN	_
ABS	-	NG	UNKWN	UNKWN	UNKWN	_	-	_	_	1	UNKWN	_	_	_	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	UNKWN	_	_	_	_	UNKWN	_	UNKWN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	_	_	_	_



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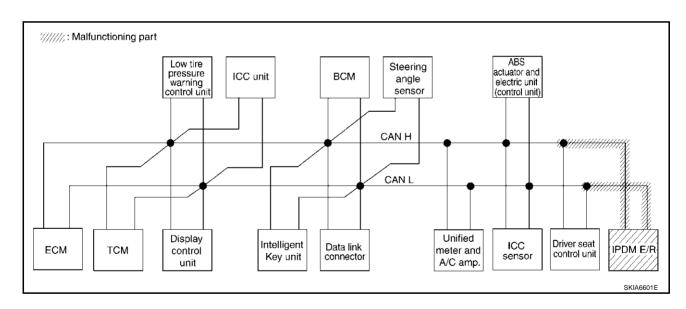
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Case 18
Check IPDM E/R circuit. Refer to LAN-125, "IPDM E/R Circuit Check".

							ÇAN	DIAG SU	PPORT N	INTR					
SELECT SYSTE	M screen	Initial	Transmit						Receive o	diagnosis					
02220707071		diagnosis		ECM	тсм	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	UNKW
A/T	ı	NG	UNKWN	UNKWN	1	_	1	UNKWN	ı	1	_	UNKWN	_	UNKWN	ı
Display control unit	_	CAN COMM	CAN CIRC 1	CAN CIRC 3	_	_	CAN CIRC 6		_	CAN CIRC 2	_	CAN CIRC 5	_	-	CANCIRO
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	ı	_	-	_	-	_	-	UNKWN	_	ı	_
ICC	ĺ	NG	UNKWN	UNKWN	UNKWN	_	ı	_	ı	UNKWN	_	_	UNKWN	UNKWN	-
INTELLIGENT KEY	No indication	_	UNKWN	_	_	_	_	_	-	UNKWN	_	_	_	-	_
ВСМ	No indication	NG	UNKWN	UNKWN	-	_	_	_	UNKWN	_	_	UNKWN	_	-	UNIV
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	ı	UNKWN	_	_	_	1	UNKWN	_	UNKWN	_	- 1	-
IPDM E/R	No indication	-	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	_	_	_	_



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Case 19
Check CAN communication circuit. Refer to LAN-126, "CAN Communication Circuit Check".

							CAN	DIAG SU	PPORT N	INTR					
SELECT SYSTI	FM screen	Initial	Transmit						Receive of	diagnosis					
		diagnosis		ECM	тсм	DISPLAY	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	_	NG	UNKWN	-	UNIVWN	_	_	UNKWN	_	UNIVAN	_	UNKWN	_	n иk {νν	UNIO
A/T	_	NG	UNI WN	UNKWN	_	_	_	NMMN	_	_	_	ONR WN	_	nuk w u	_
Display control unit	_	CAN COMM	CAN RC 1	CANOTEC 3	_	_	CANCIRC 6	_	_	CANORC 2	_	CANORC 5		_	CANOTEC
AIR PRESSURE MONITOR	No indication	NG	UNKWN	_	_	_	_	_	_	-	_	UNKWN	_	_	_
ICC	_	NG	ON WN	UNR WN	NMAN	_	_	_		UN W WN	_	-	n иk {νν	∩ иК {\w}	_
INTELLIGENT KEY	No indication	_	UNKWN	_	_	_	_	_	_	UNKWN	_	ı	_	_	_
ВСМ	No indication	NG	UNKWN	UNKWN	_	_	_	_	UNKWN	ı	_	UNKWN	_	_	UNKWI
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	-	_	UNKWN	_
ABS	_	NG	UNMMN	UNKWN	UNRWN	_	_	_	_	1	NMAMN	1	_	_	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	UNKWN	_	_	_	_	UNKWN	_	UNKWN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	_	_	_	_

Case 20

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to $\underline{\text{LAN-}131}$, "IPDM E/R Ignition Relay $\underline{\text{Circuit Check}}$ ".

							CAN	DIAG SU	PPORT N	INTR					
SELECT SYSTE	M screen	Initial	Transmit						Receive of	diagnosis					
4		diagnosis		ECM	тсм	DISPLAY	TIRE-P	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	ı	NG	UNKWN	_	UNKWN	_	ı	UNKWN	l	UNKWN	_	UNKWN	_	UNK W N	UNKWN
A/T	ı	NG	UNKWN	UNKWN	_	_	ı	UNKWN	I	_	_	UNKWN	_	UNKWN	ı
Display control unit	ı	CAN COMM	CAN CIRC 1	CAN CIRC 3	_	_	CAN CIRC 6	-	ı	CAN CIRC 2	_	CAN CIRC 5	_	_	CAN CIRC 7
AIR PRESSURE MONITOR	No indication	NG	UNKWN	_	_	_	_		ı	-	_	UNKWN	_	_	_
ICC	_	NG	UNKWN	UNKWN	NNA MN	_	_	_	_	UNKWN	_	_	UNKWN	ON WA	_
INTELLIGENT KEY	No indication	_	UNKWN	_	_	_	ı	-	-	UNKWN	_	-	_	_	_
ВСМ	No indication	NG	UNKWN	UNKWN	_	_	_	_	UNKWN	_	_	UNKWN	_	_	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNWWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	-	П	_	UNWWN	_
ABS	ı	NG	UNKWN	UNKWN	UNKWN	_	_	_	-	_	UNKWN	-	_	_	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	UNKWN	_	_	_		UNKWN	_	UNKWN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_			_	_	UNKWN	_	_	_	_	_

Case 21

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

							CAN	DIAG SU	PPORT N	INTR					
SELECT SYSTE	M screen	Initial	Transmit						Receive of	diagnosis					
32227 3 1 3 1		diagnosis		ECM	тсм	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	UNKWI
A/T	1	NG	UNKWN	UNIVIN	_	_	-	UNKWN	_	_		UNIKWN	_	UNKWN	_
Display control unit	ı	CAN COMM	CAN CIRC 1	CAN CIRC 3	_	_	CAN CIRC 6	_	_	CAN CIRC 2	_	CAN CIRC 5	_	_	CAN CIRC
AIR PRESSURE MONITOR	No indication	NG	UNKWN	_	_	_	1	_	_	_	_	UNKWN	_	_	1
ICC	ı	NG	UNKWN	UNKWN	UNKWN	_	_	_	_	UNKWN	_	ı	UNKWN	UNKWN	_
INTELLIGENT KEY	No indication	_	UNKWN	_	_	_	ı	_	_	UNKWN	_	ı	_	_	_
ВСМ	No indication	NG	UNKWN	UNKWN	_	_	_		UNKWN	_	_	UNKWN	_	_	UNKWI
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN		ı	_	UNKWN	_
ABS		NG	UNKWN	UNKWN	UNKWN	_	_	_	_	_	NNR WN	ı	_	_	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	UNKWN	_	_		_	UNKWN	_	UNKWN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	_	_	_	_

Circuit Check Between TCM and Data Link Connector

1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect the negative battery terminal.

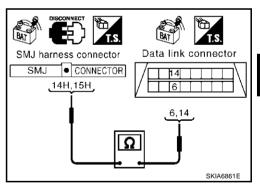
- 3. Disconnect ECM connector and harness connector M82.
- Check continuity between harness connector M82 terminals 14H (L), 15H (R) and data link connector M5 terminals 6 (L), 14 (R).

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.



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

1. CHECK HARNESS FOR OPEN CIRCUIT

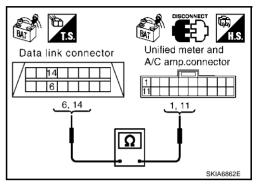
- 1. Turn ignition switch OFF.
- 2. Disconnect the negative battery terminal.
- 3. Disconnect ECM connector and unified meter and A/C amp. connector.
- Check continuity between data link connector M5 terminals 6 (L), 14 (R) and unified meter and A/C amp. harness connector M55 terminals 1 (L), 11 (R).

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)

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.

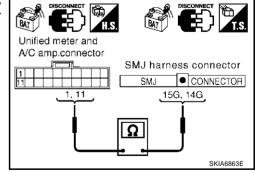
2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect unified meter and A/C amp. connector and harness connector M41.
- 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

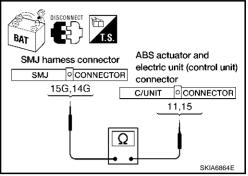
- 1. Disconnect ABS actuator and electric unit (control unit) connector.
- 2. Check continuity between harness connector E211 terminals 15G (L), 14G (R) and ABS actuator and electric unit (control unit) harness connector E56 terminals 11 (L), 15 (R).

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

1. CHECK CONNECTOR

- 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.
- 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).

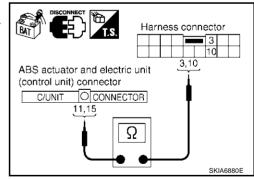
11 (L) - 3 (L) 15 (R) - 10 (R) : Continuity should exist.

: Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair harness.



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$\overline{3}$. CHECK HARNESS FOR OPEN CIRCUIT

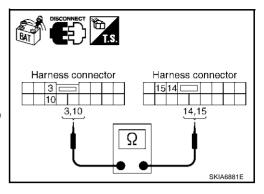
- 1. Disconnect harness connector B8.
- 2. Check continuity between harness connector B5 terminals 3 (L), 10 (R) and harness connector B8 terminals 14 (L), 15 (R).

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 <u>LAN-91, "Work Flow"</u>.

NG >> Repair harness.



AKS007S0

ECM Circuit Check

1. CHECK CONNECTOR

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

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

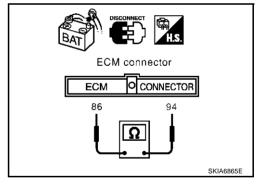
- 1. Disconnect ECM connector.
- 2. Check resistance between ECM harness connector M90 terminals 94 (L) and 86 (R).

94 (L) - 86 (R) : Approx. $108 - 132\Omega$

OK or NG

OK >> Replace ECM.

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



AKS007S1

TCM Circuit Check

1. CHECK CONNECTOR

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

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

AKS007S2

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$\overline{2}$. CHECK HARNESS FOR OPEN CIRCUIT

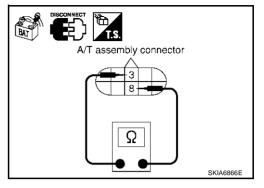
- Disconnect A/T assembly connector.
- 2. Check resistance between A/T assembly harness connector F44 terminals 3 (L) and 8 (R).

3 (L) - 8 (R) : Approx.
$$54 - 66\Omega$$

OK or NG

OK >> Replace A/T assembly.

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



Display Control Unit Circuit Check

1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- Disconnect the negative battery terminal.
- 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

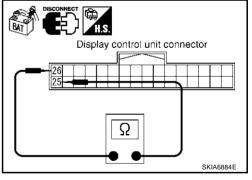
- 1. Disconnect display control unit connector.
- Check resistance between display control unit harness connector M76 terminals 25 (L) and 26 (R).

25 (L) - 26 (R) : Approx. 54 -
$$66\Omega$$

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

CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- Disconnect the negative battery terminal.
- 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.

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$\overline{2}$. 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)

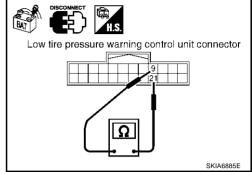
: Approx. 54 - 66 Ω

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.



AKS007S4

ICC Unit Circuit Check

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).

: Approx. 54 - 66 Ω

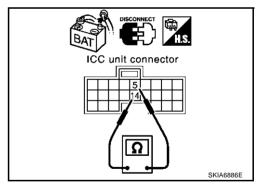
OK or NG

OK

>> Replace ICC unit.

NG >> Rep

>> Repair harness between ICC unit and harness connector M82.



AKS007S5

Intelligent Key Unit Circuit Check

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.

$\overline{2}$. CHECK HARNESS FOR OPEN CIRCUIT

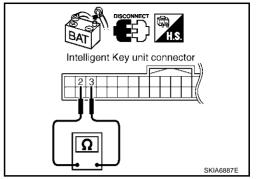
- 1. Disconnect Intelligent Key unit connector.
- Check resistance between Intelligent Key unit harness connector M34 terminals 2 (L) and 3 (R).

2 (L) - 3 (R) : Approx.
$$54 - 66\Omega$$

OK or NG

OK >> Replace Intelligent Key unit.

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



Data Link Connector Circuit Check

1. CHECK CONNECTOR

- Turn ignition switch OFF. 1.
- Disconnect the negative battery terminal. 2.
- 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

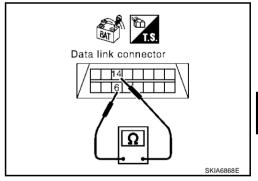
Check resistance between data link connector M5 terminals 6 (L) and 14 (R).

6 (L) - 14 (R) : Approx. **54 - 66**
$$\Omega$$

OK or NG

OK >> Diagnose again. Refer to LAN-91, "Work Flow".

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



BCM Circuit Check

CHECK CONNECTOR

- Turn ignition switch OFF.
- Disconnect the negative battery terminal.
- 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.

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$\overline{2}$. CHECK HARNESS FOR OPEN CIRCUIT

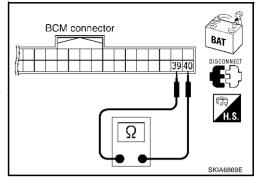
- 1. Disconnect BCM connector.
- 2. Check resistance between BCM harness connector M3 terminals 39 (L) and 40 (R).

: Approx. 54 - 66 Ω

OK or NG

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

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



AKS007S8

Steering Angle Sensor Circuit Check

1. CHECK CONNECTOR

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

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

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

: Approx. 54 - 66 Ω

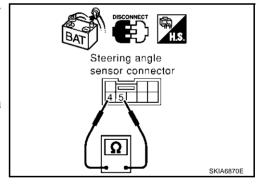
OK or NG

OK

>> Replace steering angle sensor.

NG

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



Unified Meter and A/C Amp. Circuit Check

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.

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$\overline{2}$. CHECK HARNESS FOR OPEN CIRCUIT

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

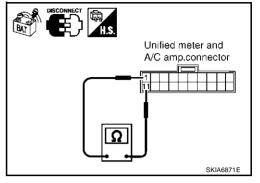
: Approx. 54 - 66 Ω

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.



AKS007SA

ICC Sensor Circuit Check

1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- Disconnect the negative battery terminal.
- 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.
- Check resistance between ICC sensor harness connector E39 terminals 3 (L) and 6 (R).

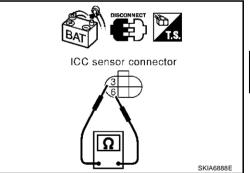
: Approx. 54 - 66 Ω

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.
- Disconnect the negative battery terminal.
- Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

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OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

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$\overline{2}$. 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)

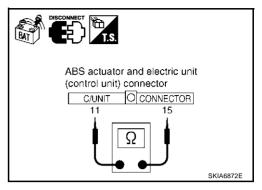
: Approx. 54 - 66 Ω

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.



AKS007SC

Driver Seat Control Unit Circuit Check

1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the negative battery terminal.
- 3. Check following terminals and connectors for damage, bend and loose connection (control unit side and harness side).
- Driver seat control unit connector
- Harness connector 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.
- Check resistance between driver seat control unit harness connector B152 terminals 14 (OR) and 15 (SB).

14 (OR) - 15 (SB)

: Approx. 54 - 66 Ω

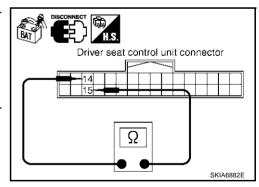
OK or NG

OK

>> Replace driver seat control unit.

NG

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



CAN SYSTEM (TYPE 3)

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IPDM E/R Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.

- 2. Disconnect the negative battery terminal.
- 3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
- 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).

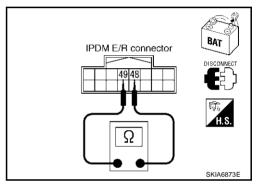
: Approx. 108 - 132 Ω

OK or NG

OK >> Replace IPDM E/R.

NG >> Repair h

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



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CAN SYSTEM (TYPE 3)

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CAN Communication Circuit Check

1. CHECK CONNECTOR

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

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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).

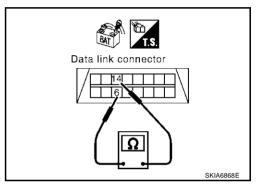
6 (L) - 14 (R) : Continuity should not exist.

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.



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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

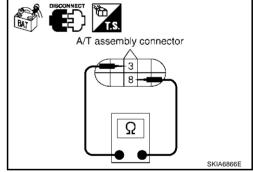
- 1. Disconnect A/T assembly connector.
- 2. Check continuity between A/T assembly harness connector F44 terminals 3 (L) and 8 (R).

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.



Data link connector

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5. CHECK HARNESS FOR SHORT CIRCUIT

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

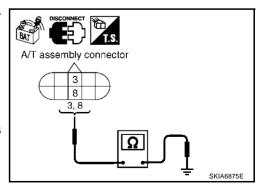
3 (L) - Ground : Continuity should not exist.8 (R) - Ground : Continuity should not exist.

OK or NG

NG

OK >> GO TO 6.

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



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6. CHECK HARNESS FOR SHORT CIRCUIT

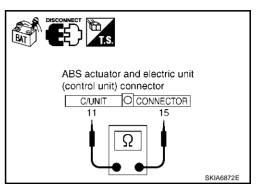
- Disconnect ABS actuator and electric unit (control unit) connector, ICC sensor connector and harness connector E205.
- 2. Check continuity between ABS actuator and electric unit (control unit) harness connector E56 terminals 11 (L) and 15 (R).

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

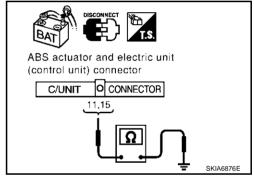
- Disconnect harness connector B8.
- Check continuity between harness connector B5 terminals 3 (L) and 10 (R).

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.



Harness connector

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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

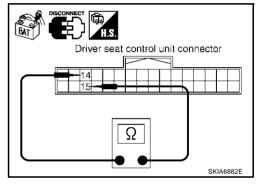
- 1. Disconnect driver seat control unit connector.
- Check continuity between driver seat control unit harness connector B152 terminals 14 (OR) and 15 (SB).

OK or NG

OK >> GO TO 11.

NG

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



Harness connector

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11. CHECK HARNESS FOR SHORT CIRCUIT

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

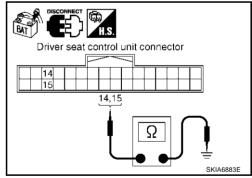
14 (OR) - Ground : Continuity should not exist. 15 (SB) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 12.

NG >> Repair ha

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



12. CHECK HARNESS FOR SHORT CIRCUIT

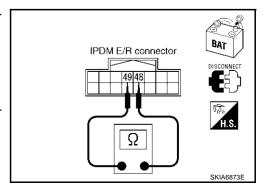
- 1. Disconnect IPDM E/R connector.
- 2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (R).

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.



[CAN]

13. CHECK HARNESS FOR SHORT CIRCUIT

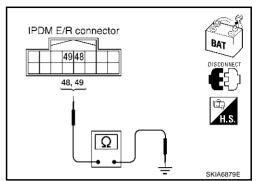
Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (R) and ground.

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 $\underline{\mathsf{LAN-131}}$, " $\underline{\mathsf{FCM/IPDM}}$ $\underline{\mathsf{E/R}}$ INTERNAL CIRCUIT INSPECTION" . OK or NG

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

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

IPDM E/R Ignition Relay Circuit Check

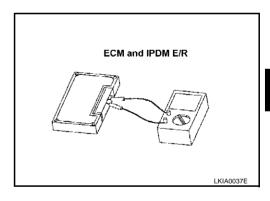
Check the following. If no malfunction is found, replace the IPDM E/R.

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

Component Inspection ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

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

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	100 - 132



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CAN SYSTEM (TYPE 4)

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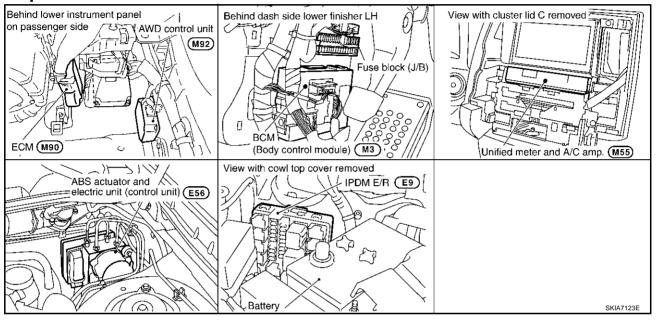
System Description

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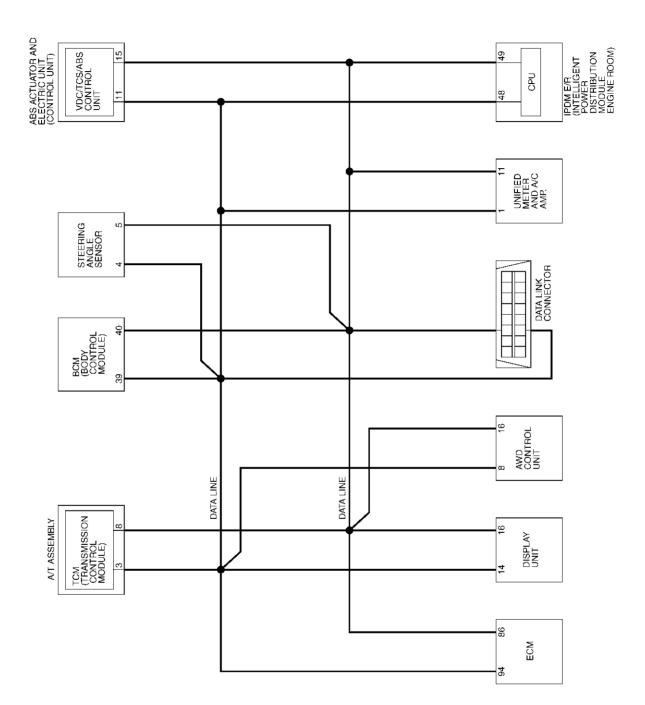
CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information 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

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Schematic AKS007SJ



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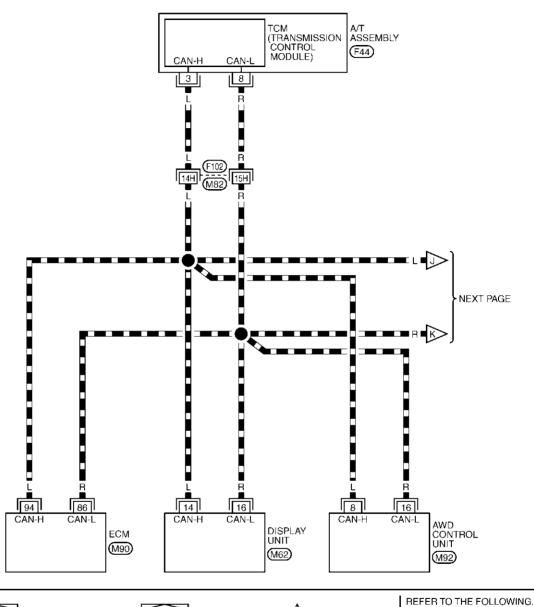
L

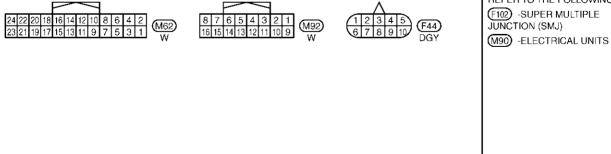
Wiring Diagram - CAN -

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LAN-CAN-08

: DATA LINE





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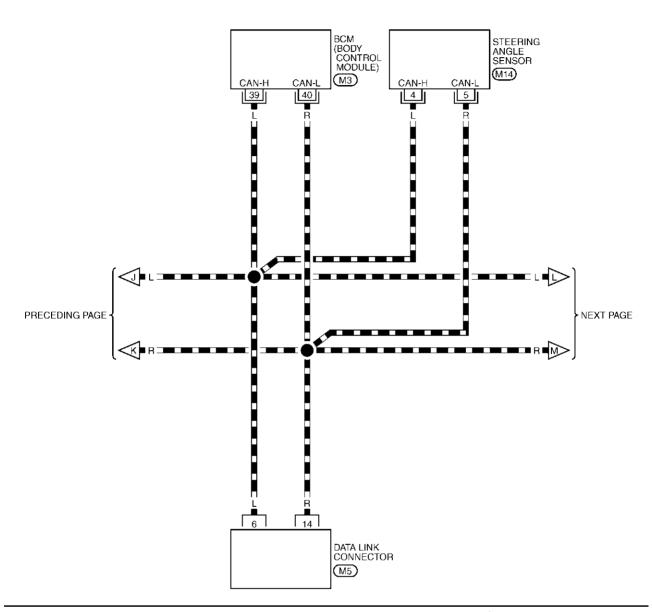
В

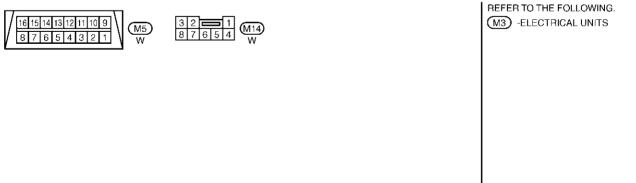
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LAN-CAN-09

: DATA LINE





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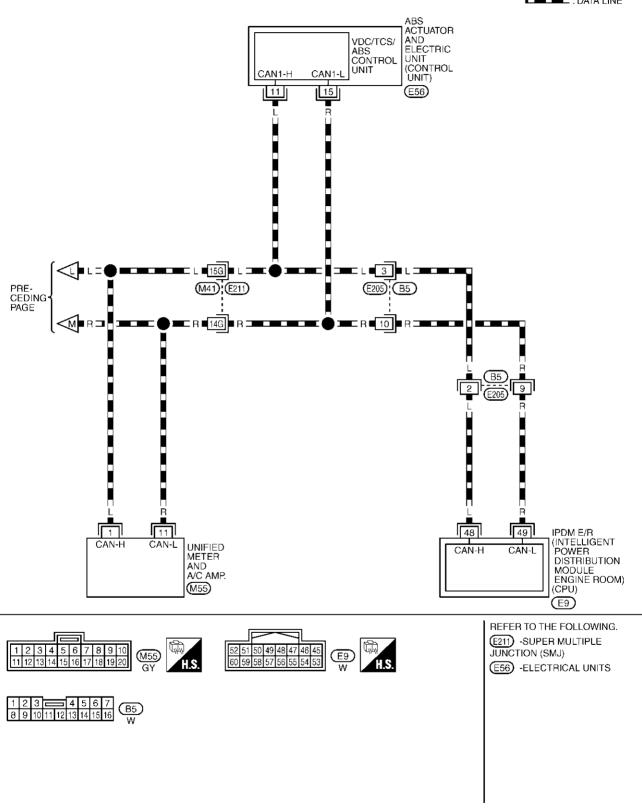
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LAN-CAN-10

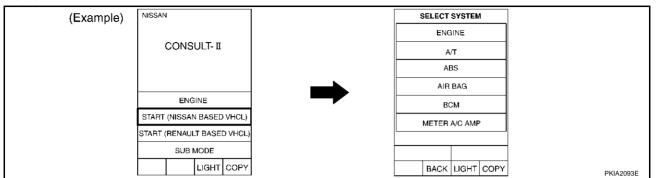
: DATA LINE



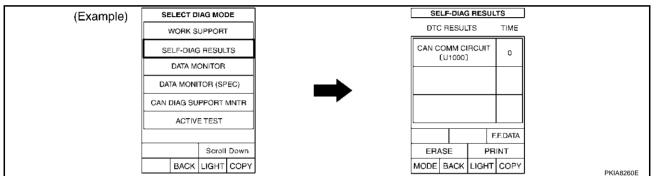
TKWH0250E

Work Flow

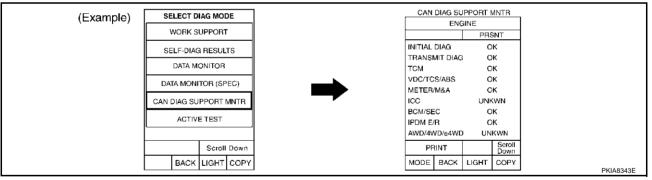
1. When there are no indications of "BCM", "METER A/C AMP" or "IPDM E/R" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



 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.



- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to <u>LAN-139</u>, "CHECK SHEET".
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "v" onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to <u>LAN-139</u>, "CHECK SHEET".

NOTE:

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual.
 So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.
- Check CAN communication line of the integrated display system. Refer to <u>AV-97, "CAN Communication Line Inspection"</u>.
- Attach the CAN DIAG MONITOR check sheet onto the check sheet. Refer to <u>LAN-139</u>, "CHECK SHEET"

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CAN SYSTEM (TYPE 4)

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8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG MONITOR check sheet. Refer to <u>LAN-139</u>, "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 <u>LAN-141, "CHECK SHEET RESULTS (EXAMPLE)"</u>.

CAN SYSTEM (TYPE 4)

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CHECK SHEET

NOTE:

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

						CAN DIAC	SUPPO	RT MNTR				
SELECT SYST	EM screen	Initial	Transmit					eive diagn	osis			
		diagnosis		ECM	тсм	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/F
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	_	_	_	_	ı	UNKWN	UNKWN	_
всм	No indication	NG	UNKWN	UNKWN	_	_	-	_	ı	UNKWN	_	UNKWN
METER A/C AMP	No indication	1	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	ı	-	UNKWN	_
ABS	1	NG	UNKWN	UNKWN	UNKWN	_	UNKWN	-	UNKWN	ı	_	-
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	UNKWN	-	_	_	_
			tach copy LECT SYS					n copy of T SYSTE	M			
				CAN DIA	Attach co display G MONIT	opy of unit OR check	< sheet					

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Attach copy of	Attach copy of	Attach copy of	Attach copy of
ENGINE	A/T	ALL MODE AWD/4WD	BCM
SELF-DIAG RESULTS	SELF-DIAG RESULTS	SELF-DIAG RESULTS	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	Attach copy of	Attach copy of	Attach copy of
ENGINE	A/T	ALL MODE AWD/4WD	BCM
CAN DIAG SUPPORT	CAN DIAG SUPPORT	CAN DIAG SUPPORT	CAN DIAG SUPPORT
MNTR	MNTR	MNTR	MNTR
Attach copy of	Attach copy of	Attach copy of	
METER A/C AMP	ABS	IPDM E/R	
CAN DIAG SUPPORT	CAN DIAG SUPPORT	CAN DIAG SUPPORT	
MNTR	MNTR	MNTR	

CHECK SHEET RESULTS (EXAMPLE)

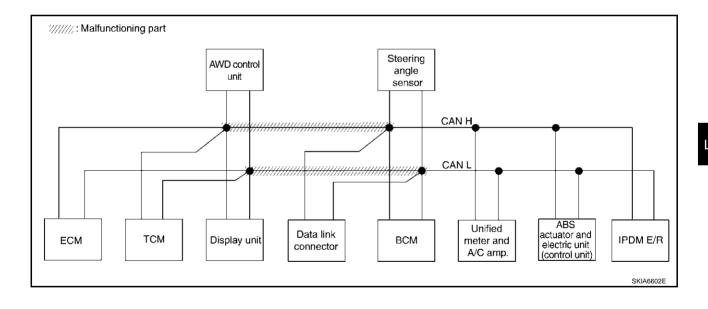
NOTE:

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 <u>LAN-155</u>, "Circuit Check Between TCM and <u>Data Link Connector"</u>.

						CAN DIAG	SUPPOR	RT MNTR				
SELECT SYST	EM screen	Initial	Transmit				Rec	eive diagn	osis			
322201 3131	LIW SCIEGIT	diagnosis		ECM	ТСМ	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/I
ENGINE	_	NG	UNKWN	_	UNKWN	_	1	UNIWN	-	Π ΝΚ ΜΝ	Π ΝΚ ΜΝ	UNKWN
A/T	_	NG	UNKWN	UNKWN	_	_	-	_	-	UNK ∕ WN	UNK WN	_
Display unit	_	CAN COMM	CAN 1	CAN 3	_	_		CAN 2	_	CAN 5	_	CAN 7
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	-	_	-	_	-	UNIXWN	UNK WN	_
всм	No indication	NG	UNKWN	UNKWN	_	_	-	-	-	UNKWN	_	UNKWN
METER A/C AMP	No indication	-	UNKWN	UNIWN	UNIWN	UNION	UNWWN	UNKWN	_	_	UNKWN	_
ABS	_	NG	UNKWN	UNKWN	UNKWN	_	UNNWN	_	UNKWN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNK WN	_	_		UNKWN	_	_	_	_



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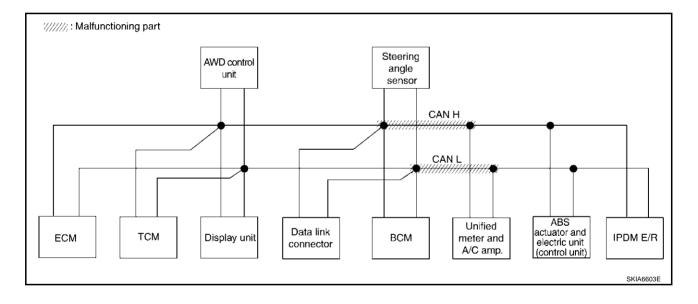
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Case 2
Check harness between data link connector and unified meter and A/C amp. Refer to LAN-155, "Circuit Check Between Data Link Connector and Unified Meter and A/C Amp."

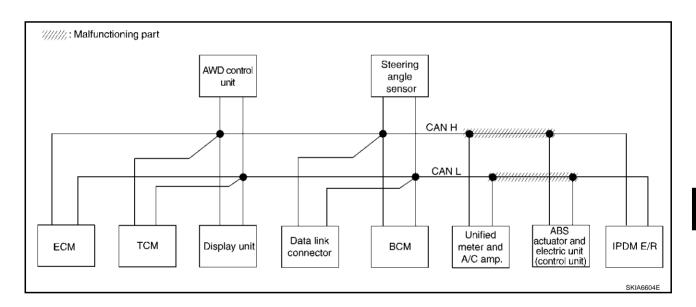
SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR												
		screen Initial diagnosis	Transmit diagnosis	Receive diagnosis										
				ЕСМ	тсм	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/F		
ENGINE	_	NG	UNKWN	-	UNKWN	_	-	UNKWN	-	Π ΝΚ ΑΝ	Π Μ ΜΝ	UN k ₩I		
A/T	_	NG	UNKWN	UNKWN	_	_	_	_	-	UNK WN	UNK WN	_		
Display unit	_	CAN COMM	CAN 1	CAN 3	-	_	-	CAN 2	-	CAN 5	-	CAN 7		
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	-	-	-	_	-	UN A WN	UN K ₩N	_		
всм	No indication	NG	UNKWN	UNKWN	-	_	_	_	-	UNKWN	_	UNKWI		
METER A/C AMP	No indication	-	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	-	-	UNKWN	_		
ABS	_	NG	UNKWN	UNKWN	UNHWN	_	UNIWN	_	UNKWN	_	_	_		
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_		UNKWN	_	_	_	_		



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	тсм	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/		
ENGINE	l	NG	UNKWN	I	UNKWN	ı	ı	UNKWN	ı	UNKWN	UNKWN	UNKWN		
A/T	_	NG	UNKWN	UNKWN	_	_	-	_	1	UNKWN	ONK WN	_		
Display unit	_	CAN COMM	CAN 1	CAN 3	_	_	-	CAN 2	1	CAN 5	-	CAN 7		
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	_	_	-	_	ı	UNKWN	UNK W N	_		
всм	No indication	NG	UNKWN	UNKWN	_	_	_	_	ı	UNKWN	_	UNK WN		
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	-	-	UNKVN	_		
ABS	_	NG	UNKWN	UNK WN	UNKWN	_	UNKWN	_	UNK WN	-	_	_		
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_		UNKWN	_	_	_	_		



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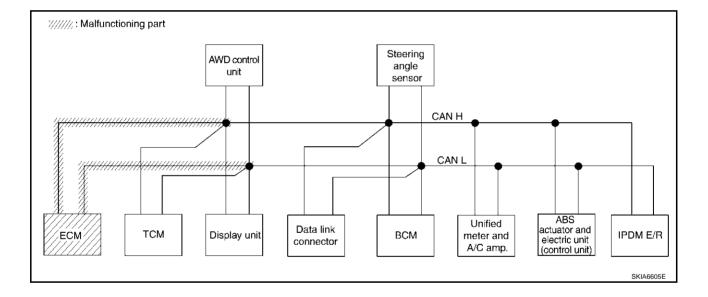
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Case 4
Check ECM circuit. Refer to <u>LAN-156</u>, "ECM Circuit Check".

				CAN DIAG SUPPORT MNTR										
SELECT SYSTEM screen		Initial diagnosis	Transmit diagnosis	Receive diagnosis										
				ЕСМ	ТСМ	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R		
ENGINE	_	NG	UNNWN	_	UNKWN	_	-	UNKWN	1	UNKWN	UNKWN	UNKWN		
A/T	_	NG	UNKWN	UN K WN	-	_	-	_	_	UNKWN	UNKWN	_		
Display unit	_	CAN COMM	CAN 1	C Ą√ 3	_	_	_	CAN 2	_	CAN 5	_	CAN 7		
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	_	_	-	_	_	UNKWN	UNKWN	_		
всм	No indication	NG	UNKWN	UNI WN	_	_	_	_	-	UNKWN	_	UNKWN		
METER A/C AMP	No indication	_	UNKWN	UNWWN	UNKWN	UNKWN	UNKWN	UNKWN	_	_	UNKWN	_		
ABS	_	NG	UNKWN	UNK WN	UNKWN	_	UNKWN	_	UNKWN	_	_	_		
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	UNKWN	_	_	_	_		



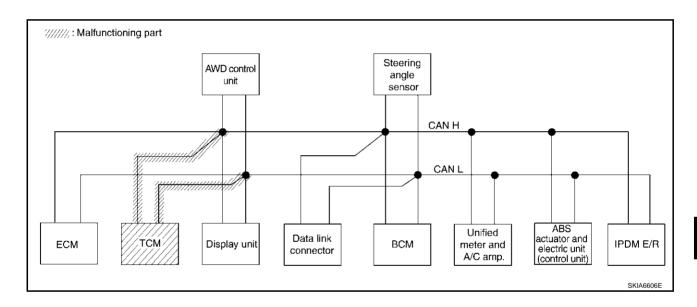
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Case 5
Check TCM circuit. Refer to <u>LAN-157</u>, "TCM Circuit Check".

						CAN DIAC	3 SUPPOI	RT MNTR				
SELECT SYST	EM screen	Initial	Transmit				Red	eive diagr	osis			
0222010101		diagnosis		ЕСМ	тсм	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/F
ENGINE	_	NG	UNKWN	_	UNKWN	_	_	UNKWN	_	UNKWN	UNKWN	UNKWN
A/T	_	NG	UN A WN	UNIA WN	_	_	_	_	_	Π ИΚ ΑΝ	ONK WN	_
Display unit	_	CAN COMM	CAN 1	CAN 3	_	1	_	CAN 2	_	CAN 5	-	CAN 7
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	_	-	_	_	_	UNKWN	UNKWN	_
всм	No indication	NG	UNKWN	UNKWN	_	1	_	_	_	UNKWN	_	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	NNP WN	UNKWN	UNKWN	UNKWN	_	-	UNKWN	_
ABS	_	NG	UNKWN	UNKWN	UNK WN		UNKWN	_	UNKWN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_		_	UNKWN	_	_	_	_

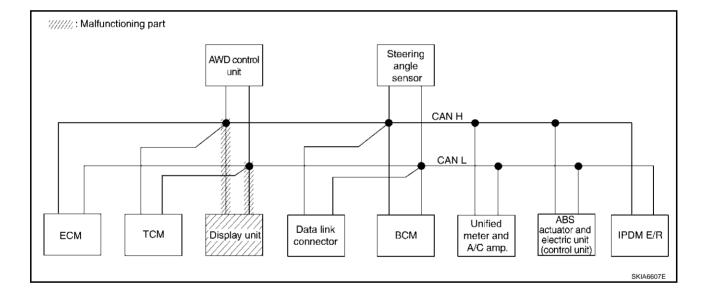


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Case 6
Check display unit circuit. Refer to <u>LAN-157</u>, "<u>Display Unit Circuit Check</u>".

						CAN DIAG	SUPPOI	RT MNTR				
SELECT SYST	EM screen	Initial	Transmit				Rec	eive diagn	osis			
3EEE31 3131	LIVI 3CICGII	diagnosis		ECM	ТСМ	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/I
ENGINE	_	NG	UNKWN	-	UNKWN	_	-	UNKWN	1	UNKWN	UNKWN	UNKWN
A/T	_	NG	UNKWN	UNKWN	_	_	_	_	_	UNKWN	UNKWN	_
Display unit	_	CAN COMM	CAN 1	с₩з	_	_	_	C4/12	_	CAN 5	_	CAN 7
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	_	_	-	_	-	UNKWN	UNKWN	_
всм	No indication	NG	UNKWN	UNKWN	_	_	_	_	-	UNKWN	_	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNK WN	UNKWN	UNKWN	_	_	UNKWN	_
ABS	_	NG	UNKWN	UNKWN	UNKWN	_	UNKWN	_	UNKWN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	UNKWN	_	_	_	_



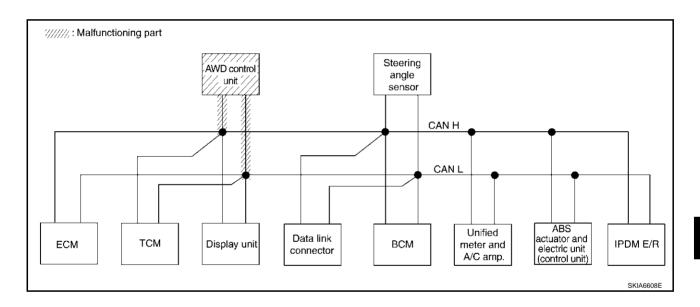
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Case 7
Check AWD control unit circuit. Refer to <u>LAN-158</u>, "AWD Control Unit Circuit Check".

						CAN DIAG	SUPPO	RT MNTR				
SELECT SYST	FM screen	Initial	Transmit				Rec	eive diagn	osis			
0222010101	LIVI SCICOII	diagnosis		ECM	тсм	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/
ENGINE	_	NG	UNKWN		UNKWN	_	ı	UNKWN	_	UNKWN	UNKWN	UNKWI
A/T	_	NG	UNKWN	UNKWN	ı		-	_	_	UNKWN	UNKWN	_
Display unit	_	CAN COMM	CAN 1	CAN 3	ı	1	-	CAN 2	-	CAN 5	-	CAN 7
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	I	-	-	_	_	UNKWN	UNKWN	_
всм	No indication	NG	UNKWN	UNKWN	ı	1	_	_	_	UNKWN	_	UNKWI
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	1	1		UNKWN	-	ı	1	_



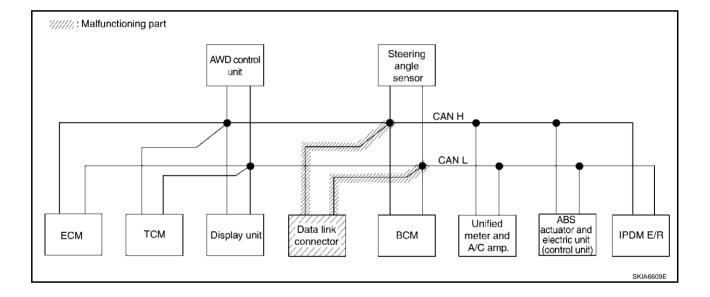
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Case 8
Check data link connector circuit. Refer to <u>LAN-158</u>, "<u>Data Link Connector Circuit Check</u>".

						CAN DIAG	à SUPPOF	RT MNTR				
SELECT SYST	FM screen	Initial	Transmit				Rec	eive diagn	osis			
	Elvi Screen		diagnosis	ECM	тсм	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E
ENGINE	_	NG	UNKWN	_	UNKWN	_	_	UNKWN	1	UNKWN	UNKWN	UNKWI
A/T	_	NG	UNKWN	UNKWN	_	_	-	_	1	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	_
всм	No indication	NG	UNKWN	UNKWN	_	_	_	_	-	UNKWN	-	UNKW
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	_	_		_



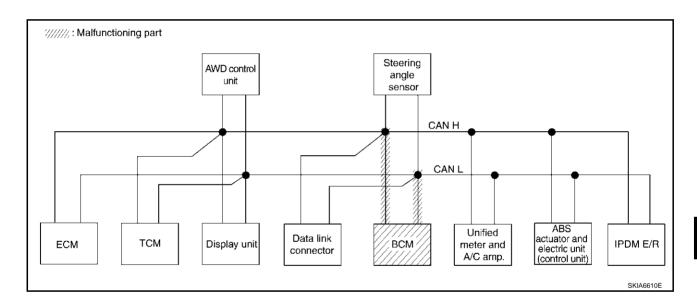
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Case 9
Check BCM circuit. Refer to <u>LAN-159</u>, "BCM Circuit Check".

						CAN DIAG	SUPPO	RT MNTR				
SELECT SYST	EM screen	Initial	Transmit				Rec	eive diagn	osis			
0222010101	EIW SCIEGH		diagnosis	ECM	ТСМ	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/F
ENGINE	_	NG	UNKWN	-	UNKWN	_	ı	UNIMON	ı	UNKWN	UNKWN	UNKWN
A/T	_	NG	UNKWN	UNKWN	_	_	-	_	-	UNKWN	UNKWN	_
Display unit	_	CAN COMM	CAN 1	CAN 3	-	_	-	C4 2	-	CAN 5	-	CAN 7
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	-	_	-	_	-	UNKWN	UNKWN	_
всм	No indication	NG	UNKWN	UNKWN	-	_	_	_	-	UNKWN	_	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNIVAN	-	_	UNKWN	_
ABS	_	NG	UNKWN	UNKWN	UNKWN	_	UNKWN	_	UNKWN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	UN K ∕WN	-	_	_	_



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Case 10
Check steering angle sensor circuit. Refer to <u>LAN-159</u>, "Steering Angle Sensor Circuit Check".

						CAN DIAG	3 SUPPOI	RT MNTR				
SELECT SYST	EM screen	Initial	Transmit				Rec	eive diagn	osis			
0222010101	LIVI SCIEGII	diagnosis		ECM	TCM	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/
ENGINE	_	NG	UNKWN	-	UNKWN	_	-	UNKWN	1	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	_
всм	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	_	_	_	_

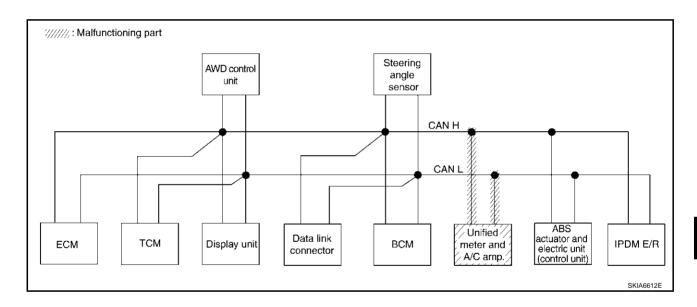
//////: Malfunctioning part Steering AWD control angle sensor CAN H CAN L ABS Unified Data link actuator and TCM ECM Display unit всм IPDM E/R meter and electric unit (control unit) connector A/C amp. SKIA6611E

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Case 11
Check unified meter and A/C amp. circuit. Refer to LAN-160, "Unified Meter and A/C Amp. Circuit Check".

						CAN DIAG	SUPPO	RT MNTR				
SELECT SYST	EM screen	Initial	Transmit				Rec	eive diagn	osis			
0222010101	2111 0010011	diagnosis		ЕСМ	ТСМ	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/F
ENGINE	_	NG	UNKWN	-	UNKWN	_	ı	UNKWN	ı	UNMWN	UNKWN	UNKWN
A/T	_	NG	UNKWN	UNKWN	-	_	-	_	_	Π ИΚ ₩И	UNKWN	_
Display unit	_	CAN COMM	CAN 1	CAN 3	-	_	-	CAN 2	-	CAN 5	-	CAN 7
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	-	_	-	_	-	UNKWN	UNKWN	_
всм	No indication	NG	UNKWN	UNKWN	-	_	_	_	-	UN ∳ WN	_	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	ı		UNKWN	_
ABS	_	NG	UNKWN	UNKWN	UNKWN	_	UNKWN	_	UNKWN	_	-	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_		UNKWN	ı	_	_	_

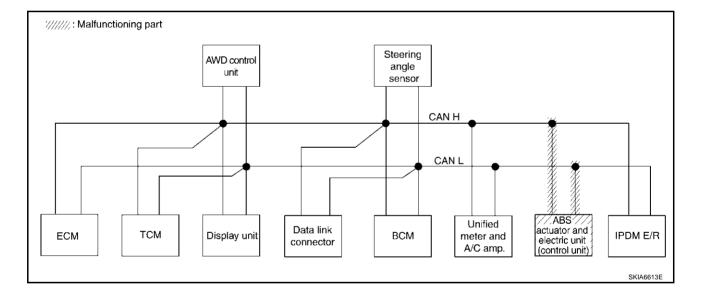


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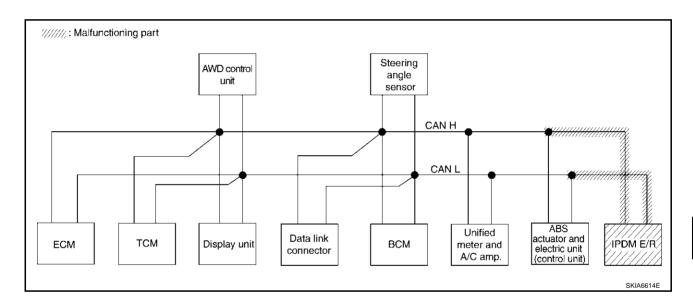
Case 12
Check ABS actuator and electric unit (control unit) circuit. Refer to <u>LAN-160</u>, "ABS Actuator and Electric Unit (Control Unit) Circuit Check".

						CAN DIAG	3 SUPPOR	RT MNTR				
SELECT SYST	EM screen	Initial	Transmit				Rec	eive diagn	osis			
0222010101	EIVI GETEGIT		diagnosis	ECM	тсм	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/
ENGINE		NG	UNKWN	-	UNKWN		_	UNKWN	-	UNKWN	UNIVAN	UNKWI
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	UNI	_
всм	No indication	NG	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	UNKW
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	-	UN K WN	_
ABS	_	NG	UNK WN	UNKWN	UNK W N	_	UNKWN	_	UNK WN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	UNKWN	_	_		_



Case 13
Check IPDM E/R circuit. Refer to LAN-161, "IPDM E/R Circuit Check".

						CAN DIAG	SUPPO	RT MNTR				
SELECT SYST	FM screen	Initial	Transmit				Rec	eive diagn	osis			
0222010101	Elvi Screen	diagnosis		ECM	ТСМ	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/
ENGINE	_	NG	UNKWN	ı	UNKWN	_	_	UNKWN	ı	UNKWN	UNKWN	UNK WI
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	-	_	_	_	1	UNKWN	UNKWN	_
всм	No indication	NG	UNKWN	UNKWN	-	_	_	_	_	UNKWN	_	UNK VI
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	1	_	_	_



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Case 14

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

						CAN DIAG	SUPPOI	RT MNTR				
SELECT SYST	FM screen	Initial	Transmit				Rec	eive diagn	osis			
0222010101	EIW SCIEGH	diagnosis		ECM	тсм	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/F
ENGINE	_	NG	UNKWN	_	UN K ₩N	_	_	UNK WN	_	UNKW N	UNIWN	UNKWN
A/T	_	NG	Π ΝΚ (MN	UNIKWN	-	_	_	_	_	Π Μ ΜΝ	UNIVEN	_
Display unit	_	CAN COMM	CAN 1	сұ√із	_	_	-	CAN 2	_	CAN 5	_	CAN 7
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	_	_	-	_	_	UNKWN	UNKWN	_
всм	No invication	NG	UNKWN	UNKWN	-	-	=	_	_	UNKWN	-	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	_	UNKWN	_
ABS	_	NG	UNKWN	UN ∳ WN	UNKWN	_	UNKVN	_	UNKWN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_		UNKWN	_	_	_	_

Case 15

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

						CAN DIAG	SUPPOI	RT MNTR				
SELECT SYST	EM screen	Initial	Transmit				Rec	eive diagn	osis			
0222010101		diagnosis		ECM	тсм	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	_	NG	UNKWN	_	Π ΛΚ ΜΝ	_	-	UNKWN	-	UNKWN	UN K ₩N	UNKWN
A/T	_	NG	UNKWN	UNKWN	_	_	_	_	-	UNKWN	UNKWN	_
Display unit	_	CAN COMM	CAN 1	CAN 3	_	_	-	CAN 2	1	CAN 5	-	CAN 7
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	_	_	_	_	-	UNKWN	UNIVAN	_
всм	No indication	NG	UNKWN	UNKWN	_	_	-	_	1	UNKWN	_	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UN ∳ WN	UNKWN	UNKWN	UNKWN	-	_	Π νΚ ,ΜΝ	_
ABS	_	NG	UNKWN	UNKWN	UNKWN	_	UNKWN	_	UNKWN	1	-	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	UNKWN	_	_	_	_

Case 16

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

						CAN DIAG	SUPPO	RT MNTR				
SELECT SYST	FM screen	Initial	Transmit				Rec	eive diagn	osis			
0222010101	EIW SCICCII		diagnosis	ECM	ТСМ	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/F
ENGINE	_	NG	UNKWN	_	UNKWN	–	_	UNKWN	_	UNKWN	UNKWN	UNKWN
A/T	_	NG	UNKWN	UNKWN	-	_	-	_	_	∩ M MN	UNKWN	_
Display unit	_	CAN COMM	CAN 1	CAN 3	-	_	-	CAN 2	-	CAN 5	-	CAN 7
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	_	_	_	_	-	UNKWN	UNKWN	_
всм	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		_	_	_

Circuit Check Between TCM and Data Link Connector

1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect the negative battery terminal.

3. Disconnect ECM connector and harness connector M82.

 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.

SMJ CONNECTOR 14H, 15H SKIA6861E

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

1. CHECK HARNESS FOR OPEN CIRCUIT

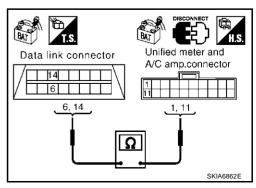
- 1. Turn ignition switch OFF.
- 2. Disconnect the negative battery terminal.
- 3. Disconnect ECM connector and unified meter and A/C amp. connector.
- Check continuity between data link connector M5 terminals 6 (L), 14 (R) and unified meter and A/C amp. harness connector M55 terminals 1 (L), 11 (R).

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.



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

1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the negative battery terminal.
- 3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
- Harness connector M41
- Harness connector E211

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect unified meter and A/C amp. connector and harness connector M41.
- 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.

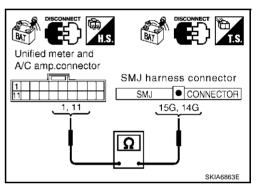
11 (R) - 14G (R)

: 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)

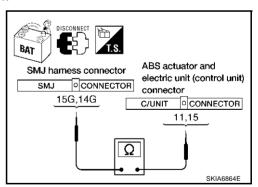
: Continuity should exist.

OK or NG

OK

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

NG >> Repair harness.



AKS007SP

ECM Circuit Check

1. CHECK CONNECTOR

- Turn ignition switch OFF.
- 2. Disconnect the negative battery terminal.
- 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.

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2. CHECK HARNESS FOR OPEN CIRCUIT

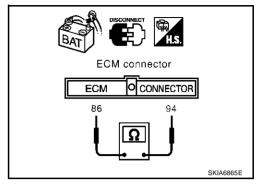
- 1. Disconnect ECM connector.
- Check resistance between ECM harness connector M90 terminals 94 (L) and 86 (R).

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

OK or NG

OK >> Replace ECM.

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



TCM Circuit Check

1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- Disconnect the negative battery terminal.
- 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

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

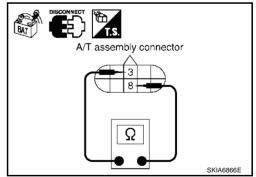
3 (L) - **8 (R)** : Approx. **54** - **66**
$$\Omega$$

OK or NG

NG

OK >> Replace A/T assembly.

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



Display Unit Circuit Check

1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- Disconnect the negative battery terminal. 2.
- 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.

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$\overline{2}$. CHECK HARNESS FOR OPEN CIRCUIT

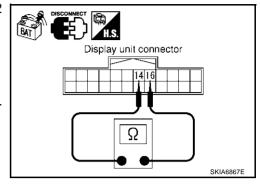
- 1. Disconnect display unit connector.
- 2. Check resistance between display unit harness connector M62 terminals 14 (L) and 16 (R).

14 (L) - 16 (R) : Approx. 54 -
$$66\Omega$$

OK or NG

OK >> Replace display unit.

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



AKS007UD

AWD Control Unit Circuit Check

1. CHECK CONNECTOR

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

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

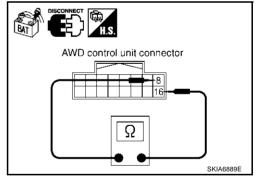
- 1. Disconnect AWD control unit connector.
- 2. Check resistance between AWD control unit harness connector M92 terminals 8 (L) and 16 (R).

8 (L) - 16 (R) : Approx. 54 -
$$66\Omega$$

OK or NG

OK >> Replace AWD control unit.

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



Data Link Connector Circuit Check

1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the negative battery terminal.
- 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.

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$\overline{2}$. CHECK HARNESS FOR OPEN CIRCUIT

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

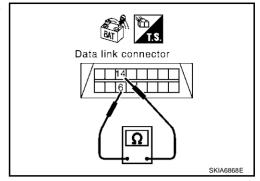
: Approx. 54 - 66 Ω

OK or NG

OK

>> Diagnose again. Refer to LAN-137, "Work Flow".

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



BCM Circuit Check

1. CHECK CONNECTOR

Turn ignition switch OFF. 1.

2. Disconnect the negative battery terminal.

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

Disconnect BCM connector.

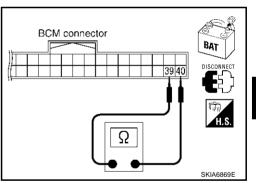
Check resistance between BCM harness connector M3 terminals 39 (L) and 40 (R).

: Approx. 54 - 66 Ω

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

1. CHECK CONNECTOR

Turn ignition switch OFF.

- Disconnect the negative battery terminal.
- 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.

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$\overline{2}$. 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).

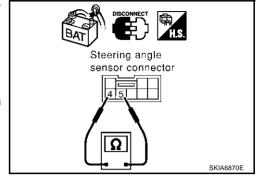
: Approx. 54 - 66 Ω

OK or NG

OK >> Replace steering angle sensor.

NG

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



AKS007SV

Unified Meter and A/C Amp. Circuit Check

1. CHECK CONNECTOR

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

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

- 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).

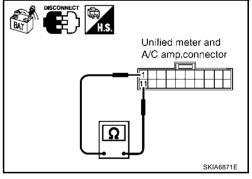
: Approx. 54 - 66 Ω

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.

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2. CHECK HARNESS FOR OPEN CIRCUIT

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

11 (L) - 15 (R)

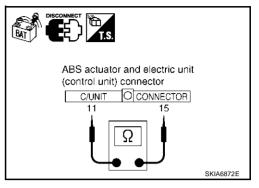
: Approx. 54 - 66 Ω

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.



AKS007SX

IPDM E/R Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.

- Disconnect the negative battery terminal.
- 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.
- Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (R).

: Approx. 108 - 132 Ω

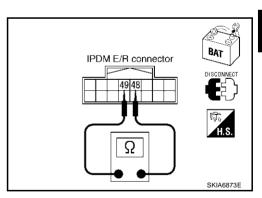
OK or NG

OK

>> Replace IPDM E/R.

NG

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



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CAN Communication Circuit Check

1. CHECK CONNECTOR

- Turn ignition switch OFF.
 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).

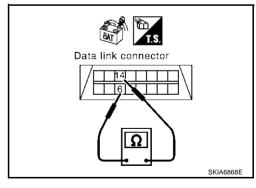
6 (L) - 14 (R) : Continuity should not exist.

OK or NG

OK >> GO TO 3.

NG >> Check th

- >> 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

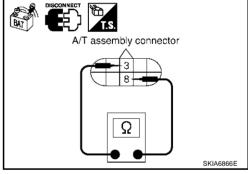
- Disconnect A/T assembly connector.
- Check continuity between A/T assembly harness connector F44 terminals 3 (L) and 8 (R).

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

OK or NG

>> GO TO 5. OK

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



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5. CHECK HARNESS FOR SHORT CIRCUIT

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

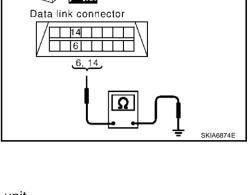
> 3 (L) - Ground : Continuity should not exist. 8 (R) - **Ground** : Continuity should not exist.

OK or NG

OK >> GO TO 6.

NG

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



A/T assembly connector 3 8 3, 8 SKIA6875E

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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).

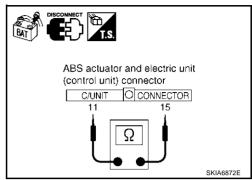
11 (L) - 15 (R) : Continuity should not exist.

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.



ABS actuator and electric unit

11,15

CONNECTOR

(control unit) connector

C/UNIT

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

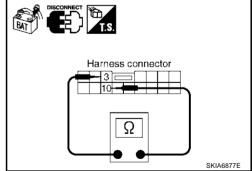
Check continuity between harness connector B5 terminals 3 (L) and 10 (R).

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

OK or NG

OK >> GO TO 9. NG >> Repair ha

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



9. CHECK HARNESS FOR SHORT CIRCUIT

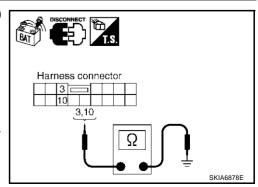
Check continuity between harness connector B5 terminals 3 (L), 10 (R) and ground.

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

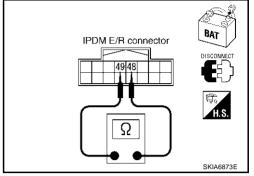
- Disconnect IPDM E/R connector. 1.
- Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (R).

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.

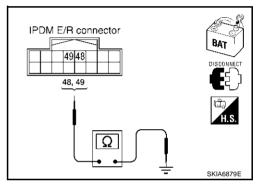
> 48 (L) - Ground : Continuity should not exist. 49 (R) - Ground : Continuity should not exist.

OK or NG

NG

OK >> GO TO 12.

> >> 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

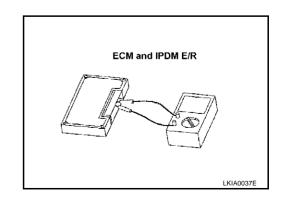
Check the following. If no malfunction is found, replace the IPDM E/R.

- 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 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	100 - 132



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LAN-165 Revision; 2004 April 2003 FX

CAN SYSTEM (TYPE 5)

PFP:23710

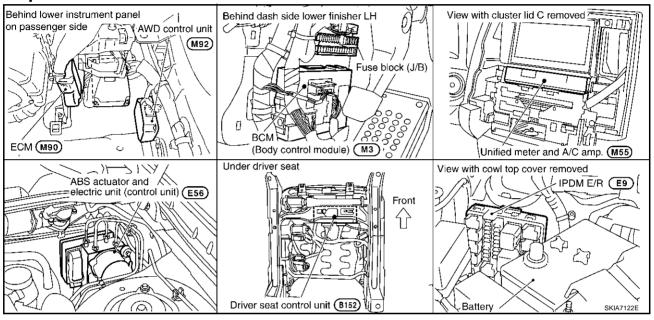
System Description

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



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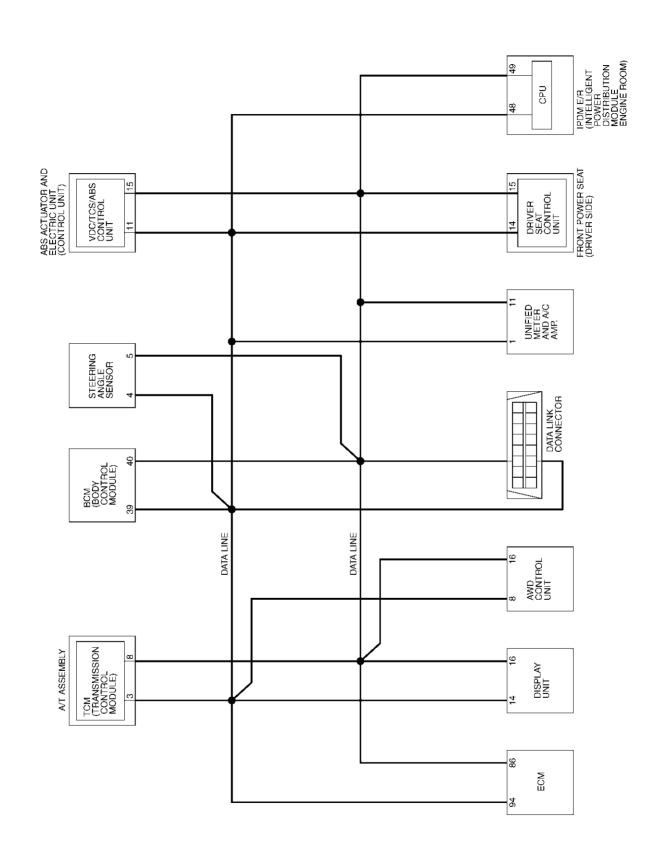
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Schematic AKS007T3



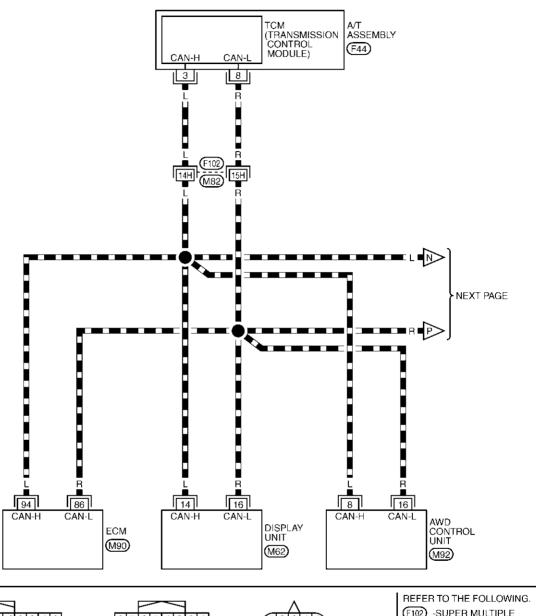
TKWM0754E

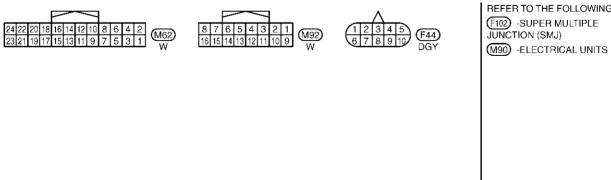
Wiring Diagram - CAN -

AKS007T4

LAN-CAN-11

: DATA LINE





TKWM0755E

В

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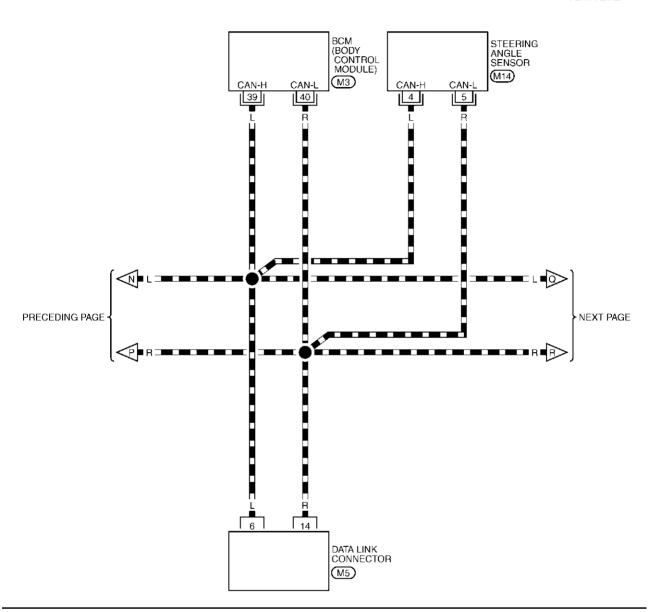
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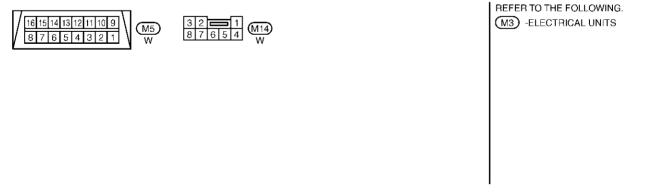
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LAN-CAN-12

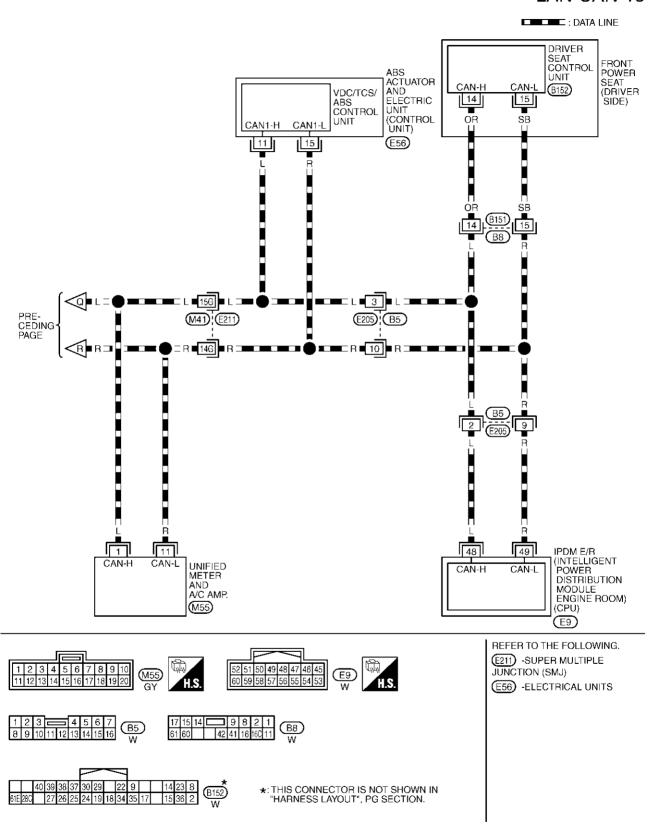
: DATA LINE





TKWM0756E

LAN-CAN-13

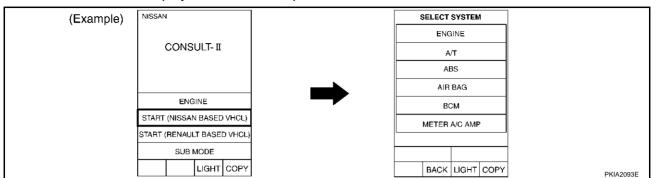


TKWH0251E

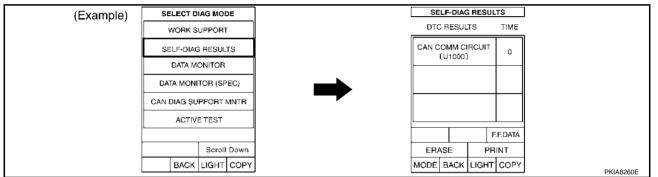
[CAN]

Work Flow

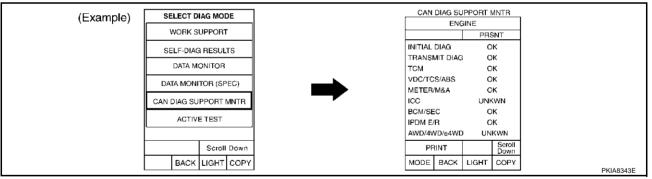
1. When there are no indications of "BCM", "METER A/C AMP", "AUTO DRIVE POS." or "IPDM E/R" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



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.



- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to <u>LAN-173</u>, "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.
- Check CAN communication line of the integrated display system. Refer to <u>AV-97, "CAN Communication Line Inspection"</u>.
- Attach the CAN DIAG MONITOR check sheet onto the check sheet. Refer to <u>LAN-173</u>, "CHECK SHEET"

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Revision; 2004 April **LAN-171** 2003 FX

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CAN SYSTEM (TYPE 5)

[CAN]

8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG MONITOR check sheet. Refer to <u>LAN-173</u>, "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 <u>LAN-175, "CHECK SHEET RESULTS (EXAMPLE)"</u>.

CAN SYSTEM (TYPE 5)

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CHECK SHEET

NOTE:

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

Check sheet table												
051 507 0115						CAN DIAG		RT MNTR eive diagn				
SELECT SYST		Initial diagnosis	Transmit diagnosis	ЕСМ	ТСМ	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/F
ENGINE	_	NG	UNKWN	-	UNKWN	_	-	UNKWN	_	UNKWN	UNKWN	UNKWN
\$ √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	_
ВСМ	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	_	_
PDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	UNKWN	_	_	_	_
			ach copy ECT SYS					copy of SYSTEI	м			
			(Attach co display 3 MONIT(sheet					

PKIA8003E

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

CHECK SHEET RESULTS (EXAMPLE)

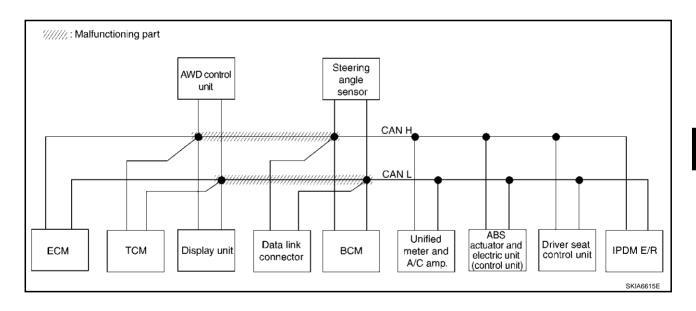
NOTE:

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 <u>LAN-191</u>, "Circuit Check Between TCM and <u>Data Link Connector"</u>.

			CAN DIAG SUPPORT MNTR												
SELECT SYST	FM screen	Initial	Transmit diagnosis		Receive diagnosis										
OLLLO1 G1G1	LIVI SCIEGII			ECM	тсм	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/			
ENGINE	_	NG	UNKWN	-	UNKWN	_	_	UNION	-	UNKWN	UNKWN	UNKWI			
A/T	_	NG	UNKWN	UNKWN	_	_	_	_	_	UN K WN	∩ NK WN	_			
Display unit	_	CAN COMM	CAN 1	CAN 3	_	_	-	CM 2	-	CAN 5	_	CAN 7			
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	_	_	_	_	_	UNNWN	UNK WN	_			
ВСМ	No indication	NG	UNKWN	UNK ∕ WN	-	_	-	-	-	UNKWN	_	UNKW			
METER A/C AMP	No indication	_	UNKWN	UMMAN	UNKWN	UNI W N	UNK WN	UNKWN	_	1	UNKWN	ı			
ABS	_	NG	UNKWN	UNK WA	UNRWN	_	UMMAN	_	UNKWN	-	_	-			
AUTO DRIVE POS.	No indication	NG	UNKWN	1	UNIX WN	_	_	UNKWN	-	UNKWN	_	_			
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	UNKWN	_	_	_	_			



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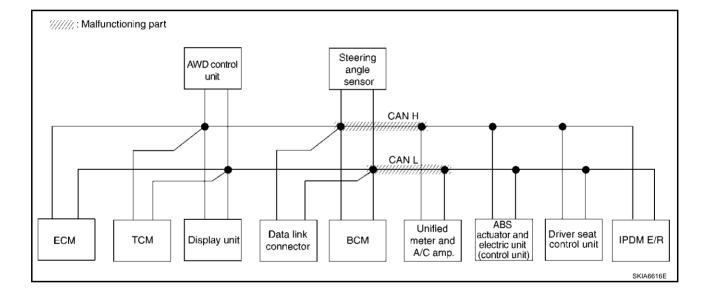
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Case 2
Check harness between data link connector and unified meter and A/C amp. Refer to LAN-191, "Circuit Check Between Data Link Connector and Unified Meter and A/C Amp."

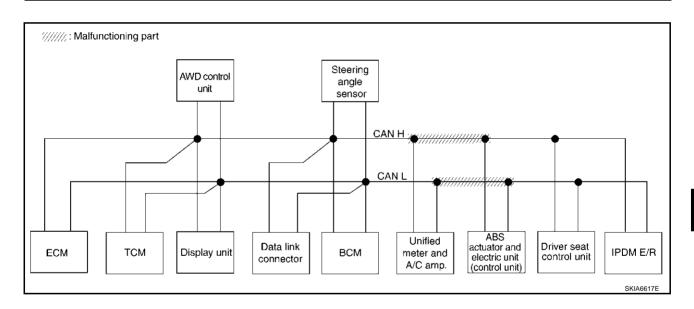
						CAN DIAG	SUPPOR	RT MNTR				
SELECT SYST	FM screen	Initial	Transmit				Rec	eive diagn	osis			
OZZZOT GTGT	LIVI BOICOII		diagnosis	ECM	тсм	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/
ENGINE	_	NG	UNKWN	1	UNKWN	-	_	UNKWN	-	UNKWN	UNKWN	UNKWI
A/T	_	NG	UNKWN	UNKWN	-	_	_	-	-	Π ΝΚ ΑΝ	ONK WN	_
Display unit	_	CAN COMM	CAN 1	CAN 3	-	_	-	CAN 2	-	CAN 5	-	CAN 7
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	-	_	_	_	_	UNIVAN	UNK WN	_
ВСМ	No indication	NG	UNKWN	UNKWN	_	-	-	-	_	UNION	_	UNK WI
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	-	-	UNKWN	_
ABS	_	NG	UNKWN	ΩNK W N	UNKWN	-	UNI WN	1	UN K ₩N	-	-	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	UNKWN	_	_	UNKWN	_	UNKWN		-
IPDM E/R	No indication	_	UNKWN	UNKWN	-	-	_	UNKWN	_	_	_	_



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)".

						CAN DIAG	SUPPO	RT MNTR						
SELECT SYST	FM screen	Initial	Transmit	Receive diagnosis										
022201 0101	LIVI BUICUII		diagnosis	ECM	тсм	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/I		
ENGINE	_	NG	UNKWN	1	UNKWN	_	_	UNKWN	1	UNKWN	UN K ₩N	UNKWN		
A/T	_	NG	UNKWN	UNKWN	_	_	_	_	1	UNKWN	ONK WN	_		
Display unit	_	CAN COMM	CAN 1	CAN 3	-	_	_	CAN 2	1	CAN 5	-	CAN 7		
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	ı	_	_	-	ı	UNKWN	UNK WN	-		
ВСМ	No indication	NG	UNKWN	UNKWN	ı	_	_	ı	I	UNKWN	1	UNKWN		
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	ı	ı	UN A WN	1		
ABS	_	NG	UNKWN	UNK WN	UNKWN	_	UNKWN	_	UNK W N	ı	-	-		
AUTO DRIVE POS.	No indication	NG	UNKWN	ļ	UNKWN	_	-	UNKWN	ı	UNKWN	_			
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	UNKWN	-	_	_	_		



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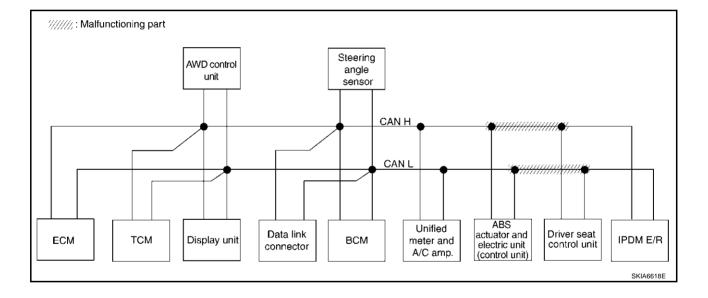
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Case 4

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

						CAN DIAG	SUPPOR	RT MNTR						
SELECT SYST	EM screen	Initial	Transmit	Receive diagnosis										
OLLLO1 G1G1	LIVI BOICOII		diagnosis	ECM	тсм	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/I		
ENGINE	_	NG	UNKWN	-	UNKWN	_	_	UNKWN	1	UNKWN	UNKWN	UNKWN		
A/T	_	NG	UNKWN	UNKWN	-	_	-	-	1	UNKWN	UNKWN	_		
Display unit	_	CAN COMM	CAN 1	CAN 3	-	_	-	CAN 2	1	CAN 5	1	CAN 7		
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	-	_	-	_	-	UNKWN	UNKWN	_		
ВСМ	No indication	NG	UNKWN	UNKWN	ı	_	_	ı	1	UNKWN	1	UNKWN		
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	1	1	UNKWN	ı		
ABS	_	NG	UNKWN	UNKWN	UNKWN	_	UNKWN	1	UNKWN	1	ı	-		
AUTO DRIVE POS.	No indication	NG	UNKWN	1	UNKWN	_	-	UNKWN	_	UNKWN	_	_		
IPDM E/R	No indication	_	UNKWN	UNKWN	-	_	_	UNKWN		_	_	_		



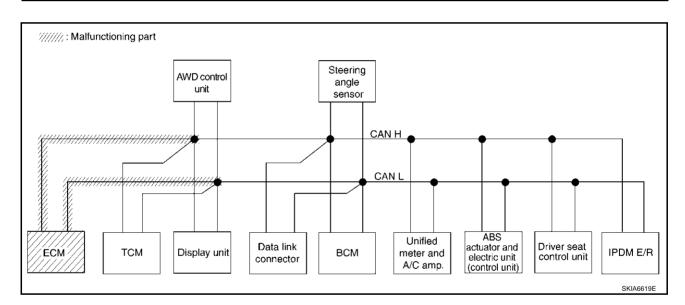
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Case 5
Check ECM circuit. Refer to <u>LAN-193</u>, "ECM Circuit Check".

						CAN DIAG	SUPPOR	RT MNTR							
SELECT SYST	EM screen	Initial	Transmit diagnosis	Receive diagnosis											
0222010101				ECM	тсм	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/			
ENGINE	_	NG	UNI W WN	_	NNKWN	-	_	UNK WN	1	UNK WN	UNIMAN	UNK WI			
A/T	_	NG	UNKWN	UNKWN	_	_	-	_	-	UNKWN	UNKWN	_			
Display unit	_	CAN COMM	CAN 1	C ∜ √3	_	_	-	CAN 2	1	CAN 5	_	CAN 7			
ALL MODE AWD/4WD	_	NG	UNKWN	UNK WN	ı	-	-	-	ı	UNKWN	UNKWN	-			
ВСМ	No indication	NG	UNKWN	UNKWN	ı	-	-	ı	I	UNKWN	1	UNKWI			
METER A/C AMP	No indication	_	UNKWN	Π ИΚ ,ΜИ	UNKWN	UNKWN	UNKWN	UNKWN	ı		UNKWN	ı			
ABS	_	NG	UNKWN	UNK W N	UNKWN	-	UNKWN	1	UNKWN	-	1				
AUTO DRIVE POS.	No indication	NG	UNKWN	_	UNKWN	_	_	UNKWN	1	UNKWN	_	_			
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	UNKWN	-		_	_			



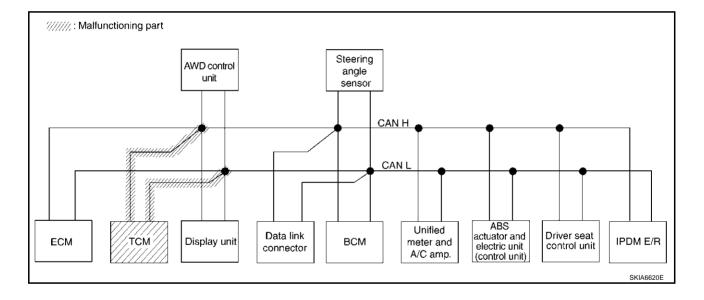
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Case 6
Check TCM circuit. Refer to <u>LAN-194, "TCM Circuit Check"</u>.

						CAN DIAG	SUPPOR	RT MNTR								
SELECT SYST	FM screen	Initial	Transmit diagnosis		Receive diagnosis											
3222313131	2117 5010011	1		ECM	тсм	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/I				
ENGINE	_	NG	UNKWN	_	UNK WN	_	_	UNKWN	-	UNKWN	UNKWN	UNKWN				
A/T	_	NG	UNHWN	UNRWN	_	_	_	_	_	UNKWN	UNIVAN	_				
Display unit	_	CAN COMM	CAN 1	CAN 3	-	_	-	CAN 2	_	CAN 5	_	CAN 7				
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	_		-	1	-	UNKWN	UNKWN	_				
ВСМ	No indication	NG	UNKWN	UNKWN	_	-	ı	ı	-	UNKWN	1	UNKWN				
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNIWN	UNKWN	UNKWN	UNKWN	_	ı	UNKWN	ı				
ABS	_	NG	UNKWN	UNKWN	UNKWN	-	UNKWN	1	UNKWN	ı	ı	-				
AUTO DRIVE POS.	No indication	NG	UNKWN	_	UNK W N	_	_	UNKWN	_	UNKWN	_	_				
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	UNKWN	_	_	_	_				



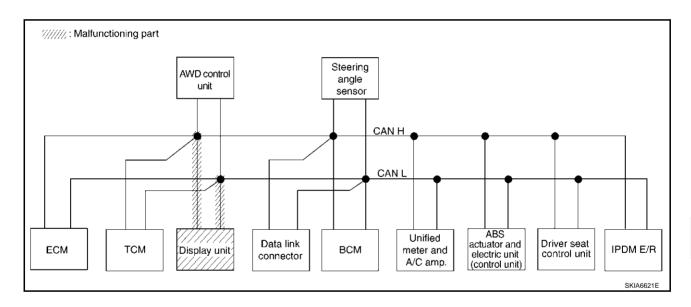
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Case 7
Check display unit circuit. Refer to LAN-194, "Display Unit Circuit Check".

						CAN DIAG	SUPPO	RT MNTR				
SELECT SYST	EM screen	Initial	Transmit				Rec	eive diagn	osis			
022201 0101	LIVI BUICUIT	diagnosis		ECM	тсм	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/
ENGINE	_	NG	UNKWN	1	UNKWN	_	1	UNKWN	-	UNKWN	UNKWN	UNKWI
A/T	_	NG	UNKWN	UNKWN	_	_	ı	-	_	UNKWN	UNKWN	_
Display unit	_	CAN COMM	C 4 /11	CAN 3	ı	_	ı	C M 2	-	C 4 5	ı	CAN 7
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	_	_	-	-	_	UNKWN	UNKWN	_
ВСМ	No indication	NG	UNKWN	UNKWN	ı	_	1	ı	ı	UNKWN	1	UNKWI
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UN K∕ VN	UNKWN	UNKWN	_	I	UNKWN	ı
ABS	_	NG	UNKWN	UNKWN	UNKWN	_	UNKWN	1	UNKWN	ı	ı	ı
AUTO DRIVE POS.	No indication	NG	UNKWN	-	UNKWN	_	_	UNKWN	_	UNKWN	_	-
IPDM E/R		UNKWN	UNKWN	_	_	_	UNKWN	_	_	_	_	



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Case 8
Check AWD control unit circuit. Refer to <u>LAN-195</u>, "AWD Control Unit Circuit Check".

						CAN DIAG	SUPPOR	RT MNTR				
SELECT SYST	FM screen	Initial	Transmit				Rec	eive diagn	osis			
322231 3131	EIV BOICOIT	diagnosis		ECM	тсм	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/
ENGINE	_	NG	UNKWN	-	UNKWN	_	_	UNKWN	-	UNKWN	UNKWN	UNKWI
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	UNIWN	_	_	-	_	-	UNK WN	UNK/VN	_
всм	No indication	NG	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	UNKW
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNK WN	UNKWN	-	-	UNKWN	1
ABS	_	NG	UNKWN	UNKWN	UNKWN	_	UNK WN	-	UNKWN	ı	ı	
AUTO DRIVE POS.	No indication	NG	UNKWN	ı	UNKWN	_	_	UNKWN	_	UNKWN	_	
IPDM E/R	No indication	dication — U	UNKWN	UNKWN	_	_	_	UNKWN	_	_		_

//////: Malfunctioning part Steering AWD control angle unit sensor CAN H CAN L ABS actuator and electric unit (control unit) Unified Driver seat control unit Data link TCM IPDM E/R **ECM** Display unit BCM meter and connector A/C amp. SKIA6622E

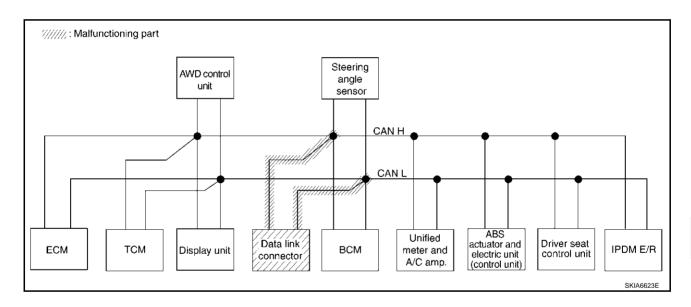
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Case 9
Check data link connector circuit. Refer to <u>LAN-195</u>, "<u>Data Link Connector Circuit Check</u>".

						CAN DIAG	SUPPOR	RT MNTR				
SELECT SYST	EM screen	Initial	Transmit				Rec	eive diagn	osis			
3222313131	2.07 3373371	diagnosis		ECM	тсм	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/
ENGINE	_	NG	UNKWN	1	UNKWN	_	_	UNKWN	1	UNKWN	UNKWN	UNKWI
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	4	UNKWN	ı	_	_	-	-	UNKWN	UNKWN	_
ВСМ	No indication	NG		UNKWN	ı	_	-	ı	_	UNKWN	1	UNKWI
METER A/C AMP	No invication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	ı	UNKWN	_
ABS	_	NG	UNKWN	UNKWN	UNKWN	_	UNKWN	1	UNKWN	-	1	_
AUTO DRIVE POS.	No indication	NG	UNKWN	ı	UNKWN	_	_	UNKWN	_	UNKWN	_	
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	UNKWN	_	_	_	_

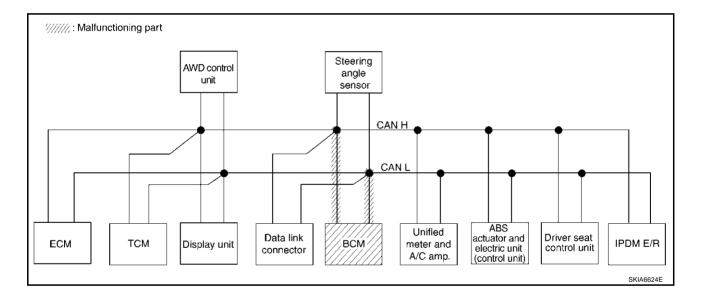


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Case 10
Check BCM circuit. Refer to <u>LAN-196</u>, "BCM Circuit Check".

						CAN DIAG	SUPPOR	RT MNTR				
SELECT SYST	FM screen	Initial	Transmit				Rec	eive diagn	osis			
0222010101		diagnosis		ECM	тсм	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/F
ENGINE	_	NG	UNKWN	1	UNKWN	ı	-	UNK WN	1	UNKWN	UNKWN	UNKWN
A/T	_	NG	UNKWN	UNKWN	_	_	-	_	_	UNKWN	UNKWN	_
Display unit	_	CAN COMM	CAN 1	CAN 3	_	_	_	C# 2	-	CAN 5	-	CAN 7
ALL MODE AWD/4WD	_	NG		UNKWN	_	_	-	_	-	UNKWN	UNKWN	_
ВСМ	No indication	NG	UNKWN	UNKWN	_	-	ı	_	-	UNKWN	1	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNK/WN	-		UNKWN	ı
ABS	_	NG	UNKWN	UNKWN	UNKWN	_	UNKWN	_	UNKWN	_	_	_
AUTO DRIVE POS.	No indication	NG	UNKWN	-	UNKWN	_	_	UN W WN	_	UNKWN	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	UNIXWN	_	_	_	_



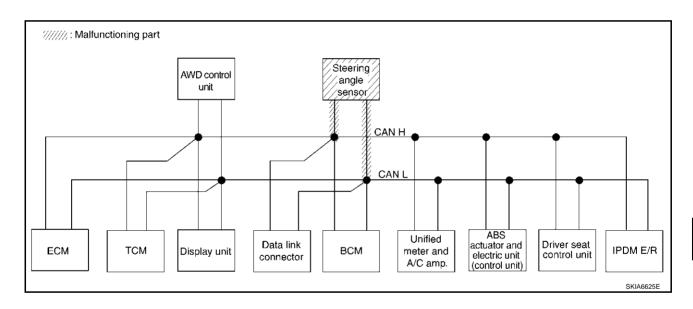
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Case 11
Check steering angle sensor circuit. Refer to <u>LAN-196</u>, "Steering Angle Sensor Circuit Check".

						CAN DIAG	SUPPOR	RT MNTR				
SELECT SYST	FM screen	Initial	Transmit				Rec	eive diagn	osis			
022201 0101	20, 50, 50, 1	diagnosis		ECM	тсм	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/I
ENGINE		NG	UNKWN	1	UNKWN	1	_	UNKWN	1	UNKWN	UNKWN	UNKWN
A/T	ı	NG	UNKWN	UNKWN	ı	_	-	-	Ī	UNKWN	UNKWN	-
Display unit	I	CAN COMM	CAN 1	CAN 3	I	-	_	CAN 2	I	CAN 5	ı	CAN 7
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	ı	_	_	-	ı	UNKWN	UNKWN	_
ВСМ	No indication	NG	UNKWN	UNKWN	ı	-	-	ı	I	UNKWN	1	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	ı		UNKWN	ı
ABS	ı	NG	UNKWN	UNKWN	UNKWN	_	UNKWN	1	UNKWN	1	ı	ı
AUTO DRIVE POS.	No indication	NG	UNKWN	ı	UNKWN	_	_	UNKWN	1	UNKWN	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	UNKWN	_	_	_	_

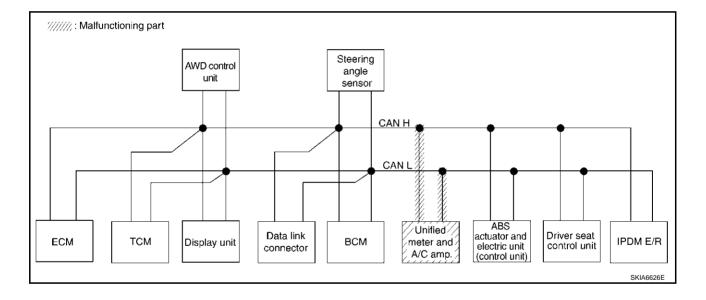


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Case 12
Check unified meter and A/C amp. circuit. Refer to LAN-197, "Unified Meter and A/C Amp. Circuit Check".

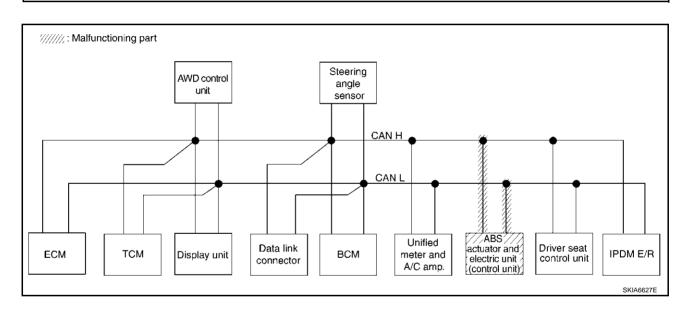
						CAN DIAG	SUPPOR	RT MNTR				
SELECT SYST	EM screen	Initial	Transmit				Rec	eive diagn	osis			
3222313131	2117 2010011	diagnosis		ECM	тсм	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/F
ENGINE	_	NG	UNKWN	1	UNKWN	_	_	UNKWN	1	UNK WN	UNKWN	UNKWN
A/T	_	NG	UNKWN	UNKWN	-	_	-	-	-	UNIVAN	UNKWN	_
Display unit	_	CAN COMM	CAN 1	CAN 3	-	_	-	CAN 2	1	CAN 5	-	CAN 7
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	-	_	_	-	_	UNKWN	UNKWN	_
ВСМ	No indication	NG	UNKWN	UNKWN	ı	_	-	ı	_	UNIWN	1	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	-	1	UNKWN	ı
ABS	_	NG	UNKWN	UNKWN	UNKWN	_	UNKWN	1	UNKWN	1	_	_
AUTO DRIVE POS.	No indication	NG	UNKWN	-	UNKWN	_	_	UNKWN	-	Ω ΝΚ ⁄⁄ΩΝ	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	UNKWN	_	_	_	_



Case 13

Check ABS actuator and electric unit (control unit) circuit. Refer to <u>LAN-197</u>, "ABS Actuator and Electric Unit (Control Unit) Circuit Check".

						CAN DIAG	SUPPOR	RT MNTR				
SELECT SYST	EM screen	Initial	Transmit				Rec	eive diagn	osis			
022201 0101	LIVI SCICCII	diagnosis		ECM	тсм	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/
ENGINE	_	NG	UNKWN	1	UNKWN	_	_	UNKWN	ı	UNKWN	NNKWN	UNKWI
A/T	_	NG	UNKWN	UNKWN	_	_	-	_	1	UNKWN	UNIVAN	_
Display unit	_	CAN COMM	CAN 1	CAN 3	-	_	-	CAN 2	1	CAN 5	-	CAN 7
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	_	_	-	_	_	UNKWN	UN K WN	_
ВСМ	No indication	NG	UNKWN	UNKWN	-	_	-	_	1	UNKWN	1	UNKWI
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	ı	1	UNION	_
ABS	_	NG	UNK WN	UNK WN	UNKWN	_	UNK WN	-	UNKWN	1	ı	_
AUTO DRIVE POS.	No indication	NG	UNKWN	ı	UNKWN	_	_	UNKWN	1	UNKWN	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	UNKWN		_	_	_



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Case 14
Check driver seat control unit circuit. Refer to <u>LAN-198</u>, "<u>Driver Seat Control Unit Circuit Check</u>".

						CAN DIAG	SUPPOR	RT MNTR				
SELECT SYST	FM screen	Initial	Transmit				Rec	eive diagn	osis			
022201 0101	LIVI BOICOII	I	diagnosis	ECM	тсм	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/I
ENGINE	_	NG	UNKWN	1	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	-
ВСМ	No indication	NG	UNKWN	UNKWN	ı	1	ı	-	-	UNKWN	1	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	ı	UNKWN	ı
ABS	_	NG	UNKWN	UNKWN	UNKWN	_	UNKWN	_	UNKWN	1	_	_
AUTO DRIVE POS.	No inclication	NG	UNKWN	ı	UNKWN	_	_	UNKWN	_	UNKWN	_	-
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	UNKWN	_	_	_	_

//////: Malfunctioning part Steering AWD control angle unit sensor CAN H CAN L ABS actuator and electric unit (control unit) Unified Driver seat control unit Data link TCM IPDM E/R **ECM** Display unit BCM meter and connector A/C amp. SKIA6628E

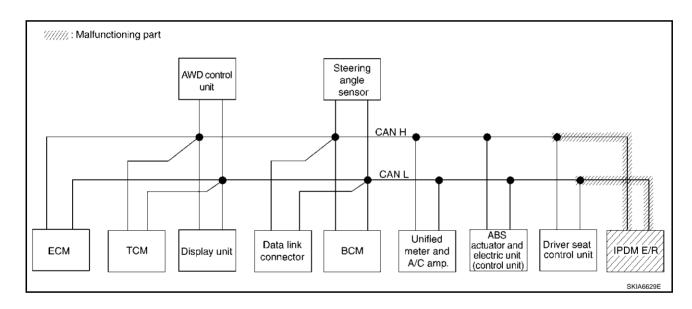
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Case 15
Check IPDM E/R circuit. Refer to LAN-199, "IPDM E/R Circuit Check".

						CAN DIAG	SUPPOR	RT MNTR				
SELECT SYST	EM screen	Initial	Transmit				Rec	eive diagn	osis			
3222313131	200	diagnosis		ECM	тсм	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/
ENGINE	_	NG	UNKWN	1	UNKWN	_	_	UNKWN	1	UNKWN	UNKWN	UNKWI
A/T	_	NG	UNKWN	UNKWN	_	_	-	_	-	UNKWN	UNKWN	_
Display unit	_	CAN COMM	CAN 1	CAN 3	ı	_	_	CAN 2	I	CAN 5	ı	C 4 /17
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	-	_	_	_	ı	UNKWN	UNKWN	_
ВСМ	No indication	NG	UNKWN	UNKWN	ı	_	-	ı	I	UNKWN	1	UNKW
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	ı		UNKWN	ı
ABS	_	NG	UNKWN	UNKWN	UNKWN	_	UNKWN	1	UNKWN	1	I	ı
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 CAN communication circuit. Refer to LAN-199, "CAN Communication Circuit Check" .

						CAN DIAG	SUPPOR	RT MNTR				
SELECT SYST	FM screen	Initial	Transmit				Rec	eive diagn	osis			
0222010101	LIVI BOICOII		diagnosis	ECM	тсм	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/I
ENGINE	_	NG	NNK MN	_	UNIMAN	-	_	UNIWN	_	NNKWN	UNKWN	UNKWN
A/T	_	NG	UNKWN	UNKWN	-	_	_	-	_	UNK WN	UNIWN	_
Display unit	_	CAN COMM	CAN 1	CAN 3	-	-	_	CM2	_	CAN 5	_	CAN 7
ALL MODE AWD/4WD	_	NG	UNK WN	UNKWN	_	-	_	_	_	UNION	UNKWN	_
ВСМ	No indication	NG	UNKWN	UNKWN	_	-	_	_	_	UNKWN	_	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	-	ı	UNKWN	ı
ABS	_	NG	UNK WN	UNKWN	UNKWN	_	UNKWN	1	NNAMN	ı	ı	-
AUTO DRIVE POS.	No indication	NG	UNKWN	ı	UNKWN	_	_	UNKWN	_	UNKWN	_	-
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	UNKWN	_	_	_	_

Case 17

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

						CAN DIAC	SUPPO	RT MNTR				
SELECT SYST	EM screen	Initial	Transmit				Rec	eive diagn	osis			
0222010101	2111 3010011	diagnosis		ECM	тсм	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	_	NG	UNKWN	-	UNWWN	-	-	UNKWN	_	UNKWN	UNKWN	UNKWN
A/T	_	NG	UNKWN	UNKWN	_	ı	ı	_	-	UNKWN	UNKWN	_
Display unit	_	CAN COMM	CAN 1	CAN 3	_	ı	1	CAN 2	_	CAN 5	-	CAN 7
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	_	_	_	_	_	UNKWN	UNIMN	_
всм	No indication	NG	UNKWN	UNKWN	_	ı	ı	_	_	UNKWN	1	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	-	ı	UNIV	_
ABS	_	NG	UNKWN	UNKWN	UNKWN	ı	UNKWN	_	UNKWN	-	ı	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	NAMA	-	_	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".

						CAN DIAG	SUPPOR	RT MNTR				
SELECT SYST	EM screen	Initial	Transmit				Rec	eive diagn	osis			
0222010101	LIVI BOTOGIT	diagnosis		ECM	тсм	DISPLAY	AWD /4WD	BCM /SEC	STRG	METER /M&A	VDC/TCS /ABS	IPDM E/I
ENGINE	_	NG	UNKWN	_	UNKWN	_	_	UNKWN	-	UNKWN	UNKWN	UNKWN
A/T	_	NG	UNKWN	Ω ΝΚ ⁄ΜΝ	_	-	_	_	_	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	_
ВСМ	No indication	NG	UNKWN	UNKWN	-	1	-	-	1	UNKWN	1	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	ı	1	UNKWN	-
ABS	_	NG	UNKWN	n uk wu	UNKWN	_	UN K ₩N	_	Π ΜΑ ΜΝ	-	-	_
AUTO DRIVE POS.	No indication	NG	UNKWN	ı	UNKWN	_	_	UNKWN	1	UNKWN	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	UNKWN	_	-	_	_

Circuit Check Between TCM and Data Link Connector

1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect the negative battery terminal.

3. Disconnect ECM connector and harness connector M82.

4. Check continuity between harness connector M82 terminals 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 <u>LAN-171</u>, "Work Flow".

NG >> Repair harness.

SMJ CONNECTOR 14H, 15H SKIA6861E

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

1. CHECK HARNESS FOR OPEN CIRCUIT

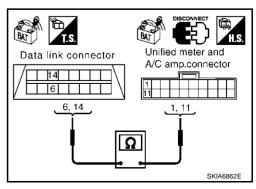
- 1. Turn ignition switch OFF.
- 2. Disconnect the negative battery terminal.
- 3. Disconnect ECM connector and unified meter and A/C amp. connector.
- Check continuity between data link connector M5 terminals 6 (L), 14 (R) and unified meter and A/C amp. harness connector M55 terminals 1 (L), 11 (R).

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.



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Circuit Check Between Unified Meter and A/C Amp. and ABS Actuator and Electric Unit (Control Unit) AKS007T8

1. CHECK CONNECTOR

- Turn ignition switch OFF. 1.
- 2. Disconnect the negative battery terminal.
- 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

- 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)

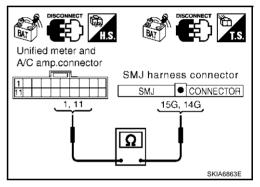
: Continuity should exist.

11 (R) - 14G (R)

: Continuity should exist.

OK or NG

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



$oldsymbol{3}.$ Check harness for open circuit

- Disconnect ABS actuator and electric unit (control unit) connector. 1.
- 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.

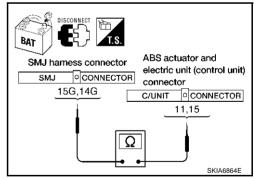
14G (R) - 15 (R)

: 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

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1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the negative battery terminal.
- 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

- Disconnect ABS actuator and electric unit (control unit) connector and harness connector E205.
- 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).

: Continuity should exist.

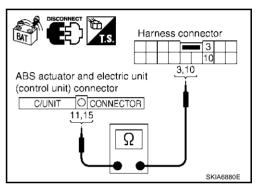
15 (R) - 10 (R)

: Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair harness.



$oldsymbol{3}$. 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)

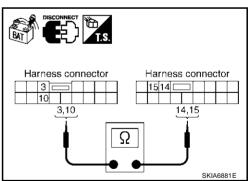
: Continuity should exist.

OK or NG

NG

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

>> Repair harness.



ECM Circuit Check

1. CHECK CONNECTOR

Turn ignition switch OFF.

- 2. Disconnect the negative battery terminal.
- 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.

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$\overline{2}$. CHECK HARNESS FOR OPEN CIRCUIT

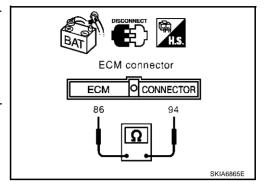
- 1. Disconnect ECM connector.
- 2. Check resistance between ECM harness connector M90 terminals 94 (L) and 86 (R).

94 (L) - 86 (R) : Approx. 108 - 132Ω

OK or NG

OK >> Replace ECM.

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



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TCM Circuit Check

1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the negative battery terminal.
- 3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
- 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.
- Check resistance between A/T assembly harness connector F44 terminals 3 (L) and 8 (R).

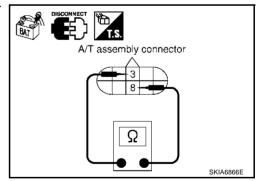
3 (L) - 8 (R) : Approx. 54 -
$$66\Omega$$

OK or NG

NG

OK >> Replace A/T assembly.

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



Display Unit Circuit Check

1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the negative battery terminal.
- 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.

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$\overline{2}$. CHECK HARNESS FOR OPEN CIRCUIT

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

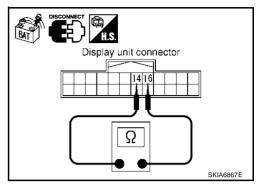
14 (L) - 16 (R) : Approx. 54 -
$$66\Omega$$

OK or NG

OK >> Replace display unit.

NG

>> Repair harness between display unit and harness connector M82.



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AWD Control Unit Circuit Check

1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- Disconnect the negative battery terminal.
- 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

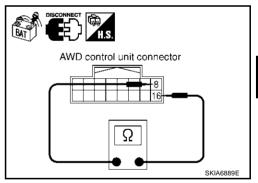
- 1. Disconnect AWD control unit connector.
- Check resistance between AWD control unit harness connector M92 terminals 8 (L) and 16 (R).

8 (L) - 16 (R) : Approx. 54 -
$$66\Omega$$

OK or NG

OK >> Replace AWD control unit.

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



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Data Link Connector Circuit Check

1. CHECK CONNECTOR

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

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OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

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$\overline{2}$. CHECK HARNESS FOR OPEN CIRCUIT

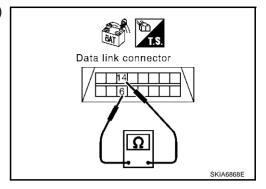
Check resistance between data link connector M5 terminals 6 (L) and 14 (R).

6 (L) - 14 (R) : Approx. 54 - 66
$$\Omega$$

OK or NG

OK >> Diagnose again. Refer to LAN-171, "Work Flow".

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



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BCM Circuit Check

1. CHECK CONNECTOR

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

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

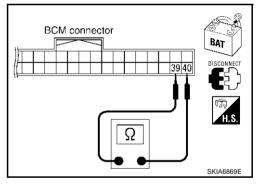
- Disconnect BCM connector.
- Check resistance between BCM harness connector M3 terminals 39 (L) and 40 (R).

39 (L) - **40** (R) : Approx. **54** - **66**
$$\Omega$$

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

1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the negative battery terminal.
- 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.

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2. CHECK HARNESS FOR OPEN CIRCUIT

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

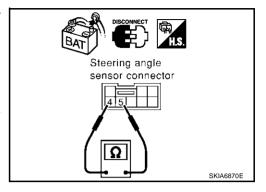
: Approx. 54 - 66 Ω

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

1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- Disconnect the negative battery terminal.
- 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

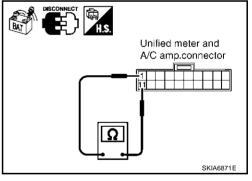
- 1. Disconnect unified meter and A/C amp. connector.
- Check resistance between unified meter and A/C amp. harness connector M55 terminals 1 (L) and 11 (R).

: Approx. 54 - 66 Ω

OK or NG

OK NG >> Replace unified meter and A/C amp.

>> Repair harness between unified meter and A/C amp. and harness connector M41.



ABS Actuator and Electric Unit (Control Unit) Circuit Check

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1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- Disconnect the negative battery terminal.
- 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.

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$\overline{2}$. CHECK HARNESS FOR OPEN CIRCUIT

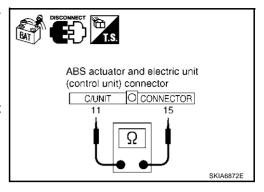
- 1. Disconnect ABS actuator and electric unit (control unit) connector.
- 2. Check resistance between ABS actuator and electric unit (control unit) harness connector E56 terminals 11 (L) and 15 (R).

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.



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Driver Seat Control Unit Circuit Check

1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the negative battery terminal.
- 3. Check following terminals and connectors for damage, bend and loose connection (control unit side and harness side).
- Driver seat control unit connector
- Harness connector B151
- Harness connector B8

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

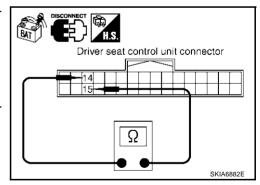
- 1. Disconnect driver seat control unit connector.
- Check resistance between driver seat control unit harness connector B152 terminals 14 (OR) and 15 (SB).

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.



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IPDM E/R Circuit Check

1. CHECK CONNECTOR

- 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

- Disconnect IPDM E/R connector.
- Check resistance between IPDM E/R harness connector E9 ter-2 minals 48 (L) and 49 (R).

: Approx. 108 - 132 Ω

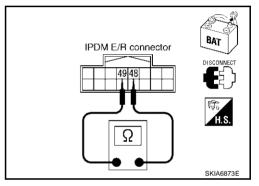
OK or NG

OK

>> Replace IPDM E/R.

NG

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



CAN Communication Circuit Check

1. CHECK CONNECTOR

- Turn ignition switch OFF. 1.
- Disconnect the negative battery terminal.
- 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. LAN

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$\overline{2}$. 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).

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.

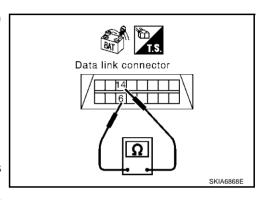
6 (L) - Ground : Continuity should not exist. 14 (R) - Ground : Continuity should not exist.

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.



Data link connector

|14| | | |6| | |

6, 14

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).

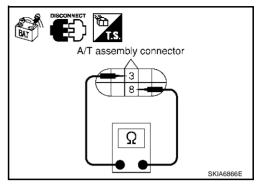
3 (L) - 8 (R)

: 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.

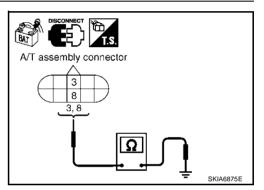
3 (L) - Ground : Continuity should not exist. 8 (R) - Ground : Continuity should not exist.

OK or NG

NG

OK >> GO TO 6.

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



6. CHECK HARNESS FOR SHORT CIRCUIT

- 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).

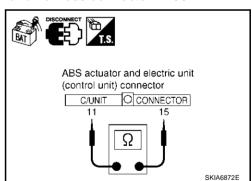
11 (L) - 15 (R) : Continuity should not exist.

OK or NG

OK >> GO TO 7.

NG >> Check the

- >> 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.



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

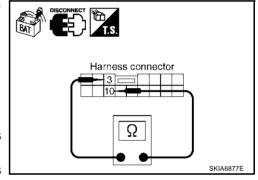
3 (L) - 10 (R) : Continuity should not exist.

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.



ABS actuator and electric unit

11,15

CONNECTOR

(control unit) connector

C/UNIT

9. CHECK HARNESS FOR SHORT CIRCUIT

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

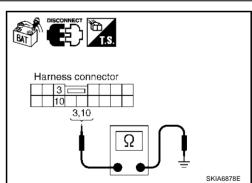
3 (L) - Ground : Continuity should not exist. 10 (R) - Ground : Continuity should not exist.

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

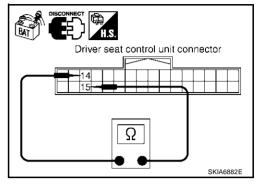
- 1. Disconnect driver seat control unit connector.
- 2. Check continuity between driver seat control unit harness connector B152 terminals 14 (OR) and 15 (SB).

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.

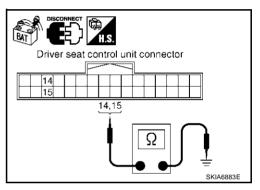
14 (OR) - Ground : Continuity should not exist.15 (SB) - Ground : Continuity should not exist.

OK or NG

NG

OK >> GO TO 12.

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



12. CHECK HARNESS FOR SHORT CIRCUIT

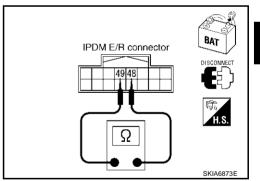
- 1. Disconnect IPDM E/R connector.
- Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (R).

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.

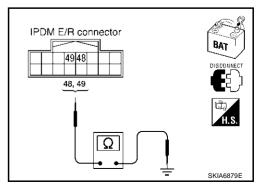
48 (L) - Ground : Continuity should not exist. 49 (R) - Ground : Continuity should not exist.

OK or NG

NG

OK >> GO TO 14.

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



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14. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to <u>LAN-204, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"</u> . OK or NG

OK >> Connect all the connectors and diagnose again. Refer to <u>LAN-171</u>, "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.

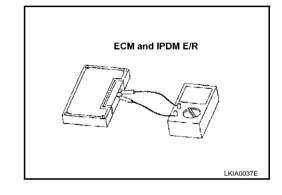
- IPDM E/R power supply circuit. Refer to <u>PG-43</u>, "IPDM E/R Power/Ground Circuit Inspection".
- Ignition power supply circuit. Refer to <u>PG-12, "IGNITION POWER SUPPLY IGNITION SW. IN "ON" AND/OR "START"</u>.

Component Inspection ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

AKS007TM

- 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	100 - 132



[CAN]

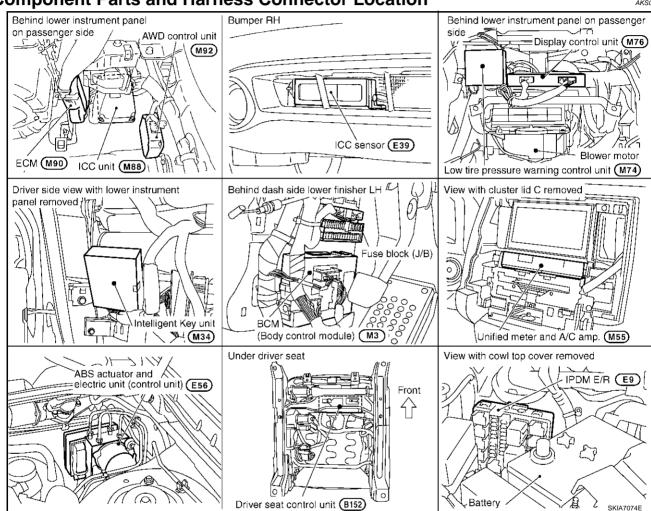
CAN SYSTEM (TYPE 6)

PFP:23710

System Description

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



LAN

Schematic AKS007TP IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) 49 CPU 48 FRONT POWER SEAT (DRIVER SIDE) DRIVER SEAT CONTROL UNIT ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) VDC/TCS/ABS CONTROL UNIT 15 ICC SENSOR UNIFIED METER AND A/C AMP. STEERING ANGLE SENSOR DATA LINK CONNECTOR BCM (BODY CONTROL MODULE) INTELLIGENT KEY UNIT TCM (TRANSMISSION CONTROL MODULE) A/T ASSEMBLY DATA LINE DATA LINE AWD CONTROL UNIT LOW TIRE PRESSURE WARNING CONTROL UNIT ICC UNIT DISPLAY CONTROL UNIT 32 98 ECM 8

TKWM0758E

Wiring Diagram - CAN -

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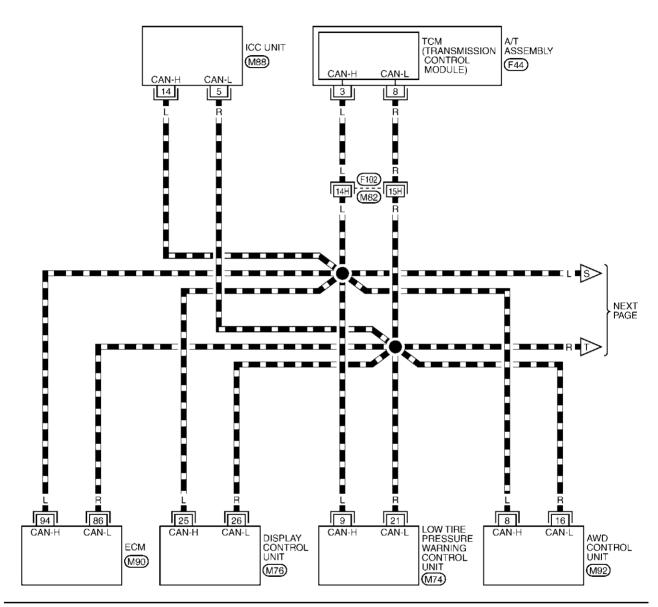
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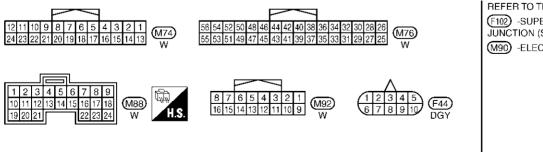
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LAN-CAN-14

: DATA LINE





REFER TO THE FOLLOWING.

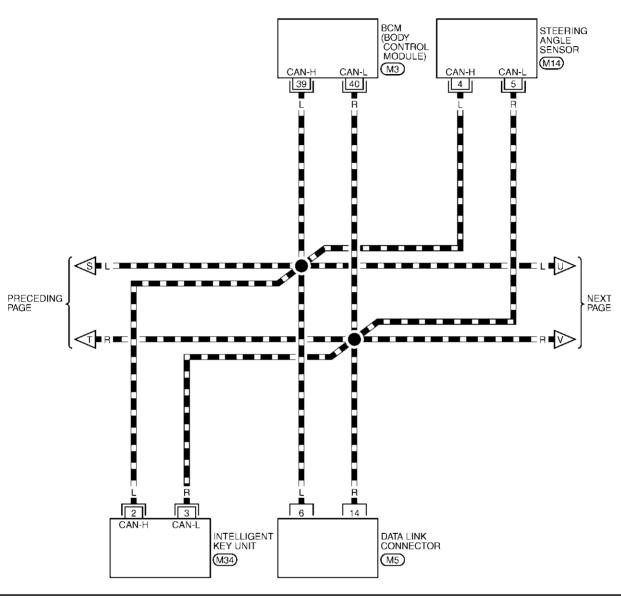
(F102) -SUPER MULTIPLE JUNCTION (SMJ)

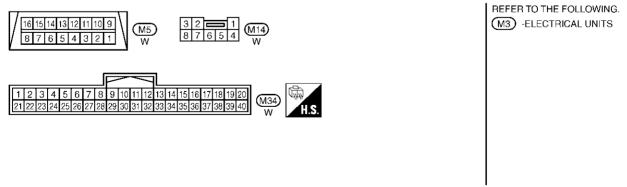
M90 -ELECTRICAL UNITS

TKWM0759E

LAN-CAN-15

: DATA LINE





TKWM0760E

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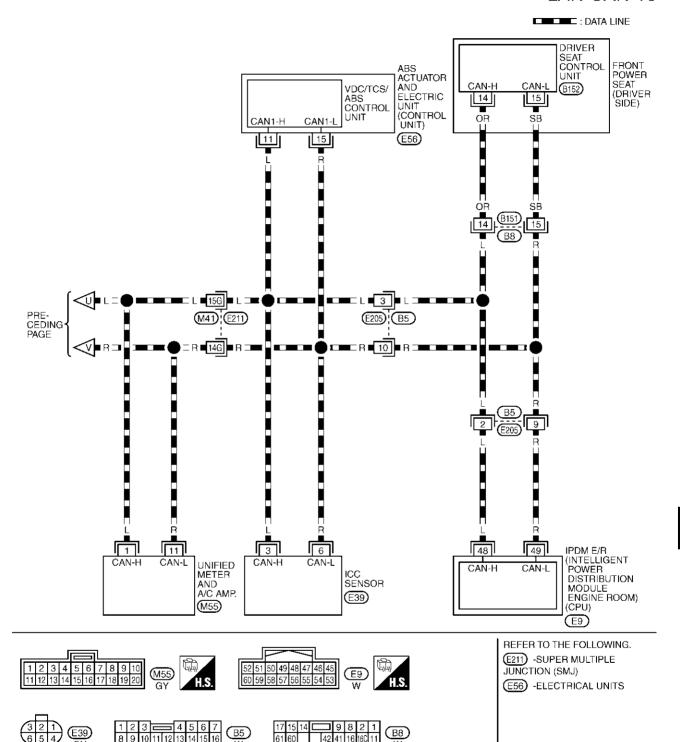
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LAN-CAN-16



TKWH0252E

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

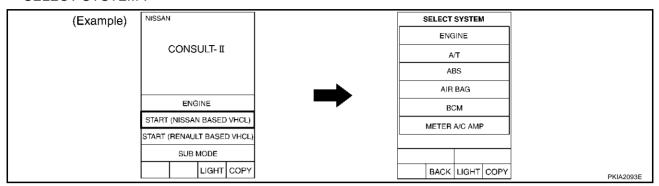
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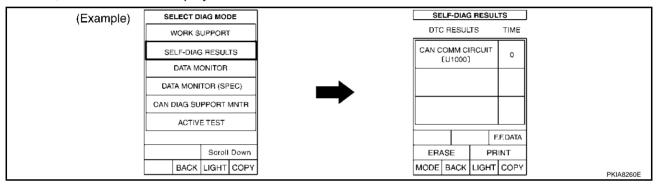
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Work Flow

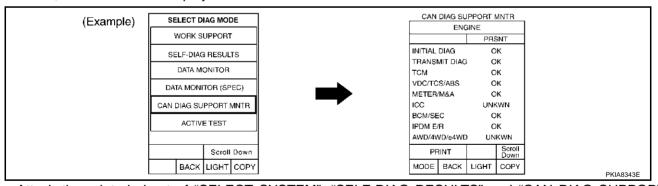
1. When there are no indications of "AIR PRESSURE MONITOR", "INTELLIGENT KEY", "BCM", "METER A/C AMP", "AUTO DRIVE POS." or "IPDM E/R" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



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.



- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to <u>LAN-212</u>, "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 <u>AV-184, "CAN Communication Line Check"</u>.

CAN SYSTEM (TYPE 6)

[CAN]

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

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CHECK SHEET

NOTE:

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

Check sheet ta	ble															
							- 1	CAN DIAC	SUPPO	RT MNTR eive diagn						
SELECT SYST	EM screen	Initial diagnosis	Transmit diagnosis	ECM	тсм	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	UNKWI
VT	_	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
IR PRESSURE MONITOR	No indication	NG	UNKWN	_	_	_	_	_	_	_	_	_	UNKWN	_	_	_
LL MODE AWD/4WD	_	NG	UNKWN	UNKWN	_	_	_	_	_	_	_	_	UNKWN	_	UNKWN	_
DC	_	NG	UNKWN	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	_	UNKWN	UNKWN	_
NTELLIGENT KEY	No indication	_	UNKWN	_	_	_	_	_	_	_	UNKWN	_	_	_	_	_
BCM	No indication	NG	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	_	UNKWN	_	_	UNKWI
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	_	_	_
PDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	_	_	_	UNKWN	_	_	_	_	_
										Attach copy of SELECT SYSTEM						
				Attach co LECT S												

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Attach copy of display control unit CAN DIAG SUPPORT MONITOR check sheet Attach copy of Attach copy of Attach copy of Attach copy of AIR PRESSURE ALL MODE AWD/4WD **ENGINE** A/T MONITOR SELF-DIAG RESULTS SELF-DIAG RESULTS SELF-DIAG RESULTS SELF-DIAG RESULTS Attach copy of Attach copy of Attach copy of Attach copy of METER A/C AMP ICC INTELLIGENT KEY BCM SELF-DIAG RESULTS SELF-DIAG RESULTS SELF-DIAG RESULTS SELF-DIAG RESULTS Attach copy of Attach copy of Attach copy of AUTO DRIVE POS. ABS IPDM E/R SELF-DIAG RESULTS SELF-DIAG RESULTS SELF-DIAG RESULTS

Revision; 2004 April LAN-213 2003 FX

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 INTELLIGENT KEY 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

PKIA8025E

CHECK SHEET RESULTS (EXAMPLE)

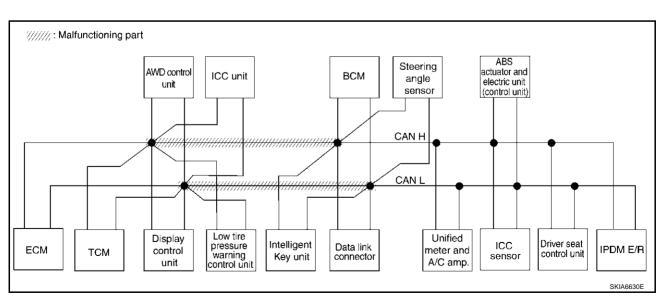
NOTE:

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 <u>LAN-236</u>, "Circuit Check Between TCM and Data Link Connector" .

							(CAN DIAC	SUPPO	RT MNTR							
SELECT SYSTEM screen		Initial	ial Transmit nosis diagnosis														
	IIIIII			ECM	тсм	DISPLAY	TIRE-P	AWD /4WD	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDN E/R	
ENGINE	_	NG	UNKWN		UNKWN	_		_	UNKWN	_	UNK WN	_	UNI WIN	_	UNKWN	nww	
A/T	_	NG	UNKWN	UNKWN	_	_	1	_	UNKWN	_	_	_	UNK ∕ AN	_	UNK VN	_	
Display control unit	_	CAN COMM	CAN CIRC 1	CAN CIRC 3	_	_	CAN CIRC 6	_	_	_	CANCIRC 2	_	CANORC 5	_	_	CANOR	
AIR PRESSURE MONITOR	No indication	W	UNKWN	-	_	_	_	_	_	_	_	_	UNKWN	_	_	_	
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	_	_	_	_	_	_	_	_	UNK WN	_	UNR WN	_	
ICC	_	NG	UNKWN	UNKWN	UNKWN	_	_	_	_	_	nnkwn	_	_	UNKVN	UNKWN	_	
INTELLIGENT KEY	No indication	_	UNKWN	1	_	_	_	_	_	-	UNKWN	_	_	_	_	-	
всм	No indication	NG	UNKWN	UNK WN	_	_	-	_	_	UNKWN	_	_	UNKWN	_	_	ŲNKW	
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKVN	UNR WN	UNKWN	UNKWN	UNK VN	UNKWN	UNKWN	_	_	_	UNKWN	_	
ABS	_	NG	UNKWN	UNK VN	UNKVN	_	_	UNK VN	_	_	-	UNKWN	_	_	_	-	
AUTO DRIVE POS.	No indication	NG	UNKWN	1	UNKVN	_	1	_	_	_	UNKWN	_	UNKWN	_	_	-	
IPDM E/R	No indication	_	UNKWN	UNK WN	_	_	_	_	_	_	UNKWN	_	_	_	_	_	



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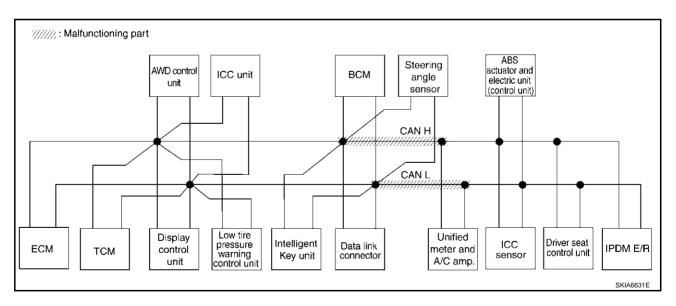
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Case 2
Check harness between data link connector and unified meter and A/C amp. Refer to LAN-237, "Circuit Check Between Data Link Connector and Unified Meter and A/C Amp.".

							(CAN DIAC	SUPPO	RT MNTR							
SELECT SYSTEM screen		Initial	Initial Transmit diagnosis														
				ECM	ТСМ	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	_	UM WN	_	UNK WN	UNKW	
A/T	_	NG	UNKWN	UNKWN	-	_	_	_	UNKWN	_	_	_	UNKWN	_	UNKIVN	_	
Display control unit	_	CAN COMM	CAN CIRC 1	CAN CIRC 3	_	_	CAN CIRC 6	_	_	_	CAN CIRC 2	-	CANORC 5	_	_	CANOR	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	_	-	_	_	_	_	_	_	UNKWN	_	_	_	
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	_	_	_	_	_	_	_	_	UNK WN	_	UNKWN	_	
ICC	_	NG	UNKWN	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	_	UNK VN	UNK VN	_	
INTELLIGENT KEY	No indication	_	UNKWN	1	_	_	-	_	_	_	UNKWN	_	_	_	_	_	
всм	No indication	NG	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	-	UNYWN	_	_	UNK	
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	_	_	UNKWN	_	
ABS	_	NG	UNKWN	UNKAN	UNKIVN	_	_	UNK WN	_	_	_	UNWWN	_	_	_	_	
AUTO DRIVE POS.	No indication	NG	UNKWN	-	UNKWN	_	_	_	_	_	UNKWN	_	UNKWN	_	_	_	
IPDM E/R	No indication	_	UNKWN	UNKWN	-	_	_	_	_	_	UNKWN	_	_	_	_	_	



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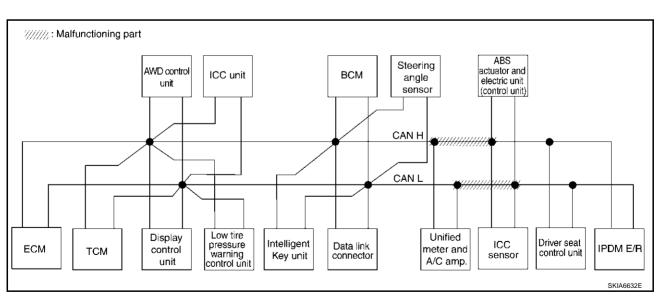
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Case 3

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)".

							(CAN DIAC	SUPPO							
SELECT SYST		Initial	Transmit							eive diagn				ICC	ирожоо	IDDM
		diagnosis	diagnosis	ECM	TCM	DISPLAY	TIRE-P	AWD /4WD	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	_	NG	UNKWN	_	UNKWN	_	_	_	UNKWN	_	UNKWN	_	UNKWN	_	UNK WN	UNKWI
A/T	_	NG	UNKWN	UNKWN	-	_	_	_	UNKWN	_	_	_	UNKWN	_	UNKVN	_
Display control unit	_	CAN COMM	CAN CIRC 1	CAN CIRC 3	1	_	CAN CIRC 6	-	_	_	CAN CIRC 2	_	CAN CIRC 5	_		CANORO
AIR PRESSURE MONITOR	No indication	NG	UNKWN	_	-	_	_	_	_	_	_	_	UNKWN	_	_	-
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	_	_	_	_	_	_	_	_	UNKWN	_	UNIA WN	_
ICC	_	NG	UNKWN	UNKWN	UNKWN	_	_		_	_	UNKWN	_	_	UNKVN	UNKWN	_
INTELLIGENT KEY	No indication	_	UNKWN	_	-	_	_	-	_	_	UNKWN	_	_	_	_	_
всм	No indication	NG	UNKWN	UNKWN	_	_	-	_	_	UNKWN	_	_	UNKWN	_	_	UNKWI
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	_	_	NNKWN	_
ABS	_	NG	UNKWN	UNK VN	UNK VN	_	_	UNK VN	_	_	-	UNWWN	_	-	_	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	UNKWN	_	_	-	_	_	UNKWN	_	UNKWN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	-	_	_	ı	_	_	UNKWN	_	_	_	_	_



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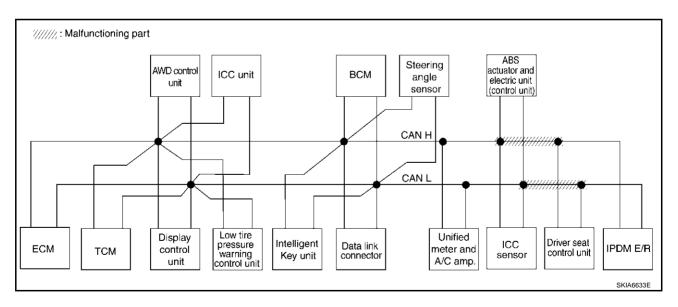
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Case 4

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

							1	CAN DIAC	SUPPO	RT MNTR						
SELECT SYST	ΓEM screen	Initial	Transmit				1		Rec	eive diagn	osis					
		diagnosis		ECM	ТСМ	DISPLAY	TIRE-P	AWD /4WD	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDN E/R
ENGINE	_	NG	UNKWN	_	UNKWN	_	_	_	UNKWN	_	UNKWN	_	UNKWN	_	UNKWN	DNR.V
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	_	_	CANOR
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	_	_	_	_	_
всм	No indication	NG	UNKWN	UNKWN	_	_	-	_	_	UNKWN	_	_	UNKWN	_	_	UNK
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	_	_	_	_	_

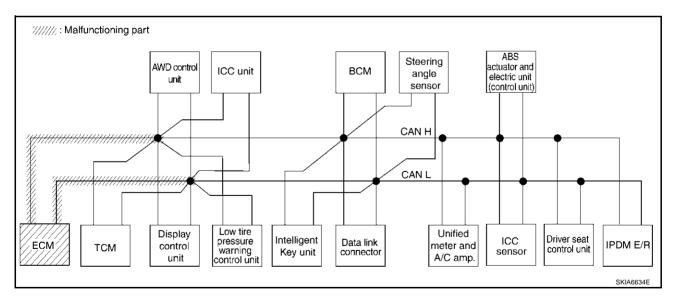


CAN SYSTEM (TYPE 6)

[CAN]

Case 5
Check ECM circuit. Refer to LAN-239, "ECM Circuit Check".

								CAN DIAC	SUPPO	RT MNTR						
SELECT SYST	TEM screen	Initial	Transmit			I				eive diagn			I		I	
		diagnosis	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	ON WN	_	UNK WN	_	_	_	UNKWN	_	UNIVON	_	ONKAN	_	UNK VN	nww
A/T	_	NG	UNKWN	UNION	_	_	_	_	UNKWN	_	_	_	UNKWN	_	UNKWN	_
Display control unit	_	CAN COMM	CAN CIRC 1	CANCIRC 3	_	_	CAN CIRC 6	_	_	_	CAN CIRC 2	_	CAN CIRC 5	-	_	CAN CIRC
AIR PRESSURE MONITOR	No indication	NG	UNKWN	_	_	_	_	_	_	_	_	_	UNKWN	-	_	_
ALL MODE AWD/4WD	_	NG	UNKWN	∩ NIA MN	_	_	_	_	_	_	-	-	UNKWN	-	UNKWN	_
ICC	_	NG	UNKWN	NAMA	UNKWN	_	-	_	ı	_	UNKWN	ı	_	UNKWN	UNKWN	
INTELLIGENT KEY	No indication	_	UNKWN	ı	ı	_	_	_	ı	_	UNKWN		_	ı	_	_
всм	No indication	NG	UNKWN	UMAMN	-	_	-	_		UNKWN	ı	1	UNKWN	1	_	UNKW
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	_	_	UNKWN	_
ABS	_	NG	UNKWN	n uk wu	UNKWN	_	_	UNKWN	_	_	_	UNKWN	_	_	_	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	UNKWN	_	_	_	_	_	UNKWN	_	UNKWN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNIWN	_	_	_	_	_	_	UNKWN	_	_	_	_	_



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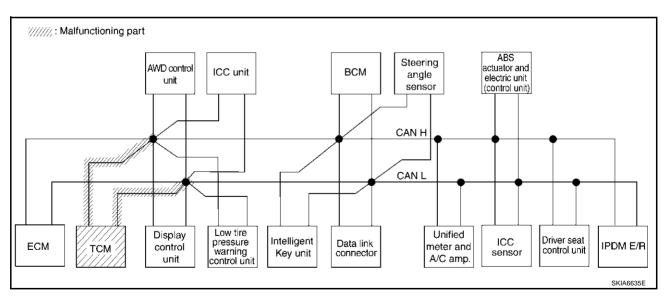
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Case 6
Check TCM circuit. Refer to <u>LAN-239</u>, "TCM Circuit Check".

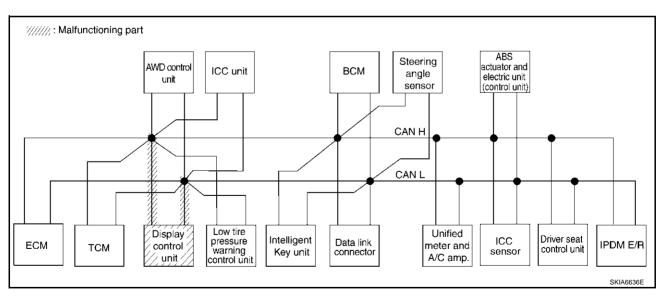
							(CAN DIAC	SUPPO							
SELECT SYST	TEM screen	Initial diagnosis	Transmit					AWD	Reci	eive diagr	osis BCM		METER	ICC	VDC/TCS	IPDM
		diagnosis	diagnosis	ECM	TCM	DISPLAY	TIRE-P	/4WD	/e4WD	I-KEY	/SEC	STRG	/M&A	SENSOR	/ABS	E/R
ENGINE	_	NG	UNKWN	_	NNK MN	_	_	_	UNKWN	_	UNKWN	_	UNKWN	_	unkwn	UNKW
A/T	_	NG	UNK WN	UNKAN	_	_	_	_	UNK WN	_	-	-	UNKWN	_	UNKAN	_
Display control unit	_	CAN COMM	CAN CIRC 1	CAN CIRC 3	_	_	CAN CIRC 6	_	_	_	CAN CIRC 2	_	CAN CIRC 5	_	_	CAN CIR
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	-	_	_	_	-
всм	No indication	NG	UNKWN	UNKWN	-	_	-	_	_	UNKWN	-	_	UNKWN	_	_	UNKW
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	_	_	UNKWN	_
ABS	_	NG	UNKWN	UNKWN	UNKVN	_	_	UNKWN	_	_	_	UNKWN	_	_	_	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	UNK WN	_	_	_	_	_	UNKWN	-	UNKWN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	_	_	_	UNKWN	_	_	_	_	_



Case 7

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

			ı					CAN DIAC	SUPPO							
SELECT SYST	ΓEM screen	Initial diagnosis	Transmit diagnosis	ECM	тсм	DISPLAY	TIRE-P	AWD	ICC	eive diagn	всм	STRG	METER	ICC	VDC/TCS	IPDM
				LOW	1011	DISFLAI		/4WD	/e4WD	I-KL1	/SEC	31110	/M&A	SENSOR		E/R
ENGINE	_	NG	UNKWN	_	UNKWN	_	_	_	UNKWN	_	UNKWN	_	UNKWN	_	UNKWN	UNKWI
A/T	_	NG	UNKWN	UNKWN	_	_	_	_	UNKWN	_	_	_	UNKWN	_	UNKWN	_
Display control unit	_	CAN COMM	CAN CHIC 1	CANCERC 3	_	_	CANCIAC 6	-	_	_	CANORC 2	_	CANCIRC 5	_	_	CANCAC
AIR PRESSURE MONITOR	No indication	NG	UNKWN	_	_	_	_	_	_	_	_	-	UNKWN	_	_	_
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	_	_	_	_	_	_	_	1	UNKWN	_	UNKWN	_
ICC	_	NG	UNKWN	UNKWN	UNKWN	_	_	_	_	_	UNKWN	-	_	UNKWN	UNKWN	_
INTELLIGENT KEY	No indication	_	UNKWN	-	_	-	-	_	_	_	UNKWN	-	_	-	_	_
всм	No indication	NG	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	_	UNKWN	_	_	UNKWI
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	NMANN	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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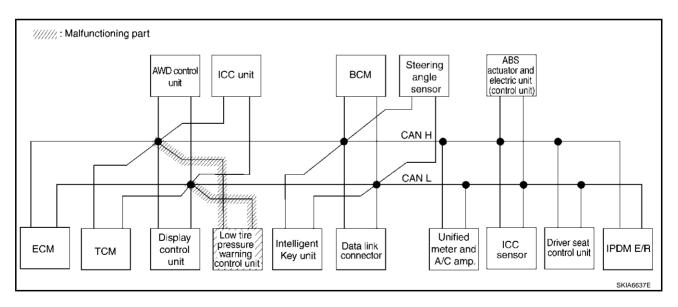
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Case 8

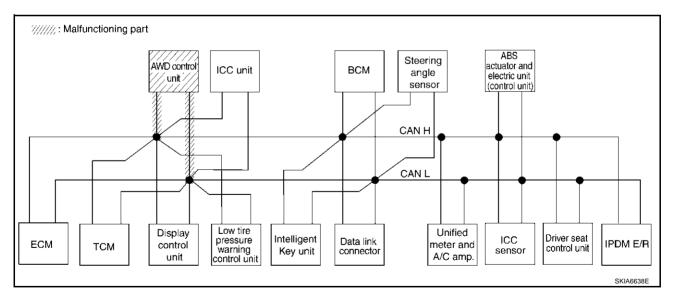
Check low tire pressure warning control unit circuit. Refer to $\underline{\mathsf{LAN-240}}$, "Low Tire Pressure Warning Control Unit Circuit Check".

								CAN DIAC	SUPPO	RT MNTR						
SELECT SYST	ΓEM screen	Initial	Transmit						Rec	eive diagn	osis			1	ı	
		diagnosis		ECM	ТСМ	DISPLAY	TIRE-P	AWD /4WD	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDN E/R
ENGINE	_	NG	UNKWN	_	UNKWN	_	_	_	UNKWN	_	UNKWN	_	UNKWN	_	UNKWN	UNKW
A/T	_	NG	UNKWN	UNKWN	ı	_	1	_	UNKWN	_	1	ı	UNKWN	_	unkwn	_
Display control unit	_	CAN COMM	CAN CIRC 1	CAN CIRC 3	-	_	CANCYAC 6	_	_	_	CAN CIRC 2	_	CAN CIRC 5	_	_	CAN CIR
AIR PRESSURE MONITOR	No indication	NG	UNKWN	1	_	-	_	_	_	_	_	_	UNKWN	_	_	-
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	_	_	_	_	_	_	_	_	UNKWN	_	UNKWN	_
ICC	_	NG	UNKWN	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	_	UNKWN	UNKWN	_
INTELLIGENT KEY	No indication	_	UNKWN	_	-	_	_	_	_	_	UNKWN	_	_	_	_	_
всм	No indication	NG	UNKWN	UNKWN	_	_	-	_	_	UNKWN	_	_	UNKWN	_	_	ÜNKM
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNK WN	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	_	_	_	_	_



Case 9
Check AWD control unit circuit. Refer to <u>LAN-241</u>, "AWD Control Unit Circuit Check".

							(CAN DIAC	SUPPO	RT MNTR						
SELECT SYST	TEM screen	Initial	Transmit						Rec	eive diagn	osis	T				1
		diagnosis		ECM	ТСМ	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	UNKW
A/T	_	NG	UNKWN	UNKWN	-	_	_	_	UNKWN	_	_	_	UNKWN	_	unkwn	_
Display control unit	_	CAN COMM	CAN CIRC 1	CAN CIRC 3	ı	_	CAN CIRC 6	-	-	_	CAN CIRC 2	_	CAN CIRC 5	_	_	CAN CIRC
AIR PRESSURE MONITOR	No indication	NG	UNKWN	_	1	_	_	_	_	_	_	_	UNKWN	_	_	_
ALL MODE AWD/4WD	_	NG	ONK WN	UNIV	-	_	_	_	-	_	_	_	Ω ΝΚ ΑΝ	_	UNKVN	_
ICC	_	NG	UNKWN	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	_	UNKWN	UNKWN	_
INTELLIGENT KEY	No indication	_	UNKWN	_	-	_	-	_	_	_	UNKWN	_	_	_	_	_
всм	No indication	NG	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	_	UNKWN	_	_	UNKW
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	_	_	UNKWN	-
ABS	_	NG	UNKWN	UNKWN	UNKWN	_	_	UNK WN	_	_	_	UNKWN	_	_	_	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	UNKWN	_	_	_	_	_	UNKWN	_	UNKWN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	ı	_	_	_	_	_	UNKWN	_	_	_	_	_



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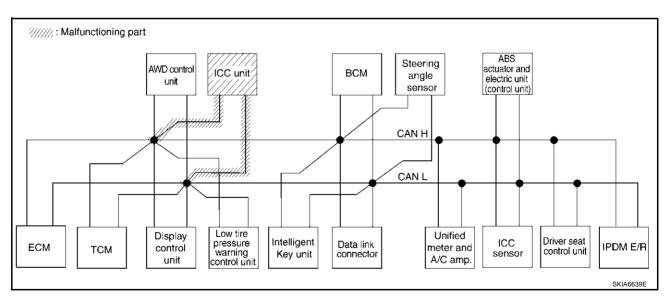
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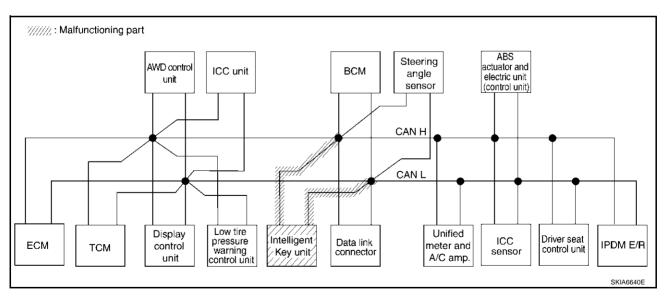
Case 10
Check ICC unit circuit. Refer to LAN-241, "ICC Unit Circuit Check".

							(CAN DIAC	SUPPO							
SELECT SYST	TEM screen	Initial diagnosis	Transmit diagnosis	ECM	тсм	DISPLAY	TIRE-P	AWD /4WD	ICC /e4WD	eive diagr	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDN E/R
ENGINE	_	NG	UNKWN	_	UNKWN	_	_	_	UNWWN	_	UNKWN	_	UNKWN	_	UNKWN	UNKW
A/T	_	NG	UNKWN	UNKWN	_	_	-	_	UNKWN	_	_	-	UNKWN	_	UNKWN	_
Display control unit	_	CAN COMM	GAN CIRC 1	CAN CIRC 3	_	_	CAN CIRC 6	_	_	_	CAN CIRC 2	_	CAN CIRC 5	_	_	CAN CIR
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	ı	_		_	_	_		-	UNKWN	_	_	_
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN		_	ı	_	_	_	ı	ı	UNKWN	_	UNKWN	_
ICC	_	NG	NNR MN	NKWN	ONKAN	_	ı	-	-	_	UNKWN	ı	-	UNKVN	UNKVN	_
INTELLIGENT KEY	No indication	_	UNKWN	ı	ı	_	ı	-	_	_	UNKWN	-	_	_	_	_
всм	No indication	NG	UNKWN	UNKWN	-	_	1	_	_	UNKWN	-	-	UNKWN	_	_	UNKV
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	NMAM N	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	_	_	_	_	_



Case 11
Check Intelligent Key unit circuit. Refer to <u>LAN-242</u>, "Intelligent Key Unit Circuit Check".

							(CAN DIAC	SUPPO							
SELECT SYST	TEM screen	Initial	Transmit							eive diagn				ino.		IDDM
		diagnosis	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	UNKW
A/T	_	NG	UNKWN	UNKWN	ı	_	_	_	UNKWN	_	1	-	UNKWN	_	UNKWN	_
Display control unit	_	CAN COMM	CAN CIRC 1	CAN CIRC 3	١	_	CAN CIRC 6	_	_	_	CAN CIRC 2	_	CAN CIRC 5	_	_	CAN CIRC
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	1	-	_	_	_	-	_	UNKWN	_	_	_	_	_
всм	No indication	NG	UNKWN	UNKWN	_	_	_	_	_	UNK WN	_	_	UNKWN	_	_	UNKW
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNK WN	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	1	_	_	_	_	_	UNKWN	_	_	_	_	_



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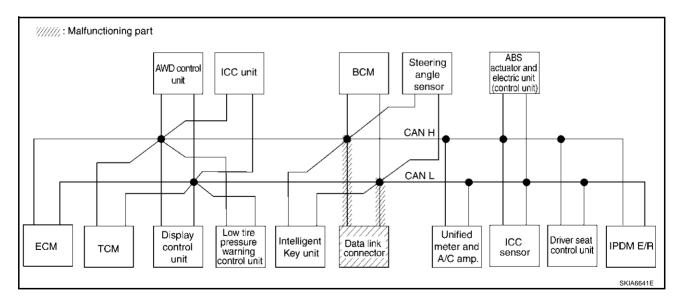
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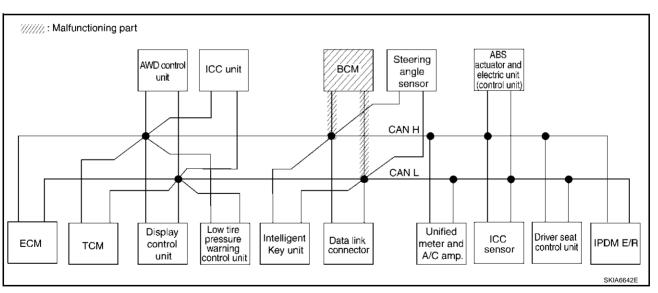
Case 12
Check data link connector circuit. Refer to <u>LAN-242</u>, "<u>Data Link Connector Circuit Check</u>".

							(CAN DIAC	SUPPO	RT MNTR						
SELECT SYST	TEM screen	Initial	Transmit							eive diagn			I		1	1
		diagnosis	diagnosis	ECM	тсм	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
AIR PRESSURE MONITOR	No indication	NG	UNKWN	_	1	_	-	_	_	_	_	ı	UNKWN	-	_	_
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	_	_	_	_	_	_	_	ı	UNKWN	_	UNKWN	_
ICC	_	NG	UNKWN	UNKWN	UNKWN	_	-	_	-	_	UNKWN	ı	_	UNKWN	UNKWN	_
INTELLIGENT KEY	No indication	_	UNKWN	_	ı	_	-	_	_	_	UNKWN	ı	_	_	_	_
всм	No invitation	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	-	_	_	_	_



Case 13
Check BCM circuit. Refer to <u>LAN-243, "BCM Circuit Check"</u>.

							1	CAN DIAC	SUPPO	RT MNTR						
SELECT SYST	TEM screen	Initial	Transmit						Rec	eive diagn	osis					
		diagnosis		ECM	тсм	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	_	_	1	UNKWN	_	UM WN	_	UNKWN	_	UNKWN	UNKW
A/T	_	NG	UNKWN	UNKWN	_	_	_	-	UNKWN	_	_	_	UNKWN	_	UNKWN	_
Display control unit	_	CAN COMM	CAN CIRC 1	CAN CIRC 3	-	_	CAN CIRC 6	I	_	_	CAN CIRC 2	_	CAN CIRC 5	_	_	CAN CIRC
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	_	_	_	ı	_	_	_	_	UNKWN	-	_	_
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	_	_	_	1	_	_	_	_	UNKWN	-	UNKWN	_
ICC	_	NG	UNKWN	UNKWN	UNKWN	_	_	_	_	_	NNKAN	_	_	UNKWN	UNKWN	_
INTELLIGENT KEY	No indication	_	UNKWN	-	_	_	-	_	_	_	UNK WN	_	_	_	_	_
всм	No invitation	NG	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	_	UNKWN	-	_	UNKW
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	_	_	-	_	_	UNK WN	_	UNKWN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	-	_	_	UNK WN	_	_	_	_	_



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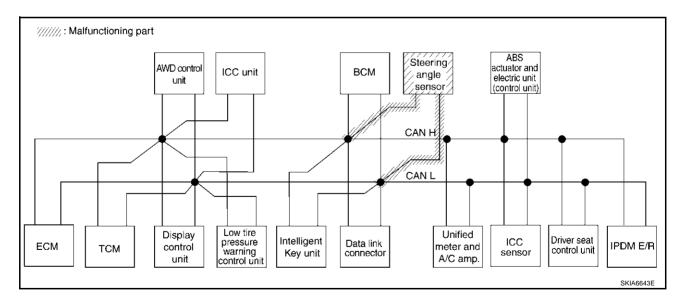
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Case 14
Check steering angle sensor circuit. Refer to <u>LAN-243</u>, "Steering Angle Sensor Circuit Check".

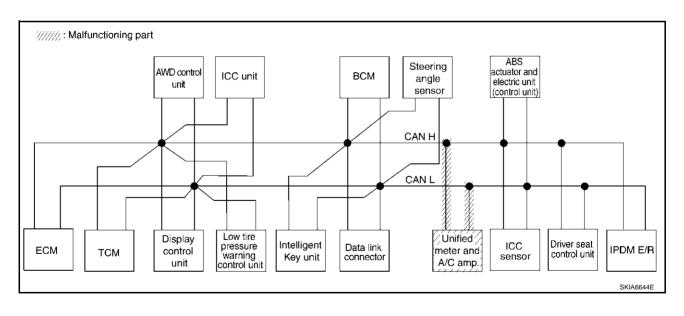
							(CAN DIAC		RT MNTR						
SELECT SYS	TEM screen	Initial	Transmit							eive diagn			I			
		diagnosis	diagnosis	ECM	TCM	DISPLAY	TIRE-P	AWD /4WD	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/R
ENGINE	_	NG	UNKWN	_	UNKWN	_	-	-	UNKWN	_	UNKWN	-	UNKWN	_	UNKWN	UNKW
A/T	_	NG	UNKWN	UNKWN	-	_	-	_	UNKWN	_	ı	_	UNKWN	_	UNKWN	_
Display control unit	_	CAN COMM	CAN CIRC 1	CAN CIRC 3	_	_	CAN CIRC 6	_	_	_	CAN CIRC 2	_	CAN CIRC 5	_	_	CAN CIRC
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	_	_	_	_	_
всм	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	_	_	ı	UNK VN	_	_	_	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	UNKWN	_	_	_	_	_	UNKWN	_	UNKWN	-	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	_	_	_	UNKWN	_	_	_	_	_



Case 15

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

							(CAN DIAC	SUPPO							
SELECT SYST	TEM screen	Initial	Transmit							eive diagn		l		l		T
		diagnosis	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	_	UNKAN	_	UNKWN	UNKW
A/T	_	NG	UNKWN	UNKWN	ı	_	1	_	UNKWN	_	ı	_	UNKVN	_	UNKWN	_
Display control unit	_	CAN COMM	CAN CIRC 1	CAN CIRC 3	1	_	CAN CIRC 6	-	_	_	CAN CIRC 2	_	CAN CIRC 5	_	_	CAN CIR
AIR PRESSURE MONITOR	No indication	NG	UNKWN	_	_	_	_	_	_	_	_	_	UNK VN	_	_	_
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	_	_	_	_	_	_	_	_	UNK WN	_	UNKWN	_
ICC	_	NG	UNKWN	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	_	UNKWN	UNKWN	_
INTELLIGENT KEY	No indication	_	UNKWN	1	-	_	-	_	_	_	UNKWN	_	_	_	_	_
всм	No indication	NG	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	_	UNKVN	_	_	UNKW
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	_	UNKVN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	_	_	_	UNKWN	_	_	_	_	_



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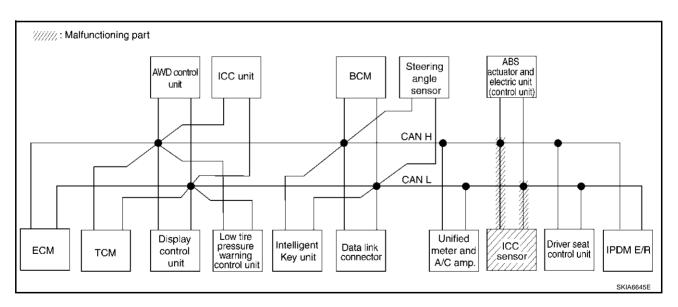
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Case 16
Check ICC sensor circuit. Refer to LAN-244, "ICC Sensor Circuit Check".

								CAN DIAC		RT MNTR						
SELECT SYS	TEM screen	Initial	Transmit				ı			eive diagn			l			
		diagnosis	diagnosis	ECM	TCM	DISPLAY	TIRE-P	AWD /4WD	ICC /e4WD	I-KEY	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDN E/R
ENGINE	_	NG	UNKWN		UNKWN	_	_	_	UNKWN	_	UNKWN	_	UNKWN	_	UNKWN	UNKW
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 CIR
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	_	_	_	_	_	_	_	_	UNKWN	_	_	_
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	_	_	_	_	_	_	_	_	UNKWN	_	UNKWN	_
ICC	_	NG	UNKWN	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	_	UNK WN	UNKWN	_
INTELLIGENT KEY	No indication	_	UNKWN	-	-	_	_	_	_	-	UNKWN	_	_	_	_	_
всм	No indication	NG	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	_	UNKWN	_	_	UNKW
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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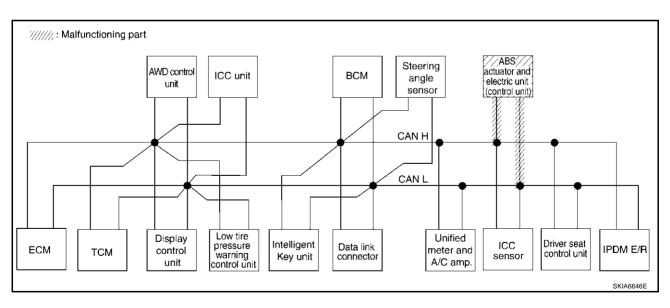
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Case 17

Check ABS actuator and electric unit (control unit) circuit. Refer to <u>LAN-245</u>, "ABS Actuator and Electric Unit (Control Unit) Circuit Check".

							(CAN DIAC	SUPPO							
SELECT SYST		Initial	Transmit							eive diagn	ı					T
		diagnosis	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	1	UNKWN	_		_	UNKWN	1	UNKWN	ı	UNKWN	_	UNK WN	UNKWI
A/T	_	NG	UNKWN	UNKWN	ı	_	-	_	UNKWN	_	_	ı	UNKWN	_	UNKVN	_
Display control unit	_	CAN COMM	CAN CIRC 1	CAN CIRC 3	ı	_	CAN CIRC 6	-	_	_	CAN CIRC 2	-	CAN CIRC 5	_	_	CAN CIRC
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	-	_	-	_	_	_	_	-	UNKWN	_	_	_
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	-	_	_	_	_	_	_	-	UNKWN	_	NNK WN	_
ICC	_	NG	UNKWN	UNKWN	UNKWN	_	_	_	_	_	UNKWN	-	_	UNKWN	nnkwn	_
INTELLIGENT KEY	No indication	_	UNKWN	1	1	_	_	_	_	_	UNKWN	_	_	_	_	_
всм	No indication	NG	UNKWN	UNKWN	-	_	-	_	_	UNKWN	_	-	UNKWN	_	_	UNKWI
METER A/C AMP	No indication	-	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	-	_	_	UNKVN	_
ABS	_	NG	UNKVN	UNKVN	UNKWN	_	_	UNKVN	_	_	_	UNKOVN	_	_	_	_
AUTO DRIVE POS.	No indication	NG	UNKWN		UNKWN	_	_	_	_	_	UNKWN	1	UNKWN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	_	_	_	UNKWN	_	_	_	_	_



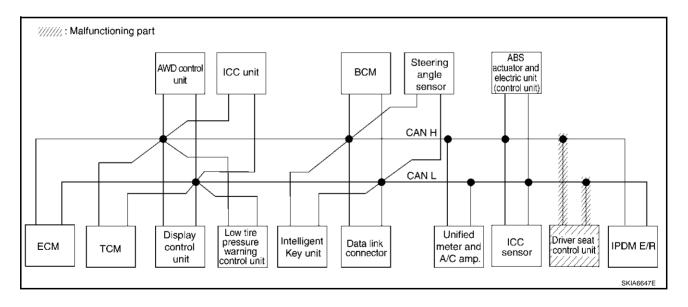
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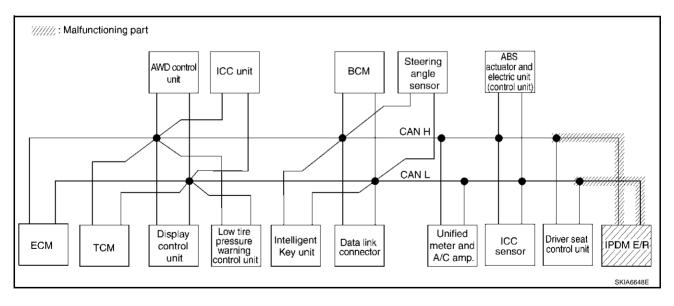
Case 18
Check driver seat control unit circuit. Refer to <u>LAN-245</u>, "<u>Driver Seat Control Unit Circuit Check</u>".

								CAN DIAC		RT MNTR						
SELECT SYS	TEM screen	Initial	Transmit				ı			eive diagn					l	T
		diagnosis	diagnosis	ECM	ТСМ	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	UNKW
A/T	_	NG	UNKWN	UNKWN	ı	_	_	_	UNKWN	_	_	_	UNKWN	_	UNKWN	_
Display control unit	_	CAN COMM	CAN CIRC 1	CAN CIRC 3	1	_	CAN CIRC 6	_	-	_	CAN CIRC 2	_	CAN CIRC 5	_	_	CAN CIR
AIR PRESSURE MONITOR	No indication	NG	UNKWN	1	_	_	_	_	_	_	_	_	UNKWN	_	_	-
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	_	_	_	_	_	_	_	_	UNKWN	_	UNKWN	_
ICC	_	NG	UNKWN	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	_	UNKWN	UNKWN	_
INTELLIGENT KEY	No indication	_	UNKWN	-	-	_	_	_	_	-	UNKWN	_	_	_	_	_
всм	No indication	NG	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	_	UNKWN	_	_	UNKW
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	_	_	_	_	_



Case 19
Check IPDM E/R circuit. Refer to LAN-246, "IPDM E/R Circuit Check" .

							(CAN DIAC		RT MNTR						
SELECT SYST	TEM screen	Initial	Transmit							eive diagn				100	иволог	IDDM
		diagnosis	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	UNW
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	_	_	CANORC
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	_	-	_	_	_
всм	No indication	NG	UNKWN	UNKWN	_	_	-	_	_	UNKWN	_	_	UNKWN	_	_	UNKWI
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	1	_	_	_	_	_	UNKWN	_	_	_	_	_



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Case 20
Check CAN communication circuit. Refer to LAN-247, "CAN Communication Circuit Check".

			1				(CAN DIAC	SUPPO							
SELECT SYST	TEM screen	Initial	Transmit							eive diagn	1			IDO	иролог	IDDM
		diagnosis	diagnosis	ECM	тсм	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	UNAMN	_	UNK WN	_	_	_	UNWWN	_	UN K WN	_	UNK WN	_	UNK WN	UNWWI
A/T	_	NG	UNK WN	UN WN	_	_	_	_	UNKWN	_	_	_	UNK Y N	_	UNKANN	_
Display control unit	_	CAN COMM	GANORC 1	CANORC 3	_	_	CANORC 6	_	_	_	CANORC 2	_	CANORC 5	_	_	CANORC
AIR PRESSURE MONITOR	No indication	NG	UNKWN	_	_	_	_	_	_	_	_	_	UNKWN	_	_	_
ALL MODE AWD/4WD	_	NG	UNK WN	NMA MN	_	_	-	_	_	_	_	_	Ω ΝΚ ΝΝ	_	NNA MN	_
ICC	_	NG	UNK WN	nukwu	UNKVVN	_	_	_	_	_	NN WN	_	_	UNK WN	NWWN	_
INTELLIGENT KEY	No indication	_	UNKWN	_	_	_	-	_	_	_	UNKWN	_	_	_	_	_
всм	No indication	NG	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	_	UNKWN	_	_	UNKWI
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	_	_	UNKWN	_
ABS	_	NG	UNA WIN	unk w n	UNK VN	_	_	UNIMN	_	_	_	UN K VN	_	_	_	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	UNKWN	_	-	_	_	_	UNKWN	_	UNKWN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	_	_	_	UNKWN	_	_	_	_	_

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Case 21

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

							(CAN DIAC	SUPPO	RT MNTR						
SELECT SYST	ΓEM screen	Initial	Transmit						Rec	eive diagn	osis		ı			
		diagnosis		ECM	тсм	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	_	UNKAN	_	_	_	UNKWN	_	UNKWN	_	UNKWN	_	UNK WN	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 :
AIR PRESSURE MONITOR	No indication	NG	UNKWN	_	_	_	_	_	_	_	_	_	UNKWN	_	_	_
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	_	_	_	_	_	_	_	_	UNKWN	_	NIKWN	_
ICC	_	NG	UNKWN	UNKWN	ONK WN	_	_	_	_	_	UNKWN	_	_	UNKWN	nuk (N	_
INTELLIGENT KEY	No indication	_	UNKWN	_	_	_	_	_	_	_	UNKWN	_	_	_	_	_
всм	No indication	NG	UNKWN	UNKWN	_	_	_	=	_	UNKWN	_	-	UNKWN	_	_	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	_	_	UNK WN	_
ABS	_	NG	UNKWN	UNKWN	UNKWN	_	_	UNKWN	_	_	_	UNKWN	_	_	_	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	UNK VN	_	_	_	_	_	UNKWN	_	UNKWN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	_	_	_	UNKWN	_	_	_	_	_

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Case 22

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

			ı	ı			(CAN DIAC	SUPPO							
SELECT SYST		Initial diagnosis	Transmit diagnosis	ECM	тсм	DISPLAY	TIRE-P	AWD /4WD	ICC /e4WD	eive diagn	BCM /SEC	STRG	METER /M&A	ICC SENSOR	VDC/TCS /ABS	IPDM E/B
ENGINE	_	NG	UNKWN	_	UNKWN	_	_	-	UNKWN	_	UNKWN	_	UNKWN	_	UNKWN	
A/T	_	NG	UNKWN	UNHWN	_	_	_	_	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 :
AIR PRESSURE MONITOR	No indication	NG	UNKWN	_	1	ı	_	_	_	_	_	-	UNKWN	_	_	_
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	_	_	_	_	_	_	_	_	UNKWN	_	UNKWN	_
ICC	_	NG	UNKWN	UNKWN	UNKWN	1	_	_	_	_	UNKWN	_	_	UNKWN	UNKWN	_
INTELLIGENT KEY	No indication	_	UNKWN	_	I	ı	ı	-	_	_	UNKWN	ı	_	_	_	_
ВСМ	No indication	NG	UNKWN	UNKWN	ı	ı	1		_	UNKWN	_	ı	UNKWN	_	_	UNKWN
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	_	_	UNKWN	_
ABS	_	NG	UNKWN	UNK/VN	UNKWN	_	_	UNIWN	_	_	_	UNK W N	_	_	_	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	UNKWN	_	_	_	_	_	UNKWN	_	UNKWN	_	_	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	_	_	_	UNKWN	_	_	_	_	_

Circuit Check Between TCM and Data Link Connector

1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.

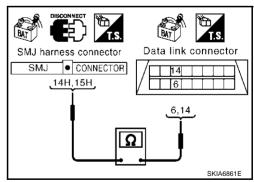
- 2. Disconnect the negative battery terminal.
- Disconnect ECM connector and harness connector M82.
- Check continuity between harness connector M82 terminals 14H (L), 15H (R) and data link connector M5 terminals 6 (L), 14 (R).

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 <u>LAN-210, "Work Flow"</u>.

NG >> Repair harness.



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

1. CHECK HARNESS FOR OPEN CIRCUIT

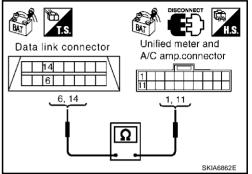
- 1. Turn ignition switch OFF.
- 2. Disconnect the negative battery terminal.
- Disconnect ECM connector and unified meter and A/C amp. connector.
- Check continuity between data link connector M5 terminals 6 (L). 14 (R) and unified meter and A/C amp. harness connector M55 terminals 1 (L), 11 (R).

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)

1. CHECK CONNECTOR

- Turn ignition switch OFF.
- 2. Disconnect the negative battery terminal.
- 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

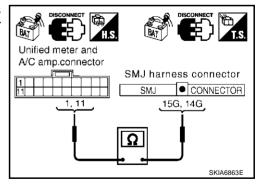
- Disconnect unified meter and A/C amp. connector and harness connector M41.
- Check continuity between unified meter and A/C amp. harness connector M55 terminals 1 (L), 11 (R) and harness connector M41 terminals 15G (L), 14G (R).

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

OK or NG

OK >> GO TO 3.

NG >> Repair harness.



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$\overline{3}$. CHECK HARNESS FOR OPEN CIRCUIT

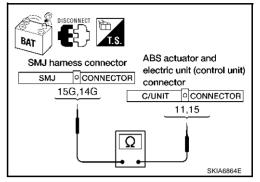
- 1. Disconnect ABS actuator and electric unit (control unit) connector.
- Check continuity between harness connector E211 terminals 15G (L), 14G (R) and ABS actuator and electric unit (control unit) harness connector E56 terminals 11 (L), 15 (R).

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

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

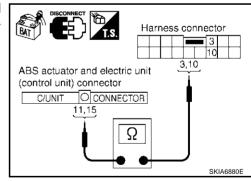
- 1. Disconnect ABS actuator and electric unit (control unit) connector and harness connector E205.
- Check continuity between ABS actuator and electric unit (control unit) harness connector E56 terminals 11 (L), 15 (R) and harness connector E205 terminals 3 (L), 10 (R).

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

OK or NG

OK >> GO TO 3.

NG >> Repair harness.



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3. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect harness connector 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) 10 (R) - 15 (R) : Continuity should exist.

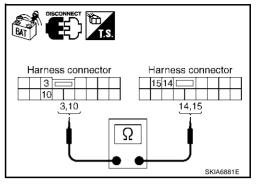
: Continuity should exist.

OK or NG

OK

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

NG >> Repair harness.



AKS007TW

ECM Circuit Check

1. CHECK CONNECTOR

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

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

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

94 (L) - 86 (R)

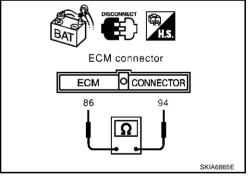
: Approx. 108 - 132 Ω

OK or NG

OK NG

DK >> Replace ECM.

>> Repair harness between ECM and harness connector M82.



AKS007TX

TCM Circuit Check

1. CHECK CONNECTOR

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

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

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$\overline{2}$. CHECK HARNESS FOR OPEN CIRCUIT

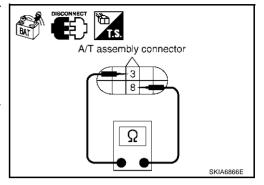
- 1. Disconnect A/T assembly connector.
- Check resistance between A/T assembly harness connector F44 terminals 3 (L) and 8 (R).

3 (L) - 8 (R) : Approx.
$$54 - 66\Omega$$

OK or NG

OK >> Replace A/T assembly.

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



AKS007TY

Display Control Unit Circuit Check

1. CHECK CONNECTOR

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

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

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

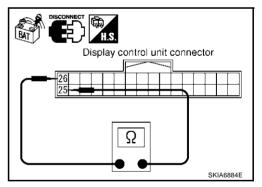
25 (L) - **26** (R) : Approx. **54** - **66**
$$\Omega$$

OK or NG

NG

OK >> Replace display control unit.

>> 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.

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$\overline{2}$. CHECK HARNESS FOR OPEN CIRCUIT

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

: Approx. 54 - 66 Ω

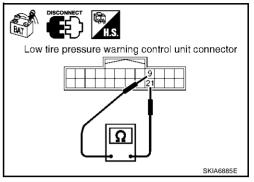
OK or NG

OK

>> Replace low tire pressure warning control unit.

NG

>> Repair harness between low tire pressure warning control unit and harness connector M82.



AKS007UF

AWD Control Unit Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.

- Disconnect the negative battery terminal.
- 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.
- Check resistance between AWD control unit harness connector M92 terminals 8 (L) and 16 (R).

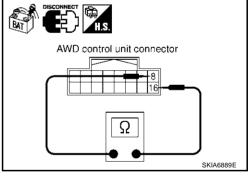
: Approx. 54 - 66 Ω

OK or NG

OK

>> Replace AWD control unit.

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



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ICC Unit Circuit Check

1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- Disconnect the negative battery terminal.
- 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.

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$\overline{2}$. 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).

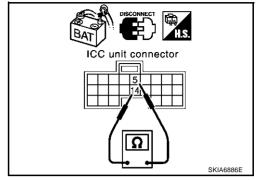
: Approx. 54 - 66 Ω

OK or NG

OK >> Replace ICC unit.

NG >> Re

>> Repair harness between ICC unit and harness connector M82.



AKS007U1

Intelligent Key Unit Circuit Check

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).

: Approx. 54 - 66 Ω

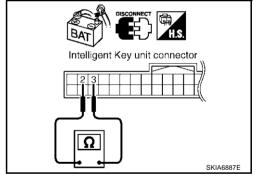
OK or NG

OK

>> Replace Intelligent Key unit.

NG

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



AKS007U2

Data Link Connector Circuit Check

1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the negative battery terminal.
- 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.

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$\overline{2}$. CHECK HARNESS FOR OPEN CIRCUIT

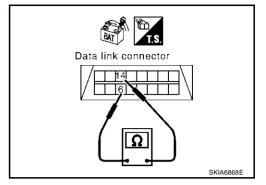
Check resistance between data link connector M5 terminals 6 (L) and 14 (R).

6 (L) - 14 (R) : Approx. 54 -
$$66\Omega$$

OK or NG

OK >> Diagnose again. Refer to LAN-210, "Work Flow".

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



BCM Circuit Check

1. CHECK CONNECTOR

Turn ignition switch OFF. 1.

2. Disconnect the negative battery terminal.

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

Disconnect BCM connector.

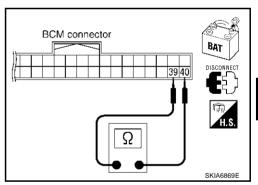
Check resistance between BCM harness connector M3 terminals 39 (L) and 40 (R).

39 (L) - 40 (R) : Approx. 54 -
$$66\Omega$$

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

1. CHECK CONNECTOR

- Turn ignition switch OFF.
- Disconnect the negative battery terminal.
- 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.

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$\overline{2}$. 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).

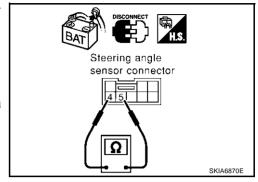
: Approx. 54 - 66 Ω

OK or NG

OK >> Replace steering angle sensor.

NG

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



AKS007U5

Unified Meter and A/C Amp. Circuit Check

1. CHECK CONNECTOR

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

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

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

: Approx. 54 - 66 Ω

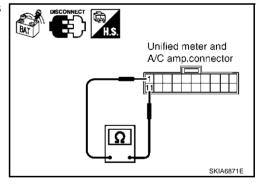
OK or NG

OK

>> Replace unified meter and A/C amp.

NG :

>> Repair harness between unified meter and A/C amp. and harness connector M41.



AKS007U6

ICC Sensor Circuit Check

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.

$\overline{2}$. CHECK HARNESS FOR OPEN CIRCUIT

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

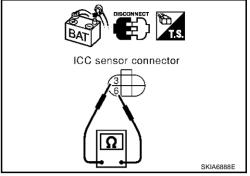
: Approx. 54 - 66 Ω

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.
- Disconnect the negative battery terminal.
- 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.
- Check resistance between ABS actuator and electric unit (control unit) harness connector E56 terminals 11 (L) and 15 (R).

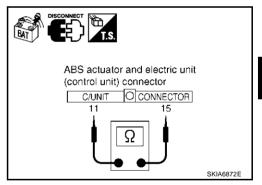
: Approx. 54 - 66 Ω

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.
- 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.

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2. CHECK HARNESS FOR OPEN CIRCUIT

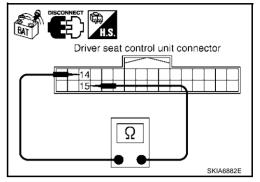
- 1. Disconnect driver seat control unit connector.
- 2. Check resistance between driver seat control unit harness connector B152 terminals 14 (OR) and 15 (SB).

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.



AKS007U9

IPDM E/R Circuit Check

1. CHECK CONNECTOR

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

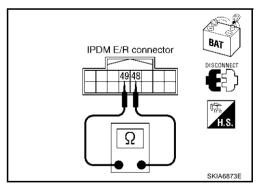
48 (L) - 49 (R) : Approx. $108 - 132\Omega$

OK or NG

NG

OK >> Replace IPDM E/R.

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



CAN SYSTEM (TYPE 6)

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CAN Communication Circuit Check

1. CHECK CONNECTOR

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

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$\overline{2}$. 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).

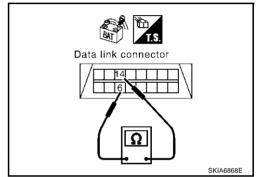
OK or NG

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.

A/T assembly connector

5. CHECK HARNESS FOR SHORT CIRCUIT

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

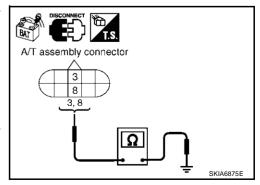
3 (L) - Ground : Continuity should not exist. 8 (R) - Ground : Continuity should not exist.

OK or NG

NG

OK >> GO TO 6.

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



Data link connector

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6, 14

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6. CHECK HARNESS FOR SHORT CIRCUIT

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

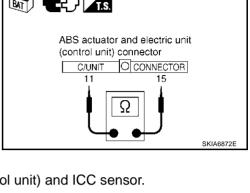
3 (L) - 10 (R) : Continuity should not exist.

OK or NG

OK >> GO TO 9.

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- >> 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.



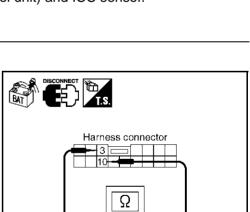
ABS actuator and electric unit

11,15

CONNECTOR

(control unit) connector

C/UNIT



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SKIA6878E

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

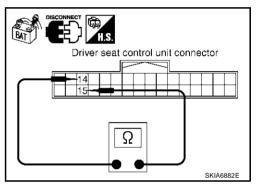
- 1. Disconnect driver seat control unit connector.
- 2. Check continuity between driver seat control unit harness connector B152 terminals 14 (OR) and 15 (SB).

OK or NG

OK >> GO TO 11.

NG >

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



Harness connector

3,10

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 ha

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

Driver seat control unit connector 14 15 14,15 SKIA6883E

12. CHECK HARNESS FOR SHORT CIRCUIT

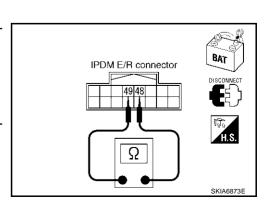
- Disconnect IPDM E/R connector.
- Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (R).

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.



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$\overline{13}$. Check harness for short circuit

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

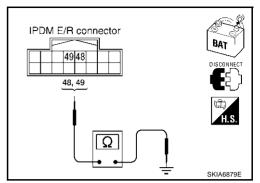
> 48 (L) - Ground : Continuity should not exist. 49 (R) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 14.

NG >> Repair harness between IPDM E/R and harness con-

nector 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 ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

AKS007UC

- 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	100 - 132

