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PRECAUTIONS

PFP:00001

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

AKS007PK

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

WARNING:

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

Precautions When Using CONSULT-II

AKS004YM

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

CAUTION:

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

CHECK POINTS FOR USING CONSULT-II

1. Has CONSULT-II been used without connecting CONSULT-II CONVERTER on this vehicle?
 - If YES, GO TO 2.
 - If NO, GO TO 5.
2. Is there any indication other than indications relating to CAN communication system in the self-diagnosis results?
 - If YES, GO TO 3.
 - If NO, GO TO 4.
3. Based on self-diagnosis results unrelated to CAN communication, carry out the inspection.
4. Malfunctions may be detected in self-diagnosis depending on control units carrying out CAN communication. Therefore, erase the self-diagnosis results.
5. Diagnose CAN communication system. Refer to [LAN-8, "CAN Communication Unit"](#) .

Precautions For Trouble Diagnosis CAN SYSTEM

AKS004YN

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

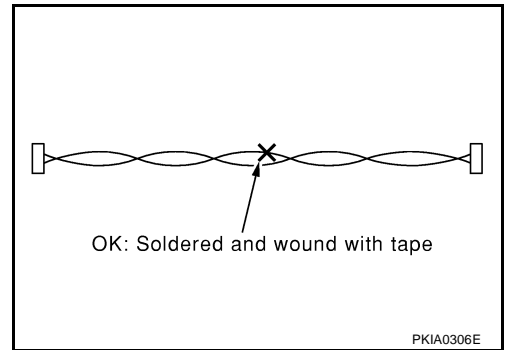
PRECAUTIONS

[CAN]

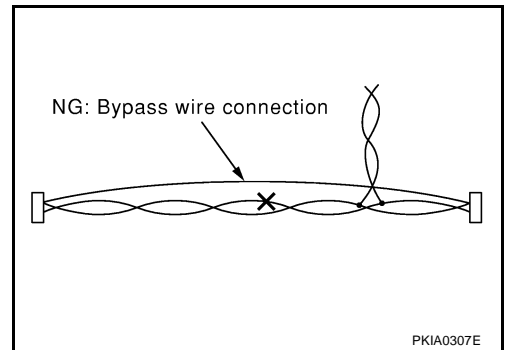
AKS004YO

Precautions For Harness Repair CAN SYSTEM

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



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



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CAN COMMUNICATION

PFP:23710

System Description

AKS004YP

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

CAN Communication Unit

AKS00ASC

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

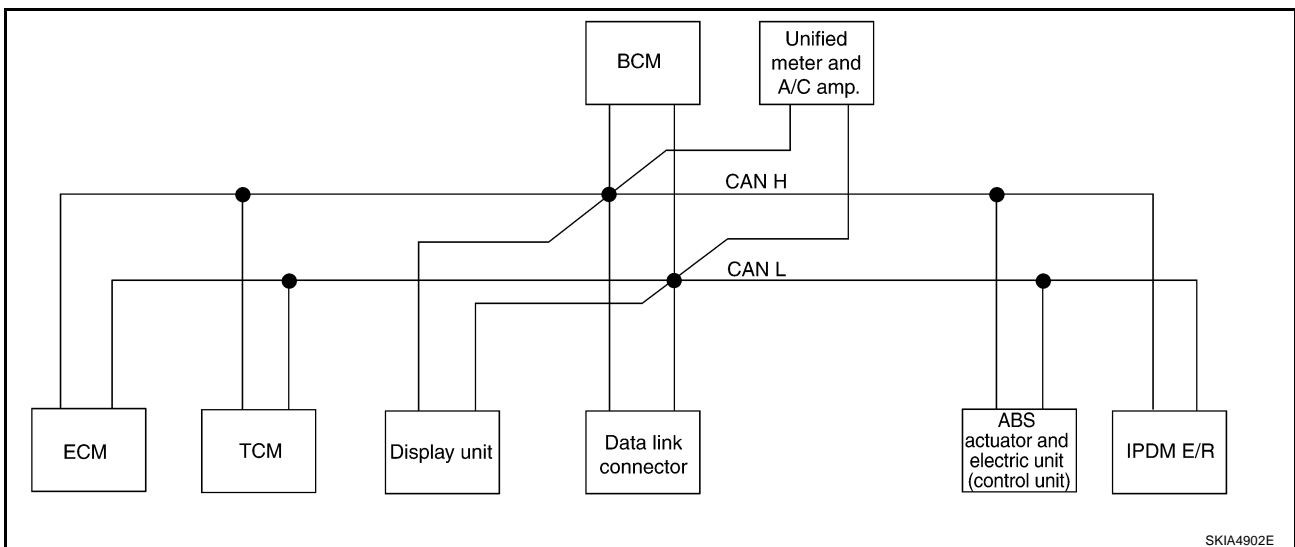
Body type	Wagon															
Axle	2WD								AWD							
Engine	VQ35DE															
Transmission	CVT															
Brake control	ABS				VDC				ABS				VDC			
Low tire pressure warning system					×	×	×	×					×	×	×	×
Navigation system		×		×		×		×		×		×		×		×
Automatic drive positioner			×	×			×	×			×	×			×	×
CAN system type	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
CAN system trouble diagnosis	LA N- 23	LA N- 52	LA N- 81	LA N- 115	LA N- 149	LA N- 182	LA N- 215	LA N- 252	LA N- 289	LA N- 321	LA N- 353	LA N- 389	LA N- 425	LA N- 460	LA N- 496	LA N- 536

×: Applicable

TYPE 1/TYPE 2/TYPE 3/TYPE 4

System Diagram

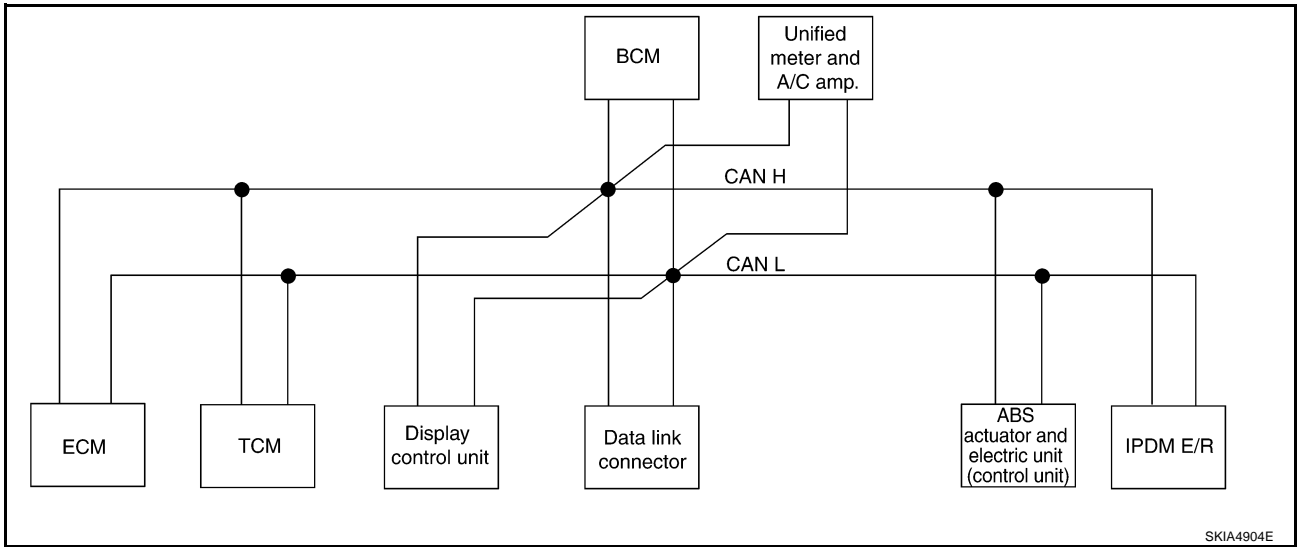
- Type1



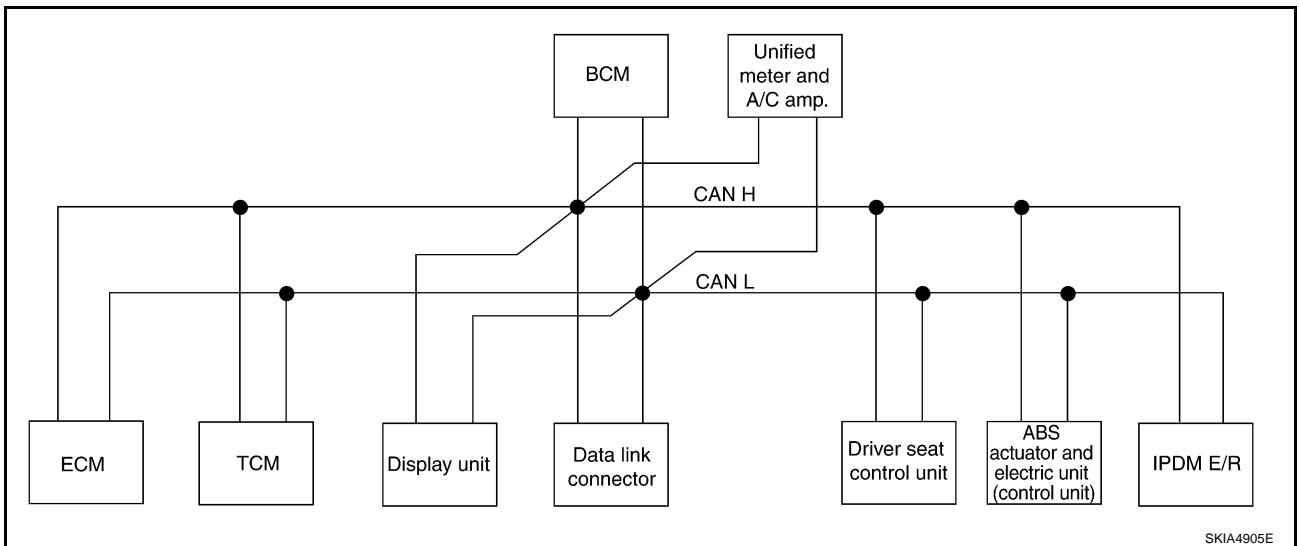
CAN COMMUNICATION

[CAN]

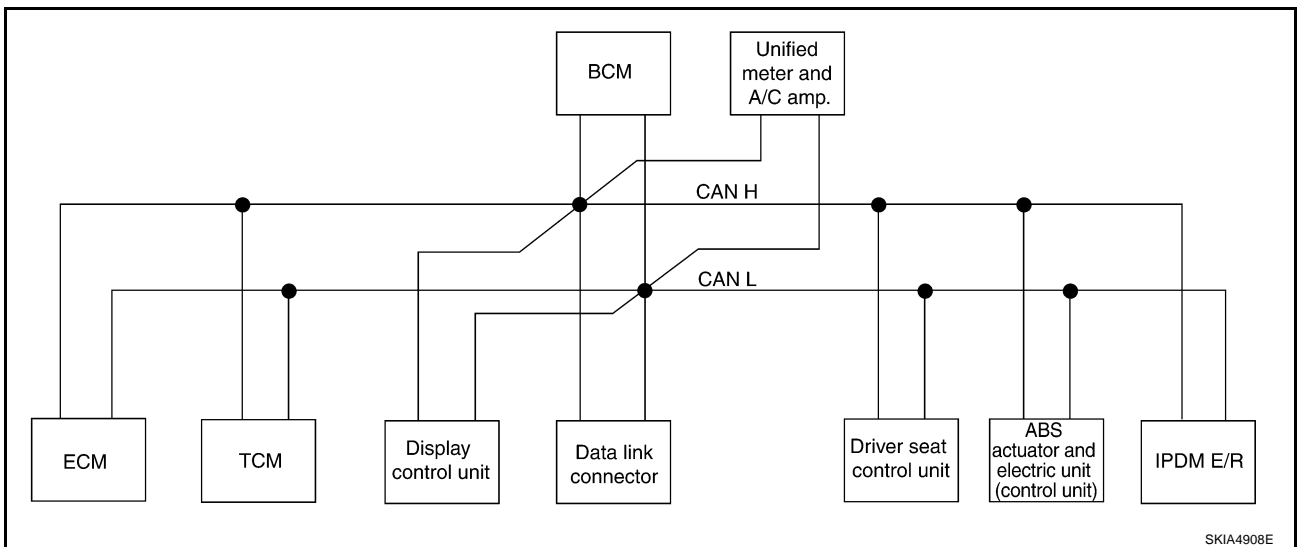
- Type2



- Type3



- Type4



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LAN

CAN COMMUNICATION

[CAN]

Input/output Signal Chart

T: Transmit R: Receive

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

CAN COMMUNICATION

[CAN]

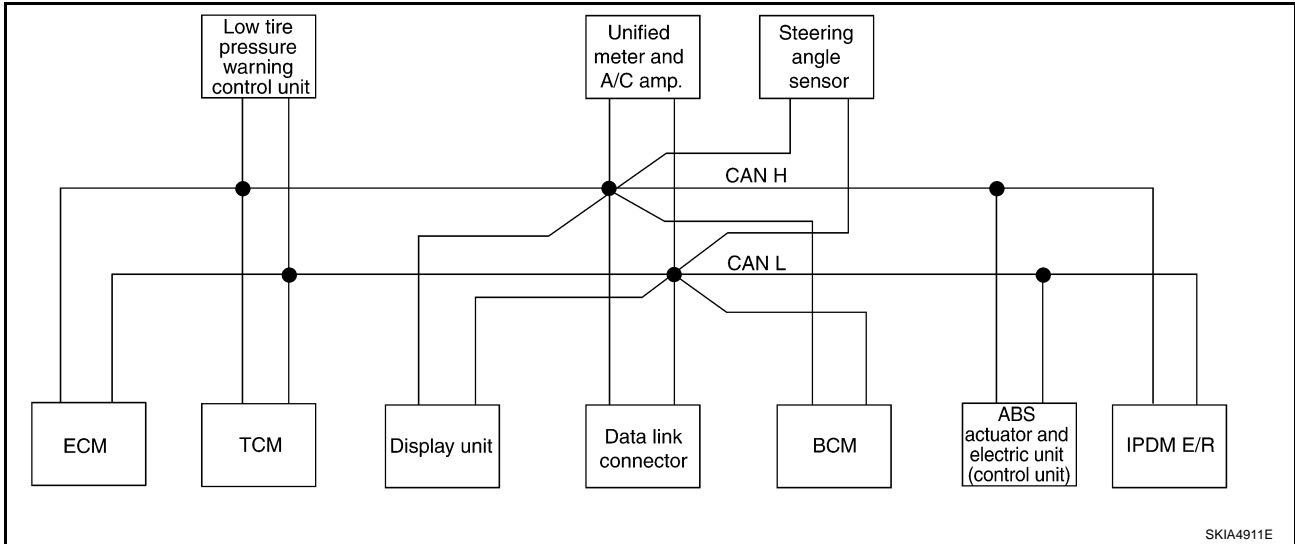
Signals	ECM	TCM	Display unit	Display control unit	BCM	Unified meter and A/C amp.	Driver seat control unit	ABS actuator and electric unit (control unit)	IPDM E/R
Oil pressure switch signal					R				T
Buzzer output signal					T	R			
Fuel level sensor signal	R					T			
Fuel level low warning signal			R	R		T			
Malfunction indicator lamp signal	T					R			
ASCD SET lamp signal	T					R			
ASCD CRUISE lamp signal	T					R			
Input shaft revolution signal	R	T							
Output shaft revolution signal	R	T							
Front wiper request signal					T				R
Front wiper stop position signal					R				T
Rear window defogger switch signal					T				R
Rear window defogger control signal	R		R	R					T
Theft warning horn request signal					T				R
Horn chirp signal					T				R
ABS warning lamp signal						R		T	
Brake warning lamp signal						R		T	
System setting signal			T	T	R		R		
			R	R	T		T		
Distance to empty signal			R	R		T			
Manual mode signal		R				T			
Not manual mode signal		R				T			
Manual mode shift up signal		R				T			
Manual mode shift down signal		R				T			
Manual mode indicator signal		T				R			

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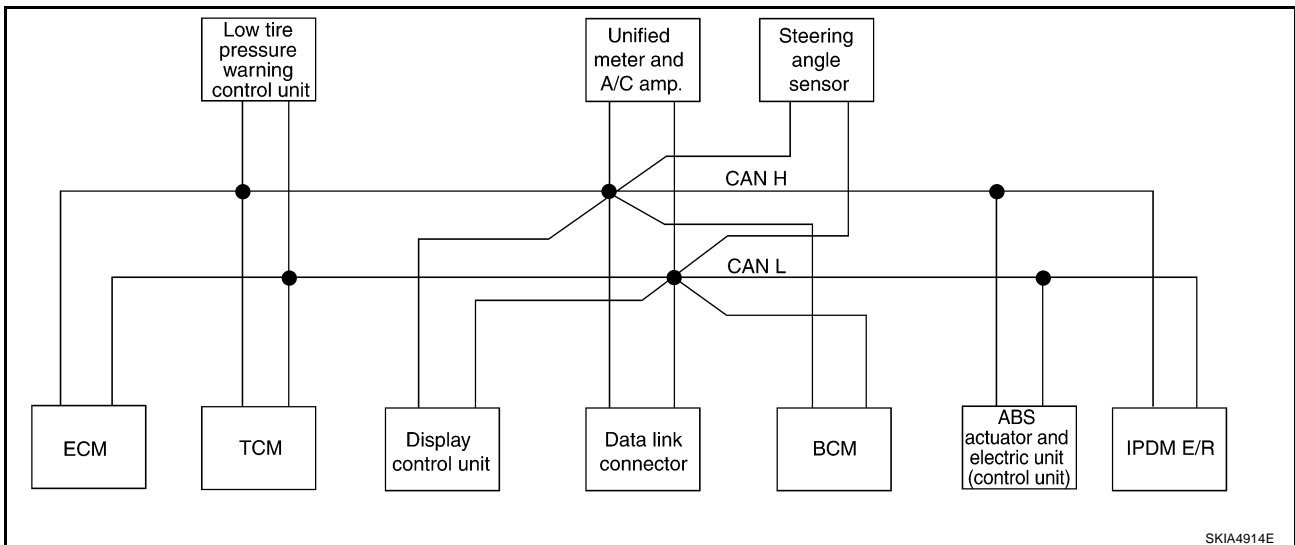
TYPE 5/TYPE 6/TYPE 7/TYPE 8

System Diagram

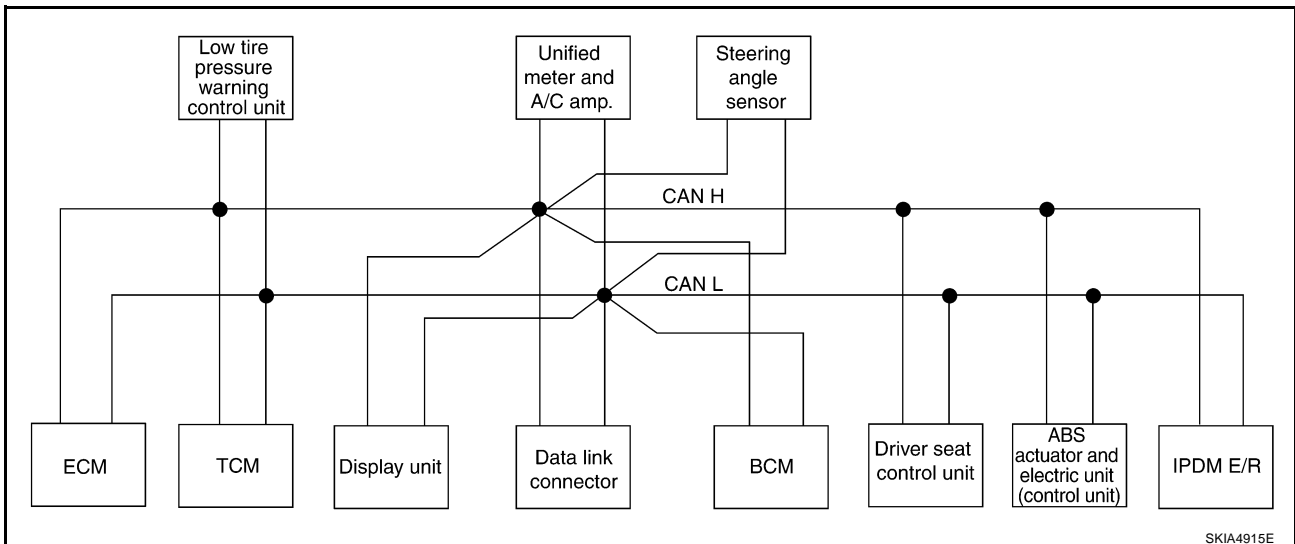
- Type5



- Type6



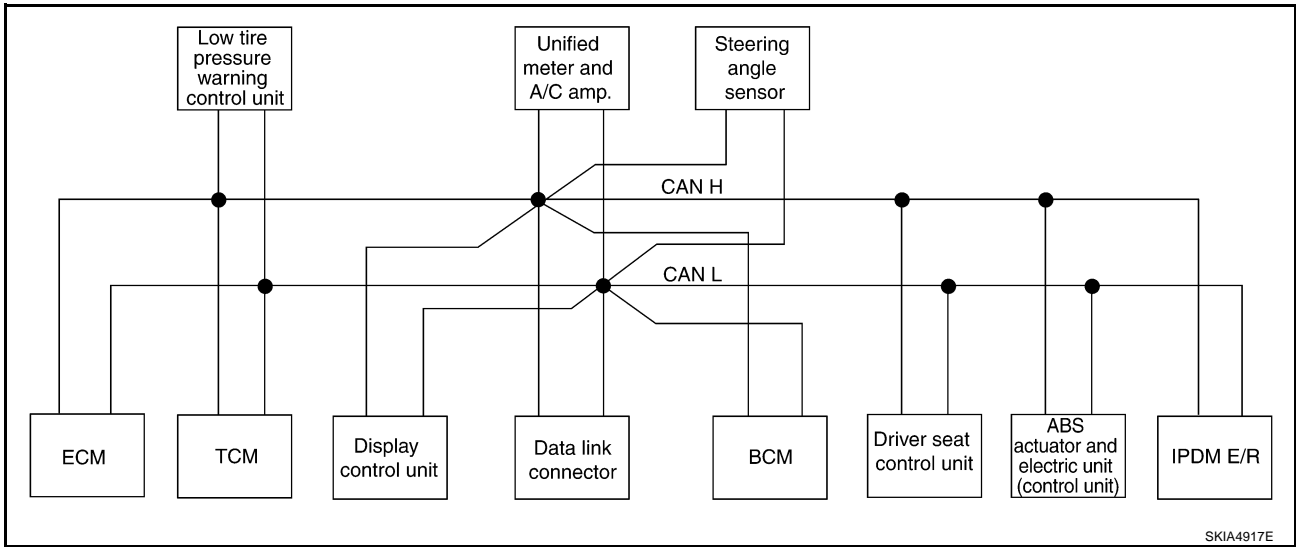
- Type7



CAN COMMUNICATION

[CAN]

● Type8



SKIA4917E

Input/output Signal Chart

T: Transmit R: Receive

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

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CAN COMMUNICATION

[CAN]

Signals	ECM	TCM	Low tire pressure warning control unit	Display unit	Display control unit	BCM	Unified meter and A/C amp.	Steering angle sensor	Driver seat control unit	ABS actuator and electric unit (control unit)	IPDM E/R
A/C switch/indicator signal				T	T		R				
				R	R		T				
Cooling fan speed request signal	T										R
Position lights request signal						T	R				R
Low beam request signal						T					R
Low beam status signal	R										T
High beam request signal						T	R				R
High beam status signal	R										T
Front fog lights request signal						T					R
Vehicle speed signal		R					R			T	
	R		R		R	R	T		R		
Sleep request 1 signal						T	R				
Sleep request 2 signal						T					R
Door switch signal				R	R	T	R		R		R
Turn indicator signal						T	R				
Key fob ID signal						T			R		
Key fob door unlock signal						T			R		
Seat belt buckle switch signal						R	T				
Oil pressure switch signal						R					T
						T	R				
Buzzer output signal						T	R				
Fuel level sensor signal	R						T				
Fuel level low warning signal				R	R		T				
Malfunction indicator signal	T						R				
ASCD SET lamp signal	T						R				
ASCD CRUISE lamp signal	T						R				
Front wiper request signal						T					R
Front wiper stop position signal						R					T
Rear window defogger switch signal						T					R
Rear window defogger control signal	R			R	R						T
Theft warning horn request signal						T					R
Horn chirp signal						T					R
Steering angle sensor signal								T		R	
Tire pressure signal			T				R				
Tire pressure data signal			T	R	R						
CVT position indicator signal		T					R			R	
ABS warning lamp signal							R			T	
VDC OFF indicator lamp signal							R			T	

CAN COMMUNICATION

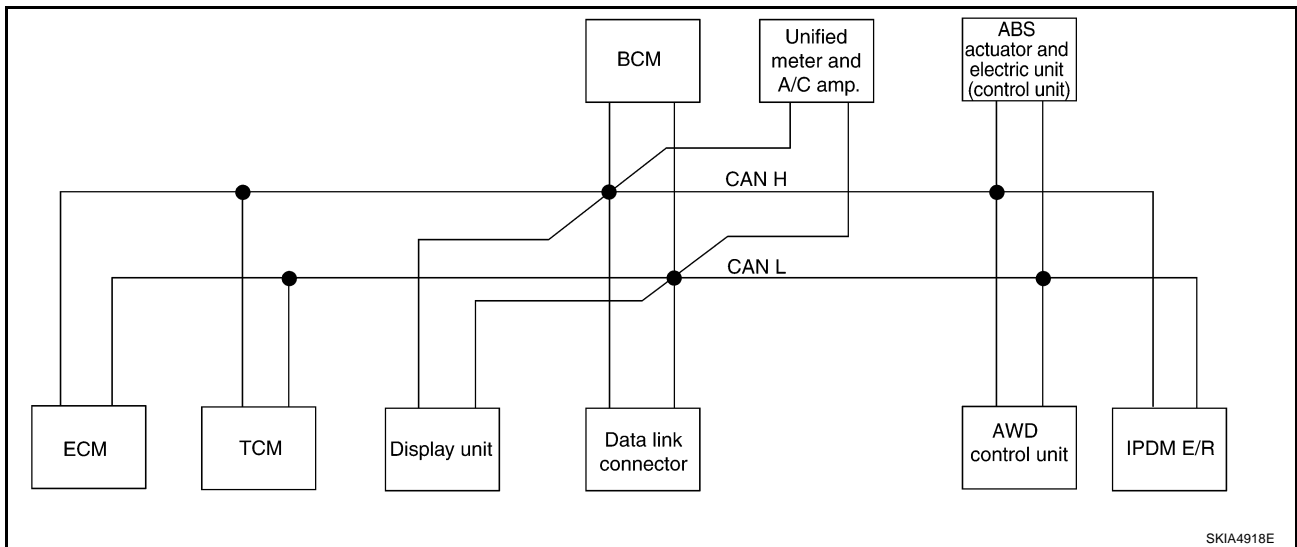
[CAN]

Signals	ECM	TCM	Low tire pressure warning control unit	Display unit	Display control unit	BCM	Unified meter and A/C amp.	Steering angle sensor	Driver seat control unit	ABS actuator and electric unit (control unit)	IPDM E/R
SLIP indicator lamp signal							R			T	
Brake warning lamp signal							R			T	
System setting signal				T	T	R			R		
				R	R	T			T		
Distance to empty signal				R	R		T				
Manual mode signal		R					T				
Not manual mode signal		R					T				
Manual mode shift up signal		R					T				
Manual mode shift down signal		R					T				
Manual mode indicator signal		T					R				

TYPE 9/TYPE10/TYPE 11/TYPE 12

System Diagram

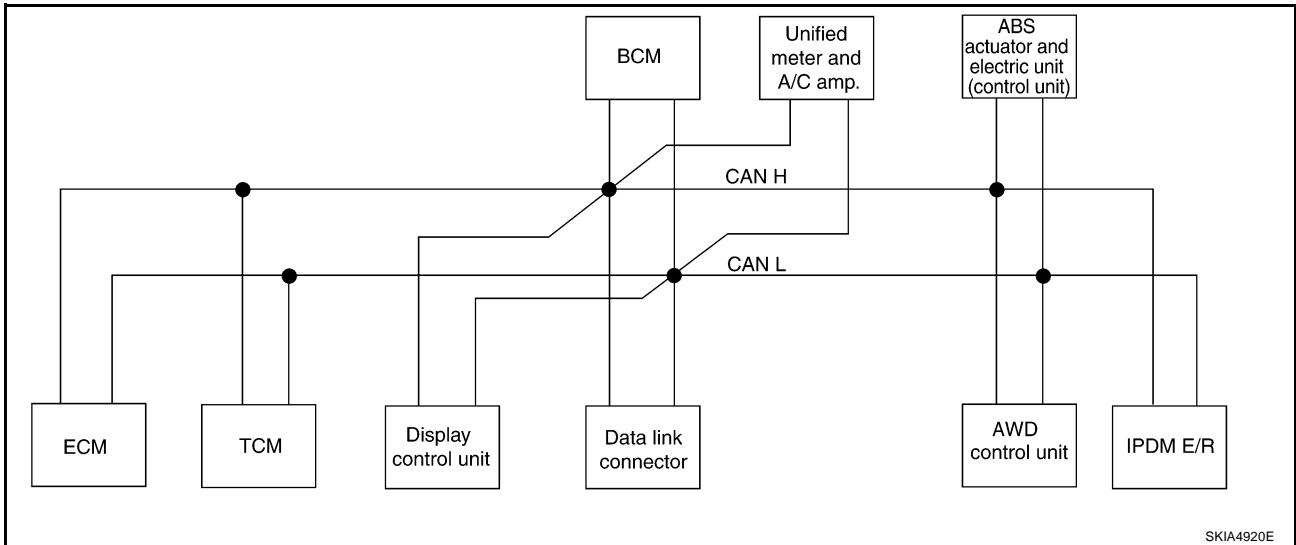
- Type9



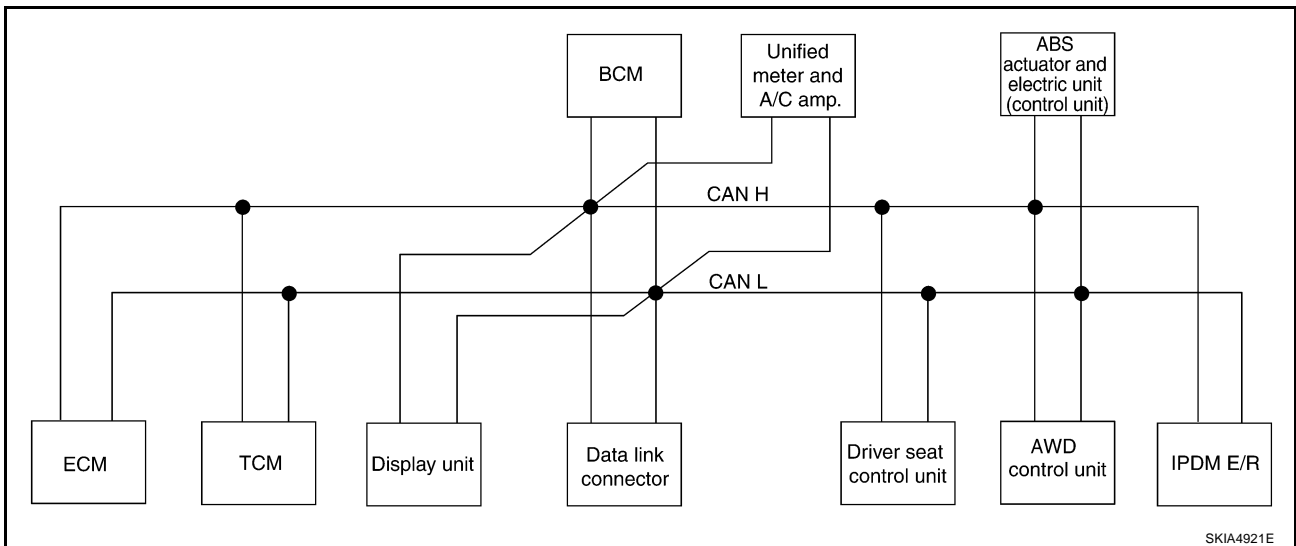
CAN COMMUNICATION

[CAN]

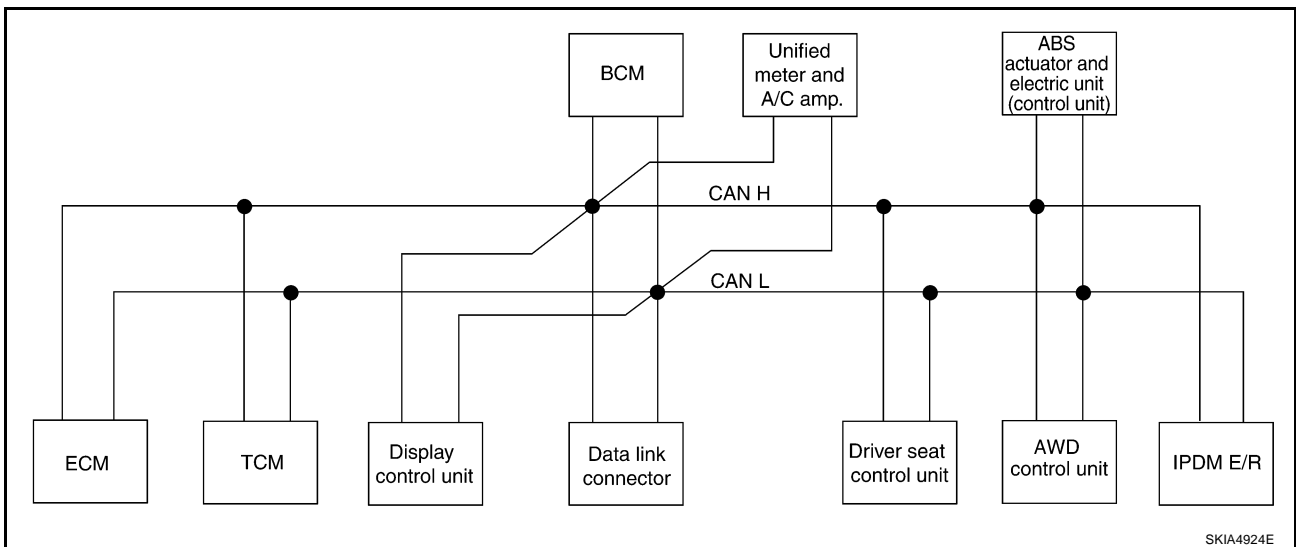
- Type10



- Type11



- Type12



CAN COMMUNICATION

[CAN]

Input/output Signal Chart

T: Transmit R: Receive

Signals	ECM	TCM	Dis- play unit	Dis- play control unit	BCM	Uni- fied meter and A/ C amp.	Driver seat control unit	AWD control unit	ABS actua- tor and elec- tric unit (con- trol unit)	IPDM E/R
CVT position indicator signal		T				R				
Second position signal		R				T				
Second position indicator signal		T				R				
Engine speed signal	T	R		R		R		R		
Engine status signal	T				R					
Engine coolant temperature signal	T					R				
Accelerator pedal position signal	T	R						R		
Closed throttle position signal	T	R								
Wide open throttle position signal	T	R								
Key switch signal					T		R			
Ignition switch signal					T		R			R
P range signal		T					R			
Stop lamp switch signal								R	T	
		R				T				
Fuel consumption monitor signal	T					R				
CVT self-diagnosis signal	R	T								
ABS operation signal		R							T	
A/C switch signal	R				T					
A/C compressor request signal	T									R
Blower fan motor switch signal	R				T					
			T	T		R				
A/C switch/indicator signal			R	R		T				
Cooling fan speed request signal	T									R
Position lights request signal					T	R				R
Low beam request signal					T					R
Low beam status signal	R									T
High beam request signal					T	R				R
High beam status signal	R									T
Front fog lights request signal					T					R
Vehicle speed signal		R				R		R	T	
	R			R	R	T	R			
Sleep request 1 signal					T	R				
Sleep request 2 signal					T					R
Door switch signal			R	R	T	R	R			R
Key fob ID signal					T		R			
Key fob door unlock signal					T		R			
Turn indicator signal					T	R				
Seat belt buckle switch signal					R	T				

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CAN COMMUNICATION

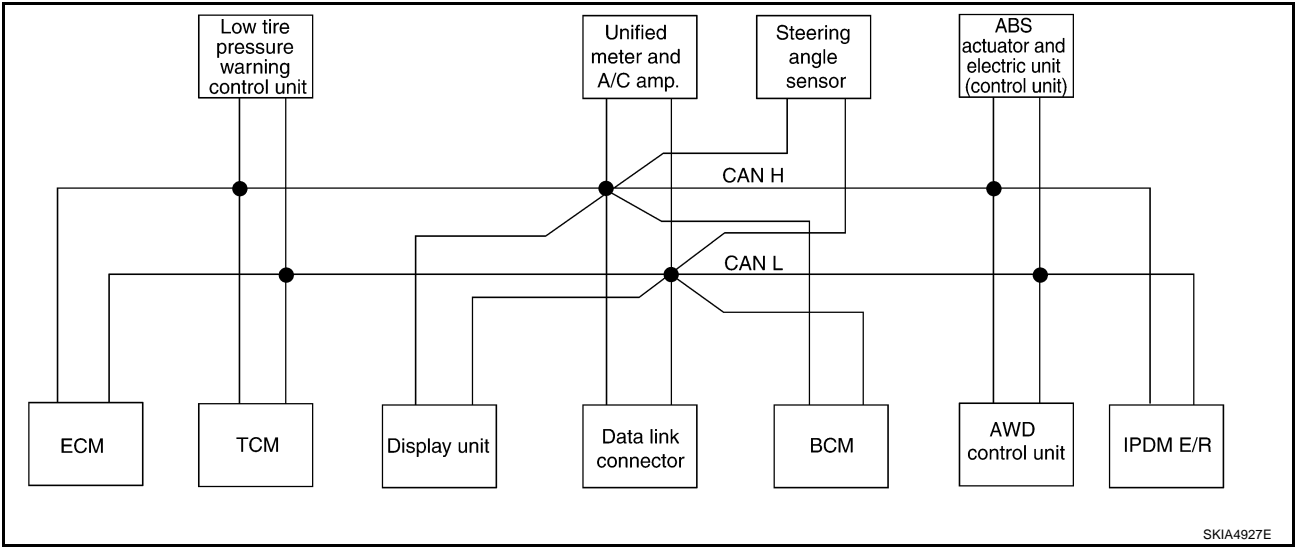
[CAN]

Signals	ECM	TCM	Display unit	Display control unit	BCM	Unified meter and A/C amp.	Driver seat control unit	AWD control unit	ABS actuator and electric unit (control unit)	IPDM E/R
Oil pressure switch signal					R					T
					T	R				
Buzzer output signal					T	R				
Fuel level sensor signal	R					T				
Fuel level low warning signal			R	R		T				
Malfunction indicator lamp signal	T					R				
ASCD SET lamp signal	T					R				
ASCD CRUISE lamp signal	T					R				
Input shaft revolution signal	R	T								
Output shaft revolution signal	R	T								
Front wiper request signal					T					R
Front wiper stop position signal					R					T
Rear window defogger switch signal					T					R
Rear window defogger control signal	R		R	R						T
Engine and CVT integrated control signal	T	R								
	R	T								
Theft warning horn request signal					T					R
Horn chirp signal					T					R
ABS warning lamp signal						R			T	
Brake warning lamp signal						R			T	
System setting signal			T	T	R		R			
			R	R	T		T			
AWD warning lamp signal						R		T		
AWD lock indicator lamp signal						R		T		
AWD lock switch signal						T		R		
Parking brake switch signal						T		R		
Distance to empty signal			R	R		T				
Manual mode signal		R				T				
Not manual mode signal		R				T				
Manual mode shift up signal		R				T				
Manual mode shift down signal		R				T				
Manual mode indicator signal		T				R				

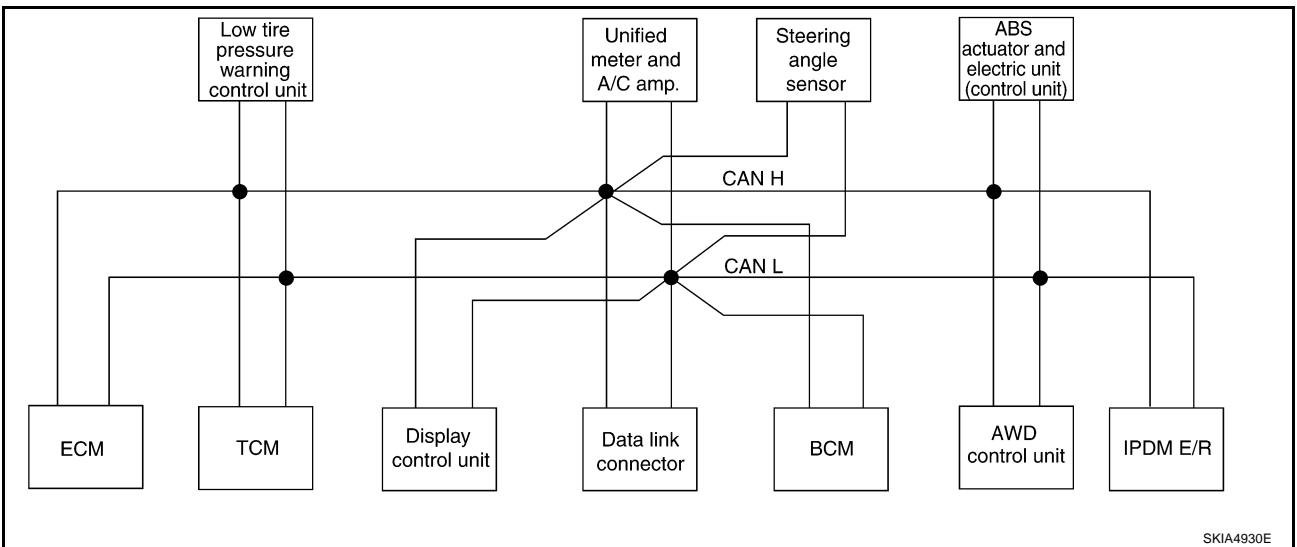
TYPE 13/TYPER 14/TYPER 15/TYPER 16

System Diagram

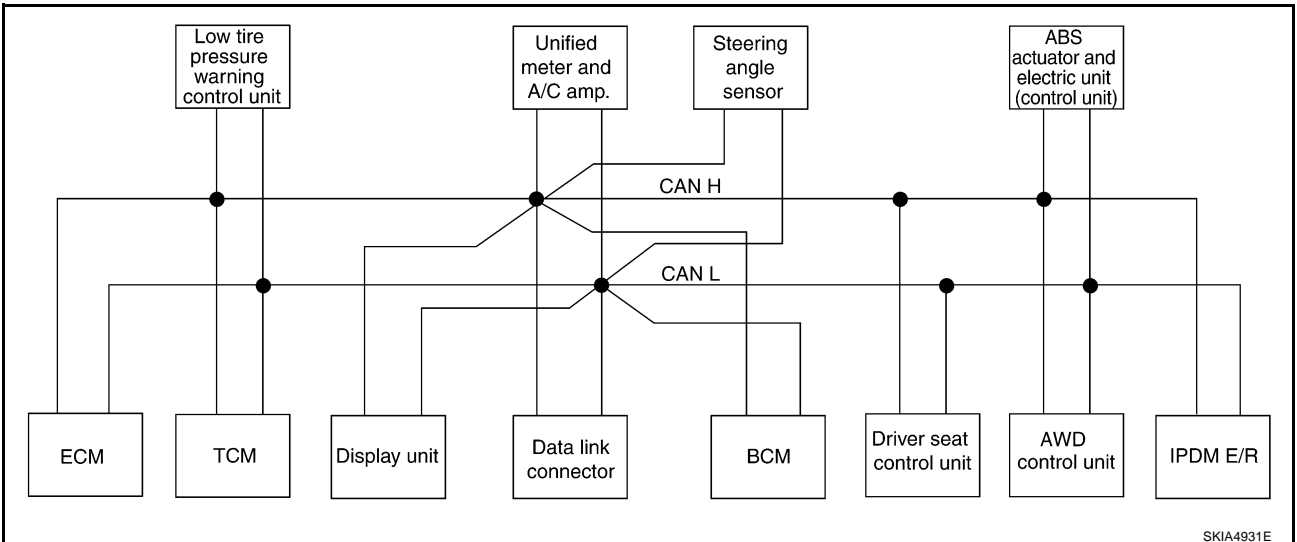
- Type13



- Type14



- Type15



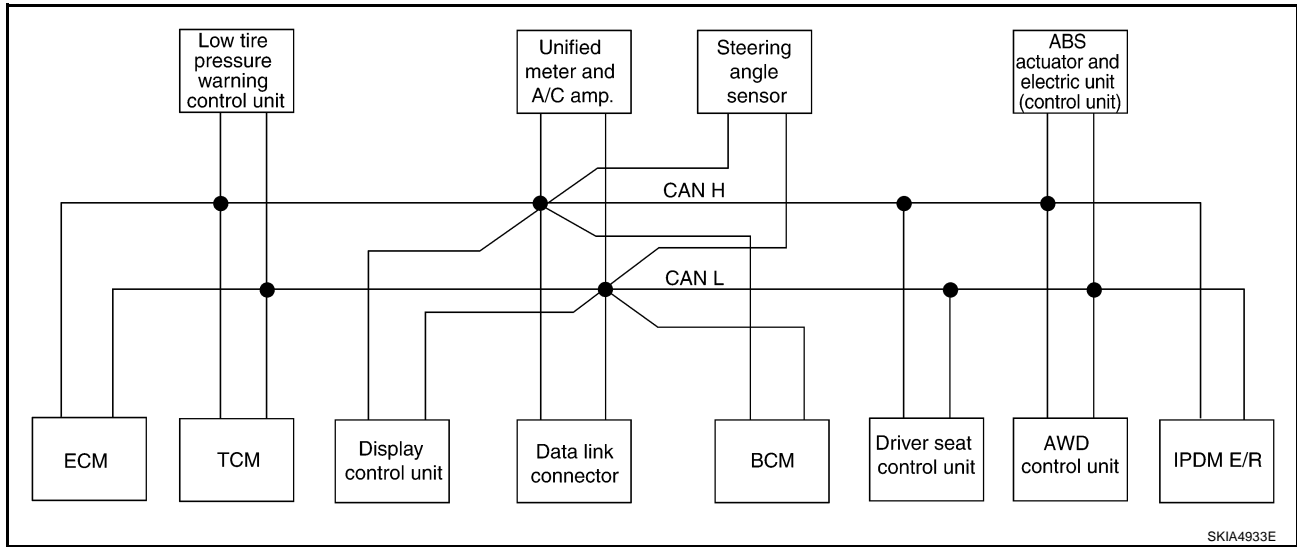
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CAN COMMUNICATION

[CAN]

● Type16



Input/output Signal Chart

T: Transmit R: Receive

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

CAN COMMUNICATION

[CAN]

Signals	ECM	TCM	Low tire pressure warning control unit	Display unit	Display control unit	BCM	Unified meter and A/C amp.	Steering angle sensor	Driver seat control unit	AWD control unit	ABS actuator and electric unit (control unit)	IPDME/R
Blower fan motor switch signal	R					T						
A/C switch/indicator signal				T	T		R					
				R	R		T					
Cooling fan speed request signal	T											R
Position lights request signal						T	R					R
Low beam request signal						T						R
Low beam status signal	R											T
High beam request signal						T	R					R
High beam status signal	R											T
Front fog lights request signal						T						R
Vehicle speed signal		R					R			R	T	
	R		R		R	R	T		R			
Sleep request 1 signal						T	R					
Sleep request 2 signal						T						R
Door switch signal				R	R	T	R		R			R
Turn indicator signal						T	R					
Key fob ID signal						T			R			
Key fob door unlock signal						T			R			
Seat belt buckle switch signal						R	T					
Oil pressure switch signal						R						T
						T	R					
Buzzer output signal						T	R					
Fuel level sensor signal	R						T					
Fuel level low warning signal				R	R		T					
Malfunction indicator signal	T						R					
ASCD SET lamp signal	T						R					
ASCD CRUISE lamp signal	T						R					
Front wiper request signal						T						R
Front wiper stop position signal						R						T
Rear window defogger switch signal						T						R
Rear window defogger control signal	R			R	R							T
Theft warning horn request signal						T						R
Horn chirp signal						T						R
Steering angle sensor signal								T			R	
Tire pressure signal			T				R					
Tire pressure data signal			T	R	R							
CVT position indicator signal		T					R				R	
ABS warning lamp signal							R				T	

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LAN

CAN COMMUNICATION

[CAN]

Signals	ECM	TCM	Low tire pressure warning control unit	Display unit	Display control unit	BCM	Unified meter and A/C amp.	Steering angle sensor	Driver seat control unit	AWD control unit	ABS actuator and electric unit (control unit)	IPDM E/R
VDC OFF indicator lamp signal							R				T	
SLIP indicator lamp signal							R				T	
Brake warning lamp signal							R				T	
System setting signal				T	T	R			R			
				R	R	T			T			
AWD warning lamp signal							R			T		
AWD lock indicator lamp signal							R			T		
AWD lock switch signal							T			R		
Parking brake switch signal							T			R		
Distance to empty signal				R	R		T					
Manual mode signal		R					T					
Not manual mode signal		R					T					
Manual mode shift up signal		R					T					
Manual mode shift down signal		R					T					
Manual mode indicator signal		T					R					

CAN SYSTEM (TYPE 1)

PF2:23710

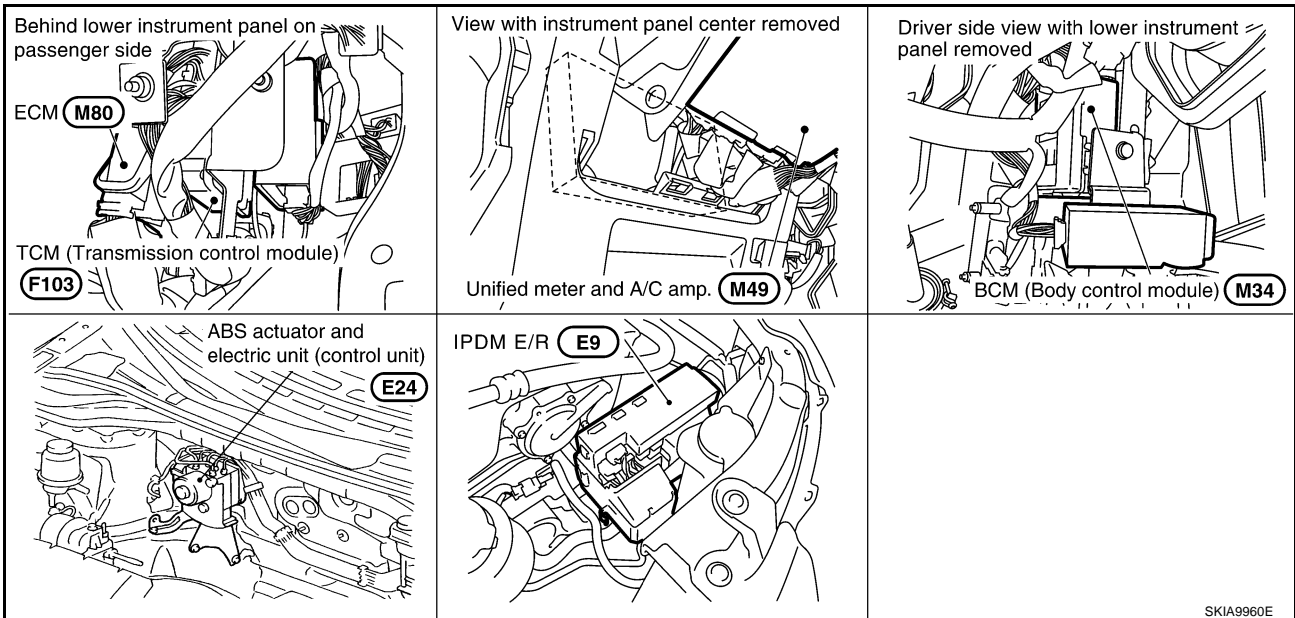
System Description

AKS0068S

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

Component Parts and Harness Connector Location

AKS0068T



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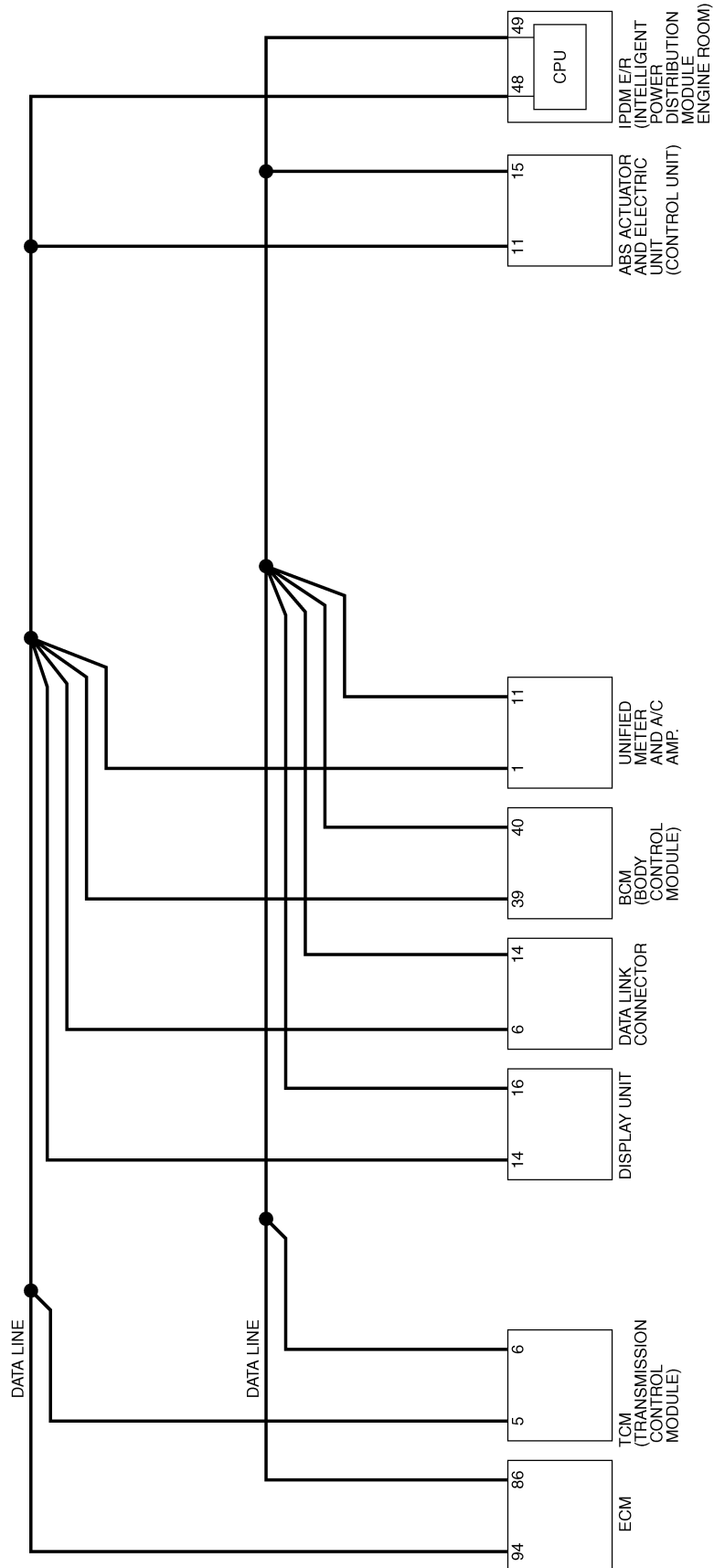
LAN

CAN SYSTEM (TYPE 1)

[CAN]

Schematic

AKS0069A



TKWB0121E

CAN SYSTEM (TYPE 1)

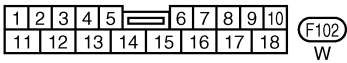
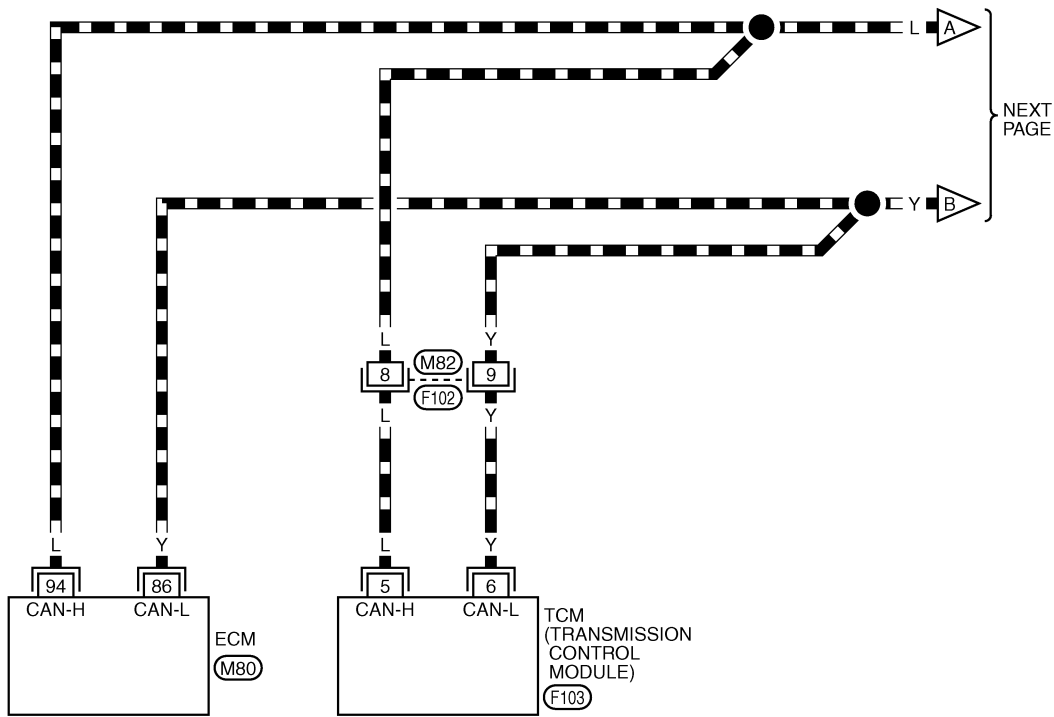
[CAN]

AKS0068U

Wiring Diagram - CAN -

LAN-CAN-01

▬ : DATA LINE



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

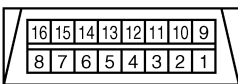
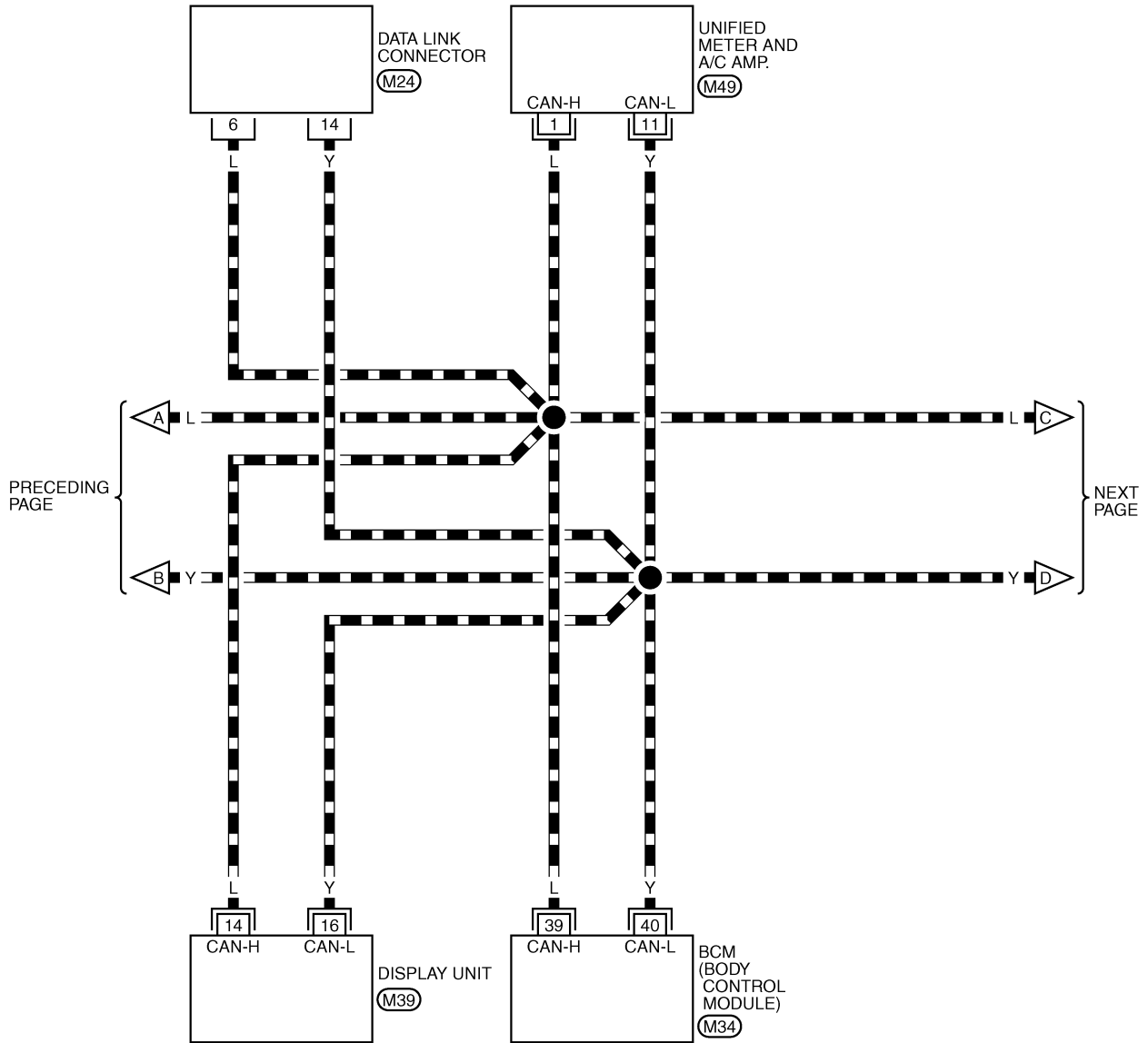
TKWA0790E

CAN SYSTEM (TYPE 1)

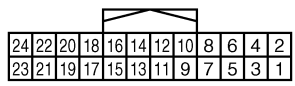
[CAN]

LAN-CAN-02

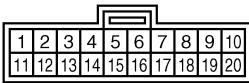
▬ : DATA LINE



(M24)
W



(M39)
W



(M49)
GR

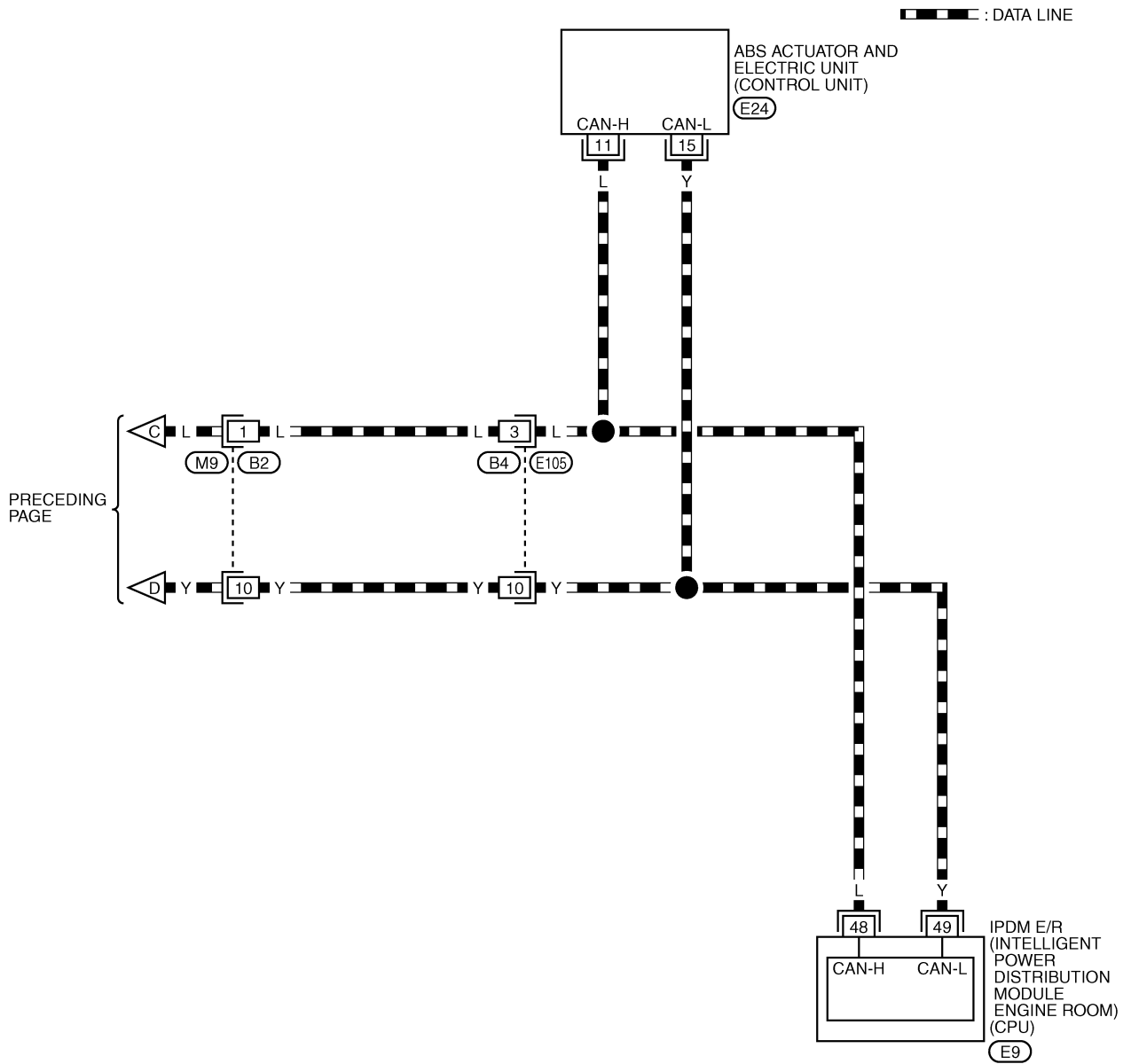


REFER TO THE FOLLOWING.

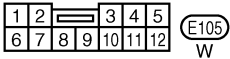
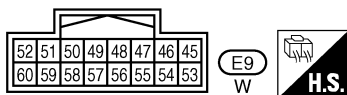
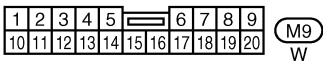
(M34) -ELECTRICAL UNITS

TKWB0122E

LAN-CAN-03



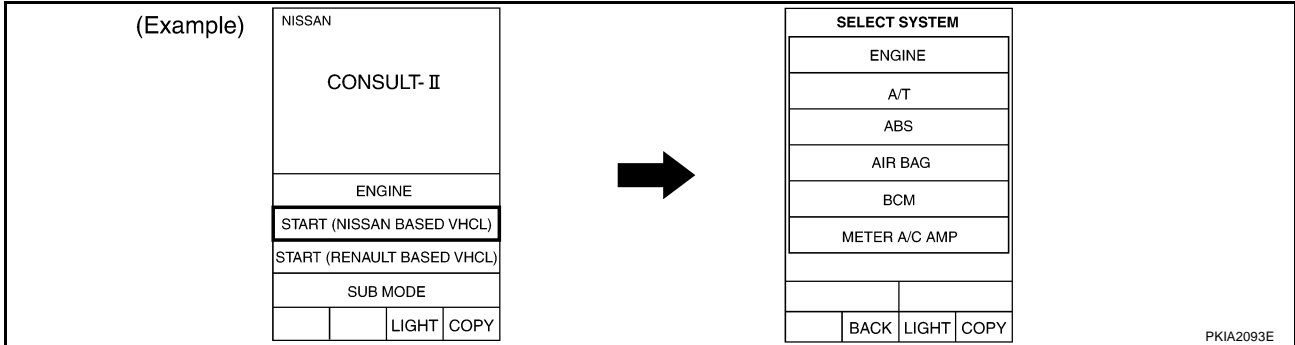
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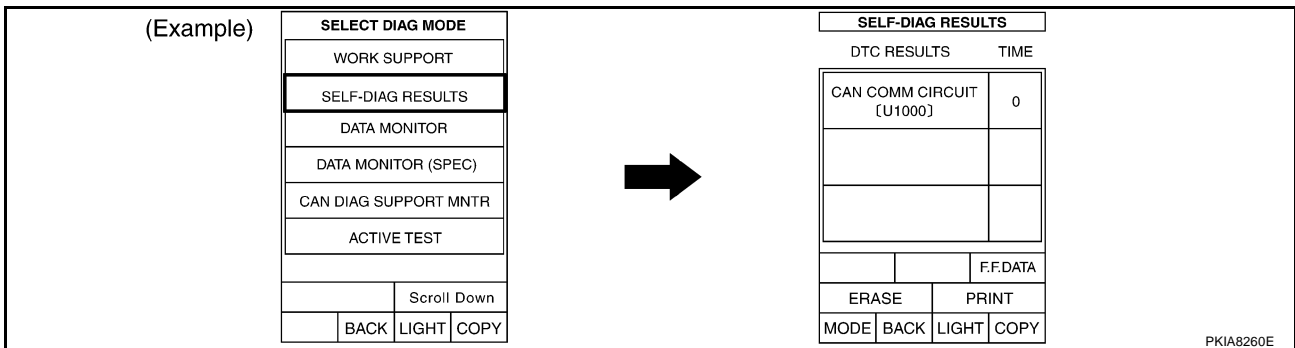
REFER TO THE FOLLOWING.
(E24) -ELECTRICAL UNITS

Work Flow

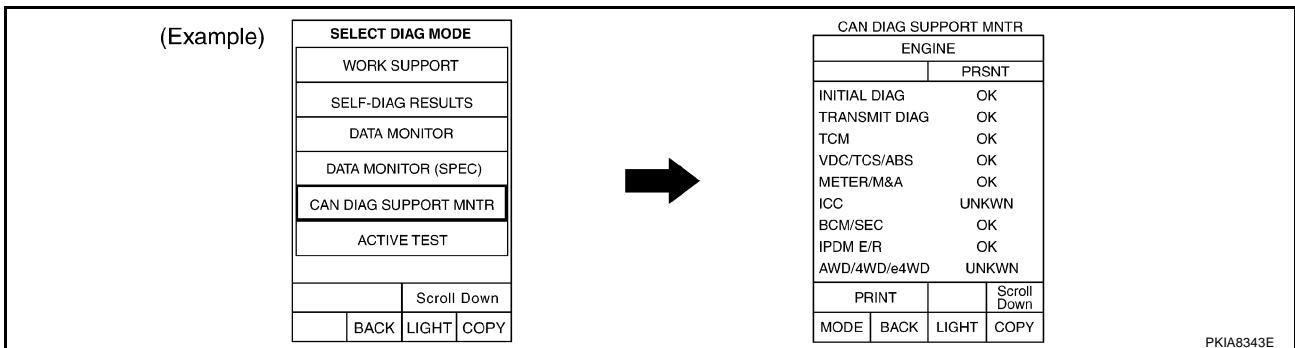
- When there are no indications of "TRANSMISSION", "BCM", "METER A/C AMP" or "IPDM E/R" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



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



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "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 [LAN-30, "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-30, "CHECK SHEET"](#) .

NOTE:

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

- Check CAN communication line of the integrated display system. Refer to [AV-101, "CAN Communication Line Check"](#) .

- Attach the CAN DIAG MONITOR check sheet onto the check sheet. Refer to [LAN-30, "CHECK SHEET"](#) .

- Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG MONITOR check sheet. Refer to [LAN-30, "CHECK SHEET"](#) .

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 [AV-101, "CAN Communication Line Check"](#).

9. According to the check sheet results (example), start inspection. Refer to [LAN-32, "CHECK SHEET RESULTS \(EXAMPLE\)"](#).

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CAN SYSTEM (TYPE 1)

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Attach copy of
ENGINE
SELF-DIAG RESULTS

Attach copy of
TRANSMISSION
SELF-DIAG RESULTS

Attach copy of
BCM
SELF-DIAG RESULTS

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

Attach copy of
ABS
SELF-DIAG RESULTS

Attach copy of
IPDM E/R
SELF-DIAG RESULTS

Attach copy of
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CAN DIAG SUPPORT
MNTR

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TRANSMISSION
CAN DIAG SUPPORT
MNTR

Attach copy of
BCM
CAN DIAG SUPPORT
MNTR

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

Attach copy of
ABS
CAN DIAG SUPPORT
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Attach copy of
IPDM E/R
CAN DIAG SUPPORT
MNTR

PKIA8345E

CHECK SHEET RESULTS (EXAMPLE)

NOTE:

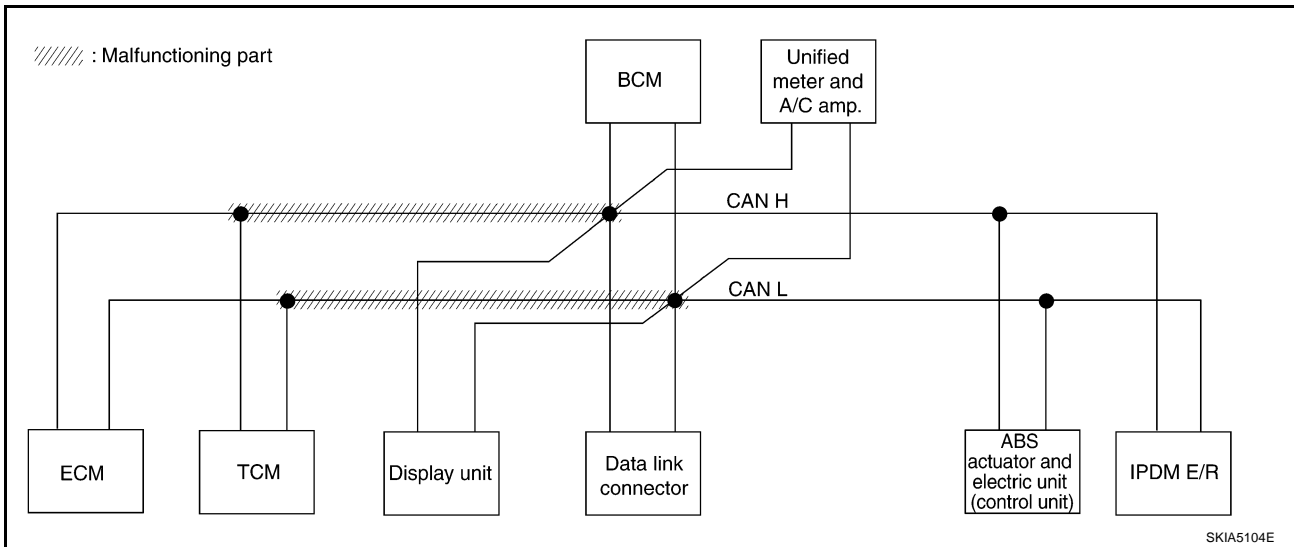
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

Case 1

Check harness between TCM and data link connector. Refer to [LAN-43. "Circuit Check Between TCM and Data Link Connector"](#).

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

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CAN SYSTEM (TYPE 1)

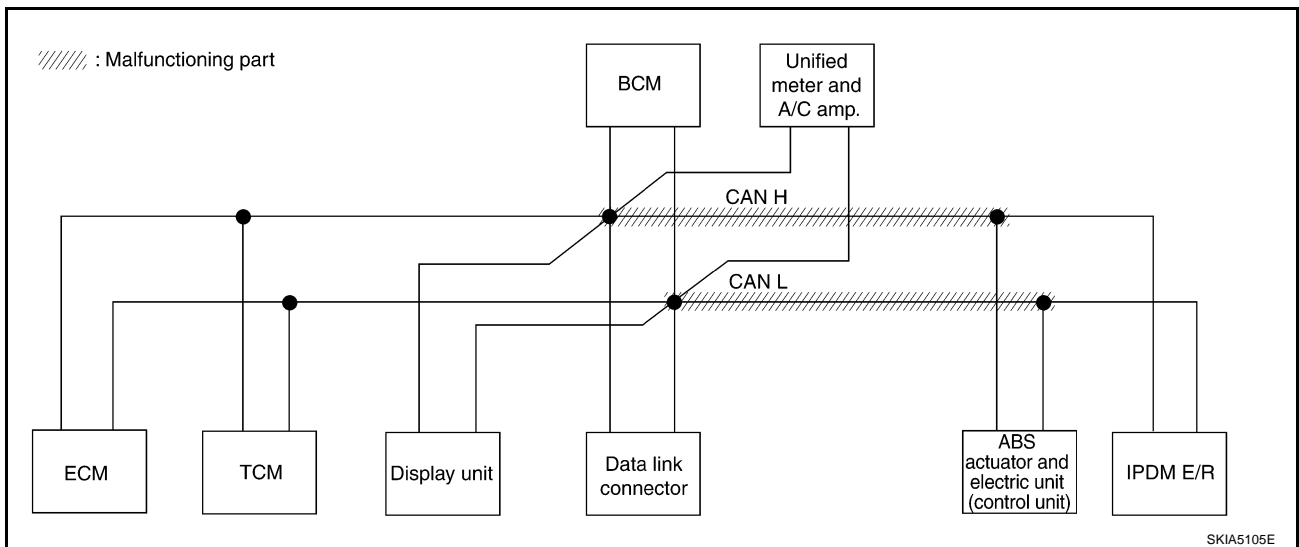
[CAN]

Case 2

Check harness between data link connector and ABS actuator and electric unit (control unit). Refer to [LAN-43](#), "Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit)".

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

PKIA6347E



SKIA5105E

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CAN SYSTEM (TYPE 1)

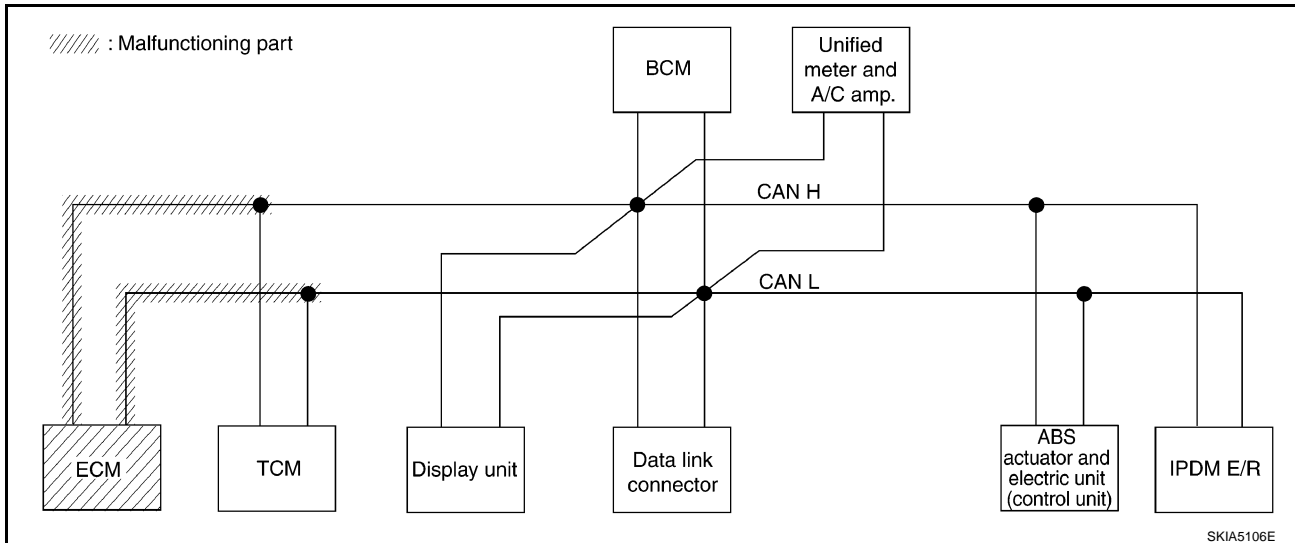
[CAN]

Case 3

Check ECM circuit. Refer to [LAN-44, "ECM Circuit Check"](#) .

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

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CAN SYSTEM (TYPE 1)

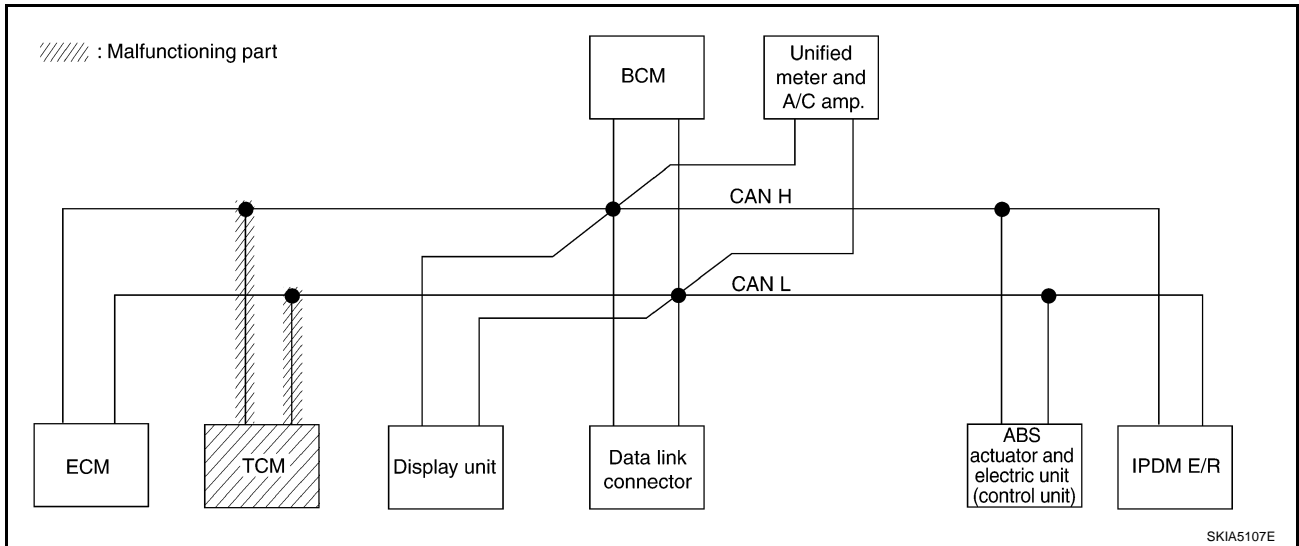
[CAN]

Case 4

Check TCM circuit. Refer to [LAN-45, "TCM Circuit Check"](#) .

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

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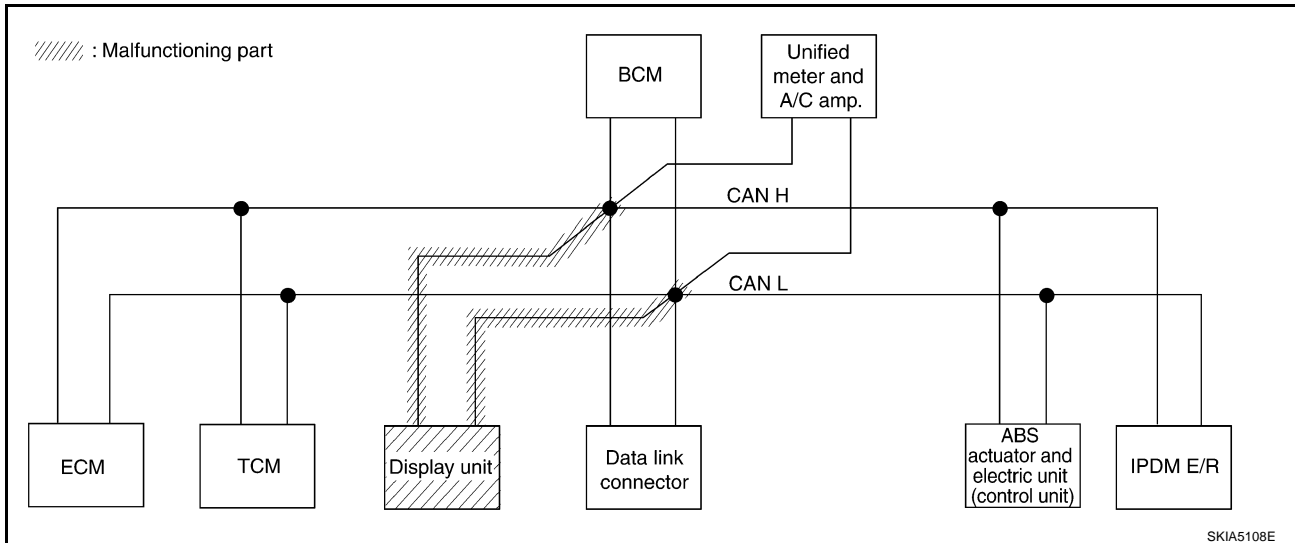
[CAN]

Case 5

Check display unit circuit. Refer to [LAN-45, "Display Unit Circuit Check"](#) .

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

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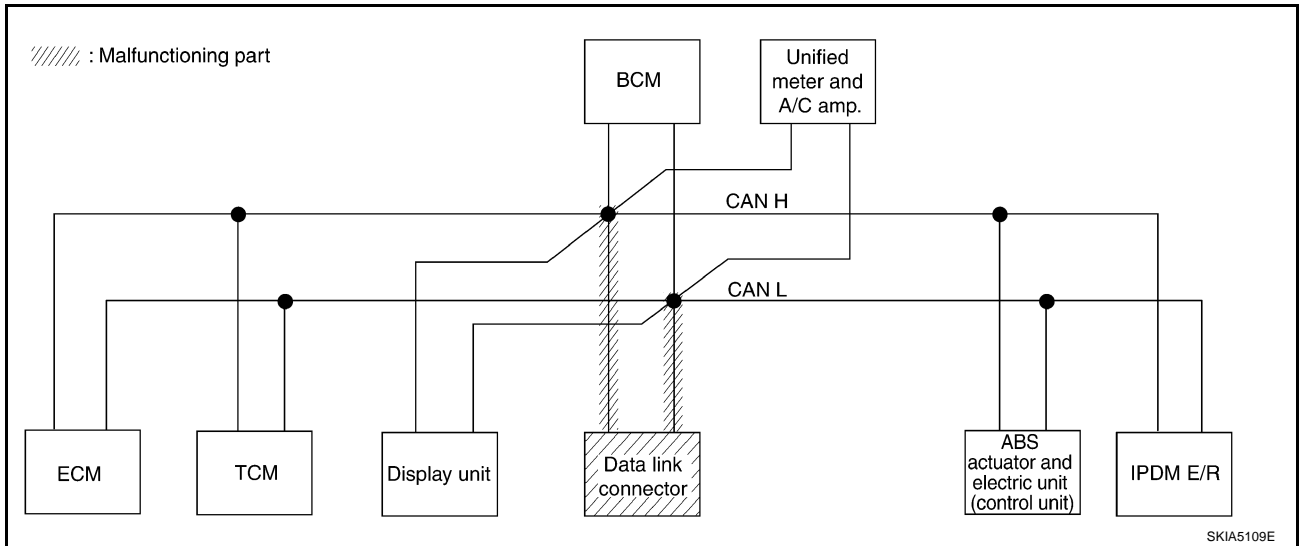


Case 6

Check data link connector circuit. Refer to [LAN-46, "Data Link Connector Circuit Check"](#) .

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

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CAN SYSTEM (TYPE 1)

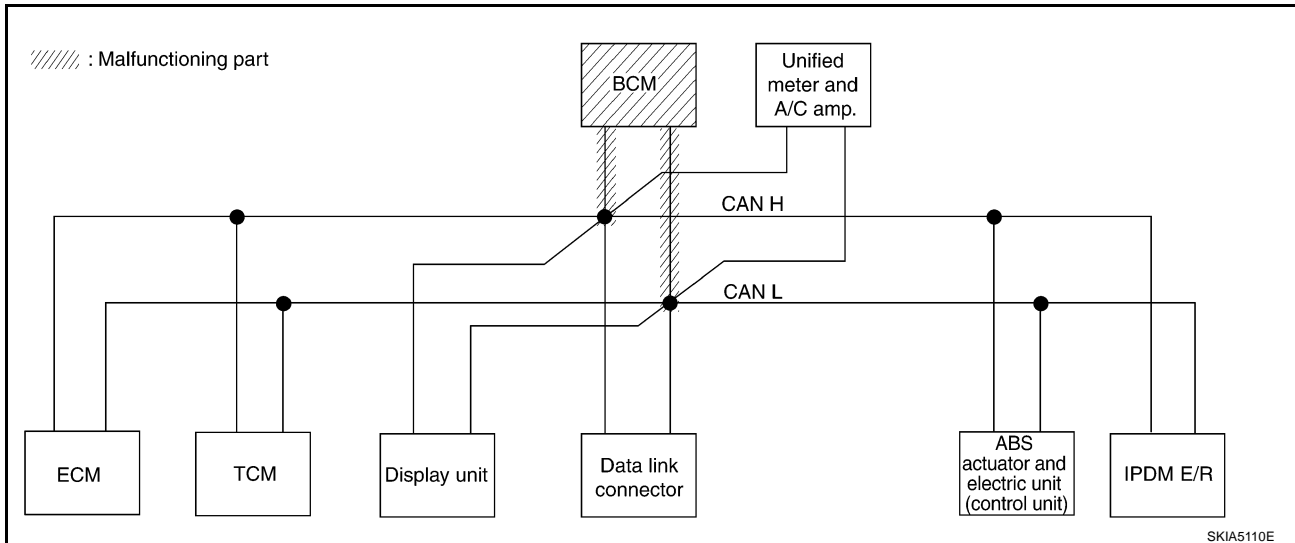
[CAN]

Case 7

Check BCM circuit. Refer to [LAN-46, "BCM Circuit Check"](#) .

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

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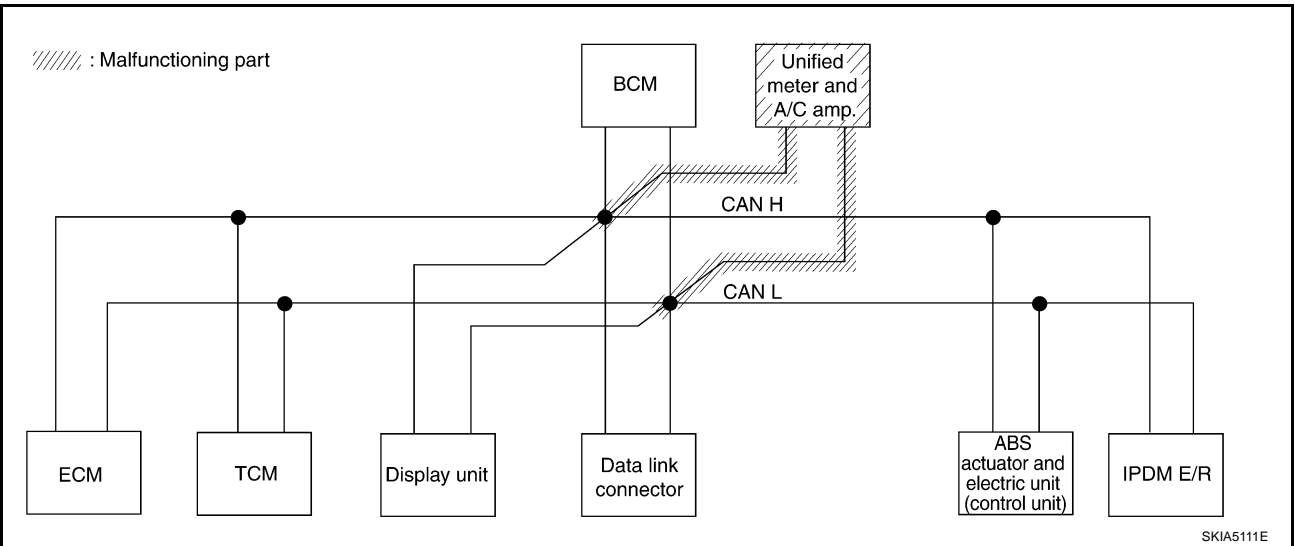


Case 8

Check unified meter and A/C amp. circuit. Refer to [LAN-47, "Unified Meter and A/C Amp. Circuit Check"](#) .

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

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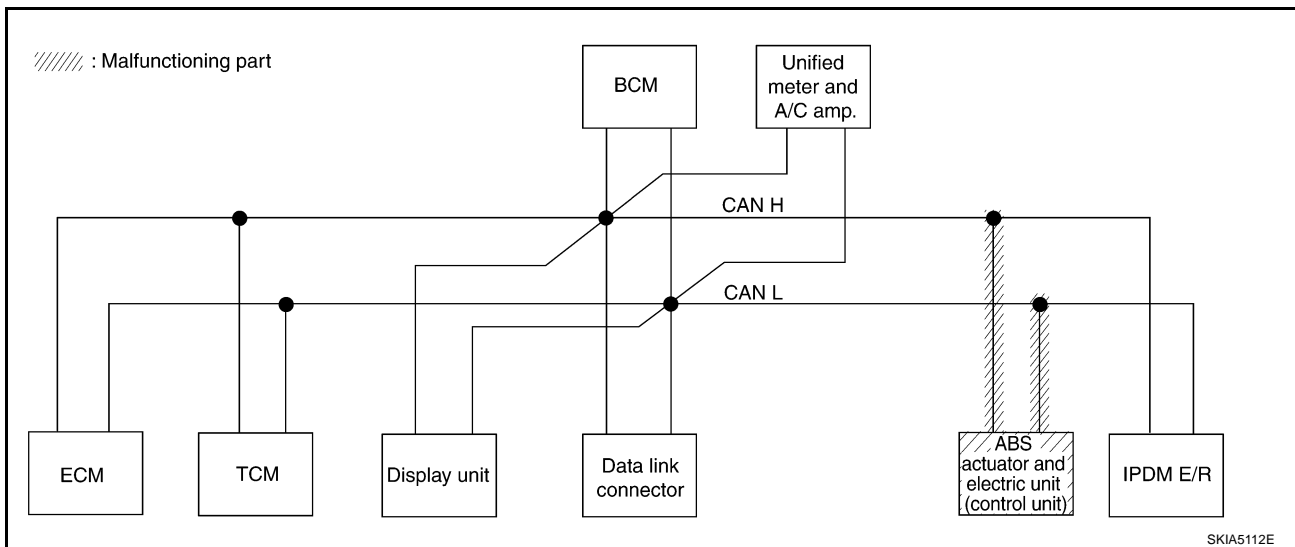
[CAN]

Case 9

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-47, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

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

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CAN SYSTEM (TYPE 1)

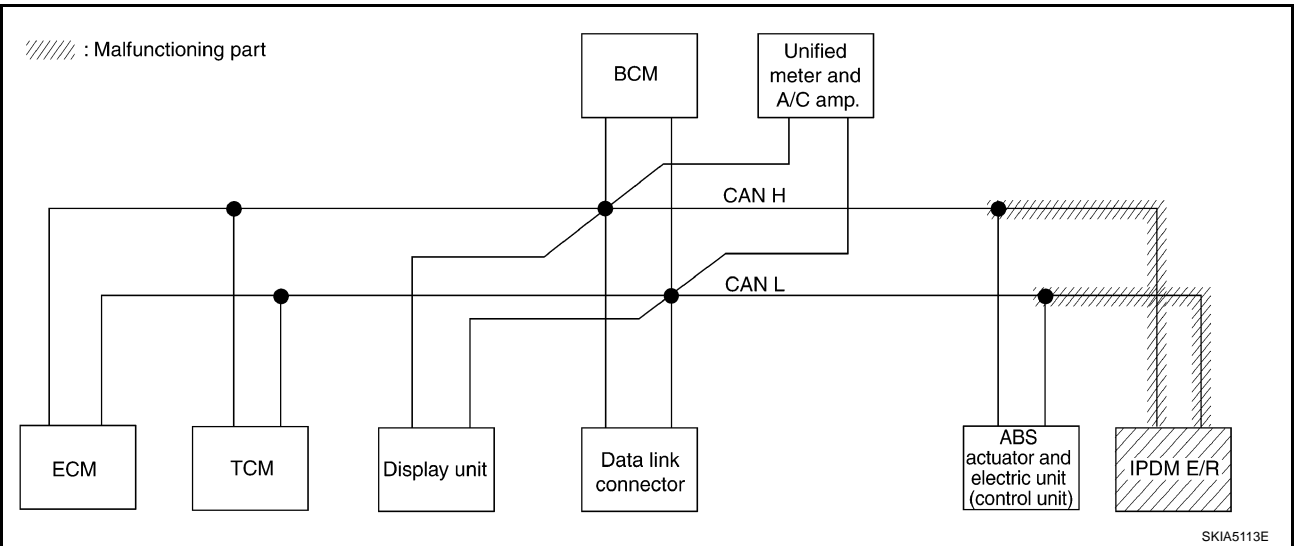
[CAN]

Case 10

Check IPDM E/R circuit. Refer to [LAN-48, "IPDM E/R Circuit Check"](#).

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

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Case 11

Check CAN communication circuit. Refer to [LAN-48, "CAN Communication Circuit Check"](#).

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

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CAN SYSTEM (TYPE 1)

[CAN]

Case 12

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-51, "IPDM E/R Ignition Relay Circuit Check"](#) .

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

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Case 13

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-51, "IPDM E/R Ignition Relay Circuit Check"](#) .

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

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Circuit Check Between TCM and Data Link Connector

AKS0068W

1. CHECK HARNESS FOR OPEN CIRCUIT

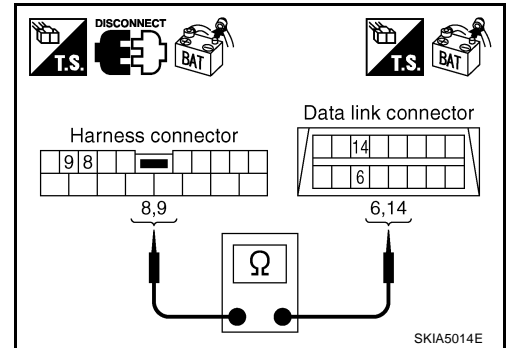
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

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

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

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-28, "Work Flow"](#) .
- NG >> Repair harness.



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

AKS0068Z

1. CHECK CONNECTOR

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

OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

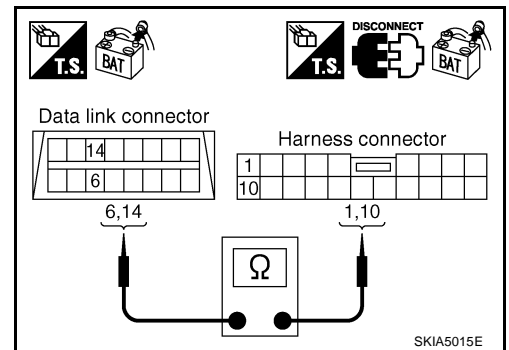
1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

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

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

OK or NG

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



3. CHECK HARNESS FOR OPEN CIRCUIT

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

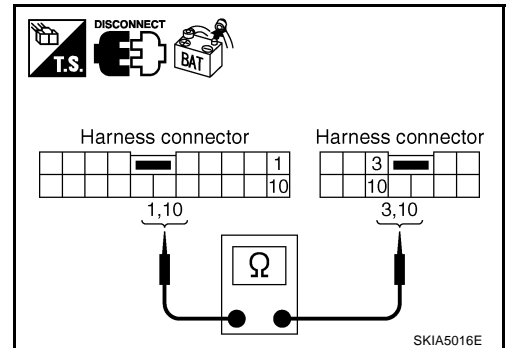
1 (L) - 3 (L) : Continuity should exist.

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

OK or NG

OK >> GO TO 4.

NG >> Repair harness.



4. CHECK HARNESS FOR OPEN CIRCUIT

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

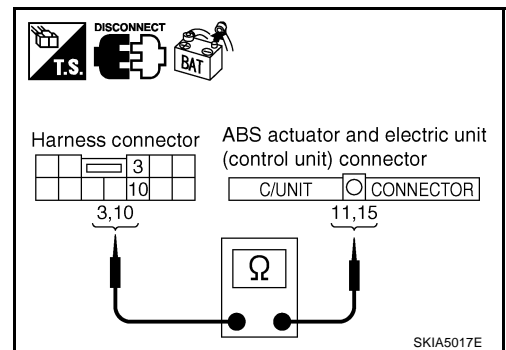
3 (L) - 11 (L) : Continuity should exist.

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

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-28, "Work Flow"](#).

NG >> Repair harness.



ECM Circuit Check

1. CHECK CONNECTOR

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

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

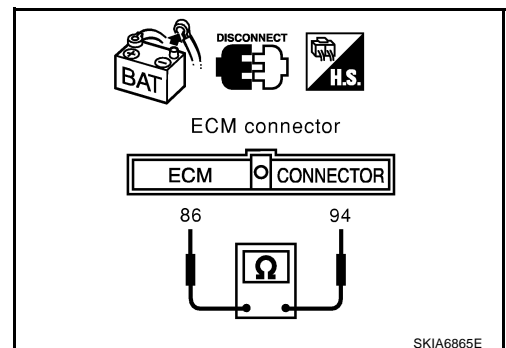
1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

94 (L) - 86 (Y) : Approx. 108 - 132Ω

OK or NG

OK >> Replace ECM.

NG >> Repair harness between ECM and TCM.



TCM Circuit Check**1. CHECK CONNECTOR**

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

OK or NG

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

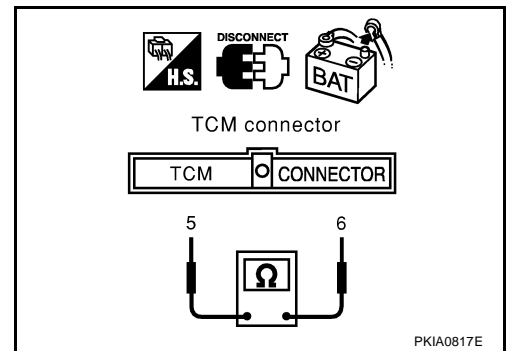
2. CHECK HARNESS FOR OPEN CIRCUIT

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

5 (L) - 6 (Y) : Approx. 54 - 66Ω

OK or NG

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

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

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

OK or NG

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

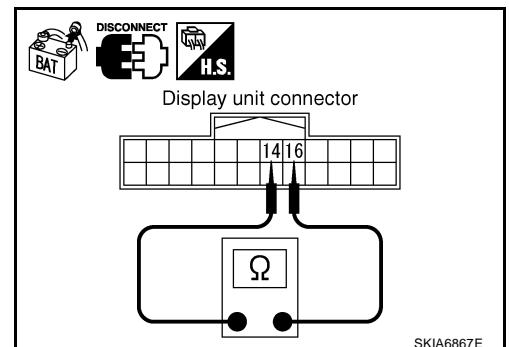
2. CHECK HARNESS FOR OPEN CIRCUIT

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

14 (L) - 16 (Y) : Approx. 54 - 66Ω

OK or NG

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



Data Link Connector Circuit Check

1. CHECK CONNECTOR

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

OK or NG

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

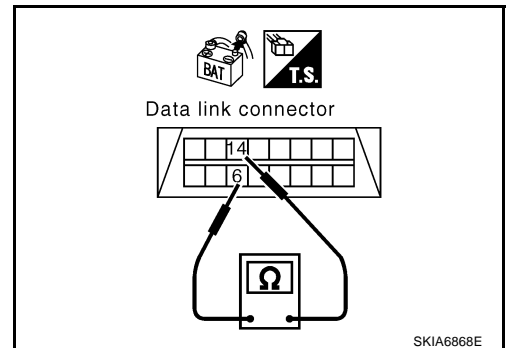
2. CHECK HARNESS FOR OPEN CIRCUIT

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

6 (L) - 14 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Diagnose again. Refer to [LAN-28, "Work Flow"](#) .
NG >> Repair harness between data link connector and BCM.



SKIA6868E

AKS00694

BCM Circuit Check

1. CHECK CONNECTOR

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

OK or NG

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

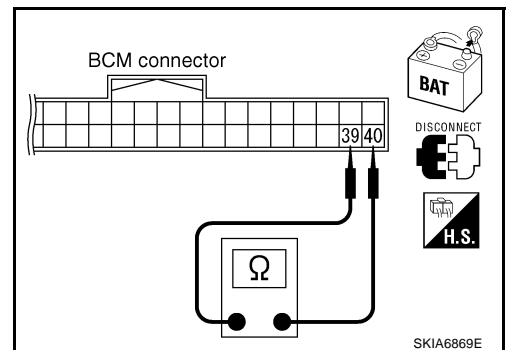
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M34 terminals 39 (L) and 40 (Y).

39 (L) - 40 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace BCM. Refer to [BCS-14, "Removal and Installation of BCM"](#) .
NG >> Repair harness between BCM and data link connector.



SKIA6869E

Unified Meter and A/C Amp. Circuit Check

1. CHECK CONNECTOR

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

OK or NG

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

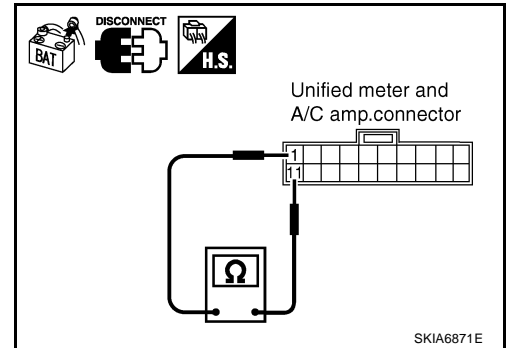
2. CHECK HARNESS FOR OPEN CIRCUIT

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

1 (L) - 11 (Y) : Approx. 54 - 66Ω

OK or NG

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



ABS Actuator and Electric Unit (Control Unit) Circuit Check

1. CHECK CONNECTOR

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

OK or NG

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

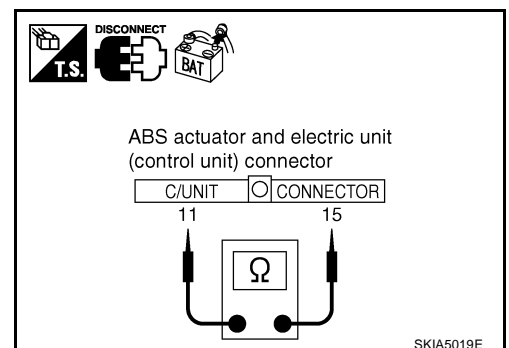
2. CHECK HARNESS FOR OPEN CIRCUIT

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

11 (L) - 15 (Y) : Approx. 54 - 66Ω

OK or NG

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



IPDM E/R Circuit Check

AKS00696

1. CHECK CONNECTOR

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

OK or NG

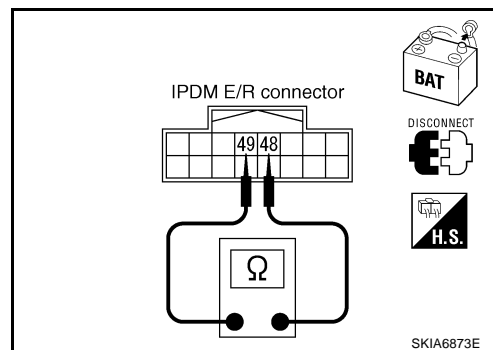
- OK >> GO TO 2.
 NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

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

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

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

**CAN Communication Circuit Check**

AKS00697

1. CHECK CONNECTOR

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

OK or NG

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

2. CHECK HARNESS FOR SHORT CIRCUIT

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

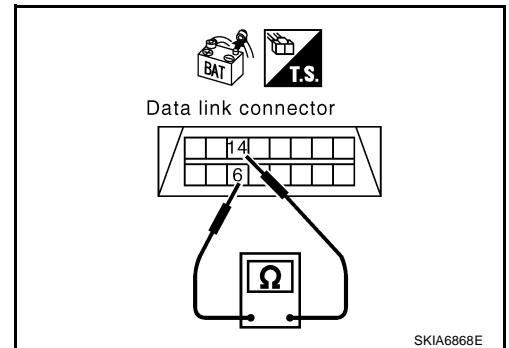
6 (L) - 14 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 3.

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

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



3. CHECK HARNESS FOR SHORT CIRCUIT

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

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

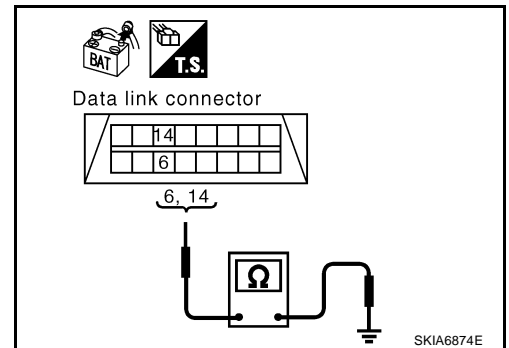
14 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 4.

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

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



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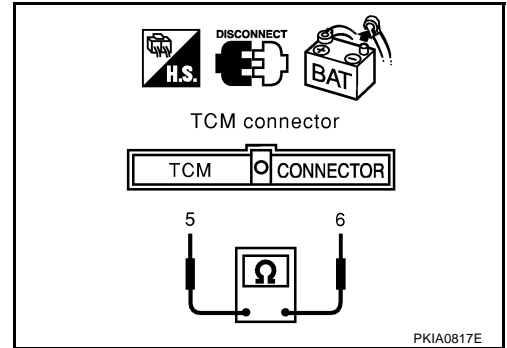
4. CHECK HARNESS FOR SHORT CIRCUIT

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

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

OK or NG

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



5. CHECK HARNESS FOR SHORT CIRCUIT

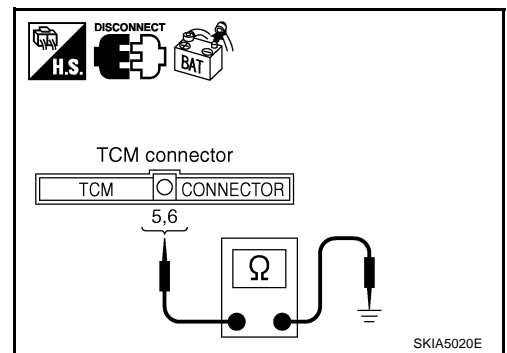
Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

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

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

OK or NG

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



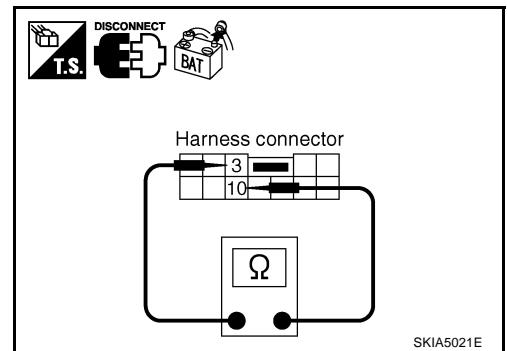
6. CHECK HARNESS FOR SHORT CIRCUIT

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

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

OK or NG

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



7. CHECK HARNESS FOR SHORT CIRCUIT

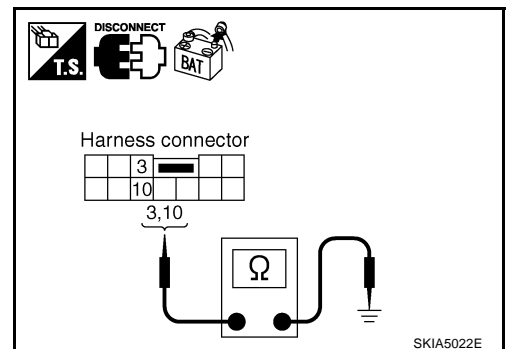
Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

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

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

OK or NG

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



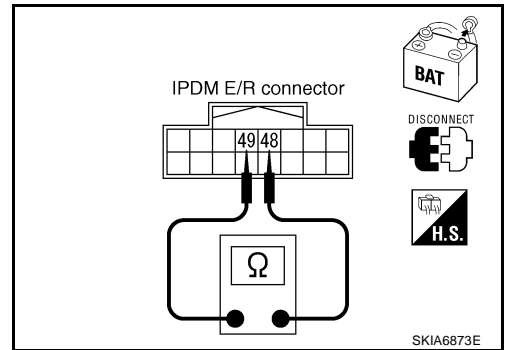
8. CHECK HARNESS FOR SHORT CIRCUIT

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

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

OK or NG

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



9. CHECK HARNESS FOR SHORT CIRCUIT

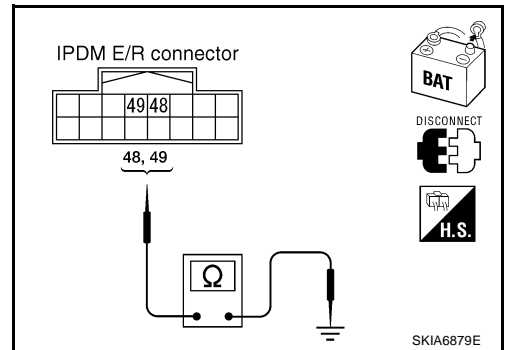
Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

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

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

OK or NG

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



10. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-51, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-28, "Work Flow"](#).
- NG >> Replace ECM and/or IPDM E/R.

IPDM E/R Ignition Relay Circuit Check

AKS00698

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

- IPDM E/R power supply circuit. Refer to [PG-27, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START""](#).

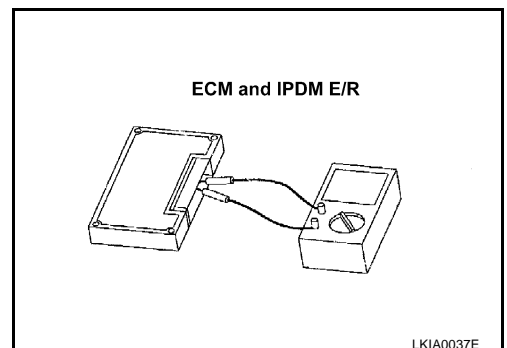
Component Inspection

ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

AKS00699

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

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



CAN SYSTEM (TYPE 2)

PFP:23710

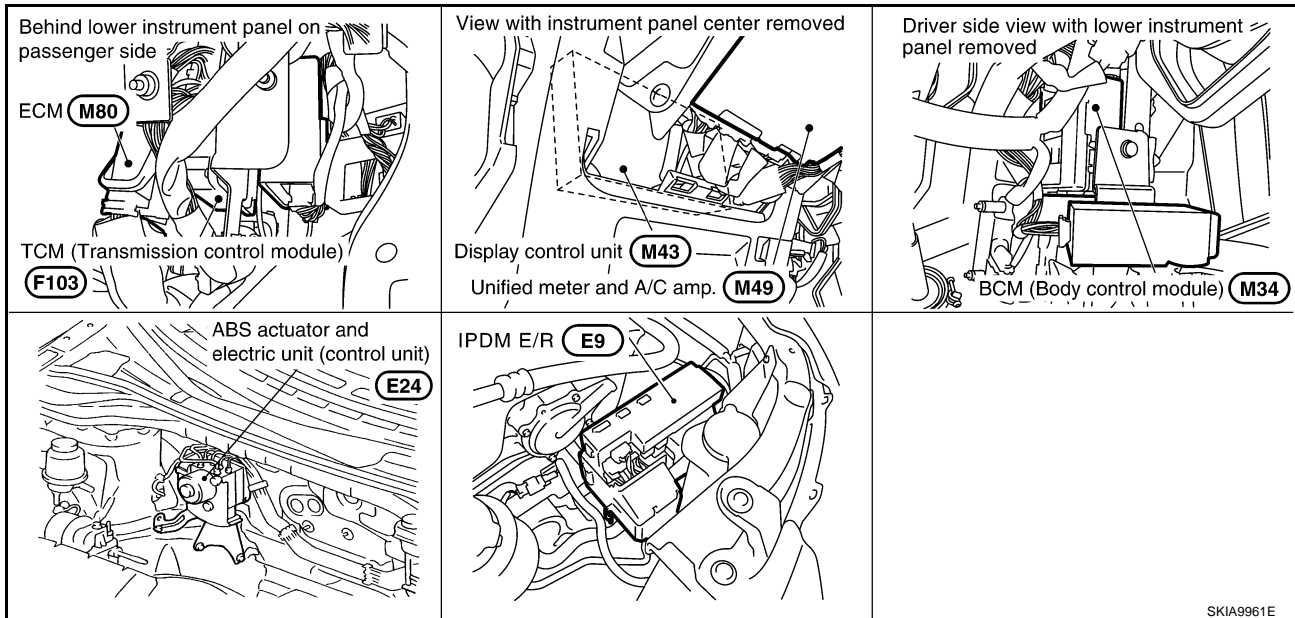
System Description

AKS00A4K

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

AKS00A4L



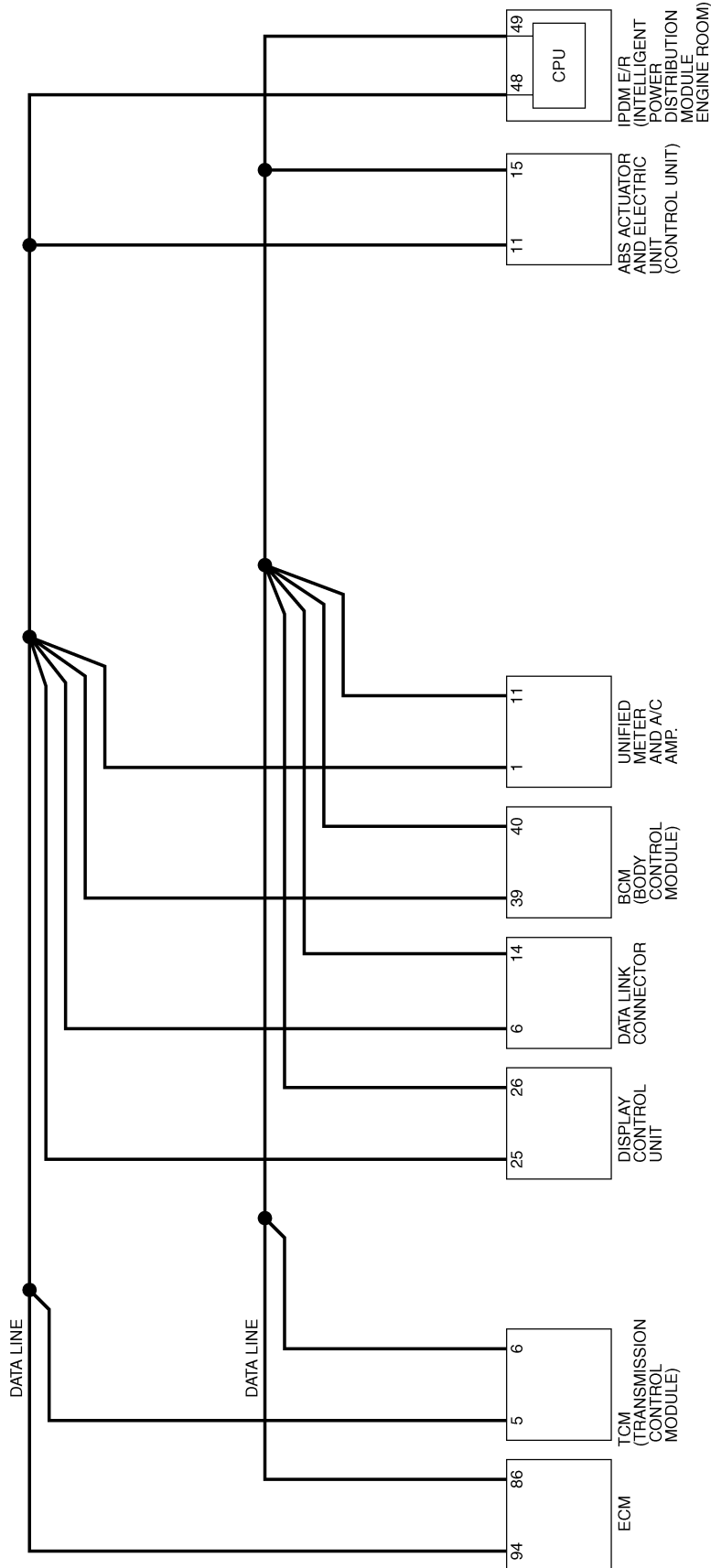
SKIA9961E

CAN SYSTEM (TYPE 2)

[CAN]

Schematic

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TKWB0009E

CAN SYSTEM (TYPE 2)

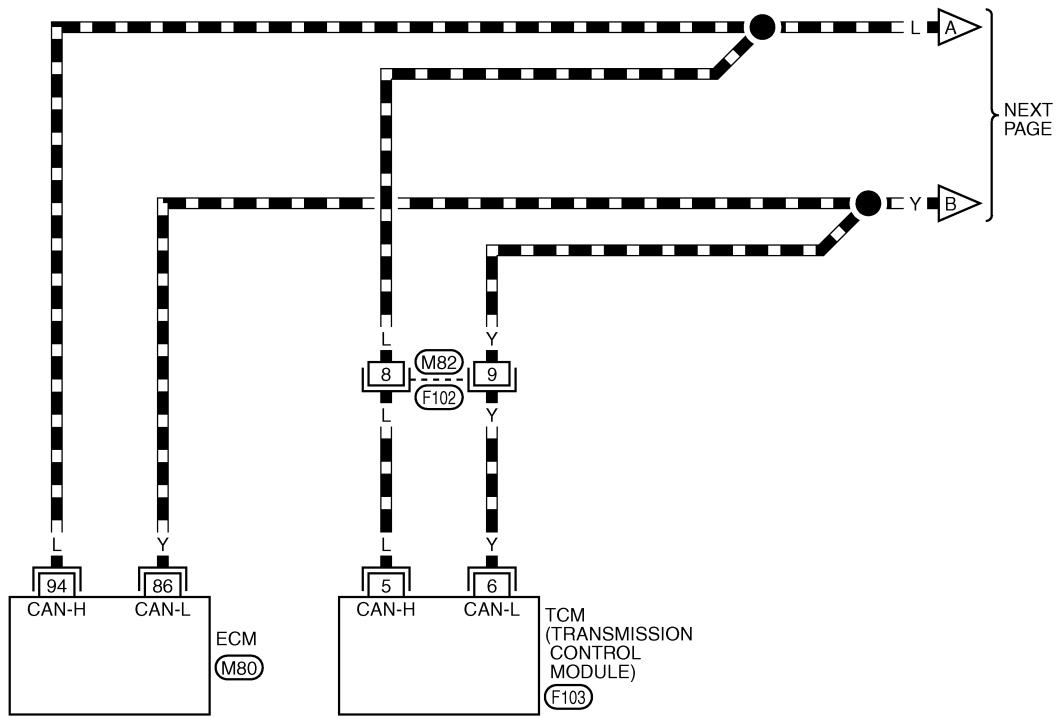
[CAN]

AKS00A4N

Wiring Diagram - CAN -

LAN-CAN-04

▬ : DATA LINE



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	(F102)	W

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

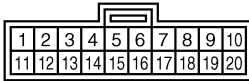
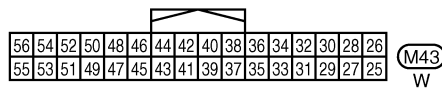
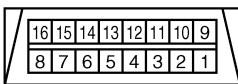
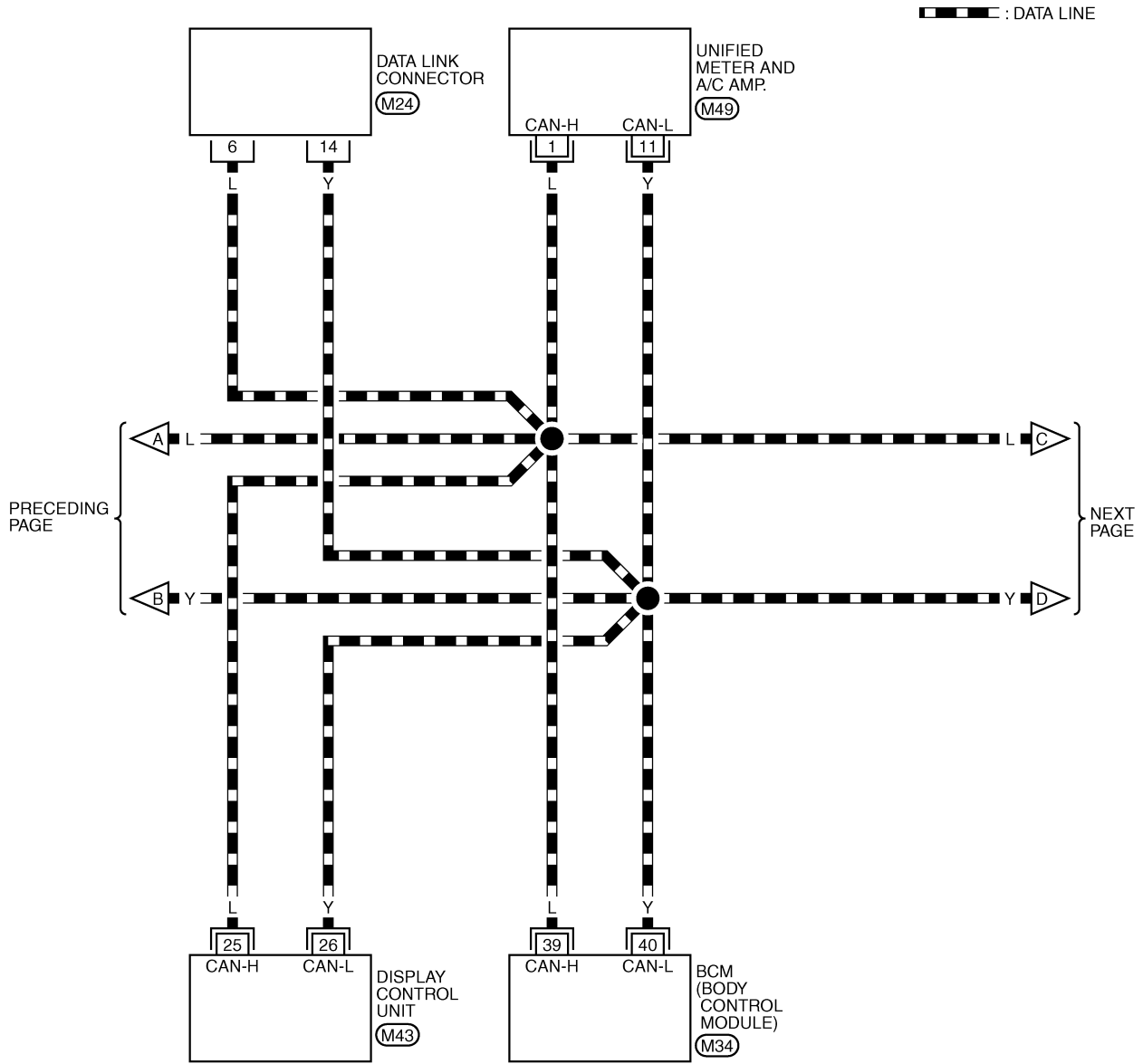
TKWB0010E

CAN SYSTEM (TYPE 2)

[CAN]

LAN-CAN-05

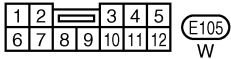
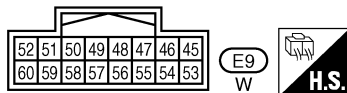
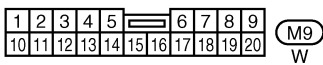
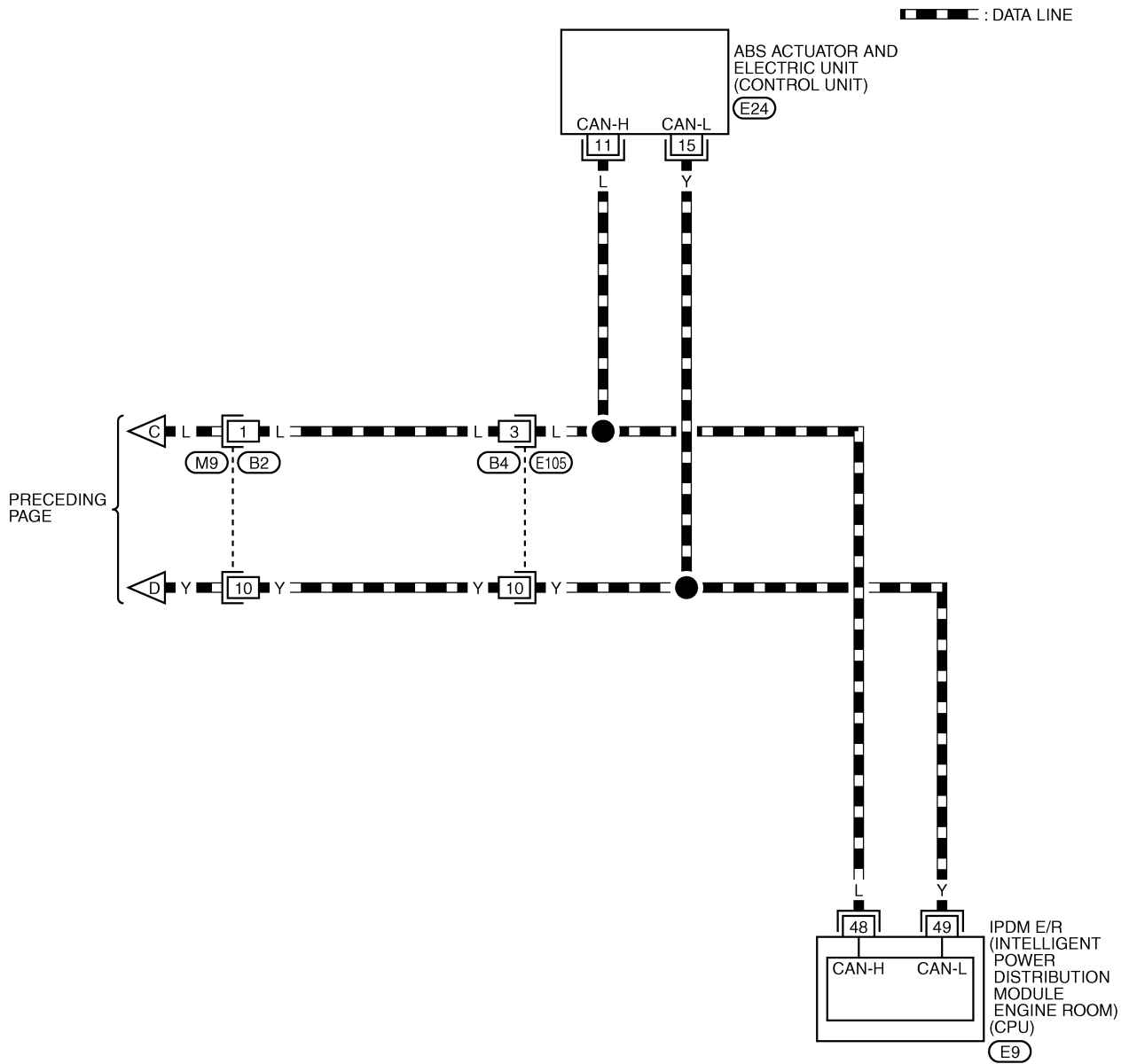
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REFER TO THE FOLLOWING.
M34 -ELECTRICAL UNITS

TKWB0011E

LAN-CAN-06



REFER TO THE FOLLOWING.

(E24) -ELECTRICAL UNITS

TKWB0012E

CAN SYSTEM (TYPE 2)

[CAN]

AKS00A40

Work Flow

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

(Example)	NISSAN			SELECT SYSTEM			
	CONSULT-II			ENGINE			
	ENGINE			A/T			
	START (NISSAN BASED VHCL)			ABS			
	START (RENAULT BASED VHCL)			AIR BAG			
	SUB MODE			BCM			
				METER A/C AMP			
	LIGHT COPY			BACK LIGHT COPY			
				PKIA2093E			

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

(Example)	SELECT DIAG MODE			SELF-DIAG RESULTS			
	WORK SUPPORT			DTC RESULTS TIME			
	SELF-DIAG RESULTS			CAN COMM CIRCUIT [U1000] 0			
	DATA MONITOR						
	DATA MONITOR (SPEC)						
	CAN DIAG SUPPORT MNTR						
	ACTIVE TEST						
				F.F.DATA			
	Scroll Down			ERASE PRINT			
	BACK LIGHT COPY			MODE BACK LIGHT COPY			
			PKIA8260E				

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

(Example)	SELECT DIAG MODE			CAN DIAG SUPPORT MNTR			
	WORK SUPPORT			ENGINE			
	SELF-DIAG RESULTS			PRSN			
	DATA MONITOR			INITIAL DIAG OK			
	DATA MONITOR (SPEC)			TRANSMIT DIAG OK			
	CAN DIAG SUPPORT MNTR			TCM OK			
	ACTIVE TEST			VDC/TCS/ABS OK			
				METER/M&A OK			
	Scroll Down			ICC UNKWN			
	BACK LIGHT COPY			BCM/SEC OK			
			IPDM E/R OK				
			AWD/4WD/e4WD UNKWN				
			PRINT Scroll Down				
			MODE BACK LIGHT COPY				
			PKIA8343E				

- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-59, "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-59, "CHECK SHEET"](#).

NOTE:

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

- Check CAN communication line of the navigation system. Refer to [AV-175, "CAN Communication Line Check"](#).
- Attach the CAN DIAG SUPPORT MONITOR check sheet onto the check sheet. Refer to [LAN-59, "CHECK SHEET"](#).

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8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG SUPPORT MONITOR check sheet. Refer to [LAN-59, "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-175, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-61, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

CAN SYSTEM (TYPE 2)

[CAN]

CHECK SHEET

NOTE:

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

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Check sheet table

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

Symptoms :

Attach copy of
SELECT SYSTEM

Attach copy of
SELECT SYSTEM

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

CAN SYSTEM (TYPE 2)

[CAN]

Attach copy of
ENGINE
SELF-DIAG RESULTS

Attach copy of
TRANSMISSION
SELF-DIAG RESULTS

Attach copy of
BCM
SELF-DIAG RESULTS

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

Attach copy of
ABS
SELF-DIAG RESULTS

Attach copy of
IPDM E/R
SELF-DIAG RESULTS

Attach copy of
ENGINE
CAN DIAG SUPPORT
MNTR

Attach copy of
TRANSMISSION
CAN DIAG SUPPORT
MNTR

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

Attach copy of
ABS
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Attach copy of
IPDM E/R
CAN DIAG SUPPORT
MNTR

PKIA8345E

CHECK SHEET RESULTS (EXAMPLE)

NOTE:

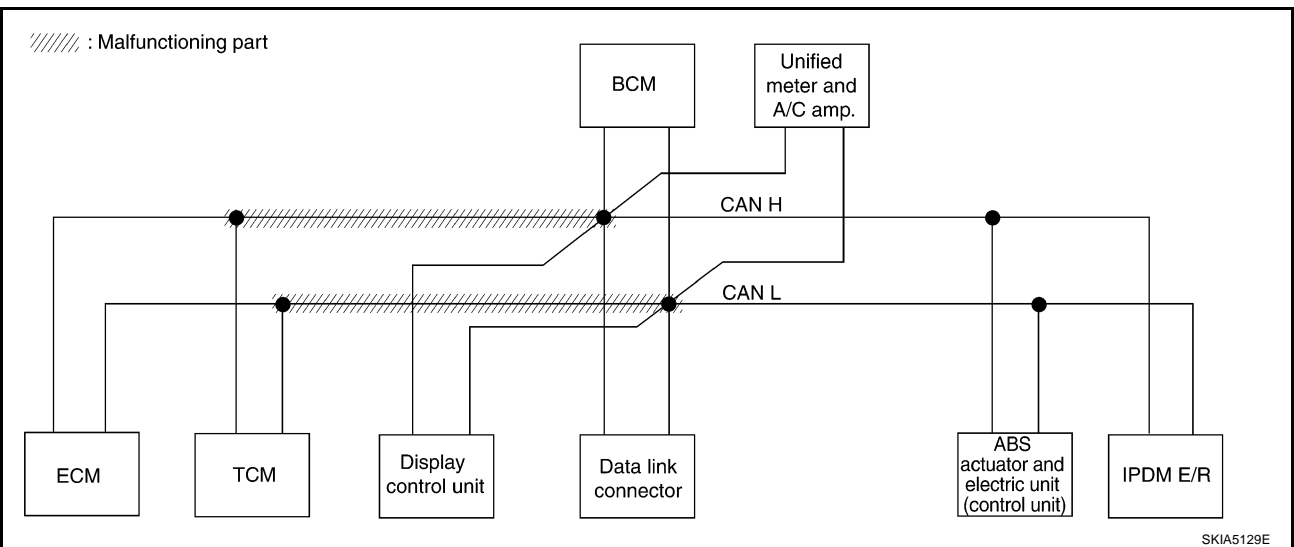
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

Case 1

Check harness between TCM and data link connector. Refer to [LAN-72, "Circuit Check Between TCM and Data Link Connector"](#).

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

PKIA8360E



CAN SYSTEM (TYPE 2)

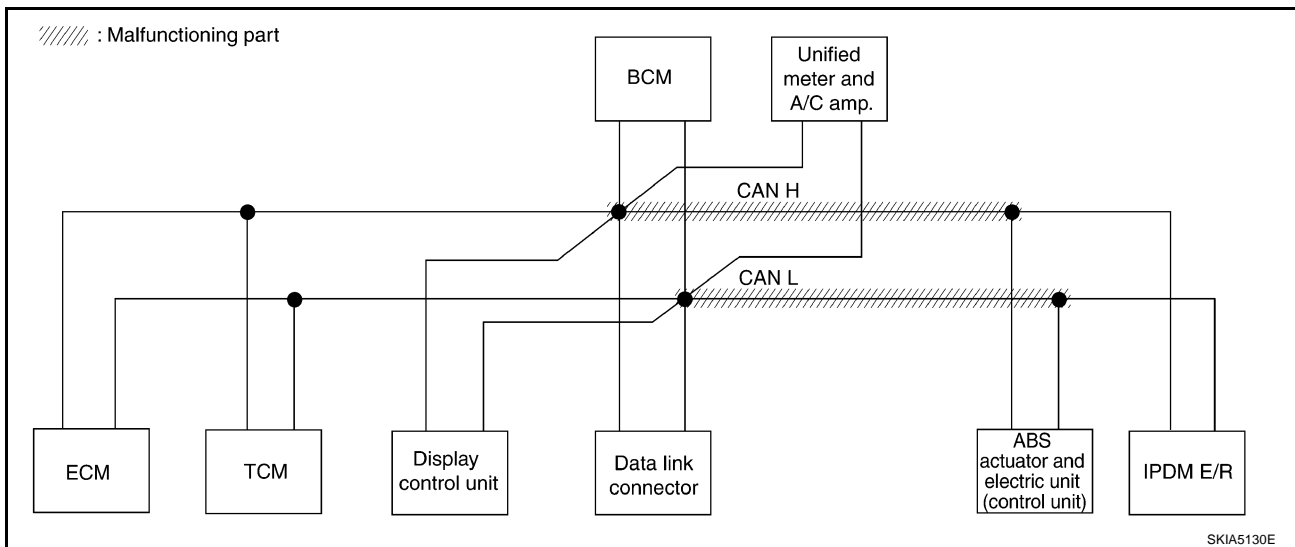
[CAN]

Case 2

Check harness between data link connector and ABS actuator and electric unit (control unit). Refer to [LAN-72, "Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit \(Control Unit\)"](#) .

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

PKIA8361E



CAN SYSTEM (TYPE 2)

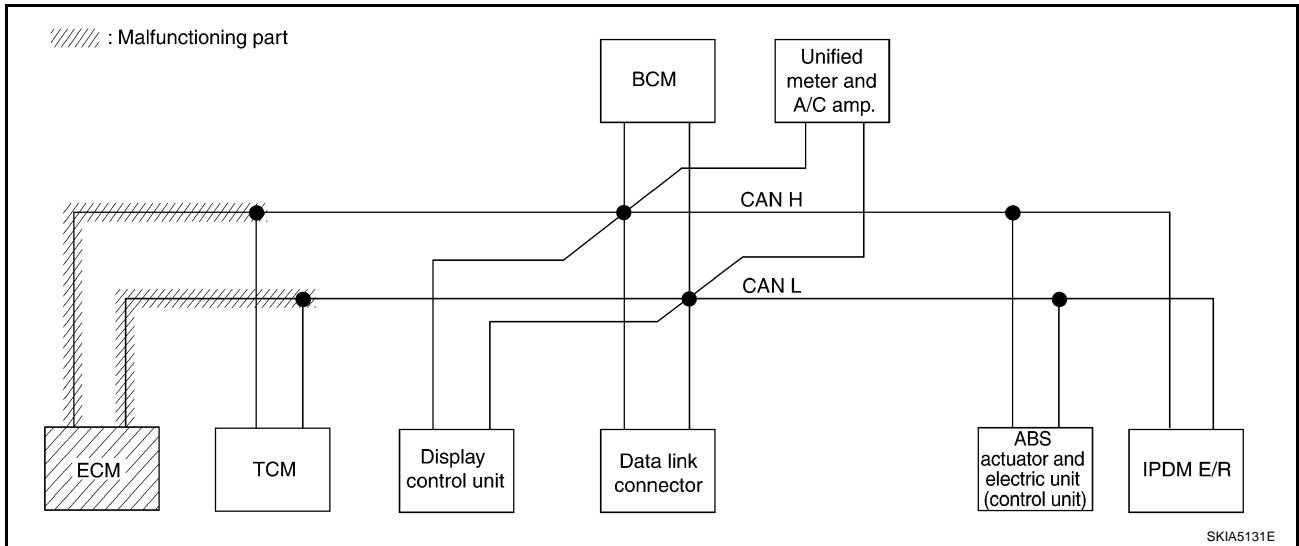
[CAN]

Case 3

Check ECM circuit. Refer to [LAN-73, "ECM Circuit Check"](#) .

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

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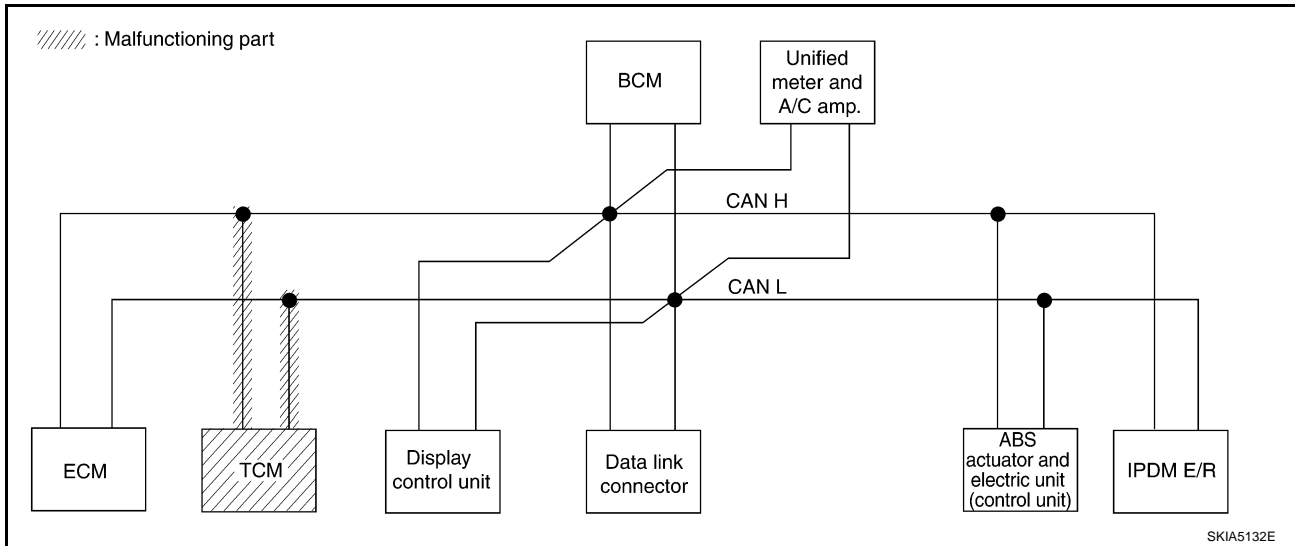
[CAN]

Case 4

Check TCM circuit. Refer to [LAN-74, "TCM Circuit Check"](#) .

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

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CAN SYSTEM (TYPE 2)

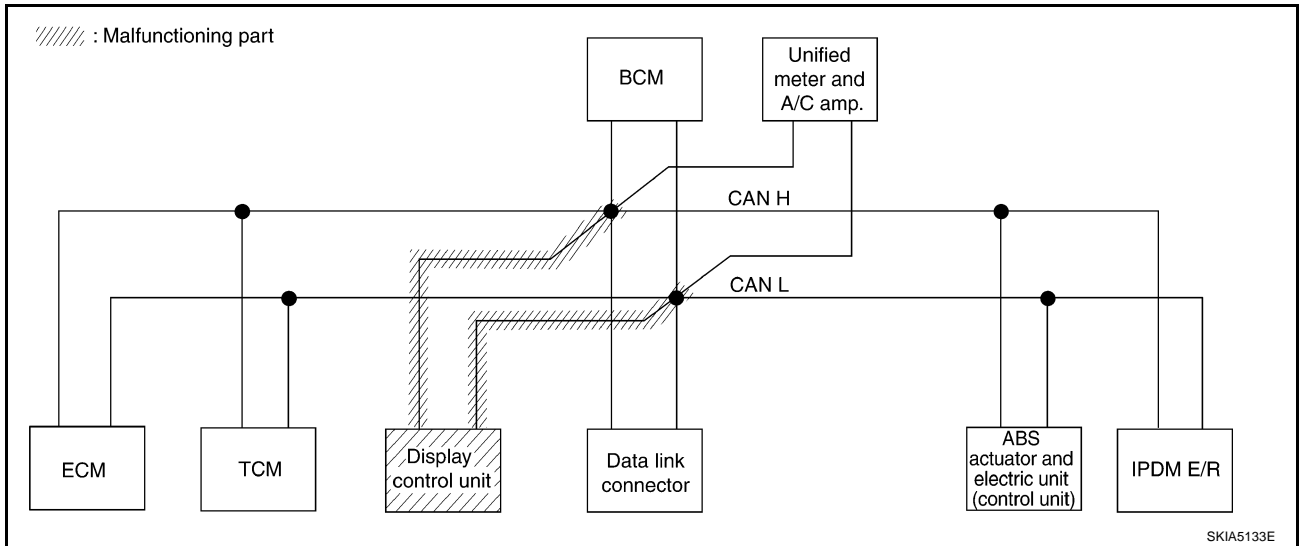
[CAN]

Case 5

Check display control unit circuit. Refer to [LAN-74, "Display Control Unit Circuit Check"](#) .

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

PKIA8364E



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CAN SYSTEM (TYPE 2)

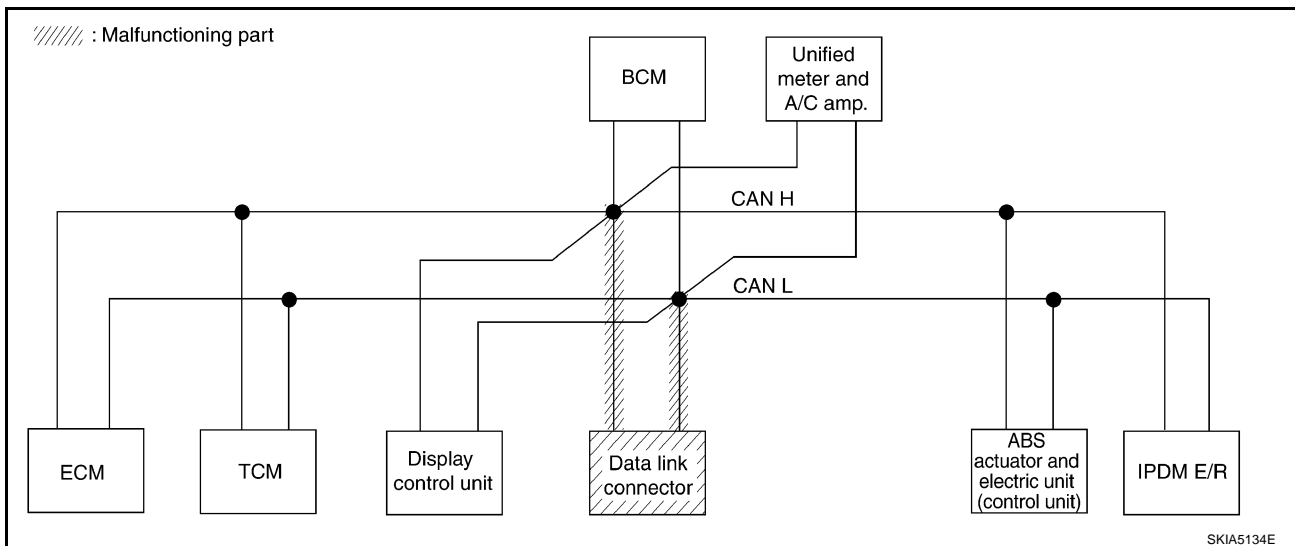
[CAN]

Case 6

Check data link connector circuit. Refer to [LAN-75, "Data Link Connector Circuit Check"](#) .

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

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CAN SYSTEM (TYPE 2)

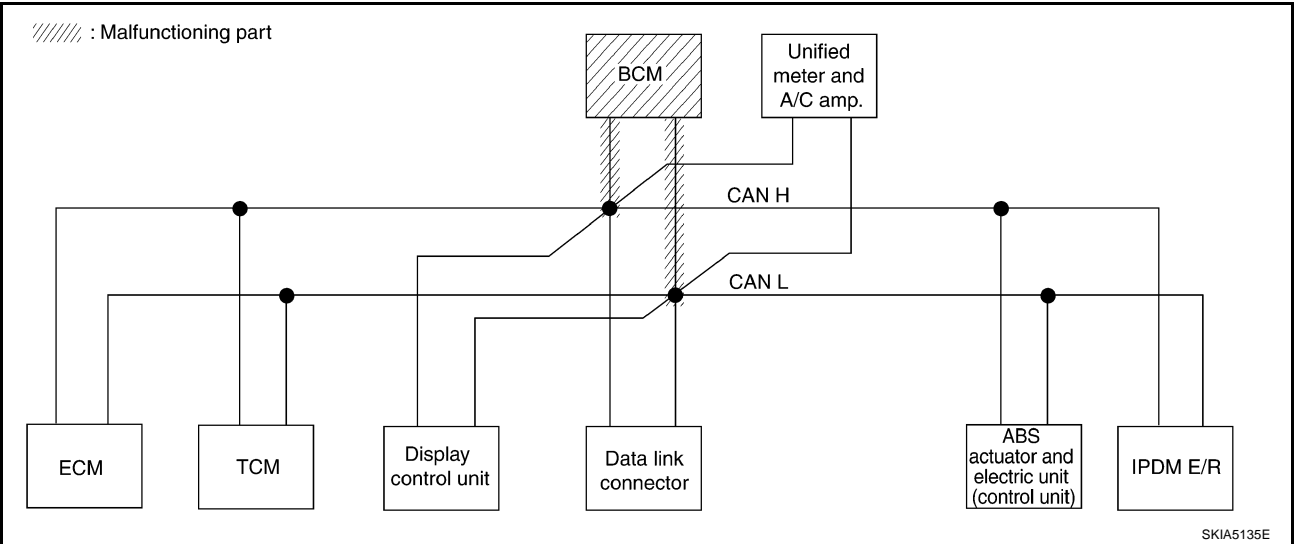
[CAN]

Case 7

Check BCM circuit. Refer to [LAN-75, "BCM Circuit Check"](#) .

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

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CAN SYSTEM (TYPE 2)

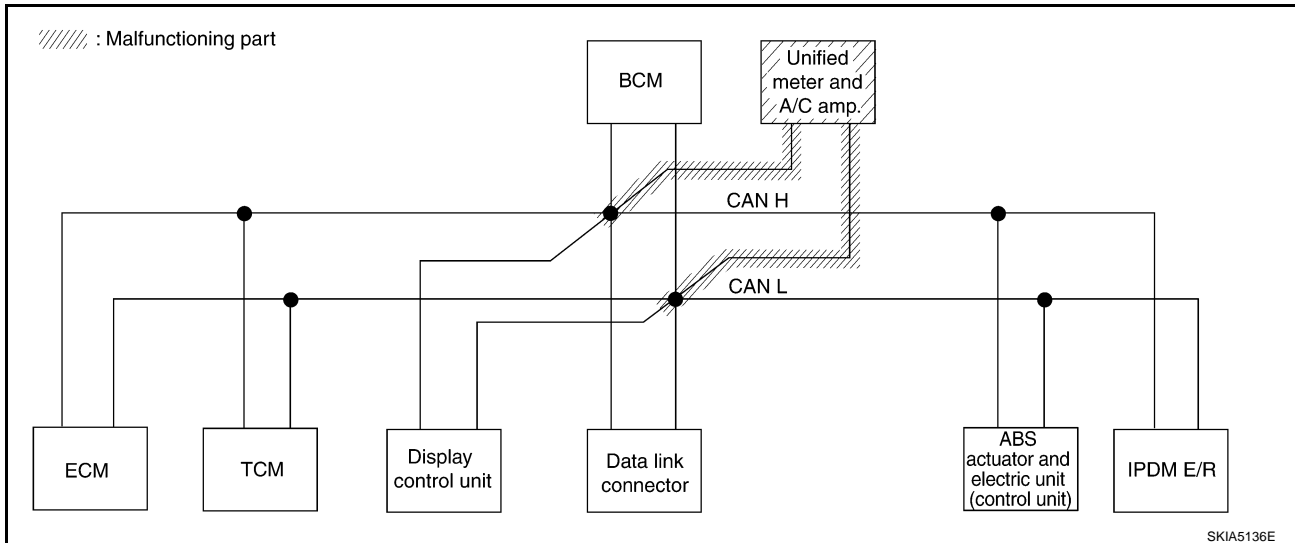
[CAN]

Case 8

Check unified meter and A/C amp. circuit. Refer to [LAN-76, "Unified Meter and A/C Amp. Circuit Check"](#) .

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

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CAN SYSTEM (TYPE 2)

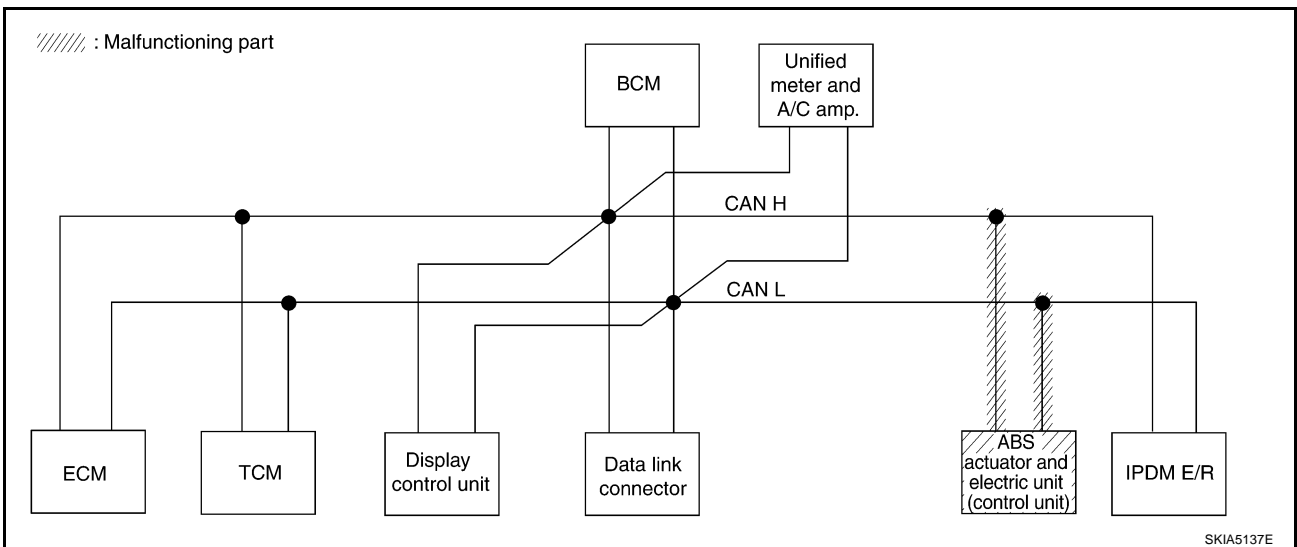
[CAN]

Case 9

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-76, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

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

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CAN SYSTEM (TYPE 2)

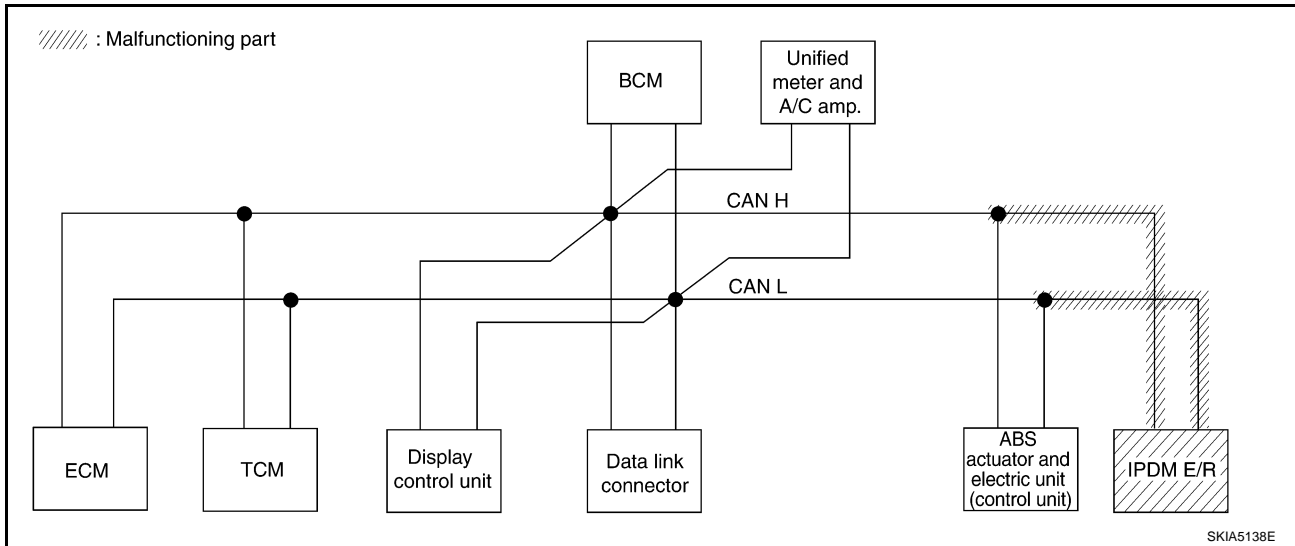
[CAN]

Case 10

Check IPDM E/R circuit. Refer to [LAN-77, "IPDM E/R Circuit Check"](#) .

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

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Case 11

Check CAN communication circuit. Refer to [LAN-77, "CAN Communication Circuit Check"](#) .

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

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CAN SYSTEM (TYPE 2)

[CAN]

Case 12

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-80, "IPDM E/R Ignition Relay Circuit Check"](#) .

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

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Case 13

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-80, "IPDM E/R Ignition Relay Circuit Check"](#) .

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

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Circuit Check Between TCM and Data Link Connector

1. CHECK HARNESS FOR OPEN CIRCUIT

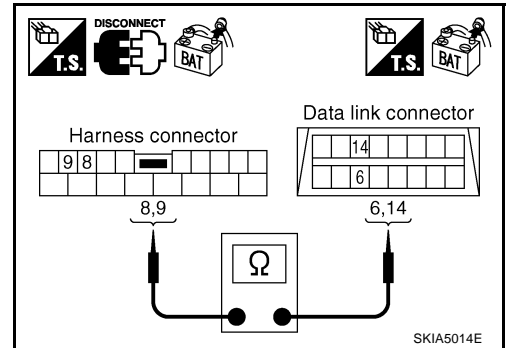
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

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

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

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-57, "Work Flow"](#) .
- NG >> Repair harness.



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

1. CHECK CONNECTOR

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

OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

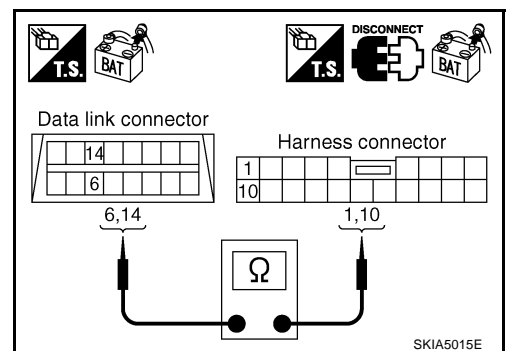
1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

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

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

OK or NG

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



3. CHECK HARNESS FOR OPEN CIRCUIT

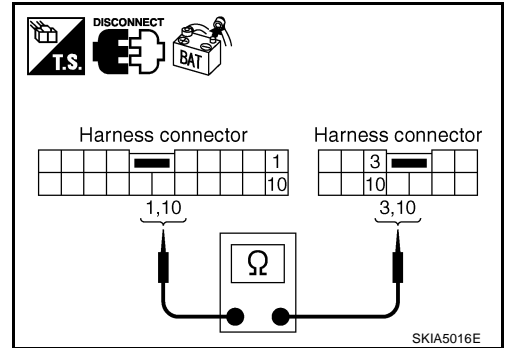
1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

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

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

OK or NG

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



4. CHECK HARNESS FOR OPEN CIRCUIT

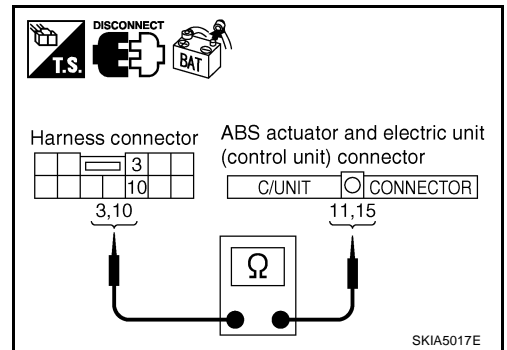
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

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

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

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-57. "Work Flow"](#).
 NG >> Repair harness.



ECM Circuit Check

1. CHECK CONNECTOR

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

OK or NG

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

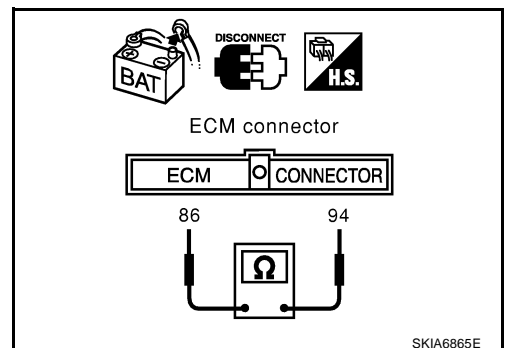
2. CHECK HARNESS FOR OPEN CIRCUIT

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

94 (L) - 86 (Y) : Approx. 108 - 132Ω

OK or NG

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



TCM Circuit Check**1. CHECK CONNECTOR**

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

OK or NG

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

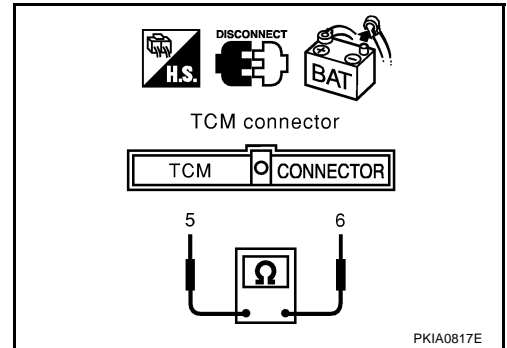
2. CHECK HARNESS FOR OPEN CIRCUIT

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

5 (L) - 6 (Y) : Approx. 54 - 66Ω

OK or NG

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

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

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

OK or NG

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

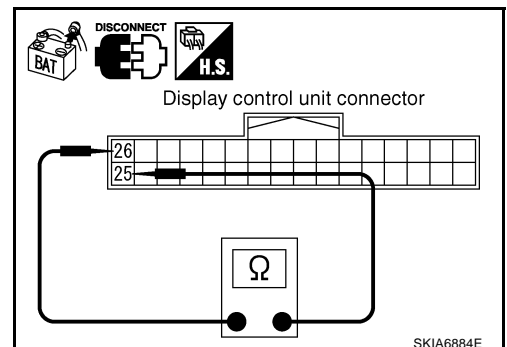
2. CHECK HARNESS FOR OPEN CIRCUIT

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

25 (L) - 26 (Y) : Approx. 54 - 66Ω

OK or NG

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



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

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

OK or NG

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

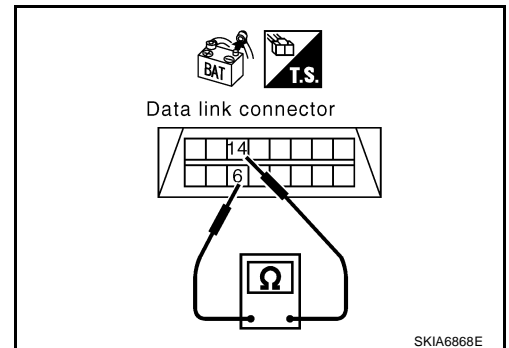
2. CHECK HARNESS FOR OPEN CIRCUIT

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

6 (L) - 14 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Diagnose again. Refer to [LAN-57, "Work Flow"](#) .
 NG >> Repair harness between data link connector and BCM.

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

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

OK or NG

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

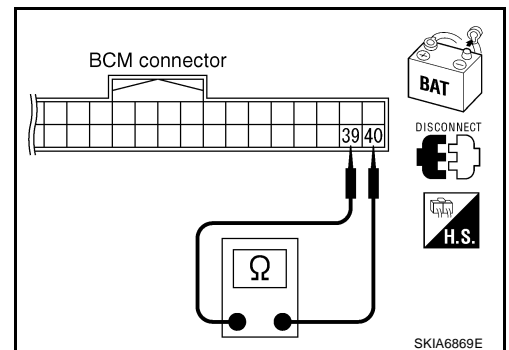
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M34 terminals 39 (L) and 40 (Y).

39 (L) - 40 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace BCM. Refer to [BCS-14, "Removal and Installation of BCM"](#) .
 NG >> Repair harness between BCM and data link connector.



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Unified Meter and A/C Amp. Circuit Check

1. CHECK CONNECTOR

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

OK or NG

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

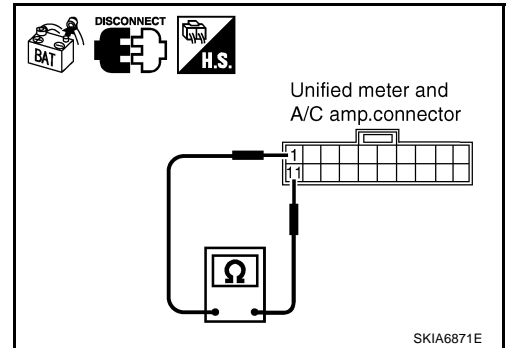
2. CHECK HARNESS FOR OPEN CIRCUIT

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

1 (L) - 11 (Y) : Approx. 54 - 66Ω

OK or NG

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



ABS Actuator and Electric Unit (Control Unit) Circuit Check

1. CHECK CONNECTOR

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

OK or NG

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

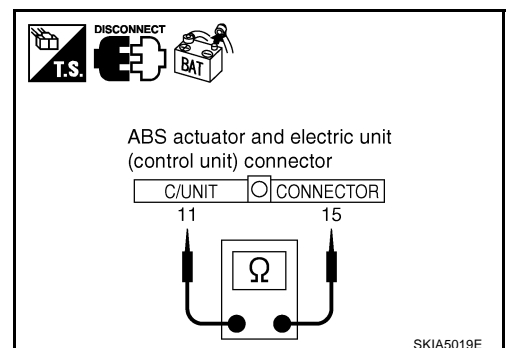
2. CHECK HARNESS FOR OPEN CIRCUIT

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

11 (L) - 15 (Y) : Approx. 54 - 66Ω

OK or NG

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



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

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

OK or NG

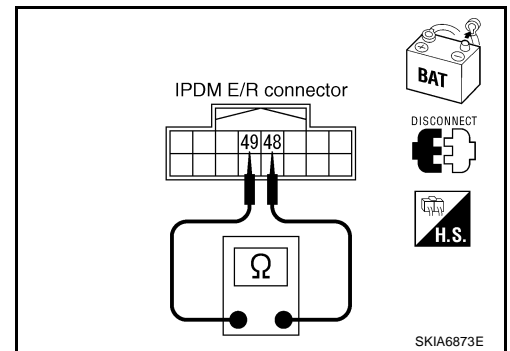
- OK >> GO TO 2.
 NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

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

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

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

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

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

OK or NG

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

2. CHECK HARNESS FOR SHORT CIRCUIT

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

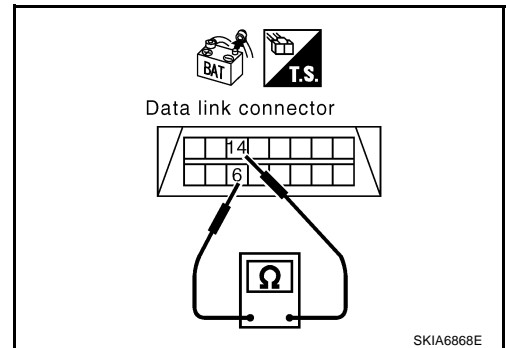
6 (L) - 14 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 3.

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

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



3. CHECK HARNESS FOR SHORT CIRCUIT

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

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

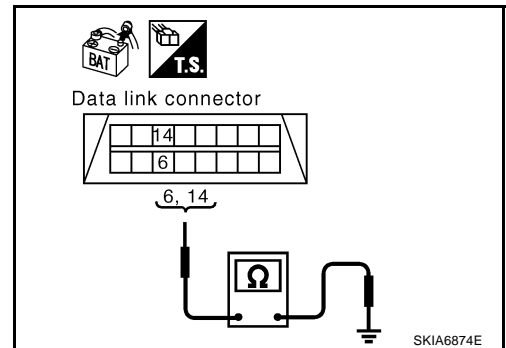
14 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 4.

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

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



4. CHECK HARNESS FOR SHORT CIRCUIT

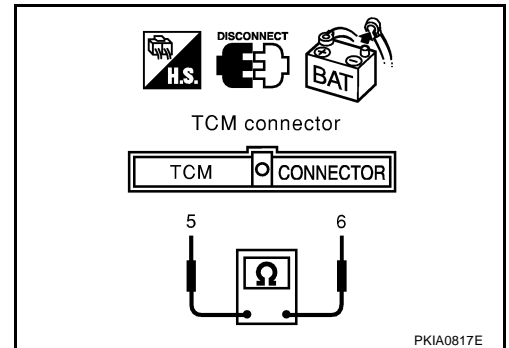
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

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

OK or NG

OK >> GO TO 5.

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



5. CHECK HARNESS FOR SHORT CIRCUIT

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

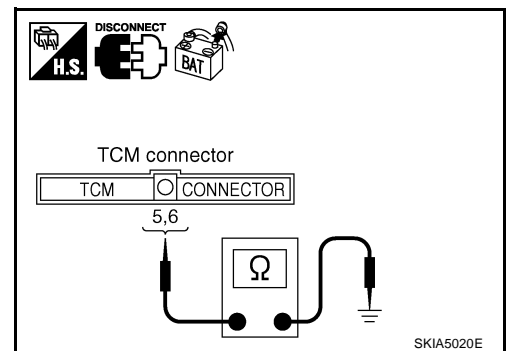
5 (L) - Ground : Continuity should not exist.

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

OK or NG

OK >> GO TO 6.

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



6. CHECK HARNESS FOR SHORT CIRCUIT

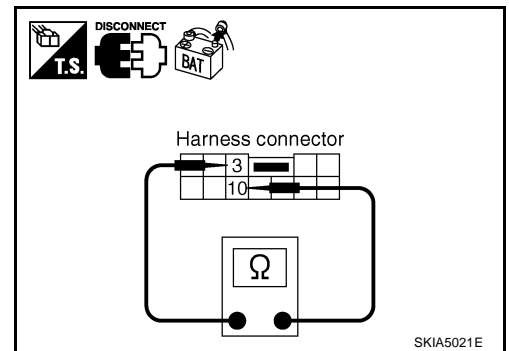
1. Disconnect harness connector B4.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

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

OK or NG

OK >> GO TO 7.

NG >> Repair harness between harness connector B4 and harness connector B2.



7. CHECK HARNESS FOR SHORT CIRCUIT

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

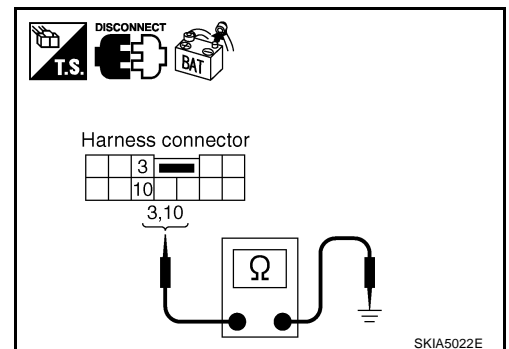
3 (L) - Ground : Continuity should not exist.

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

OK or NG

OK >> GO TO 8.

NG >> Repair harness between harness connector B4 and harness connector B2.



8. CHECK HARNESS FOR SHORT CIRCUIT

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

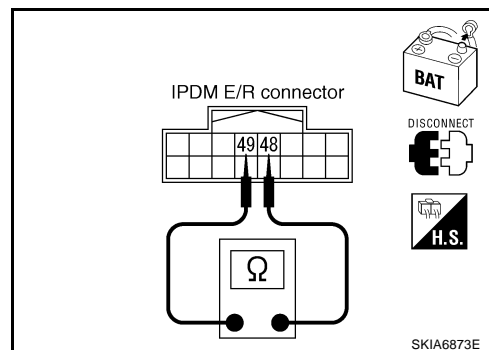
48 (L) - 49 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 9.

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

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



9. CHECK HARNESS FOR SHORT CIRCUIT

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

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

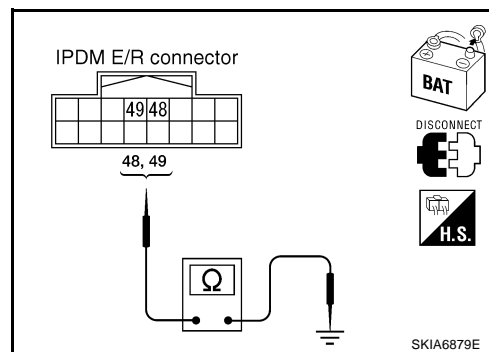
49 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 10.

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

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



10. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-80, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-57, "Work Flow"](#).

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

IPDM E/R Ignition Relay Circuit Check

AKS00A50

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

- IPDM E/R power supply circuit. Refer to [PG-27, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START""](#).

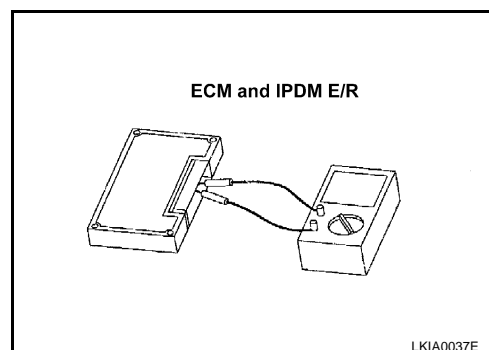
Component Inspection

ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

AKS00A51

- 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	



LKIA0037E

CAN SYSTEM (TYPE 3)

PPF:23710

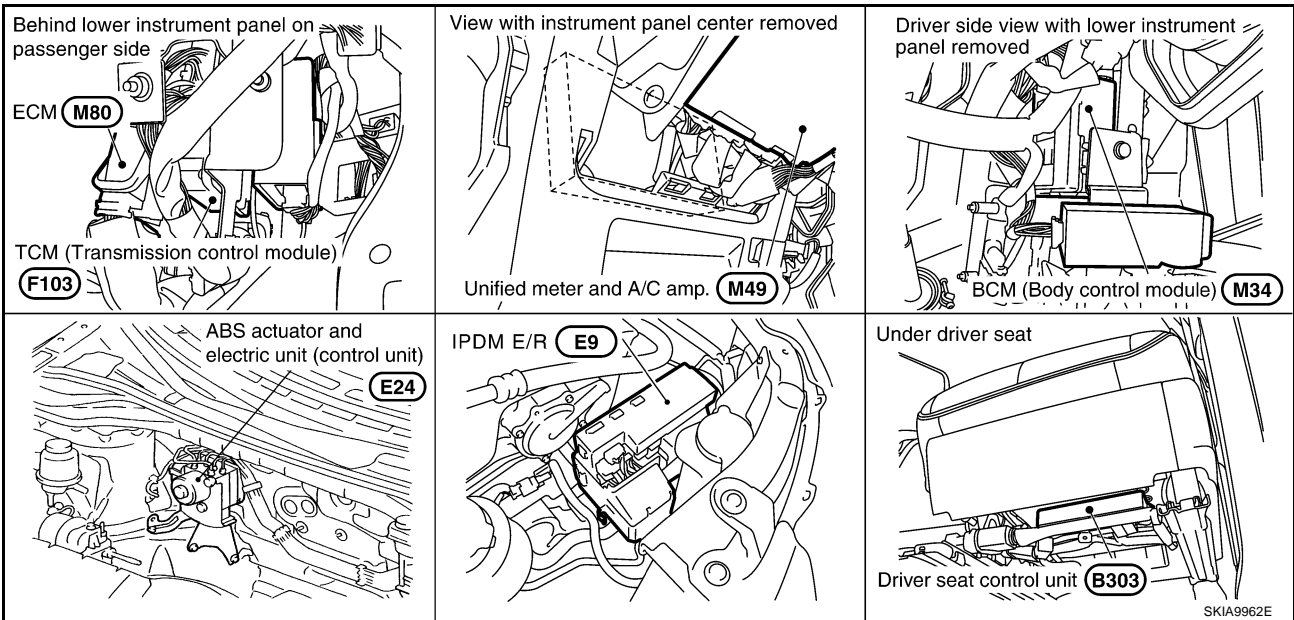
System Description

AKS00A52

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

AKS00A53



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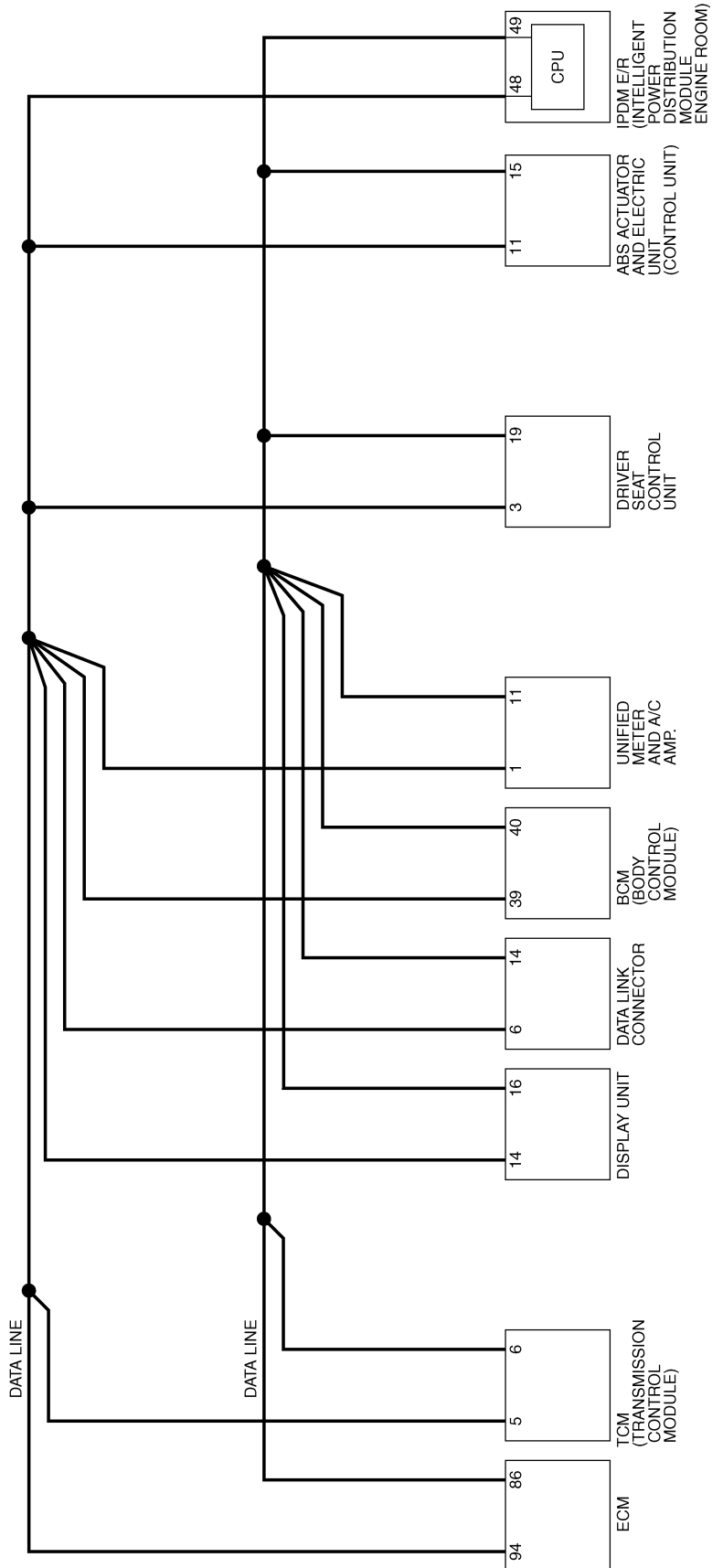
LAN

CAN SYSTEM (TYPE 3)

[CAN]

Schematic

AKS00A54



TKWB0013E

CAN SYSTEM (TYPE 3)

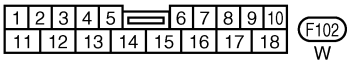
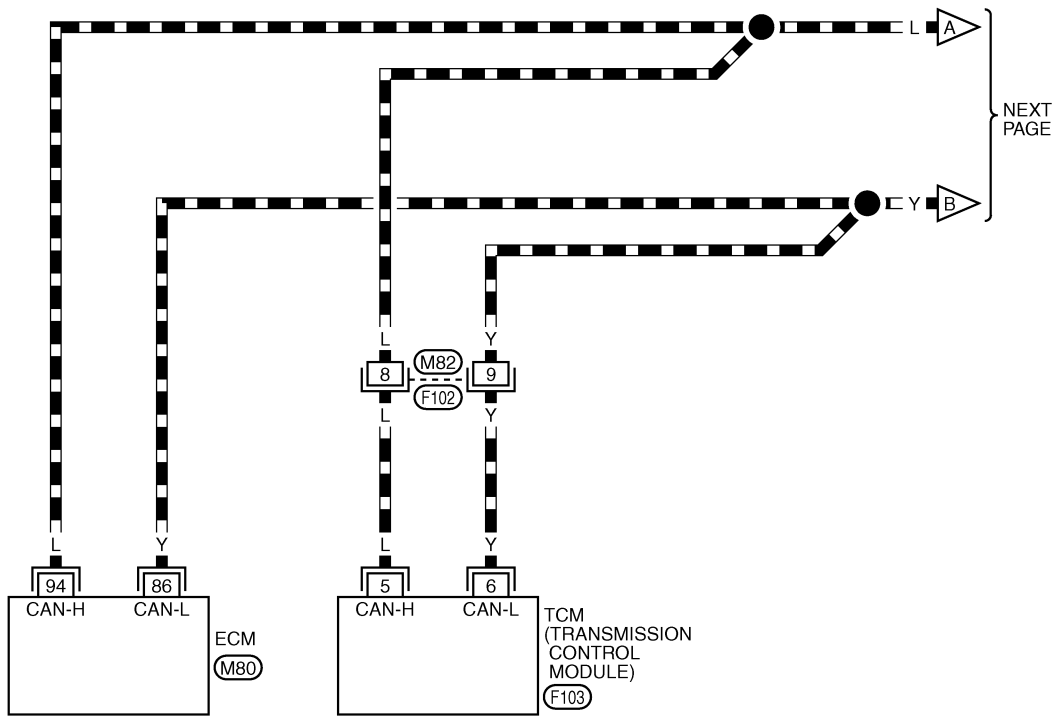
[CAN]

AKS00A55

Wiring Diagram - CAN -

LAN-CAN-07

▬ : DATA LINE



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

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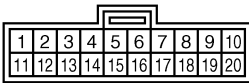
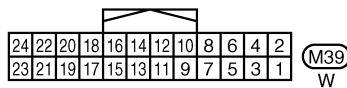
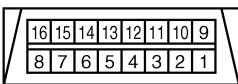
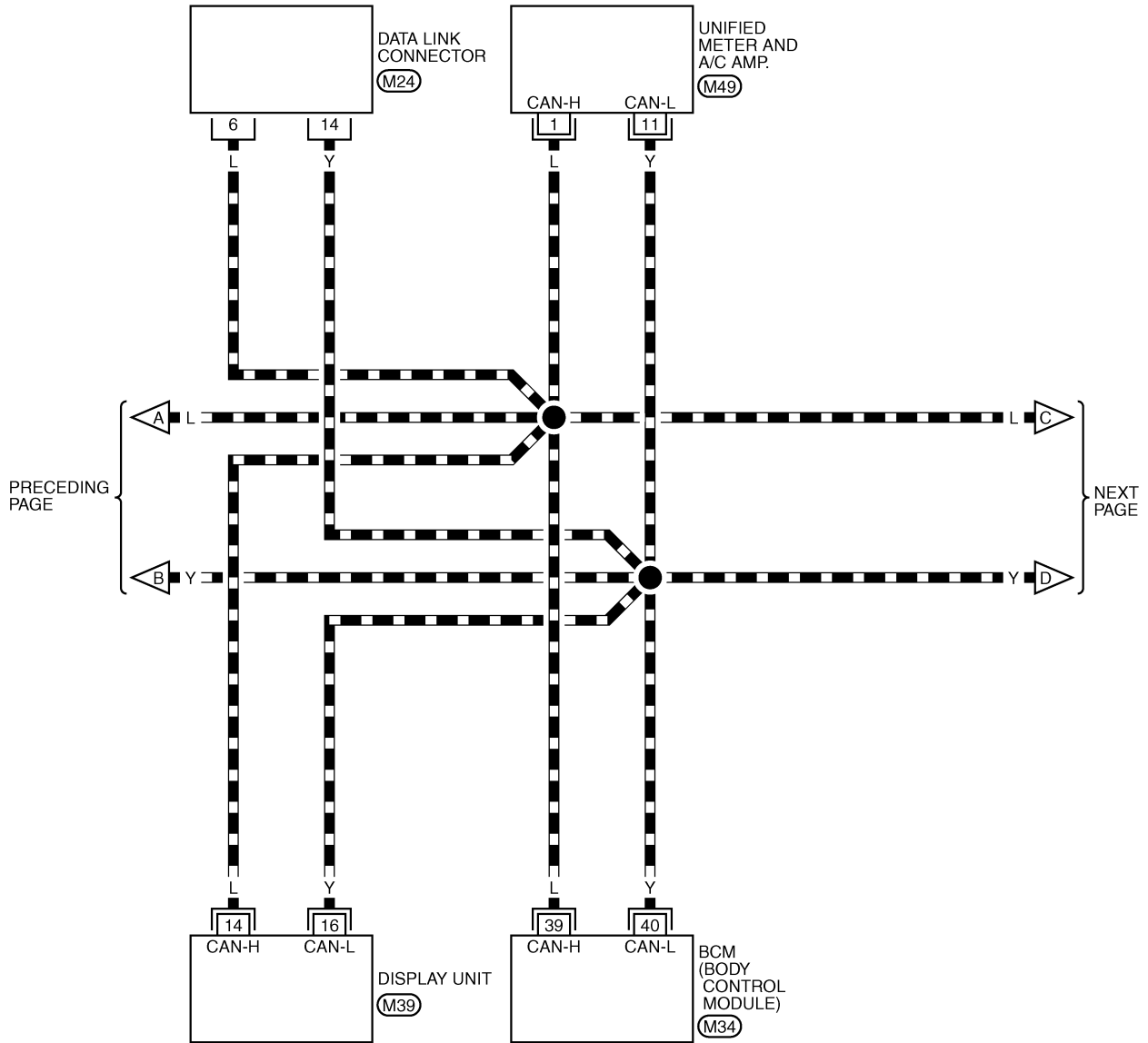
TKWB0014E

CAN SYSTEM (TYPE 3)

[CAN]

LAN-CAN-08

▬ : DATA LINE



REFER TO THE FOLLOWING.

M34 -ELECTRICAL UNITS

TKWB0015E

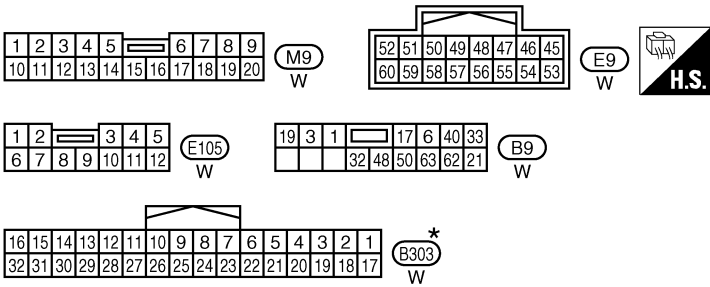
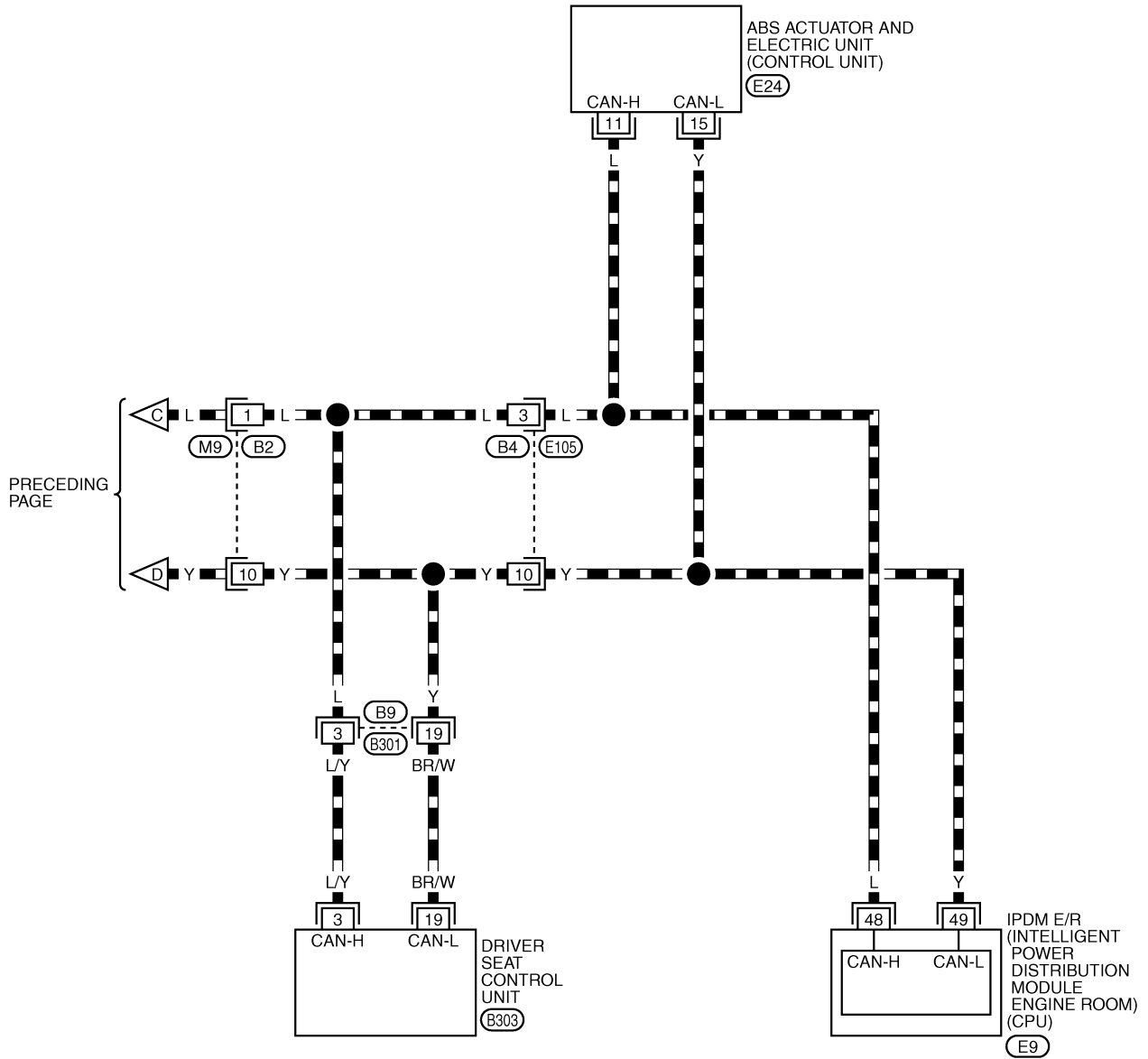
CAN SYSTEM (TYPE 3)

[CAN]

LAN-CAN-09

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▬ : DATA LINE



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

REFER TO THE FOLLOWING.
E24 -ELECTRICAL UNITS

TKWB0016E

Work Flow

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

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

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

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

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

(Example)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="4" style="text-align: center;">SELECT DIAG MODE</td></tr> <tr><td colspan="4" style="text-align: center;">WORK SUPPORT</td></tr> <tr><td colspan="4" style="text-align: center;">SELF-DIAG RESULTS</td></tr> <tr><td colspan="4" style="text-align: center;">DATA MONITOR</td></tr> <tr><td colspan="4" style="text-align: center;">DATA MONITOR (SPEC)</td></tr> <tr><td colspan="4" style="text-align: center;">CAN DIAG SUPPORT MNTR</td></tr> <tr><td colspan="4" style="text-align: center;">ACTIVE TEST</td></tr> <tr><td colspan="4" style="text-align: center;"> </td></tr> <tr><td colspan="4" style="text-align: center;">Scroll Down</td></tr> <tr> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;">BACK</td> <td style="width: 25%;">LIGHT COPY</td> </tr> </table>	SELECT DIAG MODE				WORK SUPPORT				SELF-DIAG RESULTS				DATA MONITOR				DATA MONITOR (SPEC)				CAN DIAG SUPPORT MNTR				ACTIVE TEST								Scroll Down						BACK	LIGHT COPY	➔	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="4" style="text-align: center;">CAN DIAG SUPPORT MNTR</td></tr> <tr><td colspan="4" style="text-align: center;">ENGINE</td></tr> <tr> <td colspan="2" style="text-align: center;">PRSENT</td> <td colspan="2" style="text-align: center;"> </td> </tr> <tr> <td style="width: 50%;">INITIAL DIAG</td> <td style="width: 50%;"></td> <td style="width: 50%;">OK</td> <td style="width: 50%;"></td> </tr> <tr> <td>TRANSMIT DIAG</td> <td></td> <td>OK</td> <td></td> </tr> <tr> <td>TCM</td> <td></td> <td>OK</td> <td></td> </tr> <tr> <td>VDC/TCS/ABS</td> <td></td> <td>OK</td> <td></td> </tr> <tr> <td>METER/M&A</td> <td></td> <td>OK</td> <td></td> </tr> <tr> <td>ICC</td> <td></td> <td>UNKWN</td> <td></td> </tr> <tr> <td>BCM/SEC</td> <td></td> <td>OK</td> <td></td> </tr> <tr> <td>IPDM E/R</td> <td></td> <td>OK</td> <td></td> </tr> <tr> <td>AWD/4WD/e4WD</td> <td></td> <td>UNKWN</td> <td></td> </tr> <tr> <td colspan="2" style="text-align: center;">PRINT</td> <td colspan="2" style="text-align: center;">Scroll Down</td> </tr> <tr> <td style="width: 25%;">MODE</td> <td style="width: 25%;">BACK</td> <td style="width: 25%;">LIGHT</td> <td style="width: 25%;">COPY</td> </tr> </table>	CAN DIAG SUPPORT MNTR				ENGINE				PRSENT				INITIAL DIAG		OK		TRANSMIT DIAG		OK		TCM		OK		VDC/TCS/ABS		OK		METER/M&A		OK		ICC		UNKWN		BCM/SEC		OK		IPDM E/R		OK		AWD/4WD/e4WD		UNKWN		PRINT		Scroll Down		MODE	BACK	LIGHT	COPY
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PKIA8343E

- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-88, "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-88, "CHECK SHEET"](#) .

NOTE:

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

- Check CAN communication line of the integrated display system. Refer to [AV-101, "CAN Communication Line Check"](#) .
- Attach the CAN DIAG MONITOR check sheet onto the check sheet. Refer to [LAN-88, "CHECK SHEET"](#) .
- Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG MONITOR check sheet. Refer to [LAN-88, "CHECK SHEET"](#) .

CAN SYSTEM (TYPE 3)

[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-101, "CAN Communication Line Check"](#).

9. According to the check sheet results (example), start inspection. Refer to [LAN-90, "CHECK SHEET RESULTS \(EXAMPLE\)"](#).

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LAN

CAN SYSTEM (TYPE 3)

[CAN]

CHECK SHEET

NOTE:

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

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

Symptoms :

Attach copy of
SELECT SYSTEM

Attach copy of
SELECT SYSTEM

Attach copy of
display unit
CAN DIAG MONITOR check sheet

PKIA8373E

CAN SYSTEM (TYPE 3)

[CAN]

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Attach copy of
ENGINE
SELF-DIAG RESULTS

Attach copy of
TRANSMISSION
SELF-DIAG RESULTS

Attach copy of
BCM
SELF-DIAG RESULTS

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

Attach copy of
AUTO DRIVE POS.
SELF-DIAG RESULTS

Attach copy of
ABS
SELF-DIAG RESULTS

Attach copy of
IPDM E/R
SELF-DIAG RESULTS

Attach copy of
ENGINE
CAN DIAG SUPPORT
MNTR

Attach copy of
TRANSMISSION
CAN DIAG SUPPORT
MNTR

Attach copy of
BCM
CAN DIAG SUPPORT
MNTR

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

Attach copy of
AUTO DRIVE POS.
CAN DIAG SUPPORT
MNTR

Attach copy of
ABS
CAN DIAG SUPPORT
MNTR

Attach copy of
IPDM E/R
CAN DIAG SUPPORT
MNTR

PKIA8374E

CHECK SHEET RESULTS (EXAMPLE)

NOTE:

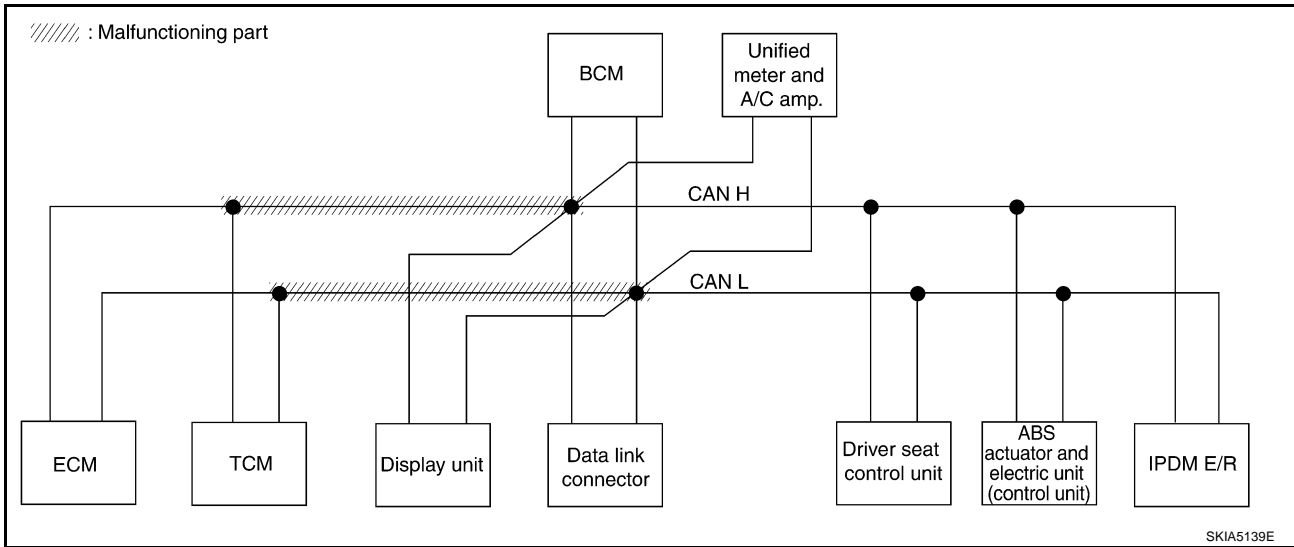
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

Case 1

Check harness between TCM and data link connector. Refer to [LAN-103, "Circuit Check Between TCM and Data Link Connector"](#).

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

PKIA8375E



CAN SYSTEM (TYPE 3)

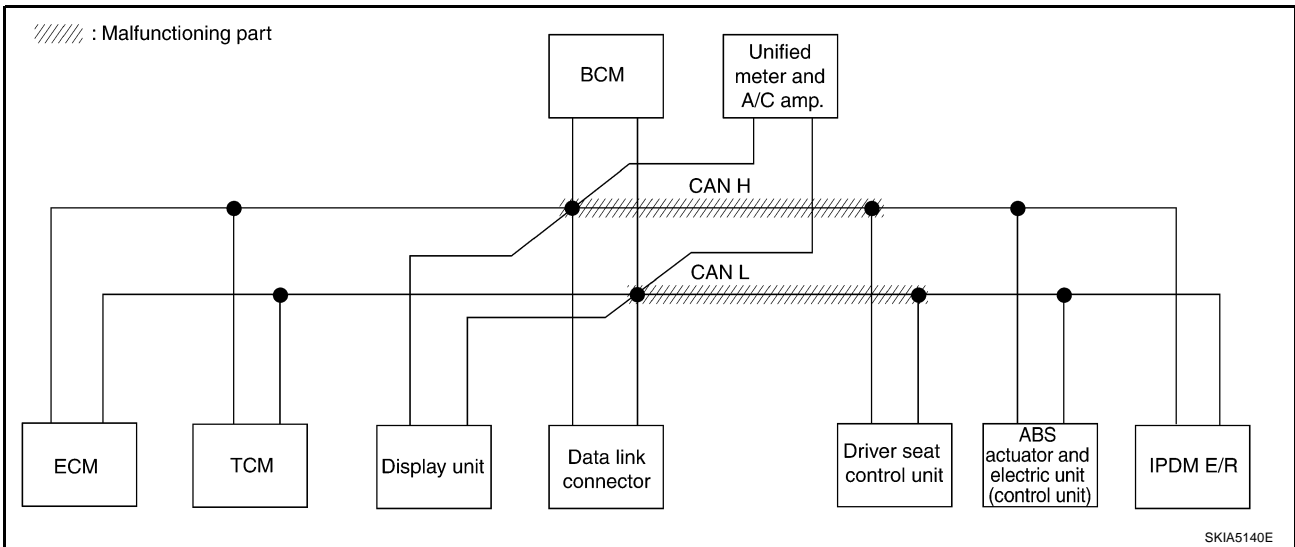
[CAN]

Case 2

Check harness between data link connector and driver seat control unit. Refer to [LAN-103, "Circuit Check Between Data Link Connector and Driver Seat Control Unit"](#).

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

PKIA8376E



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CAN SYSTEM (TYPE 3)

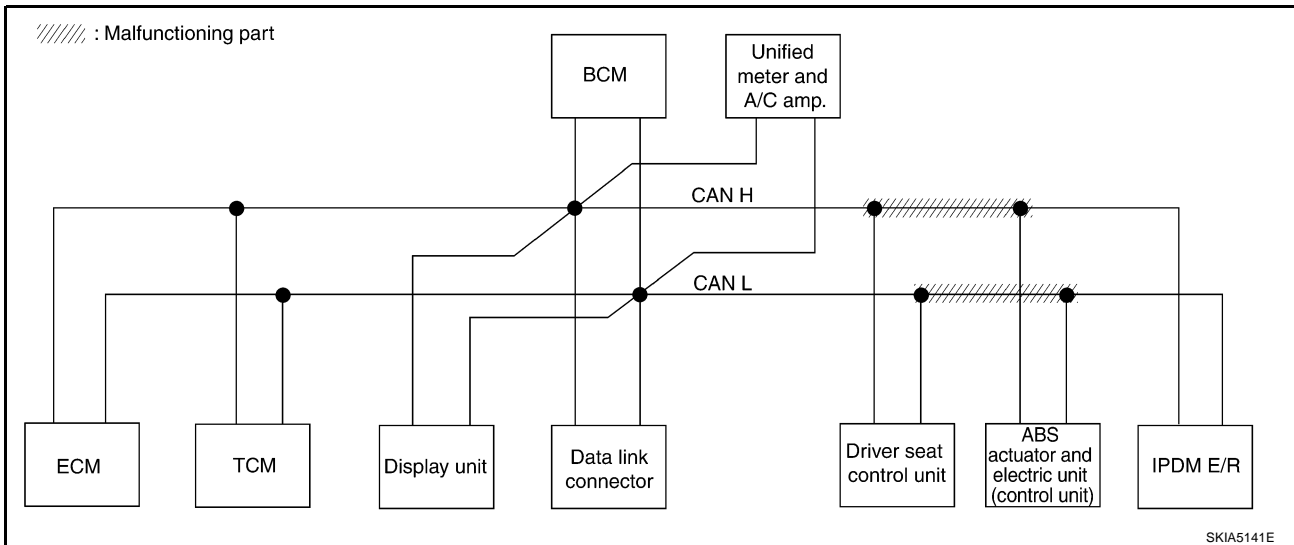
[CAN]

Case 3

Check harness between driver seat control unit and ABS actuator and electric unit (control unit). Refer to [LAN-104, "Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit \(Control Unit\)"](#) .

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

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CAN SYSTEM (TYPE 3)

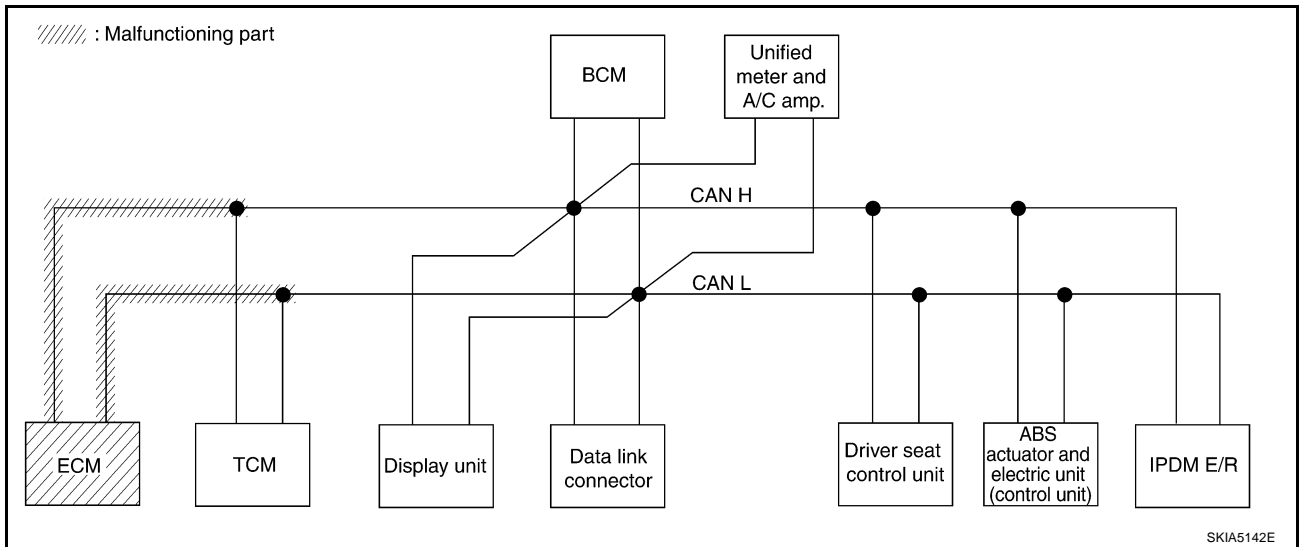
[CAN]

Case 4

Check ECM circuit. Refer to [LAN-105, "ECM Circuit Check"](#) .

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

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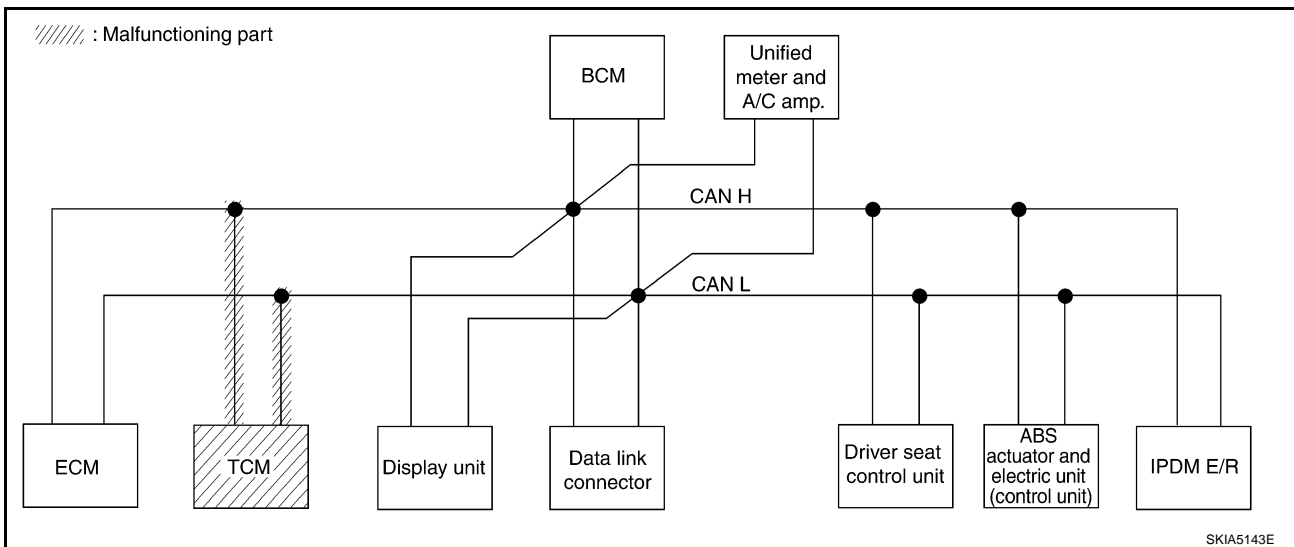
[CAN]

Case 5

Check TCM circuit. Refer to [LAN-106, "TCM Circuit Check"](#) .

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

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CAN SYSTEM (TYPE 3)

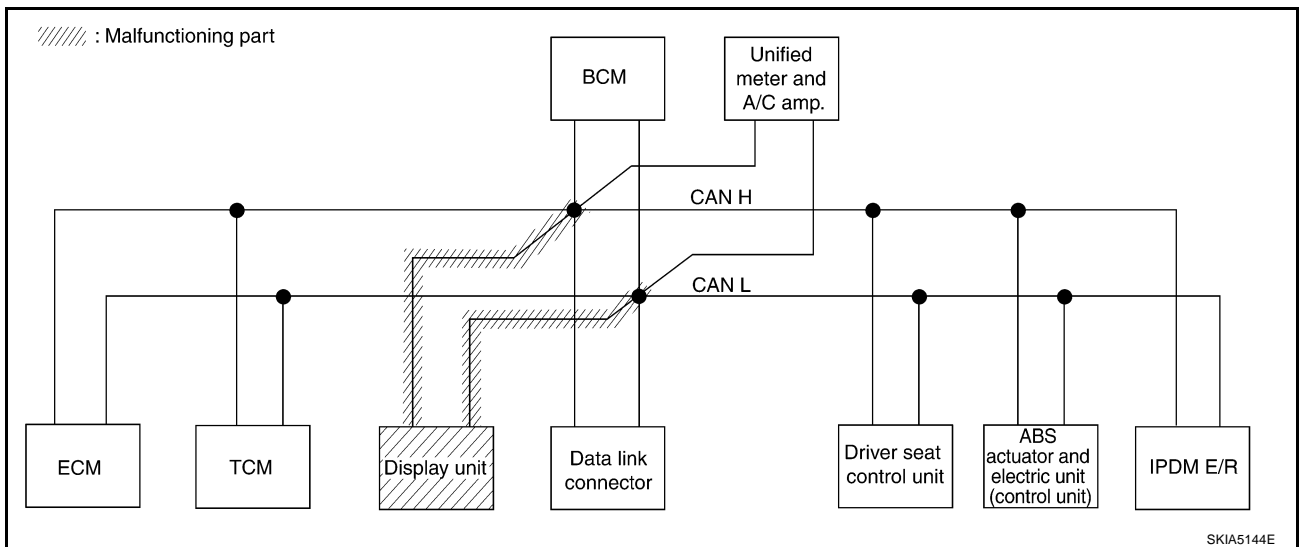
[CAN]

Case 6

Check display unit circuit. Refer to [LAN-106. "Display Unit Circuit Check"](#) .

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

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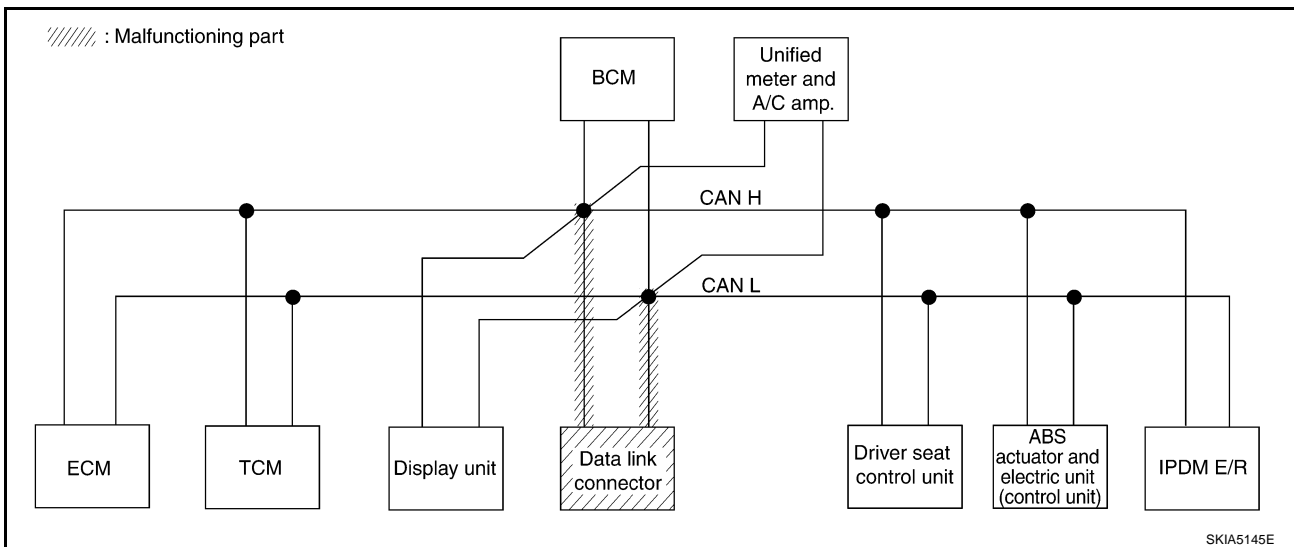
[CAN]

Case 7

Check data link connector circuit. Refer to [LAN-107, "Data Link Connector Circuit Check"](#) .

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

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CAN SYSTEM (TYPE 3)

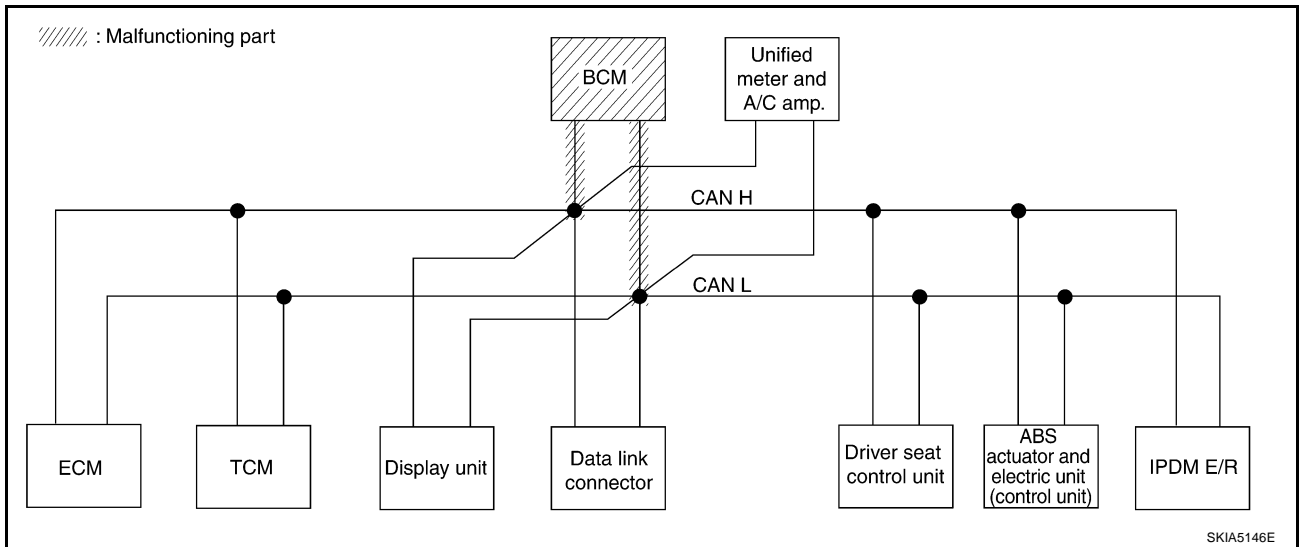
[CAN]

Case 8

Check BCM circuit. Refer to [LAN-107, "BCM Circuit Check"](#).

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

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CAN SYSTEM (TYPE 3)

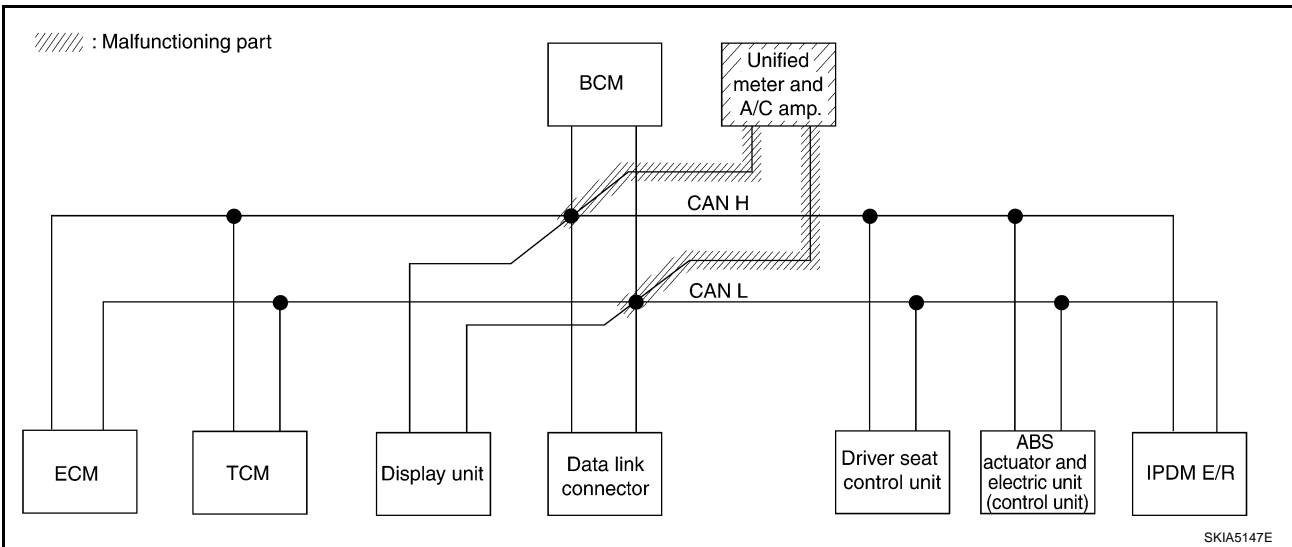
[CAN]

Case 9

Check unified meter and A/C amp. circuit. Refer to [LAN-108, "Unified Meter and A/C Amp. Circuit Check"](#) .

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

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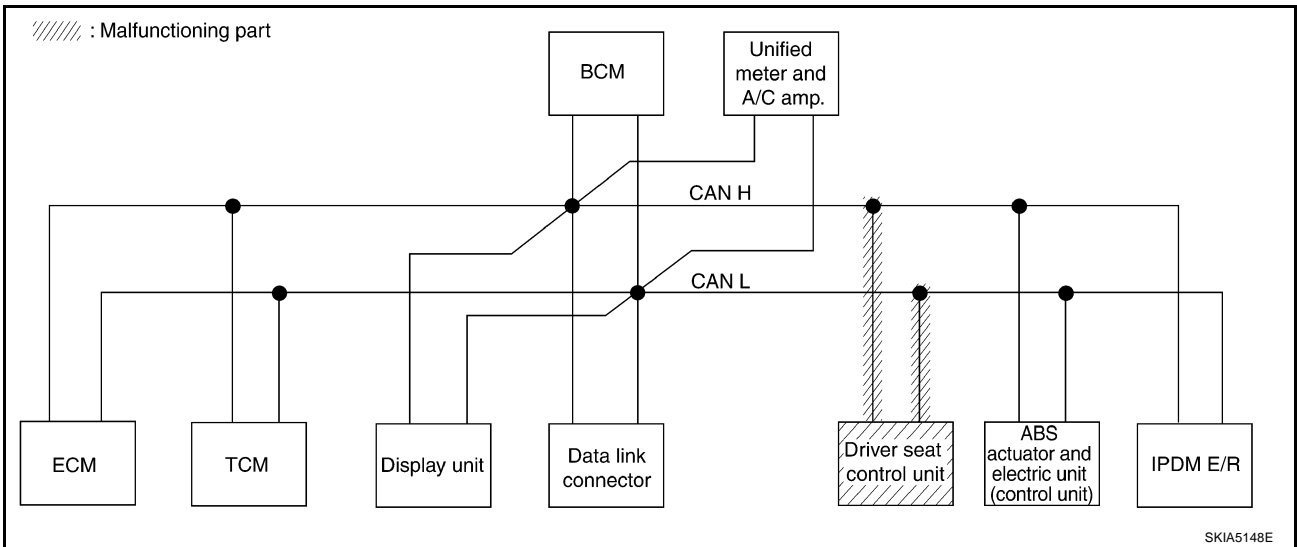
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Case 10

Check driver seat control unit circuit. Refer to [LAN-108, "Driver Seat Control Unit Circuit Check"](#) .

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

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CAN SYSTEM (TYPE 3)

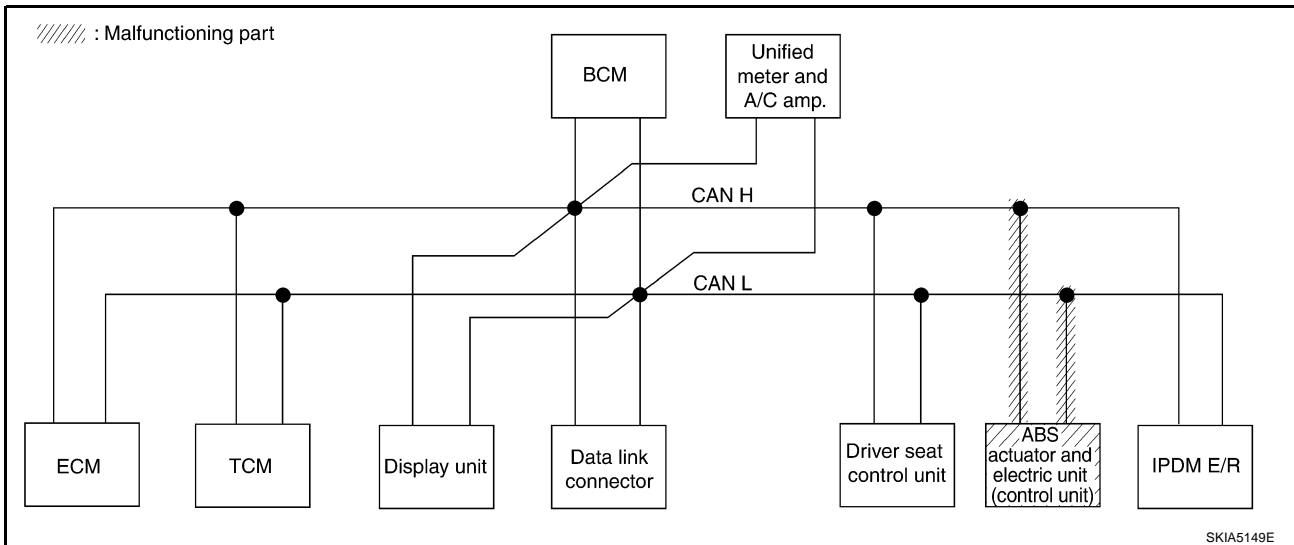
[CAN]

Case 11

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-109, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

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

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SKIA5149E

CAN SYSTEM (TYPE 3)

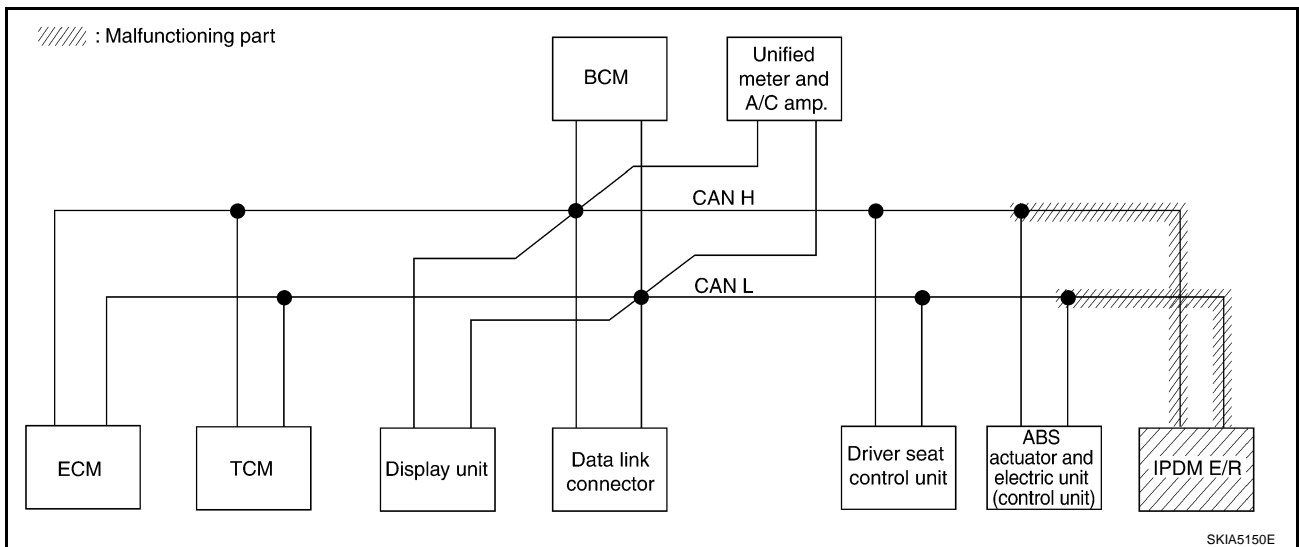
[CAN]

Case 12

Check IPDM E/R circuit. Refer to [LAN-109, "IPDM E/R Circuit Check"](#) .

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

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CAN SYSTEM (TYPE 3)

[CAN]

Case 13

Check CAN communication circuit. Refer to [LAN-110, "CAN Communication Circuit Check"](#) .

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

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Case 14

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-114, "IPDM E/R Ignition Relay Circuit Check"](#) .

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

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Case 15

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-114, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	DISPLAY	BCM/SEC	METER /M&A	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UN KN WN	—	—	—	UN KN WN	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	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UN KN WN	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—

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Circuit Check Between TCM and Data Link Connector

AKS00A57

1. CHECK HARNESS FOR OPEN CIRCUIT

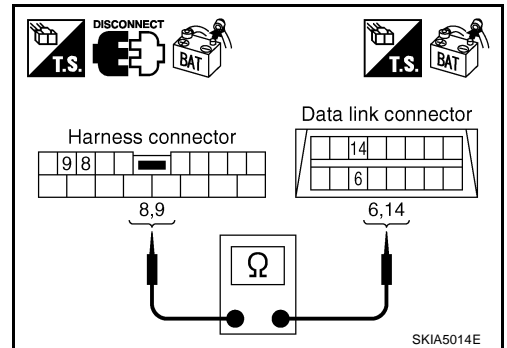
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

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

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

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-86, "Work Flow"](#) .
- NG >> Repair harness.



Circuit Check Between Data Link Connector and Driver Seat Control Unit

AKS00A58

1. CHECK CONNECTOR

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

OK or NG

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

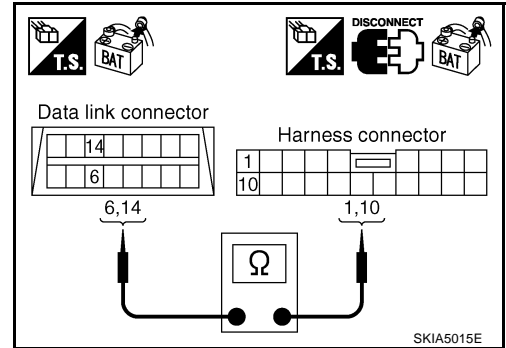
2. CHECK HARNESS FOR OPEN CIRCUIT

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

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

OK or NG

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



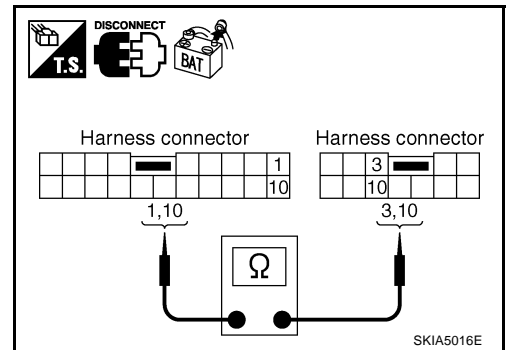
3. CHECK HARNESS FOR OPEN CIRCUIT

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

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

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-86, "Work Flow"](#) .
 NG >> Repair harness.



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

AKS00A59

1. CHECK CONNECTOR

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

OK or NG

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

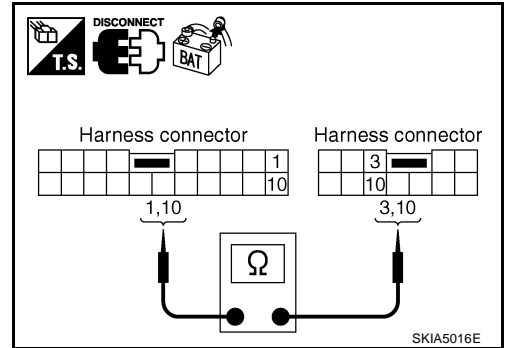
2. CHECK HARNESS FOR OPEN CIRCUIT

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

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

OK or NG

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



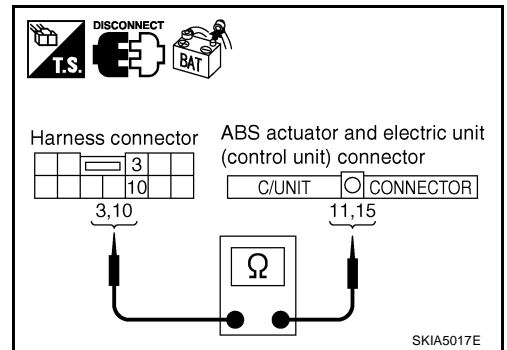
3. CHECK HARNESS FOR OPEN CIRCUIT

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

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

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-86. "Work Flow"](#).
 NG >> Repair harness.



ECM Circuit Check

1. CHECK CONNECTOR

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

OK or NG

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

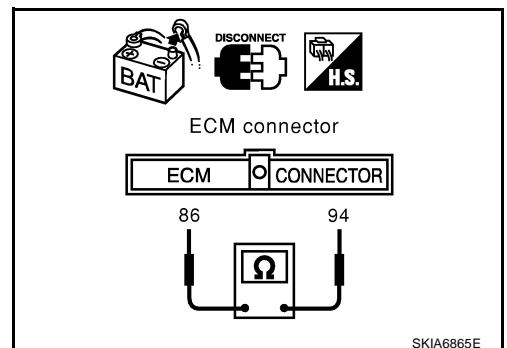
2. CHECK HARNESS FOR OPEN CIRCUIT

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

94 (L) - 86 (Y) : Approx. 108 - 132Ω

OK or NG

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



TCM Circuit Check**1. CHECK CONNECTOR**

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

OK or NG

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

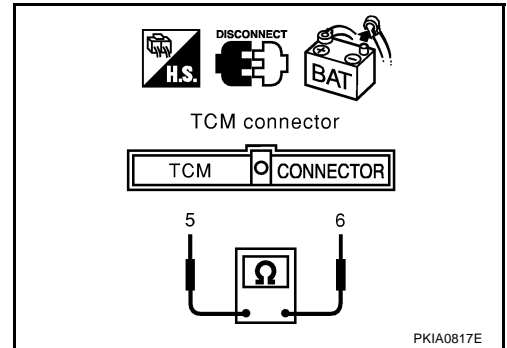
2. CHECK HARNESS FOR OPEN CIRCUIT

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

5 (L) - 6 (Y) : Approx. 54 - 66Ω

OK or NG

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

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

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

OK or NG

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

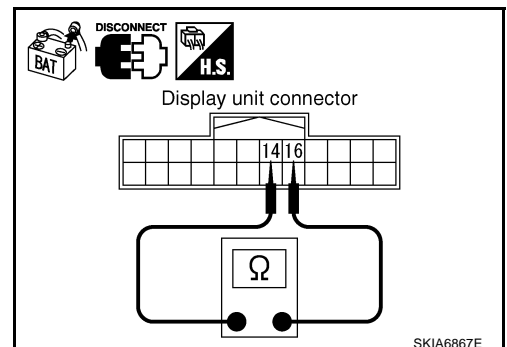
2. CHECK HARNESS FOR OPEN CIRCUIT

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

14 (L) - 16 (Y) : Approx. 54 - 66Ω

OK or NG

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



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

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

OK or NG

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

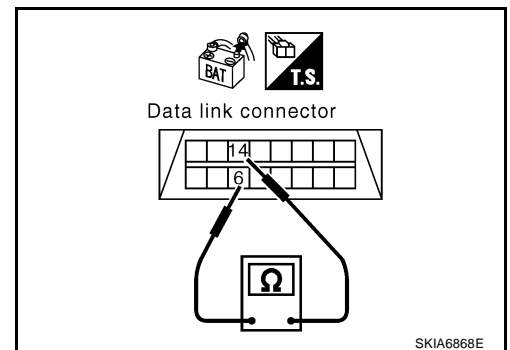
2. CHECK HARNESS FOR OPEN CIRCUIT

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

6 (L) - 14 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Diagnose again. Refer to [LAN-86, "Work Flow"](#) .
 NG >> Repair harness between data link connector and BCM.

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

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

OK or NG

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

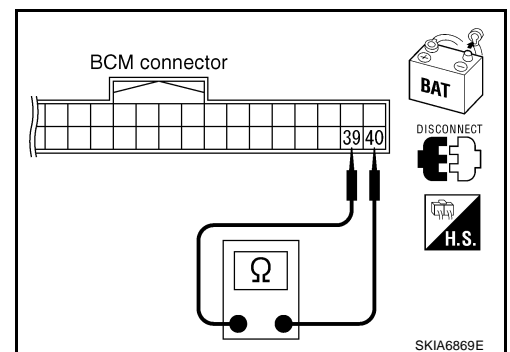
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M34 terminals 39(L) and 40 (Y).

39 (L) - 40 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace BCM. Refer to [BCS-14, "Removal and Installation of BCM"](#) .
 NG >> Repair harness between BCM and data link connector.



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Unified Meter and A/C Amp. Circuit Check

AKS00A5F

1. CHECK CONNECTOR

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

OK or NG

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

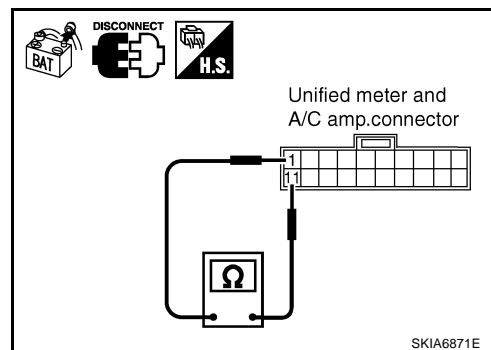
2. CHECK HARNESS FOR OPEN CIRCUIT

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

1 (L) - 11 (Y) : Approx. 54 - 66Ω

OK or NG

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

**Driver Seat Control Unit Circuit Check**

AKS00A5G

1. CHECK CONNECTOR

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

OK or NG

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

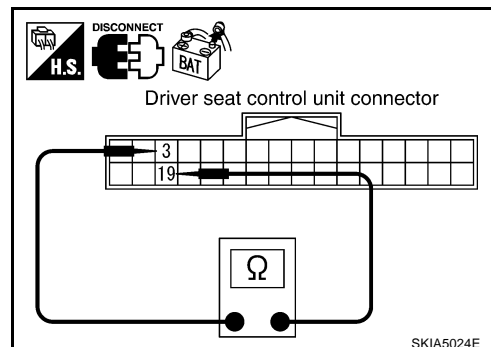
2. CHECK HARNESS FOR OPEN CIRCUIT

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

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

OK or NG

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



ABS Actuator and Electric Unit (Control Unit) Circuit Check

1. CHECK CONNECTOR

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

OK or NG

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

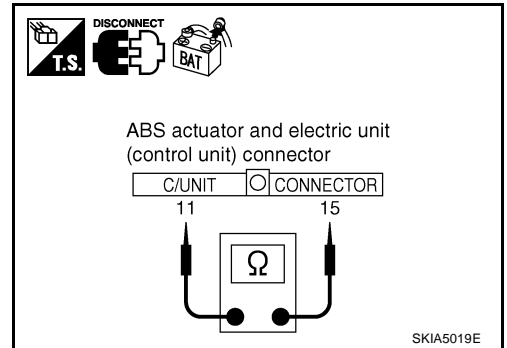
2. CHECK HARNESS FOR OPEN CIRCUIT

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

11 (L) - 15 (Y) : Approx. 54 - 66Ω

OK or NG

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



IPDM E/R Circuit Check

1. CHECK CONNECTOR

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

OK or NG

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

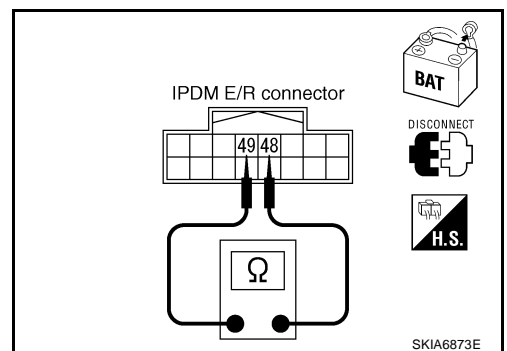
2. CHECK HARNESS FOR OPEN CIRCUIT

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

48 (L) - 49 (Y) : Approx. 108 - 132Ω

OK or NG

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



CAN Communication Circuit Check

1. CHECK CONNECTOR

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

OK or NG

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

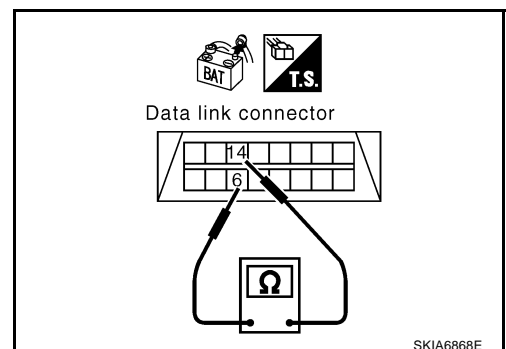
2. CHECK HARNESS FOR SHORT CIRCUIT

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

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

OK or NG

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



3. CHECK HARNESS FOR SHORT CIRCUIT

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

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

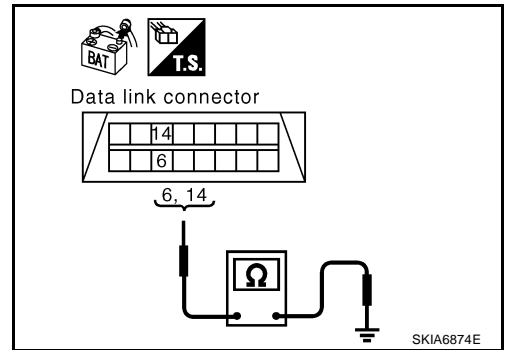
14 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 4.

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

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



4. CHECK HARNESS FOR SHORT CIRCUIT

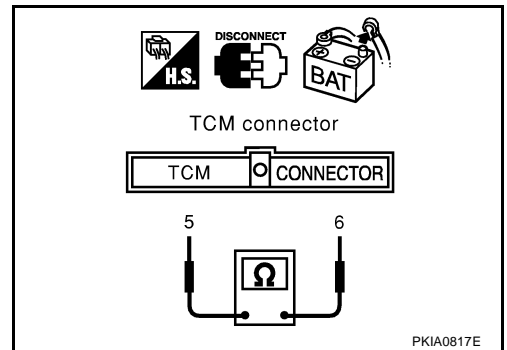
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

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

OK or NG

OK >> GO TO 5.

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



5. CHECK HARNESS FOR SHORT CIRCUIT

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

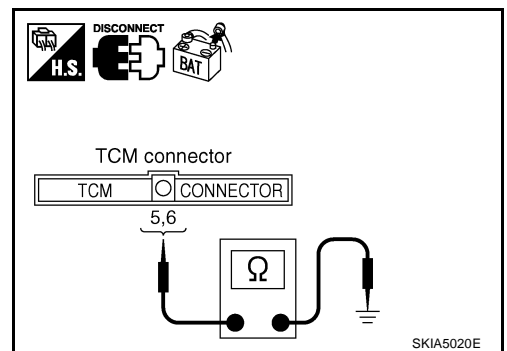
5 (L) - Ground : Continuity should not exist.

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

OK or NG

OK >> GO TO 6.

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



6. CHECK HARNESS FOR SHORT CIRCUIT

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

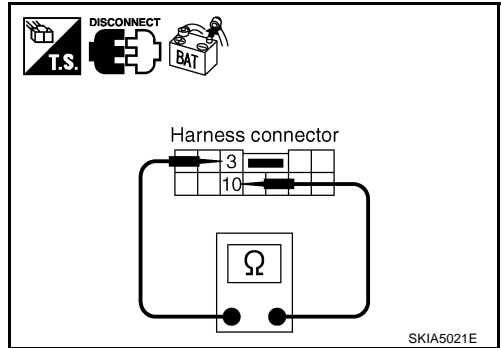
3 (L) - 10 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 7.

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

- Harness between harness connector B4 and harness connector B2
- Harness between harness connector B4 and harness connector B9



7. CHECK HARNESS FOR SHORT CIRCUIT

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

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

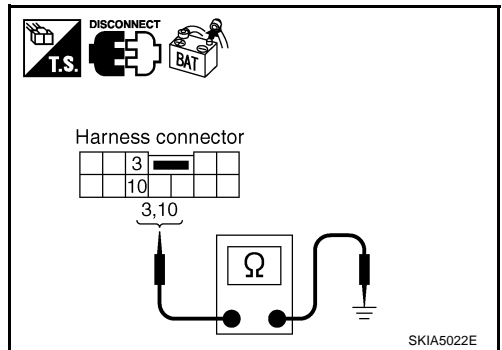
10 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 8.

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

- Harness between harness connector B4 and harness connector B2
- Harness between harness connector B4 and harness connector B9



8. CHECK HARNESS FOR SHORT CIRCUIT

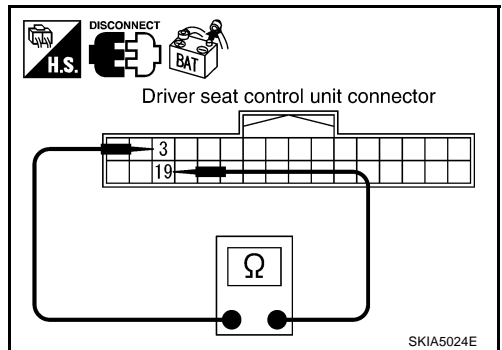
1. Disconnect driver seat control unit connector.
2. Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

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

OK or NG

OK >> GO TO 9.

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



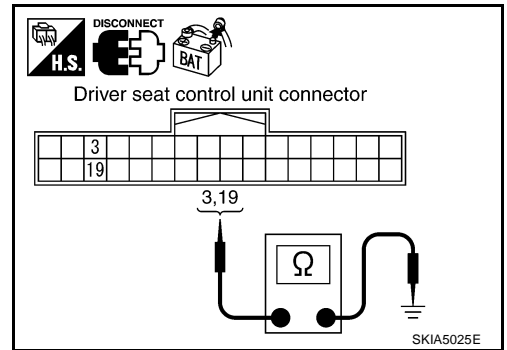
9. CHECK HARNESS FOR SHORT CIRCUIT

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

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

OK or NG

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



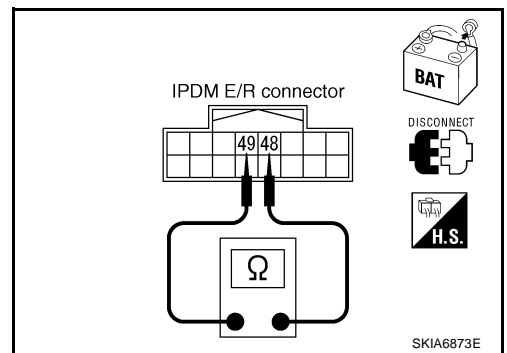
10. CHECK HARNESS FOR SHORT CIRCUIT

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

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

OK or NG

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



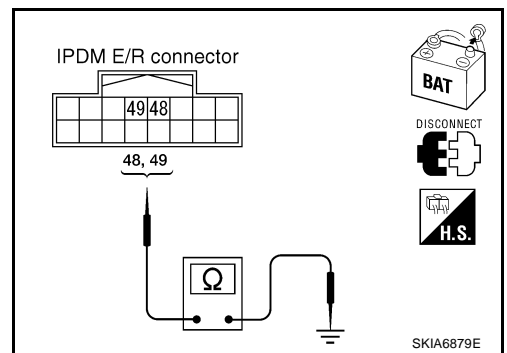
11. CHECK HARNESS FOR SHORT CIRCUIT

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

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

OK or NG

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



12. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-114, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-86, "Work Flow"](#).
- NG >> Replace ECM and/or IPDM E/R.

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IPDM E/R Ignition Relay Circuit Check

AKS00A5K

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

- IPDM E/R power supply circuit. Refer to [PG-27, "IPDM E/R Power/Ground Circuit Inspection"](#) .
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#) .

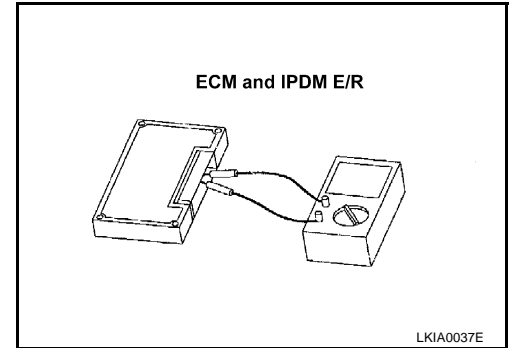
Component Inspection

AKS00A5L

ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

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

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



CAN SYSTEM (TYPE 4)

PF:23710

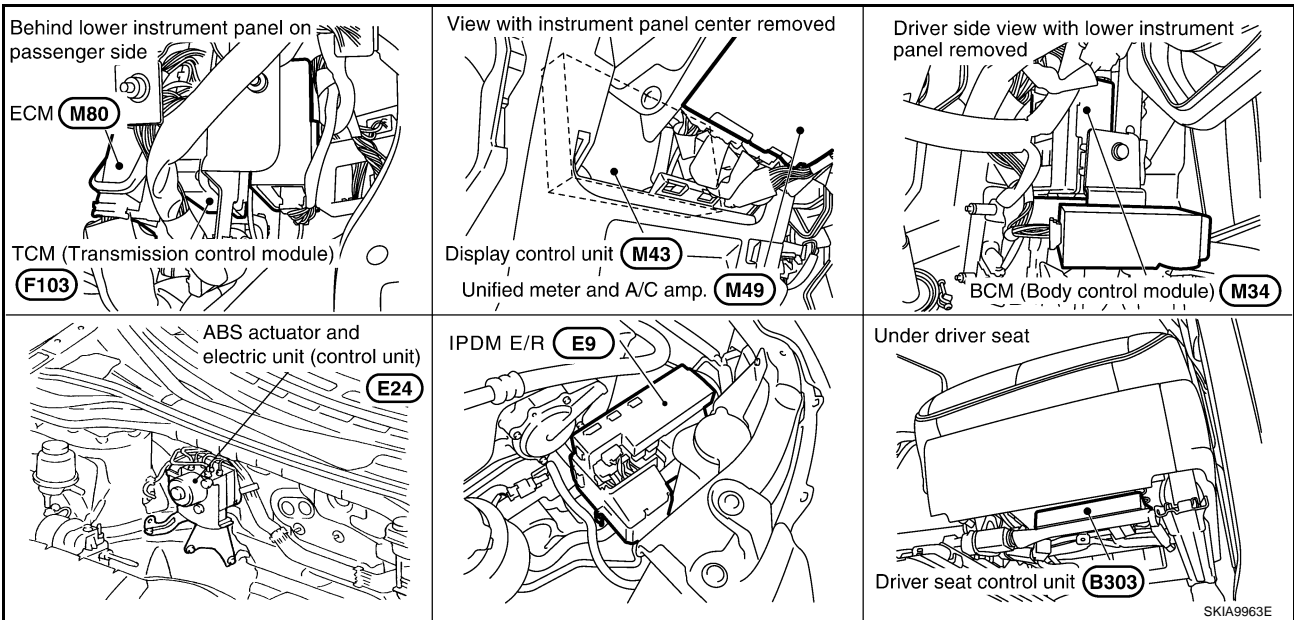
System Description

AKS00ADX

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

AKS00ADY



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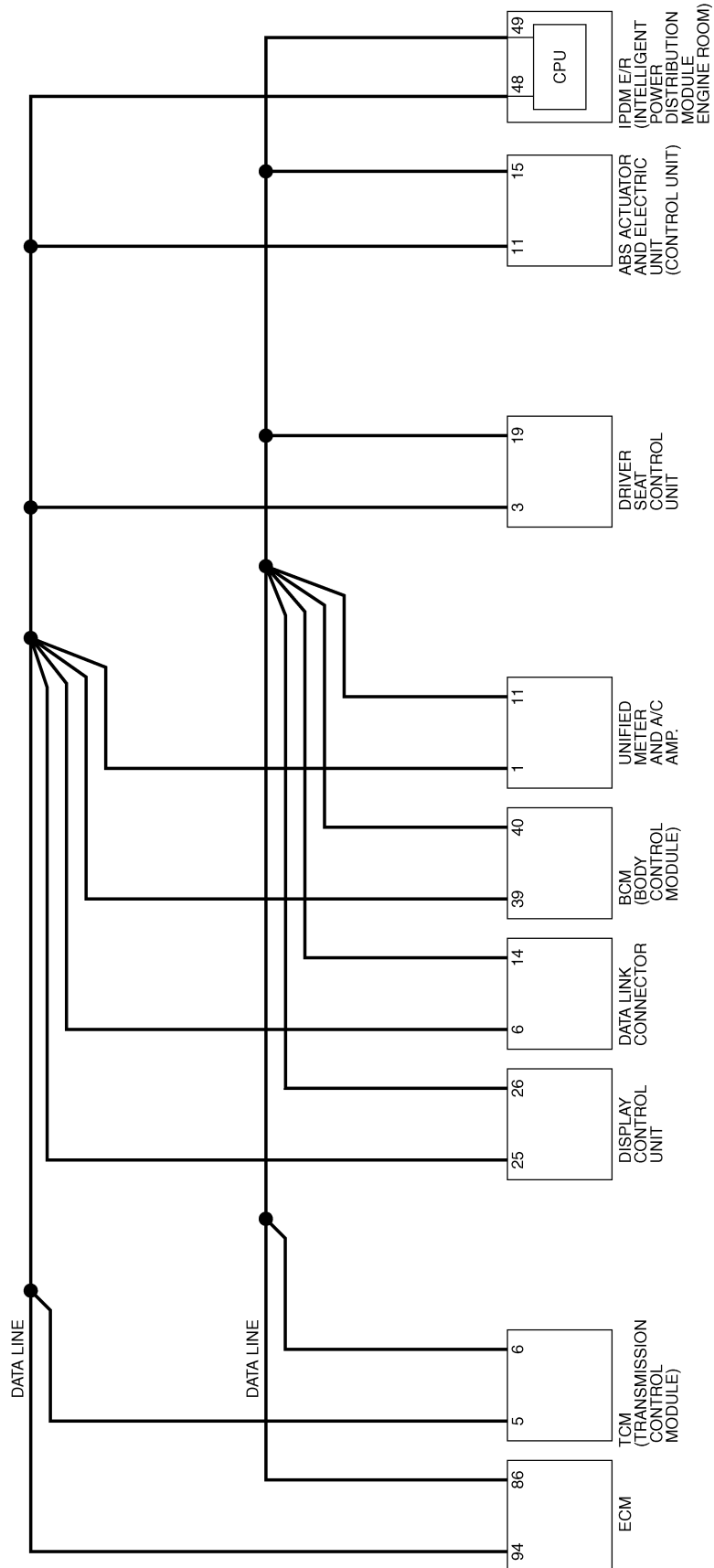
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CAN SYSTEM (TYPE 4)

[CAN]

Schematic

AKS00ADZ



TKWB0017E

CAN SYSTEM (TYPE 4)

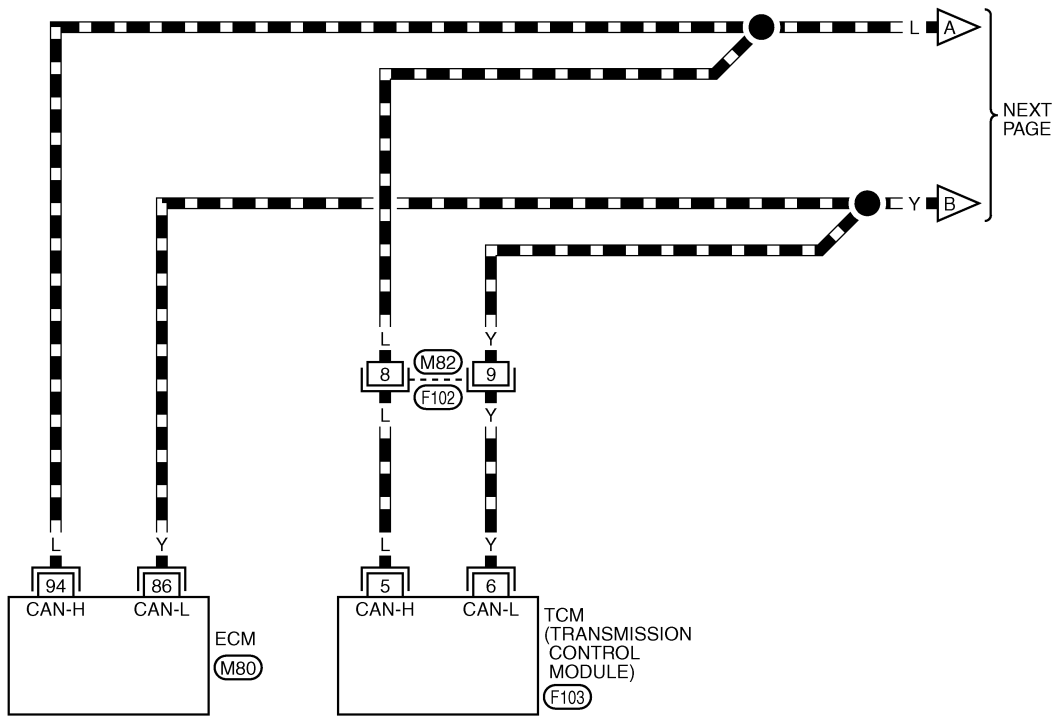
[CAN]

AKS00AE0

Wiring Diagram - CAN -

LAN-CAN-10

▬ : DATA LINE



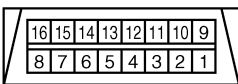
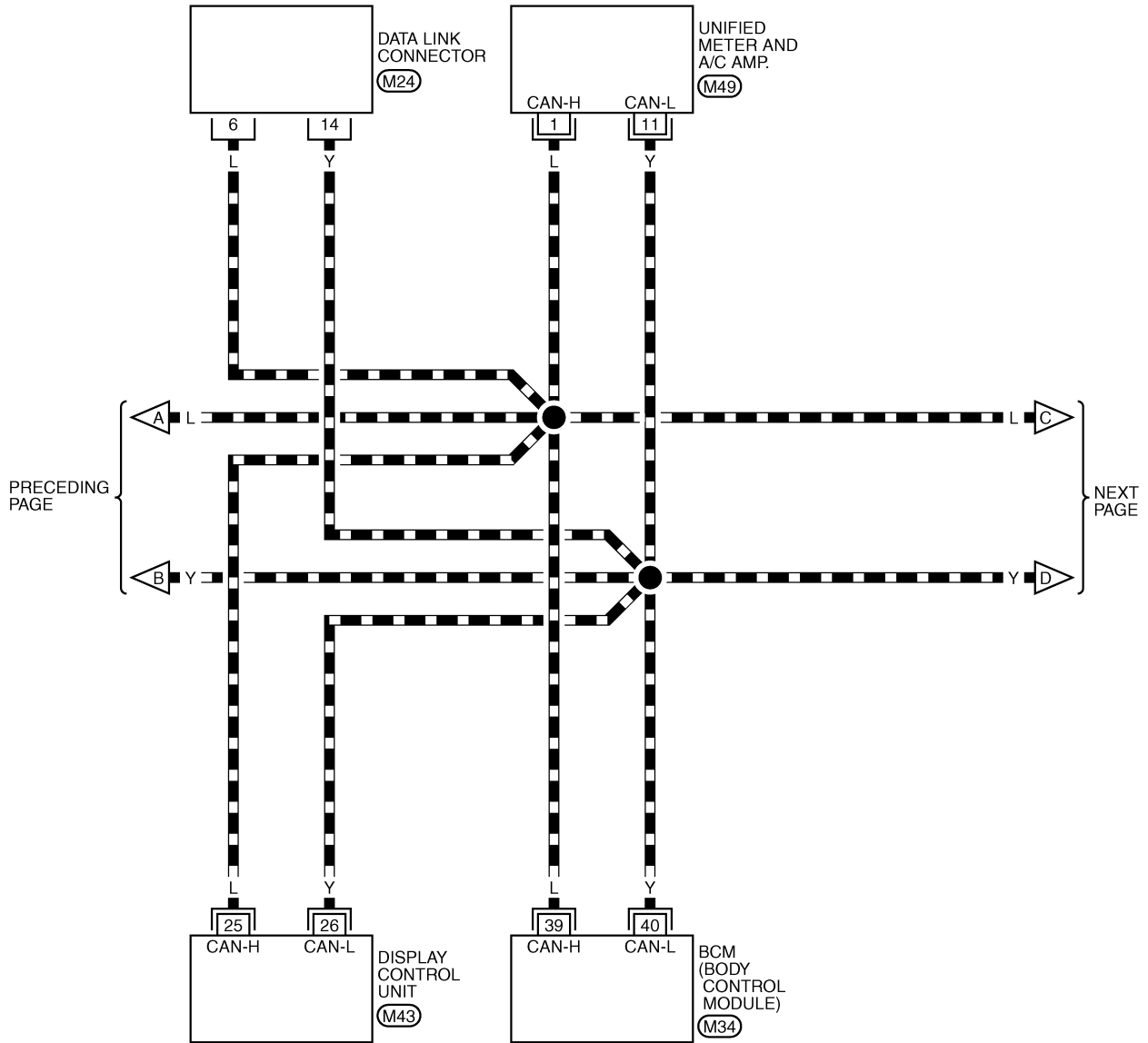
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	(F102)	W

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

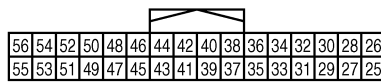
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LAN-CAN-11

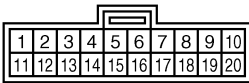
▬ : DATA LINE



(M24)
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(M43)
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(M49)
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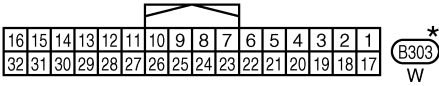
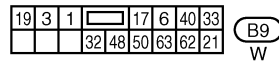
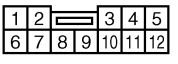
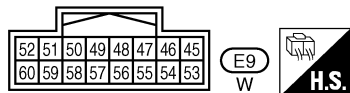
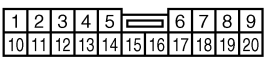
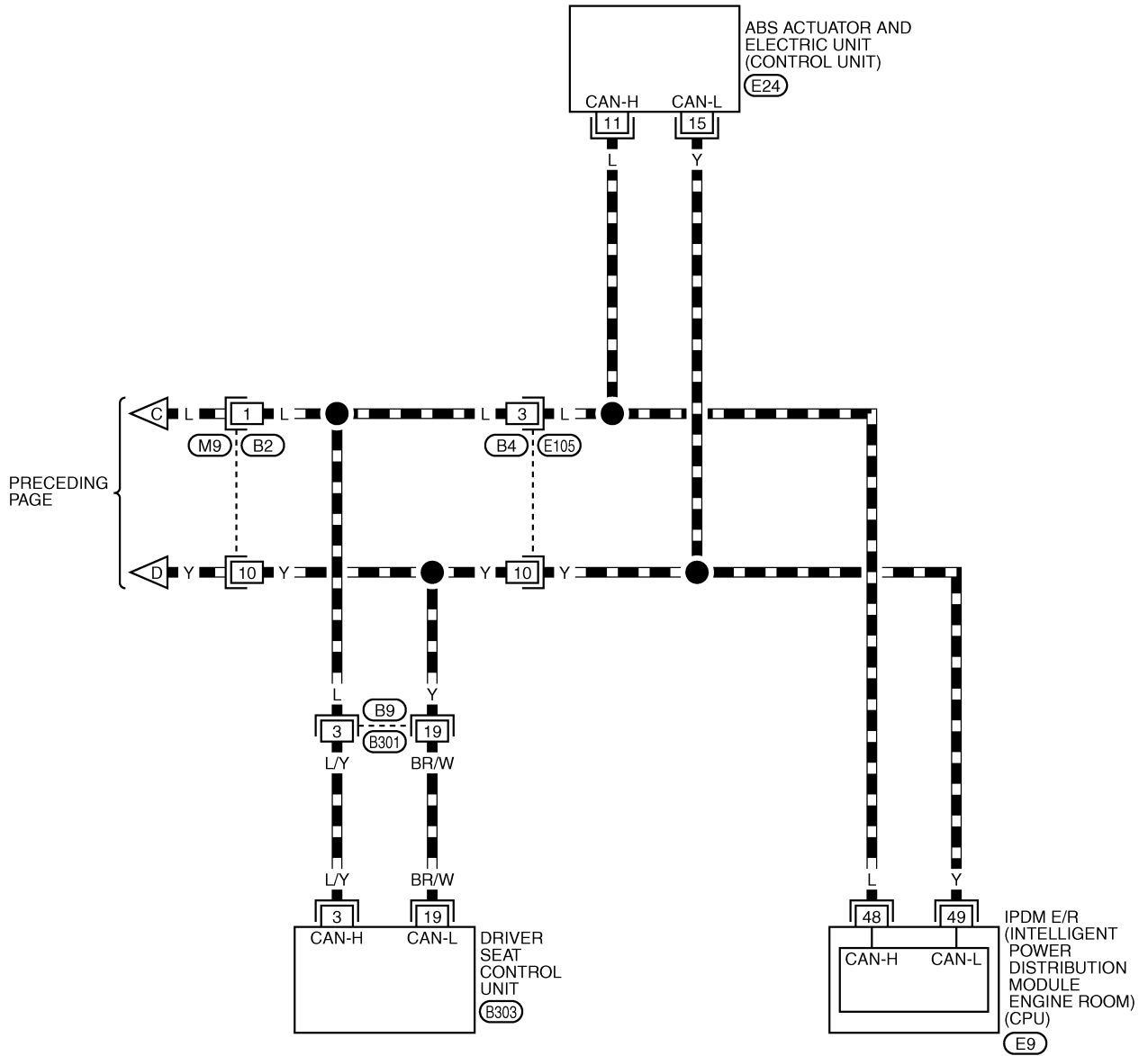


REFER TO THE FOLLOWING.

(M34) -ELECTRICAL UNITS

LAN-CAN-12

▬ : DATA LINE



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

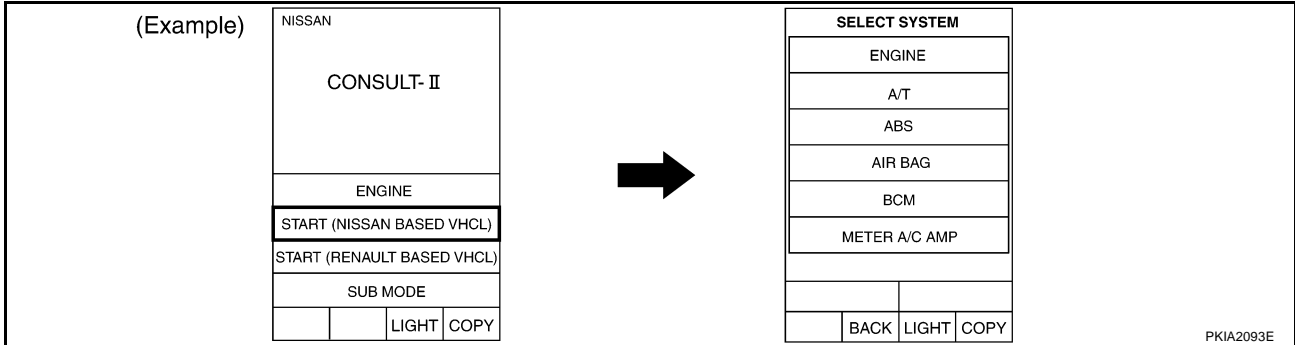
REFER TO THE FOLLOWING.

(E24) -ELECTRICAL UNITS

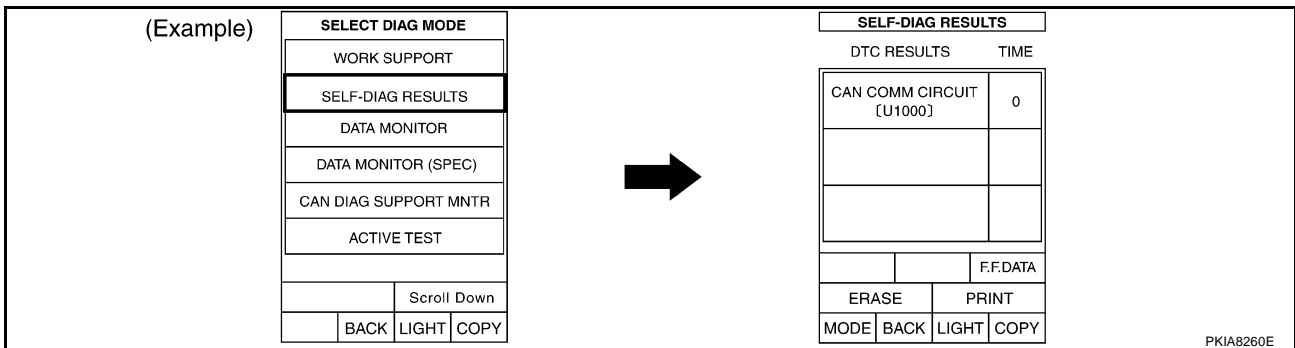
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Work Flow

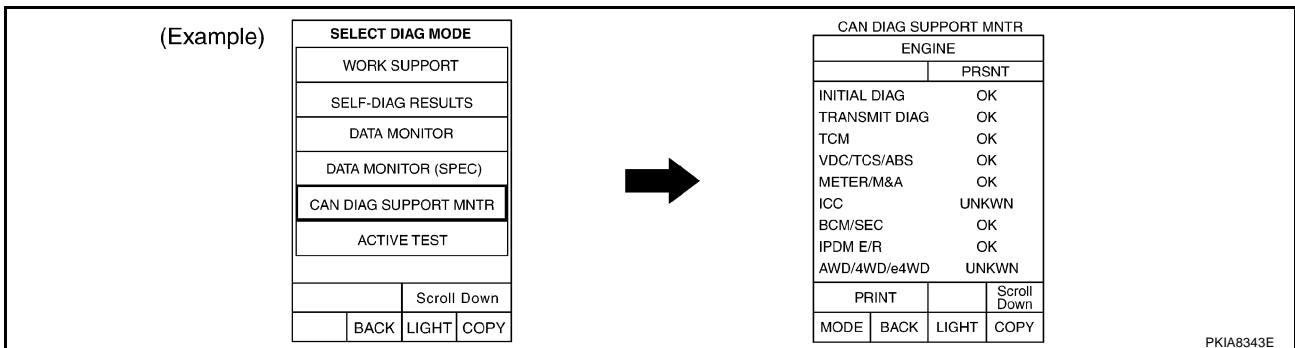
- When there are no indications of "TRANSMISSION", "BCM", "METER A/C AMP", "AUTO DRIVE POS.", or "IPDM E/R" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



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



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP", "AUTO DRIVE POS.", "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 [LAN-122, "CHECK SHEET"](#) .
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "v" onto the items with "No indication", "NG", or "UNKWKN" in the check sheet table. Refer to [LAN-122, "CHECK SHEET"](#) .

NOTE:

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

- Check CAN communication line of the navigation system. Refer to [AV-175, "CAN Communication Line Check"](#) .
- Attach the CAN DIAG SUPPORT MONITOR check sheet onto the check sheet. Refer to [LAN-122, "CHECK SHEET"](#) .

CAN SYSTEM (TYPE 4)

[CAN]

8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG SUPPORT MONITOR check sheet. Refer to [LAN-122, "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-175, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-124, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

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CAN SYSTEM (TYPE 4)

[CAN]

CHECK SHEET

NOTE:

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

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

Symptoms :

Attach copy of
SELECT SYSTEM

Attach copy of
SELECT SYSTEM

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

PKIA8390E

CAN SYSTEM (TYPE 4)

[CAN]

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Attach copy of
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SELF-DIAG RESULTS

Attach copy of
TRANSMISSION
SELF-DIAG RESULTS

Attach copy of
BCM
SELF-DIAG RESULTS

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

Attach copy of
AUTO DRIVE POS.
SELF-DIAG RESULTS

Attach copy of
ABS
SELF-DIAG RESULTS

Attach copy of
IPDM E/R
SELF-DIAG RESULTS

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ENGINE
CAN DIAG SUPPORT
MNTR

Attach copy of
TRANSMISSION
CAN DIAG SUPPORT
MNTR

Attach copy of
BCM
CAN DIAG SUPPORT
MNTR

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

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AUTO DRIVE POS.
CAN DIAG SUPPORT
MNTR

Attach copy of
ABS
CAN DIAG SUPPORT
MNTR

Attach copy of
IPDM E/R
CAN DIAG SUPPORT
MNTR

PKIA8374E

CHECK SHEET RESULTS (EXAMPLE)

NOTE:

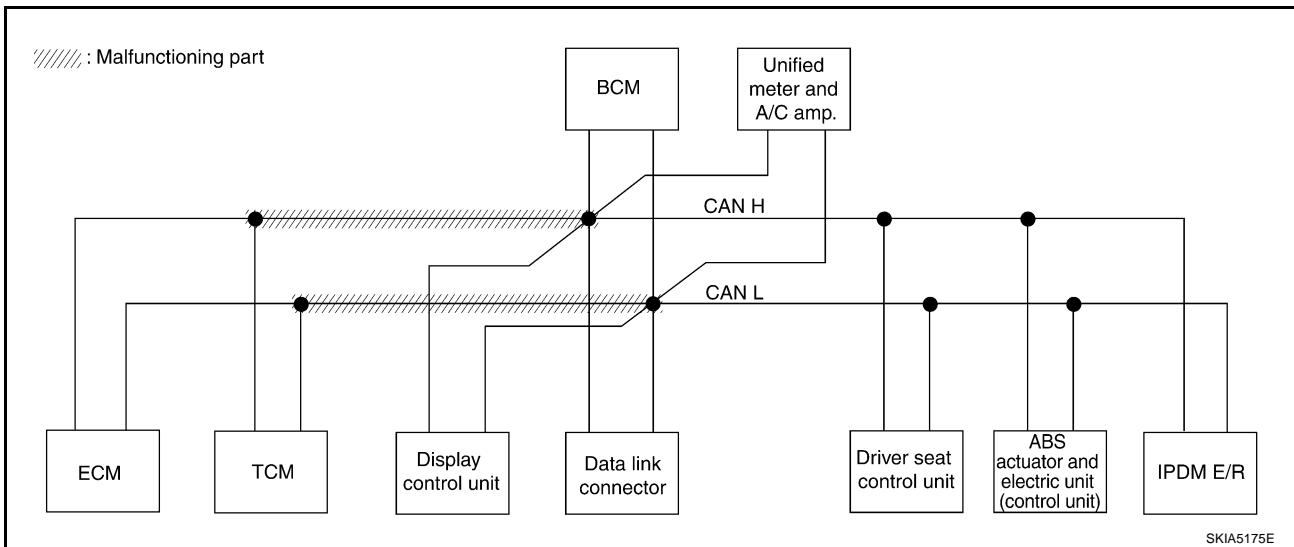
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

Case 1

Check harness between TCM and data link connector. Refer to [LAN-137, "Circuit Check Between TCM and Data Link Connector"](#).

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

PKIA8391E



CAN SYSTEM (TYPE 4)

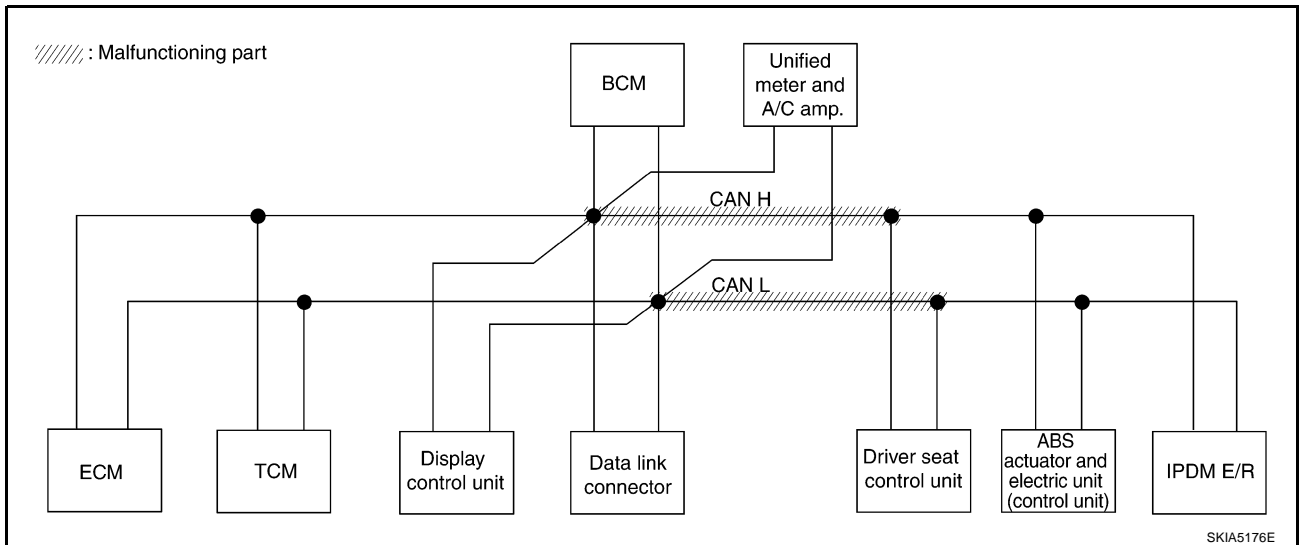
[CAN]

Case 2

Check harness between data link connector and driver seat control unit. Refer to [LAN-137, "Circuit Check Between Data Link Connector and Driver Seat Control Unit"](#).

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

SKIA8392E



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CAN SYSTEM (TYPE 4)

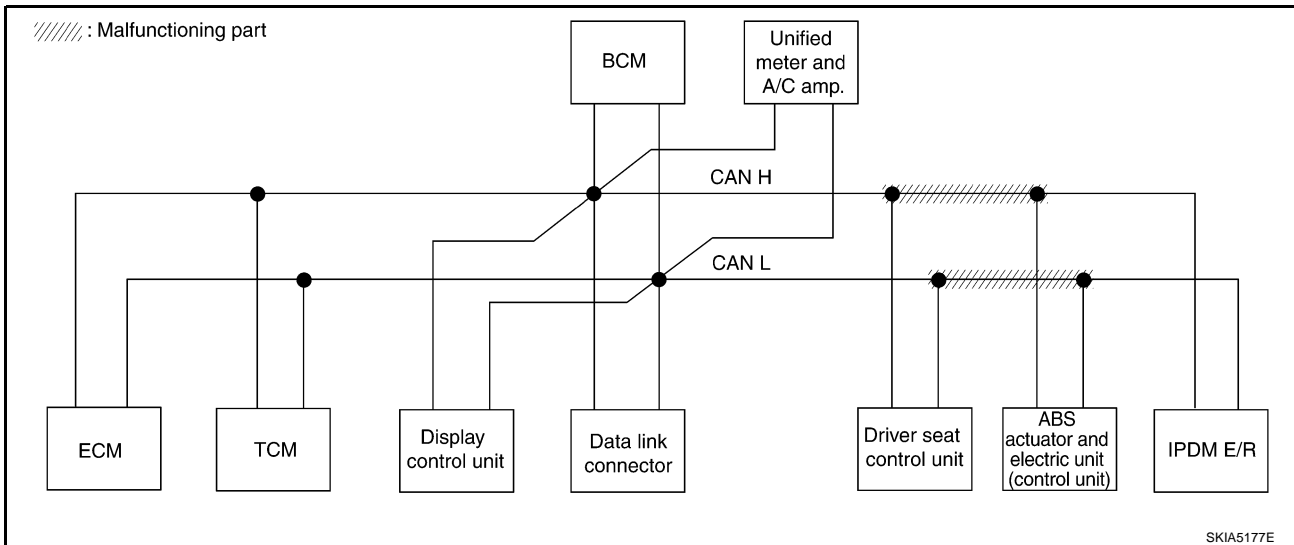
[CAN]

Case 3

Check harness between driver seat control unit and ABS actuator and electric unit (control unit). Refer to [LAN-138, "Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit \(Control Unit\)"](#) .

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

PKIA8393E



SKIA5177E

CAN SYSTEM (TYPE 4)

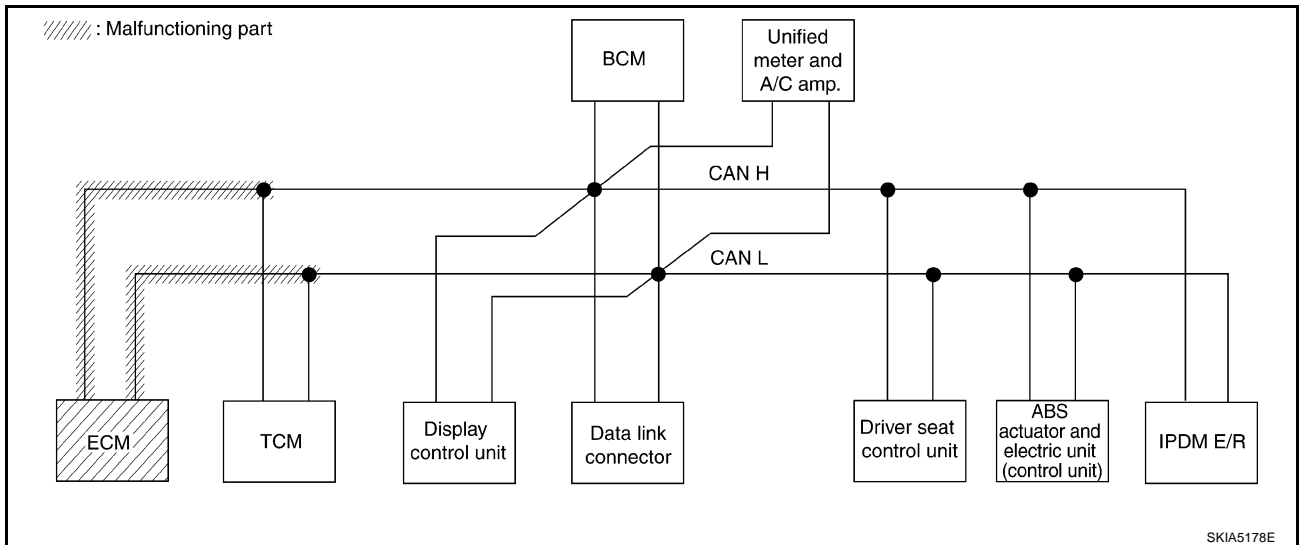
[CAN]

Case 4

Check ECM circuit. Refer to [LAN-139, "ECM Circuit Check"](#) .

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

PKIA8394E



CAN SYSTEM (TYPE 4)

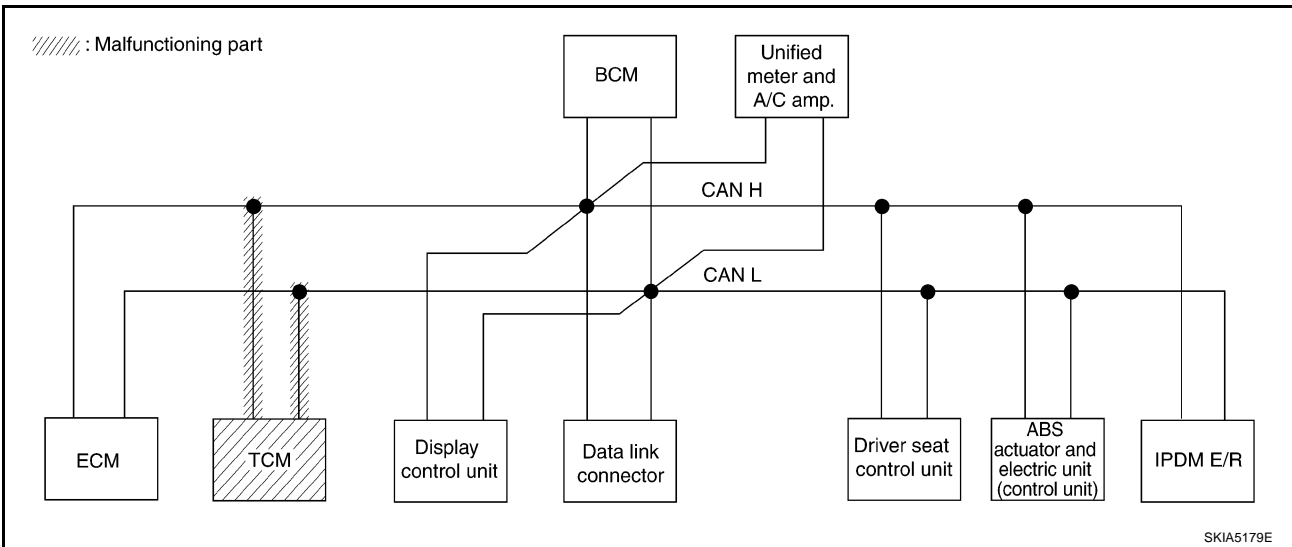
[CAN]

Case 5

Check TCM circuit. Refer to [LAN-140, "TCM Circuit Check"](#) .

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

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SKIA5179E

CAN SYSTEM (TYPE 4)

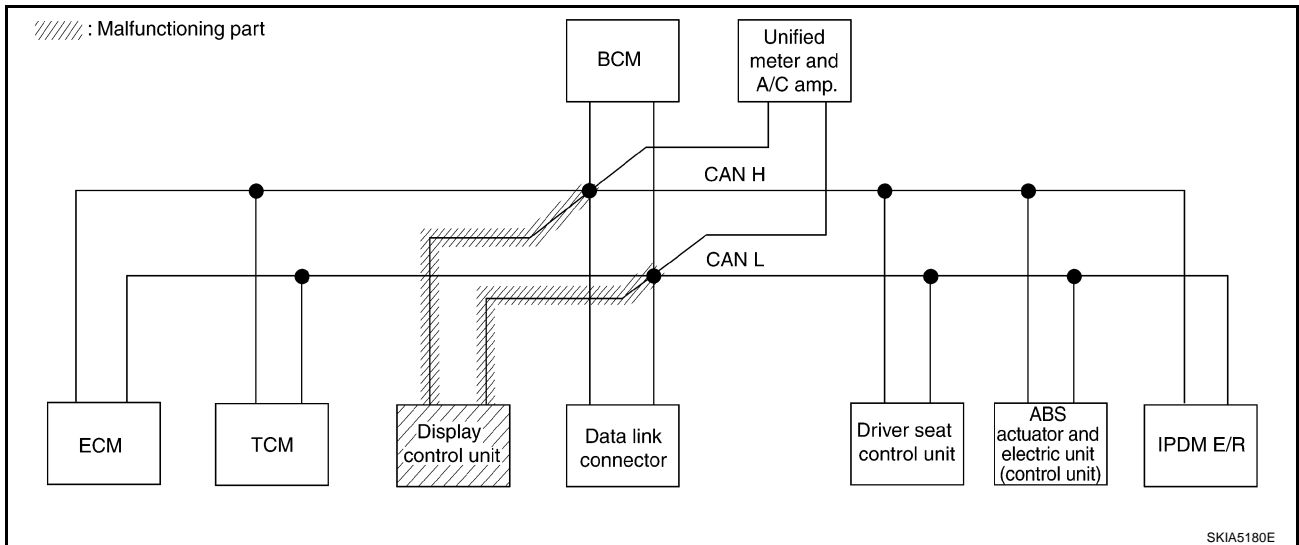
[CAN]

Case 6

Check display control unit circuit. Refer to [LAN-140, "Display Control Unit Circuit Check"](#) .

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

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CAN SYSTEM (TYPE 4)

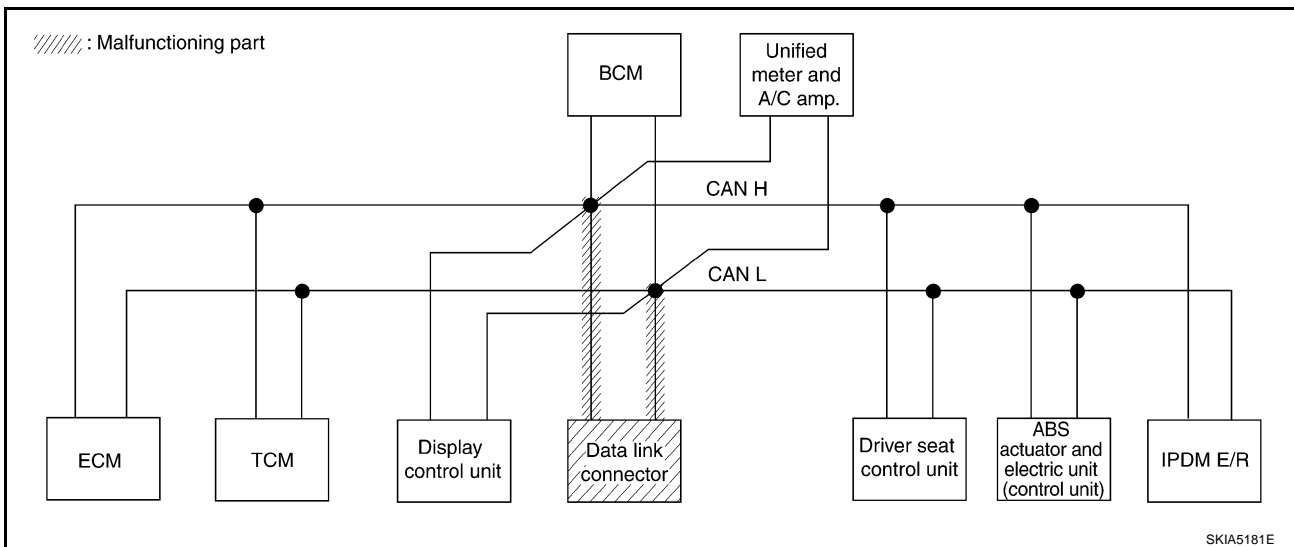
[CAN]

Case 7

Check data link connector circuit. Refer to [LAN-141, "Data Link Connector Circuit Check"](#) .

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

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SKIA5181E

CAN SYSTEM (TYPE 4)

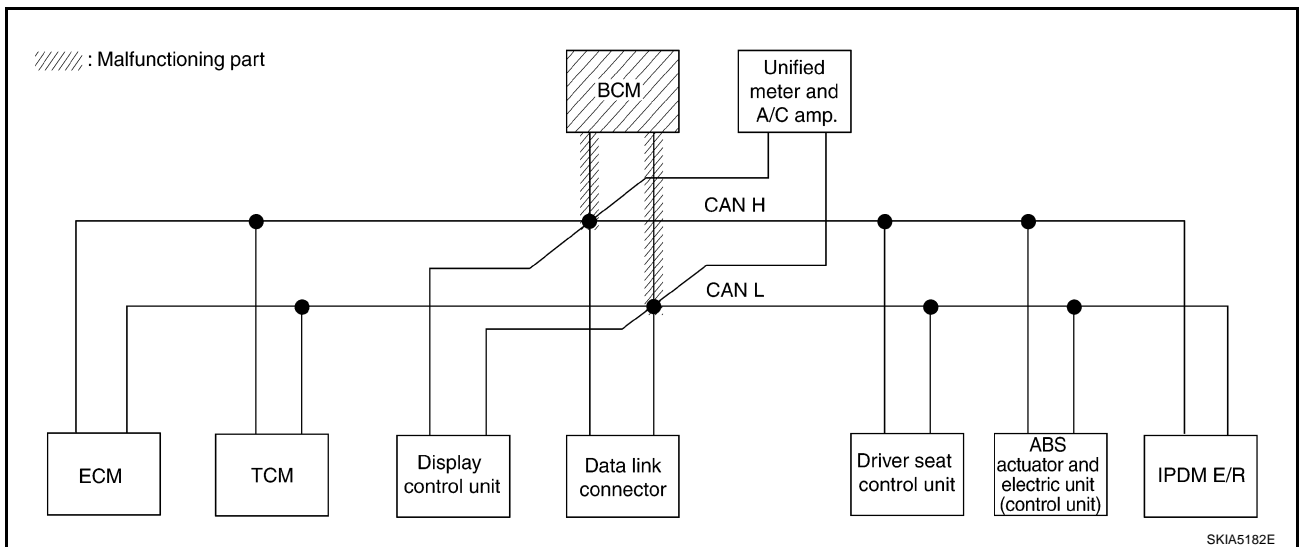
[CAN]

Case 8

Check BCM circuit. Refer to [LAN-141, "BCM Circuit Check"](#).

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

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CAN SYSTEM (TYPE 4)

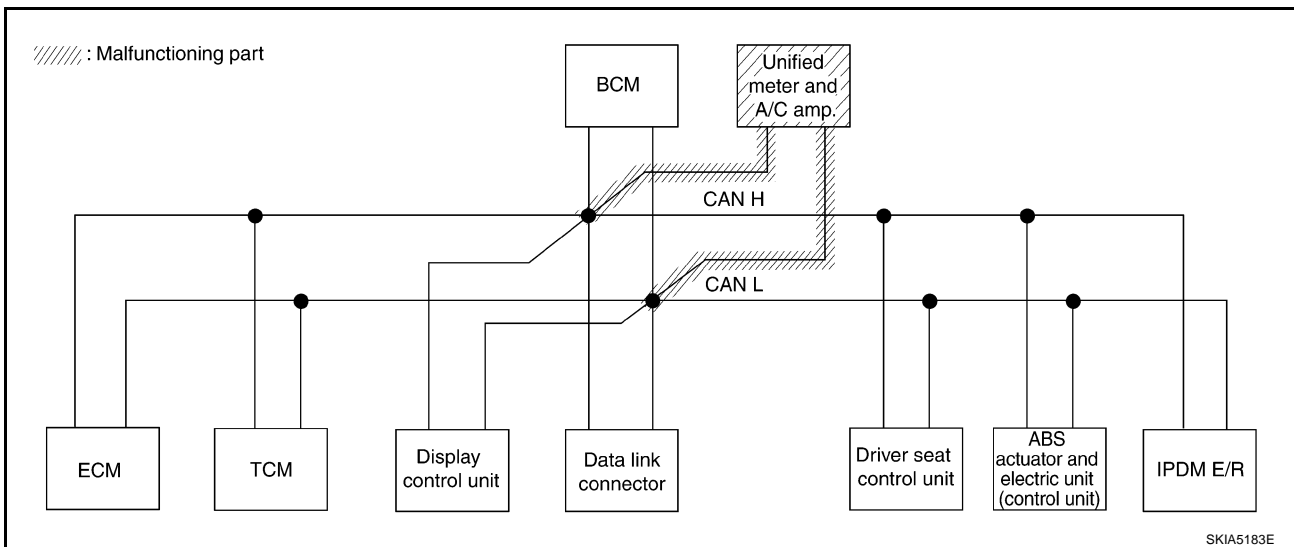
[CAN]

Case 9

Check unified meter and A/C amp. circuit. Refer to [LAN-142, "Unified Meter and A/C Amp. Circuit Check"](#) .

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

PKIA8399E



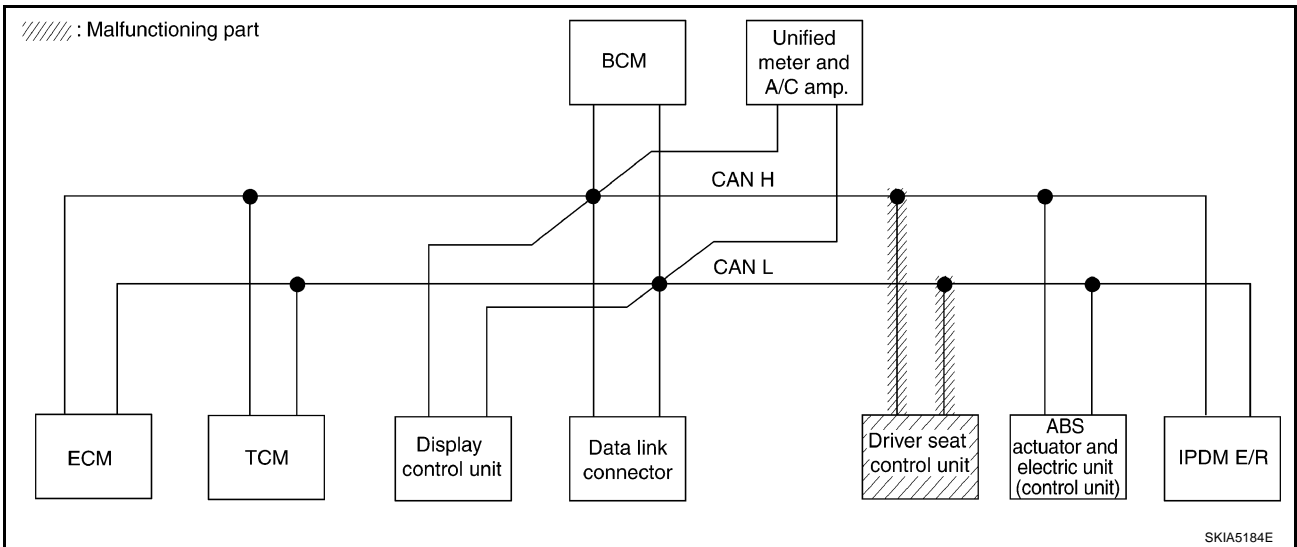
SKIA5183E

Case 10

Check driver seat control unit circuit. Refer to [LAN-142, "Driver Seat Control Unit Circuit Check"](#) .

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

PKIA8400E



CAN SYSTEM (TYPE 4)

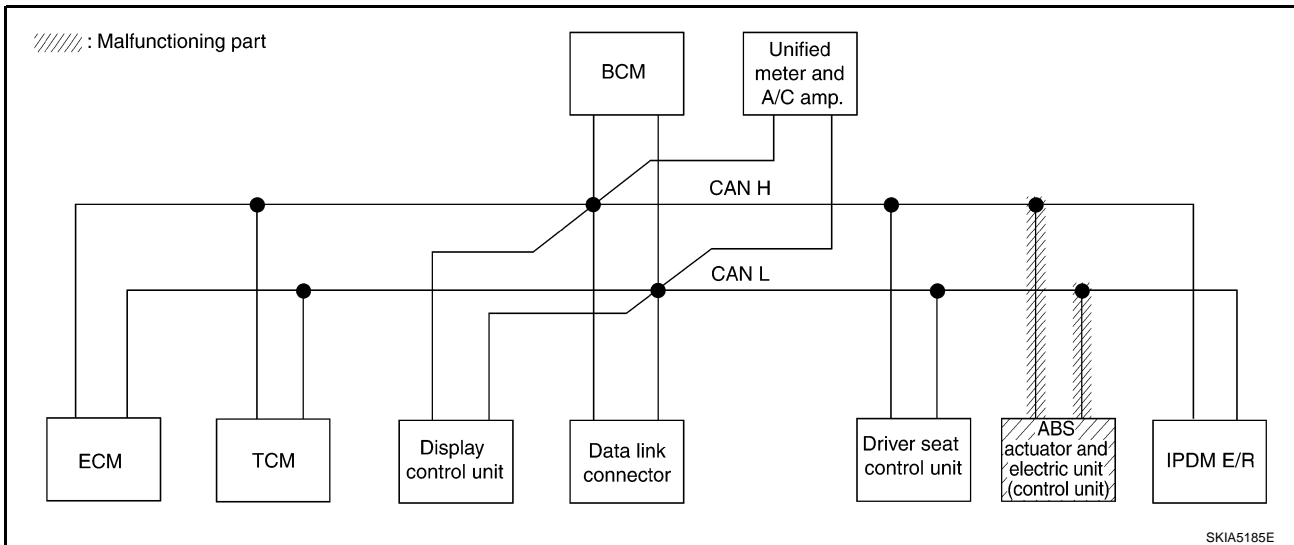
[CAN]

Case 11

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-143, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

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

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CAN SYSTEM (TYPE 4)

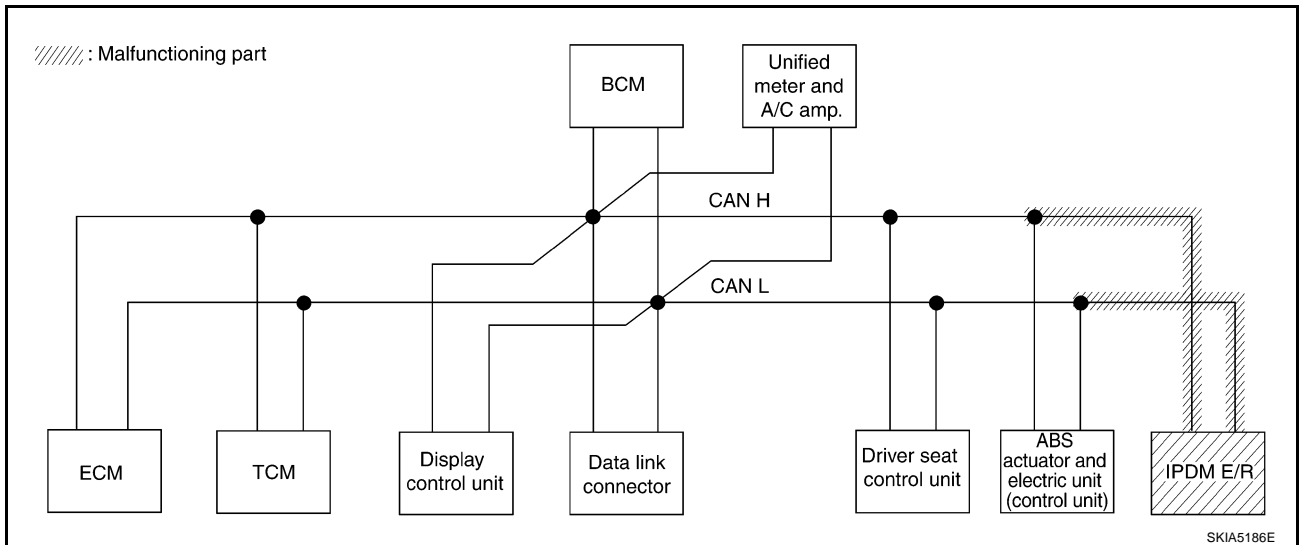
[CAN]

Case 12

Check IPDM E/R circuit. Refer to [LAN-143. "IPDM E/R Circuit Check"](#) .

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

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CAN SYSTEM (TYPE 4)

[CAN]

Case 13

Check CAN communication circuit. Refer to [LAN-144, "CAN Communication Circuit Check"](#) .

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

PKIA8403E

Case 14

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-147, "IPDM E/R Ignition Relay Circuit Check"](#) .

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

PKIA8404E

Case 15

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-147, "IPDM E/R Ignition Relay Circuit Check"](#).

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

PKIA8405E

Circuit Check Between TCM and Data Link Connector

AKS00AE2

1. CHECK HARNESS FOR OPEN CIRCUIT

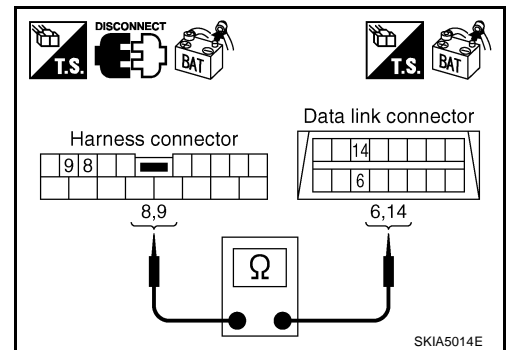
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

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

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

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-120, "Work Flow"](#).
- NG >> Repair harness.



Circuit Check Between Data Link Connector and Driver Seat Control Unit

AKS00AE3

1. CHECK CONNECTOR

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

OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

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

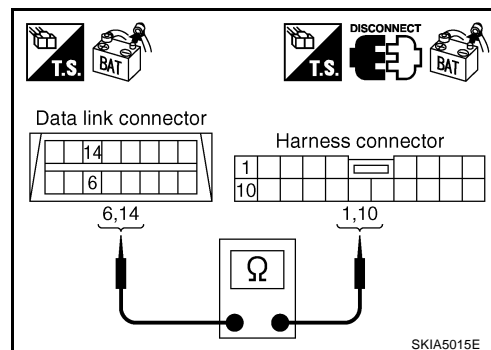
6 (L) - 1 (L) : Continuity should exist.

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

OK or NG

OK >> GO TO 3.

NG >> Repair harness.



3. CHECK HARNESS FOR OPEN CIRCUIT

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

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

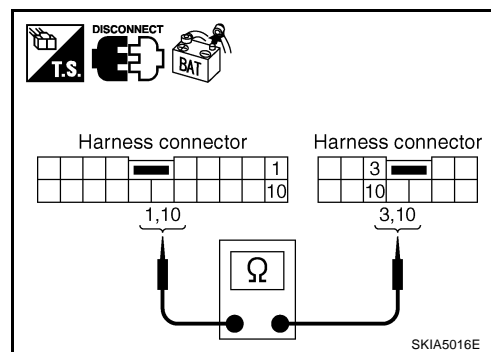
10 (Y) - 10 (Y) : Continuity should exist.

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to

[LAN-120, "Work Flow"](#) .

NG >> Repair harness.



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

AKS00AE4

1. CHECK CONNECTOR

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

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

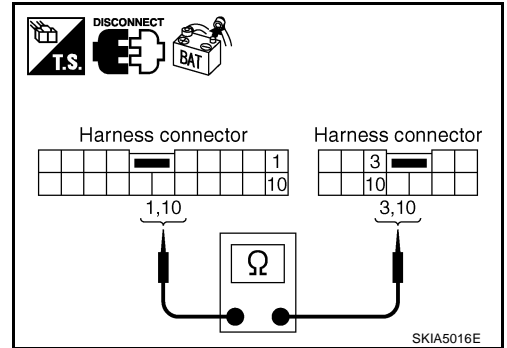
1. Disconnect harness connector B2 and harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

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

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

OK or NG

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



3. CHECK HARNESS FOR OPEN CIRCUIT

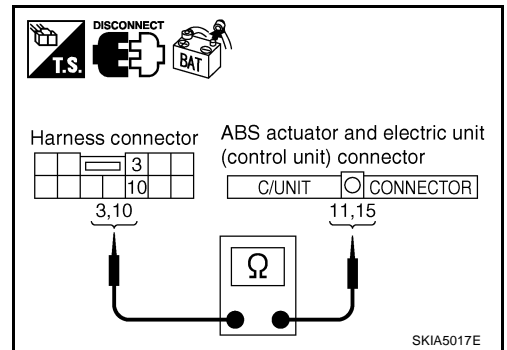
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

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

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

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-120, "Work Flow"](#).
 NG >> Repair harness.



ECM Circuit Check

1. CHECK CONNECTOR

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

OK or NG

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

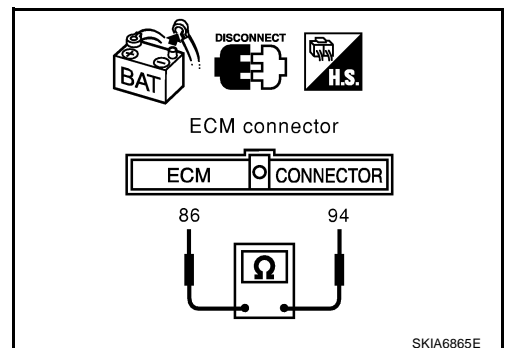
2. CHECK HARNESS FOR OPEN CIRCUIT

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

94 (L) - 86 (Y) : Approx. 108 - 132Ω

OK or NG

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



TCM Circuit Check**1. CHECK CONNECTOR**

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

OK or NG

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

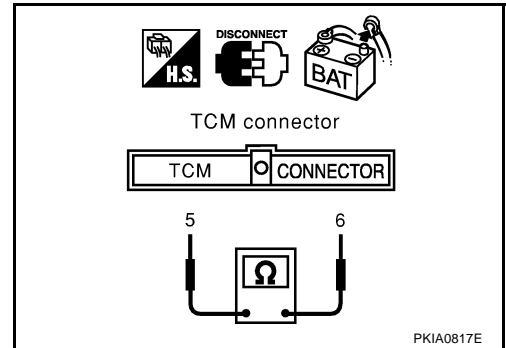
2. CHECK HARNESS FOR OPEN CIRCUIT

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

5 (L) - 6 (Y) : Approx. 54 - 66Ω

OK or NG

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

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

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

OK or NG

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

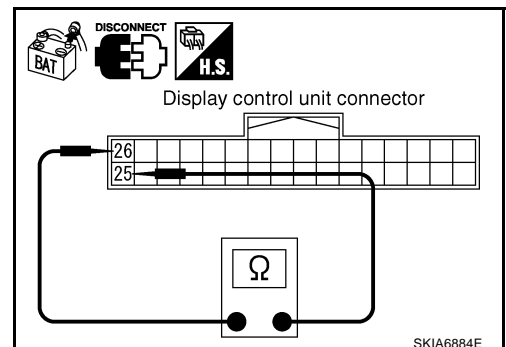
2. CHECK HARNESS FOR OPEN CIRCUIT

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

25 (L) - 26 (Y) : Approx. 54 - 66Ω

OK or NG

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



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

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

OK or NG

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

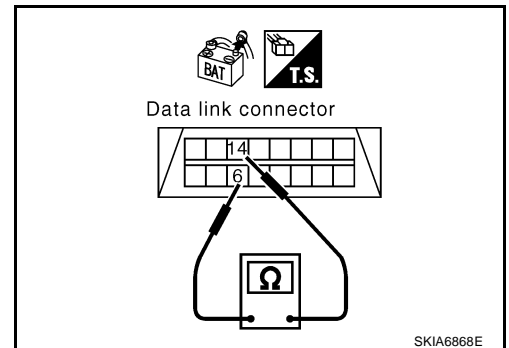
2. CHECK HARNESS FOR OPEN CIRCUIT

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

6 (L) - 14 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Diagnose again. Refer to [LAN-120, "Work Flow"](#) .
 NG >> Repair harness between data link connector and BCM.

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

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

OK or NG

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

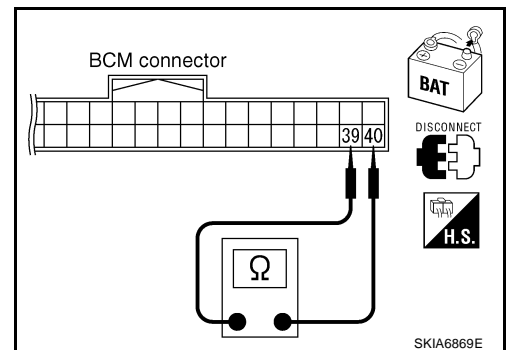
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M34 terminals 39 (L) and 40 (Y).

39 (L) - 40 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace BCM. Refer to [BCS-14, "Removal and Installation of BCM"](#) .
 NG >> Repair harness between BCM and data link connector.

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LAN

Unified Meter and A/C Amp. Circuit Check

AKS00AEA

1. CHECK CONNECTOR

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

OK or NG

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

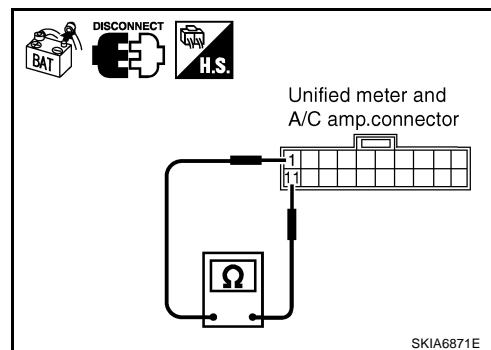
2. CHECK HARNESS FOR OPEN CIRCUIT

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

1 (L) - 11 (Y) : Approx. 54 - 66Ω

OK or NG

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

**Driver Seat Control Unit Circuit Check**

AKS00AEB

1. CHECK CONNECTOR

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

OK or NG

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

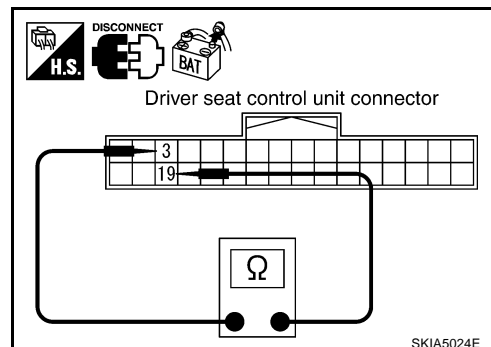
2. CHECK HARNESS FOR OPEN CIRCUIT

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

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

OK or NG

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



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

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

OK or NG

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

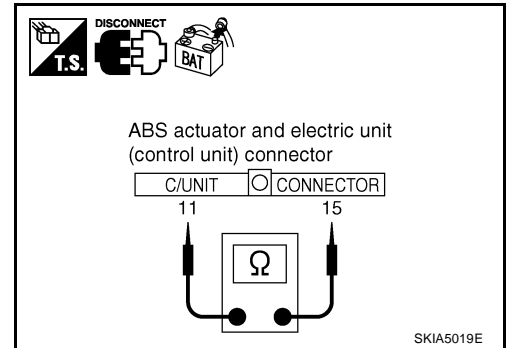
2. CHECK HARNESS FOR OPEN CIRCUIT

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

11 (L) - 15 (Y) : Approx. 54 - 66Ω

OK or NG

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

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

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

OK or NG

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

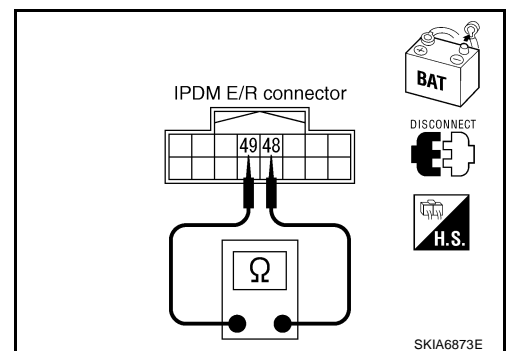
2. CHECK HARNESS FOR OPEN CIRCUIT

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

48 (L) - 49 (Y) : Approx. 108 - 132Ω

OK or NG

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



CAN Communication Circuit Check

1. CHECK CONNECTOR

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

OK or NG

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

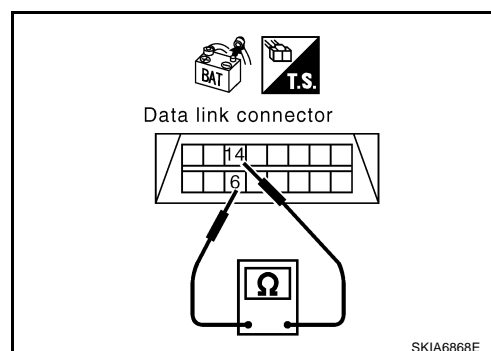
2. CHECK HARNESS FOR SHORT CIRCUIT

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

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

OK or NG

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



3. CHECK HARNESS FOR SHORT CIRCUIT

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

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

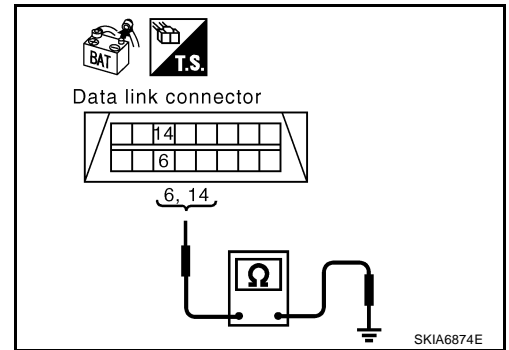
14 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 4.

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

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



4. CHECK HARNESS FOR SHORT CIRCUIT

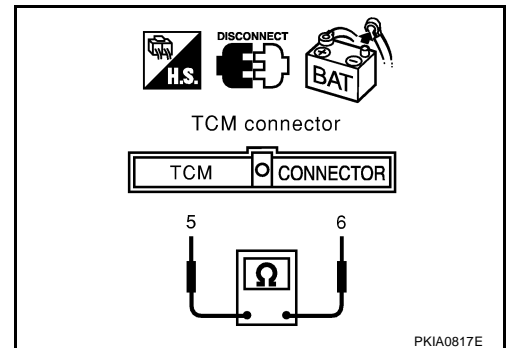
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

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

OK or NG

OK >> GO TO 5.

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



5. CHECK HARNESS FOR SHORT CIRCUIT

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

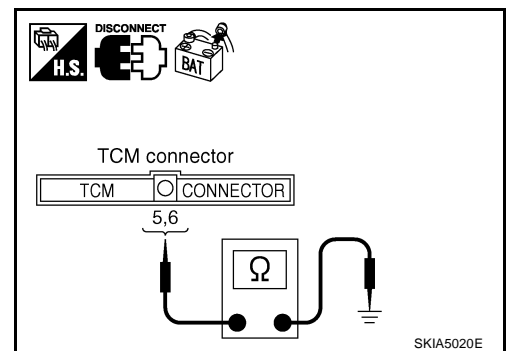
5 (L) - Ground : Continuity should not exist.

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

OK or NG

OK >> GO TO 6.

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



6. CHECK HARNESS FOR SHORT CIRCUIT

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

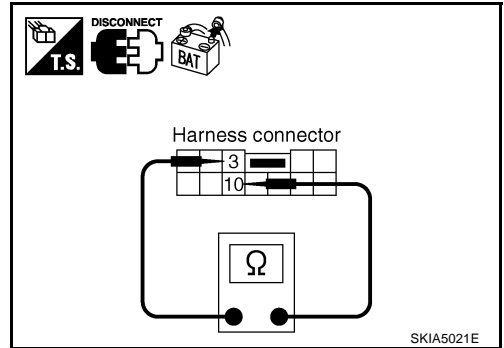
3 (L) - 10 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 7.

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

- Harness between harness connector B4 and harness connector B2
- Harness between harness connector B4 and harness connector B9



7. CHECK HARNESS FOR SHORT CIRCUIT

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

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

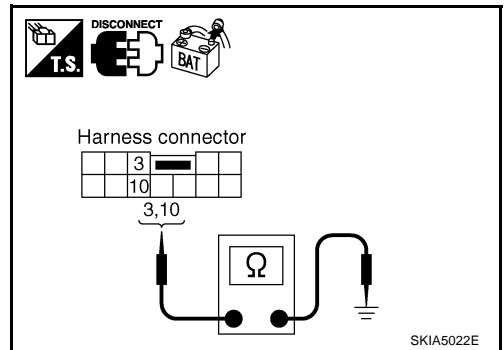
10 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 8.

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

- Harness between harness connector B4 and harness connector B2
- Harness between harness connector B4 and harness connector B9



8. CHECK HARNESS FOR SHORT CIRCUIT

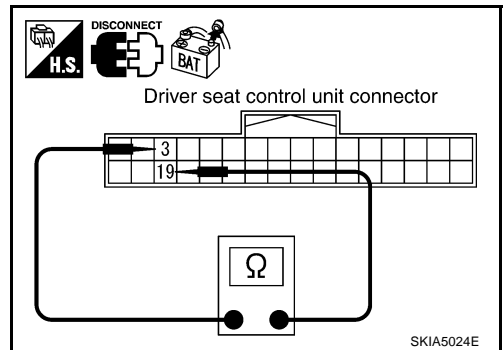
1. Disconnect driver seat control unit connector.
2. Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

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

OK or NG

OK >> GO TO 9.

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



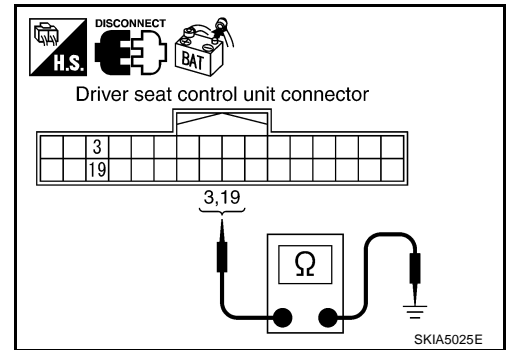
9. CHECK HARNESS FOR SHORT CIRCUIT

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

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

OK or NG

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



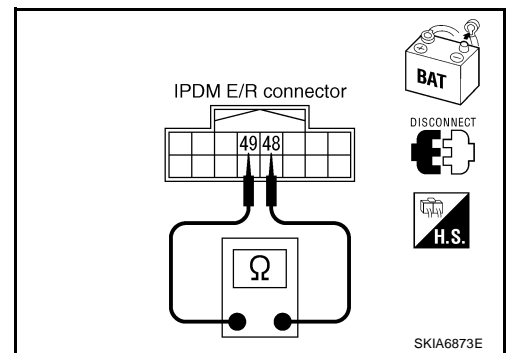
10. CHECK HARNESS FOR SHORT CIRCUIT

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

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

OK or NG

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



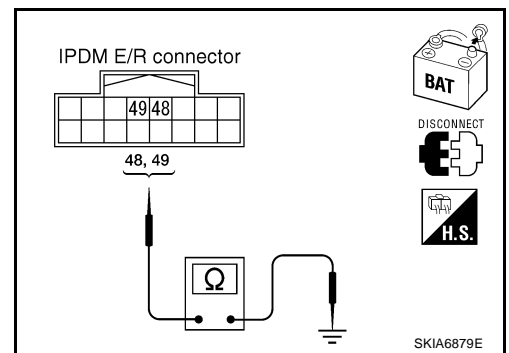
11. CHECK HARNESS FOR SHORT CIRCUIT

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

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

OK or NG

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



12. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-148, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-120, "Work Flow"](#).
- NG >> Replace ECM and/or IPDM E/R.

IPDM E/R Ignition Relay Circuit Check

AKS00AEF

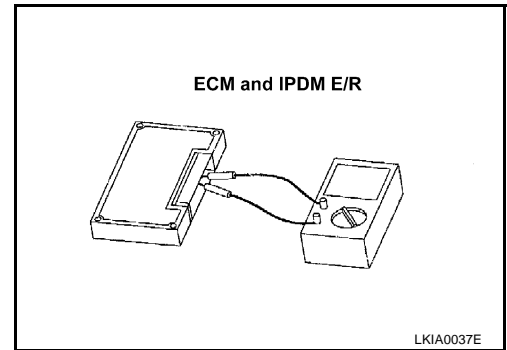
Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-27, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#).

Component Inspection ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

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

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



CAN SYSTEM (TYPE 5)

PFP:23710

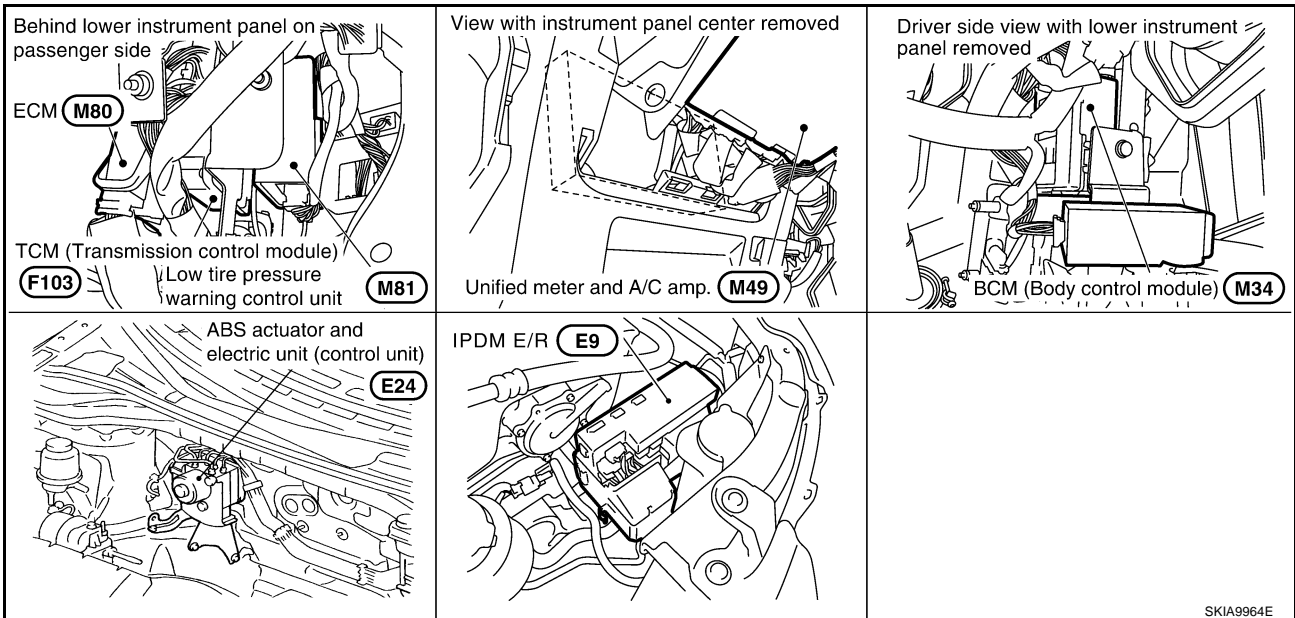
System Description

AKS00AEH

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

AKS00AEI



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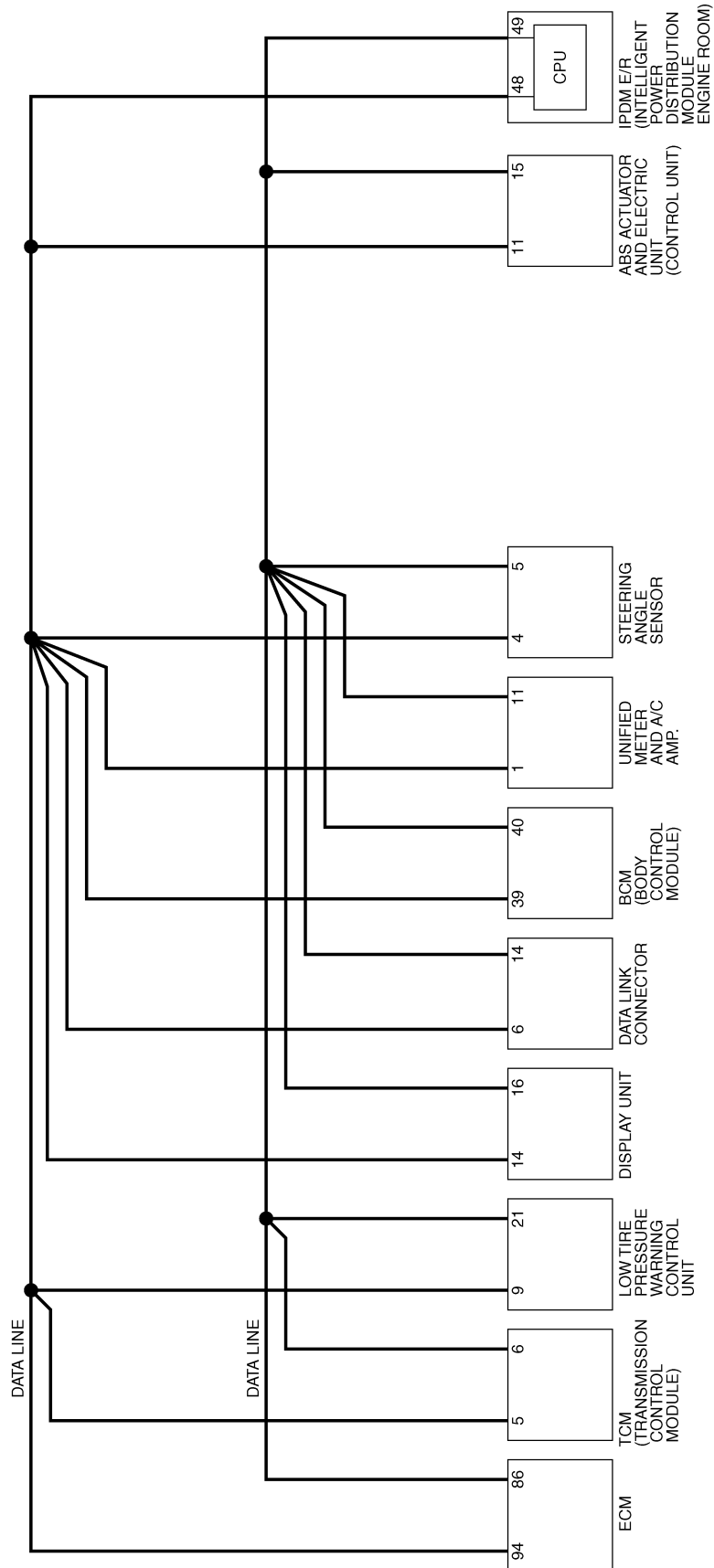
LAN

CAN SYSTEM (TYPE 5)

[CAN]

AKS00AEJ

Schematic



TKWB0021E

CAN SYSTEM (TYPE 5)

[CAN]

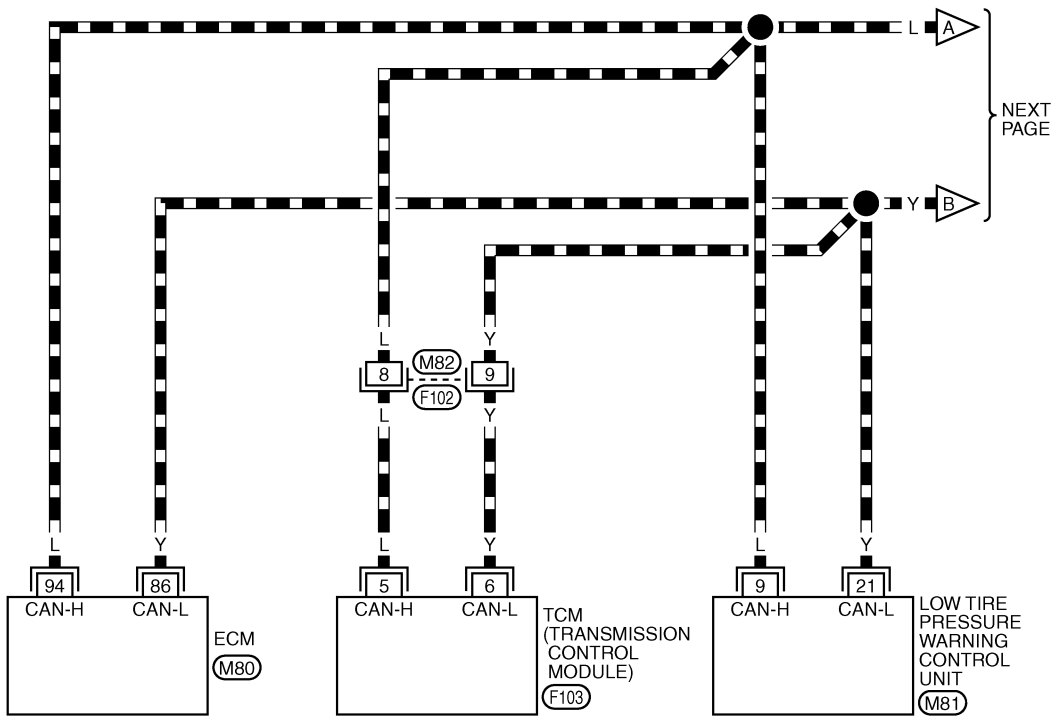
Wiring Diagram - CAN -

AKS00AEK

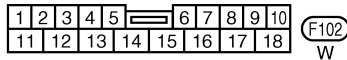
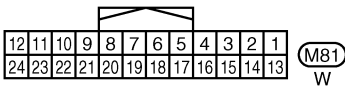
LAN-CAN-13

▬ : DATA LINE

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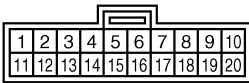
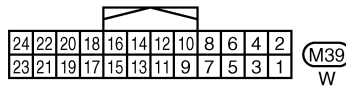
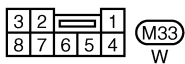
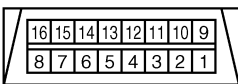
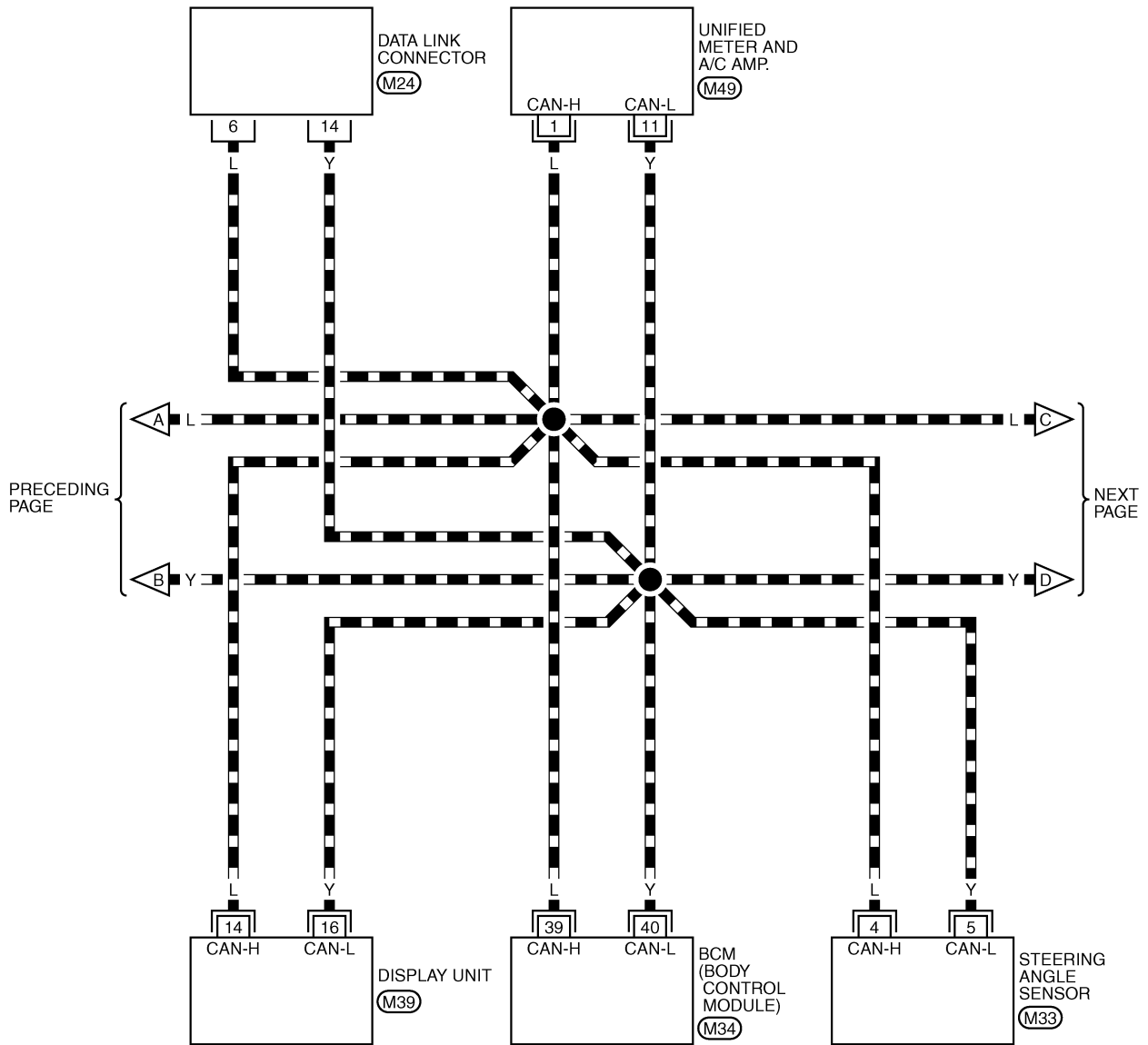


REFER TO THE FOLLOWING.
 (M80), (F103) -ELECTRICAL
 UNITS

TKWB0022E

LAN-CAN-14

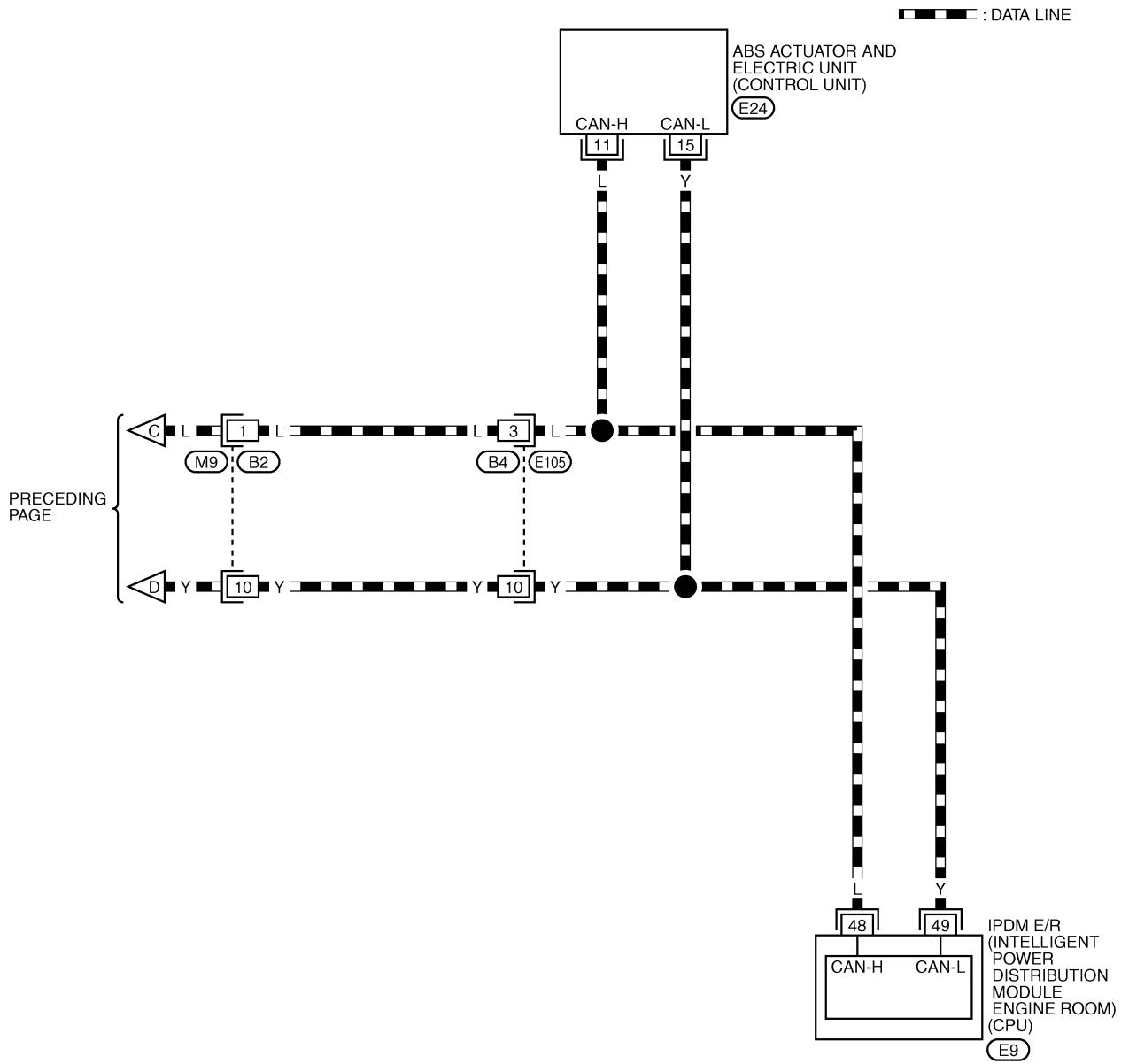
▬ : DATA LINE



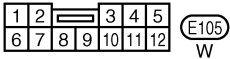
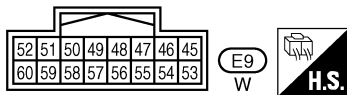
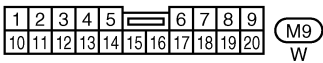
REFER TO THE FOLLOWING.
 (M34) -ELECTRICAL UNITS

TKWB0023E

LAN-CAN-15



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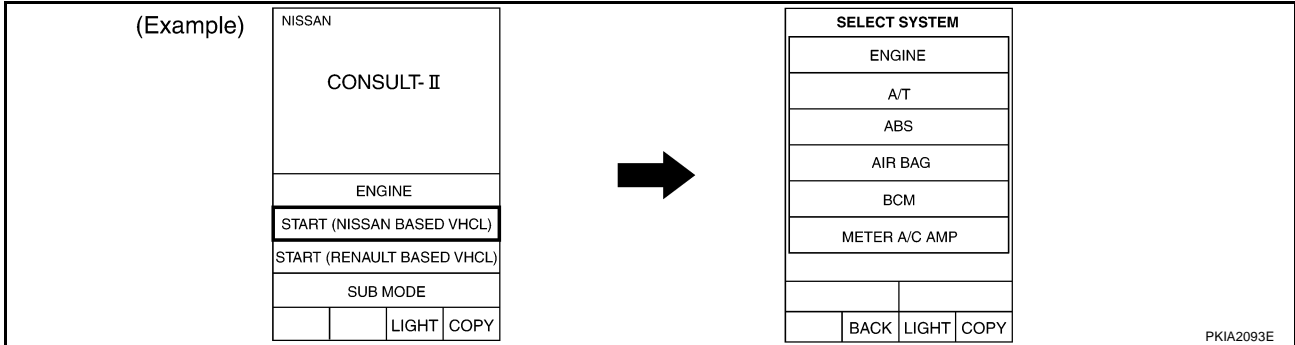


REFER TO THE FOLLOWING.
(E24) -ELECTRICAL UNITS

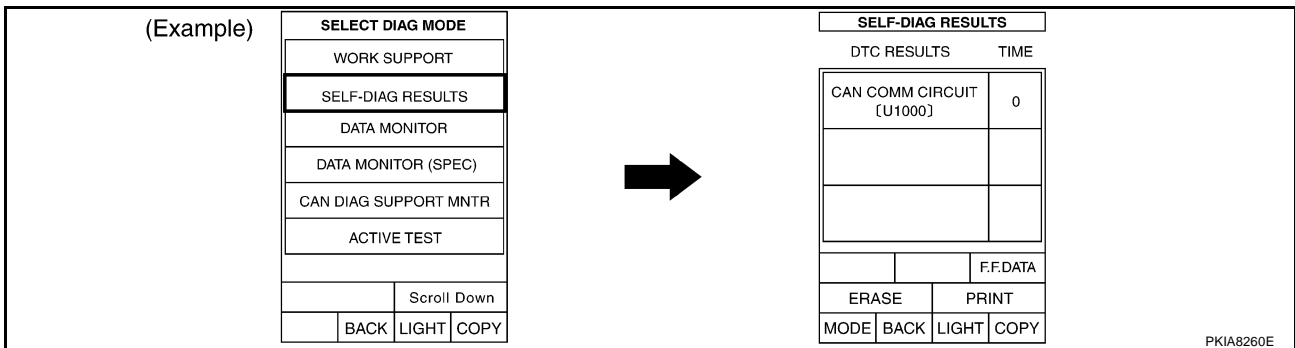
TKWB0024E

Work Flow

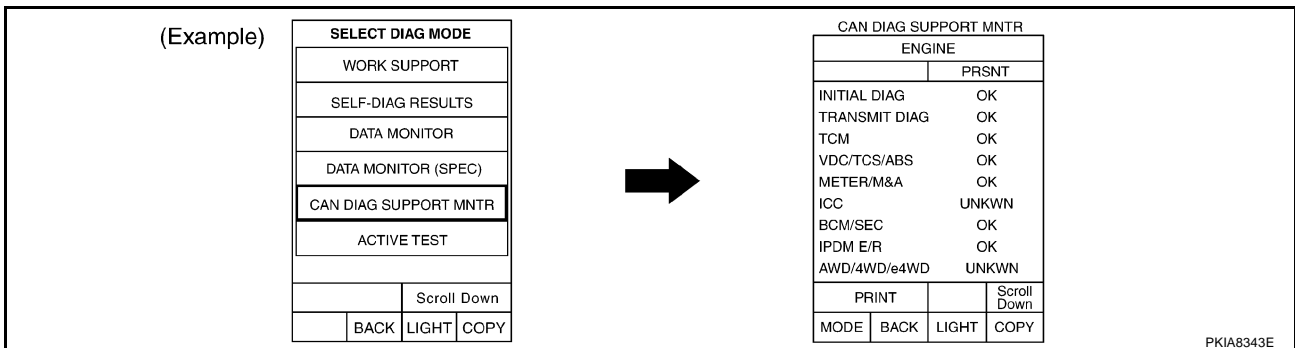
- When there are no indications of "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", or "IPDM E/R" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



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



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "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 [LAN-156, "CHECK SHEET"](#) .
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "v" onto the items with "No indication", "NG", or "UNKWKN" in the check sheet table. Refer to [LAN-156, "CHECK SHEET"](#) .

NOTE:

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

- Check CAN communication line of the integrated display system. Refer to [AV-101, "CAN Communication Line Check"](#) .
- Attach the CAN DIAG MONITOR check sheet onto the check sheet. Refer to [LAN-156, "CHECK SHEET"](#) .

CAN SYSTEM (TYPE 5)

[CAN]

8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG MONITOR check sheet. Refer to [LAN-156, "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-101, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-158, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

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CAN SYSTEM (TYPE 5)

[CAN]

CHECK SHEET

NOTE:

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

Check sheet table

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

Symptoms :

Attach copy of
SELECT SYSTEM

Attach copy of
SELECT SYSTEM

Attach copy of
display unit
CAN DIAG MONITOR check sheet

PKIA8406E

CAN SYSTEM (TYPE 5)

[CAN]

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Attach copy of
ENGINE
SELF-DIAG RESULTS

Attach copy of
TRANSMISSION
SELF-DIAG RESULTS

Attach copy of
AIR PRESSURE
MONITOR
SELF-DIAG RESULTS

Attach copy of
BCM
SELF-DIAG RESULTS

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

Attach copy of
ABS
SELF-DIAG RESULTS

Attach copy of
IPDM E/R
SELF-DIAG RESULTS

Attach copy of
ENGINE
CAN DIAG SUPPORT
MNTR

Attach copy of
TRANSMISSION
CAN DIAG SUPPORT
MNTR

Attach copy of
AIR PRESSURE
MONITOR
CAN DIAG SUPPORT
MNTR

Attach copy of
BCM
CAN DIAG SUPPORT
MNTR

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

Attach copy of
ABS
CAN DIAG SUPPORT
MNTR

Attach copy of
IPDM E/R
CAN DIAG SUPPORT
MNTR

PKIA8407E

CHECK SHEET RESULTS (EXAMPLE)

NOTE:

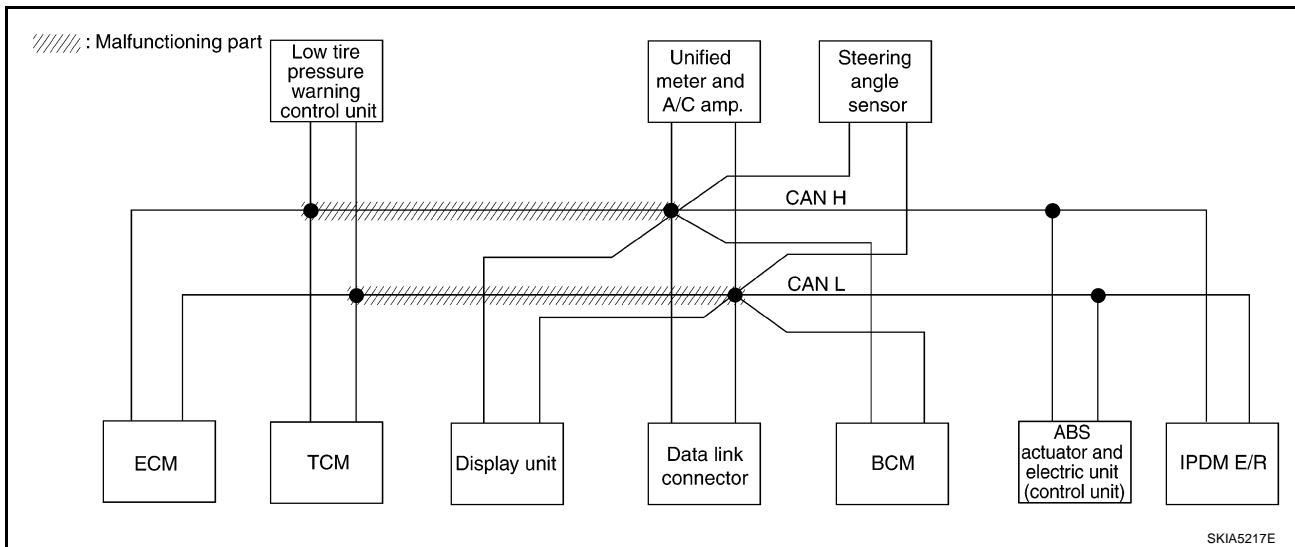
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

Case 1

Check harness between TCM and data link connector. Refer to [LAN-171, "Circuit Check Between TCM and Data Link Connector"](#).

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

PKIA8408E



CAN SYSTEM (TYPE 5)

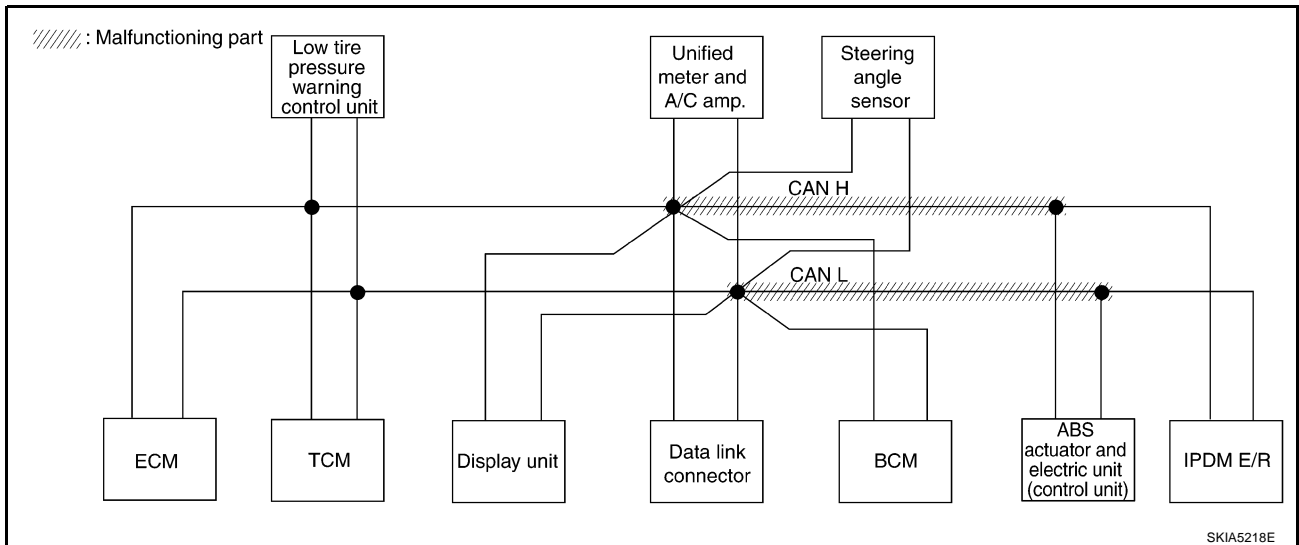
[CAN]

Case 2

Check harness between data link connector and ABS actuator and electric unit (control unit). Refer to [LAN-172, "Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit \(Control Unit\)"](#).

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

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CAN SYSTEM (TYPE 5)

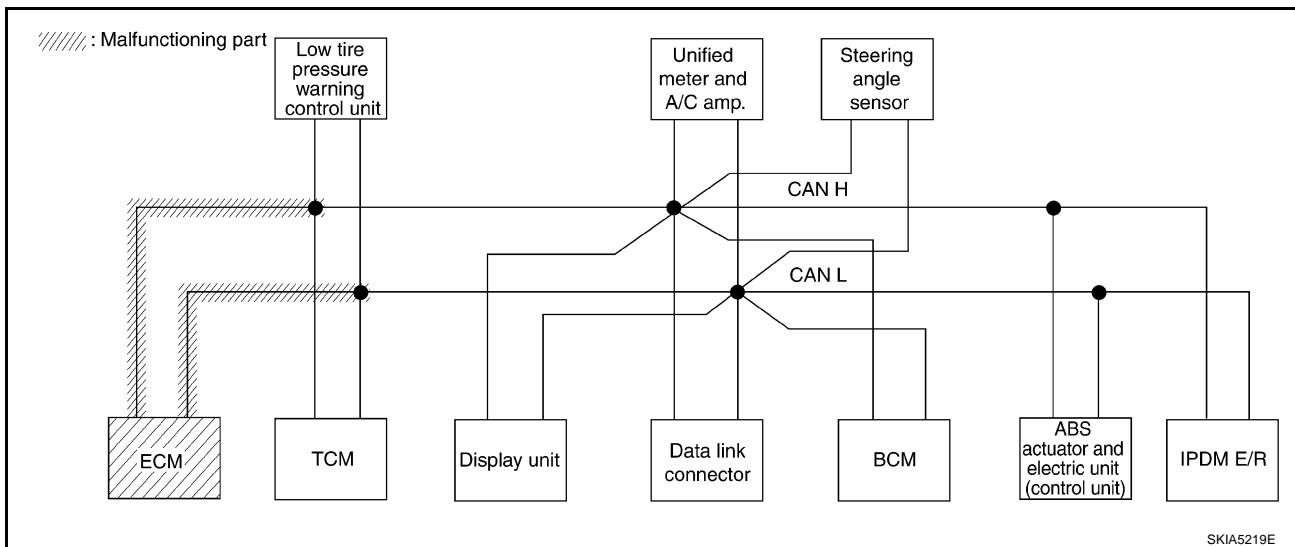
[CAN]

Case 3

Check ECM circuit. Refer to [LAN-173, "ECM Circuit Check"](#) .

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

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CAN SYSTEM (TYPE 5)

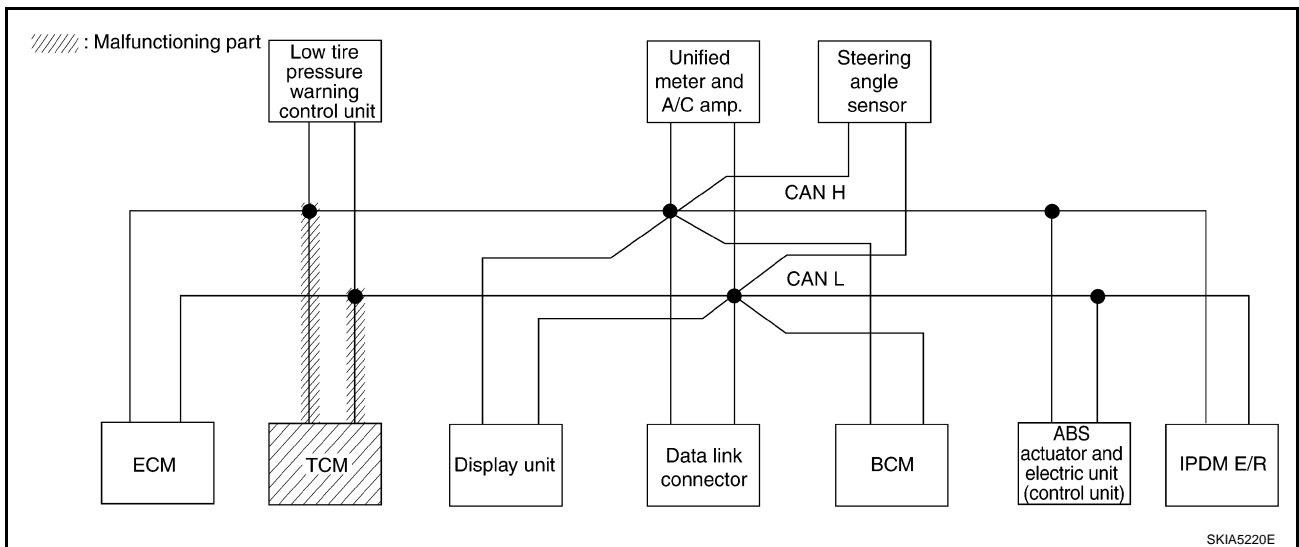
[CAN]

Case 4

Check TCM circuit. Refer to [LAN-173. "TCM Circuit Check"](#) .

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

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CAN SYSTEM (TYPE 5)

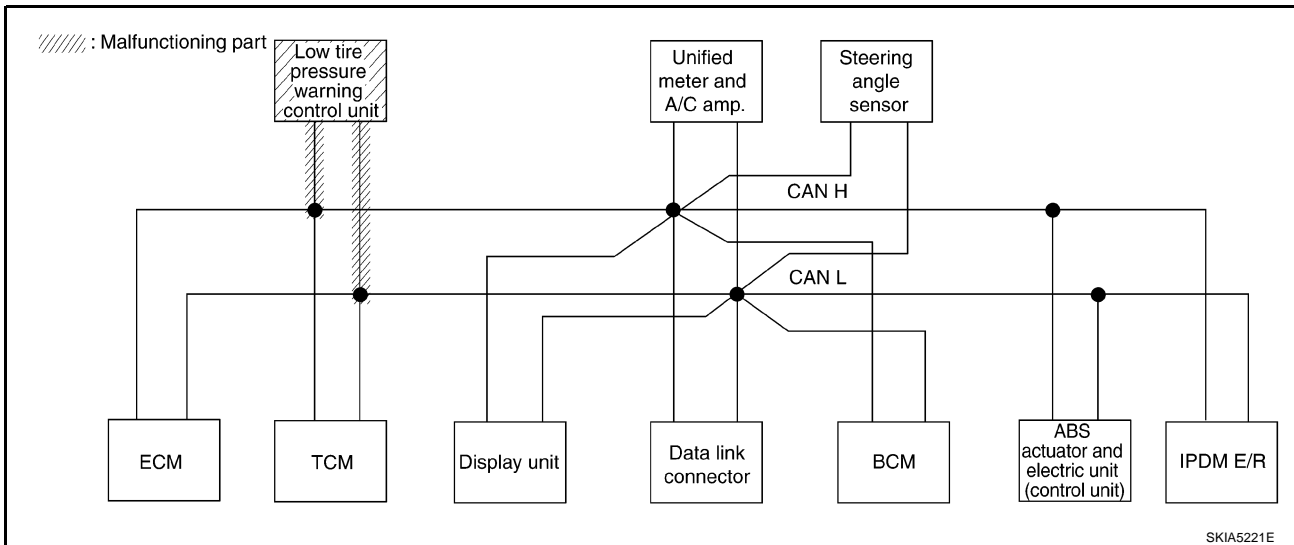
[CAN]

Case 5

Check low tire pressure warning control unit circuit. Refer to [LAN-174, "Low Tire Pressure Warning Control Unit Circuit Check"](#) .

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

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CAN SYSTEM (TYPE 5)

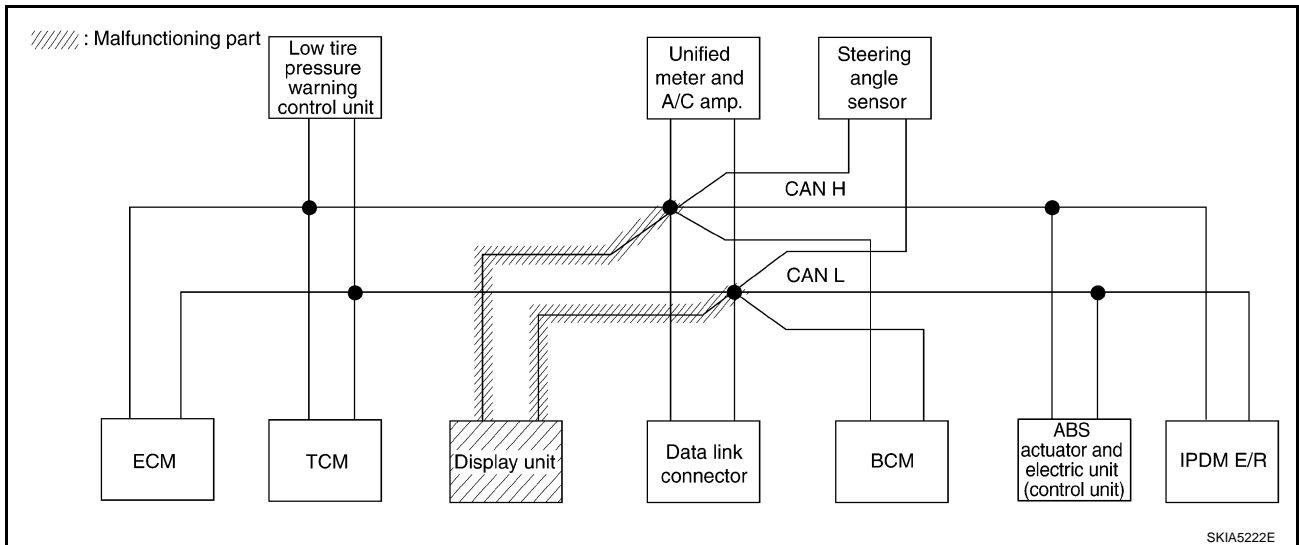
[CAN]

Case 6

Check display unit circuit. Refer to [LAN-174, "Display Unit Circuit Check"](#) .

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

PKIA8413E



CAN SYSTEM (TYPE 5)

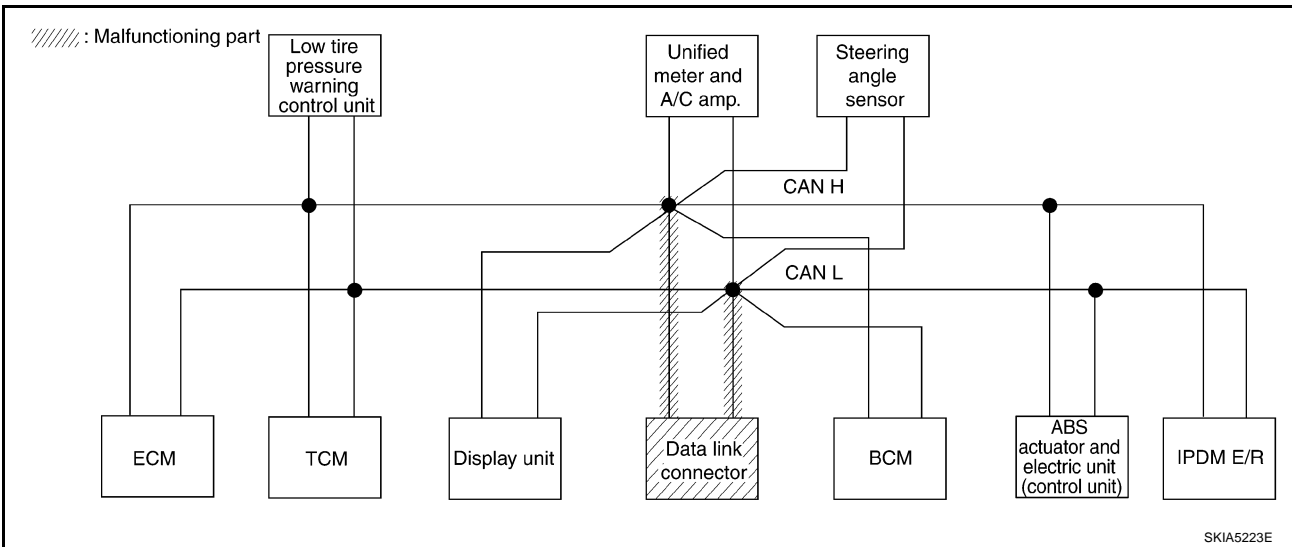
[CAN]

Case 7

Check data link connector circuit. Refer to [LAN-175, "Data Link Connector Circuit Check"](#) .

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

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SKIA5223E

CAN SYSTEM (TYPE 5)

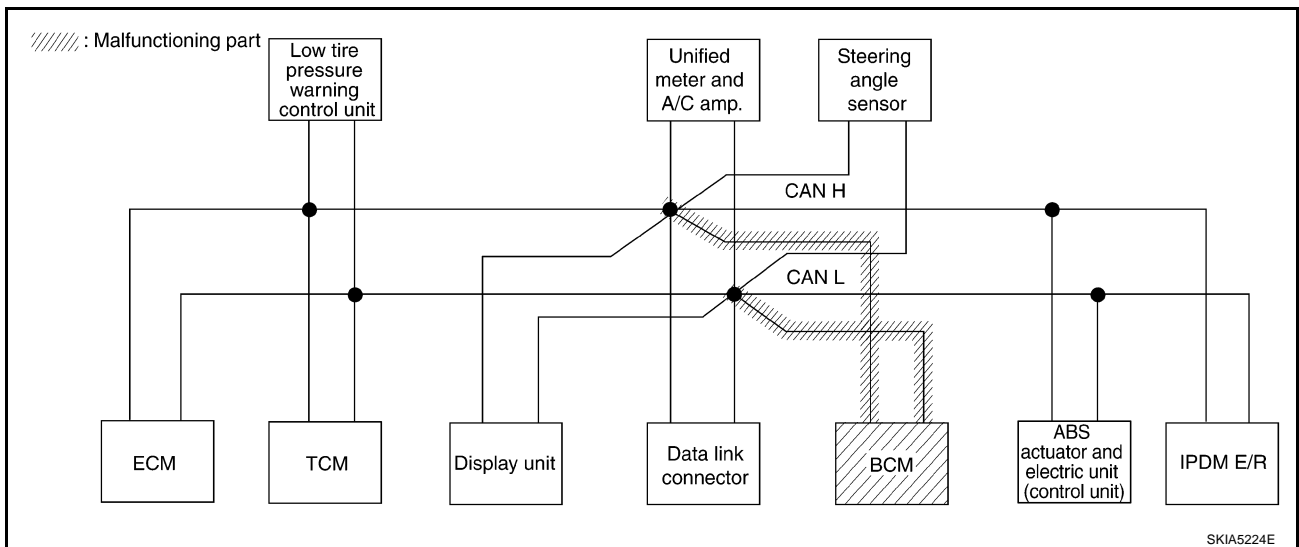
[CAN]

Case 8

Check BCM circuit. Refer to [LAN-175, "BCM Circuit Check"](#) .

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

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CAN SYSTEM (TYPE 5)

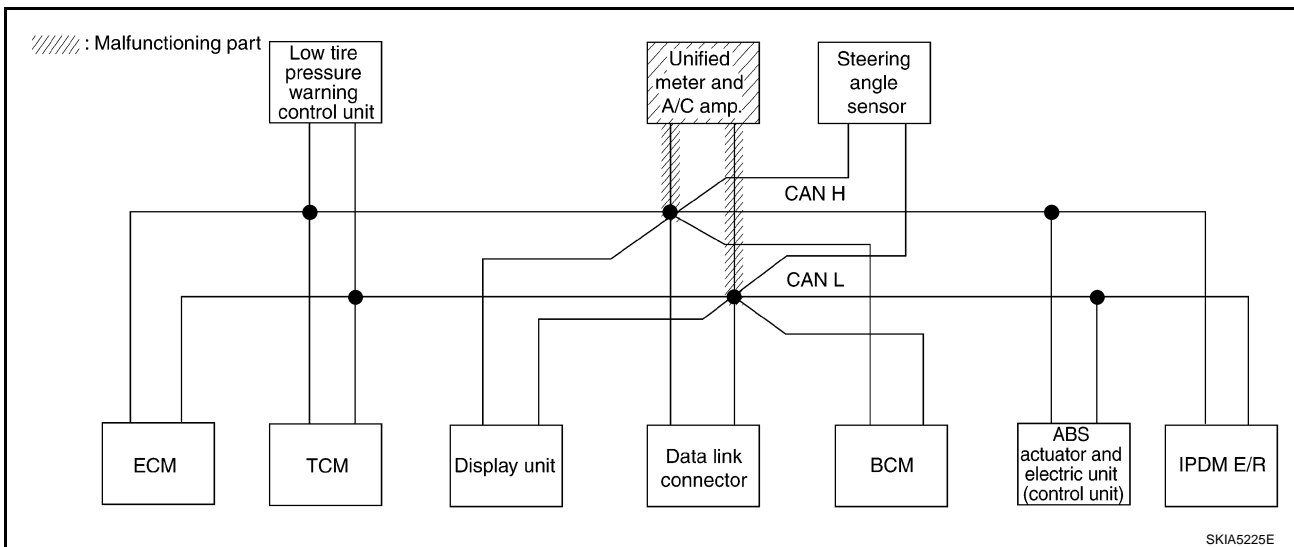
[CAN]

Case 9

Check unified meter and A/C amp. circuit. Refer to [LAN-176, "Unified Meter and A/C Amp. Circuit Check"](#) .

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

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CAN SYSTEM (TYPE 5)

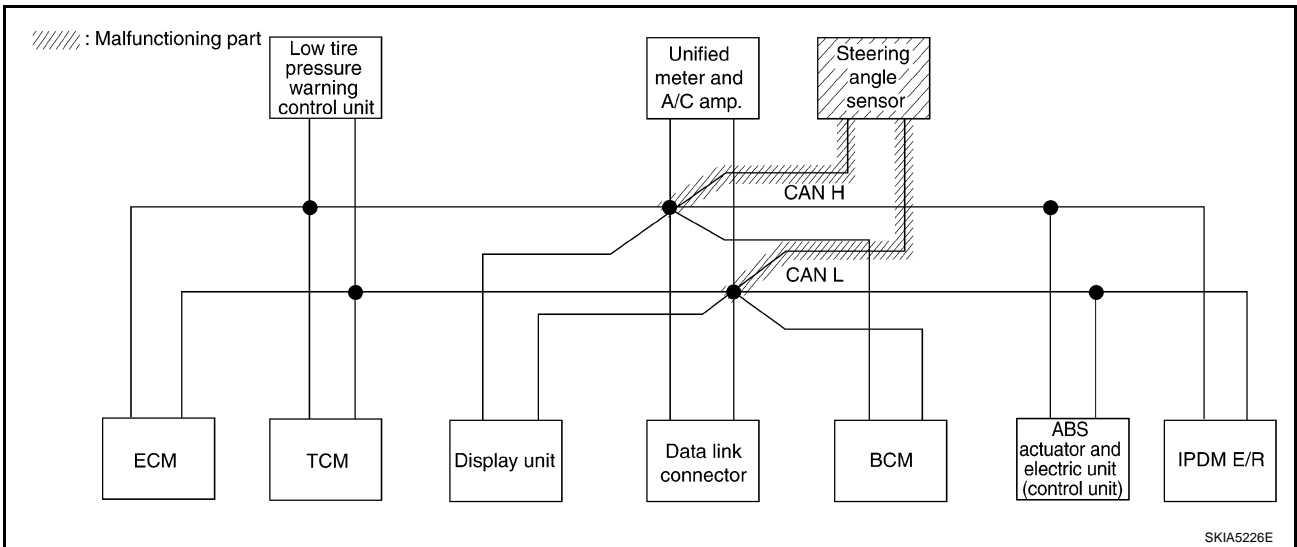
[CAN]

Case 10

Check steering angle sensor circuit. Refer to [LAN-176. "Steering Angle Sensor Circuit Check"](#) .

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

PKIA8417E



CAN SYSTEM (TYPE 5)

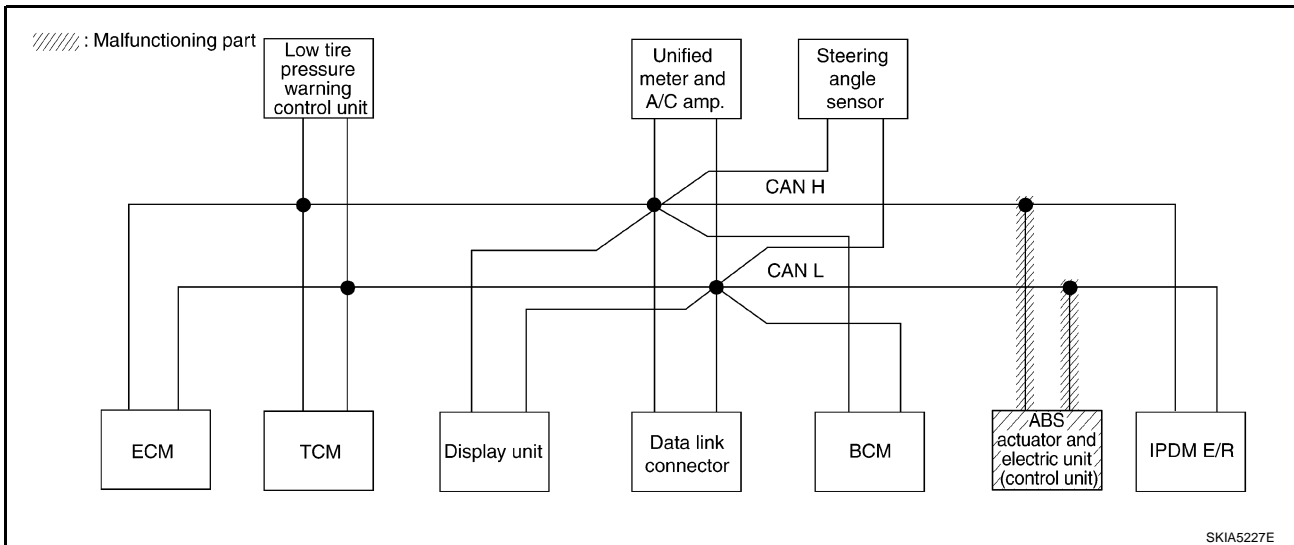
[CAN]

Case 11

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-177, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

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

PKIA8418E



SKIA5227E

CAN SYSTEM (TYPE 5)

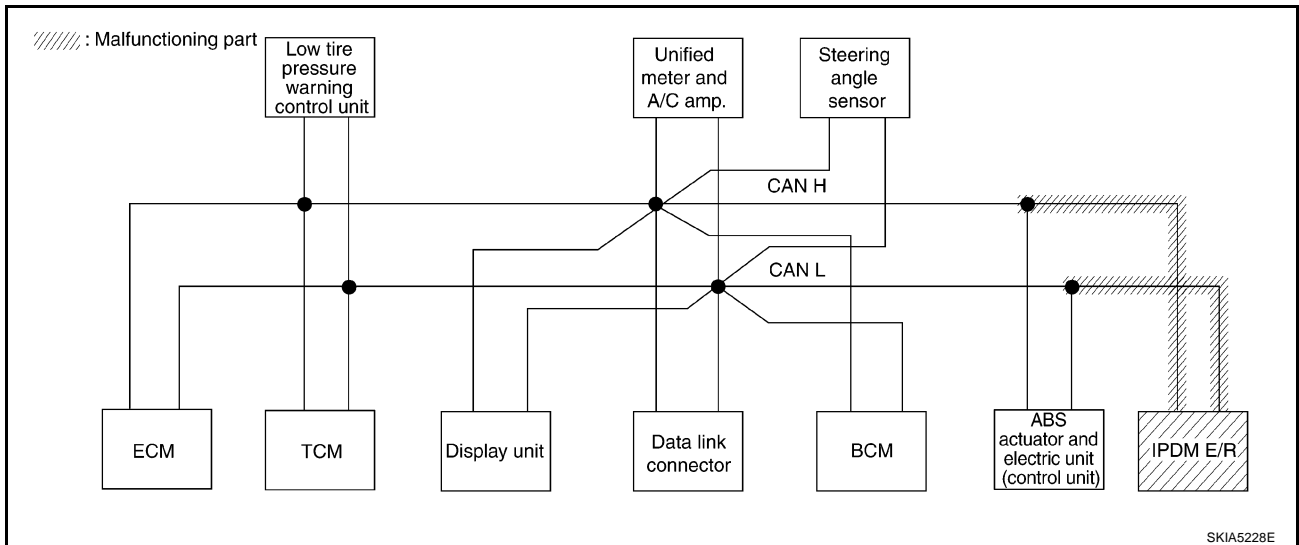
[CAN]

Case 12

Check IPDM E/R circuit. Refer to [LAN-177, "IPDM E/R Circuit Check"](#) .

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

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CAN SYSTEM (TYPE 5)

[CAN]

Case 13

Case 20: Check CAN communication circuit. Refer to [LAN-178, "CAN Communication Circuit Check"](#).

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

PKIA8420E

Case 14

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-181, "IPDM E/R Ignition Relay Circuit Check"](#).

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

PKIA8421E

Case 15

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-181, "IPDM E/R Ignition Relay Circuit Check"](#) .

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

PKIA8422E

Circuit Check Between TCM and Data Link Connector

AKS00AEM

1. CHECK HARNESS FOR OPEN CIRCUIT

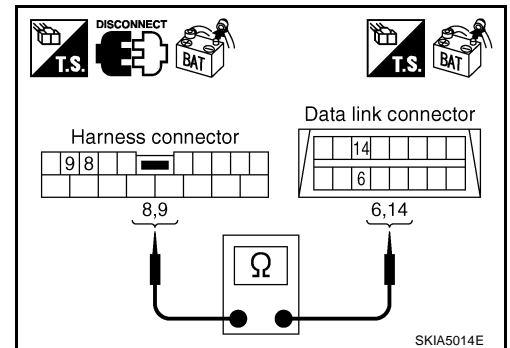
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

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

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

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-154, "Work Flow"](#) .
- NG >> Repair harness.



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

LAN

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

AKS00AEN

1. CHECK CONNECTOR

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

OK or NG

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

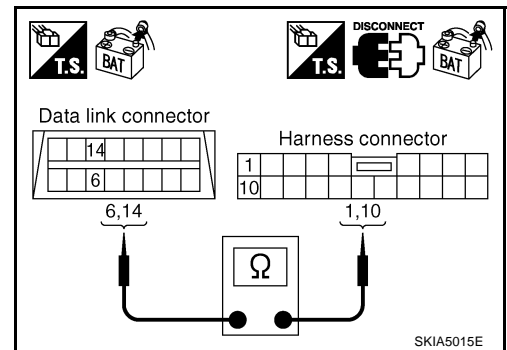
2. CHECK HARNESS FOR OPEN CIRCUIT

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

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

OK or NG

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



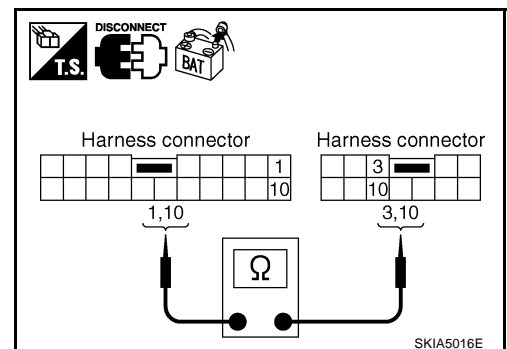
3. CHECK HARNESS FOR OPEN CIRCUIT

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

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

OK or NG

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



4. CHECK HARNESS FOR OPEN CIRCUIT

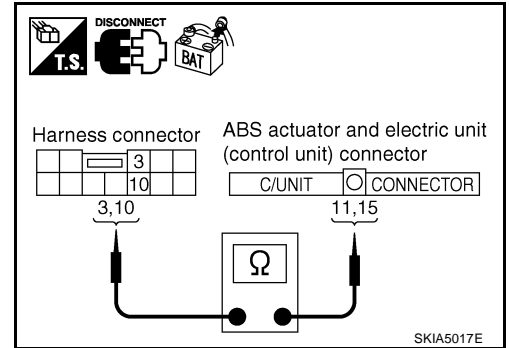
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

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

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

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-154, "Work Flow"](#).
- NG >> Repair harness.



AKS00AEO

ECM Circuit Check

1. CHECK CONNECTOR

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

OK or NG

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

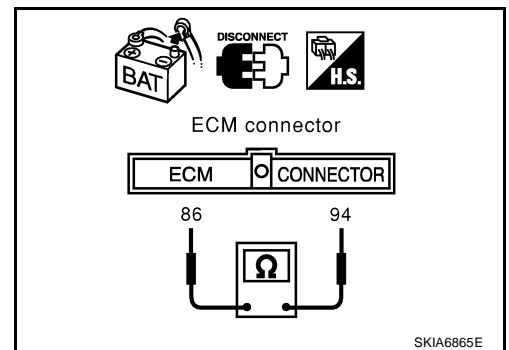
2. CHECK HARNESS FOR OPEN CIRCUIT

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

94 (L) - 86 (Y) : Approx. 108 - 132Ω

OK or NG

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



AKS00AEP

TCM Circuit Check

1. CHECK CONNECTOR

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

OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

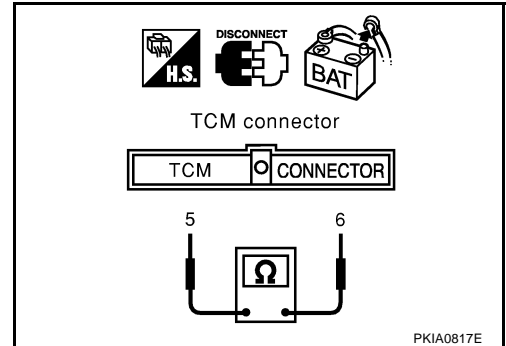
1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

5 (L) - 6 (Y)

: Approx. 54 - 66Ω

OK or NG

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



Low Tire Pressure Warning Control Unit Circuit Check

AKS00AEO

1. CHECK CONNECTOR

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

OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

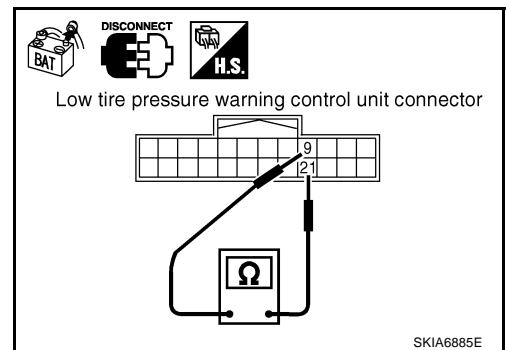
1. Disconnect low tire pressure warning control unit connector.
2. Check resistance between low tire pressure warning control unit harness connector M81 terminals 9 (L) and 21 (Y).

9 (L) - 21 (Y)

: Approx. 54 - 66Ω

OK or NG

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



Display Unit Circuit Check

AKS00AER

1. CHECK CONNECTOR

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

OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

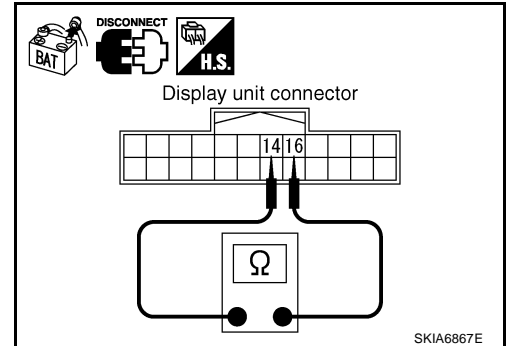
1. Disconnect display unit connector.
2. Check resistance between display unit harness connector M39 terminals 14 (L) and 16 (Y).

14 (L) - 16 (Y)

: Approx. 54 - 66Ω

OK or NG

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



AKS00AES

Data Link Connector Circuit Check

1. CHECK CONNECTOR

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

OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

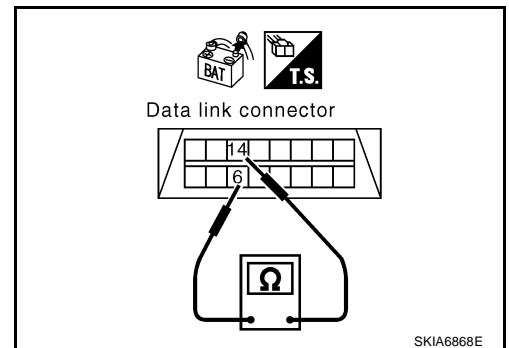
Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

6 (L) - 14 (Y)

: Approx. 54 - 66Ω

OK or NG

- OK >> Diagnose again. Refer to [LAN-154, "Work Flow"](#) .
 NG >> Repair harness between data link connector and BCM.



AKS00AET

BCM Circuit Check

1. CHECK CONNECTOR

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

OK or NG

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

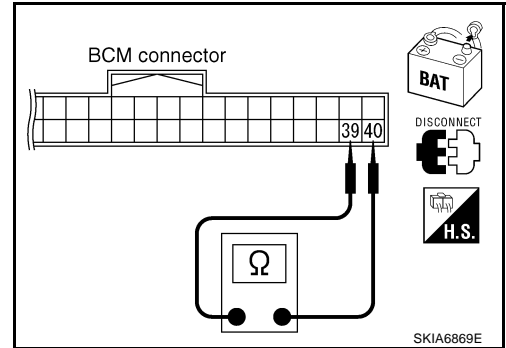
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M34 terminals 39 (L) and 40 (Y).

39 (L) - 40 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace BCM. Refer to [BCS-14, "Removal and Installation of BCM"](#).
- NG >> Repair harness between BCM and data link connector.



Unified Meter and A/C Amp. Circuit Check

1. CHECK CONNECTOR

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

OK or NG

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

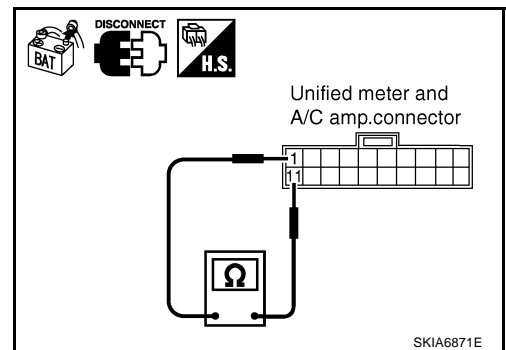
2. CHECK HARNESS FOR OPEN CIRCUIT

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

1 (L) - 11 (Y) : Approx. 54 - 66Ω

OK or NG

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



Steering Angle Sensor Circuit Check

1. CHECK CONNECTOR

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

OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

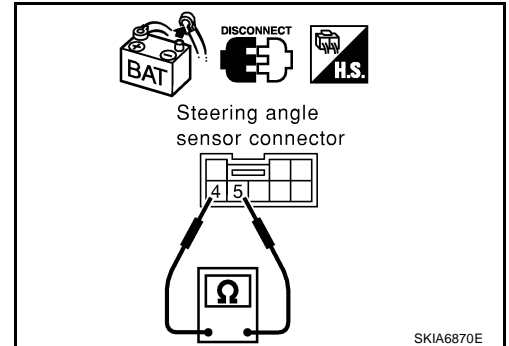
1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M33 terminals 4 (L) and 5 (Y).

4 (L) - 5 (Y)

: Approx. 54 - 66Ω

OK or NG

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



ABS Actuator and Electric Unit (Control Unit) Circuit Check

AKS00AEW

1. CHECK CONNECTOR

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

OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

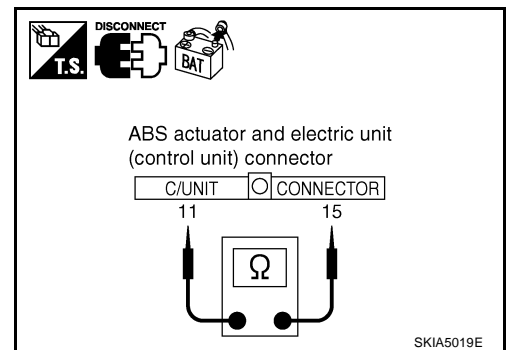
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

11 (L) - 15 (Y)

: Approx. 54 - 66Ω

OK or NG

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



IPDM E/R Circuit Check

AKS00AEX

1. CHECK CONNECTOR

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

OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

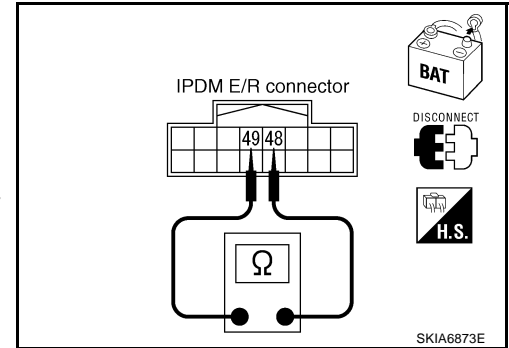
1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

48 (L) - 49 (Y)

: Approx. 108 - 132Ω

OK or NG

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



AKS00AEY

CAN Communication Circuit Check

1. CHECK CONNECTOR

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

OK or NG

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

2. CHECK HARNESS FOR SHORT CIRCUIT

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

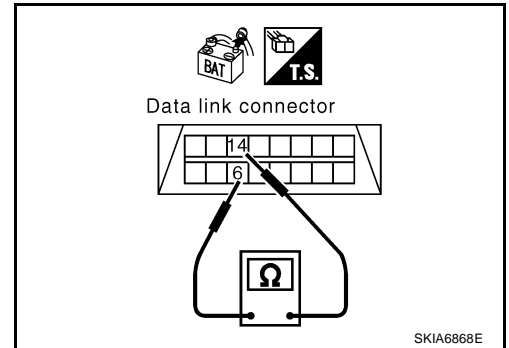
6 (L) - 14 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 3.

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

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



3. CHECK HARNESS FOR SHORT CIRCUIT

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

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

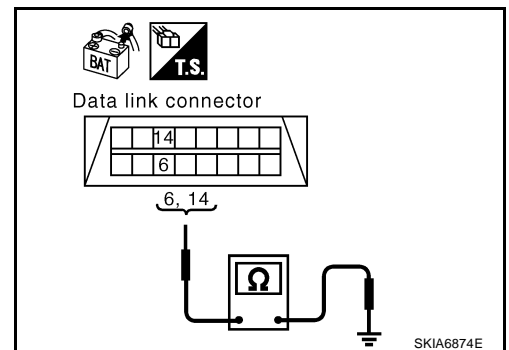
14 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 4.

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

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



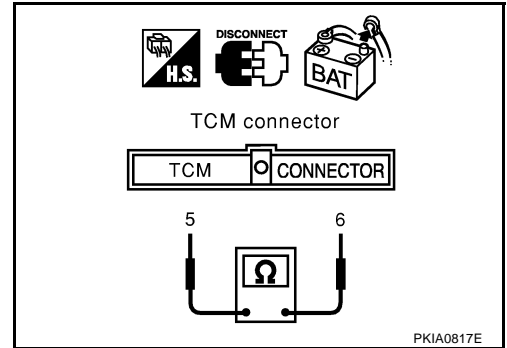
4. CHECK HARNESS FOR SHORT CIRCUIT

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

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

OK or NG

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



5. CHECK HARNESS FOR SHORT CIRCUIT

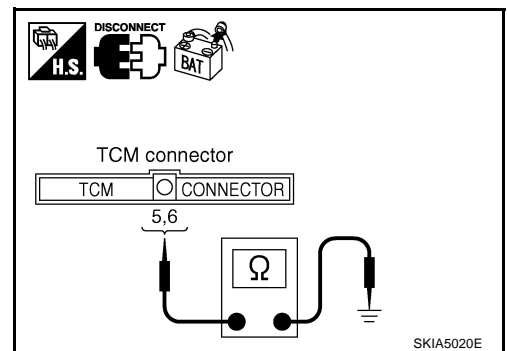
- Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

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

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

OK or NG

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



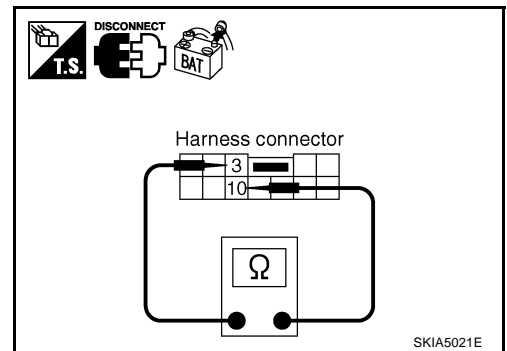
6. CHECK HARNESS FOR SHORT CIRCUIT

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

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

OK or NG

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



7. CHECK HARNESS FOR SHORT CIRCUIT

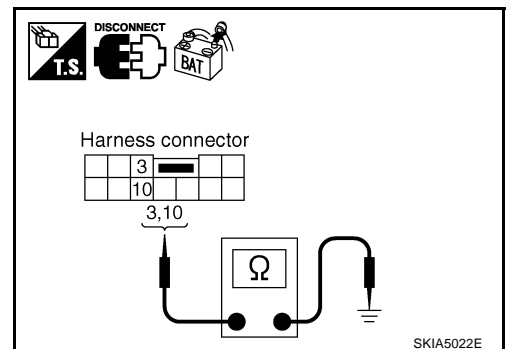
- Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

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

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

OK or NG

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



8. CHECK HARNESS FOR SHORT CIRCUIT

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

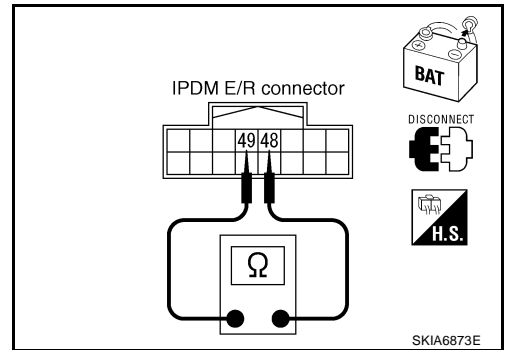
48 (L) - 49 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 9.

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

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



9. CHECK HARNESS FOR SHORT CIRCUIT

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

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

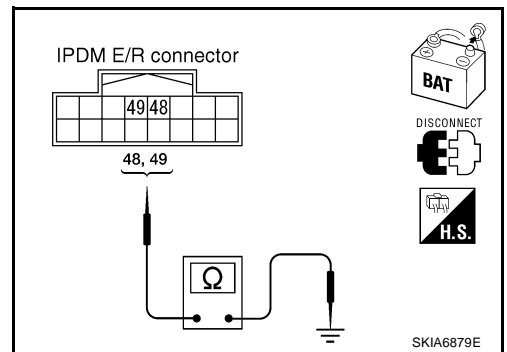
49 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 10.

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

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



10. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-181, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#) .

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-154, "Work Flow"](#) .

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

IPDM E/R Ignition Relay Circuit Check

AKS00AEZ

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

- IPDM E/R power supply circuit. Refer to [PG-27, "IPDM E/R Power/Ground Circuit Inspection"](#) .
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START""](#) .

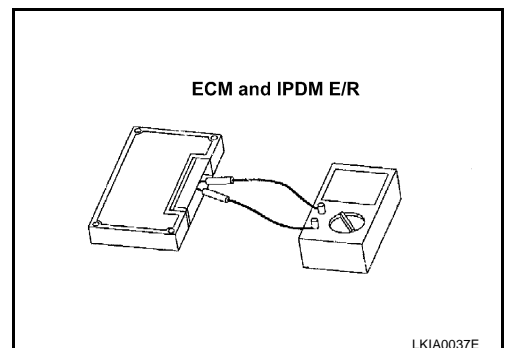
Component Inspection

ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

AKS00AF0

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

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



CAN SYSTEM (TYPE 6)

PFP:23710

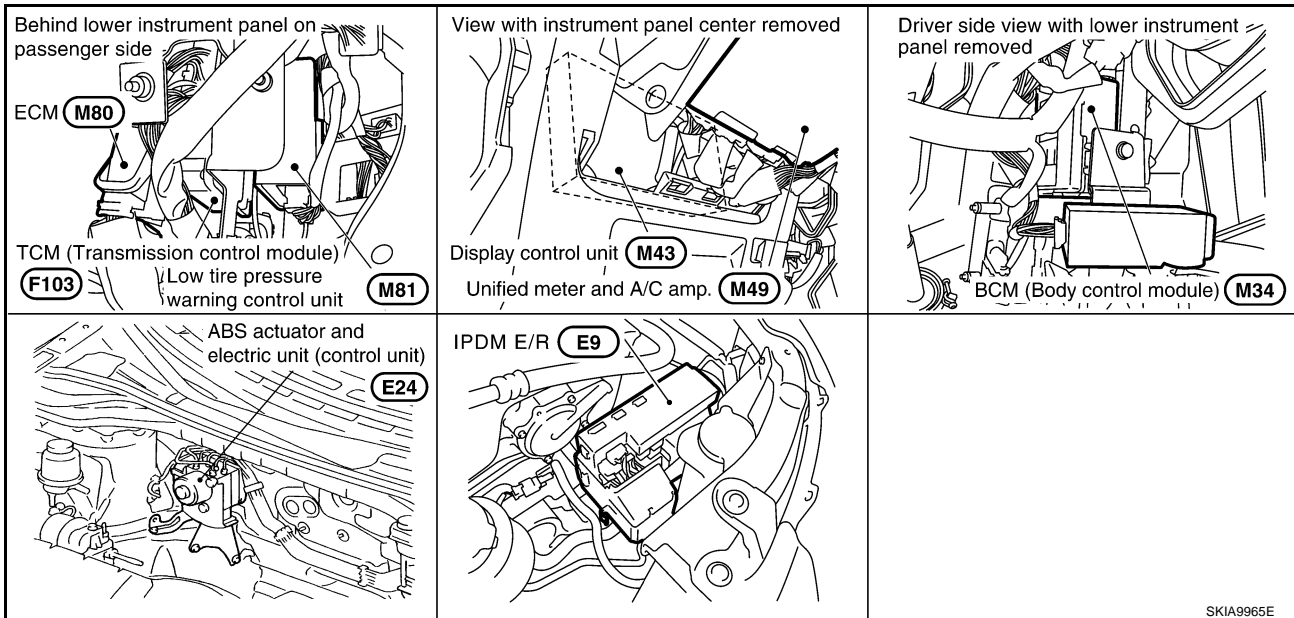
System Description

AKS00AF1

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

AKS00AF2



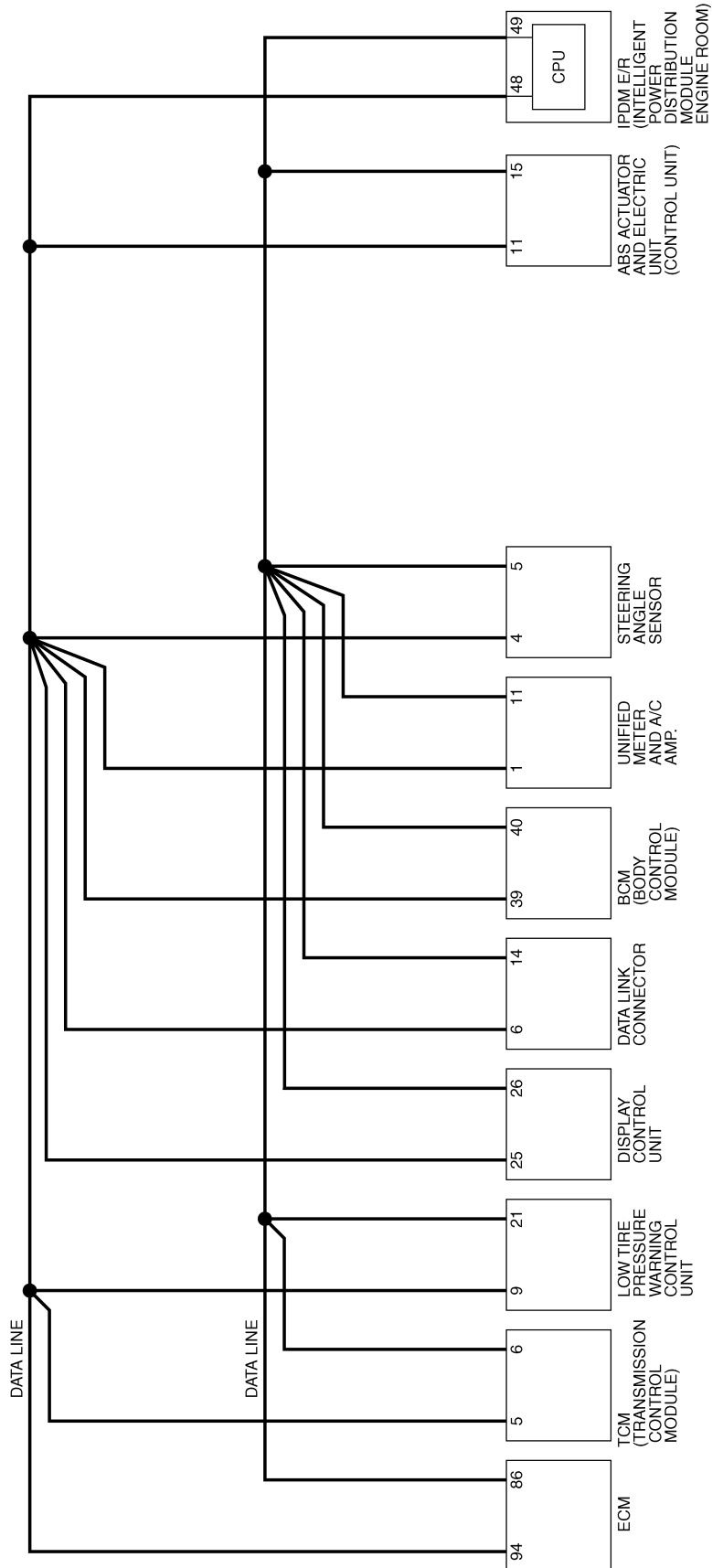
SKIA9965E

CAN SYSTEM (TYPE 6)

[CAN]

Schematic

AKS00AF3



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

TKWB0025E

CAN SYSTEM (TYPE 6)

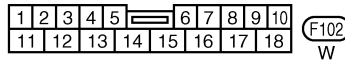
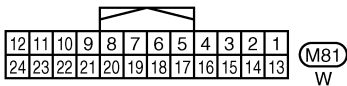
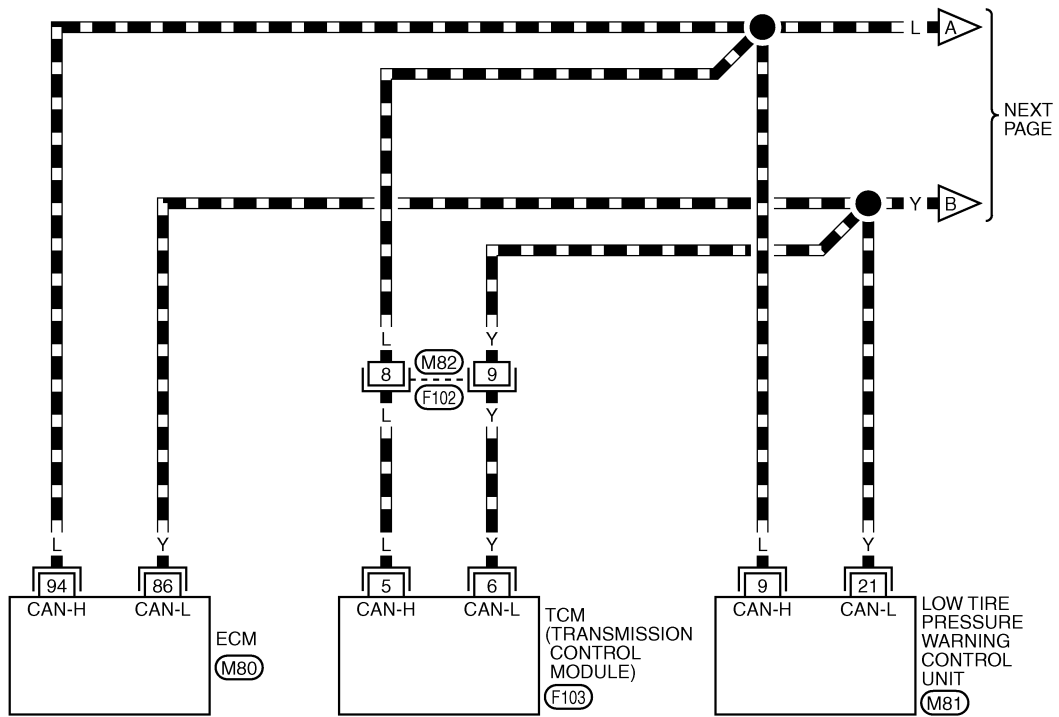
[CAN]

AKS00AF4

Wiring Diagram - CAN -

LAN-CAN-16

▬ : DATA LINE



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

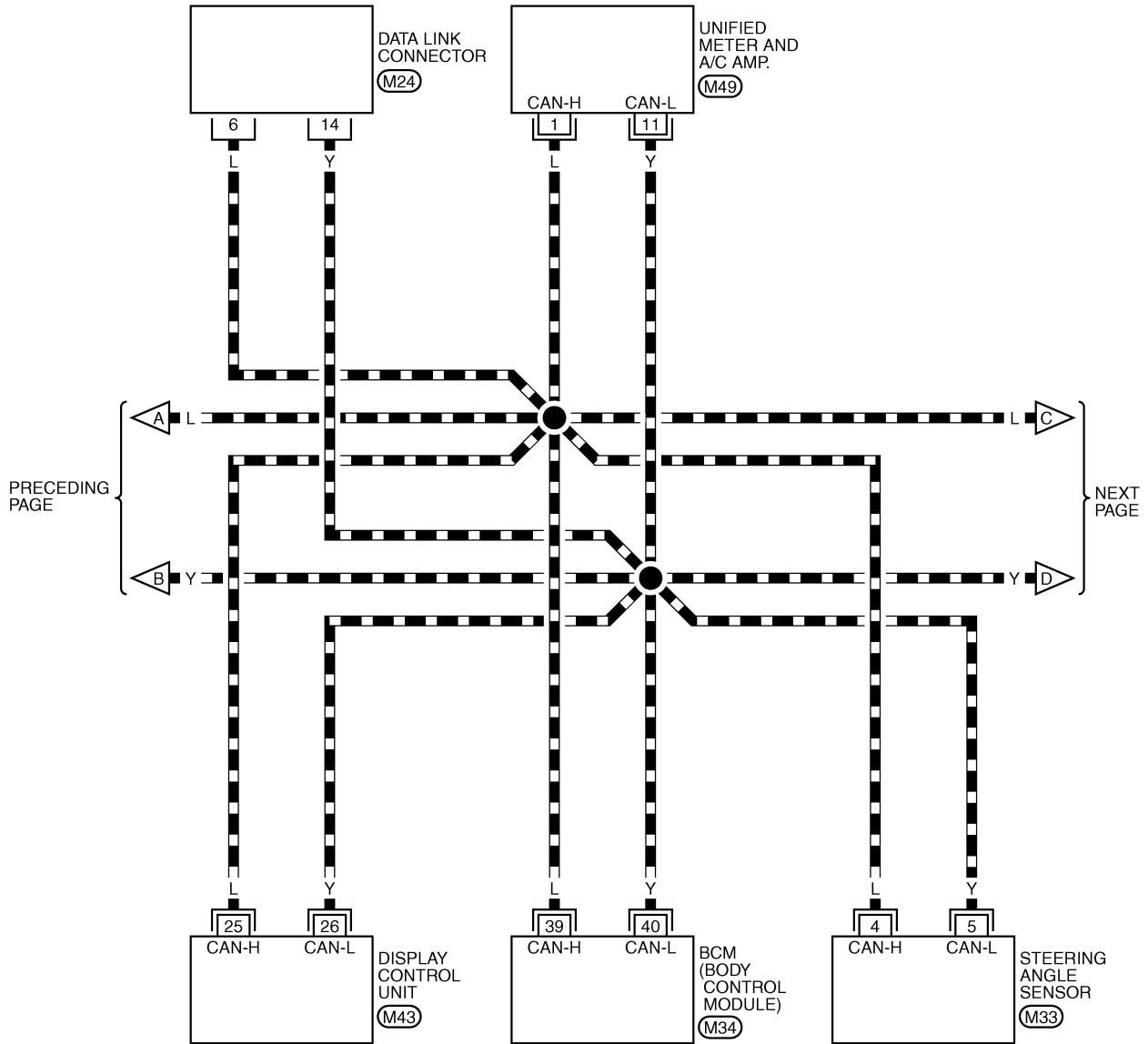
TKWB0026E

CAN SYSTEM (TYPE 6)

[CAN]

LAN-CAN-17

▬ : DATA LINE

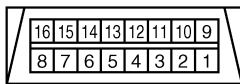


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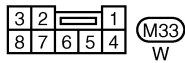
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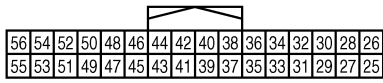
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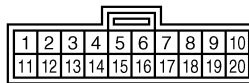
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M33
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M43
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M49
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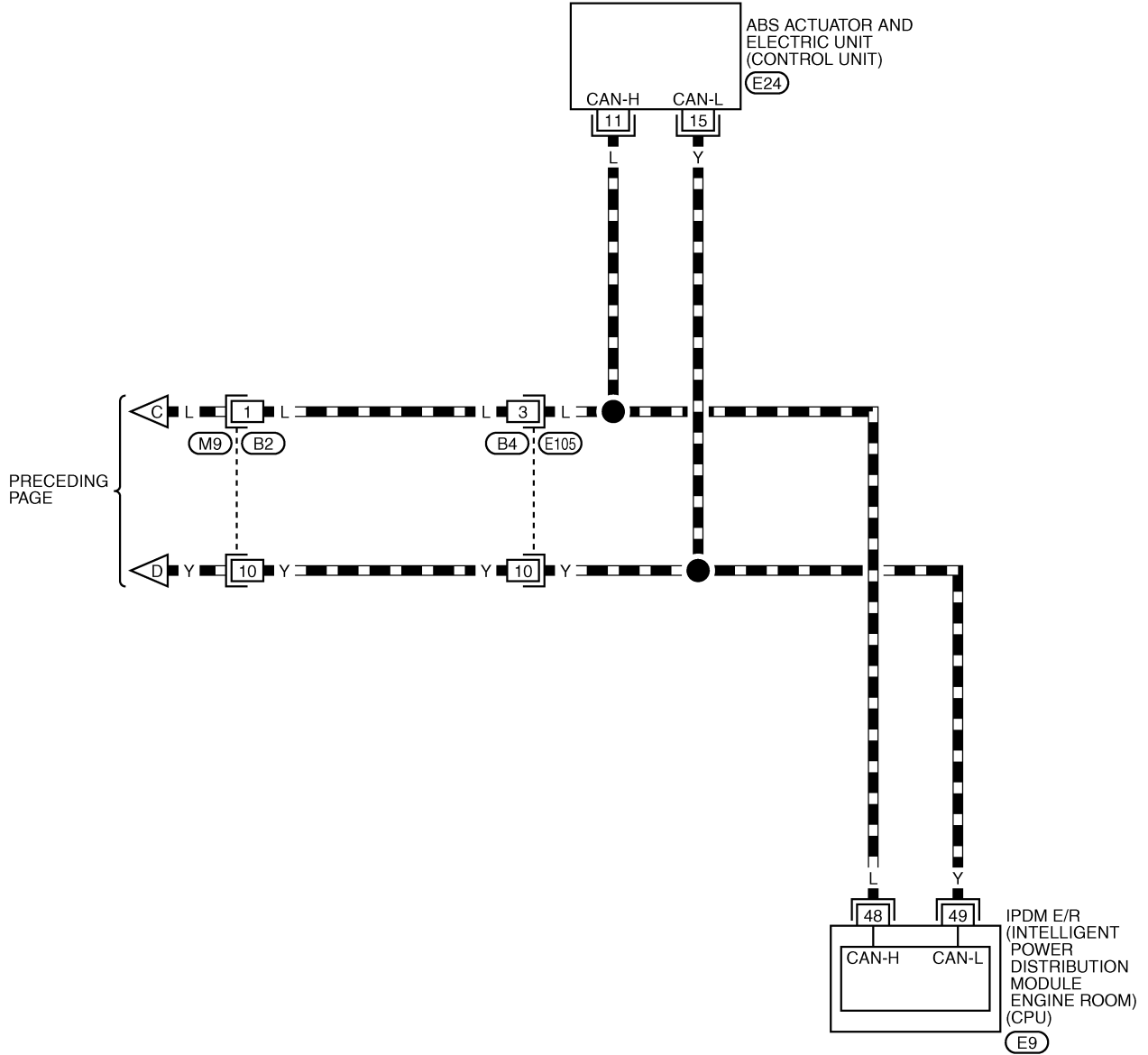


REFER TO THE FOLLOWING.
M34 -ELECTRICAL UNITS

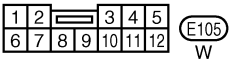
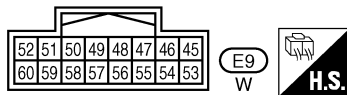
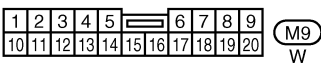
TKWB0027E

LAN-CAN-18

▬ : DATA LINE



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REFER TO THE FOLLOWING.

(E24) -ELECTRICAL UNITS

TKWB0028E

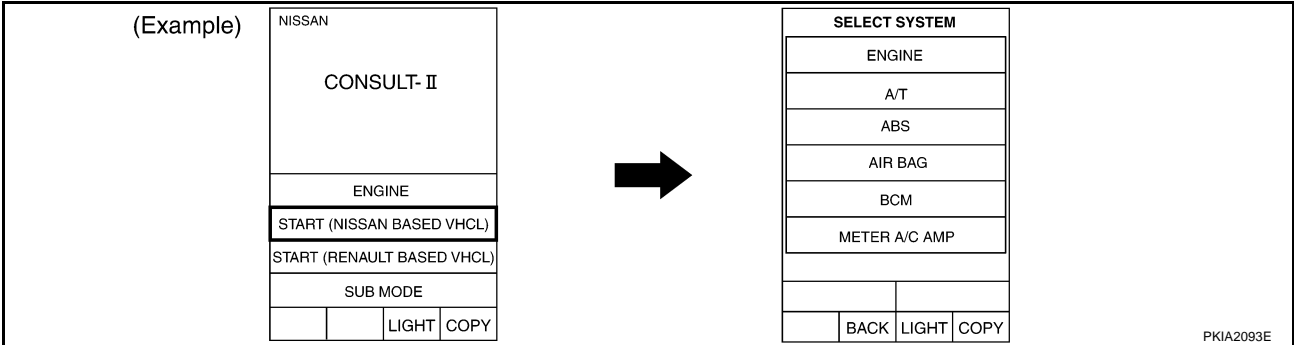
CAN SYSTEM (TYPE 6)

[CAN]

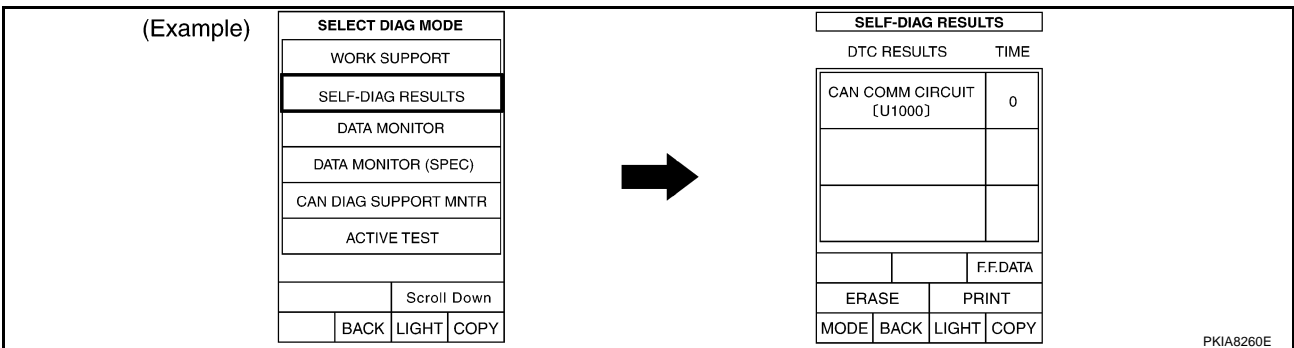
AKS00AF5

Work Flow

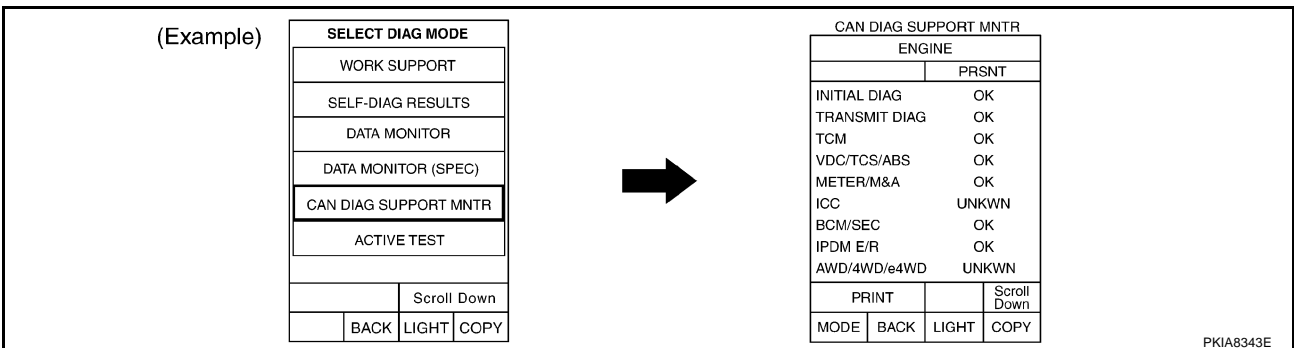
- When there are no indications of "TRANSMISSION", "AIR PRESSURE MONITOR", "METER A/C AMP", or "IPDM E/R" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



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



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "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 [LAN-189, "CHECK SHEET"](#).
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "v" onto the items with "No indication", "NG", or "UNKWVN" in the check sheet table. Refer to [LAN-189, "CHECK SHEET"](#).

NOTE:

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

- Check CAN communication line of the navigation system. Refer to [AV-175, "CAN Communication Line Check"](#).
- Attach the CAN DIAG SUPPORT MONITOR check sheet onto the check sheet. Refer to [LAN-189, "CHECK SHEET"](#).

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8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG SUPPORT MONITOR check sheet. Refer to [LAN-189, "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-175, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-191, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

CAN SYSTEM (TYPE 6)

[CAN]

CHECK SHEET

NOTE:

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

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

Symptoms :

Attach copy of
SELECT SYSTEM

Attach copy of
SELECT SYSTEM

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

PKIA8423E

CAN SYSTEM (TYPE 6)

[CAN]

Attach copy of
ENGINE
SELF-DIAG RESULTS

Attach copy of
TRANSMISSION
SELF-DIAG RESULTS

Attach copy of
AIR PRESSURE
MONITOR
SELF-DIAG RESULTS

Attach copy of
BCM
SELF-DIAG RESULTS

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

Attach copy of
ABS
SELF-DIAG RESULTS

Attach copy of
IPDM E/R
SELF-DIAG RESULTS

Attach copy of
ENGINE
CAN DIAG SUPPORT
MNTR

Attach copy of
TRANSMISSION
CAN DIAG SUPPORT
MNTR

Attach copy of
AIR PRESSURE
MONITOR
CAN DIAG SUPPORT
MNTR

Attach copy of
BCM
CAN DIAG SUPPORT
MNTR

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

Attach copy of
ABS
CAN DIAG SUPPORT
MNTR

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IPDM E/R
CAN DIAG SUPPORT
MNTR

PKIA8407E

CHECK SHEET RESULTS (EXAMPLE)

NOTE:

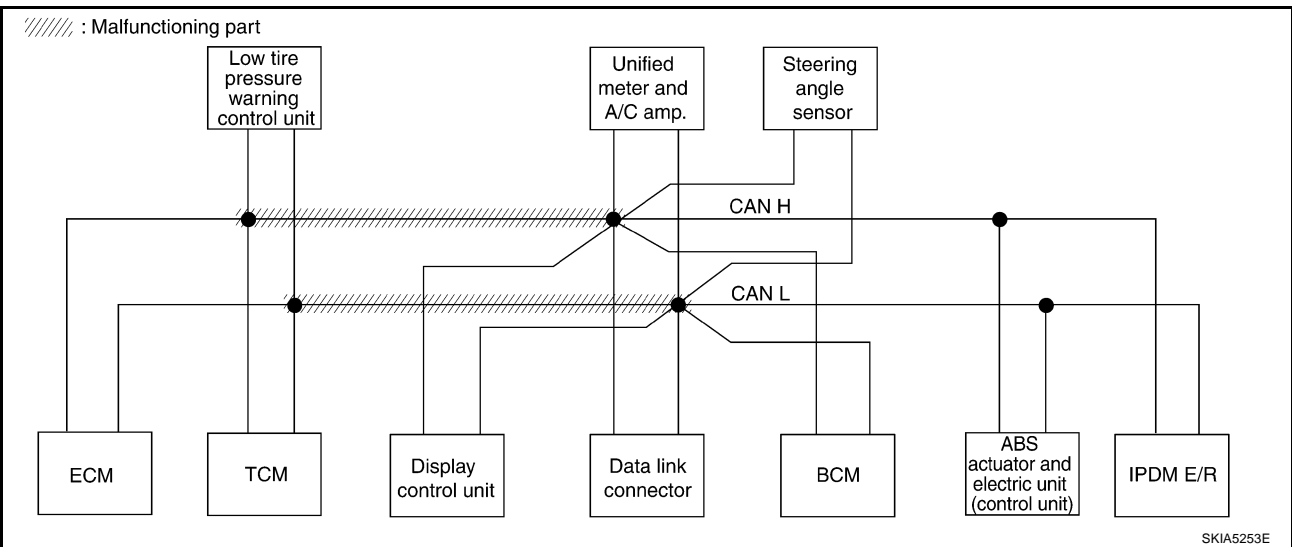
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

Case 1

Check harness between TCM and data link connector. Refer to [LAN-204, "Circuit Check Between TCM and Data Link Connector"](#).

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

PKIA8424E



CAN SYSTEM (TYPE 6)

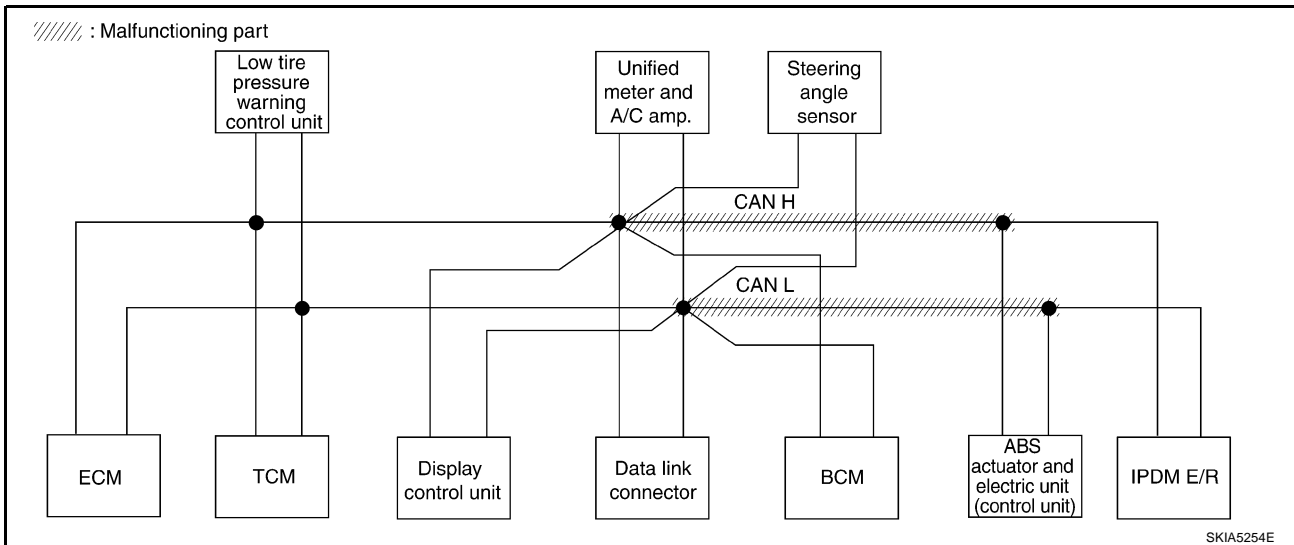
[CAN]

Case 2

Check harness between data link connector and ABS actuator and electric unit (control unit). Refer to [LAN-205, "Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit \(Control Unit\)"](#).

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

PKIA8425E



SKIA5254E

CAN SYSTEM (TYPE 6)

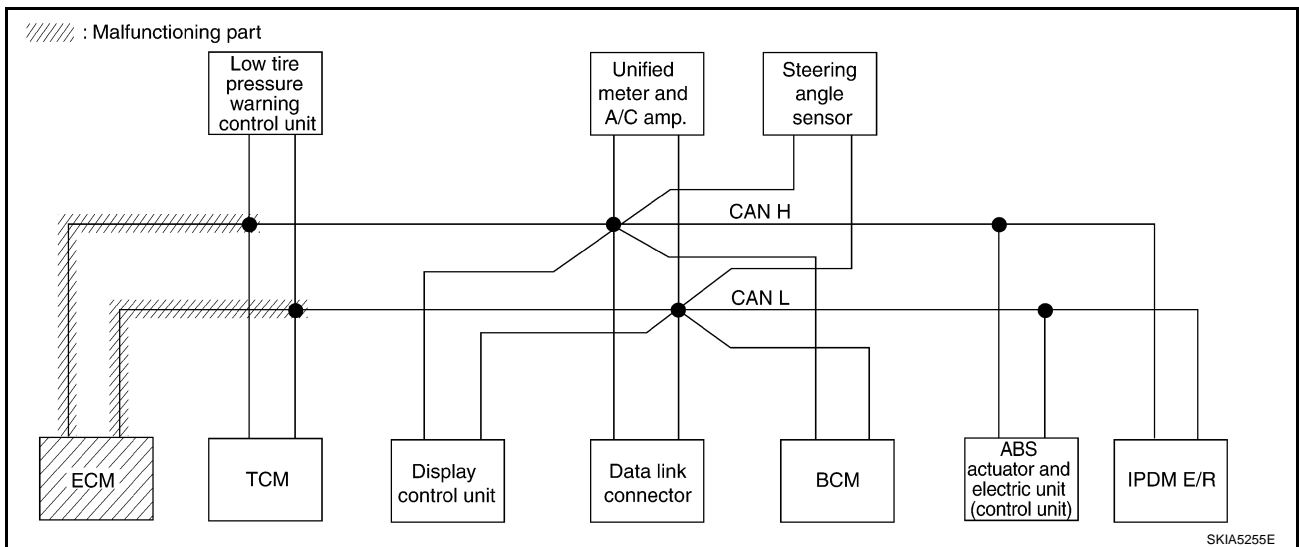
[CAN]

Case 3

Check ECM circuit. Refer to [LAN-206. "ECM Circuit Check"](#) .

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

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CAN SYSTEM (TYPE 6)

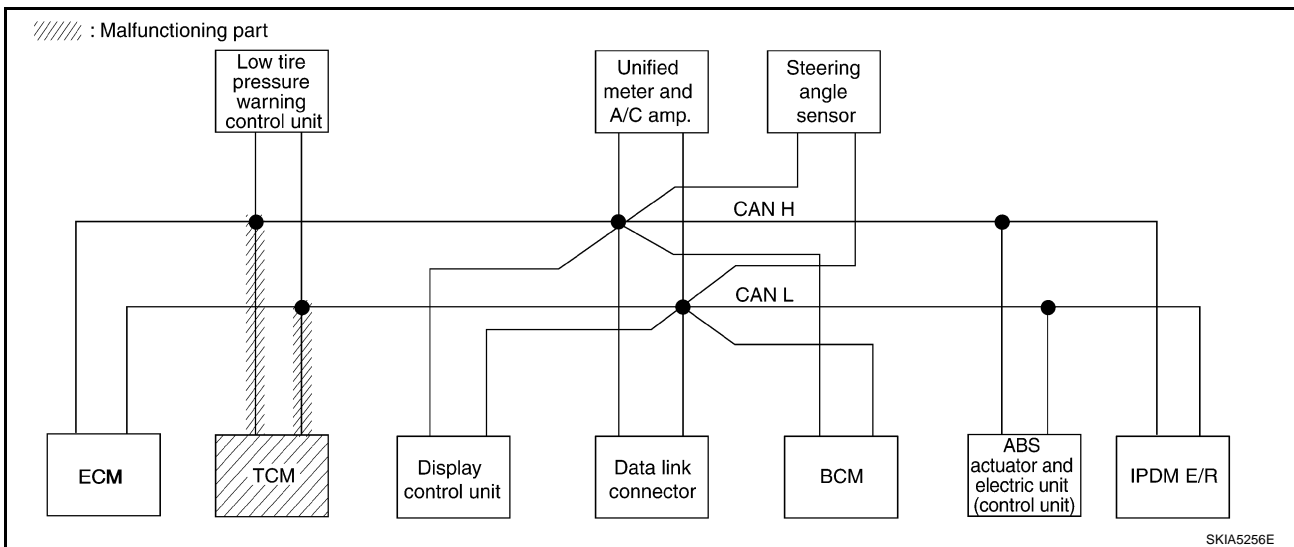
[CAN]

Case 4

Check TCM circuit. Refer to [LAN-206, "TCM Circuit Check"](#) .

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

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CAN SYSTEM (TYPE 6)

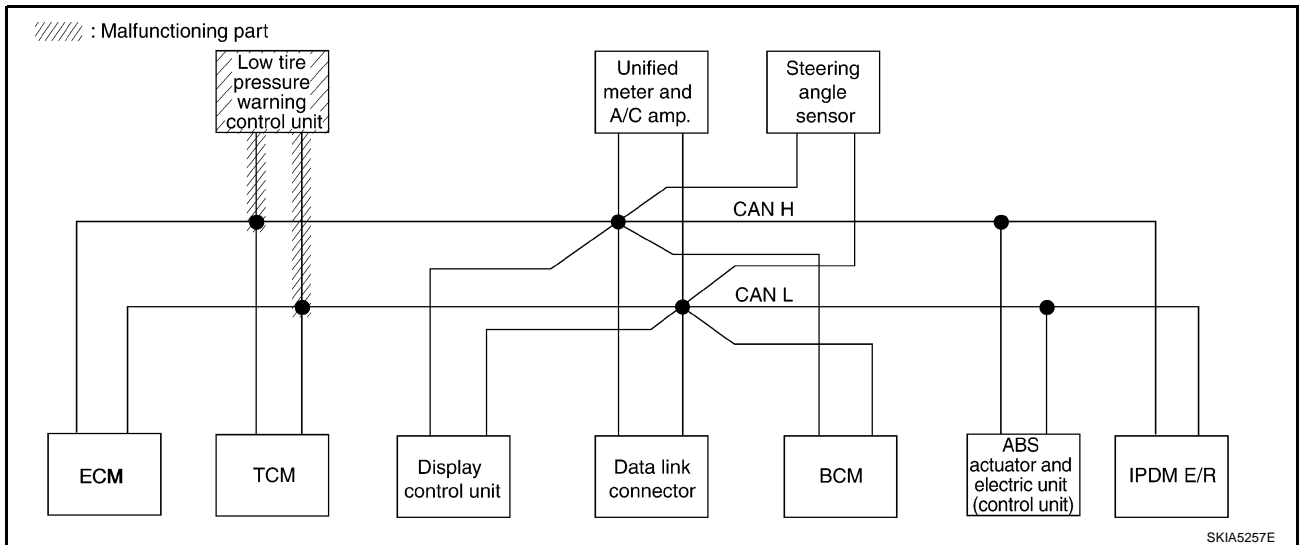
[CAN]

Case 5

Check low tire pressure warning control unit circuit. Refer to [LAN-207, "Low Tire Pressure Warning Control Unit Circuit Check"](#).

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

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CAN SYSTEM (TYPE 6)

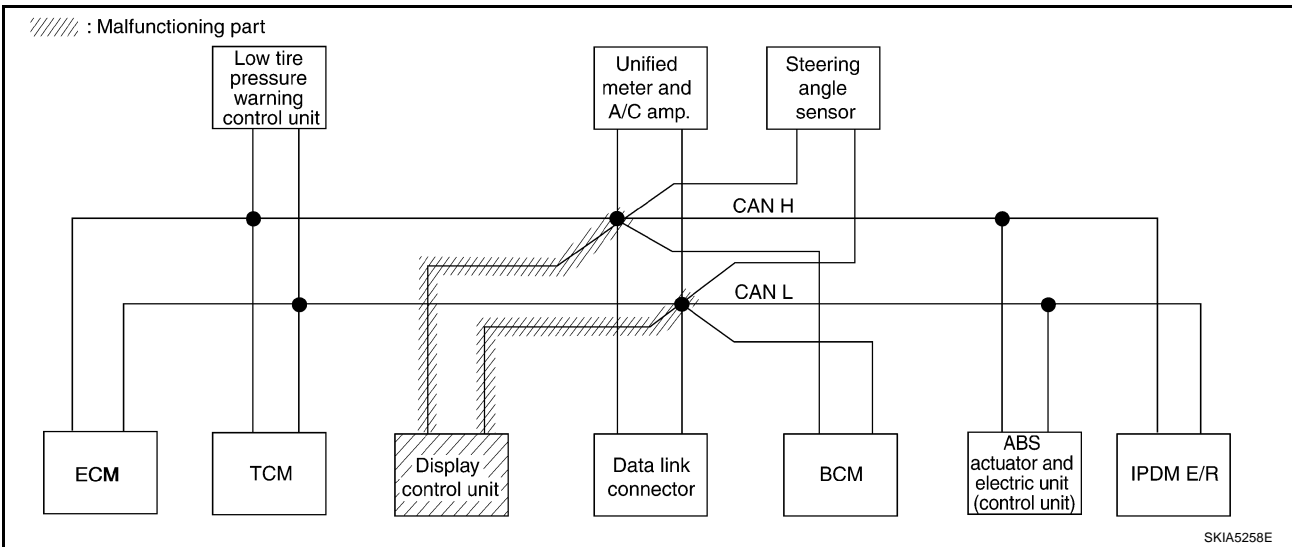
[CAN]

Case 6

Check display control unit circuit. Refer to [LAN-207, "Display Control Unit Circuit Check"](#) .

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

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CAN SYSTEM (TYPE 6)

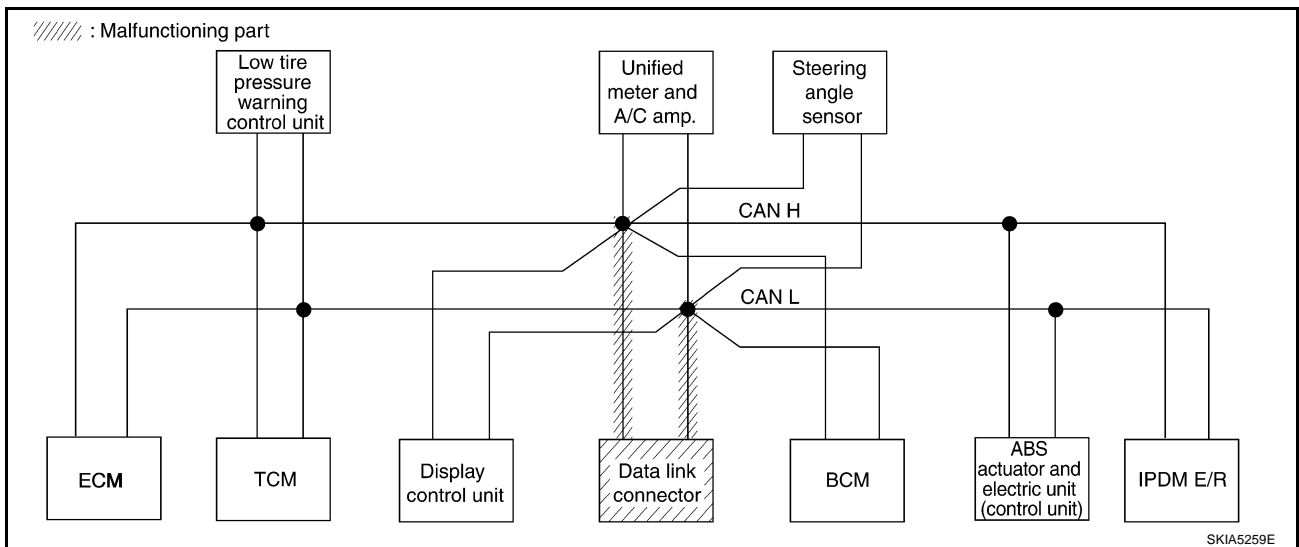
[CAN]

Case 7

Check data link connector circuit. Refer to [LAN-208, "Data Link Connector Circuit Check"](#) .

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

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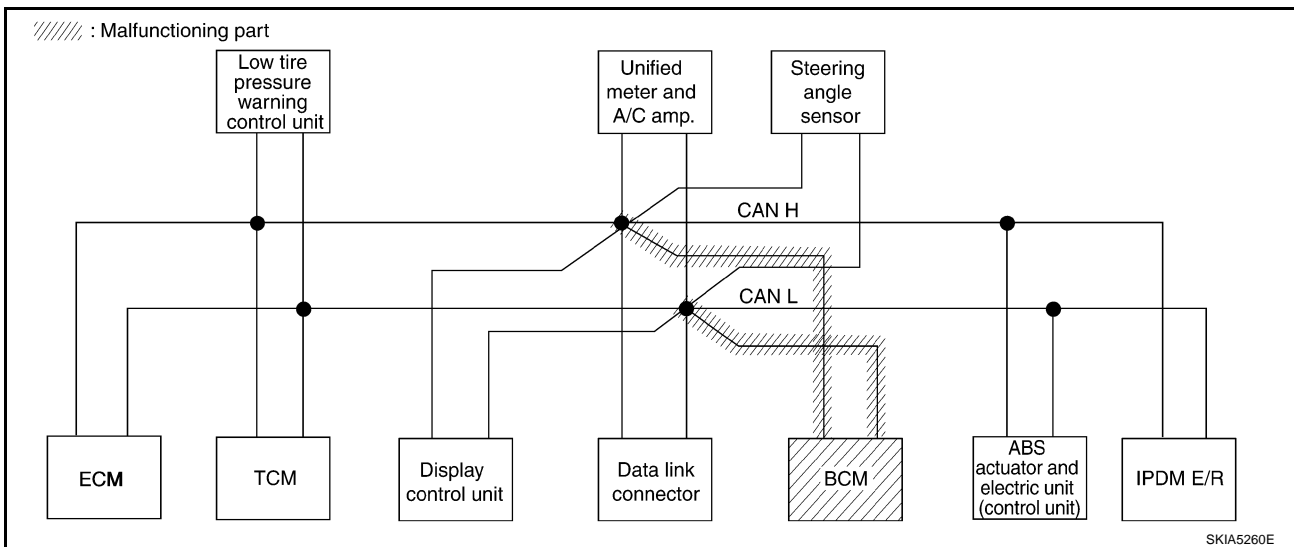
[CAN]

Case 8

Check BCM circuit. Refer to [LAN-208, "BCM Circuit Check"](#) .

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

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CAN SYSTEM (TYPE 6)

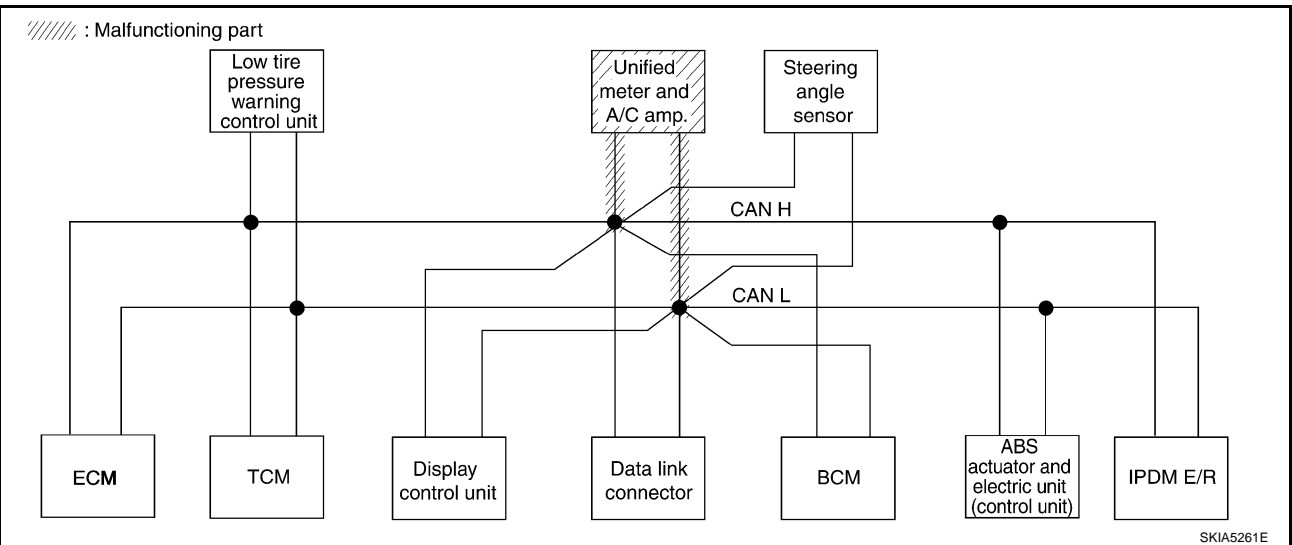
[CAN]

Case 9

Check unified meter and A/C amp. circuit. Refer to [LAN-209, "Unified Meter and A/C Amp. Circuit Check"](#) .

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

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CAN SYSTEM (TYPE 6)

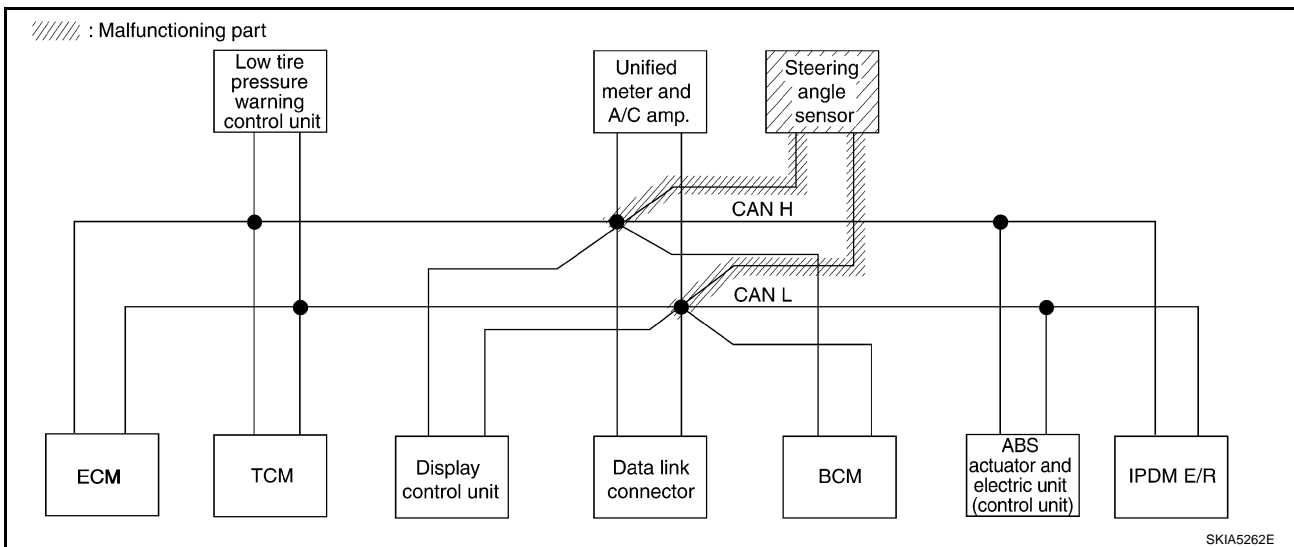
[CAN]

Case 10

Check steering angle sensor circuit. Refer to [LAN-209, "Steering Angle Sensor Circuit Check"](#) .

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

PKIA8433E



SKIA5262E

CAN SYSTEM (TYPE 6)

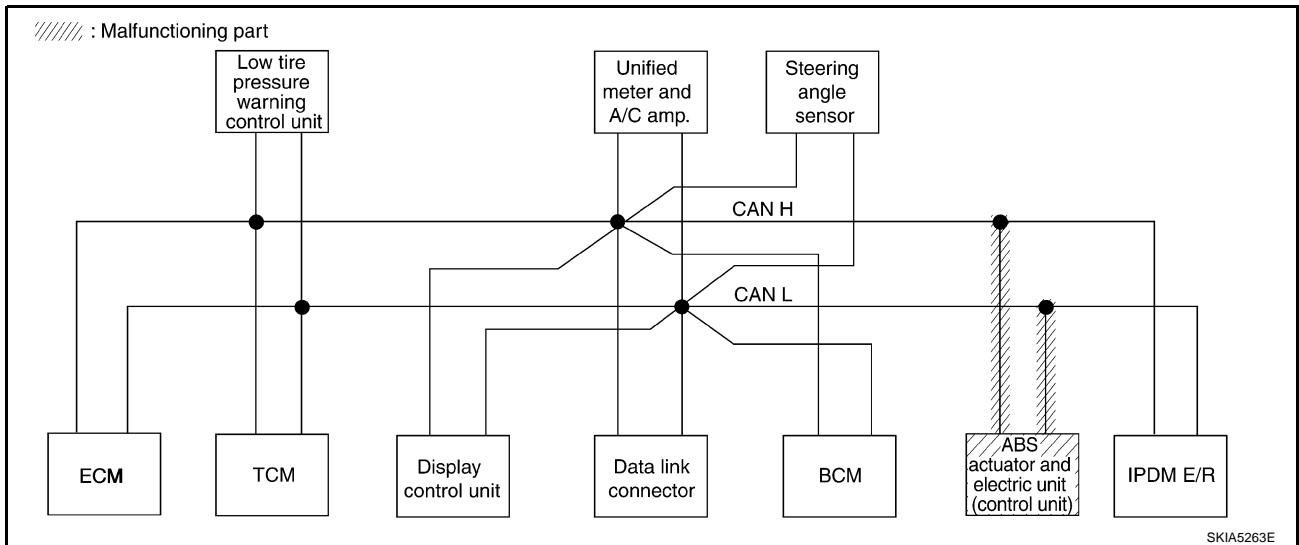
[CAN]

Case 11

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-210, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

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

PKIA8434E



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CAN SYSTEM (TYPE 6)

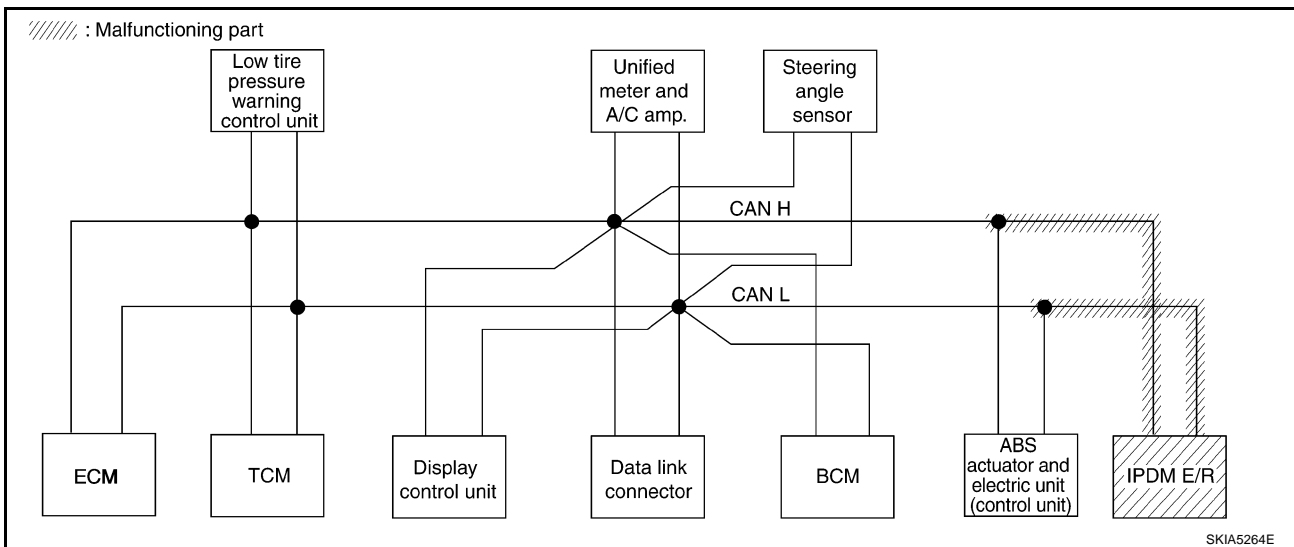
[CAN]

Case 12

Check IPDM E/R circuit. Refer to [LAN-210, "IPDM E/R Circuit Check"](#) .

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

PKIA8435E



CAN SYSTEM (TYPE 6)

[CAN]

Case 13

Check CAN communication circuit. Refer to [LAN-211, "CAN Communication Circuit Check"](#) .

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

PKIA8436E

Case 14

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-214, "IPDM E/R Ignition Relay Circuit Check"](#) .

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

PKIA8437E

Case 15

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-214, "IPDM E/R Ignition Relay Circuit Check"](#) .

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

PKIA8438E

Circuit Check Between TCM and Data Link Connector

AKS00AF6

1. CHECK HARNESS FOR OPEN CIRCUIT

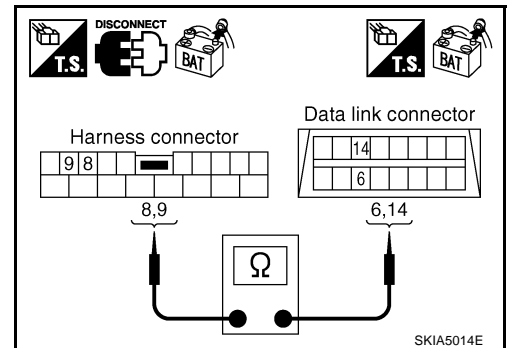
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

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

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

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-187, "Work Flow"](#) .
- NG >> Repair harness.



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

AKS00AF7

1. CHECK CONNECTOR

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

OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

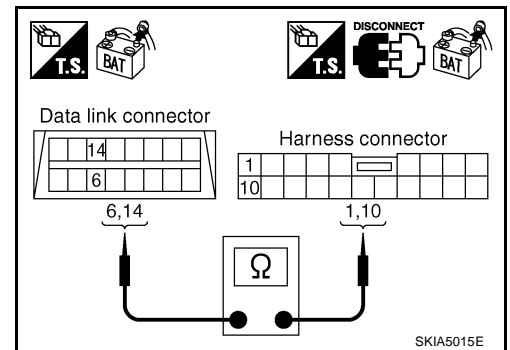
1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

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

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

OK or NG

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



3. CHECK HARNESS FOR OPEN CIRCUIT

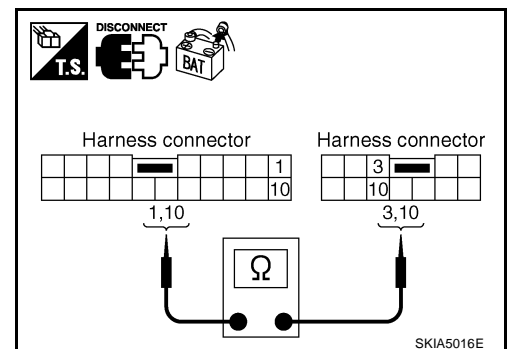
1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

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

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

OK or NG

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

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4. CHECK HARNESS FOR OPEN CIRCUIT

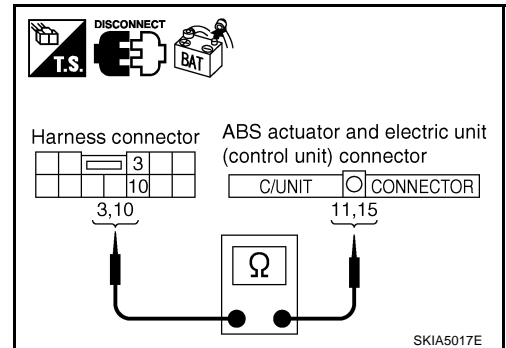
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

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

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

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-187, "Work Flow"](#).
- NG >> Repair harness.



ECM Circuit Check

1. CHECK CONNECTOR

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

OK or NG

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

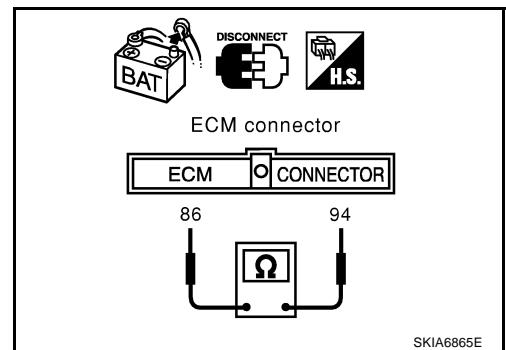
2. CHECK HARNESS FOR OPEN CIRCUIT

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

94 (L) - 86 (Y) : Approx. 108 - 132Ω

OK or NG

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



TCM Circuit Check

1. CHECK CONNECTOR

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

OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

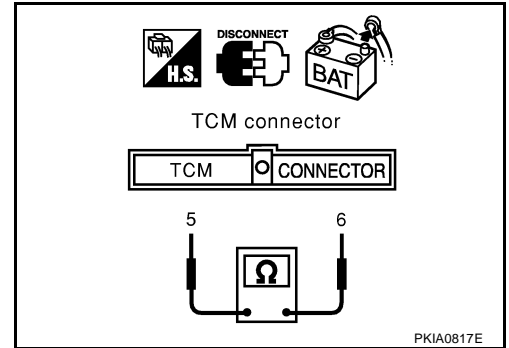
1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

5 (L) - 6 (Y)

: Approx. 54 - 66Ω

OK or NG

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



Low Tire Pressure Warning Control Unit Circuit Check

AKS00AFA

1. CHECK CONNECTOR

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

OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

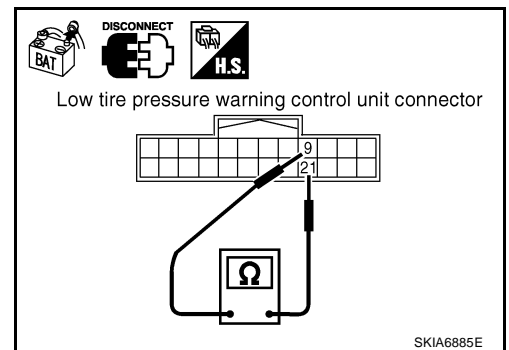
1. Disconnect low tire pressure warning control unit connector.
2. Check resistance between low tire pressure warning control unit harness connector M81 terminals 9 (L) and 21 (Y).

9 (L) - 21 (Y)

: Approx. 54 - 66Ω

OK or NG

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



Display Control Unit Circuit Check

AKS00AFB

1. CHECK CONNECTOR

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

OK or NG

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

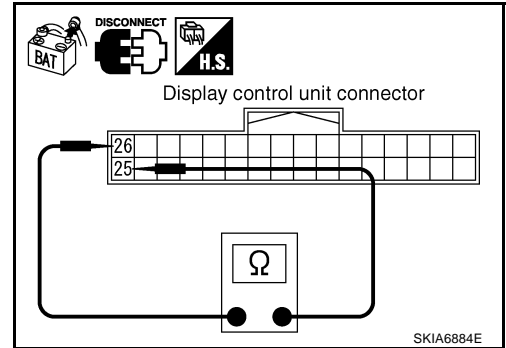
2. CHECK HARNESS FOR OPEN CIRCUIT

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

25 (L) - 26 (Y) : Approx. 54 - 66Ω

OK or NG

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



Data Link Connector Circuit Check

1. CHECK CONNECTOR

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

OK or NG

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

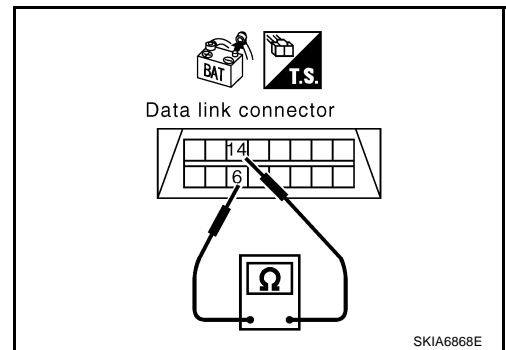
2. CHECK HARNESS FOR OPEN CIRCUIT

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

6 (L) - 14 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Diagnose again. Refer to [LAN-187, "Work Flow"](#).
 NG >> Repair harness between data link connector and BCM.



BCM Circuit Check

1. CHECK CONNECTOR

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

OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

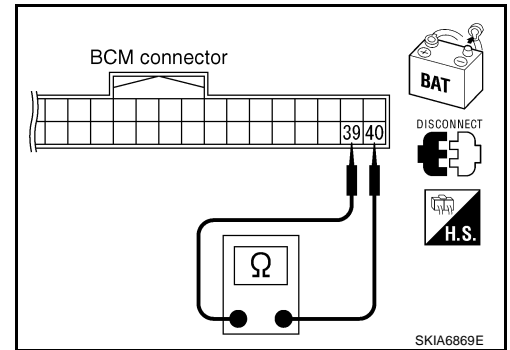
1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M34 terminals 39 (L) and 40 (Y).

39 (L) - 40 (Y)

: Approx. 54 - 66Ω

OK or NG

- OK >> Replace BCM. Refer to [BCS-14, "Removal and Installation of BCM"](#).
- NG >> Repair harness between BCM and data link connector.



AKS00AFF

Unified Meter and A/C Amp. Circuit Check

1. CHECK CONNECTOR

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

OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

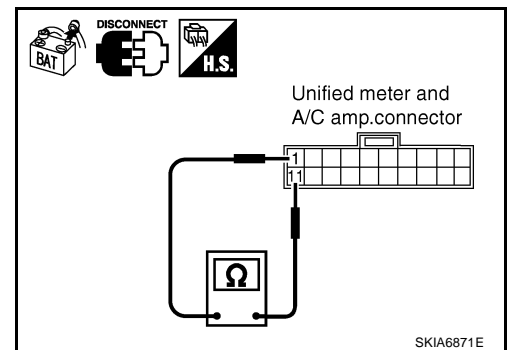
1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

1 (L) - 11 (Y)

: Approx. 54 - 66Ω

OK or NG

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



AKS00AFF

Steering Angle Sensor Circuit Check

1. CHECK CONNECTOR

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

OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

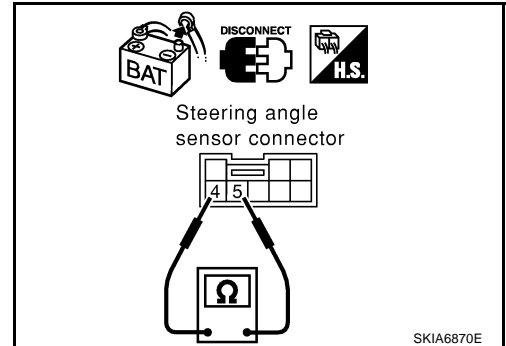
1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M33 terminals 4 (L) and 5 (Y).

4 (L) - 5 (Y)

: Approx. 54 - 66Ω

OK or NG

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



ABS Actuator and Electric Unit (Control Unit) Circuit Check

AKS00AFG

1. CHECK CONNECTOR

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

OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

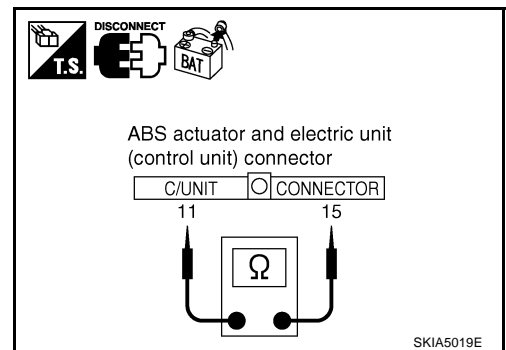
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

11 (L) - 15 (Y)

: Approx. 54 - 66Ω

OK or NG

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



IPDM E/R Circuit Check

AKS00AFH

1. CHECK CONNECTOR

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

OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

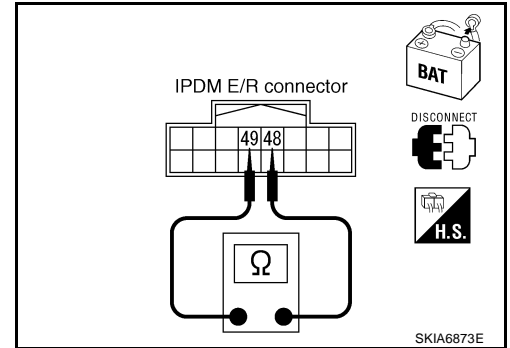
1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

48 (L) - 49 (Y)

: Approx. 108 - 132Ω

OK or NG

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



AKS00AFI

CAN Communication Circuit Check

1. CHECK CONNECTOR

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

OK or NG

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

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2. CHECK HARNESS FOR SHORT CIRCUIT

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

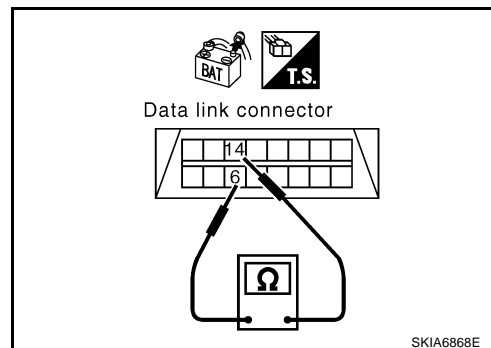
6 (L) - 14 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 3.

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

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



3. CHECK HARNESS FOR SHORT CIRCUIT

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

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

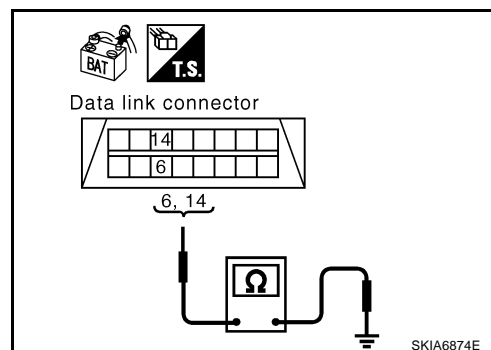
14 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 4.

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

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



4. CHECK HARNESS FOR SHORT CIRCUIT

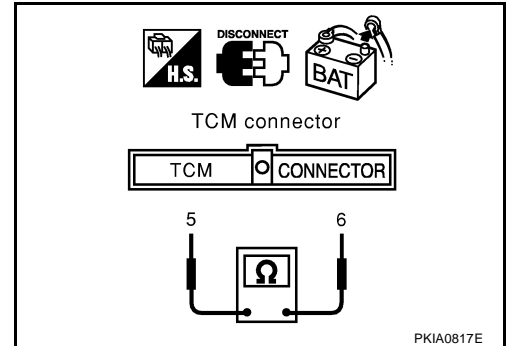
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

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

OK or NG

OK >> GO TO 5.

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



5. CHECK HARNESS FOR SHORT CIRCUIT

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

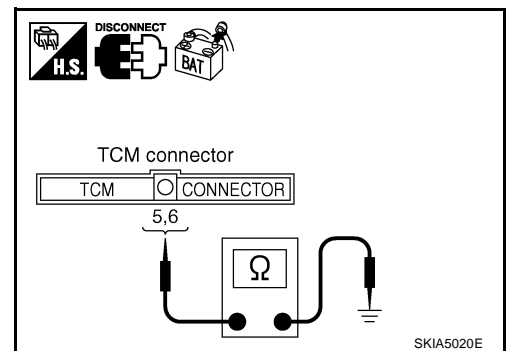
5 (L) - Ground : Continuity should not exist.

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

OK or NG

OK >> GO TO 6.

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



6. CHECK HARNESS FOR SHORT CIRCUIT

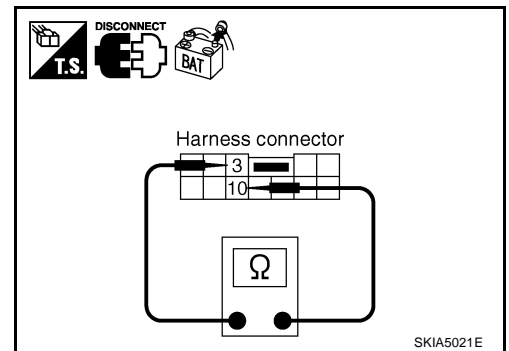
1. Disconnect harness connector B4.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

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

OK or NG

OK >> GO TO 7.

NG >> Repair harness between harness connector B4 and harness connector B2.



7. CHECK HARNESS FOR SHORT CIRCUIT

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

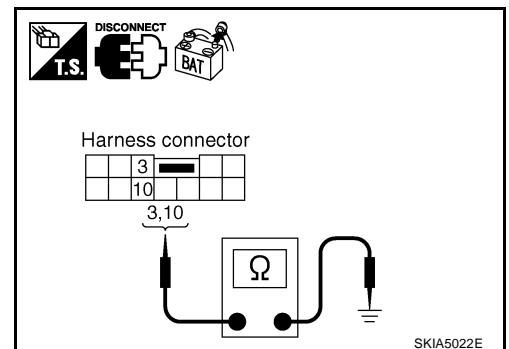
3 (L) - Ground : Continuity should not exist.

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

OK or NG

OK >> GO TO 8.

NG >> Repair harness between harness connector B4 and harness connector B2.



8. CHECK HARNESS FOR SHORT CIRCUIT

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

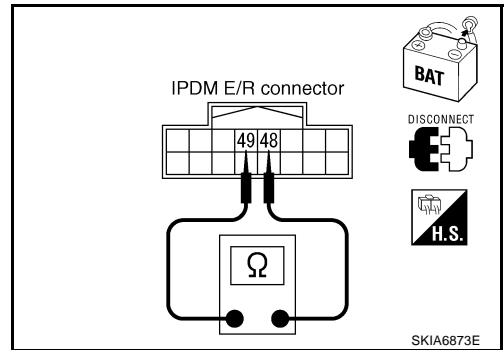
48 (L) - 49 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 9.

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

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



9. CHECK HARNESS FOR SHORT CIRCUIT

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

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

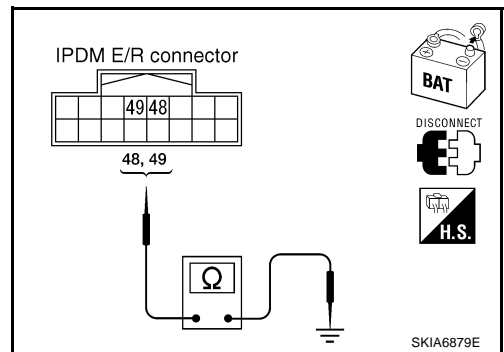
49 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 10.

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

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



10. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-214, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-187, "Work Flow"](#).

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

IPDM E/R Ignition Relay Circuit Check

AKS00AFJ

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

- IPDM E/R power supply circuit. Refer to [PG-27, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#).

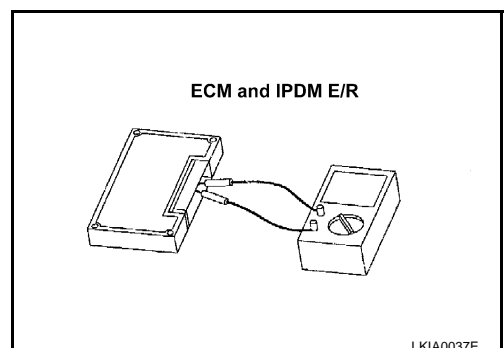
Component Inspection

ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

AKS00AFK

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

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



CAN SYSTEM (TYPE 7)

PFP:23710

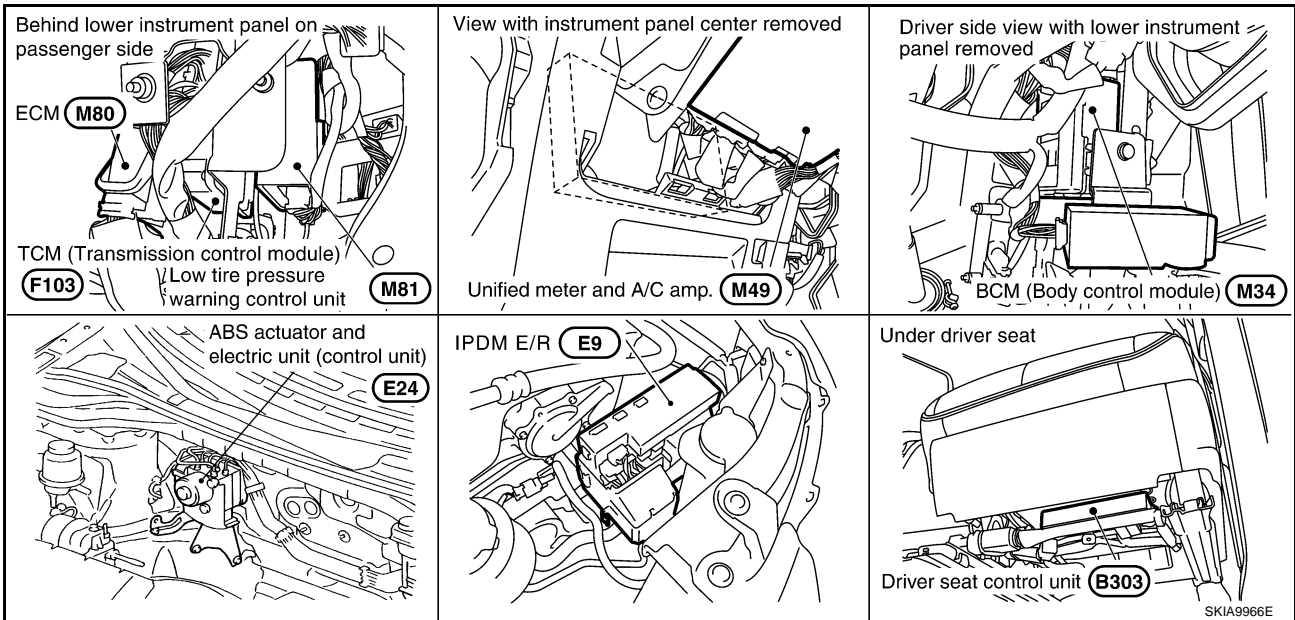
System Description

AKS00AFL

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

AKS00AFM



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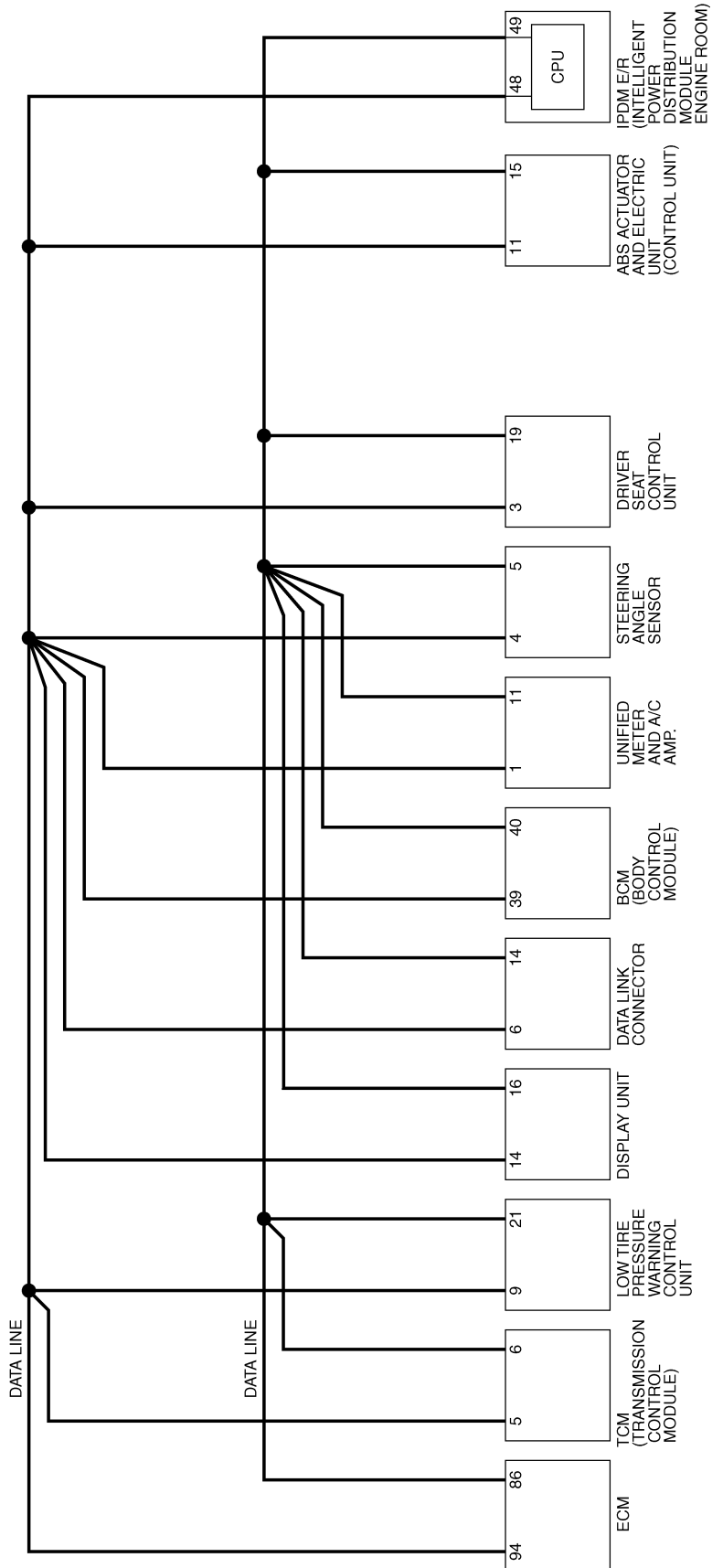
LAN

CAN SYSTEM (TYPE 7)

[CAN]

Schematic

AKS00AFN



TKWB0029E

CAN SYSTEM (TYPE 7)

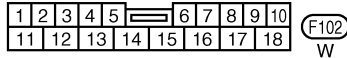
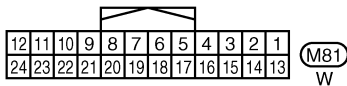
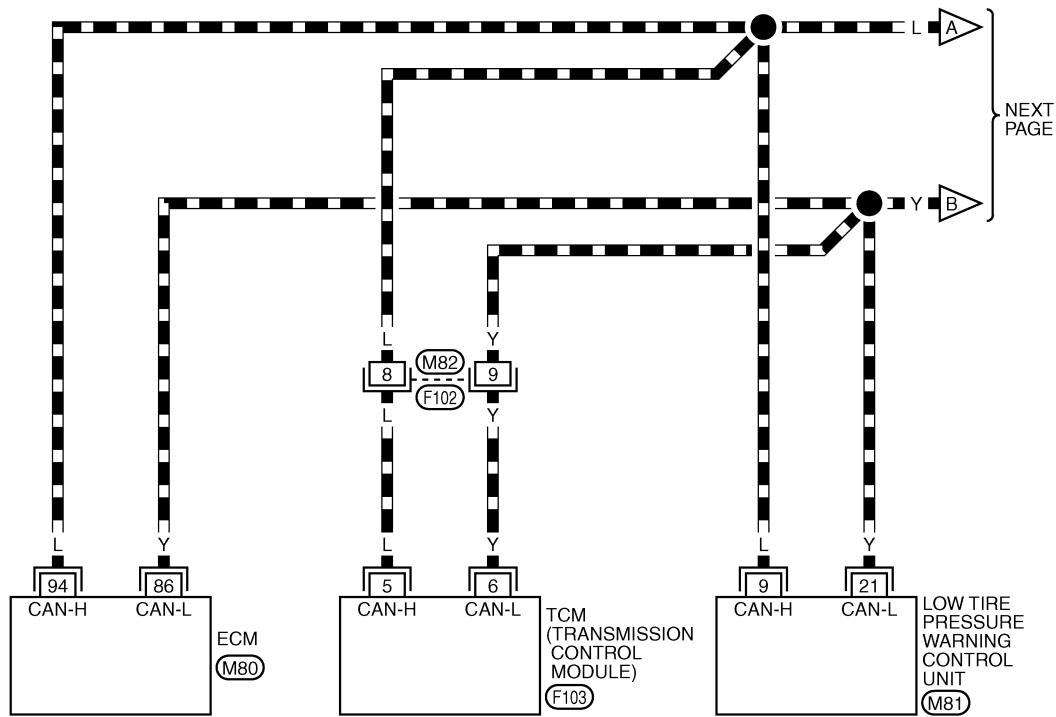
[CAN]

Wiring Diagram - CAN -

AKS00AFO

LAN-CAN-19

▬ : DATA LINE

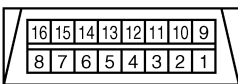
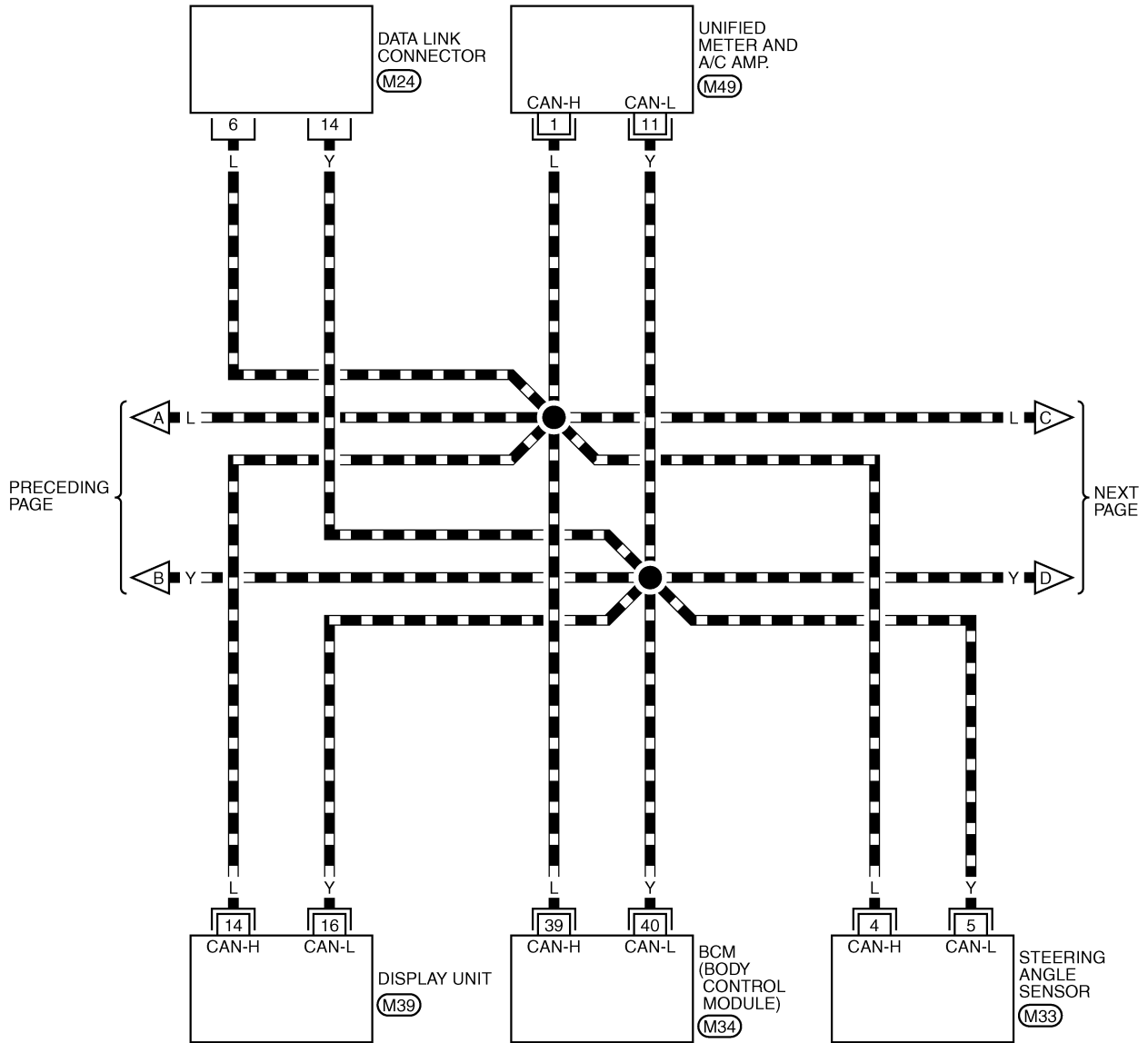


REFER TO THE FOLLOWING.
 (M80), (F103) -ELECTRICAL
 UNITS

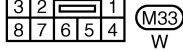
TKWB0030E

LAN-CAN-20

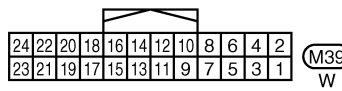
▬ : DATA LINE



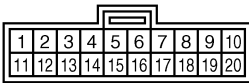
M24
W



M33
W



M39
W



M49
GR



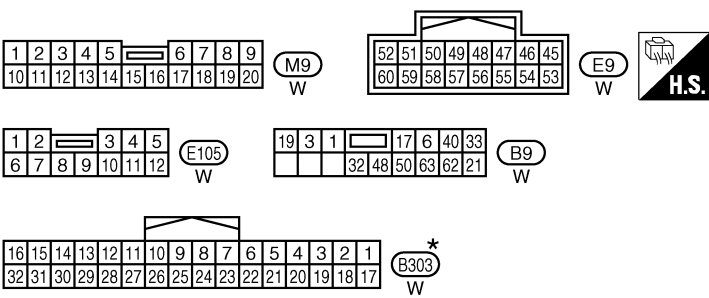
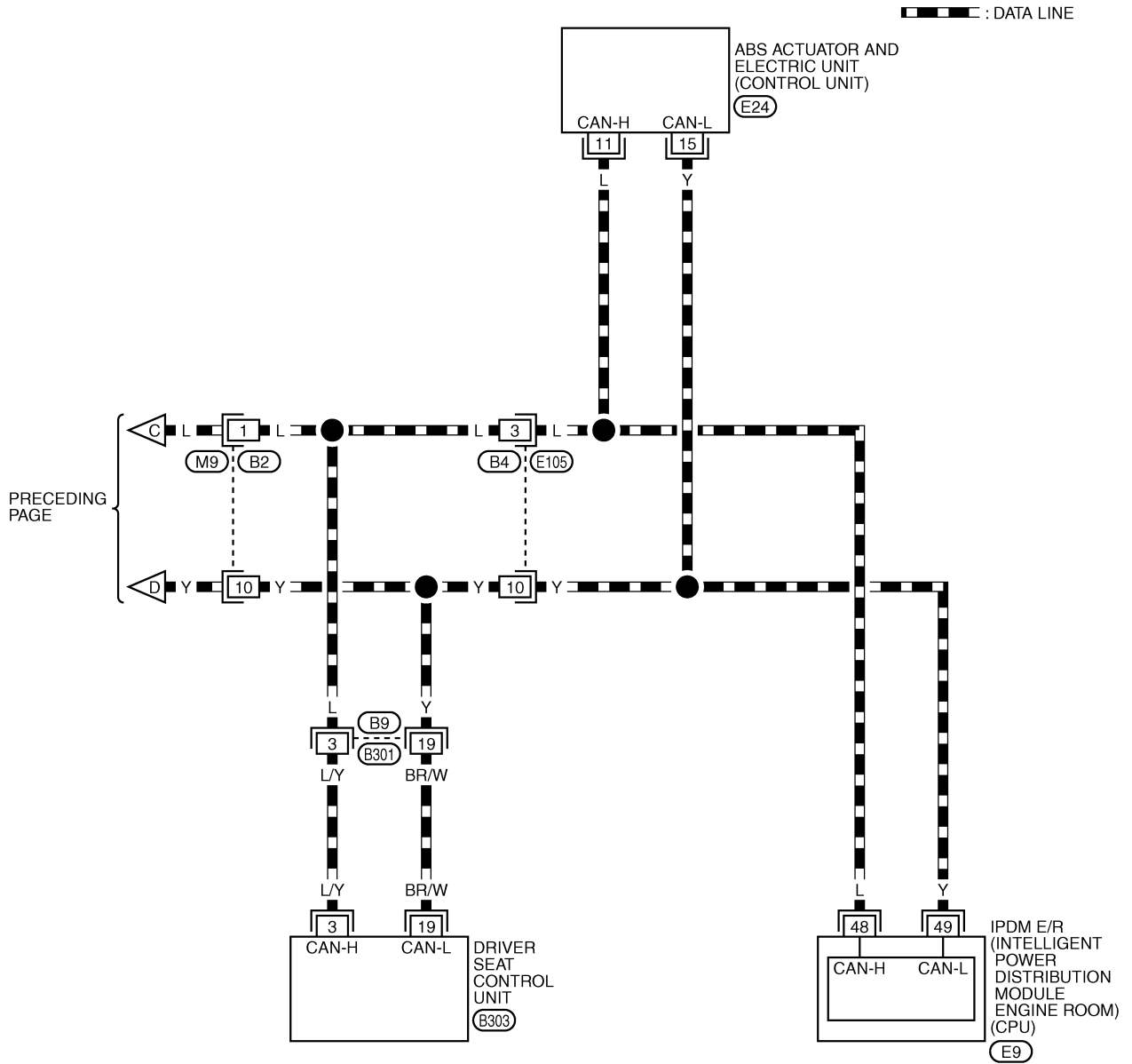
REFER TO THE FOLLOWING.
M34 -ELECTRICAL UNITS

CAN SYSTEM (TYPE 7)

[CAN]

LAN-CAN-21

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

REFER TO THE FOLLOWING.
E24 -ELECTRICAL UNITS

TKWB0032E

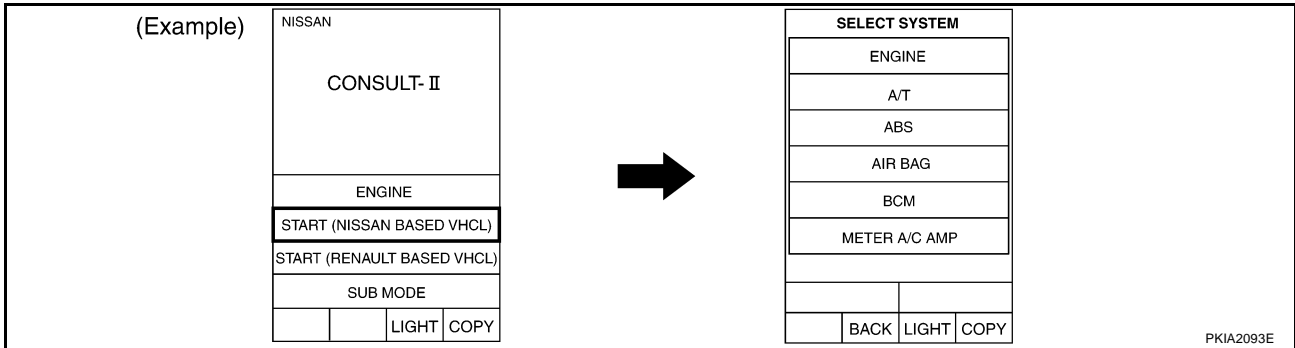
CAN SYSTEM (TYPE 7)

[CAN]

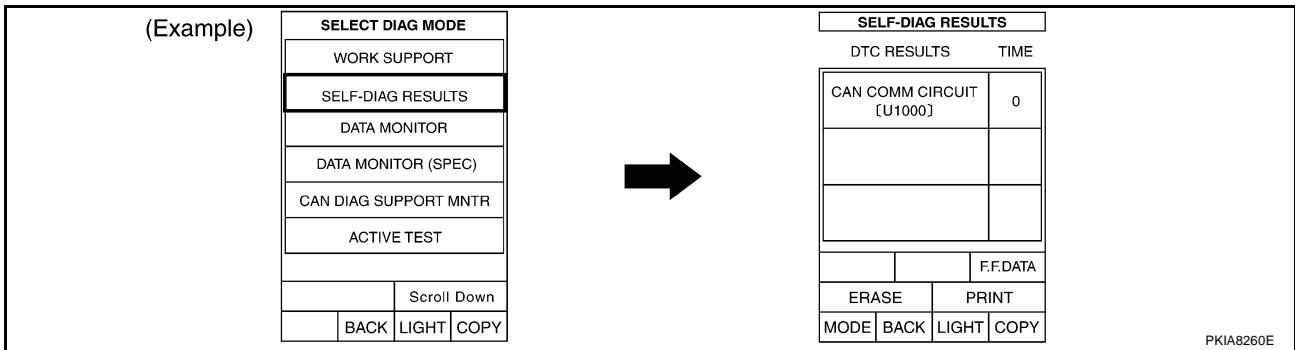
AKS00ASI

Work Flow

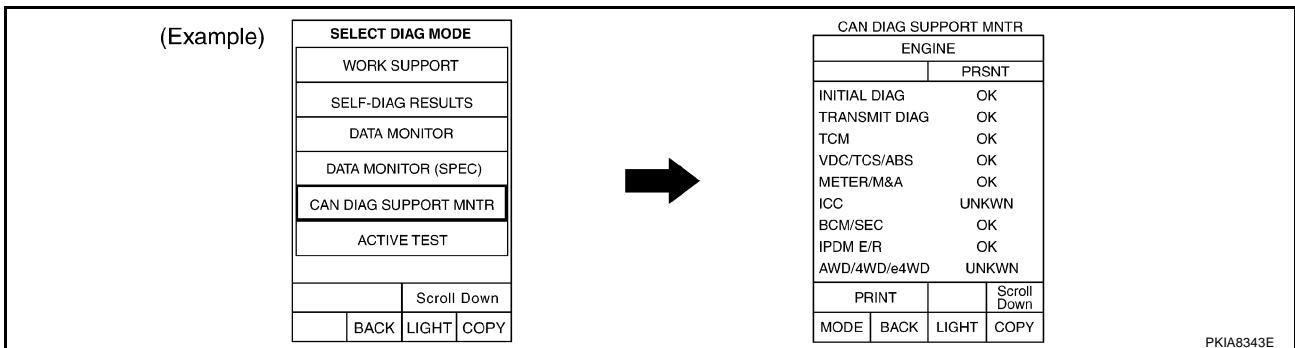
- When there are no indications of "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "AUTO DRIVE POS.", or "IPDM E/R" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



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



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "AUTO DRIVE POS.", "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 [LAN-222, "CHECK SHEET"](#).
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "V" onto the items with "No indication", "NG", or "UNKWKN" in the check sheet table. Refer to [LAN-222, "CHECK SHEET"](#).

NOTE:

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

- Check CAN communication line of the integrated display system. Refer to [AV-101, "CAN Communication Line Check"](#).

CAN SYSTEM (TYPE 7)

[CAN]

7. Attach the CAN DIAG MONITOR check sheet onto the check sheet. Refer to [LAN-222, "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-222, "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-101, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-224, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

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LAN

L

M

CAN SYSTEM (TYPE 7)

[CAN]

CHECK SHEET

NOTE:

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

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

Symptoms :

Attach copy of
SELECT SYSTEM

Attach copy of
SELECT SYSTEM

Attach copy of
display unit
CAN DIAG MONITOR check sheet

CAN SYSTEM (TYPE 7)

[CAN]

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Attach copy of
ENGINE
SELF-DIAG RESULTS

Attach copy of
TRANSMISSION
SELF-DIAG RESULTS

Attach copy of
AIR PRESSURE
MONITOR
SELF-DIAG RESULTS

Attach copy of
BCM
SELF-DIAG RESULTS

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

Attach copy of
AUTO DRIVE POS.
SELF-DIAG RESULTS

Attach copy of
ABS
SELF-DIAG RESULTS

Attach copy of
IPDM E/R
SELF-DIAG RESULTS

Attach copy of
ENGINE
CAN DIAG SUPPORT
MNTR

Attach copy of
TRANSMISSION
CAN DIAG SUPPORT
MNTR

Attach copy of
AIR PRESSURE
MONITOR
CAN DIAG SUPPORT
MNTR

Attach copy of
BCM
CAN DIAG SUPPORT
MNTR

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

Attach copy of
AUTO DRIVE POS.
CAN DIAG SUPPORT
MNTR

Attach copy of
ABS
CAN DIAG SUPPORT
MNTR

Attach copy of
IPDM E/R
CAN DIAG SUPPORT
MNTR

PKIA8440E

CAN SYSTEM (TYPE 7)

[CAN]

CHECK SHEET RESULTS (EXAMPLE)

NOTE:

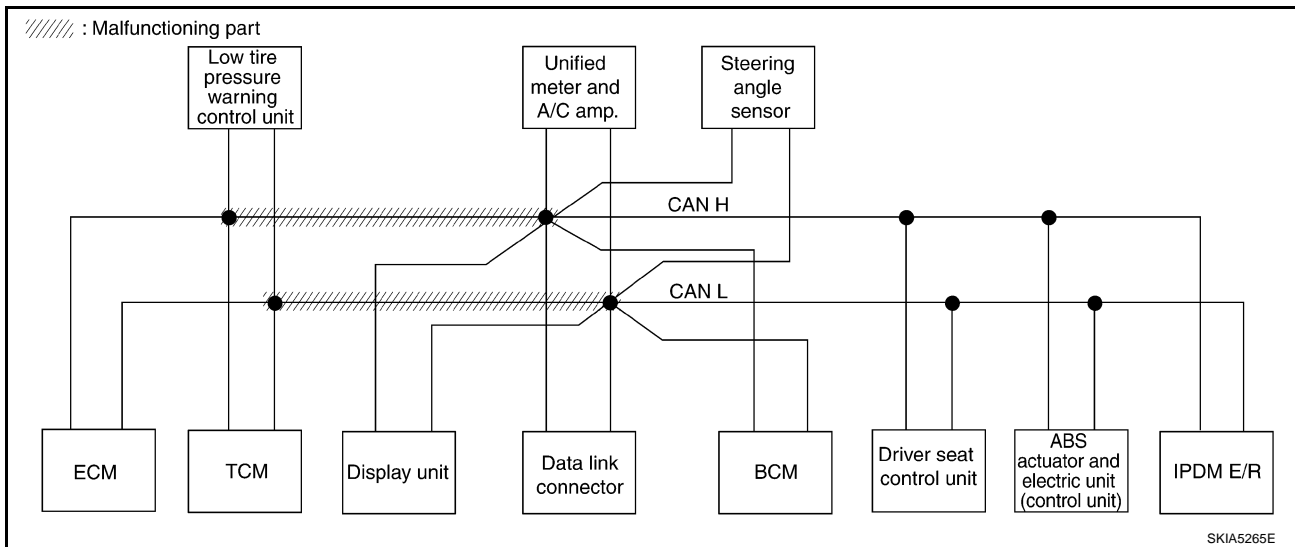
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

Case 1

Check harness between TCM and data link connector. Refer to [LAN-239, "Circuit Check Between TCM and Data Link Connector"](#).

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

PKIA8441E



SKIA5265E

CAN SYSTEM (TYPE 7)

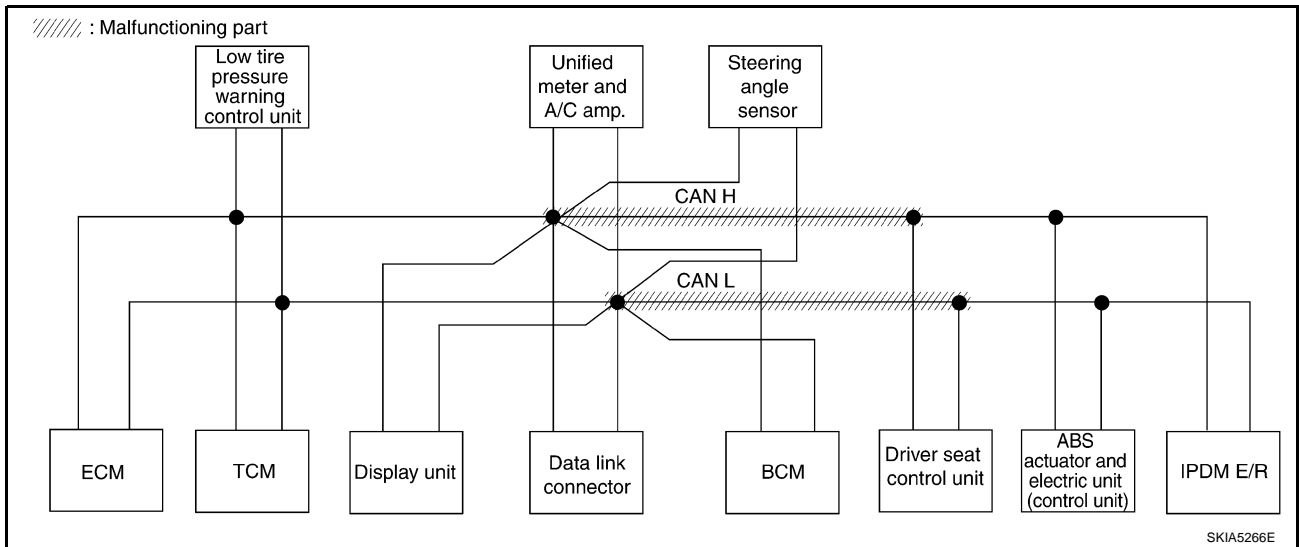
[CAN]

Case 2

Check harness between data link connector and driver seat control unit. Refer to [LAN-239, "Circuit Check Between Data Link Connector and Driver Seat Control Unit"](#) .

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

PKIA8442E



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CAN SYSTEM (TYPE 7)

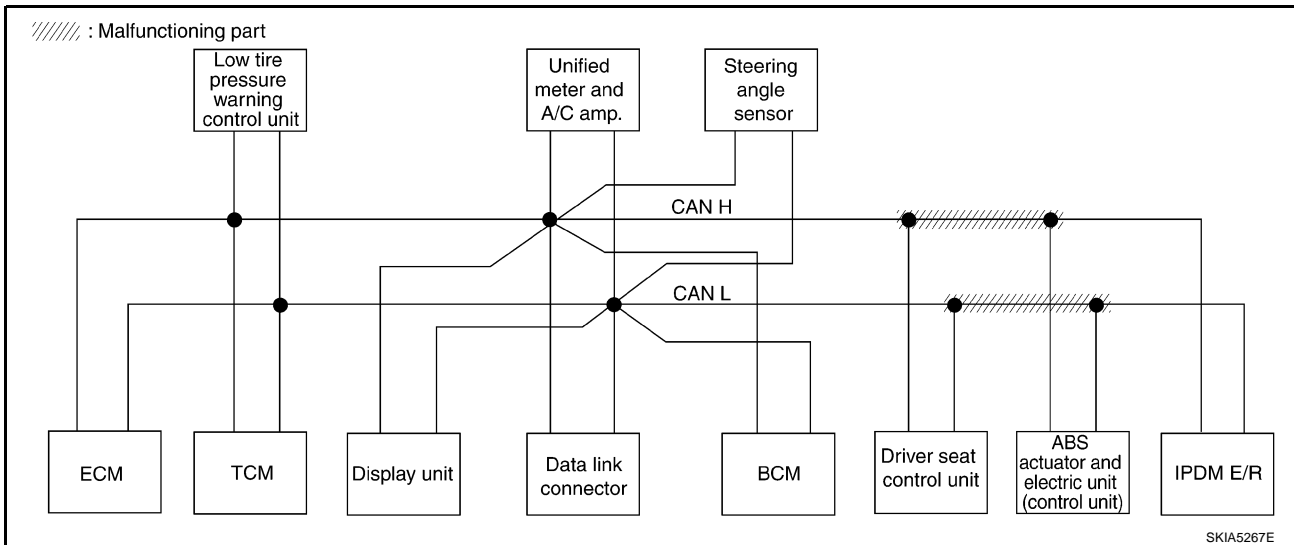
[CAN]

Case 3

Check harness between driver seat control unit and ABS actuator and electric unit (control unit). Refer to [LAN-240, "Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit \(Control Unit\)"](#).

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

PKIA8443E



SKIA5267E

CAN SYSTEM (TYPE 7)

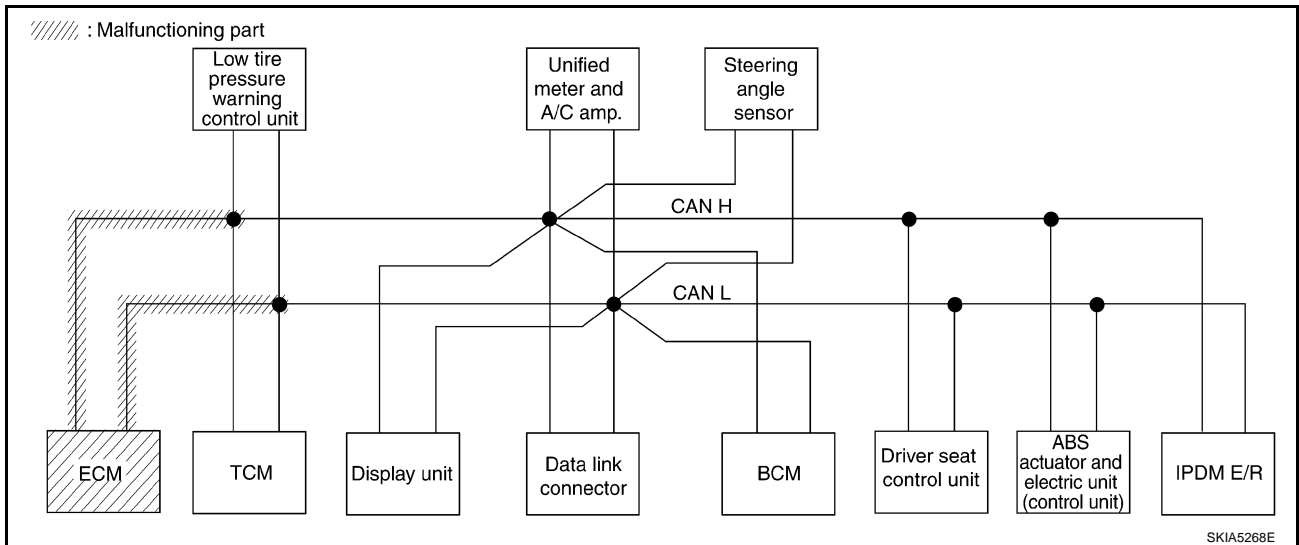
[CAN]

Case 4

Check ECM circuit. Refer to [LAN-241, "ECM Circuit Check"](#).

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

PKIA8444E



CAN SYSTEM (TYPE 7)

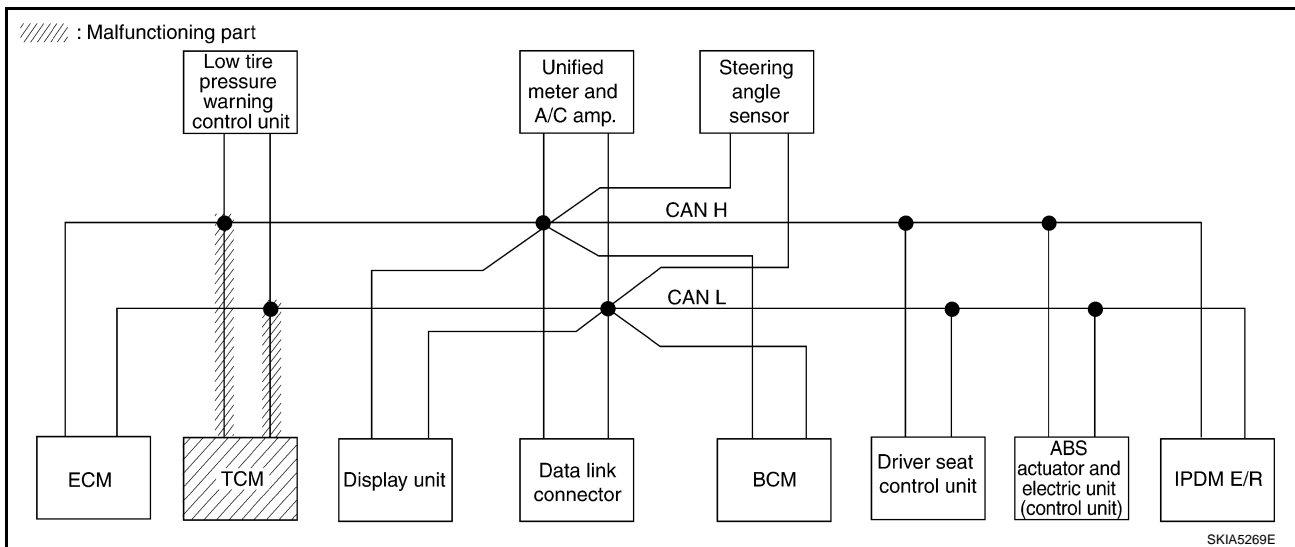
[CAN]

Case 5

Check TCM circuit. Refer to [LAN-242, "TCM Circuit Check"](#) .

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

PKIA8445E



CAN SYSTEM (TYPE 7)

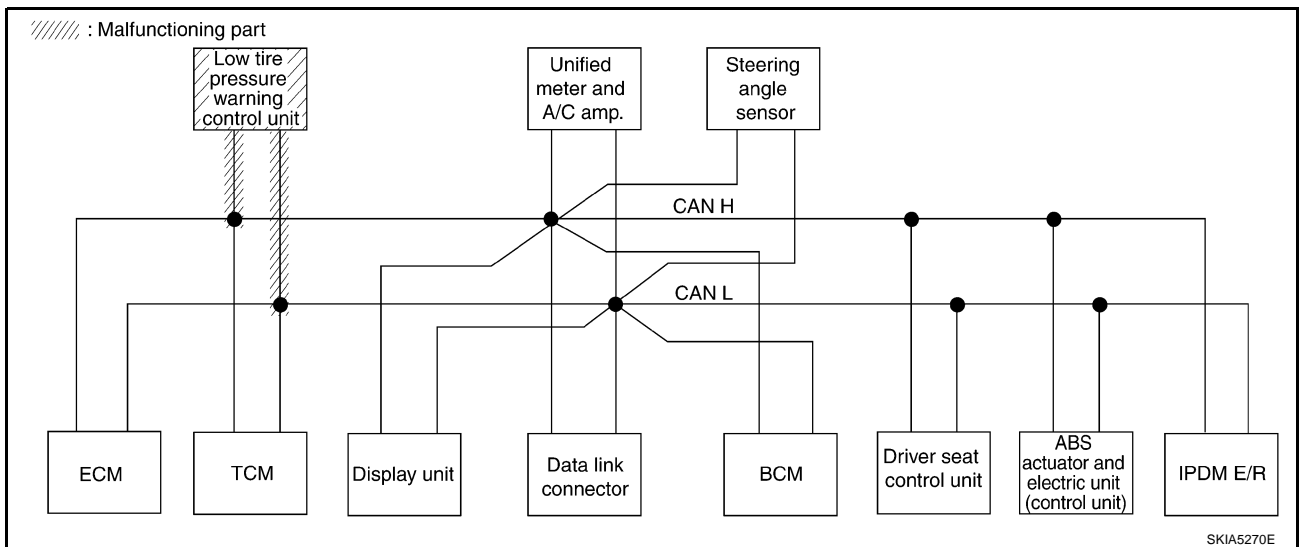
[CAN]

Case 6

Check low tire pressure warning control unit circuit. Refer to [LAN-242, "Low Tire Pressure Warning Control Unit Circuit Check"](#).

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

PKIA8446E



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LAN

CAN SYSTEM (TYPE 7)

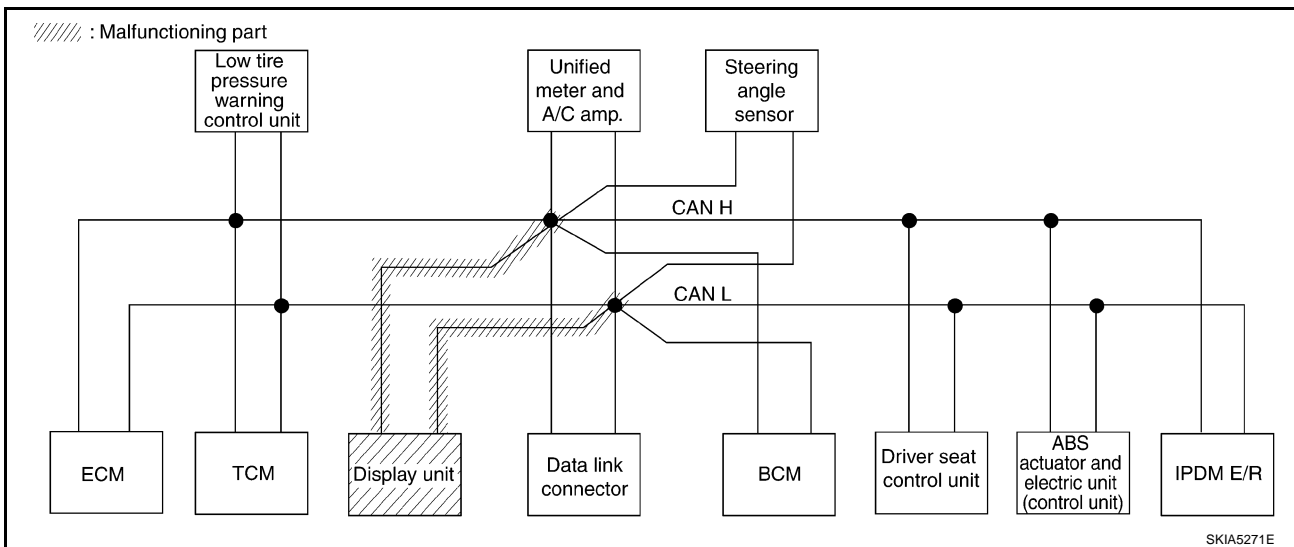
[CAN]

Case 7

Check display unit circuit. Refer to [LAN-243, "Display Unit Circuit Check"](#).

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

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CAN SYSTEM (TYPE 7)

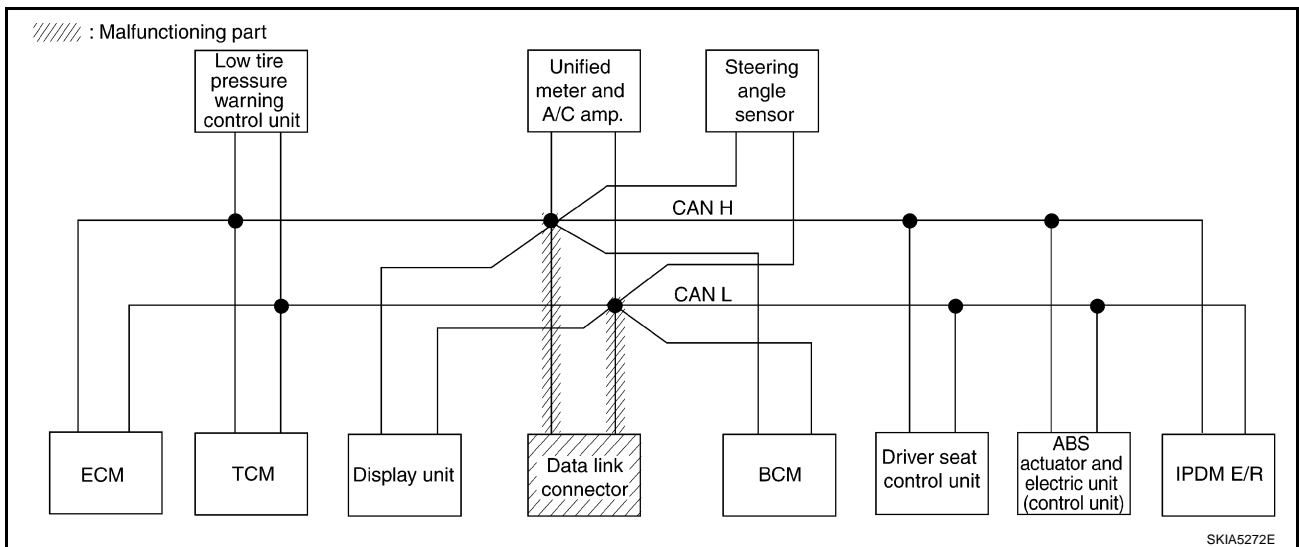
[CAN]

Case 8

Check data link connector circuit. Refer to [LAN-243, "Data Link Connector Circuit Check"](#) .

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

PKIA8448E



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CAN SYSTEM (TYPE 7)

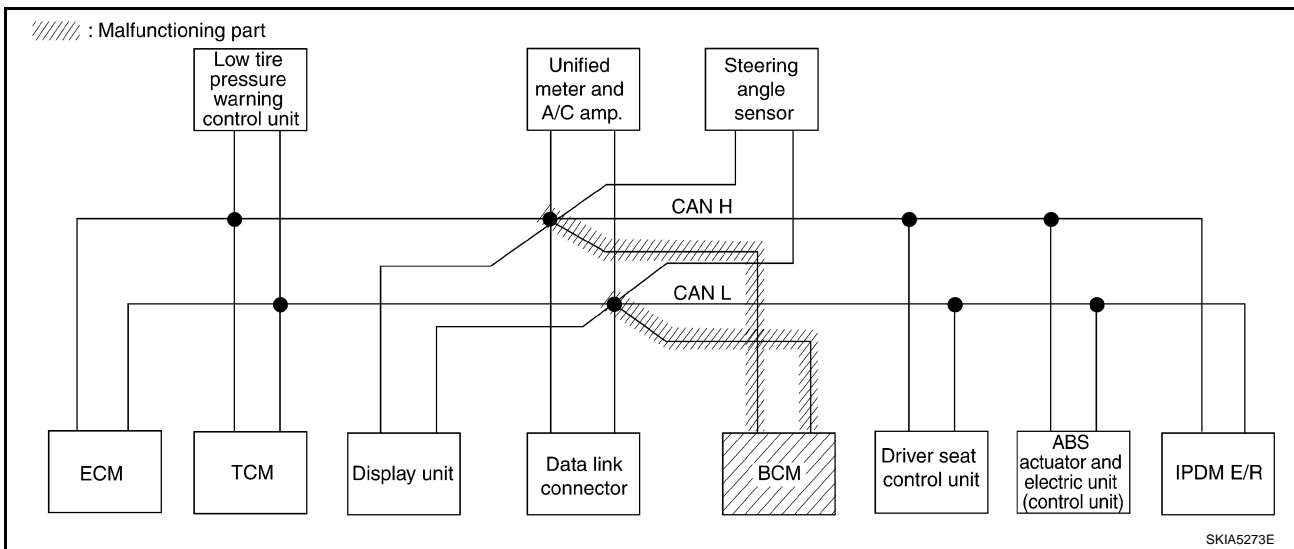
[CAN]

Case 9

Case 17: Check BCM circuit. Refer to [LAN-244, "BCM Circuit Check"](#) .

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

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SKIA5273E

CAN SYSTEM (TYPE 7)

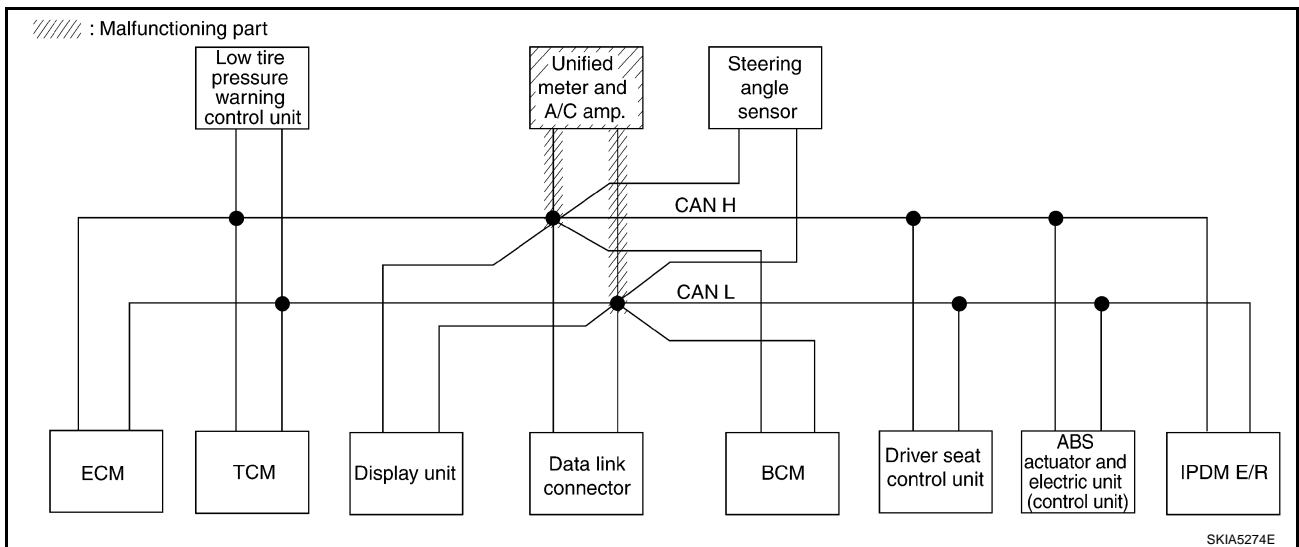
[CAN]

Case 10

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

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

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CAN SYSTEM (TYPE 7)

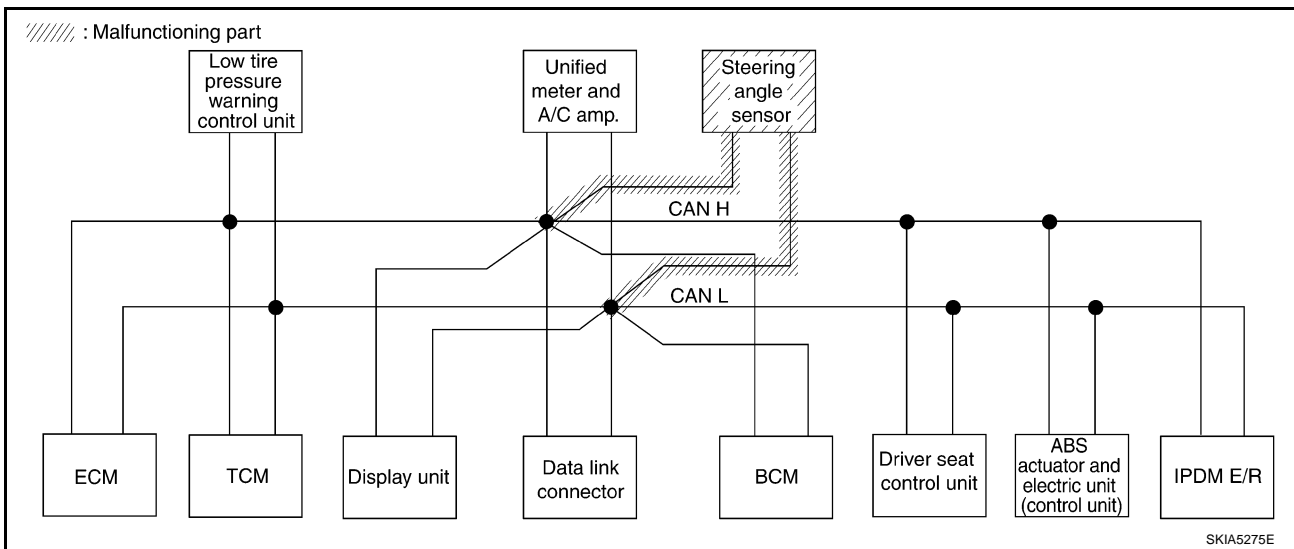
[CAN]

Case 11

Check steering angle sensor circuit. Refer to [LAN-245, "Steering Angle Sensor Circuit Check"](#) .

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

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CAN SYSTEM (TYPE 7)

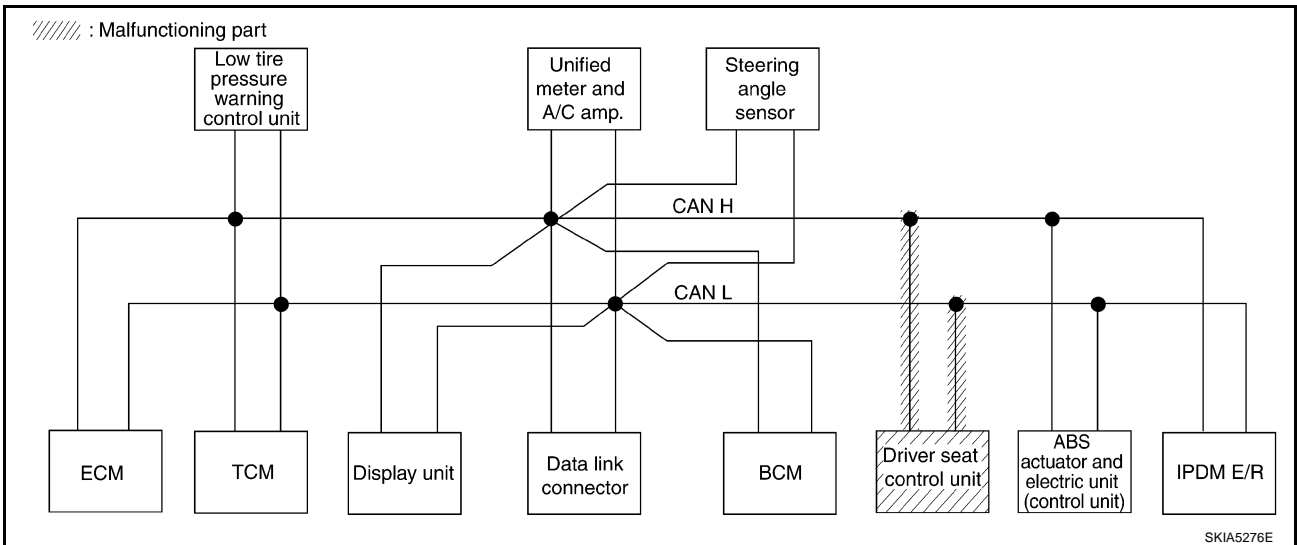
[CAN]

Case 12

Check driver seat control unit circuit. Refer to [LAN-245, "Driver Seat Control Unit Circuit Check"](#) .

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

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CAN SYSTEM (TYPE 7)

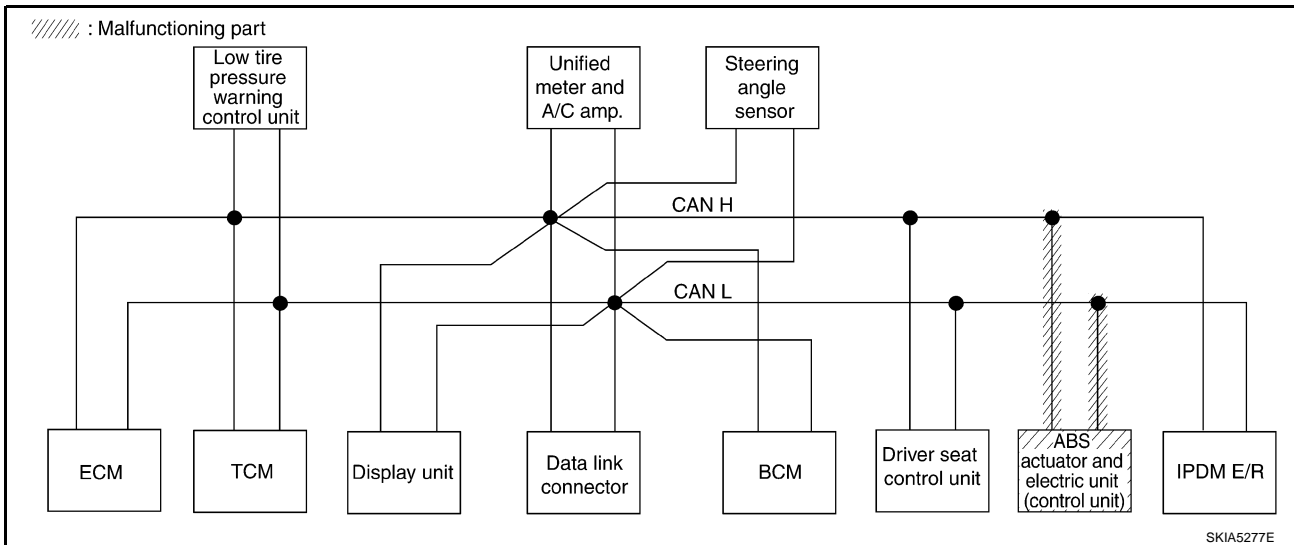
[CAN]

Case 13

Case 21: Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-246, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

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

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CAN SYSTEM (TYPE 7)

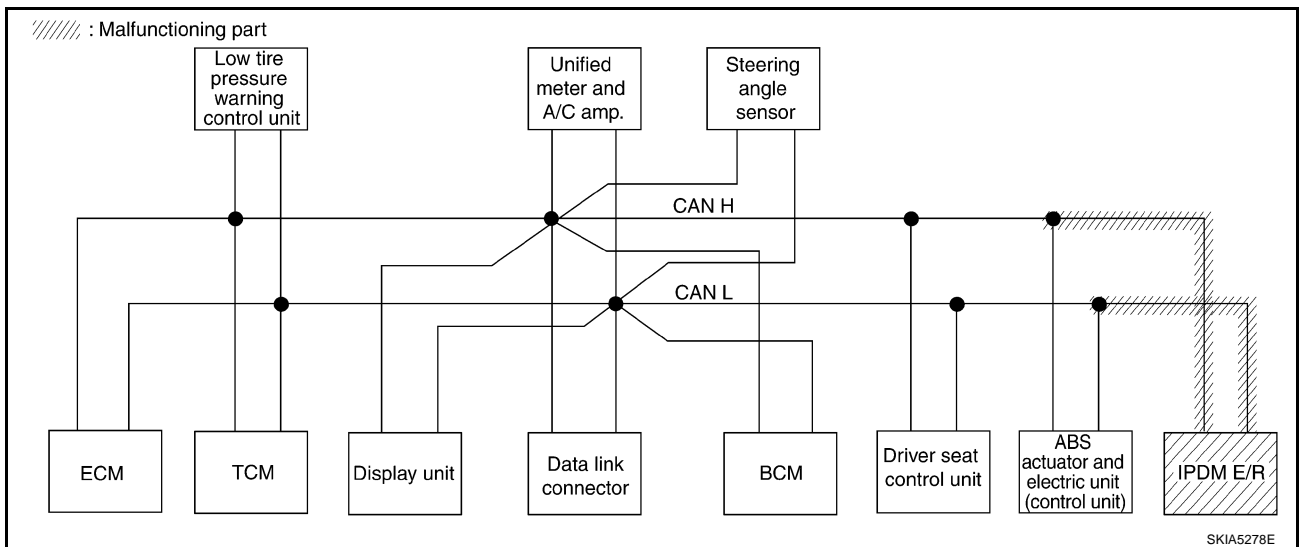
[CAN]

Case 14

Check IPDM E/R circuit. Refer to [LAN-246. "IPDM E/R Circuit Check"](#) .

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

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CAN SYSTEM (TYPE 7)

[CAN]

Case 15

Check CAN communication circuit. Refer to [LAN-247, "CAN Communication Circuit Check"](#) .

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

PKIA8455E

Case 16

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-251, "IPDM E/R Ignition Relay Circuit Check"](#) .

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

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Case 17

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-251, "IPDM E/R Ignition Relay Circuit Check"](#).

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

PKIA8457E

Circuit Check Between TCM and Data Link Connector

AKS00AFQ

1. CHECK HARNESS FOR OPEN CIRCUIT

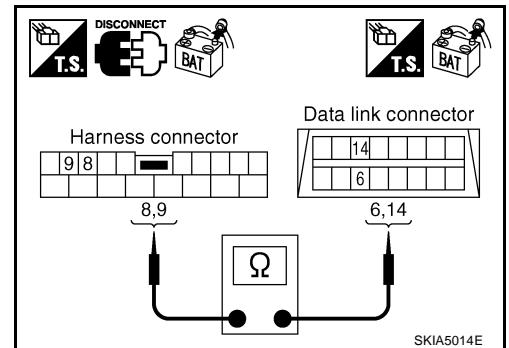
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

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

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

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-220, "Work Flow"](#).
- NG >> Repair harness.



Circuit Check Between Data Link Connector and Driver Seat Control Unit

AKS00AFR

1. CHECK CONNECTOR

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

OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

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

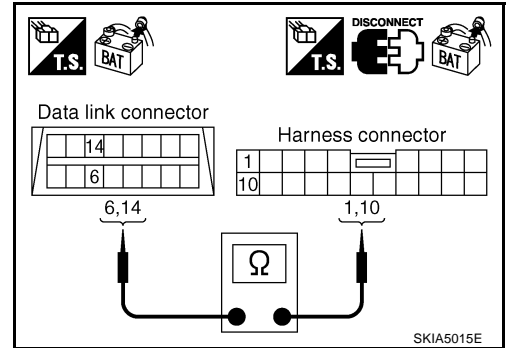
6 (L) - 1 (L) : Continuity should exist.

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

OK or NG

OK >> GO TO 3.

NG >> Repair harness.



3. CHECK HARNESS FOR OPEN CIRCUIT

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

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

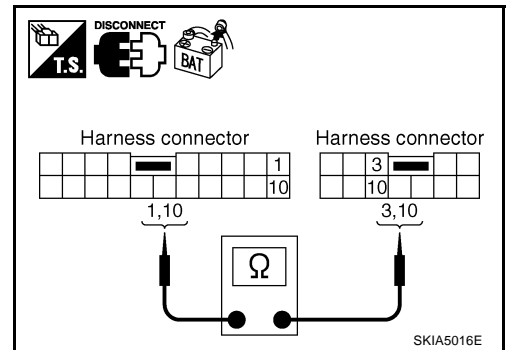
10 (Y) - 10 (Y) : Continuity should exist.

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to

[LAN-220, "Work Flow"](#) .

NG >> Repair harness.



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

AKS00AFS

1. CHECK CONNECTOR

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

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

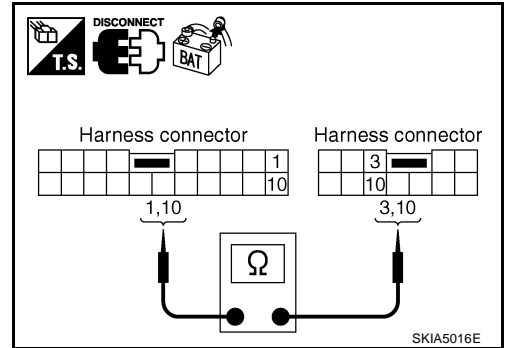
2. CHECK HARNESS FOR OPEN CIRCUIT

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

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

OK or NG

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



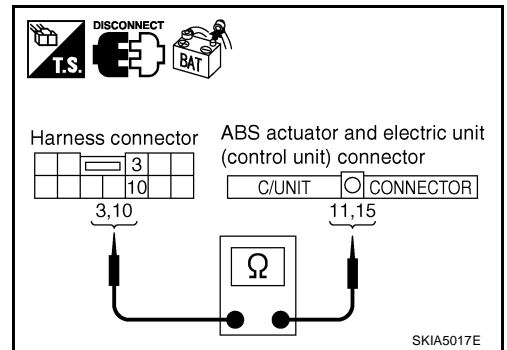
3. CHECK HARNESS FOR OPEN CIRCUIT

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

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

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-220, "Work Flow"](#).
 NG >> Repair harness.



ECM Circuit Check

1. CHECK CONNECTOR

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

OK or NG

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

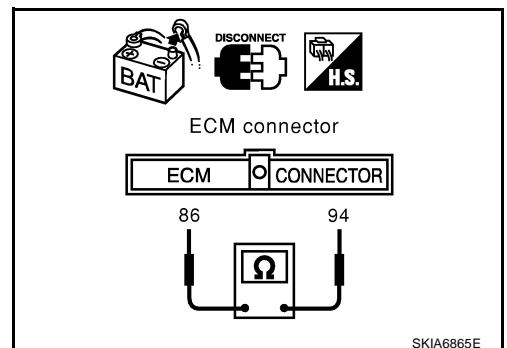
2. CHECK HARNESS FOR OPEN CIRCUIT

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

94 (L) - 86 (Y) : Approx. 108 - 132Ω

OK or NG

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



TCM Circuit Check**1. CHECK CONNECTOR**

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

OK or NG

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

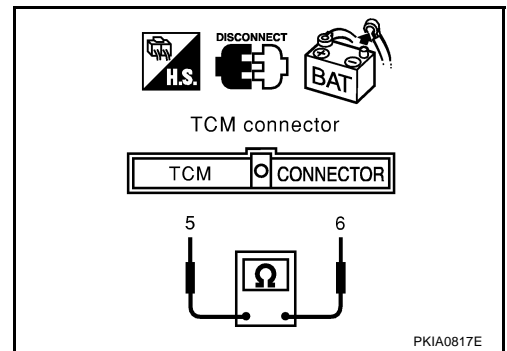
2. CHECK HARNESS FOR OPEN CIRCUIT

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

5 (L) - 6 (Y) : Approx. 54 - 66Ω

OK or NG

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

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

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

OK or NG

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

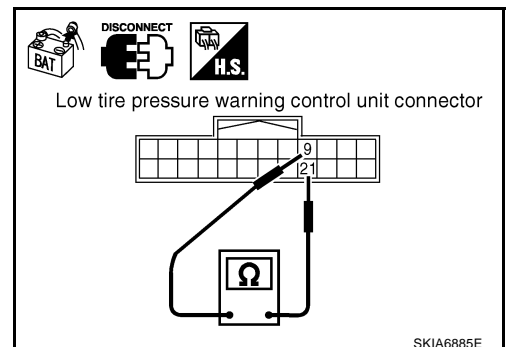
2. CHECK HARNESS FOR OPEN CIRCUIT

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

9 (L) - 21 (Y) : Approx. 54 - 66Ω

OK or NG

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



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

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

OK or NG

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

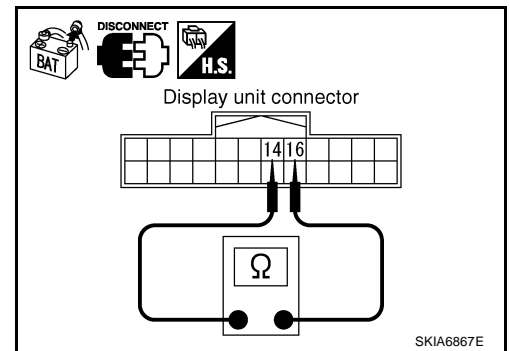
2. CHECK HARNESS FOR OPEN CIRCUIT

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

14 (L) - 16 (Y) : Approx. 54 - 66Ω

OK or NG

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

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

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

OK or NG

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

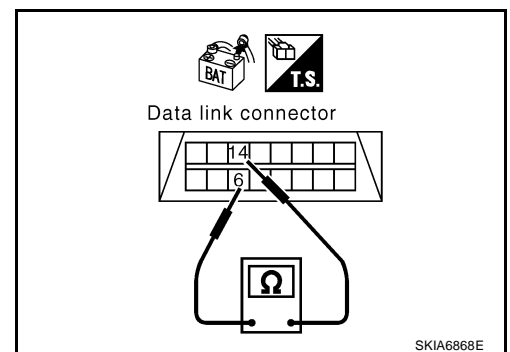
2. CHECK HARNESS FOR OPEN CIRCUIT

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

6 (L) - 14 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Diagnose again. Refer to [LAN-220, "Work Flow"](#) .
 NG >> Repair harness between data link connector and BCM.



BCM Circuit Check**1. CHECK CONNECTOR**

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

OK or NG

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

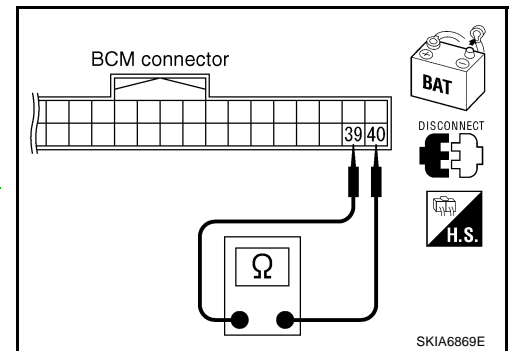
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M34 terminals 39 (L) and 40 (Y).

39 (L) - 40 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace BCM. Refer to [BCS-14, "Removal and Installation of BCM"](#) .
 NG >> Repair harness between BCM and data link connector.

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

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

OK or NG

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

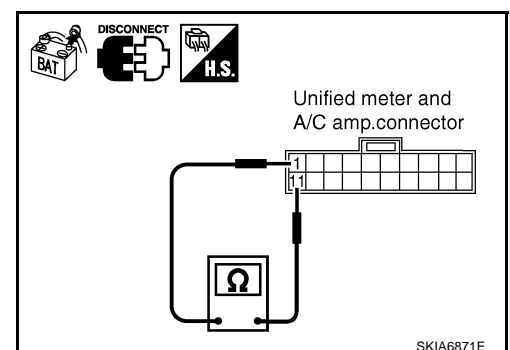
2. CHECK HARNESS FOR OPEN CIRCUIT

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

1 (L) - 11 (Y) : Approx. 54 - 66Ω

OK or NG

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



Steering Angle Sensor Circuit Check**1. CHECK CONNECTOR**

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

OK or NG

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

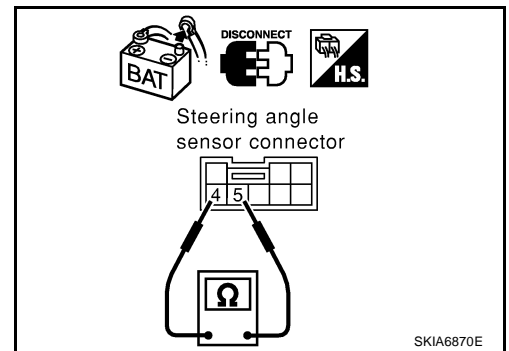
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M33 terminals 4 (L) and 5 (Y).

4 (L) - 5 (Y) : Approx. 54 - 66Ω

OK or NG

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

**Driver Seat Control Unit Circuit Check****1. CHECK CONNECTOR**

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

OK or NG

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

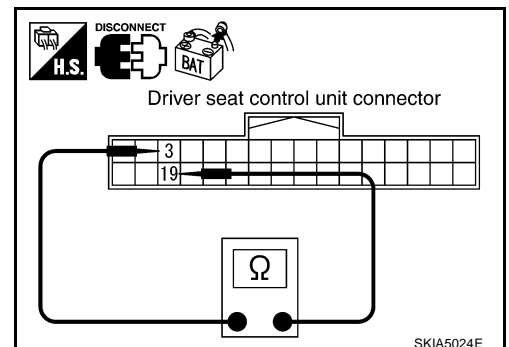
2. CHECK HARNESS FOR OPEN CIRCUIT

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

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

OK or NG

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



ABS Actuator and Electric Unit (Control Unit) Circuit Check

1. CHECK CONNECTOR

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

OK or NG

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

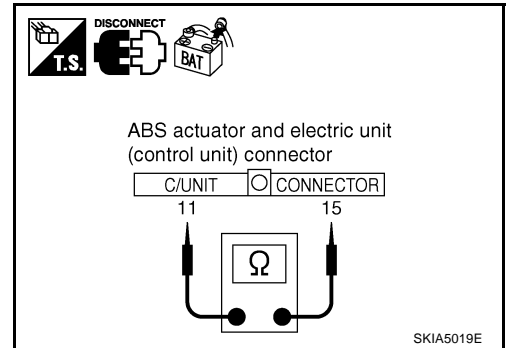
2. CHECK HARNESS FOR OPEN CIRCUIT

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

11 (L) - 15 (Y) : Approx. 54 - 66Ω

OK or NG

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



IPDM E/R Circuit Check

1. CHECK CONNECTOR

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

OK or NG

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

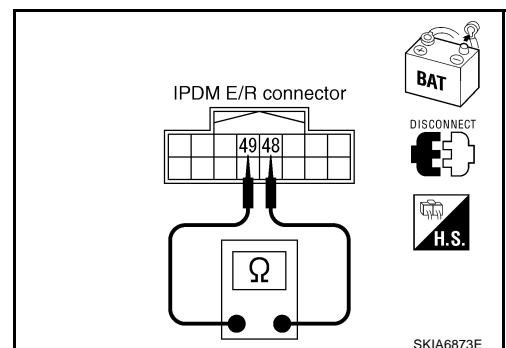
2. CHECK HARNESS FOR OPEN CIRCUIT

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

48 (L) - 49 (Y) : Approx. 108 - 132Ω

OK or NG

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



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

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

OK or NG

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

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2. CHECK HARNESS FOR SHORT CIRCUIT

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

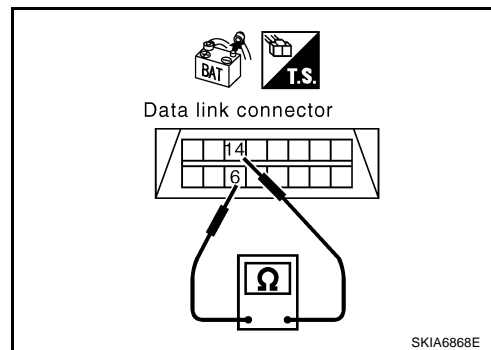
6 (L) - 14 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 3.

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

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



3. CHECK HARNESS FOR SHORT CIRCUIT

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

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

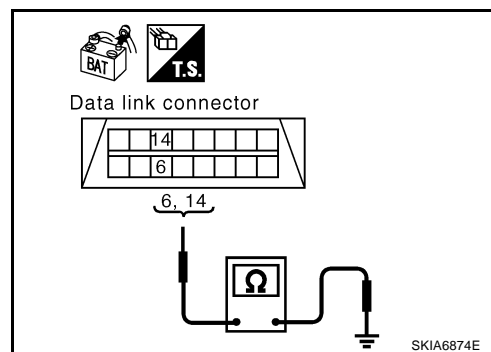
14 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 4.

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

- Harness between data link connector and ECM
- Harness between data link connector and low tire pressure warning control unit
- Harness between data link connector and harness connector M82
- Harness between data link connector and display unit
- Harness between data link connector and BCM
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor
- Harness between data link connector and harness connector M9



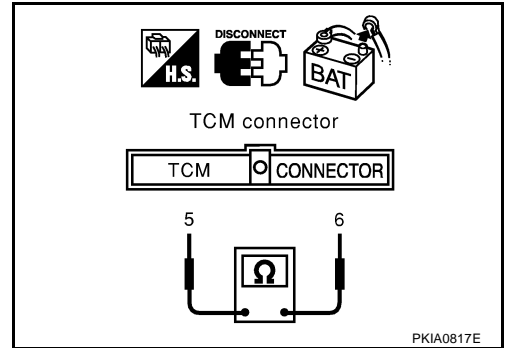
4. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

5 (L) - 6 (Y) : Continuity should not exist.

OK or NG

- OK >> GO TO 5.
 NG >> Repair harness between TCM and harness connector F102.



5. CHECK HARNESS FOR SHORT CIRCUIT

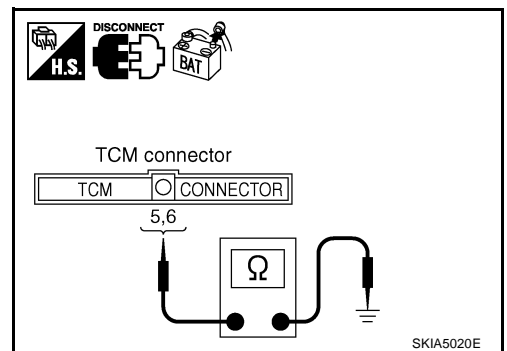
- Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

5 (L) - Ground : Continuity should not exist.

6 (Y) - Ground : Continuity should not exist.

OK or NG

- OK >> GO TO 6.
 NG >> Repair harness between TCM and harness connector F102.



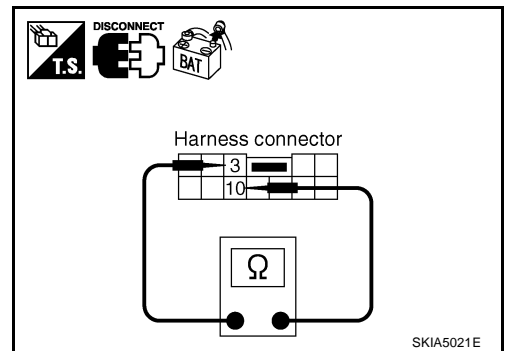
6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B4 and harness connector B9.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

3 (L) - 10 (Y) : Continuity should not exist.

OK or NG

- OK >> GO TO 7.
 NG >> Check the following harnesses. If any harness is damaged, repair the harness.
- Harness between harness connector B4 and harness connector B2
 - Harness between harness connector B4 and harness connector B9



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7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

3 (L) - Ground : Continuity should not exist.

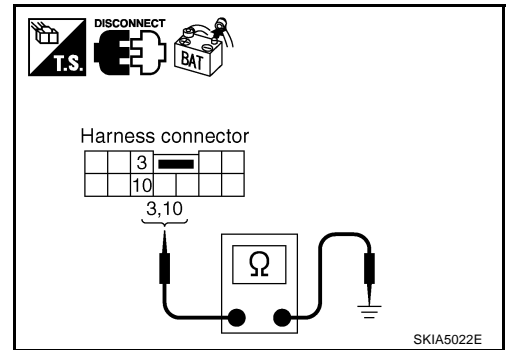
10 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 8.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between harness connector B4 and harness connector B2
- Harness between harness connector B4 and harness connector B9



8. CHECK HARNESS FOR SHORT CIRCUIT

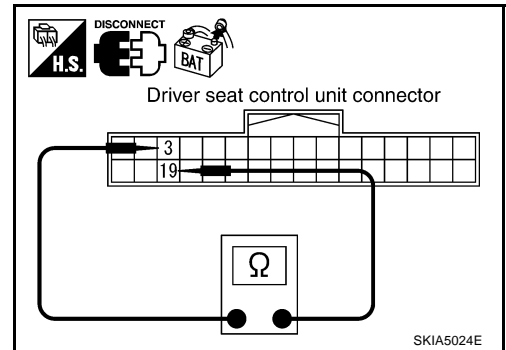
1. Disconnect driver seat control unit connector.
2. Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

3 (L/Y) - 19 (BR/W) : Continuity should not exist.

OK or NG

OK >> GO TO 9.

NG >> Repair harness between driver seat control unit and harness connector B301.



9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y), 19 (BR/W) and ground.

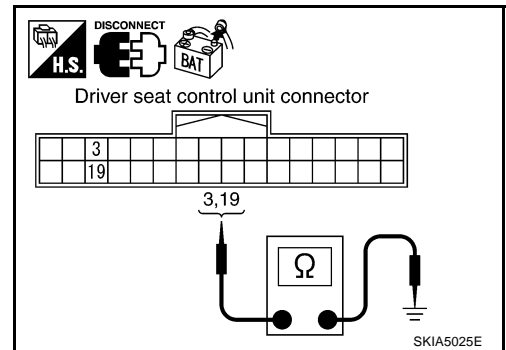
3 (L/Y) - Ground : Continuity should not exist.

19 (BR/W) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 10.

NG >> Repair harness between driver seat control unit and harness connector B301.



10. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

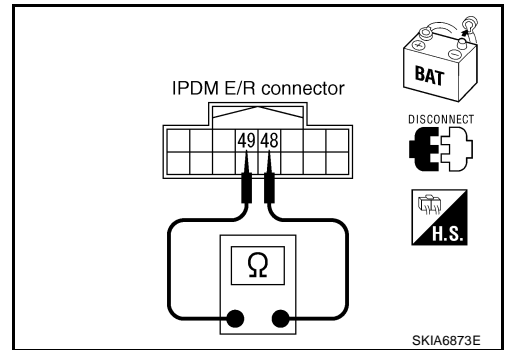
48 (L) - 49 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 11.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and ABS actuator and electric unit (control unit)
- Harness between IPDM E/R and harness connector E105



11. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

48 (L) - Ground : Continuity should not exist.

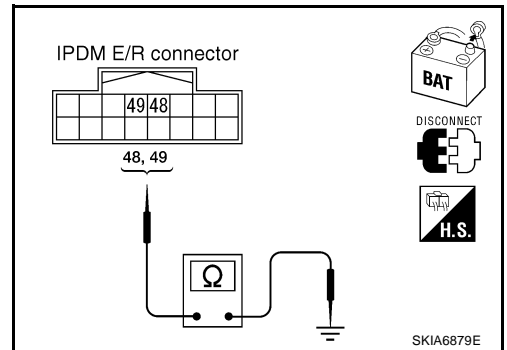
49 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 12.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and ABS actuator and electric unit (control unit)
- Harness between IPDM E/R and harness connector E105



12. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-251, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-220, "Work Flow"](#).

NG >> Replace ECM and/or IPDM E/R.

IPDM E/R Ignition Relay Circuit Check

AKS00AG5

Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-27, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#).

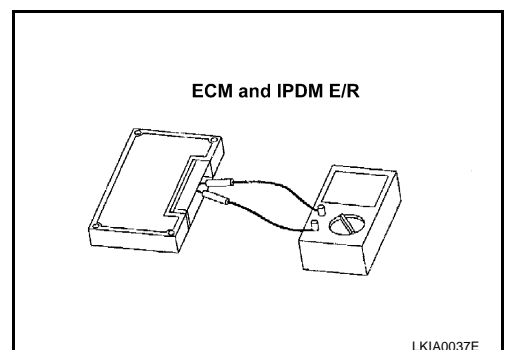
Component Inspection

ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

AKS00AG6

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



CAN SYSTEM (TYPE 8)

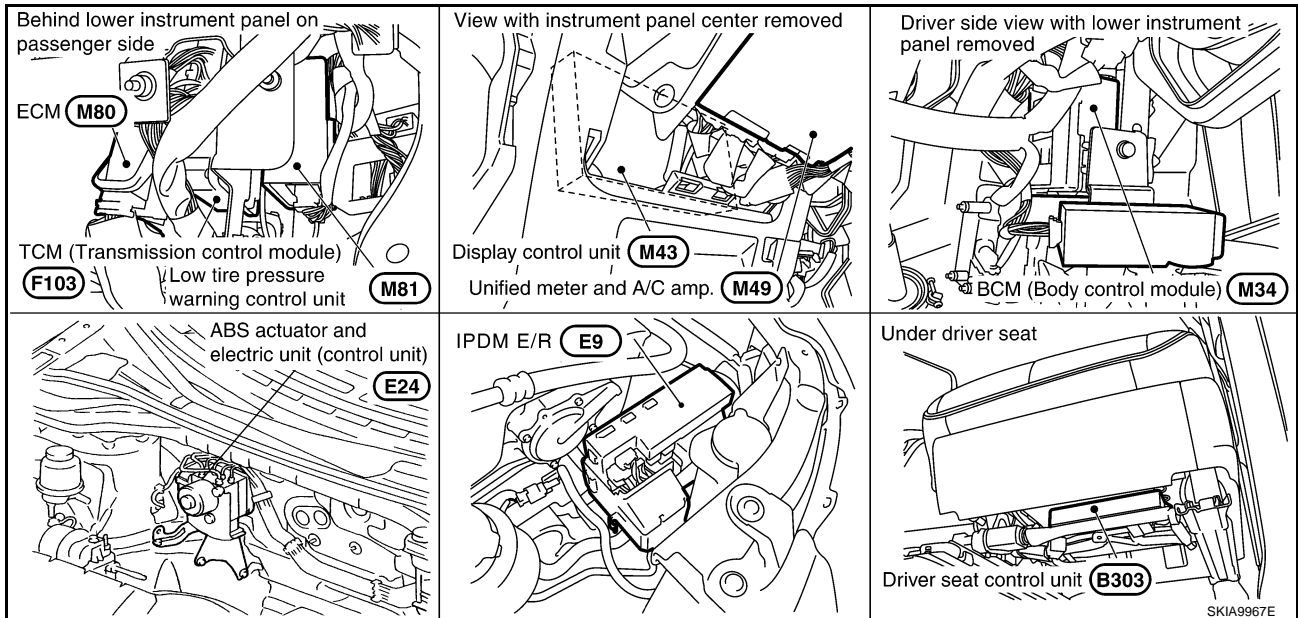
System Description

AKS00AG7

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

AKS00AG8

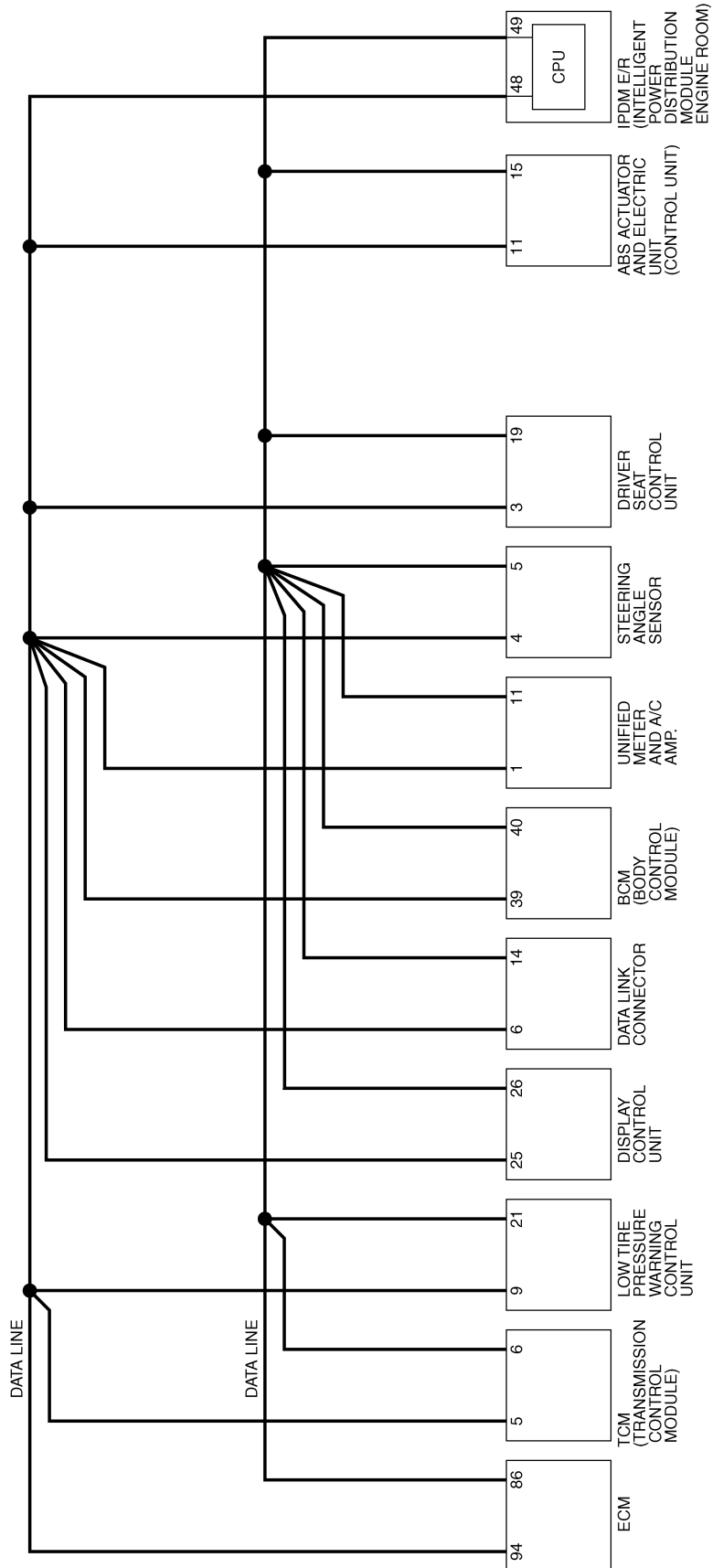


CAN SYSTEM (TYPE 8)

[CAN]

Schematic

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CAN SYSTEM (TYPE 8)

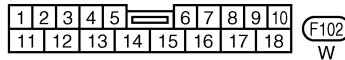
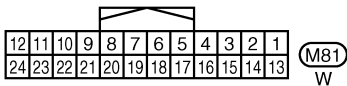
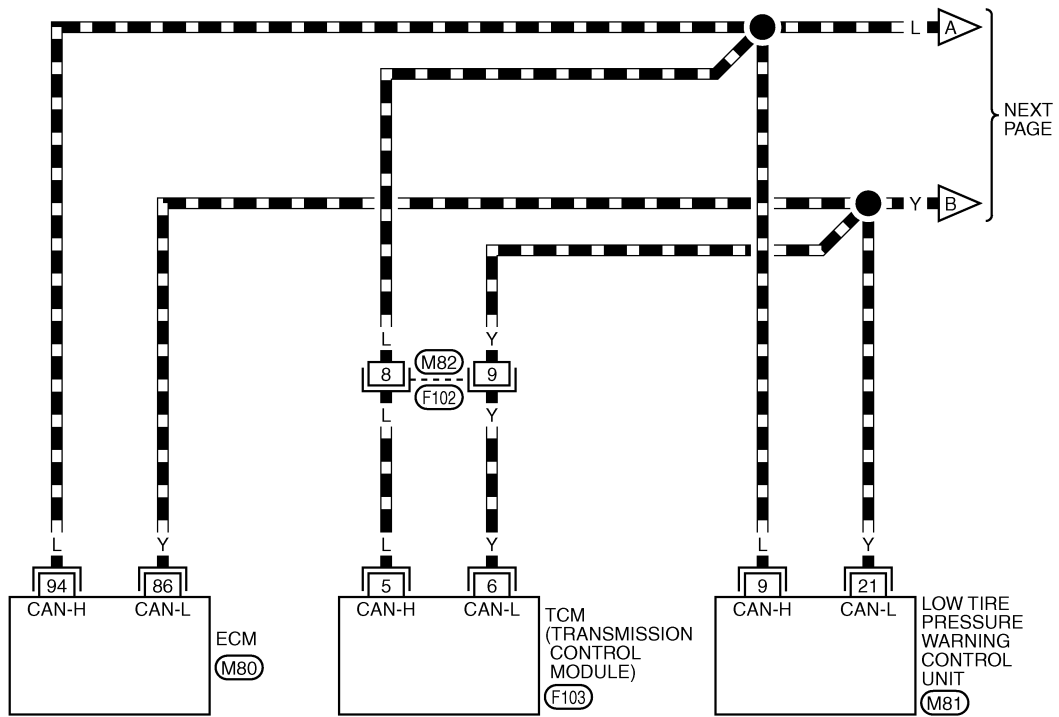
[CAN]

Wiring Diagram - CAN -

AKS00AGA

LAN-CAN-22

▬ : DATA LINE



REFER TO THE FOLLOWING.
 (M80), (F103) -ELECTRICAL
 UNITS

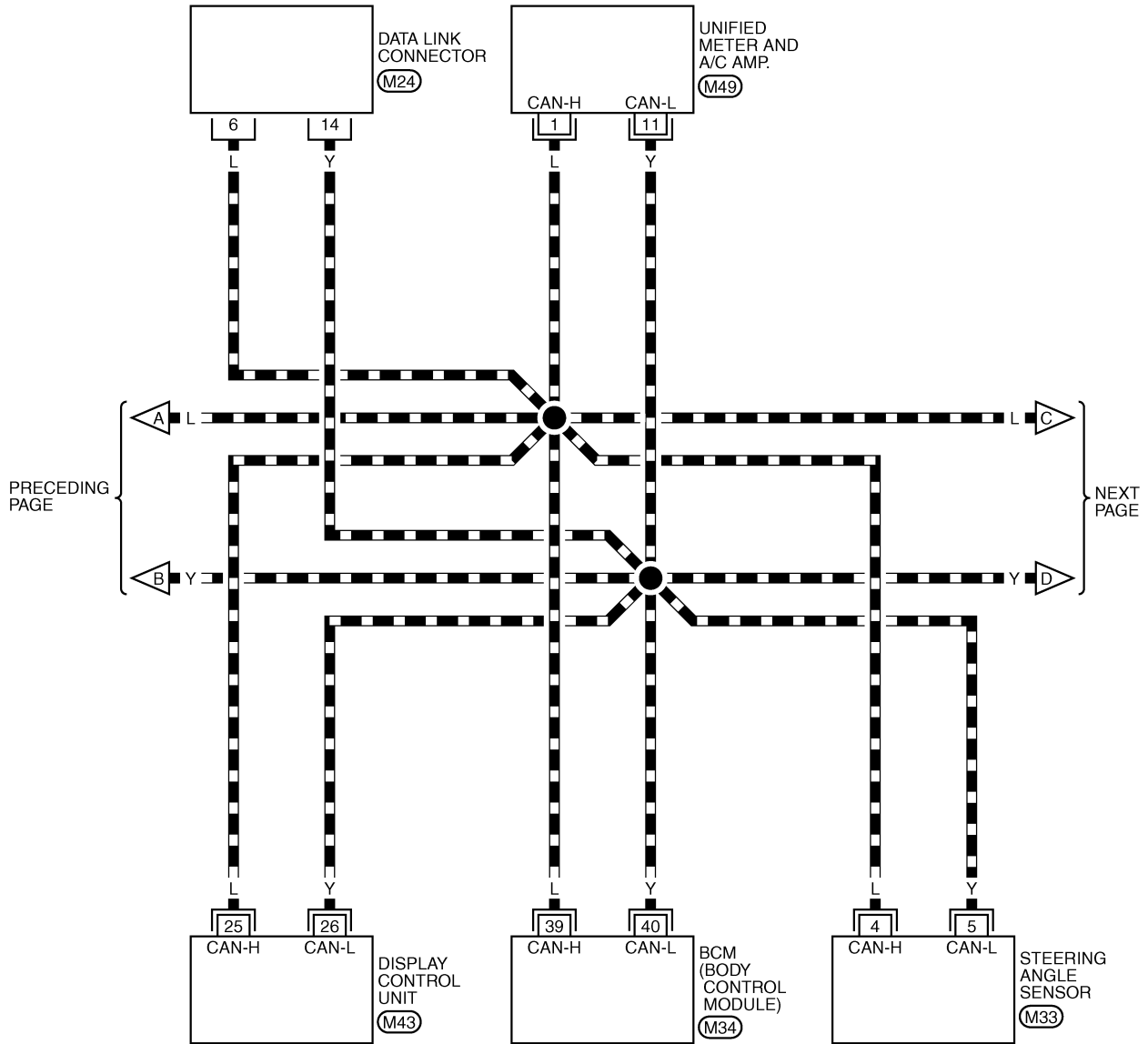
TKWB0034E

CAN SYSTEM (TYPE 8)

[CAN]

LAN-CAN-23

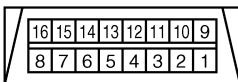
▬ : DATA LINE



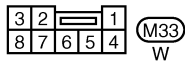
PRECEDING PAGE

NEXT PAGE

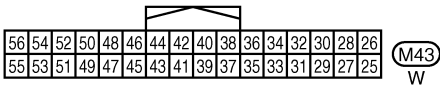
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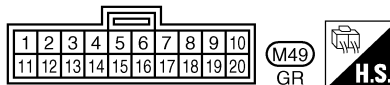
(M24)
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(M33)
W



(M43)
W



(M49)
GR

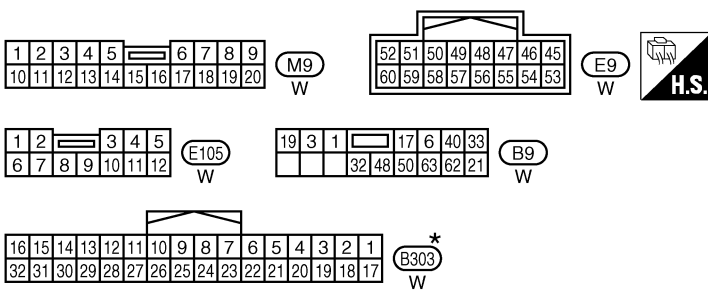
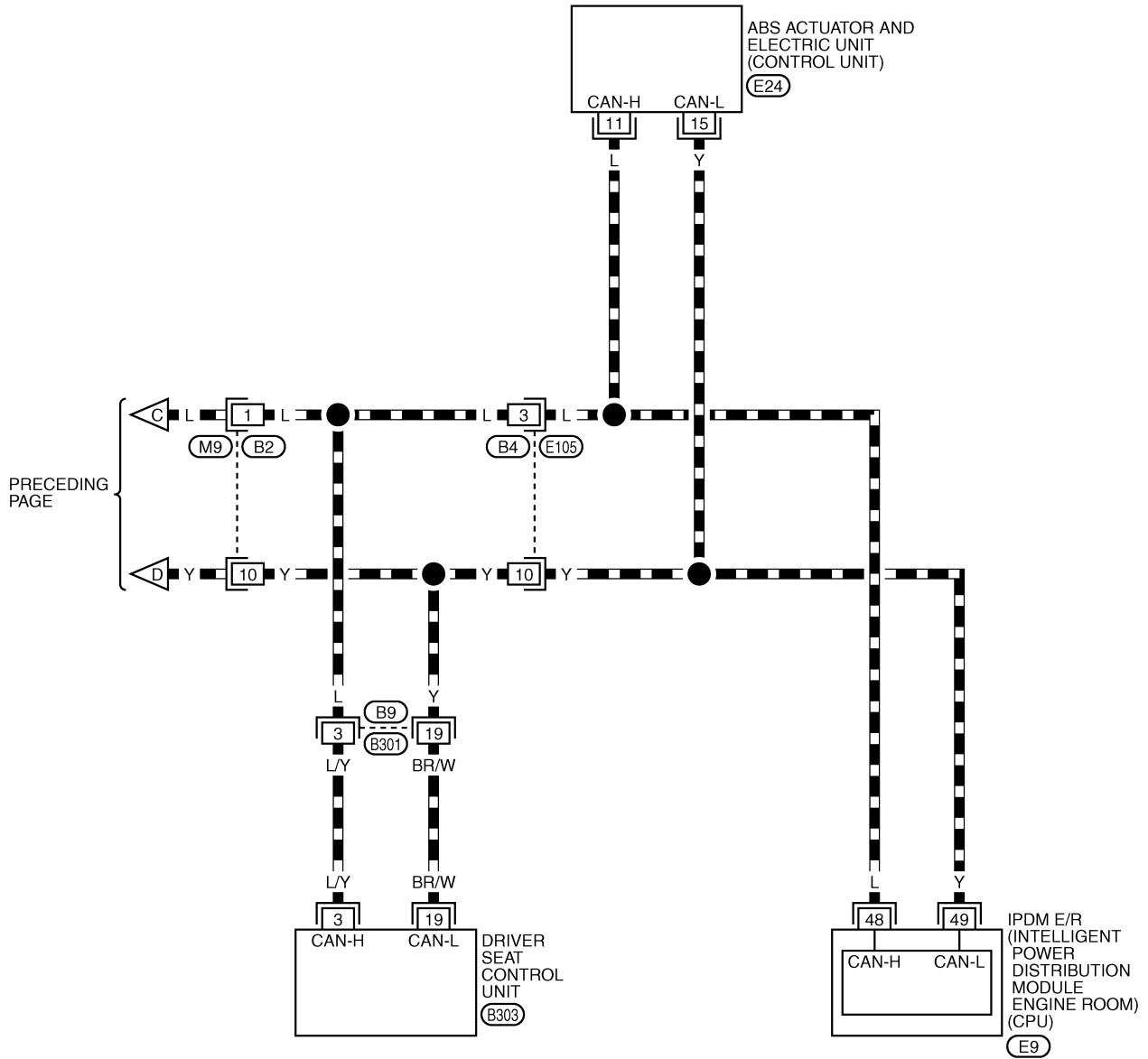


REFER TO THE FOLLOWING.
(M34) -ELECTRICAL UNITS

TKWB0035E

LAN-CAN-24

▬ : DATA LINE



*: THIS CONNECTOR IS NOT SHOWN IN "HARNES LAYOUT", PG SECTION.

REFER TO THE FOLLOWING.

(E24) -ELECTRICAL UNITS

TKWB0036E

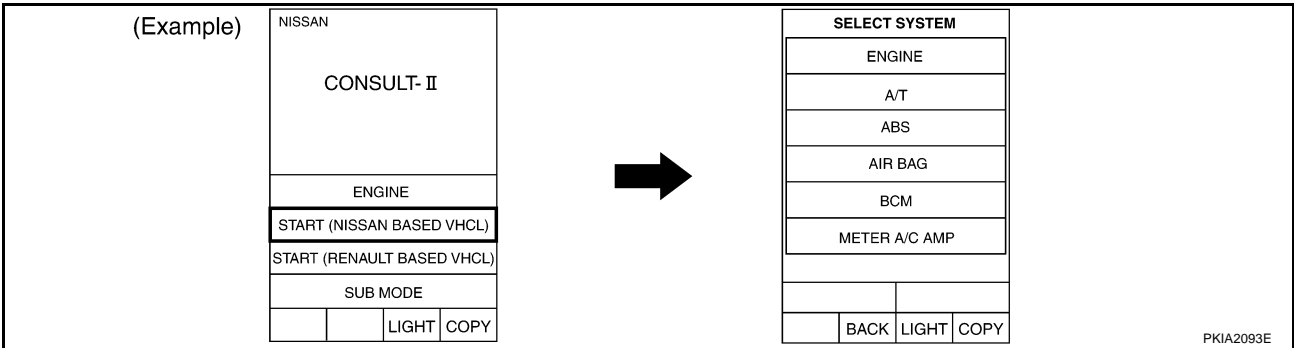
CAN SYSTEM (TYPE 8)

[CAN]

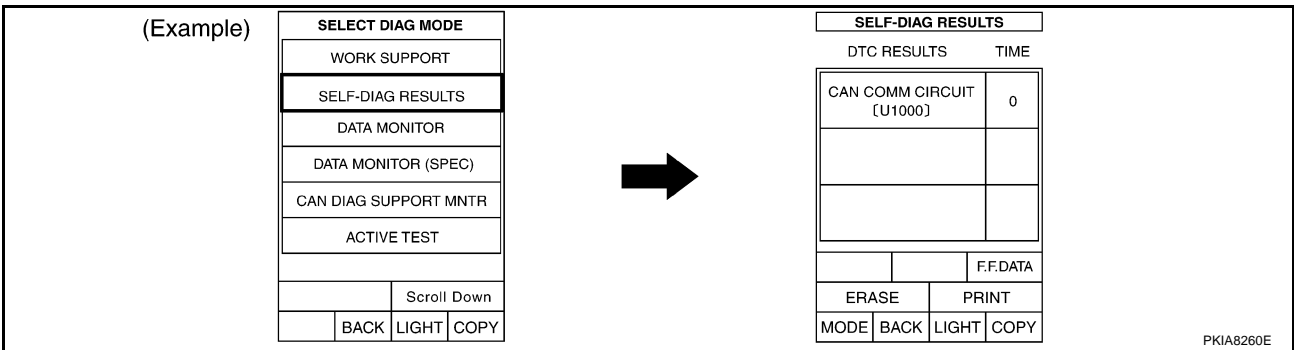
AKS00AGB

Work Flow

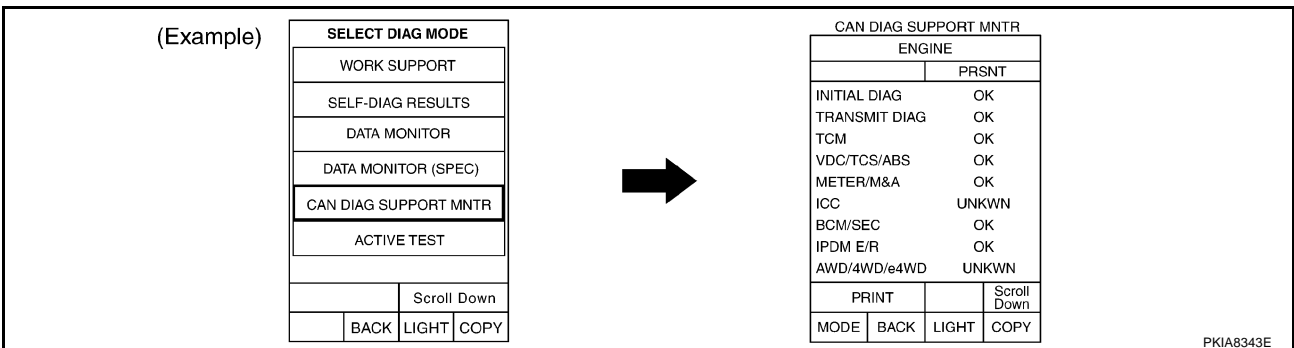
- When there are no indications of "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "AUTO DRIVE POS." or "IPDM E/R" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "AUTO DRIVE POS.", "ABS", and "IPDM E/R" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "AUTO DRIVE POS.", "ABS", "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-259, "CHECK SHEET"](#).
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "v" onto the items with "No indication", "NG", or "UNKWKN" in the check sheet table. Refer to [LAN-259, "CHECK SHEET"](#).

NOTE:

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual. So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the navigation system. Refer to [AV-175, "CAN Communication Line Check"](#).

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CAN SYSTEM (TYPE 8)

[CAN]

7. Attach the CAN DIAG SUPPORT MONITOR check sheet onto the check sheet. Refer to [LAN-259, "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-259, "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-175, "CAN Communication Line Check"](#).

9. According to the check sheet results (example), start inspection. Refer to [LAN-261, "CHECK SHEET RESULTS \(EXAMPLE\)"](#).

CAN SYSTEM (TYPE 8)

[CAN]

CHECK SHEET

NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

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Check sheet table

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

Symptoms :

Attach copy of
SELECT SYSTEM

Attach copy of
SELECT SYSTEM

Attach copy of
display control unit
CAN DIAG SUPPORT MONITOR check sheet

CAN SYSTEM (TYPE 8)

[CAN]

Attach copy of ENGINE SELF-DIAG RESULTS	Attach copy of TRANSMISSION SELF-DIAG RESULTS	Attach copy of AIR PRESSURE MONITOR SELF-DIAG RESULTS	Attach copy of BCM SELF-DIAG RESULTS
Attach copy of METER A/C AMP SELF-DIAG RESULTS	Attach copy of AUTO DRIVE POS. SELF-DIAG RESULTS	Attach copy of ABS SELF-DIAG RESULTS	Attach copy of IPDM E/R SELF-DIAG RESULTS
Attach copy of ENGINE CAN DIAG SUPPORT MNTR	Attach copy of TRANSMISSION CAN DIAG SUPPORT MNTR	Attach copy of AIR PRESSURE MONITOR CAN DIAG SUPPORT MNTR	Attach copy of BCM CAN DIAG SUPPORT MNTR
Attach copy of METER A/C AMP CAN DIAG SUPPORT MNTR	Attach copy of AUTO DRIVE POS. CAN DIAG SUPPORT MNTR	Attach copy of ABS CAN DIAG SUPPORT MNTR	Attach copy of IPDM E/R CAN DIAG SUPPORT MNTR

PKIA8440E

CAN SYSTEM (TYPE 8)

[CAN]

CHECK SHEET RESULTS (EXAMPLE)

NOTE:

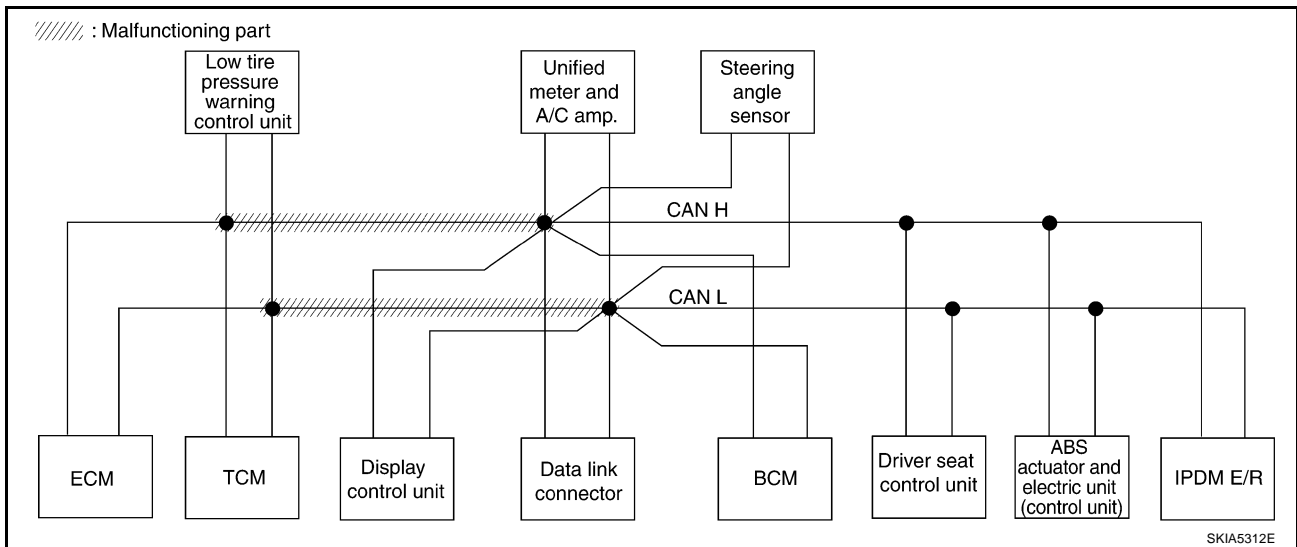
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

Case 1

Check harness between TCM and data link connector. Refer to [LAN-276, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

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CAN SYSTEM (TYPE 8)

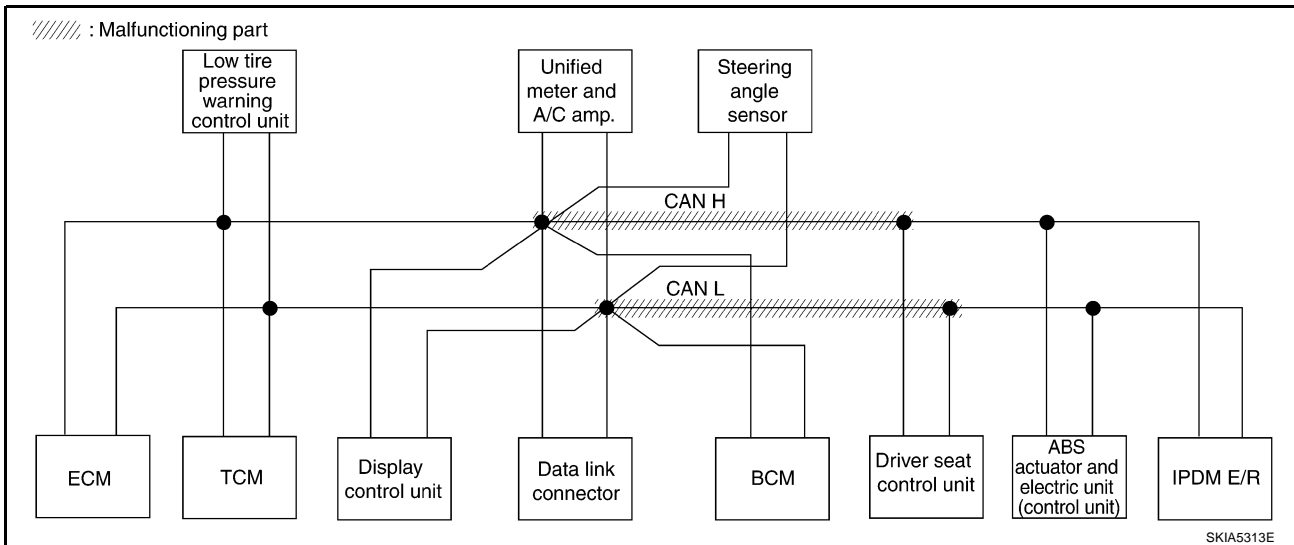
[CAN]

Case 2

Check harness between data link connector and driver seat control unit. Refer to [LAN-276, "Circuit Check Between Data Link Connector and Driver Seat Control Unit"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	

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SKIA5313E

CAN SYSTEM (TYPE 8)

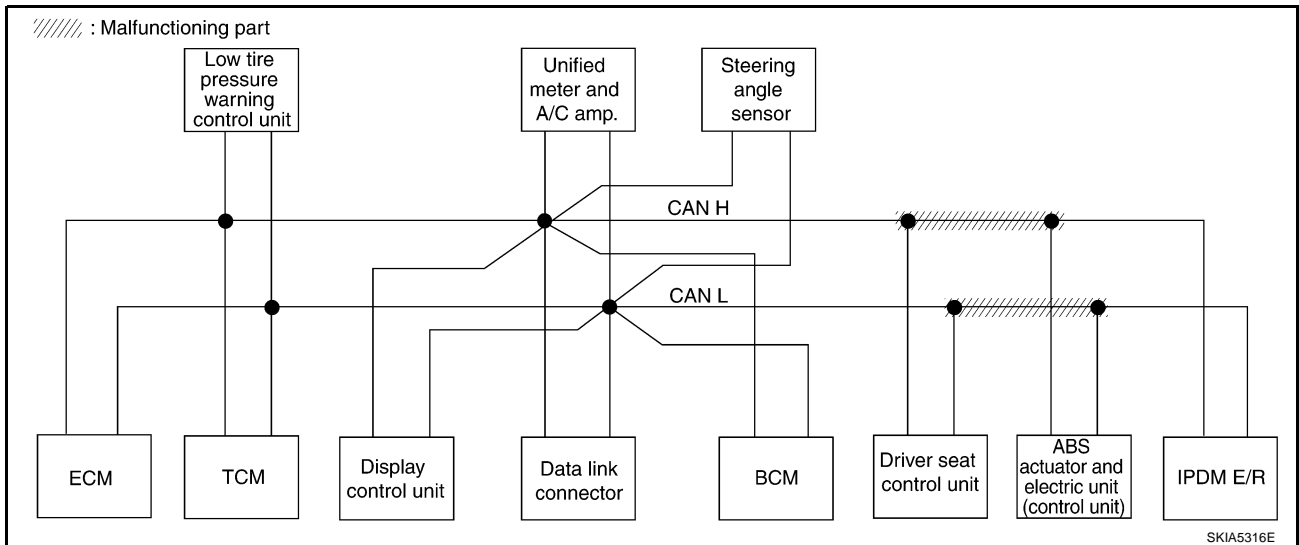
[CAN]

Case 3

Check harness between driver seat control unit and ABS actuator and electric unit (control unit). Refer to [LAN-277, "Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit \(Control Unit\)"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	

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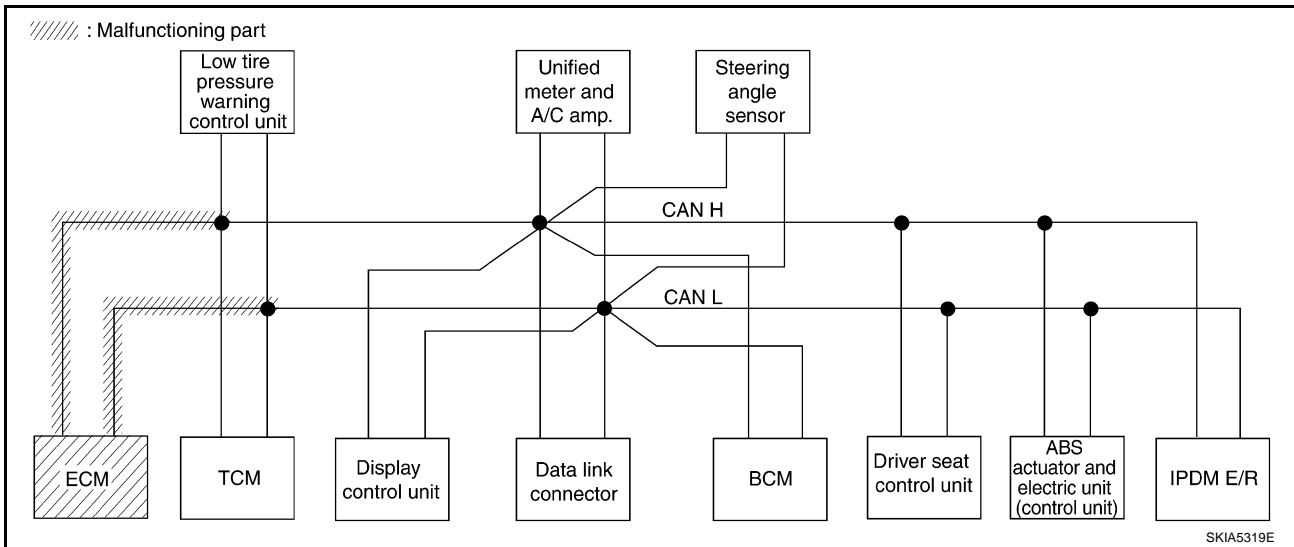
[CAN]

Case 4

Check ECM circuit. Refer to [LAN-278, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	

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SKIA5319E

CAN SYSTEM (TYPE 8)

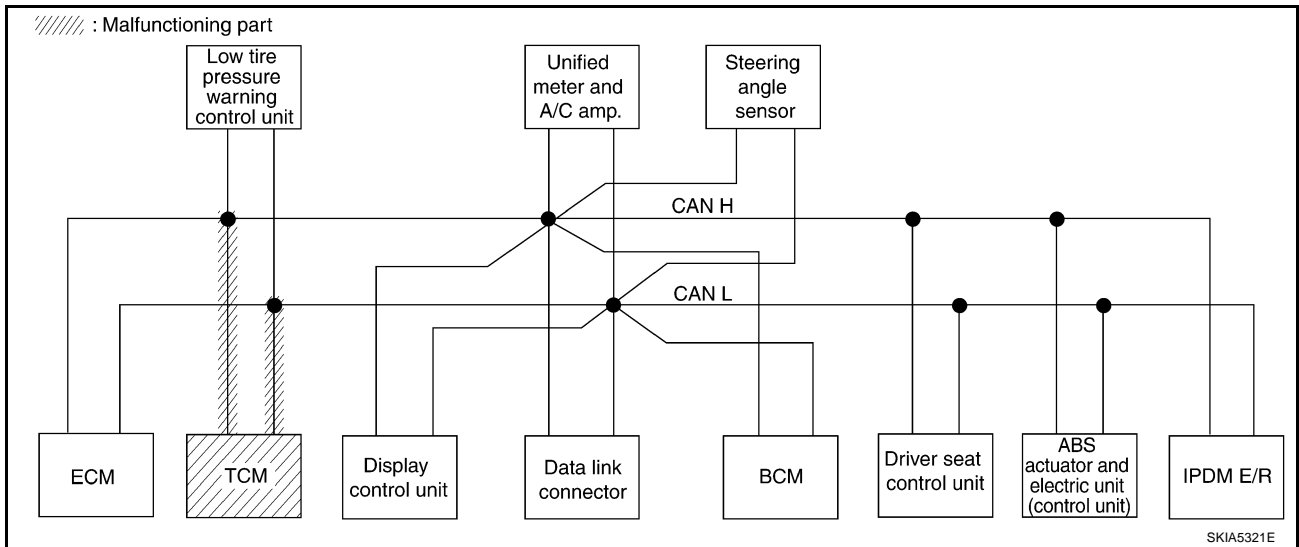
[CAN]

Case 5

Check TCM circuit. Refer to [LAN-279, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

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CAN SYSTEM (TYPE 8)

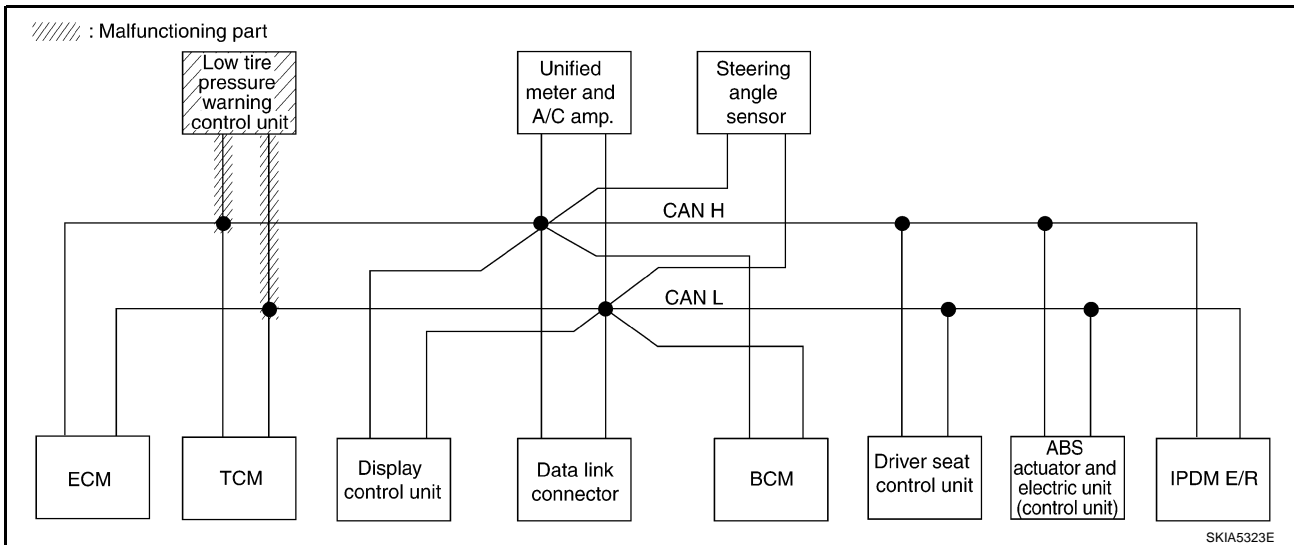
[CAN]

Case 6

Check low tire pressure warning control unit circuit. Refer to [LAN-279, "Low Tire Pressure Warning Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6 ✓	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	UNKWN	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	

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CAN SYSTEM (TYPE 8)

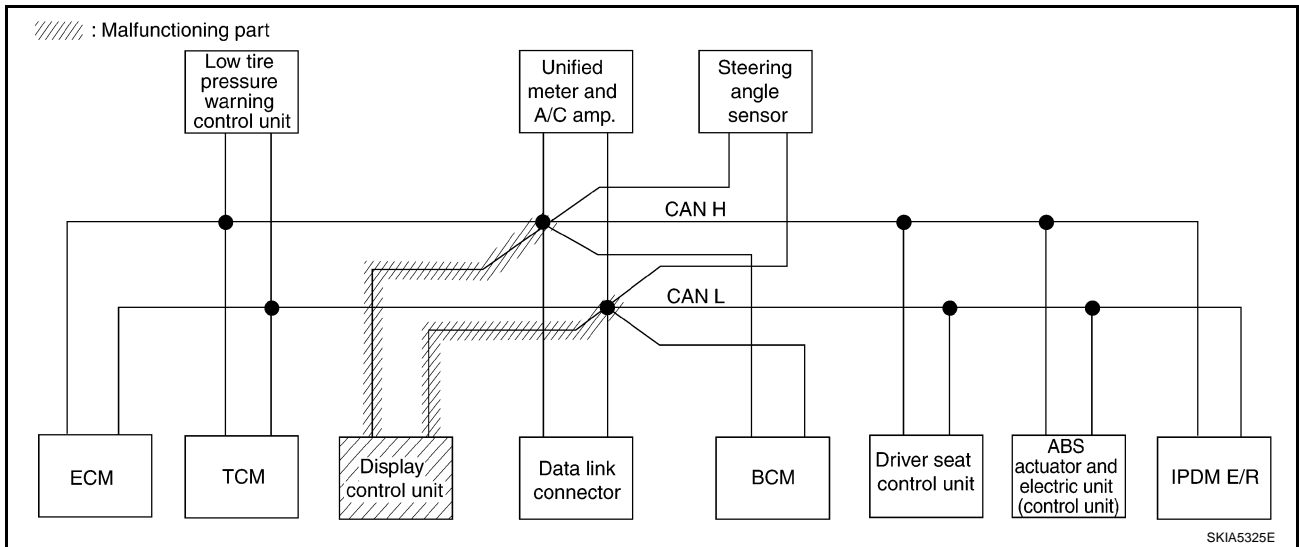
[CAN]

Case 7

Check display control unit circuit. Refer to [LAN-280, "Display Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	
Display control unit	—	CAN COMM	CAN✓RC 1	CAN✓RC 3	—	CAN✓RC 6	—	CAN✓RC 2	CAN✓RC 5	—	—	CAN✓RC 7	
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	

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CAN SYSTEM (TYPE 8)

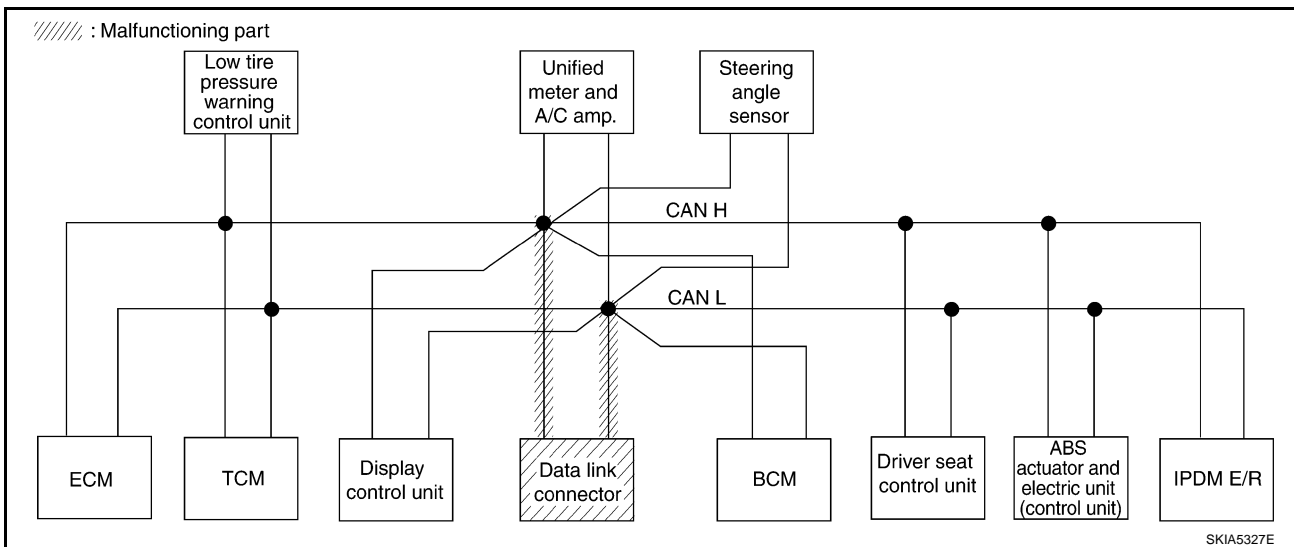
[CAN]

Case 8

Check data link connector circuit. Refer to [LAN-280, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

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CAN SYSTEM (TYPE 8)

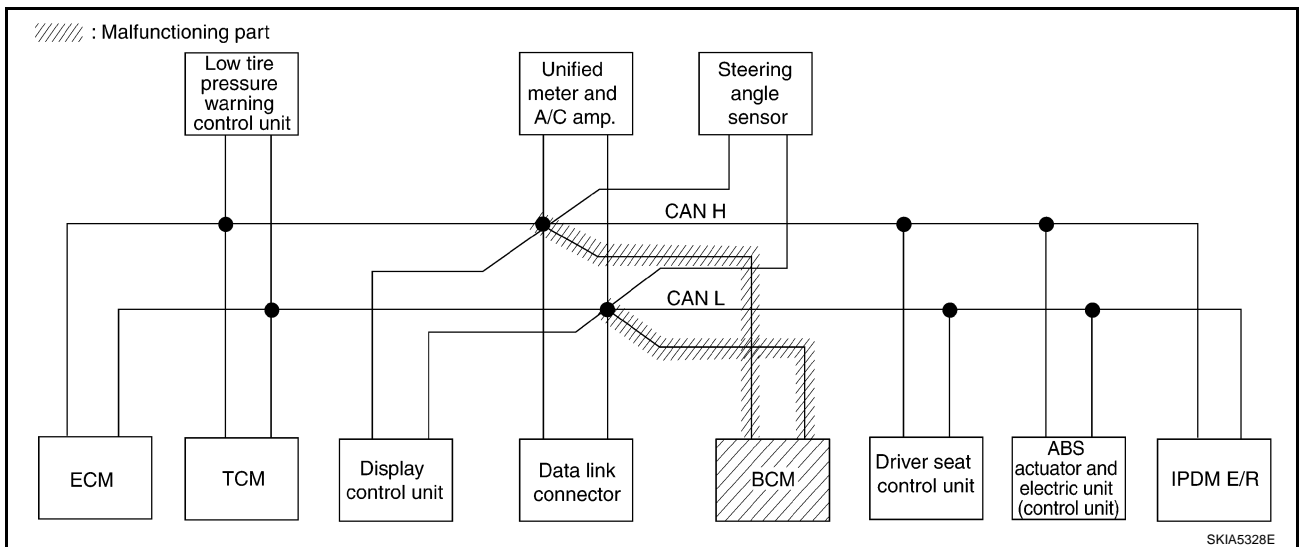
[CAN]

Case 9

Check BCM circuit. Refer to [LAN-281, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN ✓	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2 ✓	CAN CIRC 5	—	—	CAN CIRC 7
BCM	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN ✓	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN ✓	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN ✓	—	—	—	—

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CAN SYSTEM (TYPE 8)

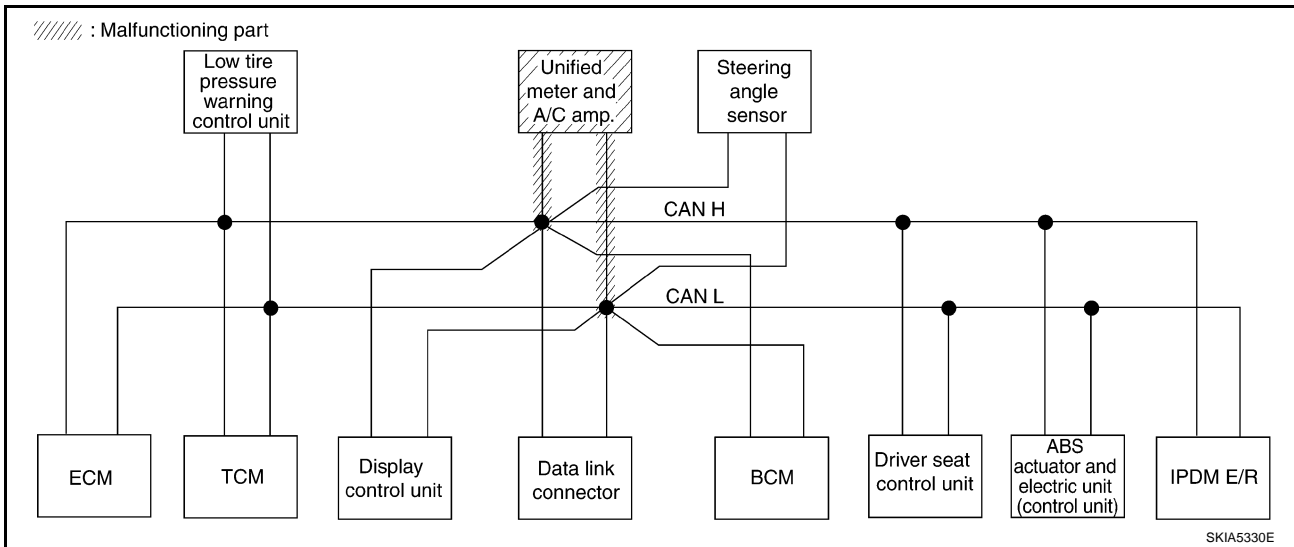
[CAN]

Case 10

Check unified meter and A/C amp. circuit. Refer to [LAN-281, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	✓	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	✓	—	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	✓	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	✓	CAN CIRC 5	—	CAN CIRC 7	
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	✓	—	—	UNKWN	
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	✓	—	—	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	

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CAN SYSTEM (TYPE 8)

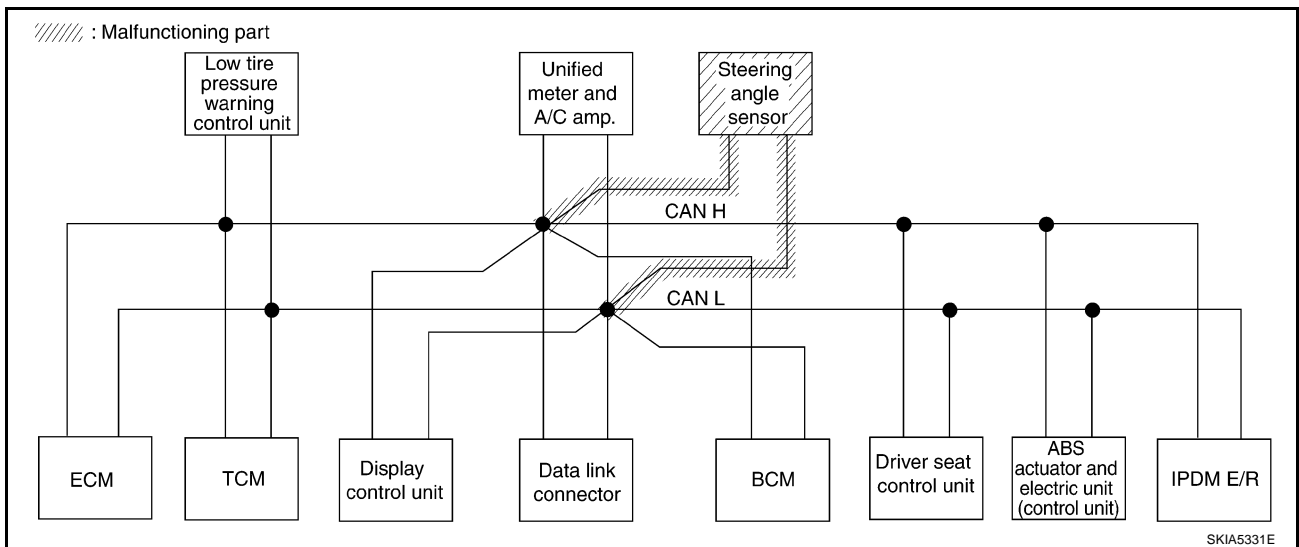
[CAN]

Case 11

Check steering angle sensor circuit. Refer to [LAN-282. "Steering Angle Sensor Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

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CAN SYSTEM (TYPE 8)

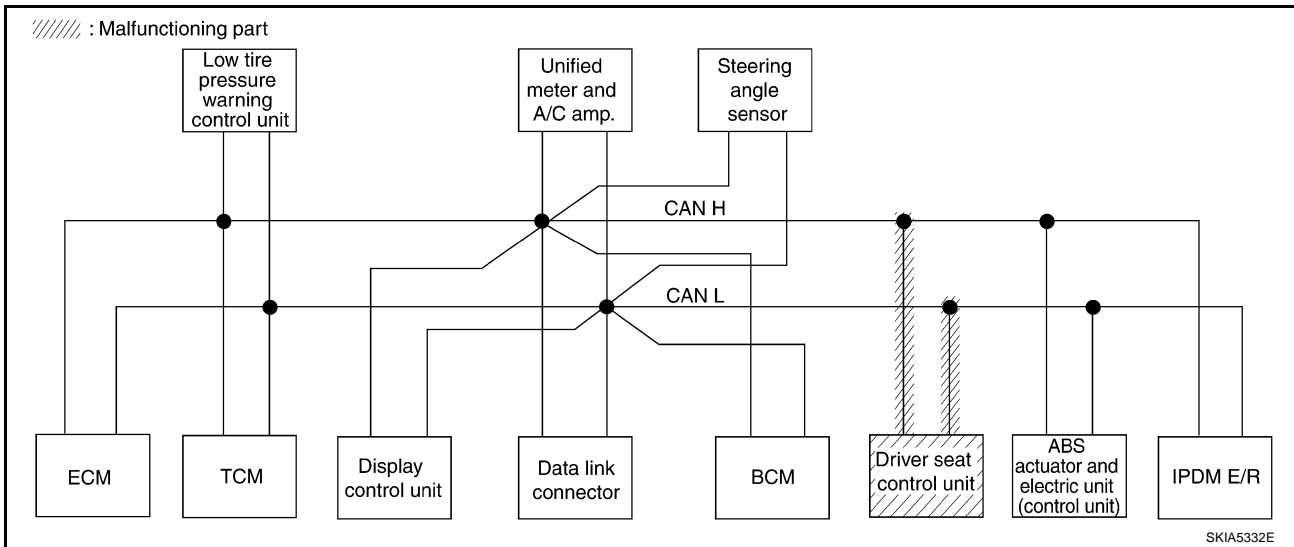
[CAN]

Case 12

Check driver seat control unit circuit. Refer to [LAN-282, "Driver Seat Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	

PKIA8470E



SKIA5332E

CAN SYSTEM (TYPE 8)

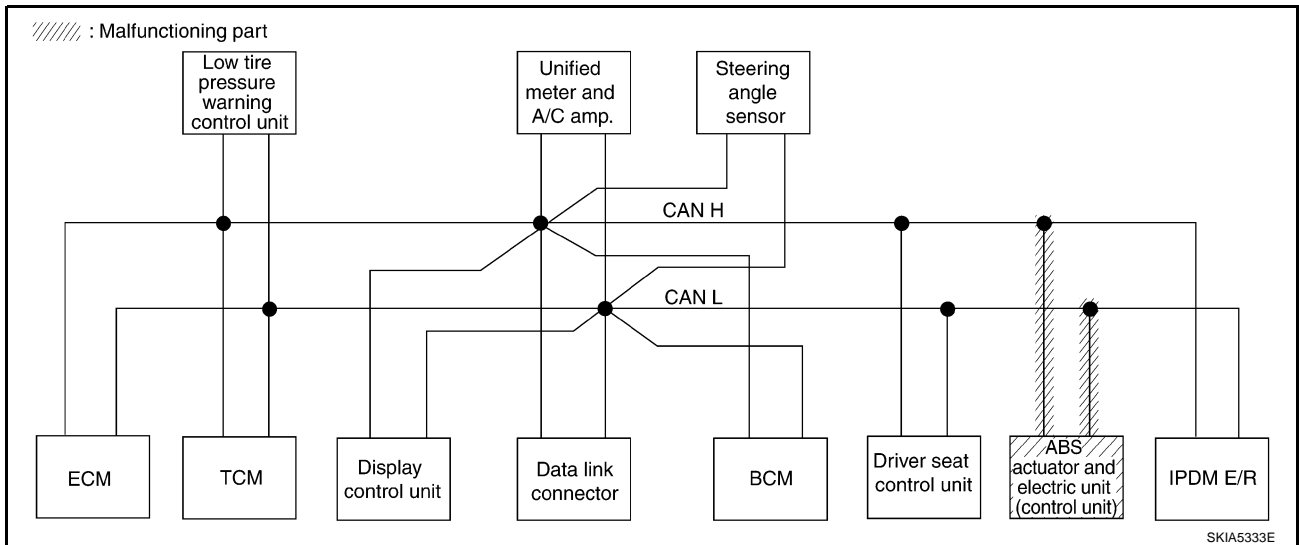
[CAN]

Case 13

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-283, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	

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CAN SYSTEM (TYPE 8)

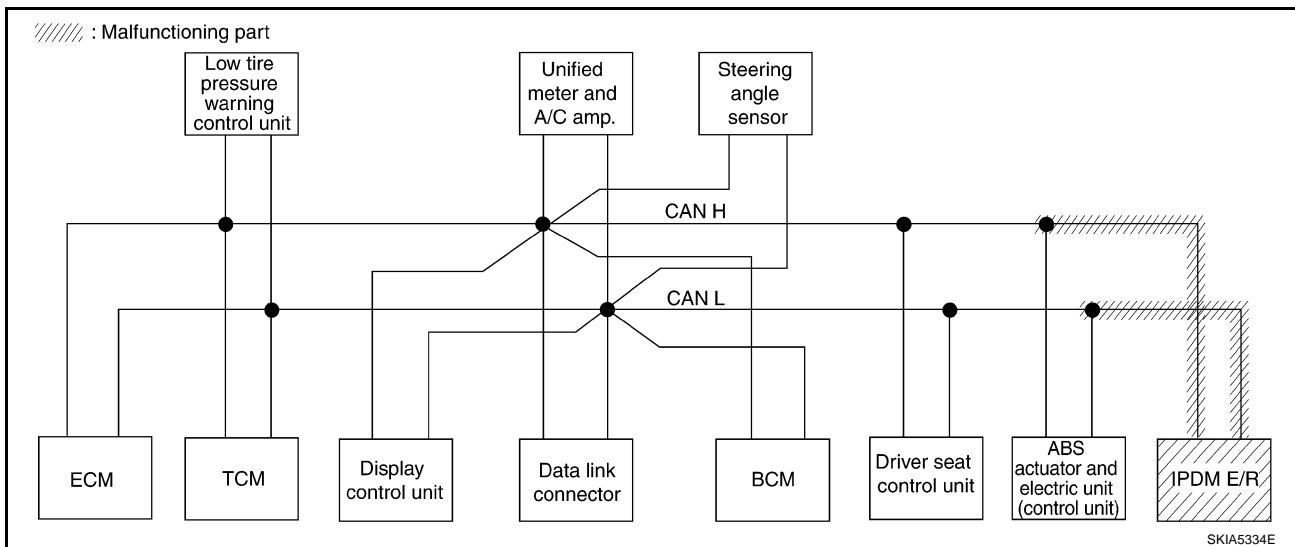
[CAN]

Case 14

Check IPDM E/R circuit. Refer to [LAN-283, "IPDM E/R Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN ✓	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7 ✓	
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN ✓	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	

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CAN SYSTEM (TYPE 8)

[CAN]

Case 15

Check CAN communication circuit. Refer to [LAN-284, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	—	NG	UNKW [✓] N	—	UNKW [✓] N	—	—	UNKW [✓] N	UNKW [✓] N	—	UNKW [✓] N	UNKW [✓] N	
TRANSMISSION	No indication [✓]	NG	UNKW [✓] N	UNKW [✓] N	—	—	—	—	UNKW [✓] N	—	UNKW [✓] N	—	
AIR PRESSURE MONITOR	No indication [✓]	NG	UNKW [✓] N	—	—	—	—	—	UNKW [✓] N	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1 [✓]	CAN CIRC 3 [✓]	—	CAN CIRC 6 [✓]	—	CAN CIRC 2 [✓]	CAN CIRC 5 [✓]	—	—	CAN CIRC 7 [✓]	
BCM	No indication [✓]	NG	UNKW [✓] N	UNKW [✓] N	—	—	—	—	UNKW [✓] N	—	—	UNKW [✓] N	
METER A/C AMP	No indication [✓]	—	UNKW [✓] N	UNKW [✓] N	UNKW [✓] N	UNKW [✓] N	UNKW [✓] N	UNKW [✓] N	—	—	UNKW [✓] N	—	
AUTO DRIVE POS.	No indication [✓]	NG	UNKW [✓] N	—	UNKW [✓] N	—	—	UNKW [✓] N	UNKW [✓] N	—	—	—	
ABS	—	NG	UNKW [✓] N	UNKW [✓] N	UNKW [✓] N	—	—	—	—	UNKW [✓] N	—	—	
IPDM E/R	No indication [✓]	—	UNKW [✓] N	UNKW [✓] N	—	—	—	UNKW [✓] N	—	—	—	—	

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Case 16

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-288, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	—	NG	UNKW [✓] N	—	UNKW [✓] N	—	—	UNKW [✓] N	UNKW [✓] N	—	UNKW [✓] N	UNKW [✓] N	
TRANSMISSION	No indication	NG	UNKW [✓] N	UNKW [✓] N	—	—	—	—	UNKW [✓] N	—	UNKW [✓] N	—	
AIR PRESSURE MONITOR	No indication	NG	UNKW [✓] N	—	—	—	—	—	UNKW [✓] N	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1 [✓]	CAN CIRC 3 [✓]	—	CAN CIRC 6 [✓]	—	CAN CIRC 2 [✓]	CAN CIRC 5 [✓]	—	—	CAN CIRC 7 [✓]	
BCM	No indication	NG	UNKW [✓] N	UNKW [✓] N	—	—	—	—	UNKW [✓] N	—	—	UNKW [✓] N	
METER A/C AMP	No indication	—	UNKW [✓] N	UNKW [✓] N	UNKW [✓] N	UNKW [✓] N	UNKW [✓] N	UNKW [✓] N	—	—	UNKW [✓] N	—	
AUTO DRIVE POS.	No indication	NG	UNKW [✓] N	—	UNKW [✓] N	—	—	UNKW [✓] N	UNKW [✓] N	—	—	—	
ABS	—	NG	UNKW [✓] N	UNKW [✓] N	UNKW [✓] N	—	—	—	—	UNKW [✓] N	—	—	
IPDM E/R	No indication	—	UNKW [✓] N	UNKW [✓] N	—	—	—	UNKW [✓] N	—	—	—	—	

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Case 17

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-288, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	UNKWN	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	

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Circuit Check Between TCM and Data Link Connector

AKS00AGC

1. CHECK HARNESS FOR OPEN CIRCUIT

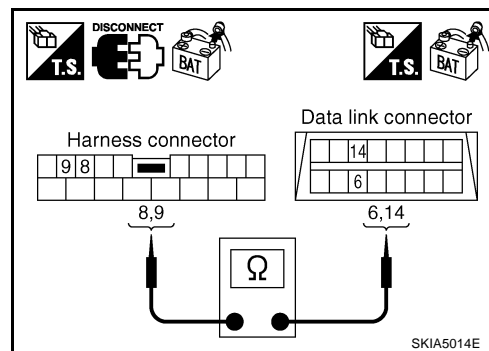
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

8 (L) - 6 (L) : Continuity should exist.

9 (Y) - 14 (Y) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-257, "Work Flow"](#) .
- NG >> Repair harness.



Circuit Check Between Data Link Connector and Driver Seat Control Unit

AKS00AGD

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M9
 - Harness connector B2

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

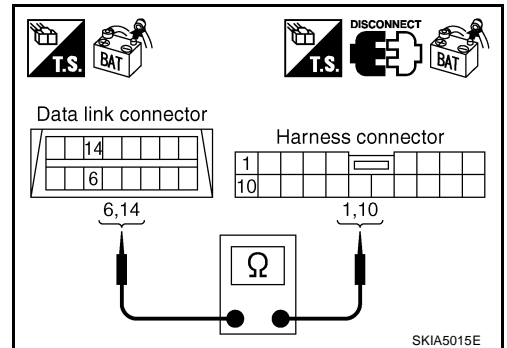
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

6 (L) - 1 (L) : Continuity should exist.
14 (Y) - 10 (Y) : Continuity should exist.

OK or NG

- OK >> GO TO 3.
 NG >> Repair harness.



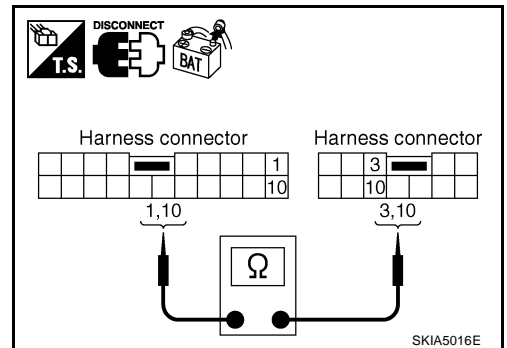
3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

1 (L) - 3 (L) : Continuity should exist.
10 (Y) - 10 (Y) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-257, "Work Flow"](#).
 NG >> Repair harness.



Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit)

AKS00AGE

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector B4
 - Harness connector E105

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

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2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B2 and harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

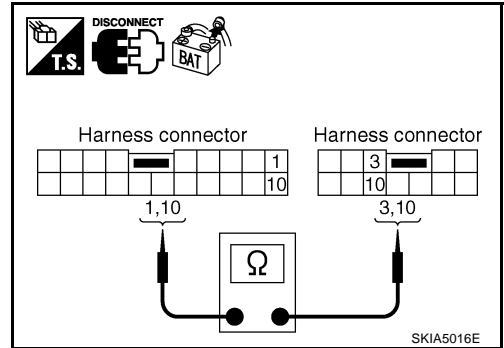
1 (L) - 3 (L) : Continuity should exist.

10 (Y) - 10 (Y) : Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair harness.



3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

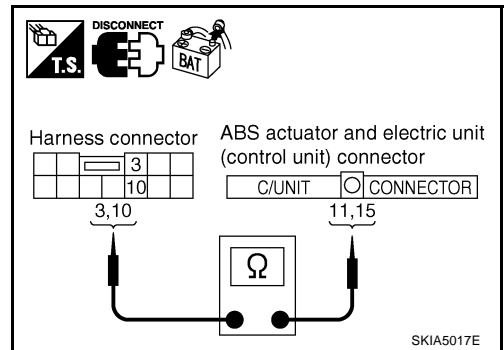
3 (L) - 11 (L) : Continuity should exist.

10 (Y) - 15 (Y) : Continuity should exist.

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-257, "Work Flow"](#).

NG >> Repair harness.



ECM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

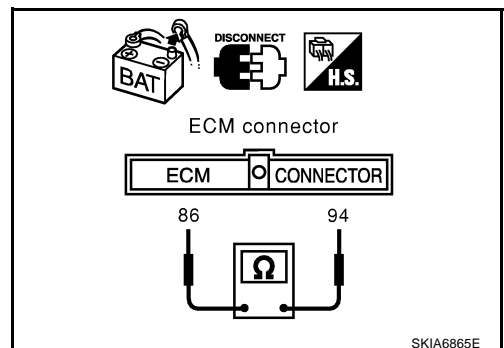
1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

94 (L) - 86 (Y) : Approx. 108 - 132Ω

OK or NG

OK >> Replace ECM.

NG >> Repair harness between ECM and TCM.



TCM Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
 - TCM connector
 - Harness connector F102

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

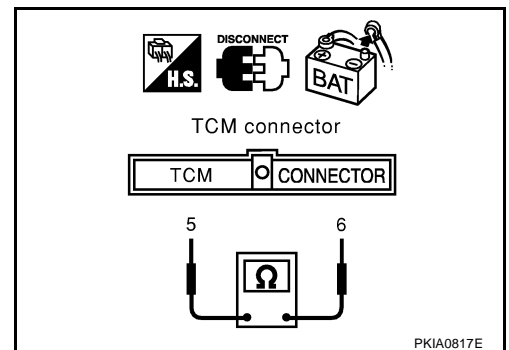
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

5 (L) - 6 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace TCM.
 NG >> Repair harness between TCM and low tire pressure warning control unit.

**Low Tire Pressure Warning Control Unit Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of low tire pressure warning control unit for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

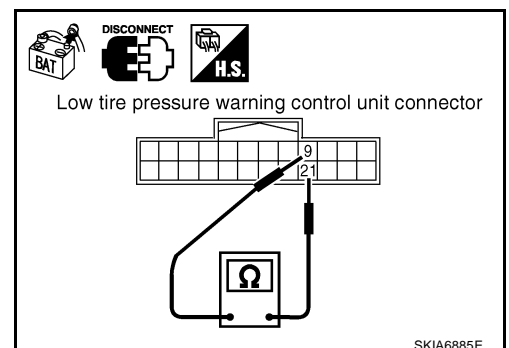
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect low tire pressure warning control unit connector.
2. Check resistance between low tire pressure warning control unit harness connector M81 terminals 9 (L) and 21 (Y).

9 (L) - 21 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace low tire pressure warning control unit.
 NG >> Repair harness between low tire pressure warning control unit and TCM.



Display Control Unit Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display control unit for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.
NG >> Repair terminal or connector.

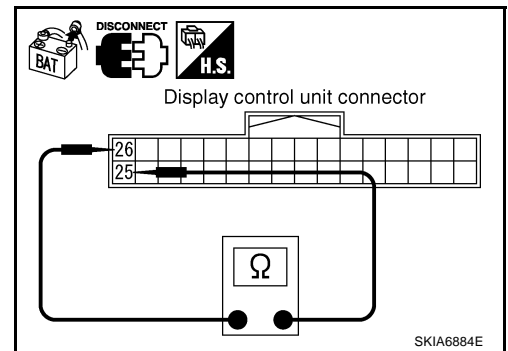
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect display control unit connector.
2. Check resistance between display control unit harness connector M43 terminals 25 (L) and 26 (Y).

25 (L) - 26 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace display control unit.
NG >> Repair harness between display control unit and data link connector.



AKS00AGJ

Data Link Connector Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

OK or NG

- OK >> GO TO 2.
NG >> Repair terminal or connector.

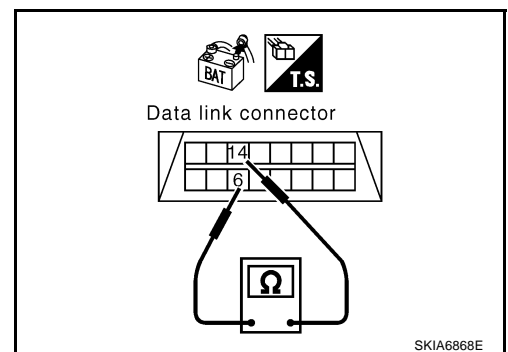
2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

6 (L) - 14 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Diagnose again. Refer to [LAN-257, "Work Flow"](#).
NG >> Repair harness between data link connector and BCM.



BCM Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

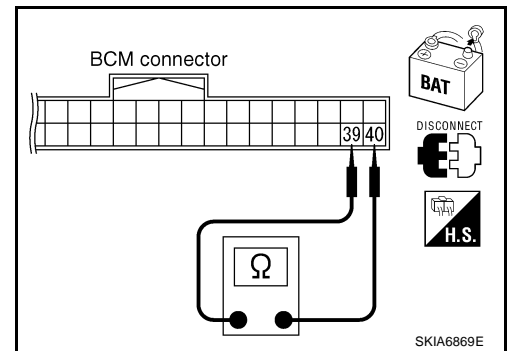
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M34 terminals 39 (L) and 40 (Y).

39 (L) - 40 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace BCM. Refer to [BCS-14, "Removal and Installation of BCM"](#) .
 NG >> Repair harness between BCM and data link connector.

**Unified Meter and A/C Amp. Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

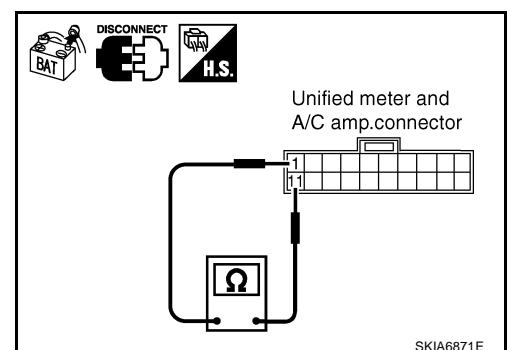
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

1 (L) - 11 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace unified meter and A/C amp.
 NG >> Repair harness between unified meter and A/C amp. and data link connector.



Steering Angle Sensor Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of steering angle sensor for damage, bend and loose connection (sensor side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

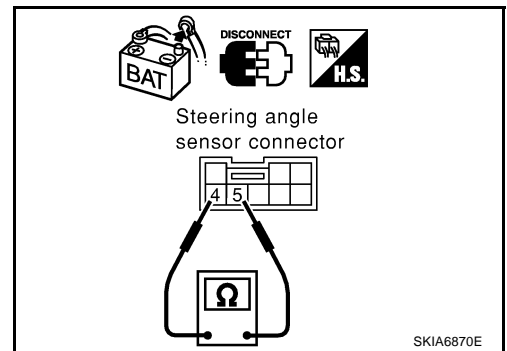
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M33 terminals 4 (L) and 5 (Y).

4 (L) - 5 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace steering angle sensor.
 NG >> Repair harness between steering angle sensor and data link connector.



Driver Seat Control Unit Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control unit side and harness side).
 - Driver seat control unit connector
 - Harness connector B301
 - Harness connector B9

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

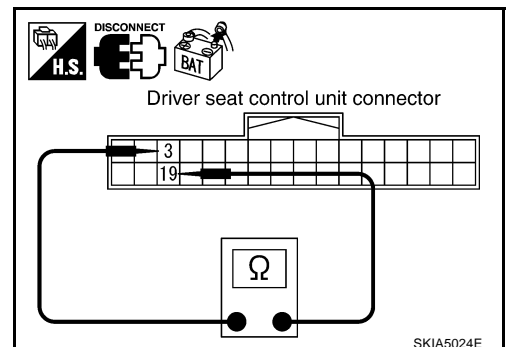
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect driver seat control unit connector.
2. Check resistance between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

3 (L/Y) - 19 (BR/W) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace driver seat control unit.
 NG >> Repair harness between driver seat control unit and harness connector B4.



ABS Actuator and Electric Unit (Control Unit) Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

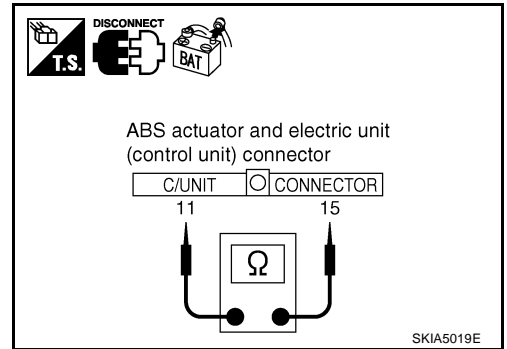
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

11 (L) - 15 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



IPDM E/R Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

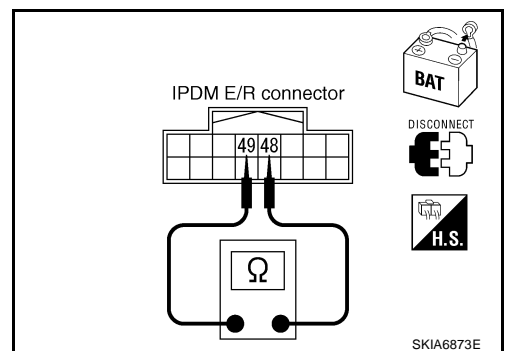
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

48 (L) - 49 (Y) : Approx. 108 - 132Ω

OK or NG

- OK >> Replace IPDM E/R.
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



CAN Communication Circuit Check

AKS00AGQ

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, meter side, sensor side and harness side).
 - ECM
 - TCM
 - Low tire pressure warning control unit
 - Display control unit
 - BCM
 - Unified meter and A/C amp.
 - Steering angle sensor
 - Driver seat control unit
 - ABS actuator and electric unit (control unit)
 - IPDM E/R
 - Between ECM and IPDM E/R
 - Between ECM and TCM
 - Between ECM and driver seat control unit

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
 - ECM connector
 - Low tire pressure warning control unit connector
 - Harness connector M82
 - Display control unit connector
 - BCM connector
 - Unified meter and A/C amp. connector
 - Steering angle sensor connector
 - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

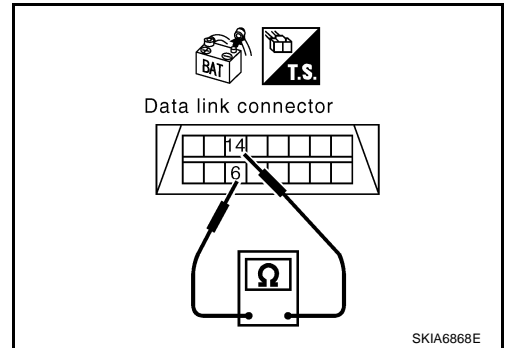
6 (L) - 14 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 3.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM
- Harness between data link connector and low tire pressure warning control unit
- Harness between data link connector and harness connector M82
- Harness between data link connector and display control unit
- Harness between data link connector and BCM
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor
- Harness between data link connector and harness connector M9



3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

6 (L) - Ground : Continuity should not exist.

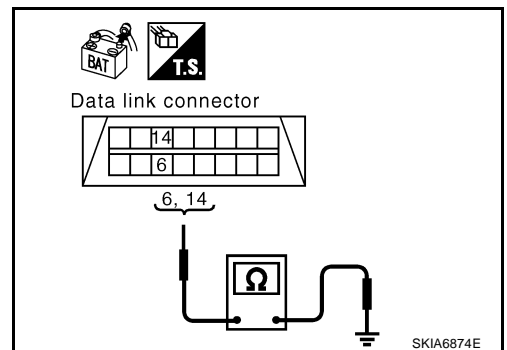
14 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM
- Harness between data link connector and low tire pressure warning control unit
- Harness between data link connector and harness connector M82
- Harness between data link connector and display control unit
- Harness between data link connector and BCM
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor
- Harness between data link connector and harness connector M9



4. CHECK HARNESS FOR SHORT CIRCUIT

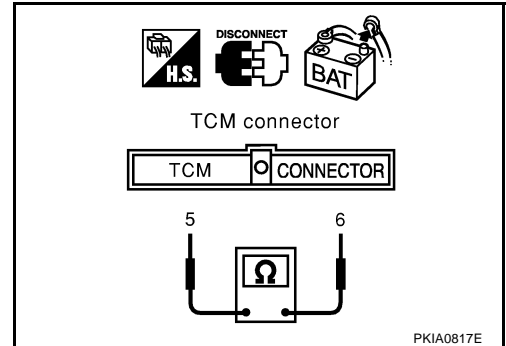
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

5 (L) - 6 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 5.

NG >> Repair harness between TCM and harness connector F102.



5. CHECK HARNESS FOR SHORT CIRCUIT

- Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

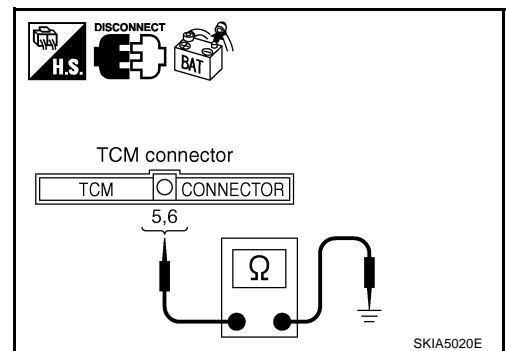
5 (L) - Ground : Continuity should not exist.

6 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 6.

NG >> Repair harness between TCM and harness connector F102.



6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B4 and harness connector B9.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

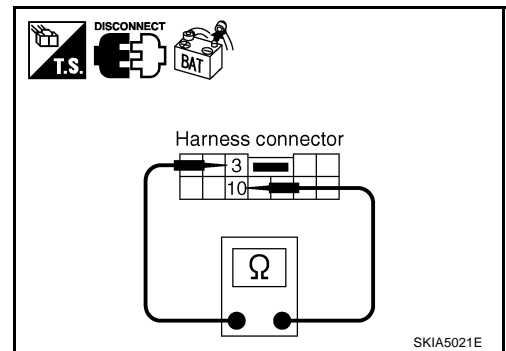
3 (L) - 10 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 7.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between harness connector B4 and harness connector B2
- Harness between harness connector B4 and harness connector B9



7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

3 (L) - Ground : Continuity should not exist.

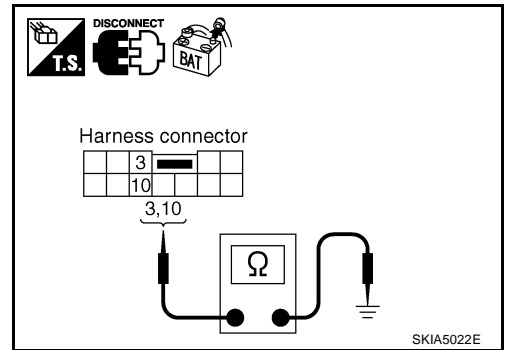
10 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 8.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between harness connector B4 and harness connector B2
- Harness between harness connector B4 and harness connector B9



8. CHECK HARNESS FOR SHORT CIRCUIT

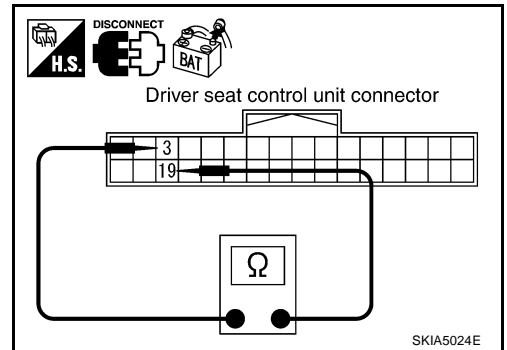
1. Disconnect driver seat control unit connector.
2. Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

3 (L/Y) - 19 (BR/W) : Continuity should not exist.

OK or NG

OK >> GO TO 9.

NG >> Repair harness between driver seat control unit and harness connector B301.



9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y), 19 (BR/W) and ground.

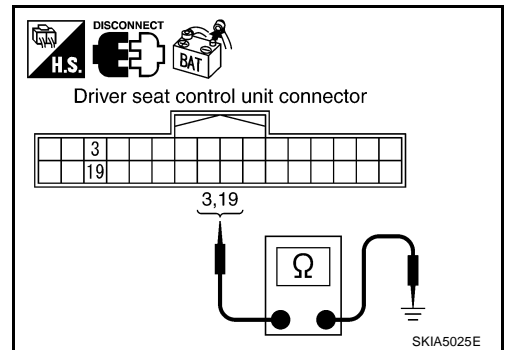
3 (L/Y) - Ground : Continuity should not exist.

19 (BR/W) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 10.

NG >> Repair harness between driver seat control unit and harness connector B301.



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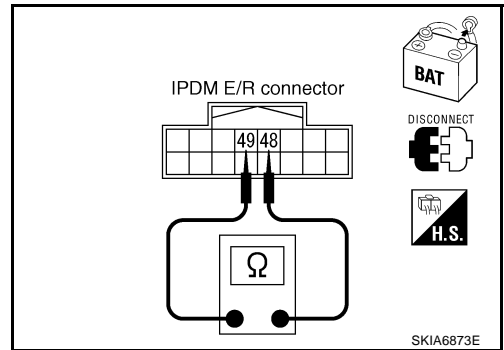
10. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

48 (L) - 49 (Y) : Continuity should not exist.

OK or NG

- OK >> GO TO 11.
 NG >> Check the following harnesses. If any harness is damaged, repair the harness.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit)
 - Harness between IPDM E/R and harness connector E105



11. CHECK HARNESS FOR SHORT CIRCUIT

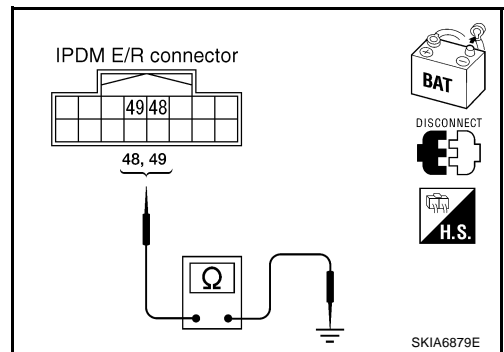
Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

48 (L) - Ground : Continuity should not exist.

49 (Y) - Ground : Continuity should not exist.

OK or NG

- OK >> GO TO 12.
 NG >> Check the following harnesses. If any harness is damaged, repair the harness.
- Harness between IPDM E/R and ABS actuator and electric unit (control unit)
 - Harness between IPDM E/R and harness connector E105



12. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-288, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#) .

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-257, "Work Flow"](#) .
 NG >> Replace ECM and/or IPDM E/R.

IPDM E/R Ignition Relay Circuit Check

AKS00AGR

Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-27, "IPDM E/R Power/Ground Circuit Inspection"](#) .
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#) .

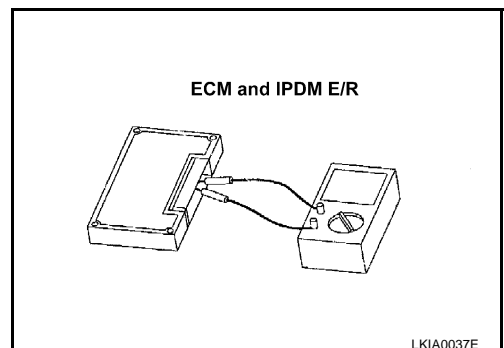
Component Inspection

ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

AKS00AGS

- 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	



LKIA0037E

CAN SYSTEM (TYPE 9)

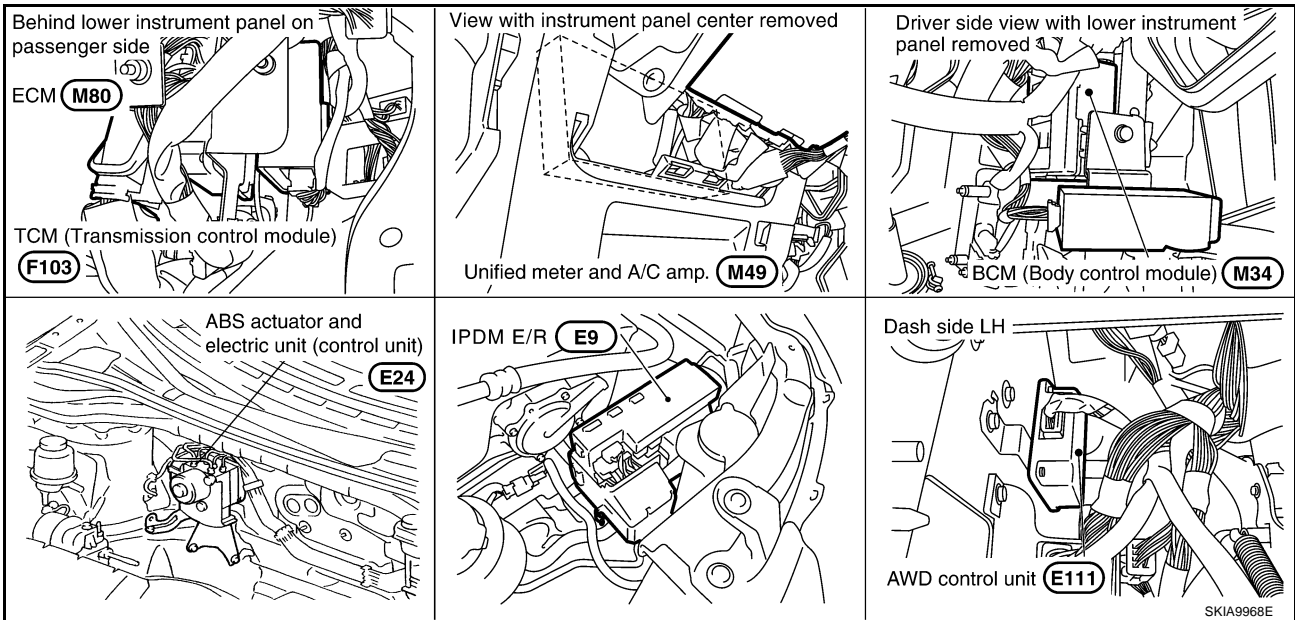
System Description

AKS00AGT

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

AKS00AGU



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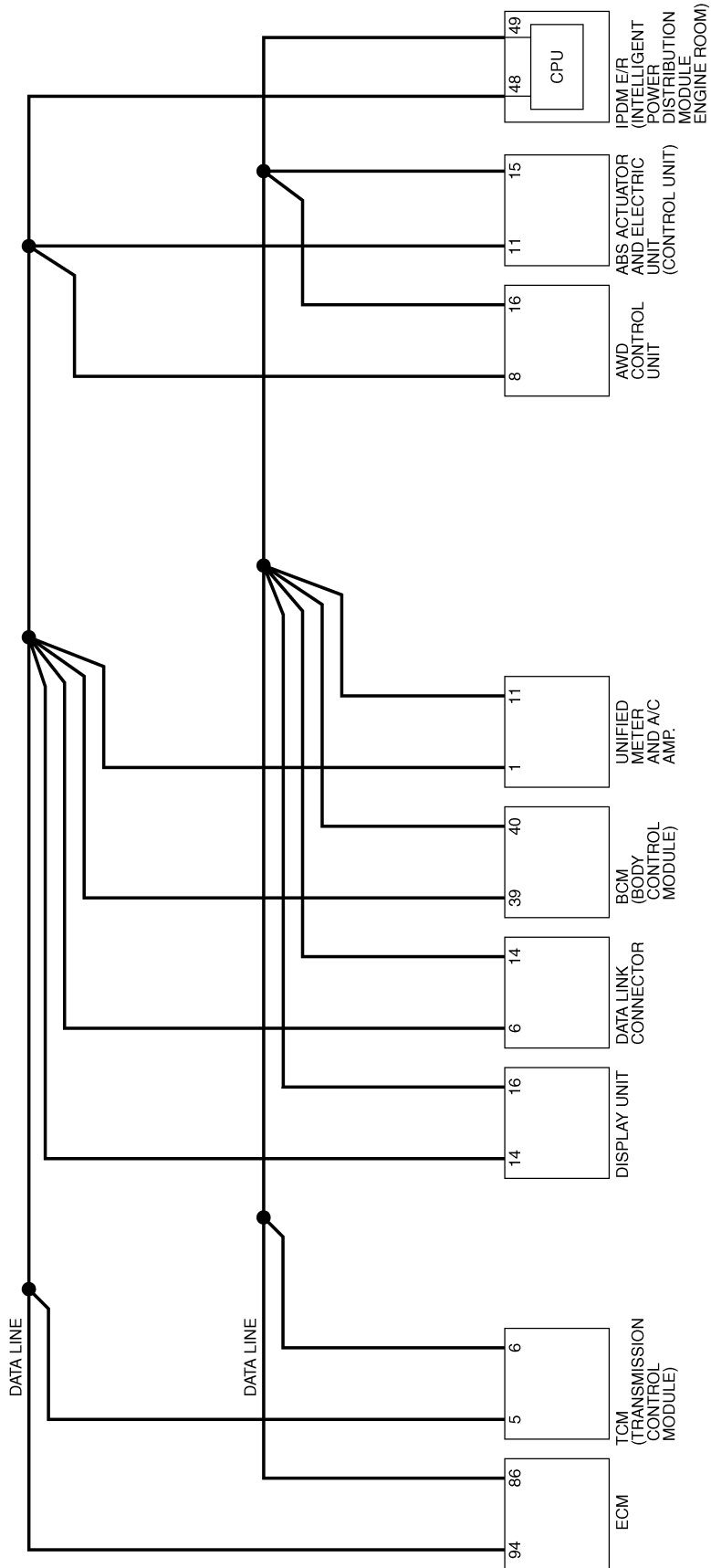
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CAN SYSTEM (TYPE 9)

[CAN]

Schematic

AKS00AGV



TKWB0037E

CAN SYSTEM (TYPE 9)

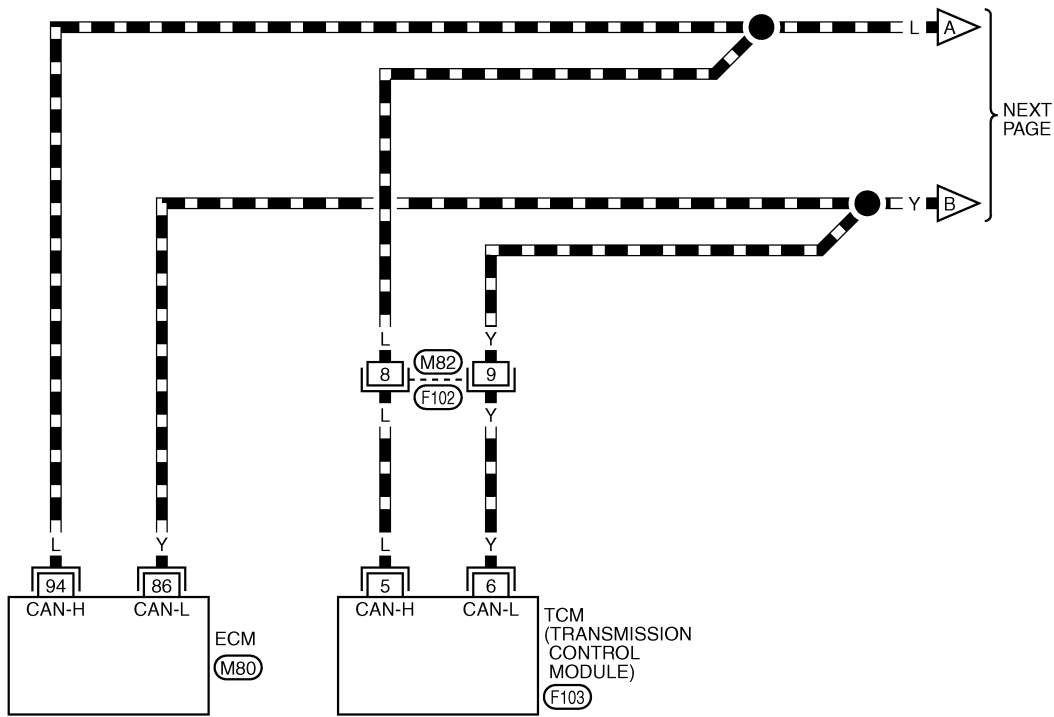
[CAN]

AKS00AGW

Wiring Diagram - CAN -

LAN-CAN-25

▬ : DATA LINE



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	F102	

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REFER TO THE FOLLOWING.
 (M80), (F103) -ELECTRICAL
 UNITS

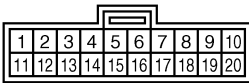
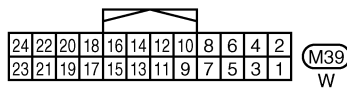
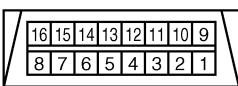
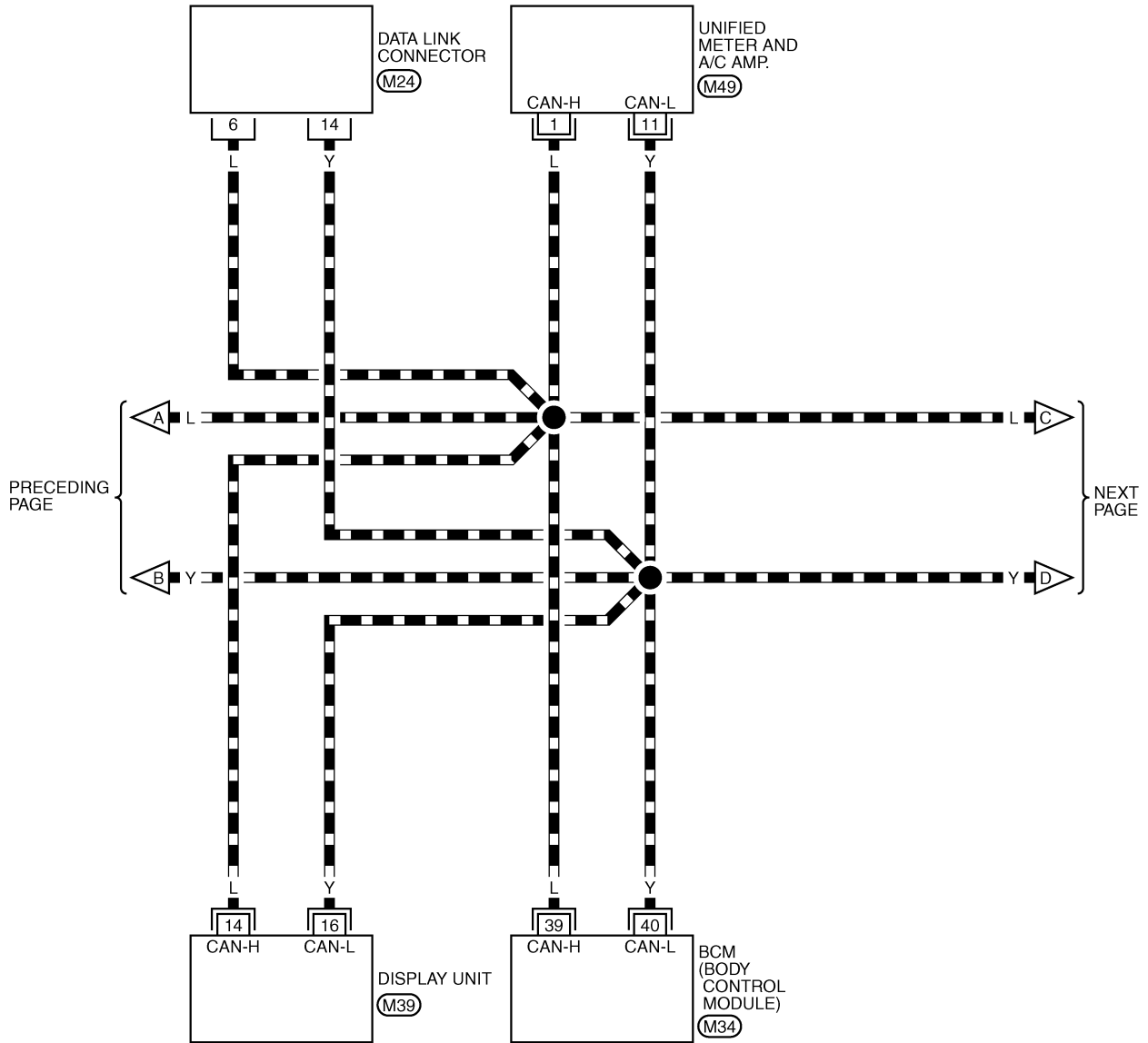
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CAN SYSTEM (TYPE 9)

[CAN]

LAN-CAN-26

▬ : DATA LINE



REFER TO THE FOLLOWING.

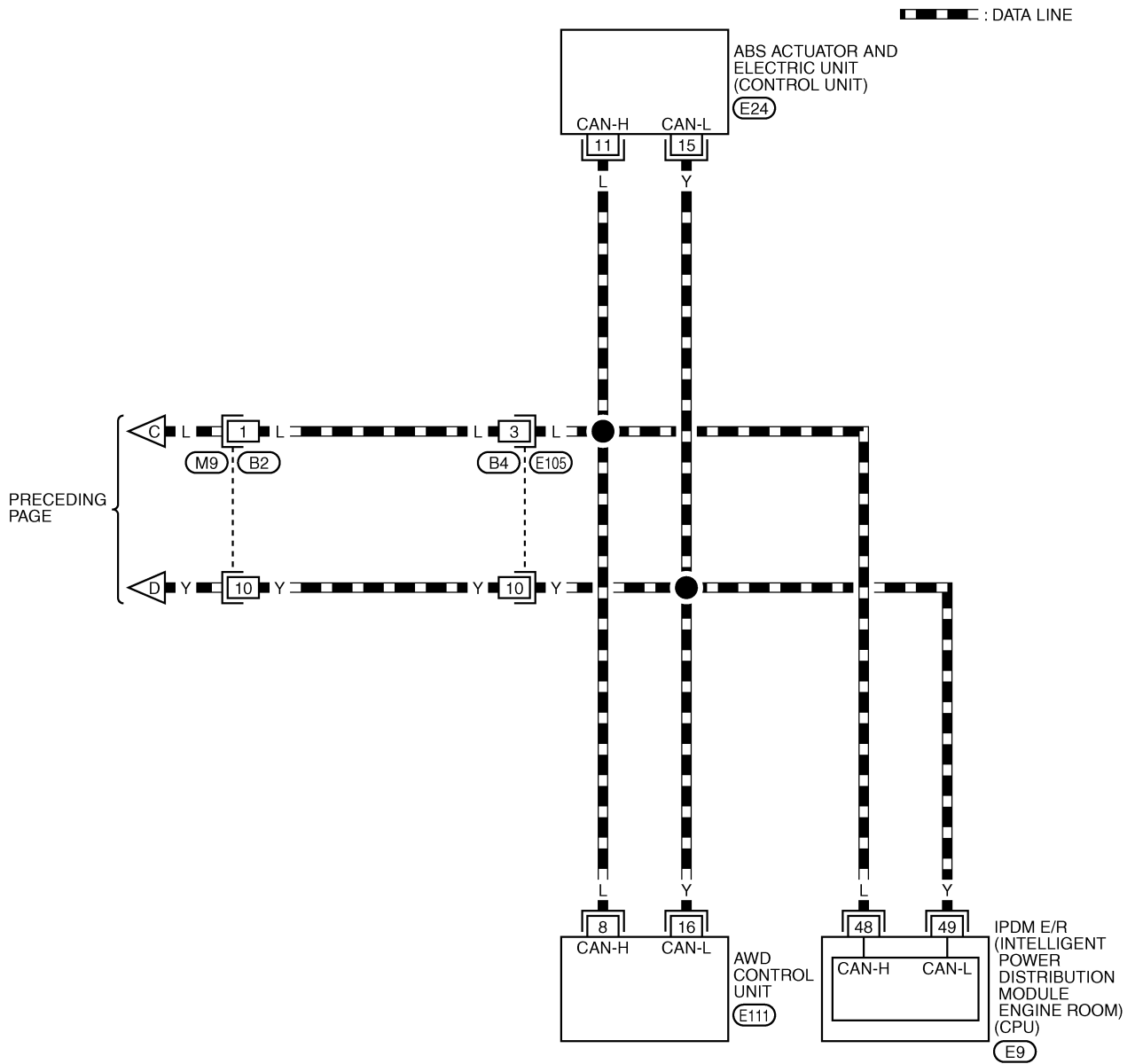
M34 -ELECTRICAL UNITS

TKWB0039E

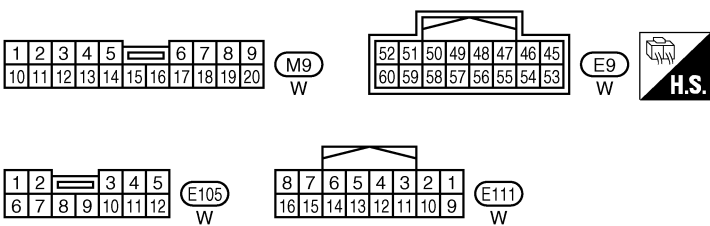
CAN SYSTEM (TYPE 9)

[CAN]

LAN-CAN-27



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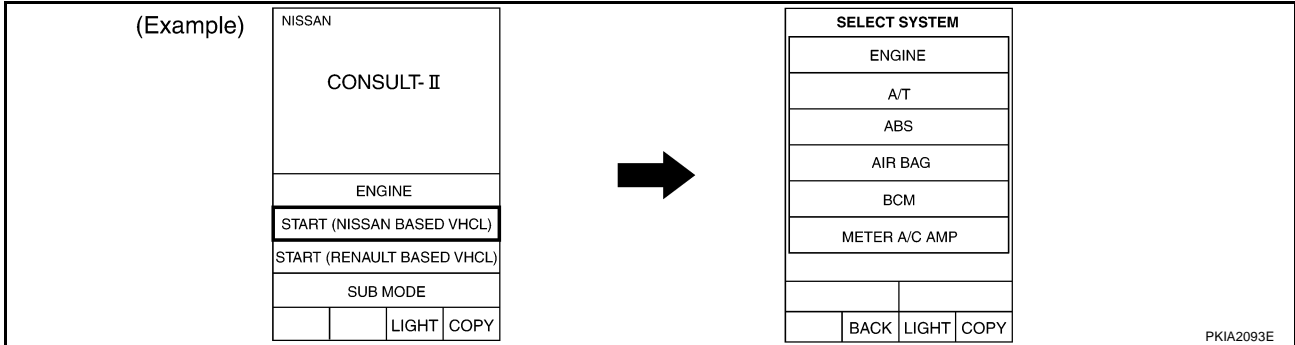


REFER TO THE FOLLOWING.
 (E24) -ELECTRICAL UNITS

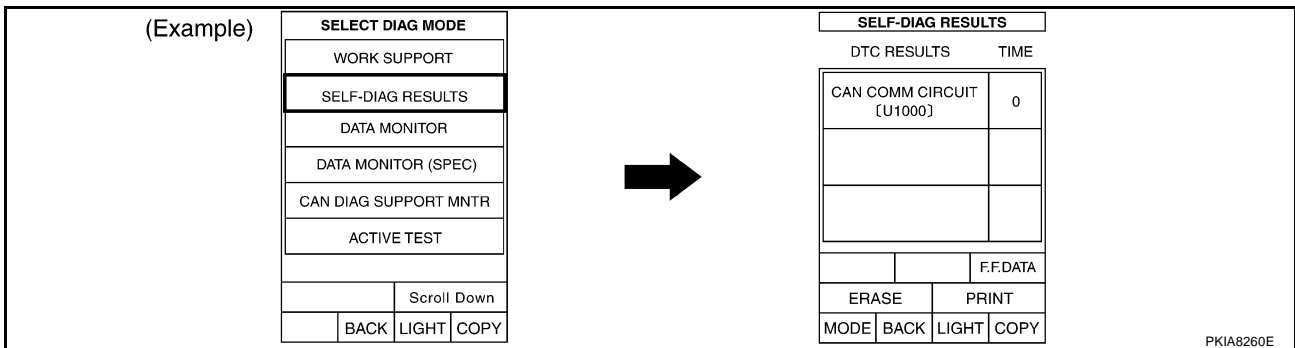
TKWB0040E

Work Flow

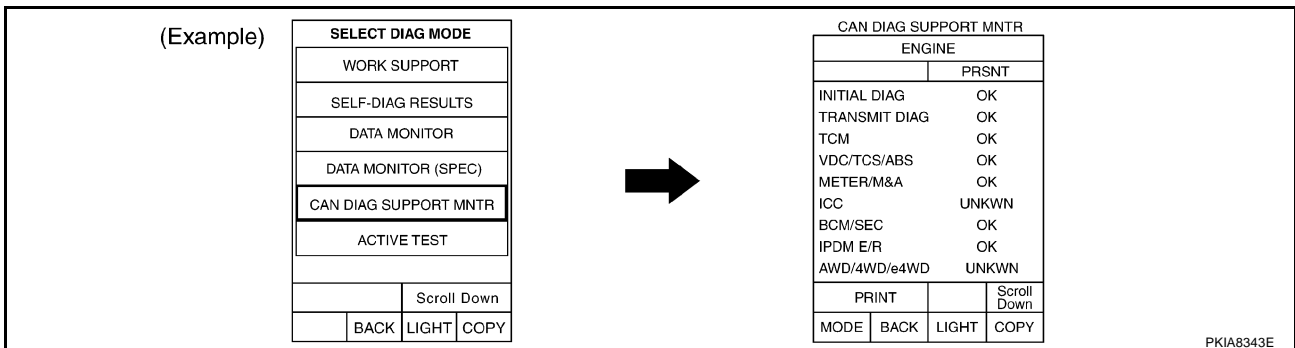
- When there are no indications of "TRANSMISSION", "BCM", "METER A/C AMP", or "IPDM E/R" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP", "ALL MODE AWD/4WD", "ABS", and "IPDM E/R" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP", "ALL MODE AWD/4WD", "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 [LAN-296, "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-296, "CHECK SHEET"](#) .

NOTE:

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual.
So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the integrated display system. Refer to [AV-101, "CAN Communication Line Check"](#) .
- Attach the CAN DIAG MONITOR check sheet onto the check sheet. Refer to [LAN-296, "CHECK SHEET"](#) .

CAN SYSTEM (TYPE 9)

[CAN]

8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG MONITOR check sheet. Refer to [LAN-296, "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-101, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-298, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

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CAN SYSTEM (TYPE 9)

[CAN]

CHECK SHEET

NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

Check sheet table

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	

Symptoms :

Attach copy of
SELECT SYSTEM

Attach copy of
SELECT SYSTEM

Attach copy of
display unit
CAN DIAG MONITOR check sheet

PKIA8476E

CAN SYSTEM (TYPE 9)

[CAN]

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Attach copy of
ENGINE
SELF-DIAG RESULTS

Attach copy of
TRANSMISSION
SELF-DIAG RESULTS

Attach copy of
BCM
SELF-DIAG RESULTS

Attach copy of
METER A/C AMP
SELF-DIAG RESULTS

Attach copy of
ALL MODE AWD/4WD
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
TRANSMISSION
CAN DIAG SUPPORT
MNTR

Attach copy of
BCM
CAN DIAG SUPPORT
MNTR

Attach copy of
METER A/C AMP
CAN DIAG SUPPORT
MNTR

Attach copy of
ALL MODE AWD/4WD
CAN DIAG SUPPORT
MNTR

Attach copy of
ABS
CAN DIAG SUPPORT
MNTR

Attach copy of
IPDM E/R
CAN DIAG SUPPORT
MNTR

PKIA8477E

CHECK SHEET RESULTS (EXAMPLE)

NOTE:

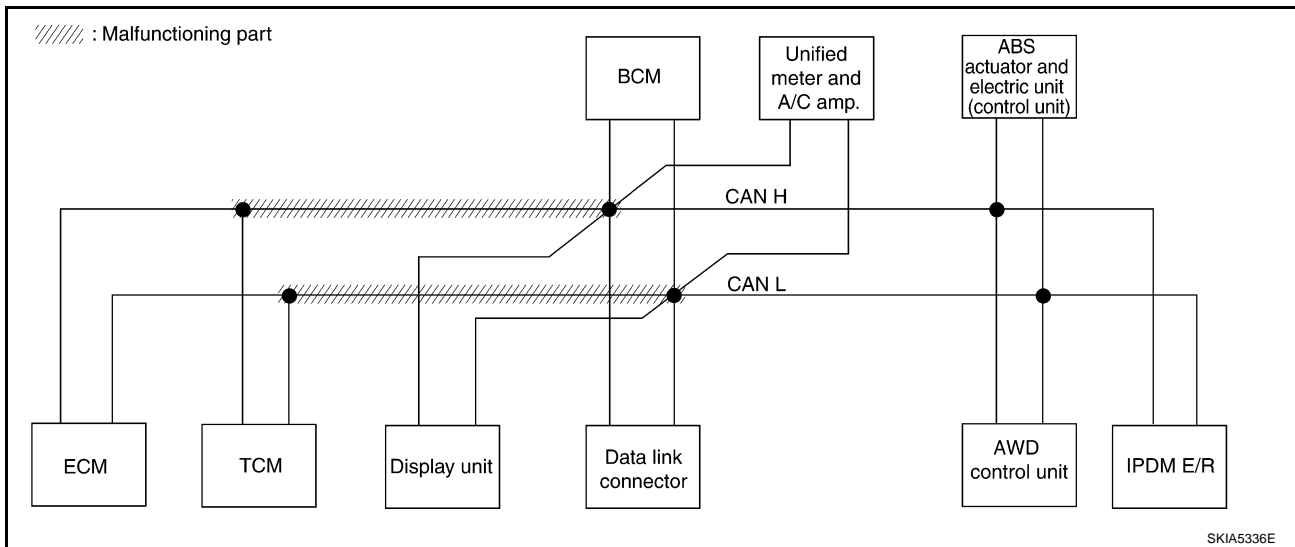
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

Case 1

Check harness between TCM and data link connector. Refer to [LAN-310, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	

PKIA8478E



CAN SYSTEM (TYPE 9)

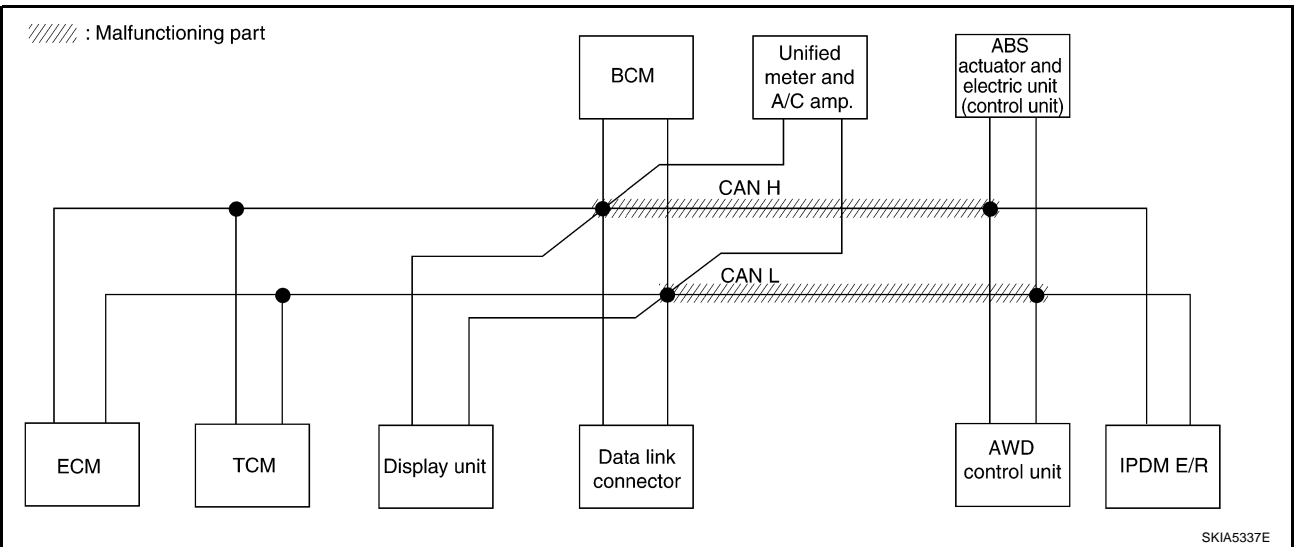
[CAN]

Case 2

Check harness between data link connector and ABS actuator and electric unit (control unit). Refer to [LAN-311, "Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit \(Control Unit\)"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—

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CAN SYSTEM (TYPE 9)

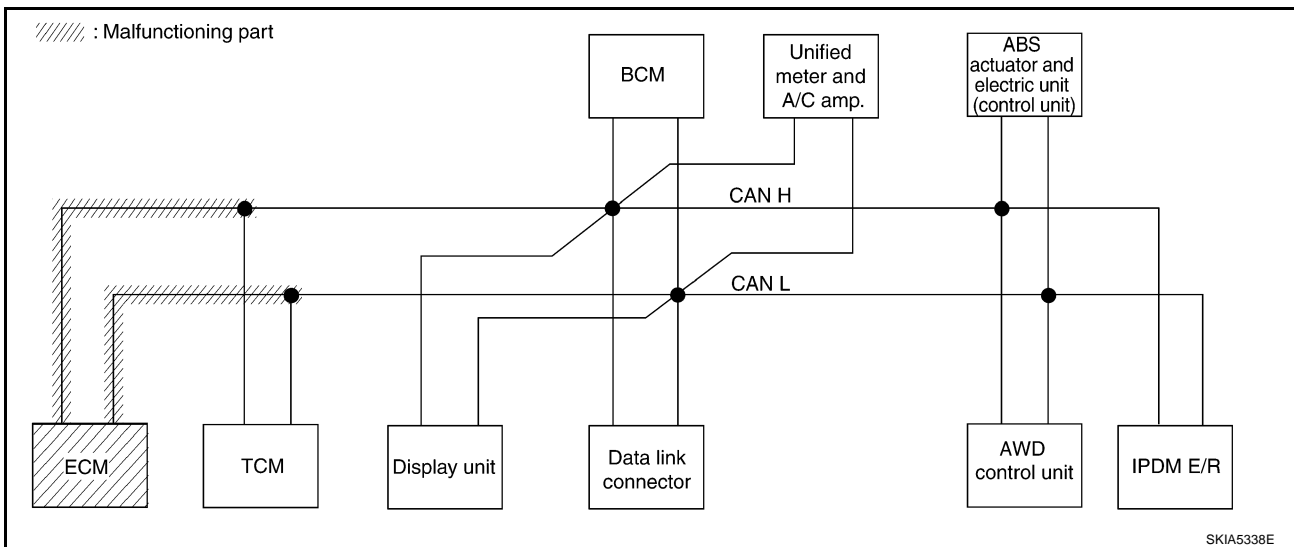
[CAN]

Case 3

Check ECM circuit. Refer to [LAN-312, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKW [✓] N	—	UNKW [✓] N	—	UNKW [✓] N	UNKW [✓] N	UNKW [✓] N	—	UNKW [✓] N	
TRANSMISSION	No indication	NG	UNKW [✓] N	UNKW [✓] N	—	—	—	UNKW [✓] N	—	UNKW [✓] N	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	No indication	NG	UNKW [✓] N	UNKW [✓] N	—	—	—	UNKW [✓] N	—	—	UNKW [✓] N	
METER A/C AMP	No indication	—	UNKW [✓] N	UNKW [✓] N	UNKW [✓] N	UNKW [✓] N	UNKW [✓] N	—	UNKW [✓] N	UNKW [✓] N	—	
ALL MODE AWD/4WD	—	NG	UNKW [✓] N	UNKW [✓] N	—	—	—	UNKW [✓] N	—	UNKW [✓] N	—	
ABS	—	NG	UNKW [✓] N	UNKW [✓] N	—	—	—	—	—	—	—	
IPDM E/R	No indication	—	UNKW [✓] N	UNKW [✓] N	—	—	UNKW [✓] N	—	—	—	—	

PKIA8480E



CAN SYSTEM (TYPE 9)

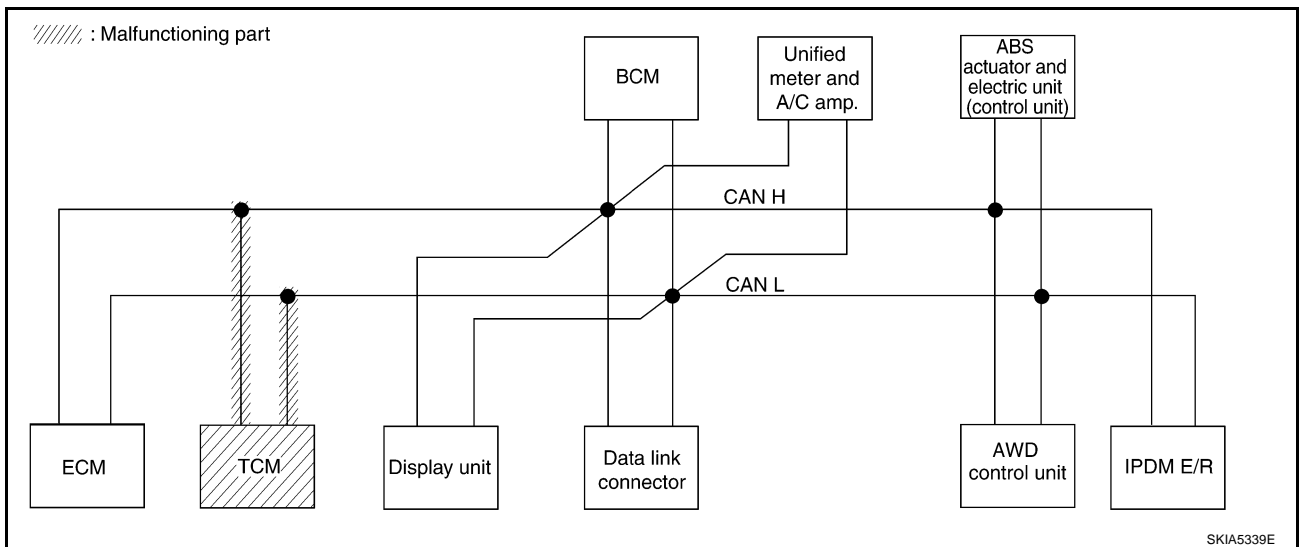
[CAN]

Case 4

Check TCM circuit. Refer to [LAN-312. "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—

PKIA8481E



CAN SYSTEM (TYPE 9)

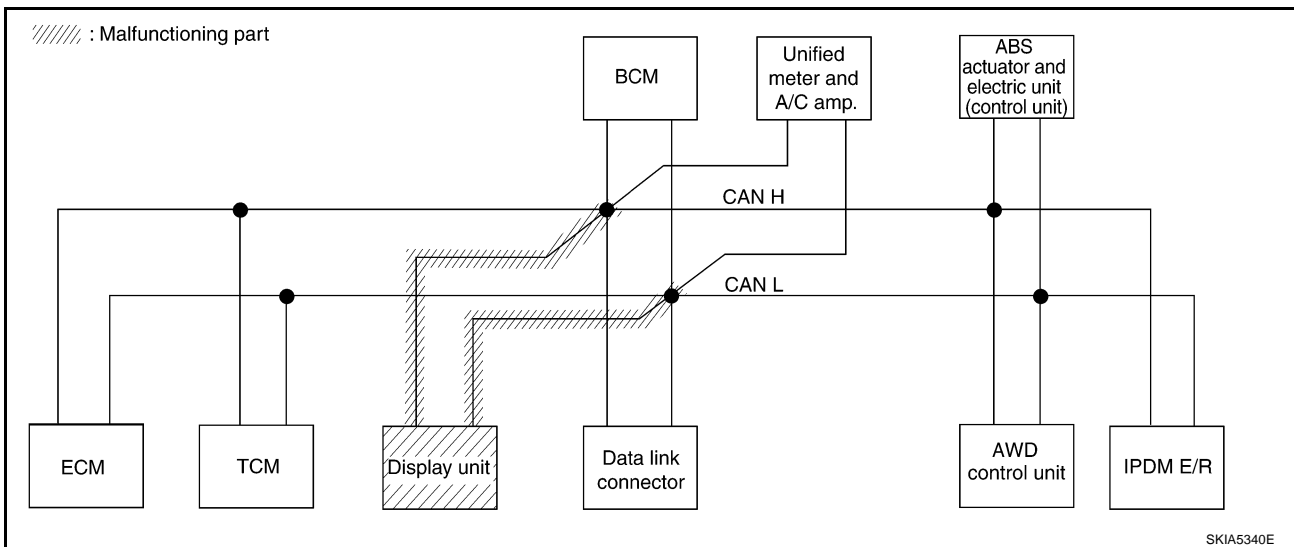
[CAN]

Case 5

Check display unit circuit. Refer to [LAN-313, "Display Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display unit	—	CAN COMM	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	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	

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CAN SYSTEM (TYPE 9)

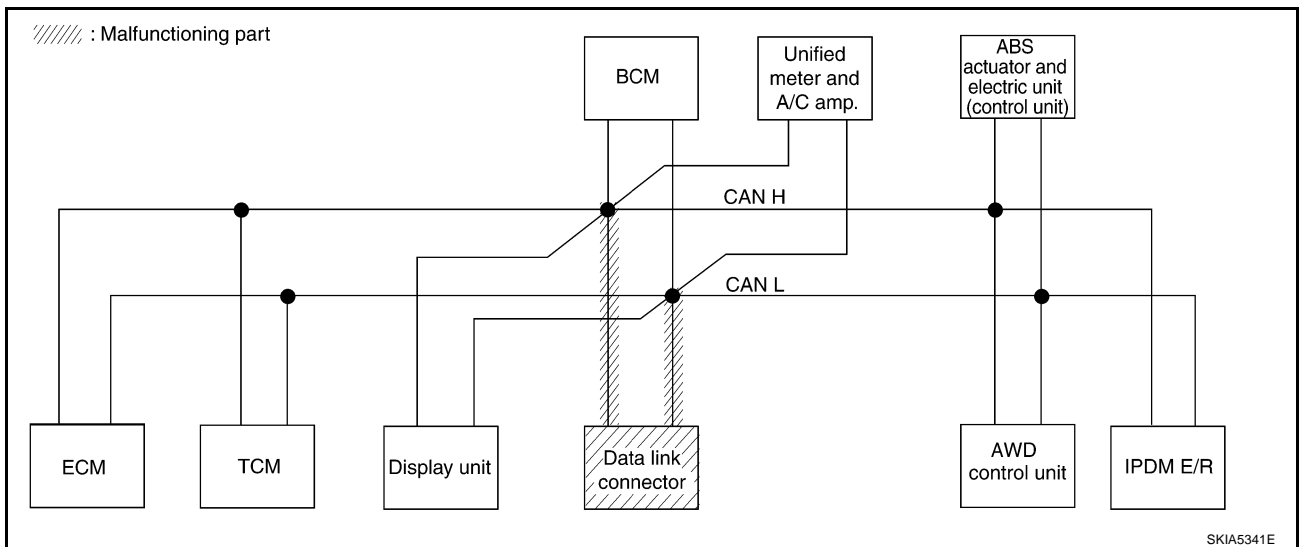
[CAN]

Case 6

Check data link connector circuit. Refer to [LAN-313, "Data Link Connector Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	

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CAN SYSTEM (TYPE 9)

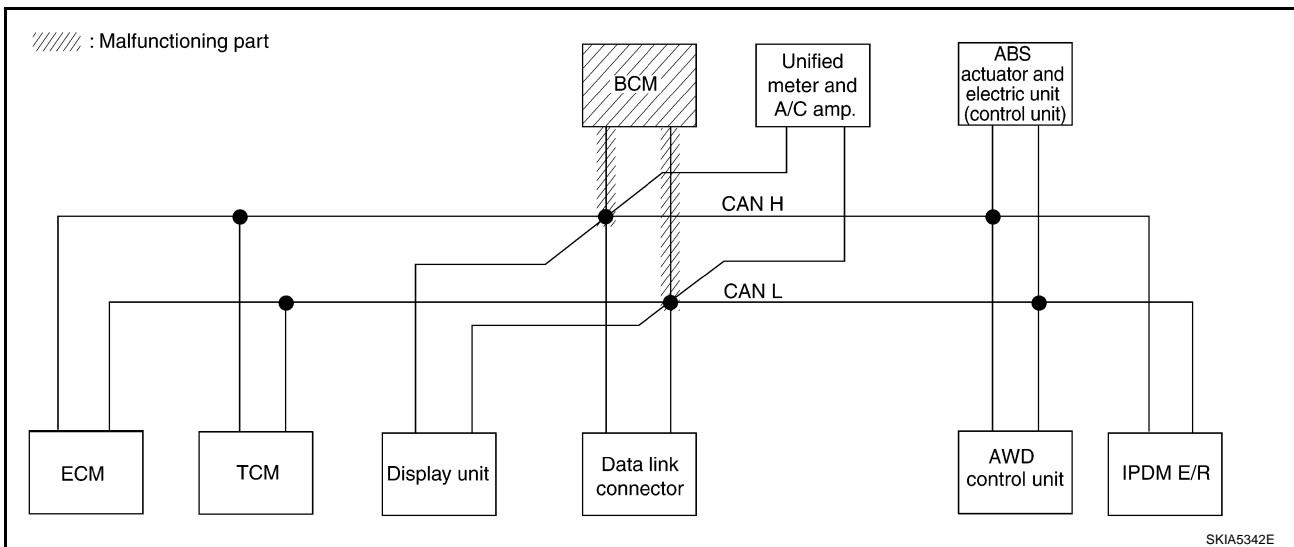
[CAN]

Case 7

Check BCM circuit. Refer to [LAN-314, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	

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CAN SYSTEM (TYPE 9)

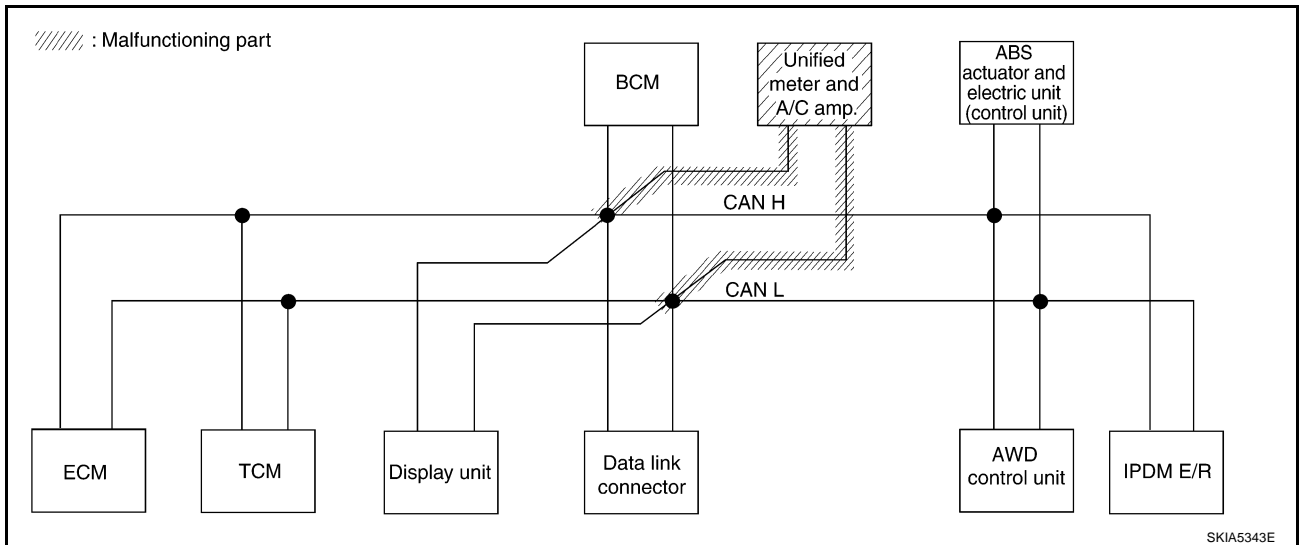
[CAN]

Case 8

Check unified meter and A/C amp. circuit. Refer to [LAN-314, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—

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CAN SYSTEM (TYPE 9)

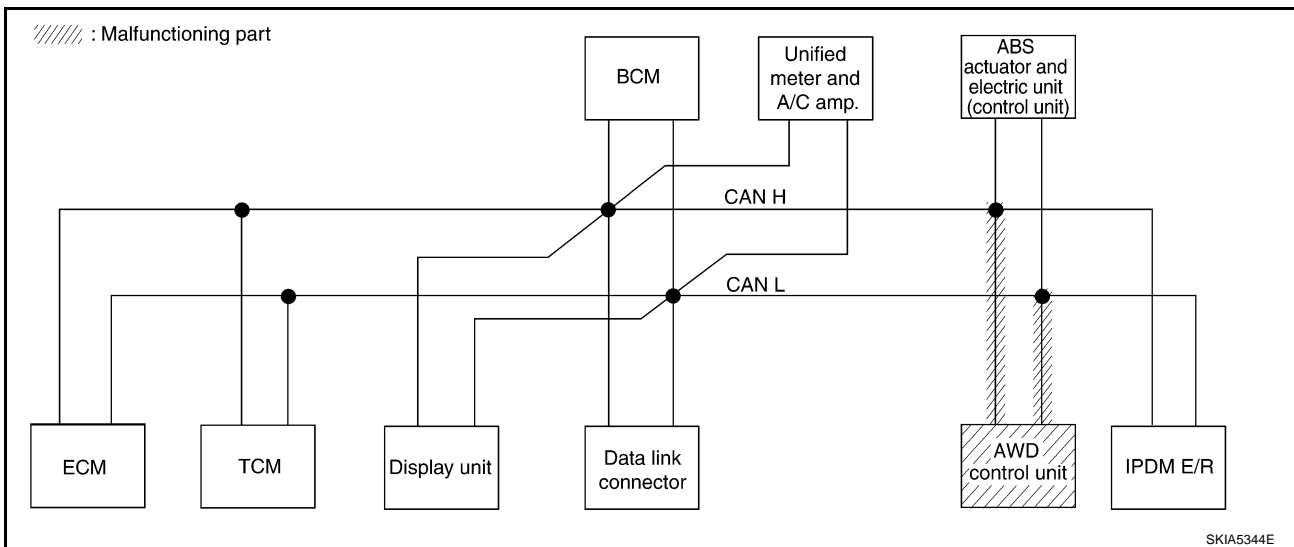
[CAN]

Case 9

Check AWD control unit circuit. Refer to [LAN-315. "AWD Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	—

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CAN SYSTEM (TYPE 9)

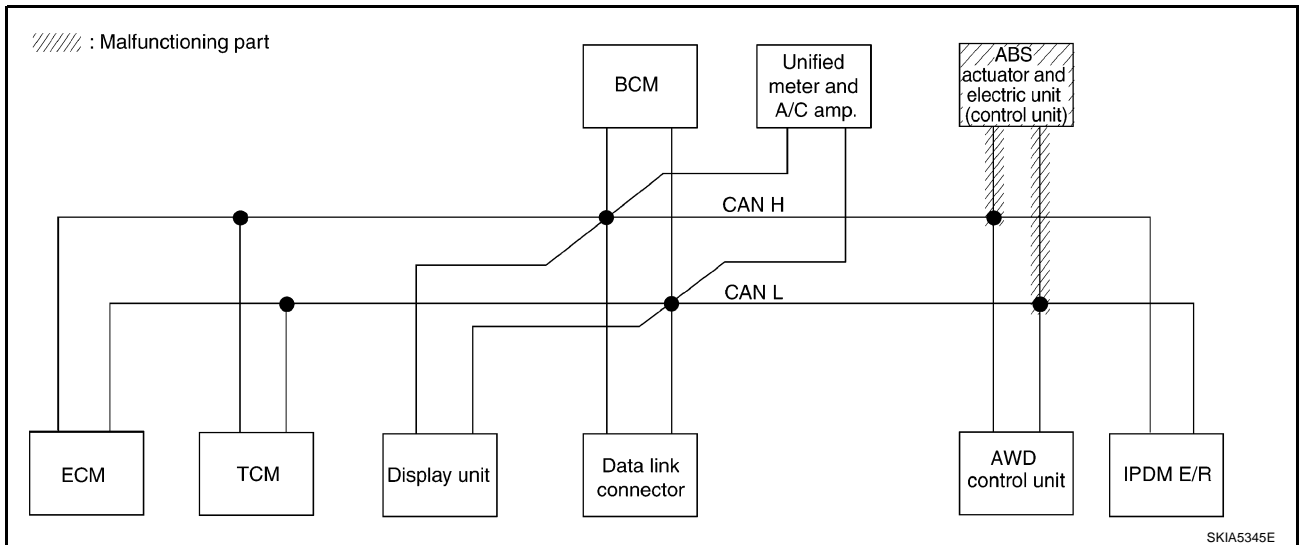
[CAN]

Case 10

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-315, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—

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CAN SYSTEM (TYPE 9)

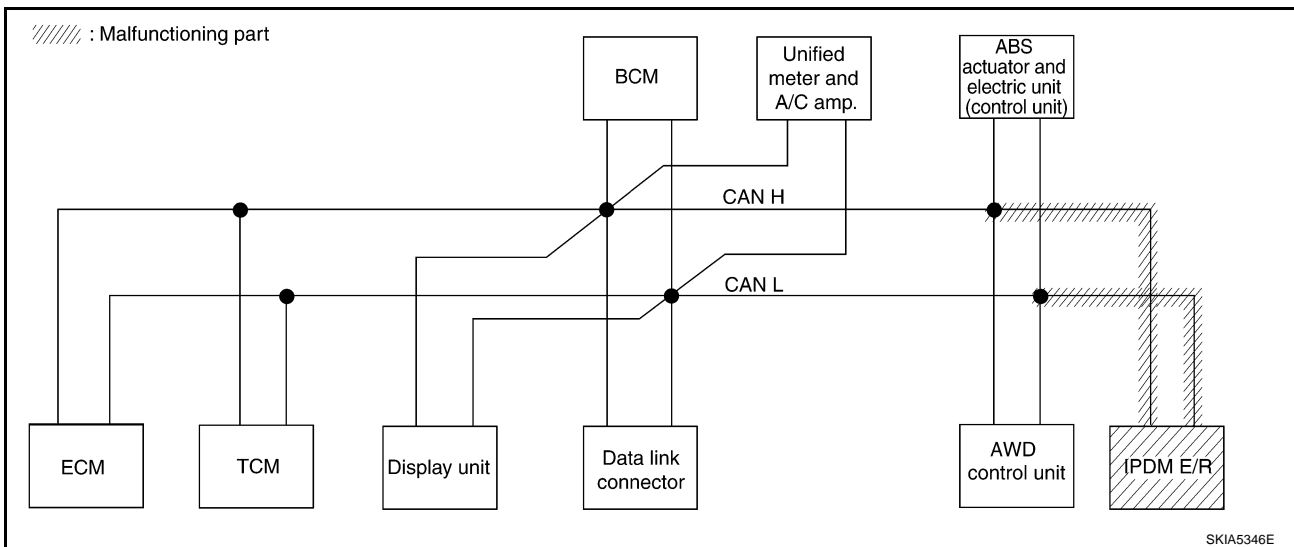
[CAN]

Case 11

Check IPDM E/R circuit. Refer to [LAN-316, "IPDM E/R Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN ✓
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7 ✓
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN ✓
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—

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SKIA5346E

CAN SYSTEM (TYPE 9)

[CAN]

Case 12

Check CAN communication circuit. Refer to [LAN-317, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								IPDM E/R
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS		
ENGINE	—	NG	UNKW N	—	UNKW N	—	UNKW N	UNKW N	UNKW N	—	UNKW N	
TRANSMISSION	No indication ✓	NG	UNKW N	UNKW N	—	—	—	UNKW N	—	UNKW N	—	
Display unit	—	CAN COMM	CAN 1 ✓	CAN 3 ✓	—	—	CAN 2 ✓	CAN 5 ✓	—	—	CAN 7 ✓	
BCM	No indication ✓	NG	UNKW N	UNKW N	—	—	—	UNKW N	—	—	UNKW N	
METER A/C AMP	No indication ✓	—	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N	—	UNKW N	UNKW N	—	
ALL MODE AWD/4WD	—	NG	UNKW N	UNKW N	—	—	—	UNKW N	—	UNKW N	—	
ABS	—	NG ✓	UNKW N	UNKW N	—	—	—	—	—	—	—	
IPDM E/R	No indication ✓	—	UNKW N	UNKW N	—	—	UNKW N	—	—	—	—	

PKIA8489E

Case 13

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-320, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								IPDM E/R
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS		
ENGINE	—	NG	UNKW N	—	UNKW N	—	UNKW N	UNKW N	UNKW N	—	UNKW N	
TRANSMISSION	No indication	NG	UNKW N	UNKW N	—	—	—	UNKW N	—	UNKW N	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	No indication	NG	UNKW N	UNKW N	—	—	—	UNKW N	—	—	UNKW N	
METER A/C AMP	No indication	—	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N	—	UNKW N	UNKW N	—	
ALL MODE AWD/4WD	—	NG	UNKW N	UNKW N	—	—	—	UNKW N	—	UNKW N	—	
ABS	—	NG	UNKW N	UNKW N	—	—	—	—	—	—	—	
IPDM E/R	No indication	—	UNKW N	UNKW N	—	—	UNKW N	—	—	—	—	

PKIA8490E

Case 14

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-320, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	

PKIA8491E

Circuit Check Between TCM and Data Link Connector

AKS00AGY

1. CHECK HARNESS FOR OPEN CIRCUIT

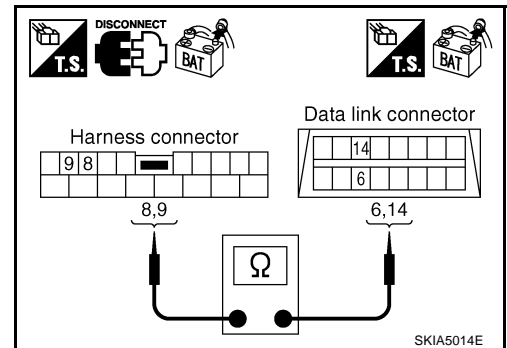
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

8 (L) - 6 (L) : Continuity should exist.

9 (Y) - 14 (Y) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-294, "Work Flow"](#) .
- NG >> Repair harness.



Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit)

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M9
 - Harness connector B2
 - Harness connector B4
 - Harness connector E105

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

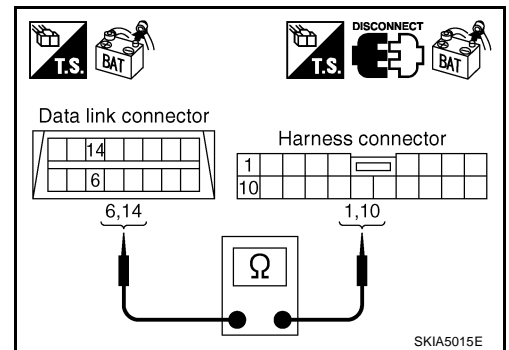
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

6 (L) - 1 (L) : Continuity should exist.
14 (Y) - 10 (Y) : Continuity should exist.

OK or NG

- OK >> GO TO 3.
 NG >> Repair harness.



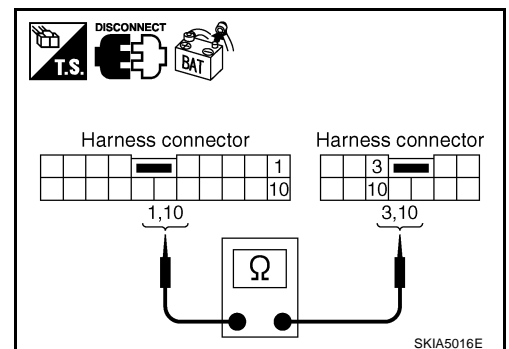
3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

1 (L) - 3 (L) : Continuity should exist.
10 (Y) - 10 (Y) : Continuity should exist.

OK or NG

- OK >> GO TO 4.
 NG >> Repair harness.



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4. CHECK HARNESS FOR OPEN CIRCUIT

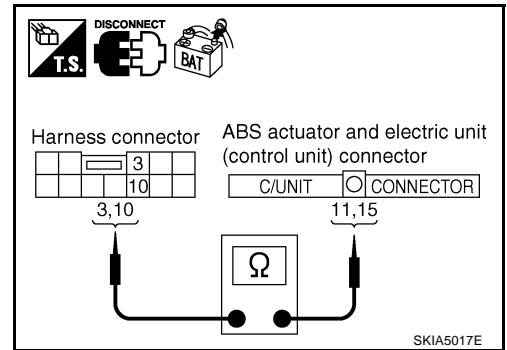
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

3 (L) - 11 (L) : Continuity should exist.

10 (Y) - 15 (Y) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-294, "Work Flow"](#) .
- NG >> Repair harness.



SKIA5017E

AKS00AH0

ECM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

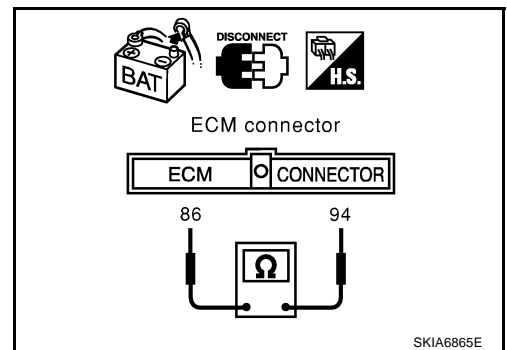
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

94 (L) - 86 (Y) : Approx. 108 - 132Ω

OK or NG

- OK >> Replace ECM.
- NG >> Repair harness between ECM and TCM.



SKIA6865E

AKS00AH1

TCM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
 - TCM connector
 - Harness connector F102
 - Harness connector M82

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

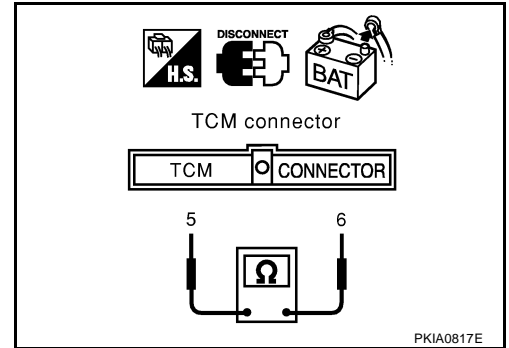
1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

5 (L) - 6 (Y)

: Approx. 54 - 66Ω

OK or NG

- OK >> Replace TCM.
 NG >> Repair harness between TCM and ECM.



AKS00AH2

Display Unit Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display unit for damage, bend and loose connection (unit side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

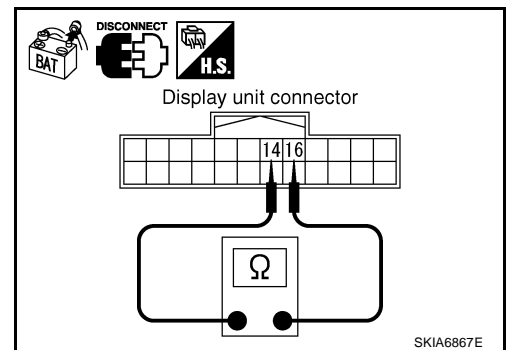
1. Disconnect display unit connector.
2. Check resistance between display unit harness connector M39 terminals 14 (L) and 16 (Y).

14 (L) - 16 (Y)

: Approx. 54 - 66Ω

OK or NG

- OK >> Replace display unit.
 NG >> Repair harness between display unit and data link connector.



AKS00AH3

Data Link Connector Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

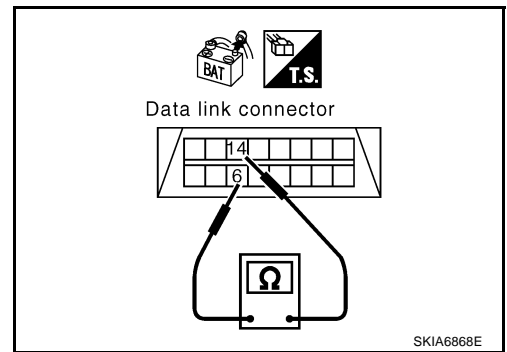
2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

6 (L) - 14 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Diagnose again. Refer to [LAN-294, "Work Flow"](#).
 NG >> Repair harness between data link connector and BCM.



BCM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

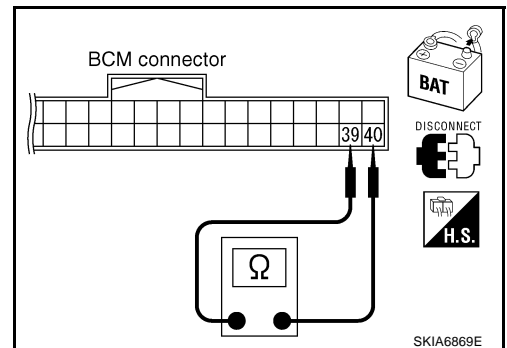
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M34 terminals 39 (L) and 40 (Y).

39 (L) - 40 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace BCM. Refer to [BCS-14, "Removal and Installation of BCM"](#).
 NG >> Repair harness between BCM and data link connector.



Unified Meter and A/C Amp. Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

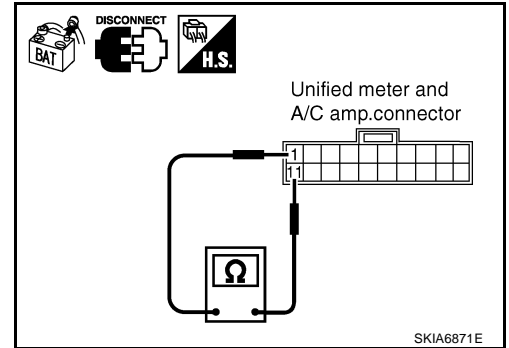
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

1 (L) - 11 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace unified meter and A/C amp.
 NG >> Repair harness between unified meter and A/C amp. and data link connector.



AKS00AH6

AWD Control Unit Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of AWD control unit for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

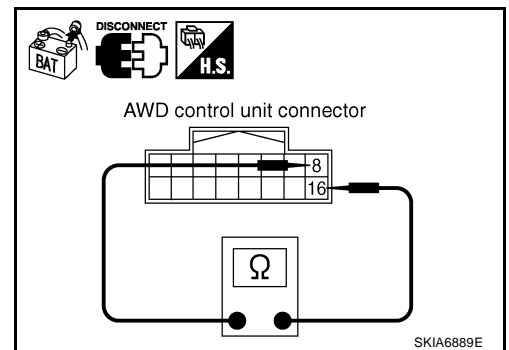
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect AWD control unit connector.
2. Check resistance between AWD control unit harness connector E111 terminals 8 (L) and 16 (Y).

8 (L) - 16 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace AWD control unit.
 NG >> Repair harness between AWD control unit and IPDM E/R.



AKS00AH7

ABS Actuator and Electric Unit (Control Unit) Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

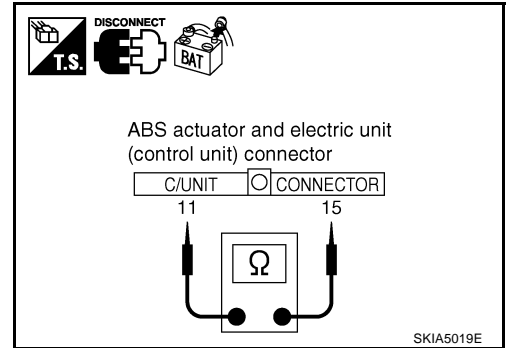
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

11 (L) - 15 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



IPDM E/R Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

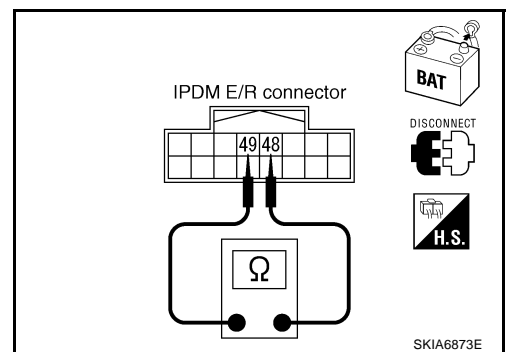
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

48 (L) - 49 (Y) : Approx. 108 - 132Ω

OK or NG

- OK >> Replace IPDM E/R.
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



CAN Communication Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, unit side, meter side, control unit side and harness side).
 - ECM
 - TCM
 - Display unit
 - BCM
 - Unified meter and A/C amp.
 - AWD control unit
 - ABS actuator and electric unit (control unit)
 - IPDM E/R
 - Between ECM and IPDM E/R
 - Between ECM and TCM

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

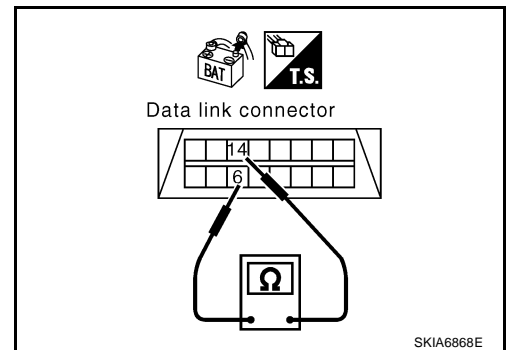
2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
 - ECM connector
 - Harness connector M82
 - Display unit connector
 - BCM connector
 - Unified meter and A/C amp. connector
 - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

6 (L) - 14 (Y) : Continuity should not exist.

OK or NG

- OK >> GO TO 3.
 NG >> Check the following harnesses. If any harness is damaged, repair the harness.
- Harness between data link connector and ECM
 - Harness between data link connector and harness connector M82
 - Harness between data link connector and display unit
 - Harness between data link connector and BCM
 - Harness between data link connector and unified meter and A/C amp.
 - Harness between data link connector and harness connector M9



3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

6 (L) - Ground : Continuity should not exist.

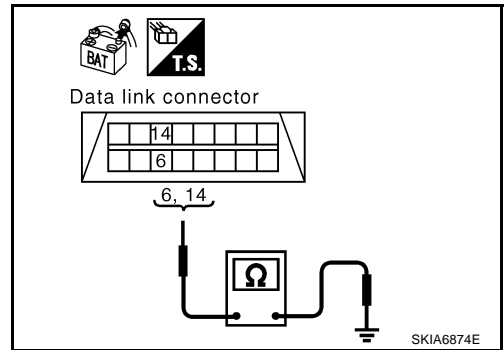
14 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM
- Harness between data link connector and harness connector M82
- Harness between data link connector and display unit
- Harness between data link connector and BCM
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9



4. CHECK HARNESS FOR SHORT CIRCUIT

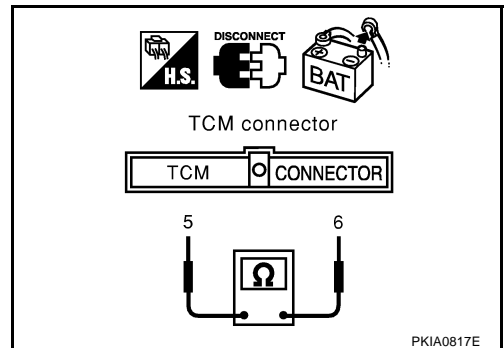
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

5 (L) - 6 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 5.

NG >> Repair harness between TCM and harness connector F102.



5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

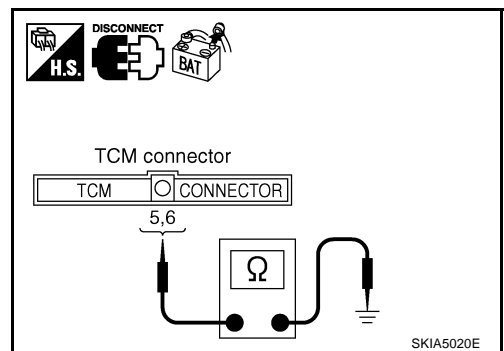
5 (L) - Ground : Continuity should not exist.

6 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 6.

NG >> Repair harness between TCM and harness connector F102.



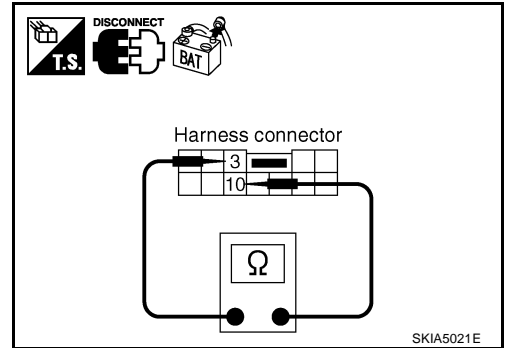
6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B4.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

3 (L) - 10 (Y) : Continuity should not exist.

OK or NG

- OK >> GO TO 7.
 NG >> Repair harness between harness connector B4 and harness connector B2.



7. CHECK HARNESS FOR SHORT CIRCUIT

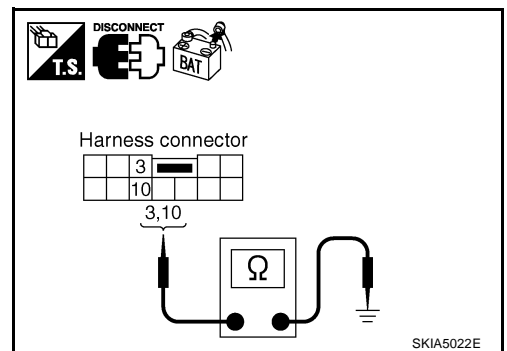
Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

3 (L) - Ground : Continuity should not exist.

10 (Y) - Ground : Continuity should not exist.

OK or NG

- OK >> GO TO 8.
 NG >> Repair harness between harness connector B4 and harness connector B2.



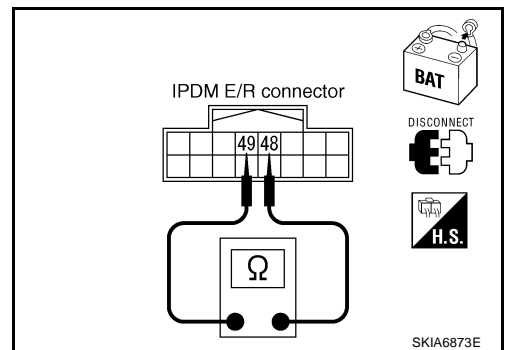
8. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect AWD control unit connector, ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

48 (L) - 49 (Y) : Continuity should not exist.

OK or NG

- OK >> GO TO 9.
 NG >> Check the following harnesses. If any harness is damaged, repair the harness.
- Harness between IPDM E/R and AWD control unit
 - Harness between IPDM E/R and ABS actuator and electric unit (control unit)
 - Harness between IPDM E/R and harness connector E105



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9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

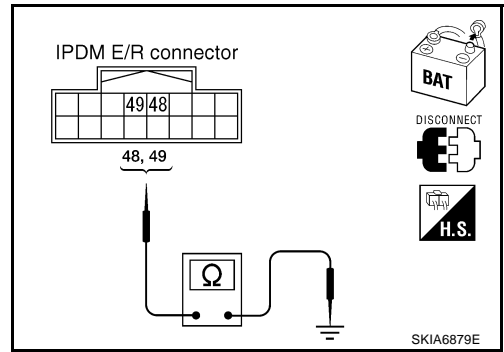
- 48 (L) - Ground : Continuity should not exist.**
- 49 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 10.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit
- Harness between IPDM E/R and ABS actuator and electric unit (control unit)
- Harness between IPDM E/R and harness connector E105



10. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-320, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#) .

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-294, "Work Flow"](#) .

NG >> Replace ECM and/or IPDM E/R.

IPDM E/R Ignition Relay Circuit Check

AKS00AHA

Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-27, "IPDM E/R Power/Ground Circuit Inspection"](#) .
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START""](#) .

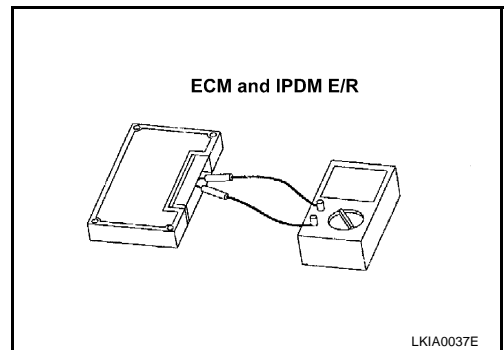
Component Inspection

ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

AKS00AHB

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



CAN SYSTEM (TYPE 10)

PPF:23710

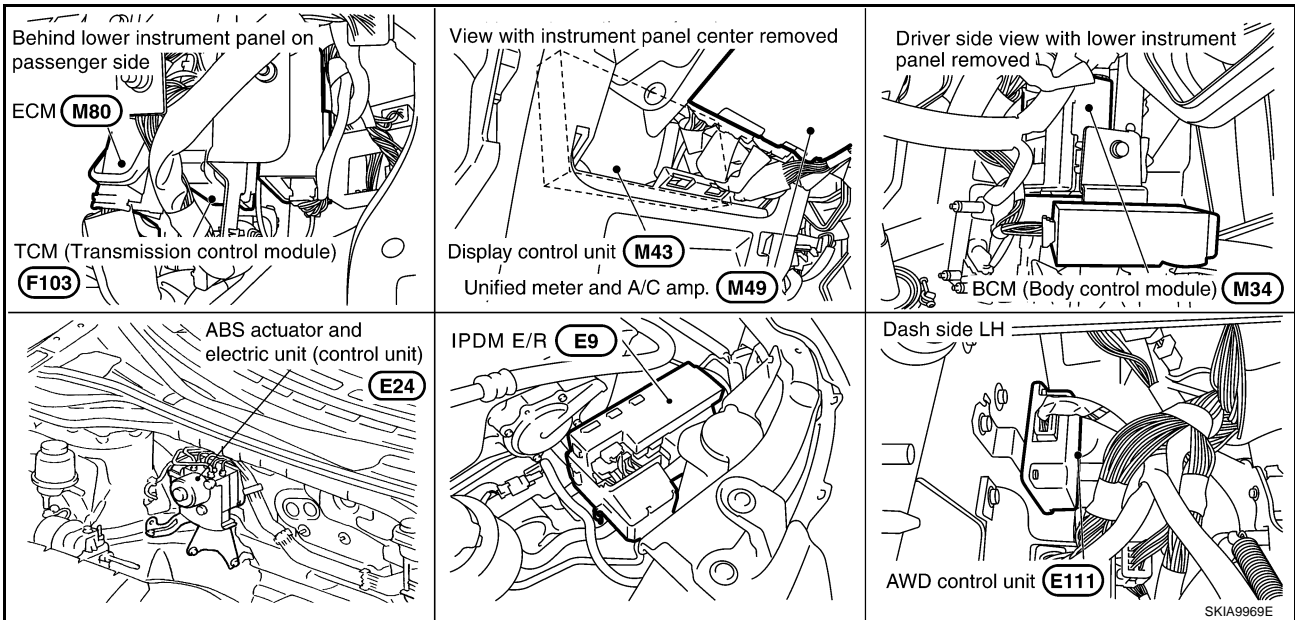
System Description

AKS00AHC

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

AKS00AHD



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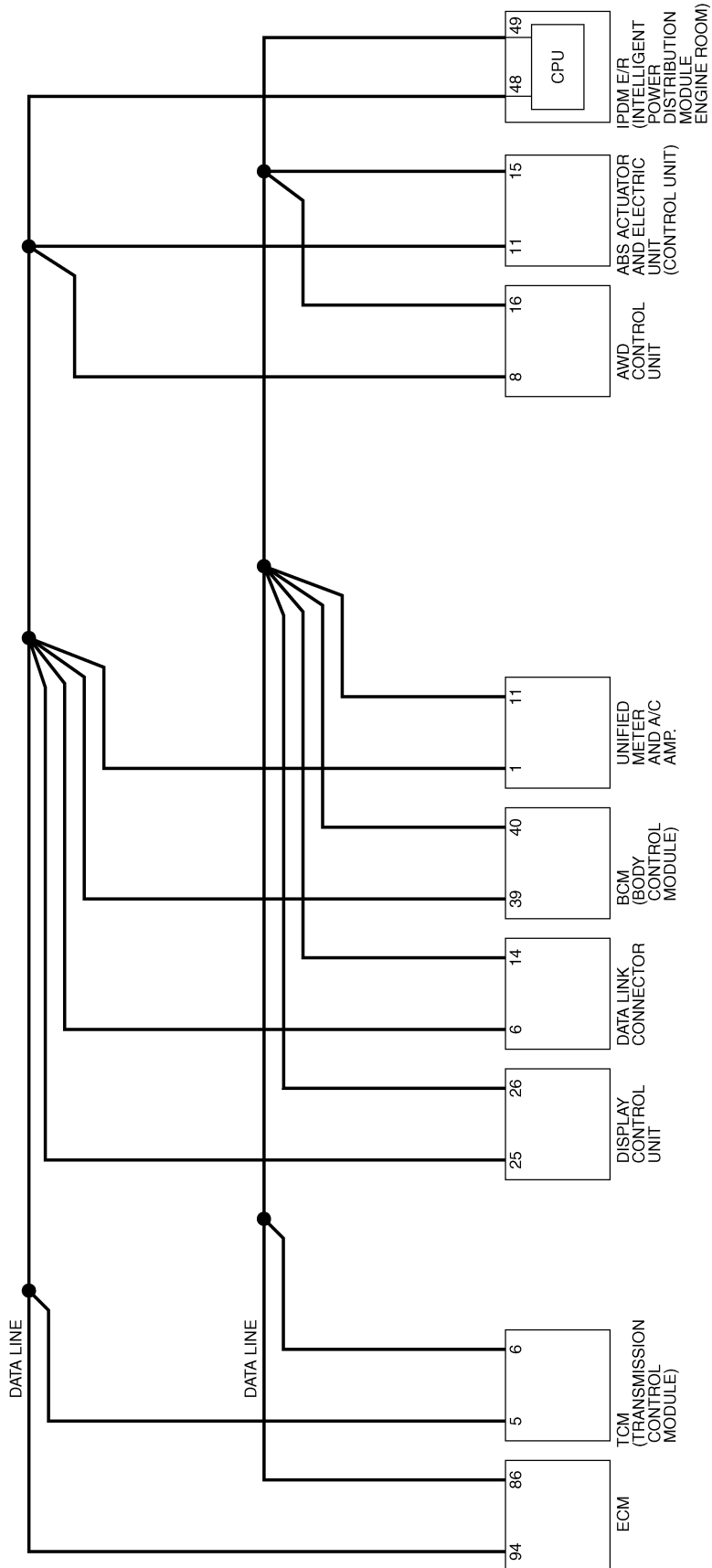
L
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CAN SYSTEM (TYPE 10)

[CAN]

Schematic

AKS00AHE



TKWB0041E

CAN SYSTEM (TYPE 10)

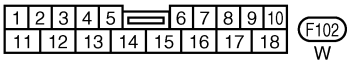
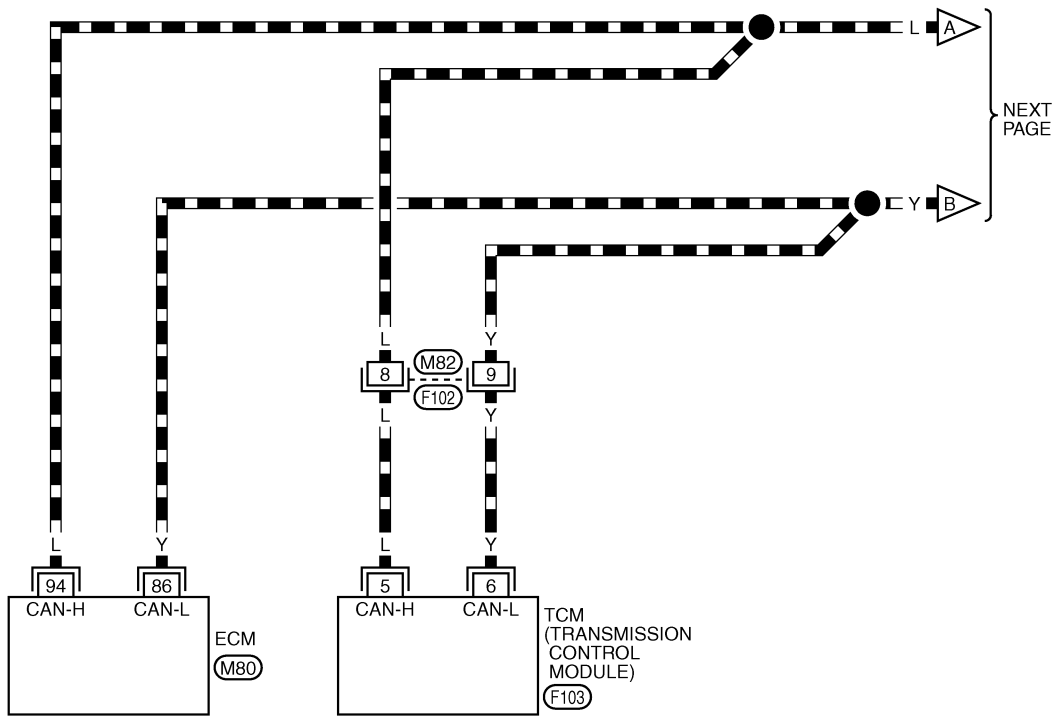
[CAN]

Wiring Diagram - CAN -

AKS00AHF

LAN-CAN-28

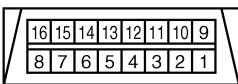
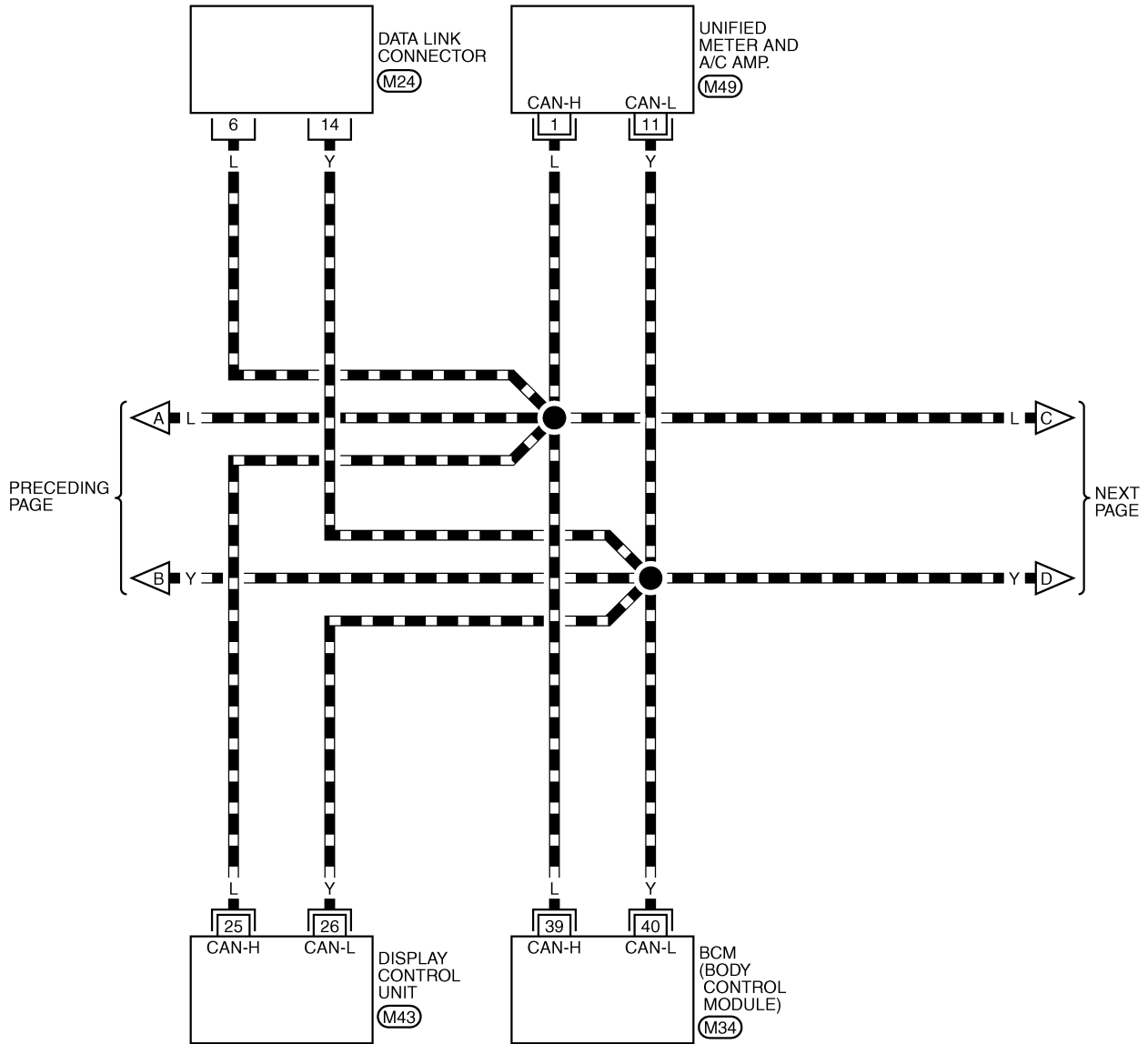
▬ : DATA LINE



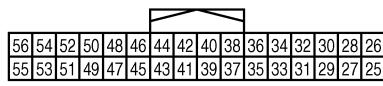
REFER TO THE FOLLOWING.
 (M80), (F103) -ELECTRICAL
 UNITS

TKWB0042E

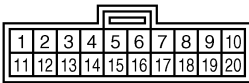
▬ : DATA LINE



(M24)
W



(M43)
W



(M49)
GR



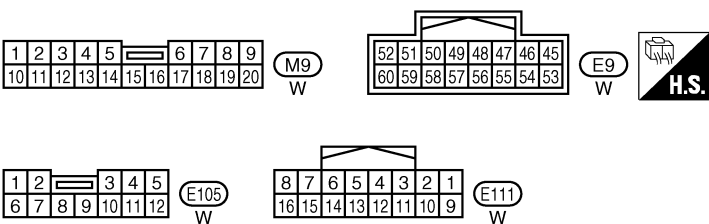
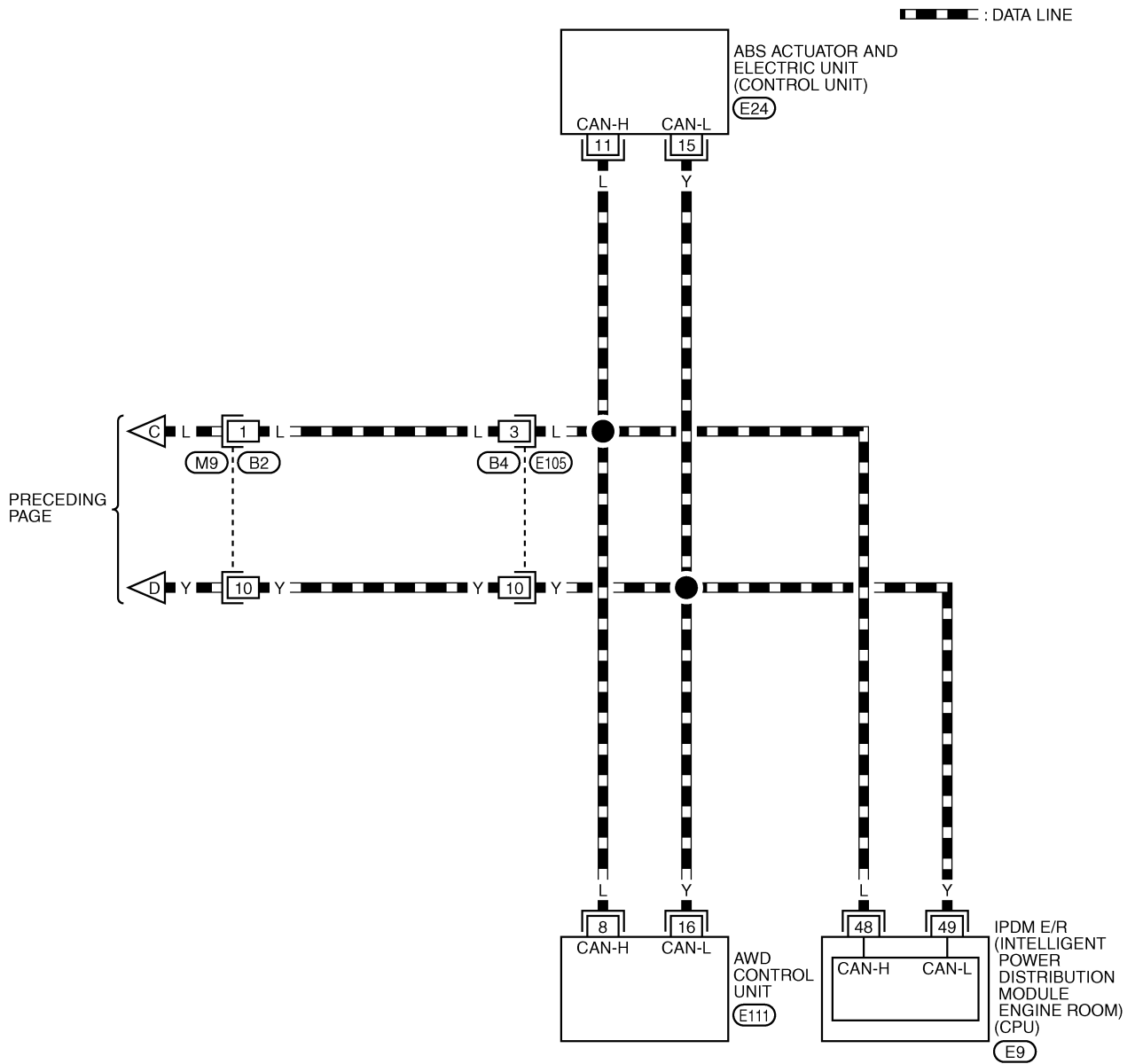
REFER TO THE FOLLOWING.

(M34) -ELECTRICAL UNITS

CAN SYSTEM (TYPE 10)

[CAN]

LAN-CAN-30

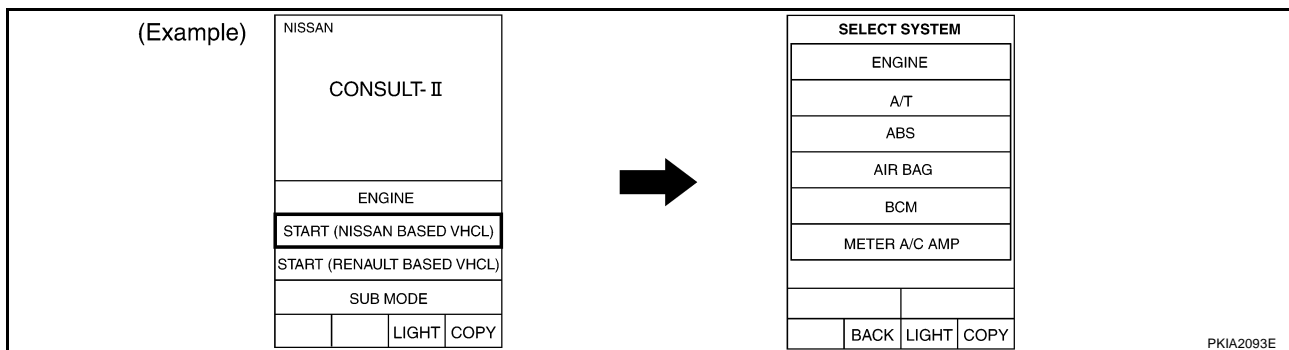


REFER TO THE FOLLOWING.
 (E24) -ELECTRICAL UNITS

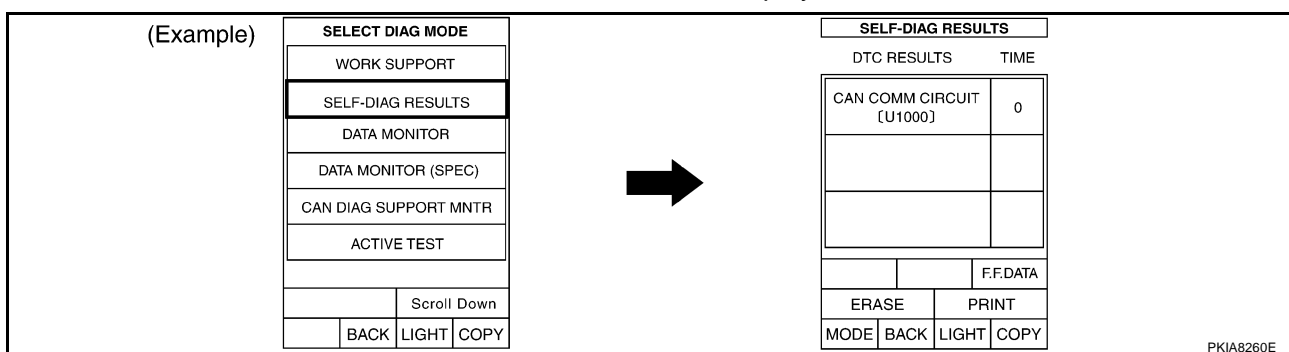
TKWB0044E

Work Flow

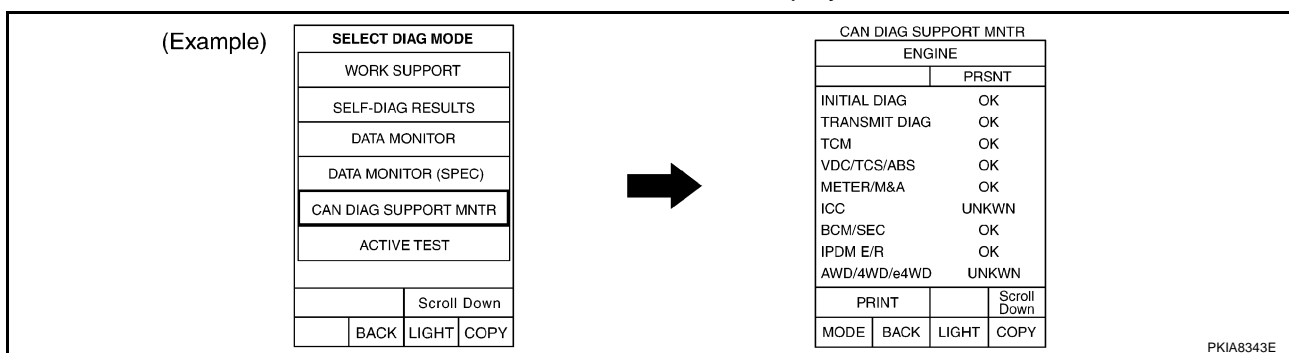
- When there are no indications of "TRANSMISSION", "BCM", "METER A/C AMP", or "IPDM E/R" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP", "ALL MODE AWD/4WD", "ABS", and "IPDM E/R" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP", "ALL MODE AWD/4WD", "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 [LAN-328, "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-328, "CHECK SHEET"](#) .

NOTE:

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual. So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the navigation system. Refer to [AV-175, "CAN Communication Line Check"](#) .
- Attach the CAN DIAG SUPPORT MONITOR check sheet onto the check sheet. Refer to [LAN-328, "CHECK SHEET"](#) .

CAN SYSTEM (TYPE 10)

[CAN]

8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG SUPPORT MONITOR check sheet. Refer to [LAN-328, "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-175, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-330, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

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CAN SYSTEM (TYPE 10)

[CAN]

CHECK SHEET

NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—

Symptoms :

Attach copy of
SELECT SYSTEM

Attach copy of
SELECT SYSTEM

Attach copy of
display control unit
CAN DIAG SUPPORT MONITOR check sheet

PKIA8492E

CAN SYSTEM (TYPE 10)

[CAN]

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Attach copy of
ENGINE
SELF-DIAG RESULTS

Attach copy of
TRANSMISSION
SELF-DIAG RESULTS

Attach copy of
BCM
SELF-DIAG RESULTS

Attach copy of
METER A/C AMP
SELF-DIAG RESULTS

Attach copy of
ALL MODE AWD/4WD
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
TRANSMISSION
CAN DIAG SUPPORT
MNTR

Attach copy of
BCM
CAN DIAG SUPPORT
MNTR

Attach copy of
METER A/C AMP
CAN DIAG SUPPORT
MNTR

Attach copy of
ALL MODE AWD/4WD
CAN DIAG SUPPORT
MNTR

Attach copy of
ABS
CAN DIAG SUPPORT
MNTR

Attach copy of
IPDM E/R
CAN DIAG SUPPORT
MNTR

PKIA8477E

CHECK SHEET RESULTS (EXAMPLE)

NOTE:

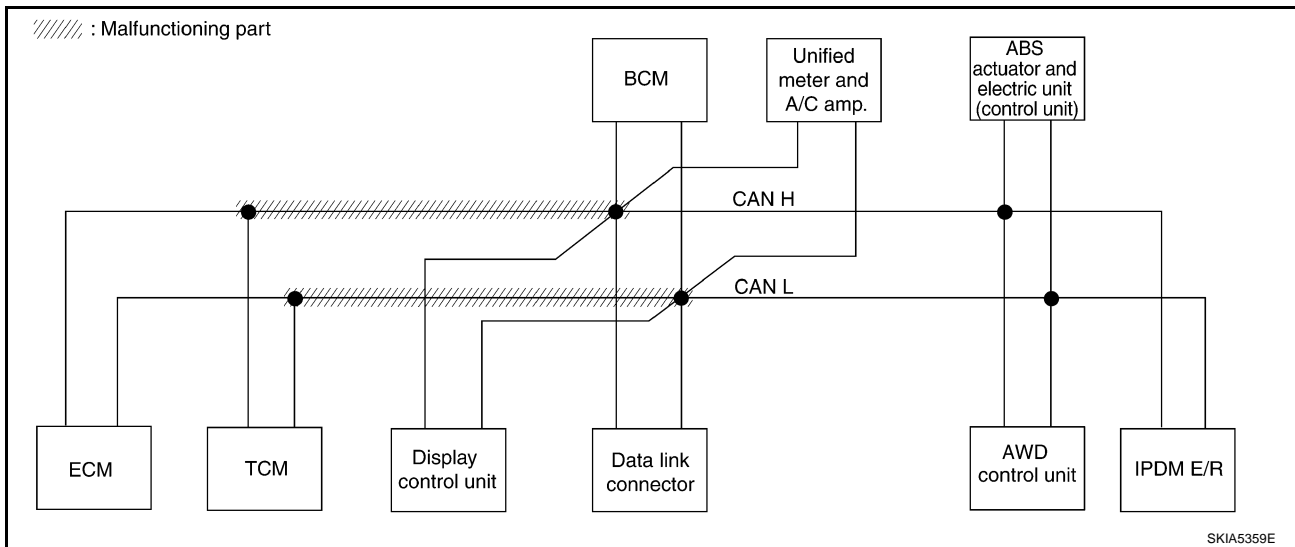
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

Case 1

Check harness between TCM and data link connector. Refer to [LAN-342, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—

PKIA8493E



CAN SYSTEM (TYPE 10)

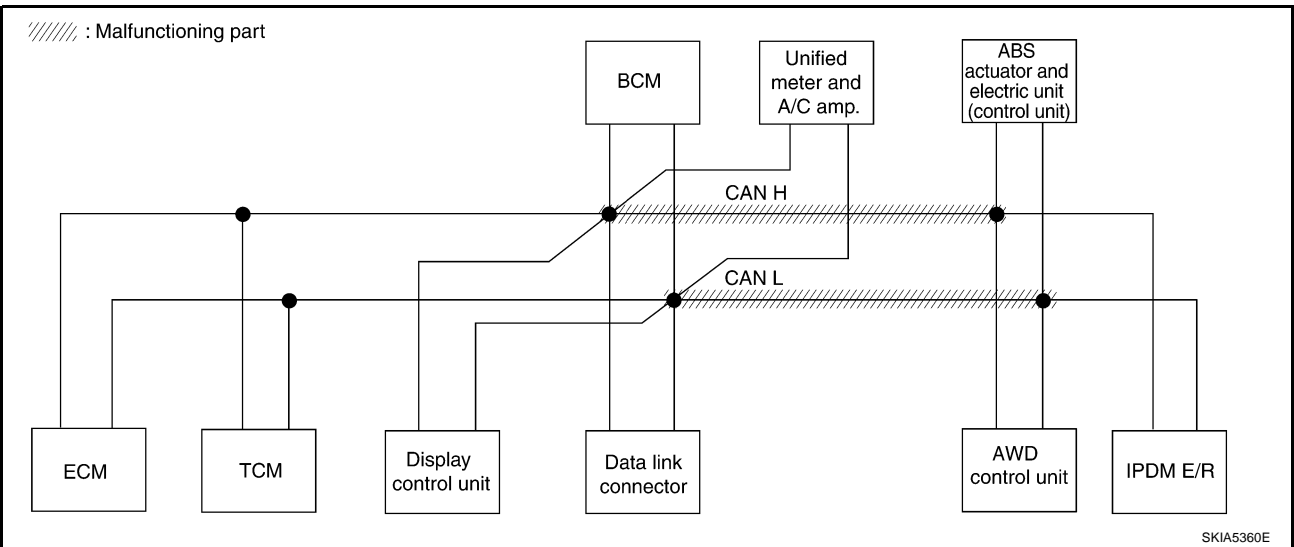
[CAN]

Case 2

Check harness between data link connector and ABS actuator and electric unit (control unit). Refer to [LAN-343, "Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit \(Control Unit\)"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	

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CAN SYSTEM (TYPE 10)

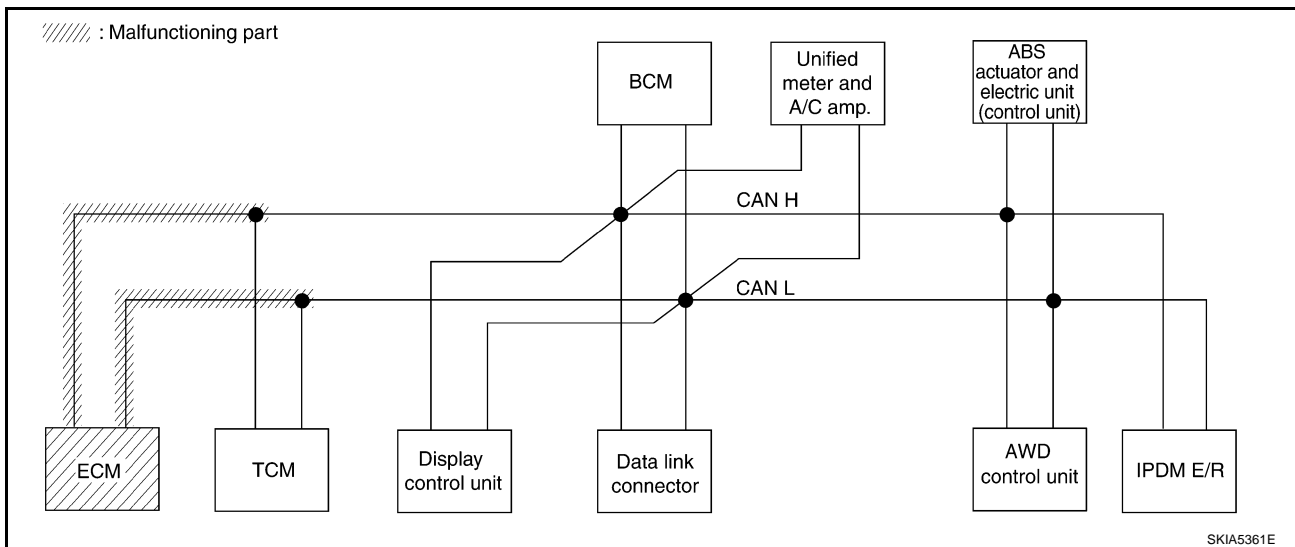
[CAN]

Case 3

Check ECM circuit. Refer to [LAN-344, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN ✓	—	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	UNKWN ✓	—	UNKWN ✓	
TRANSMISSION	No indication	NG	UNKWN	UNKWN ✓	—	—	—	UNKWN	—	UNKWN	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	No indication	NG	UNKWN	UNKWN ✓	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN ✓	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN ✓	—	—	—	UNKWN	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN ✓	—	—	—	—	—	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN ✓	—	—	UNKWN	—	—	—	—	

PKIA8495E



CAN SYSTEM (TYPE 10)

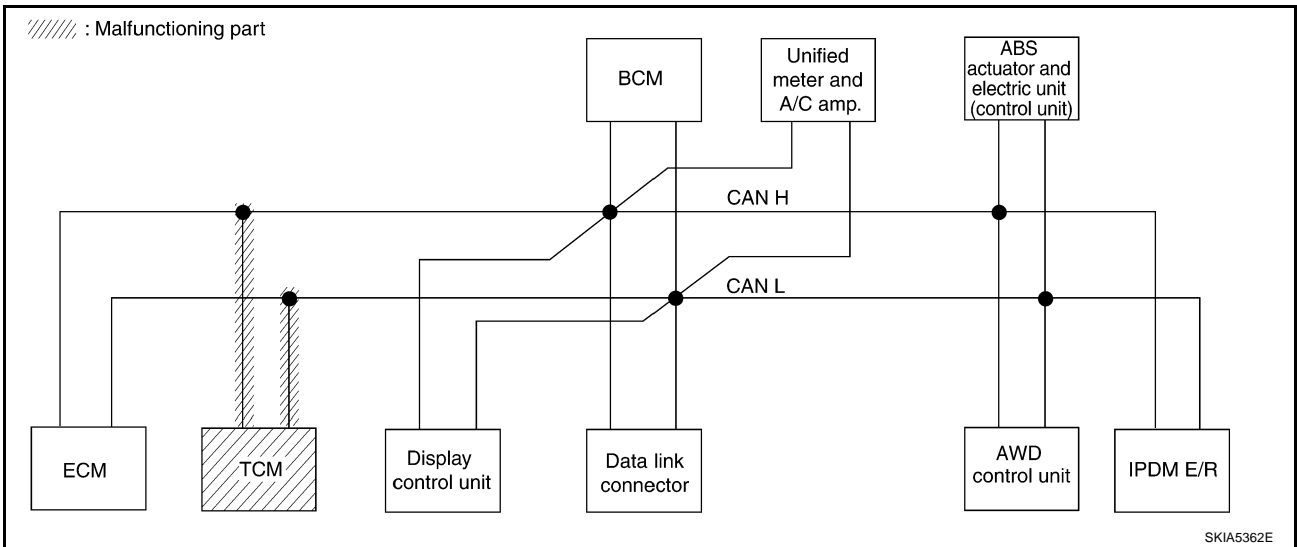
[CAN]

Case 4

Check TCM circuit. Refer to [LAN-344, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN ✓	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN ✓	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—

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CAN SYSTEM (TYPE 10)

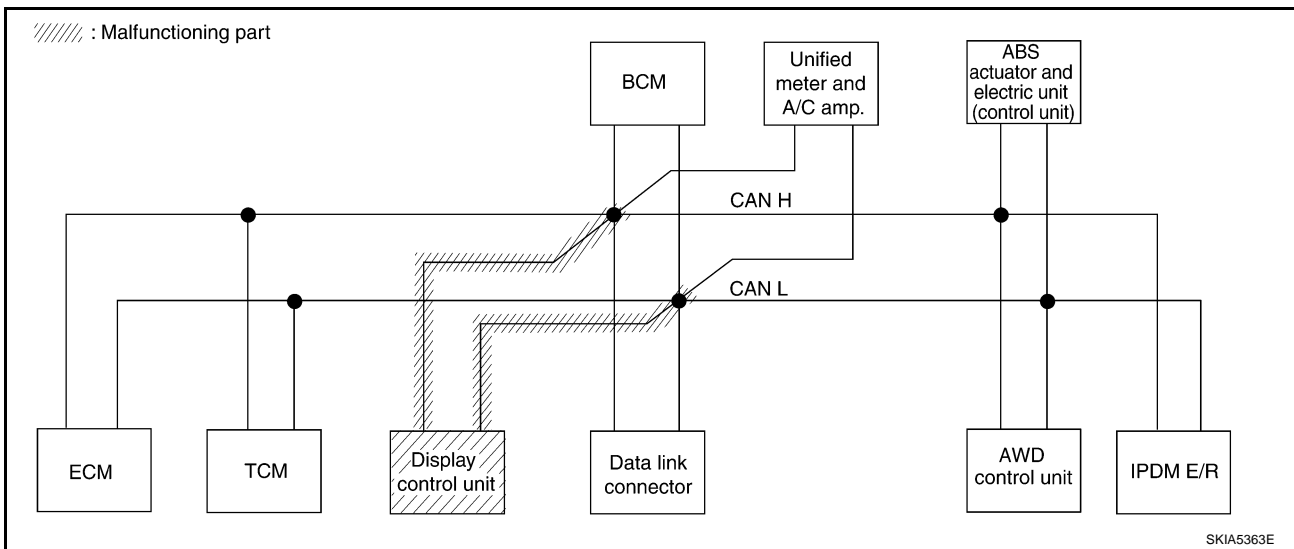
[CAN]

Case 5

Check display control unit circuit. Refer to [LAN-345, "Display Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN DTC 1 ✓	CAN DTC 3 ✓	—	—	CAN DTC 2 ✓	CAN DTC 5 ✓	—	—	CAN DTC 7 ✓
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—

PKIA8497E



CAN SYSTEM (TYPE 10)

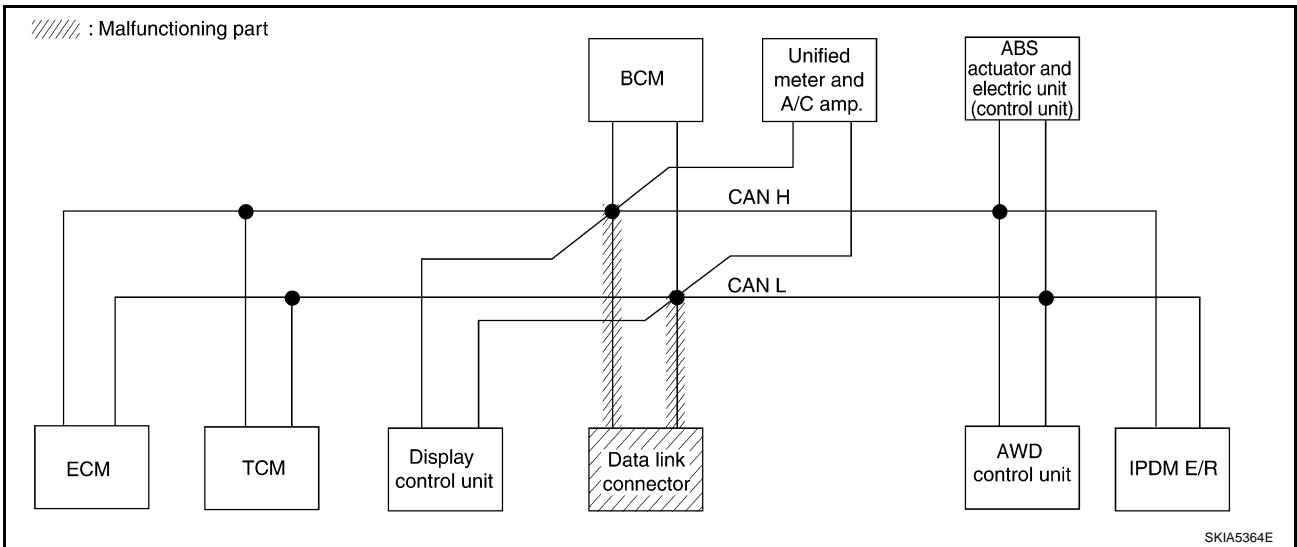
[CAN]

Case 6

Check data link connector circuit. Refer to [LAN-345, "Data Link Connector Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—

PKIA8498E



CAN SYSTEM (TYPE 10)

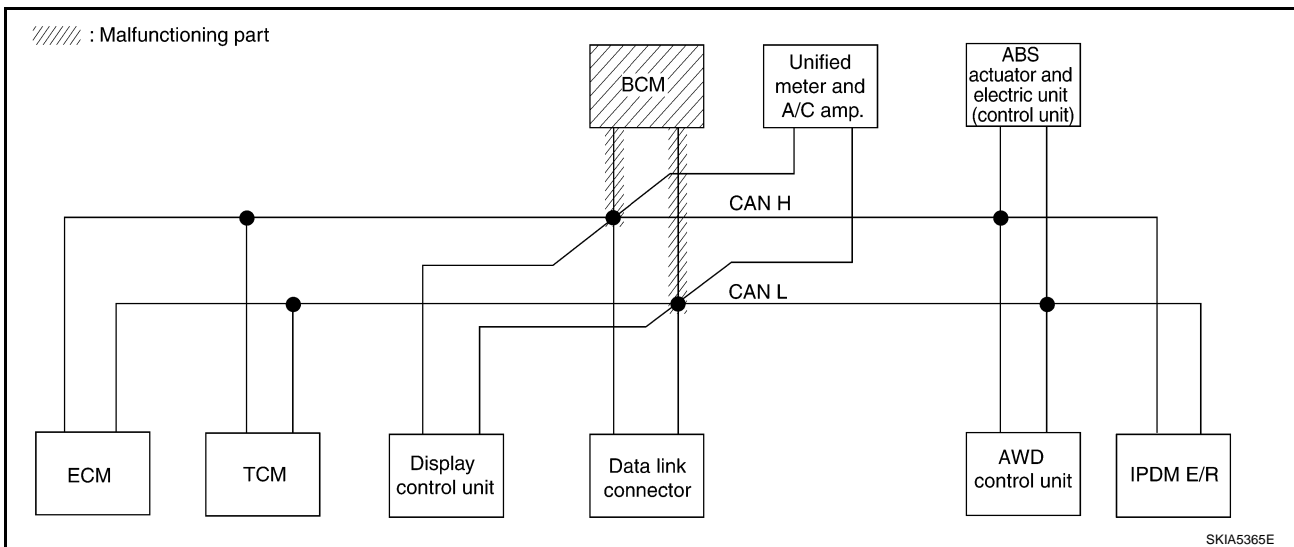
[CAN]

Case 7

Check BCM circuit. Refer to [LAN-346, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN ✓	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2 ✓	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN ✓	—	UNKWN	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN ✓	—	—	—	—	

PKIA8499E



CAN SYSTEM (TYPE 10)

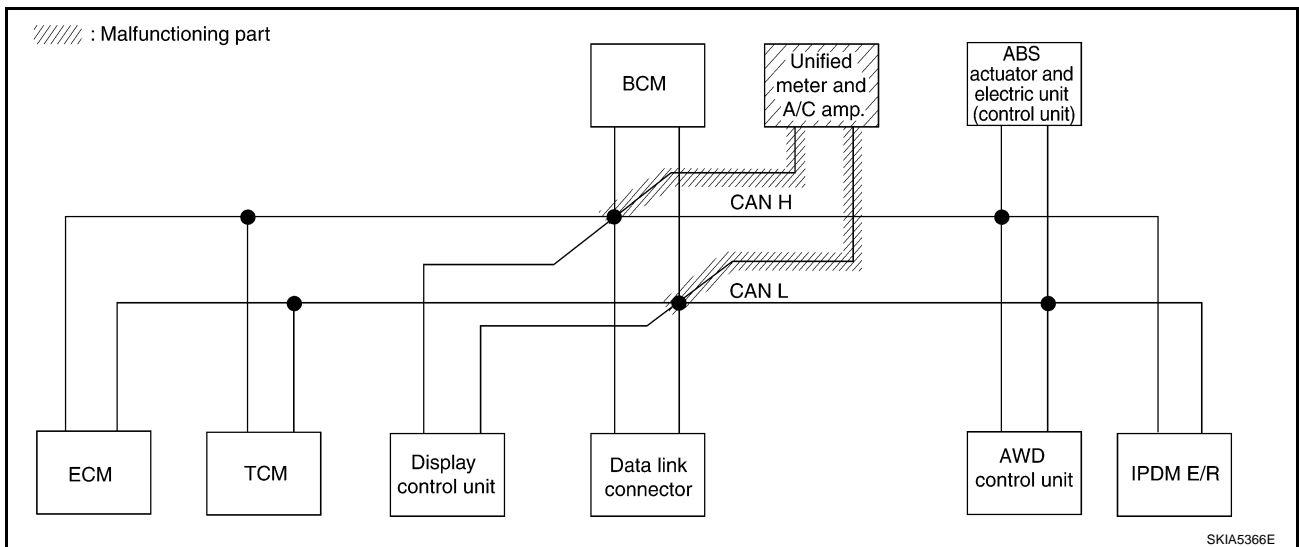
[CAN]

Case 8

Check unified meter and A/C amp. circuit. Refer to [LAN-346, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	

PKIA8500E



CAN SYSTEM (TYPE 10)

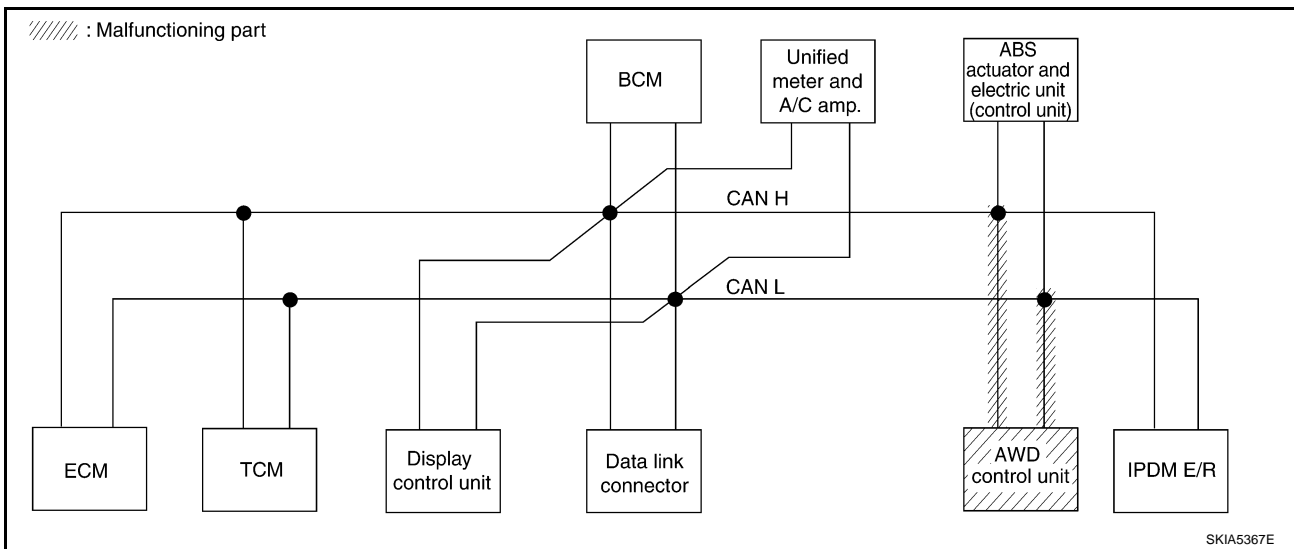
[CAN]

Case 9

Check AWD control unit circuit. Refer to [LAN-347. "AWD Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	—

PKIA8501E



SKIA5367E

CAN SYSTEM (TYPE 10)

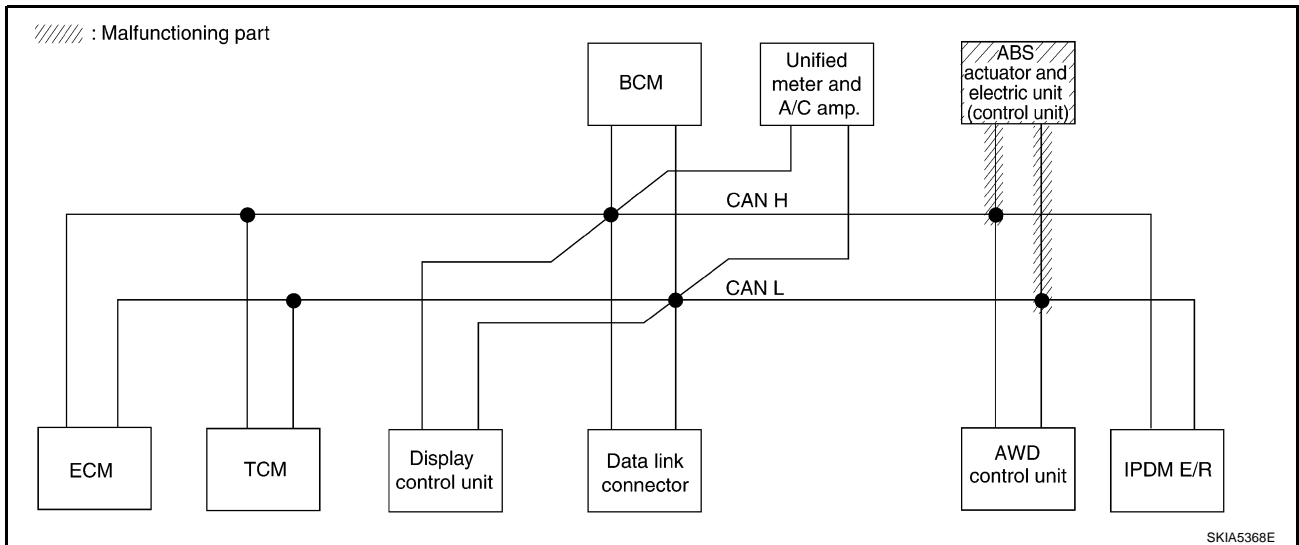
[CAN]

Case 10

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-347, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—

PKIA8502E



CAN SYSTEM (TYPE 10)

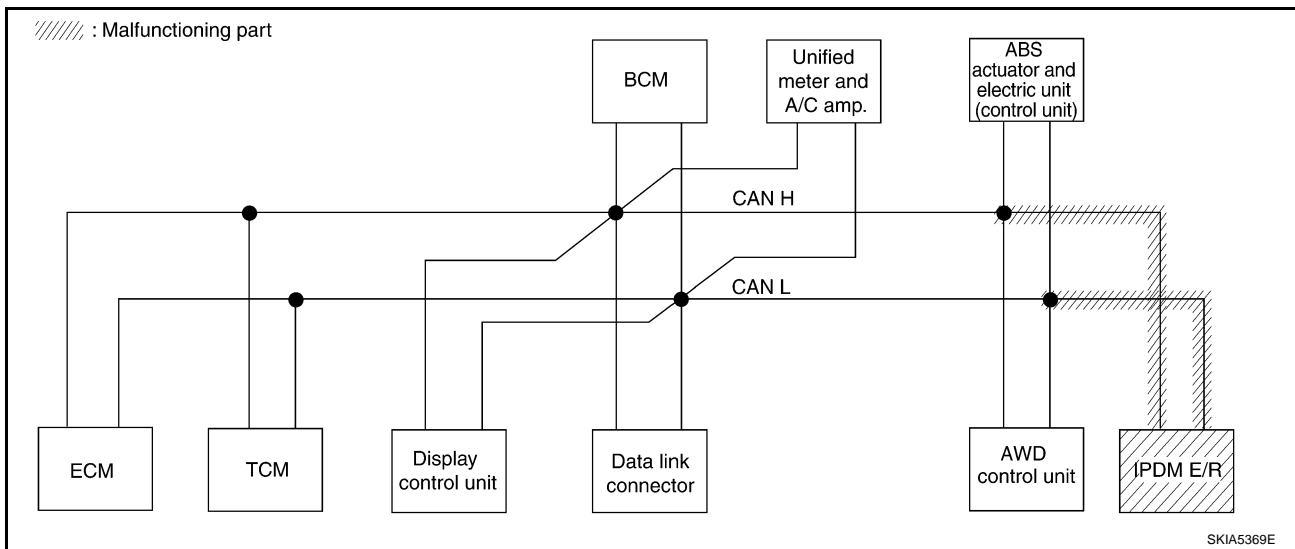
[CAN]

Case 11

Check IPDM E/R circuit. Refer to [LAN-348, "IPDM E/R Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN ✓
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7 ✓
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN ✓
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—

PKIA8503E



CAN SYSTEM (TYPE 10)

[CAN]

Case 12

Check CAN communication circuit. Refer to [LAN-349, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKW N	—	UNKW N	—	UNKW N	UNKW N	UNKW N	—	UNKW N	
TRANSMISSION	No ind ication	NG	UNKW N	UNKW N	—	—	—	UNKW N	—	UNKW N	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	No ind ication	NG	UNKW N	UNKW N	—	—	—	UNKW N	—	—	UNKW N	
METER A/C AMP	No ind ication	—	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N	—	UNKW N	UNKW N	—	
ALL MODE AWD/4WD	—	NG	UNKW N	UNKW N	—	—	—	UNKW N	—	UNKW N	—	
ABS	—	NG	UNKW N	UNKW N	—	—	—	—	—	—	—	
IPDM E/R	No ind ication	—	UNKW N	UNKW N	—	—	UNKW N	—	—	—	—	

PKIA8504E

Case 13

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-352, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKW N	—	UNKW N	—	UNKW N	UNKW N	UNKW N	—	UNKW N	
TRANSMISSION	No ind ication	NG	UNKW N	UNKW N	—	—	—	UNKW N	—	UNKW N	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	No ind ication	NG	UNKW N	UNKW N	—	—	—	UNKW N	—	—	UNKW N	
METER A/C AMP	No ind ication	—	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N	—	UNKW N	UNKW N	—	
ALL MODE AWD/4WD	—	NG	UNKW N	UNKW N	—	—	—	UNKW N	—	UNKW N	—	
ABS	—	NG	UNKW N	UNKW N	—	—	—	—	—	—	—	
IPDM E/R	No ind ication	—	UNKW N	UNKW N	—	—	UNKW N	—	—	—	—	

PKIA8505E

Case 14

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-352, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	✓	—	—	—	✓	—	UNKWN	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ABS	—	NG	UNKWN	✓	—	—	—	—	—	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	

PKIA8506E

Circuit Check Between TCM and Data Link Connector

AKS00AHH

1. CHECK HARNESS FOR OPEN CIRCUIT

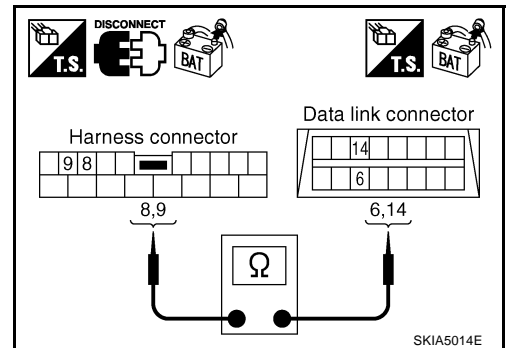
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

8 (L) - 6 (L) : Continuity should exist.

9 (Y) - 14 (Y) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-326, "Work Flow"](#) .
- NG >> Repair harness.



Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit)

AKS00AH1

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M9
 - Harness connector B2
 - Harness connector B4
 - Harness connector E105

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

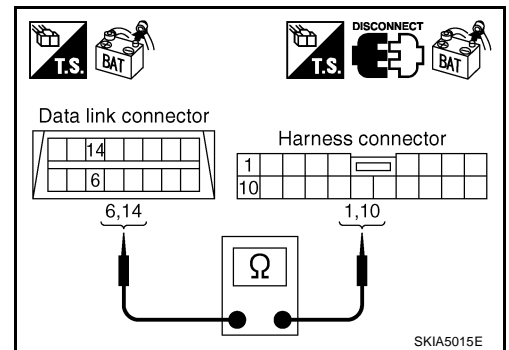
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

6 (L) - 1 (L) : Continuity should exist.
14 (Y) - 10 (Y) : Continuity should exist.

OK or NG

- OK >> GO TO 3.
 NG >> Repair harness.



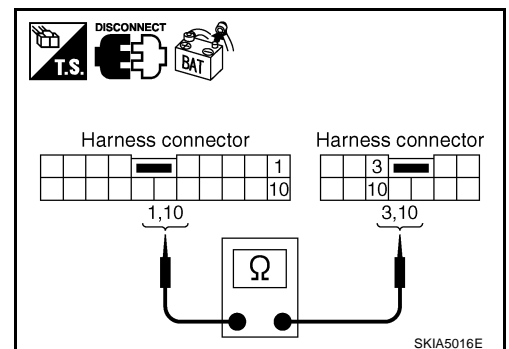
3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

1 (L) - 3 (L) : Continuity should exist.
10 (Y) - 10 (Y) : Continuity should exist.

OK or NG

- OK >> GO TO 4.
 NG >> Repair harness.



A
B
C
D
E
F
G
H
I
J
LAN
L
M

4. CHECK HARNESS FOR OPEN CIRCUIT

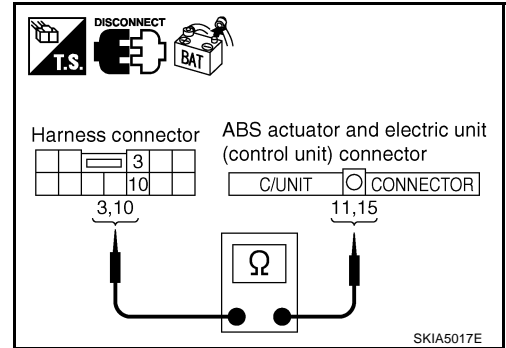
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

3 (L) - 11 (L) : Continuity should exist.

10 (Y) - 15 (Y) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-326, "Work Flow"](#) .
- NG >> Repair harness.



SKIA5017E

AKS00AHJ

ECM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

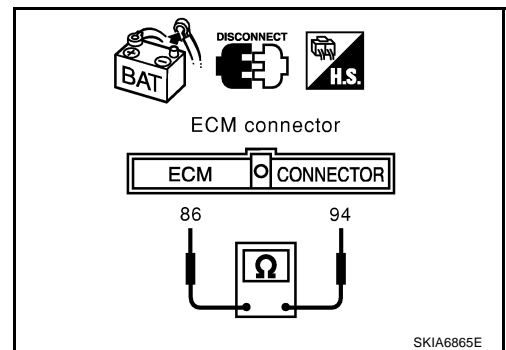
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

94 (L) - 86 (Y) : Approx. 108 - 132Ω

OK or NG

- OK >> Replace ECM.
- NG >> Repair harness between ECM and TCM.



SKIA6865E

AKS00AHK

TCM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
 - TCM connector
 - Harness connector F102
 - Harness connector M82

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

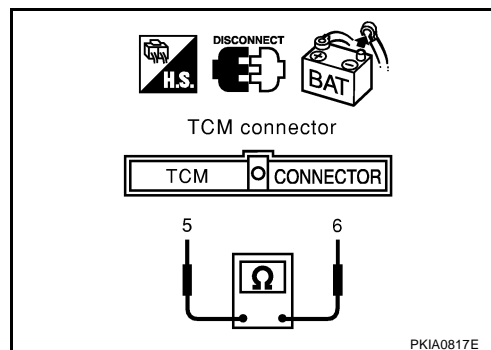
1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

5 (L) - 6 (Y)

: Approx. 54 - 66Ω

OK or NG

- OK >> Replace TCM.
 NG >> Repair harness between TCM and ECM.



AKS00AHL

Display Control Unit Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display control unit for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

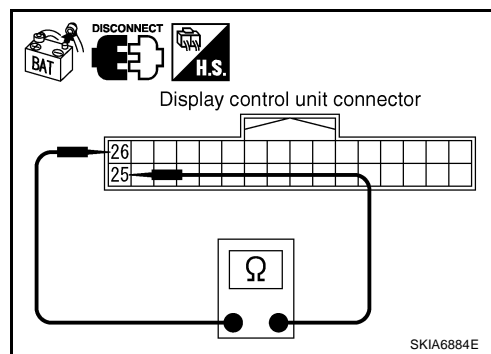
1. Disconnect display control unit connector.
2. Check resistance between display control unit harness connector M43 terminals 25 (L) and 26 (Y).

25 (L) - 26 (Y)

: Approx. 54 - 66Ω

OK or NG

- OK >> Replace display control unit.
 NG >> Repair harness between display control unit and data link connector.



AKS00AHM

Data Link Connector Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

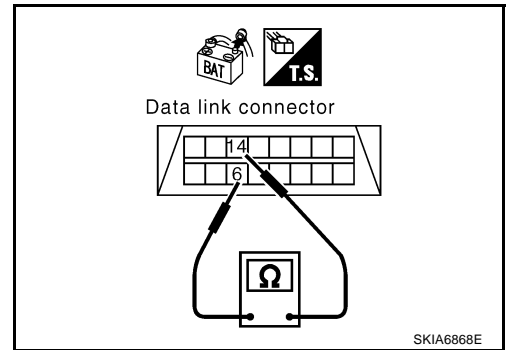
2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

6 (L) - 14 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Diagnose again. Refer to [LAN-326, "Work Flow"](#).
 NG >> Repair harness between data link connector and BCM.



AKS00AHN

BCM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

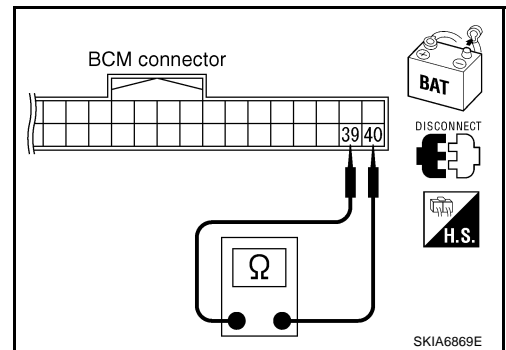
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M34 terminals 39 (L) and 40 (Y).

39 (L) - 40 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace BCM. Refer to [BCS-14, "Removal and Installation of BCM"](#).
 NG >> Repair harness between BCM and data link connector.



AKS00AHO

Unified Meter and A/C Amp. Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

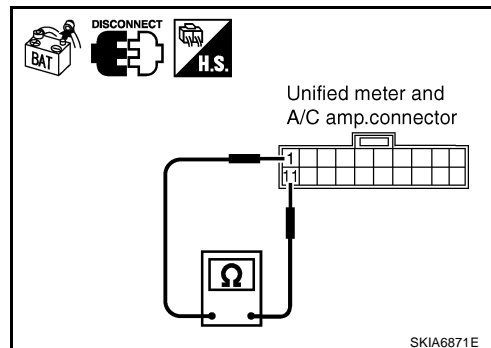
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

1 (L) - 11 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace unified meter and A/C amp.
 NG >> Repair harness between unified meter and A/C amp. and data link connector.



AKS00AHP

AWD Control Unit Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of AWD control unit for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

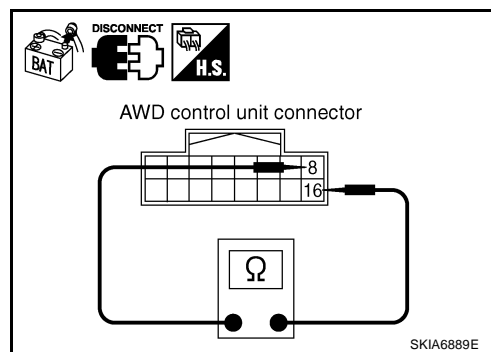
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect AWD control unit connector.
2. Check resistance between AWD control unit harness connector E111 terminals 8 (L) and 16 (Y).

8 (L) - 16 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace AWD control unit.
 NG >> Repair harness between AWD control unit and IPDM E/R.



AKS00AHO

ABS Actuator and Electric Unit (Control Unit) Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

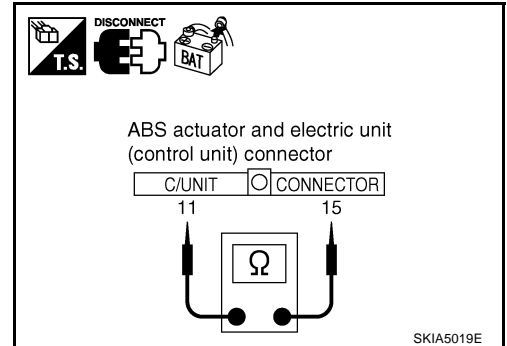
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

11 (L) - 15 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



IPDM E/R Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

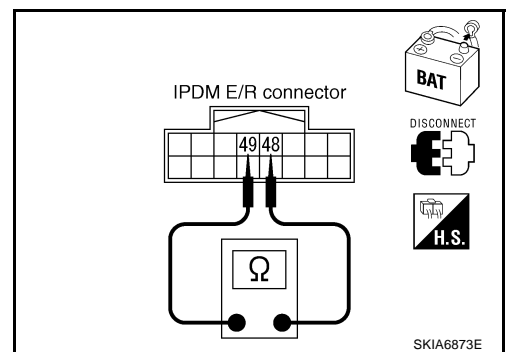
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

48 (L) - 49 (Y) : Approx. 108 - 132Ω

OK or NG

- OK >> Replace IPDM E/R.
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



CAN Communication Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, meter side and harness side).
 - ECM
 - TCM
 - Display control unit
 - BCM
 - Unified meter and A/C amp.
 - AWD control unit
 - ABS actuator and electric unit (control unit)
 - IPDM E/R
 - Between ECM and IPDM E/R
 - Between ECM and TCM

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

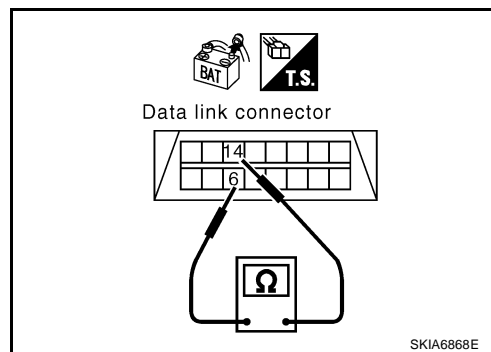
2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
 - ECM connector
 - Harness connector M82
 - Display control unit connector
 - BCM connector
 - Unified meter and A/C amp. connector
 - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

6 (L) - 14 (Y) : Continuity should not exist.

OK or NG

- OK >> GO TO 3.
 NG >> Check the following harnesses. If any harness is damaged, repair the harness.
- Harness between data link connector and ECM
 - Harness between data link connector and harness connector M82
 - Harness between data link connector and display control unit
 - Harness between data link connector and BCM
 - Harness between data link connector and unified meter and A/C amp.
 - Harness between data link connector and harness connector M9



SKIA6868E

3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

6 (L) - Ground : Continuity should not exist.

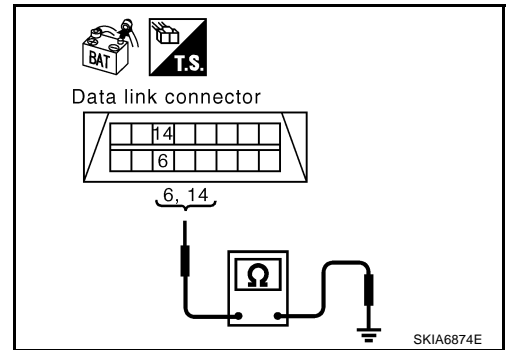
14 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM
- Harness between data link connector and harness connector M82
- Harness between data link connector and display control unit
- Harness between data link connector and BCM
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9



4. CHECK HARNESS FOR SHORT CIRCUIT

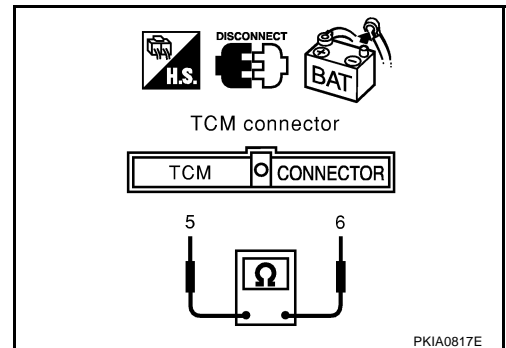
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

5 (L) - 6 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 5.

NG >> Repair harness between TCM and harness connector F102.



5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

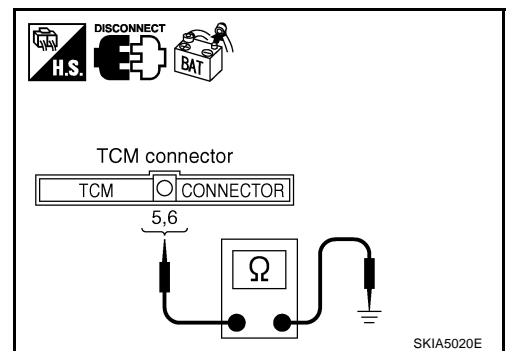
5 (L) - Ground : Continuity should not exist.

6 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 6.

NG >> Repair harness between TCM and harness connector F102.



6. CHECK HARNESS FOR SHORT CIRCUIT

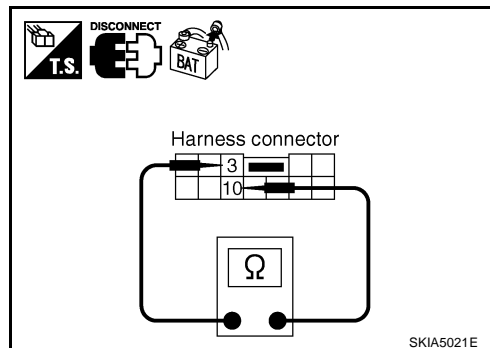
1. Disconnect harness connector B4.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

3 (L) - 10 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 7.

NG >> Repair harness between harness connector B4 and harness connector B2.



7. CHECK HARNESS FOR SHORT CIRCUIT

- Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

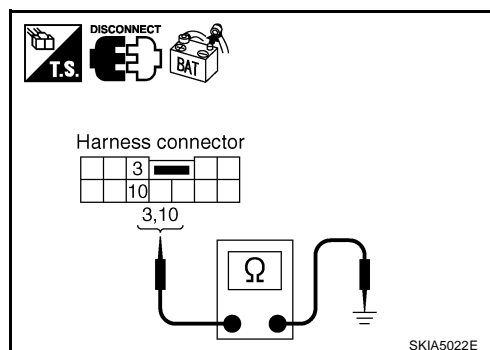
3 (L) - Ground : Continuity should not exist.

10 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 8.

NG >> Repair harness between harness connector B4 and harness connector B2.



8. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect AWD control unit connector, ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

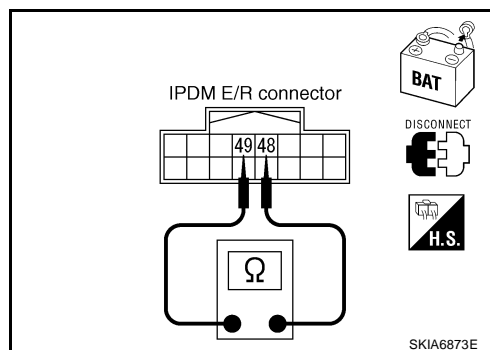
48 (L) - 49 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 9.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit
- Harness between IPDM E/R and ABS actuator and electric unit (control unit)
- Harness between IPDM E/R and harness connector E105



9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

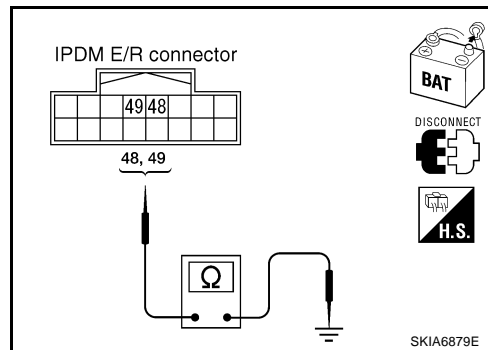
- 48 (L) - Ground : Continuity should not exist.**
- 49 (Y) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 10.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit
- Harness between IPDM E/R and ABS actuator and electric unit (control unit)
- Harness between IPDM E/R and harness connector E105



10. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-352, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#) .

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-326, "Work Flow"](#) .

NG >> Replace ECM and/or IPDM E/R.

IPDM E/R Ignition Relay Circuit Check

AKS00AHT

Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-27, "IPDM E/R Power/Ground Circuit Inspection"](#) .
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#) .

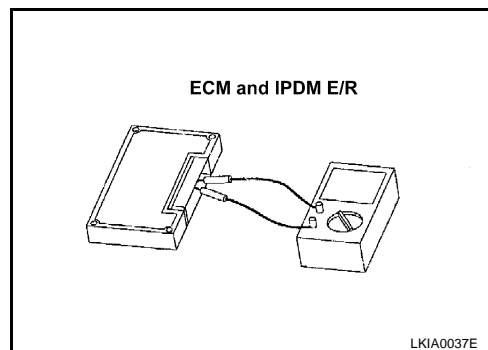
Component Inspection

AKS00AHU

ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



CAN SYSTEM (TYPE 11)

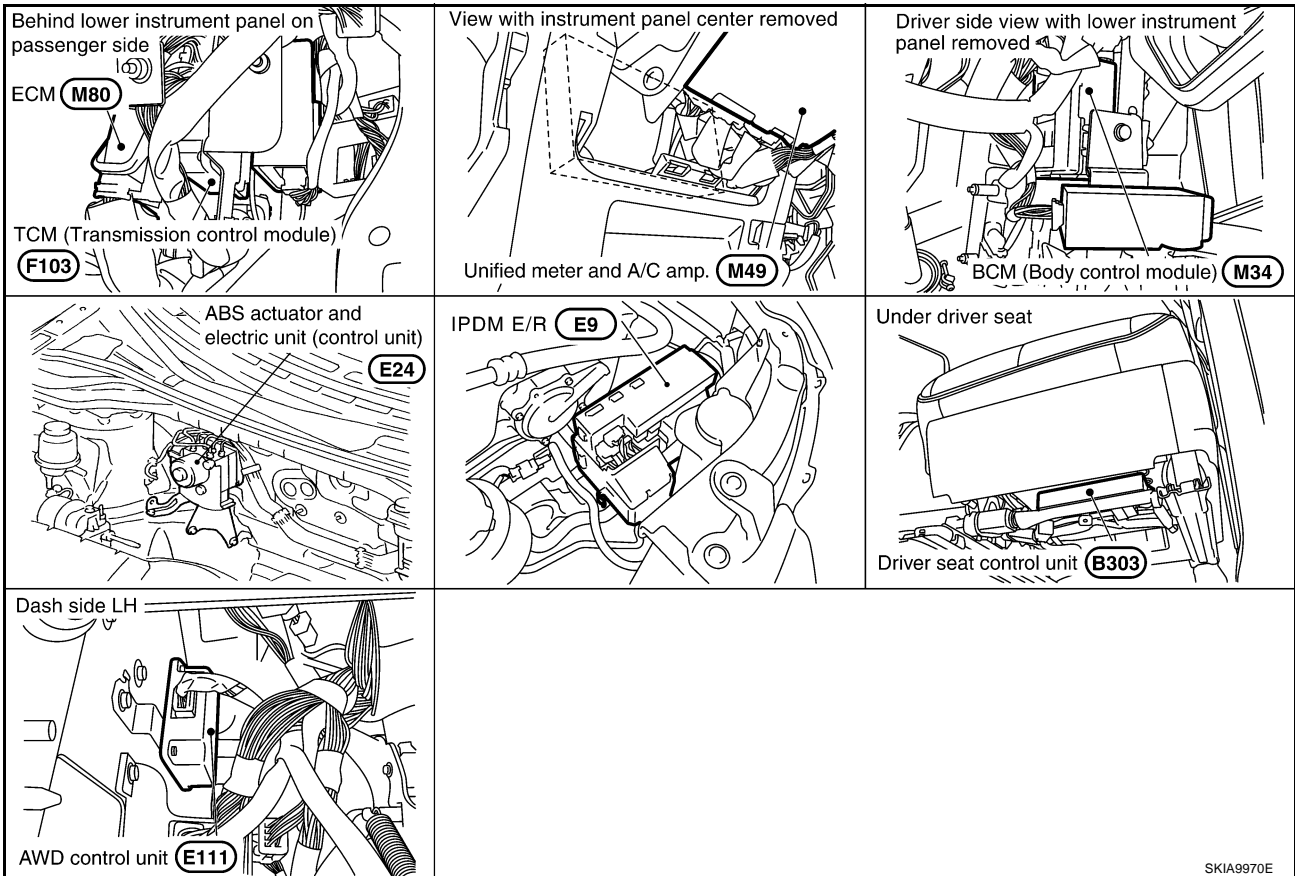
System Description

AKS00AHV

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

AKS00AHV



SKIA9970E

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M

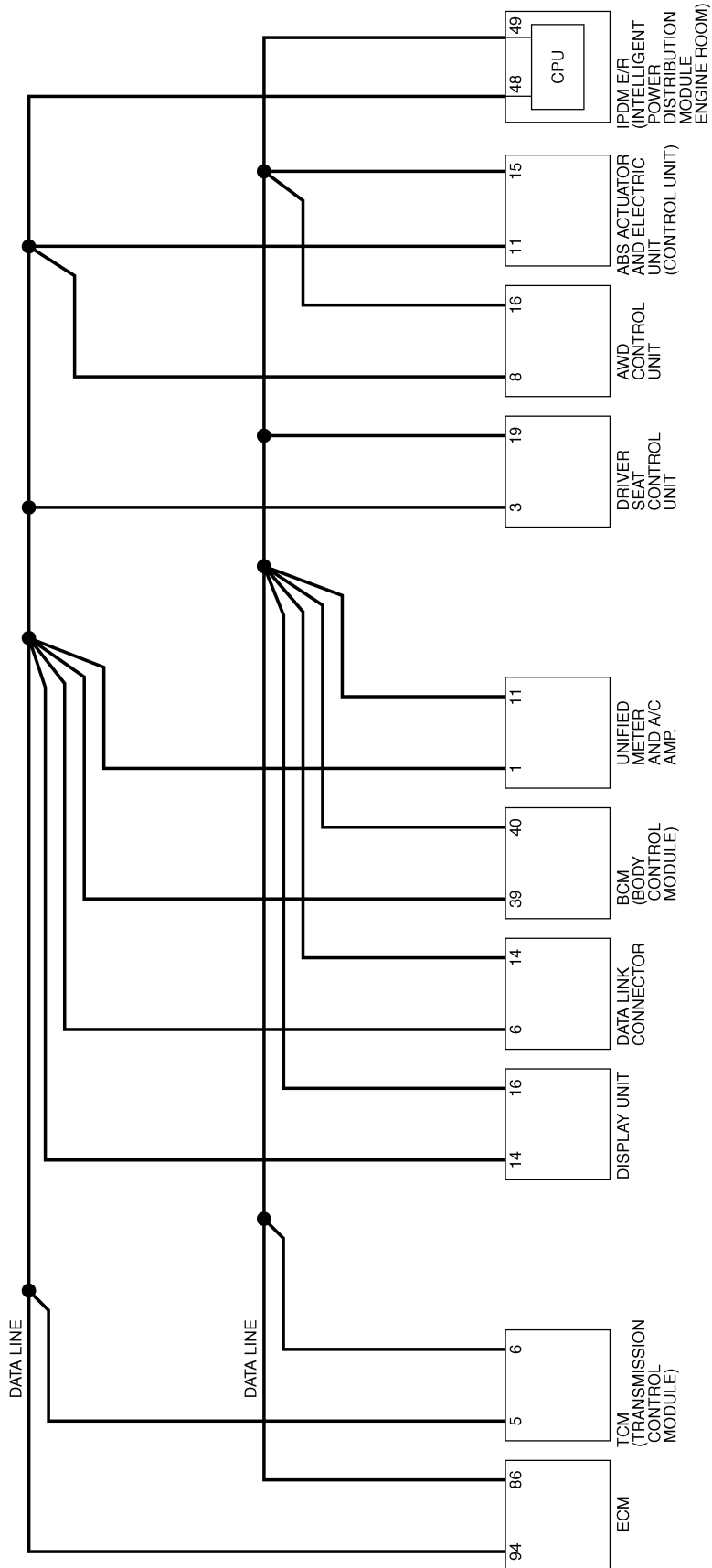
LAN

CAN SYSTEM (TYPE 11)

[CAN]

Schematic

AKS00AHX



TKWB0045E

CAN SYSTEM (TYPE 11)

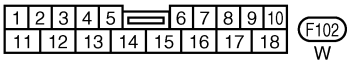
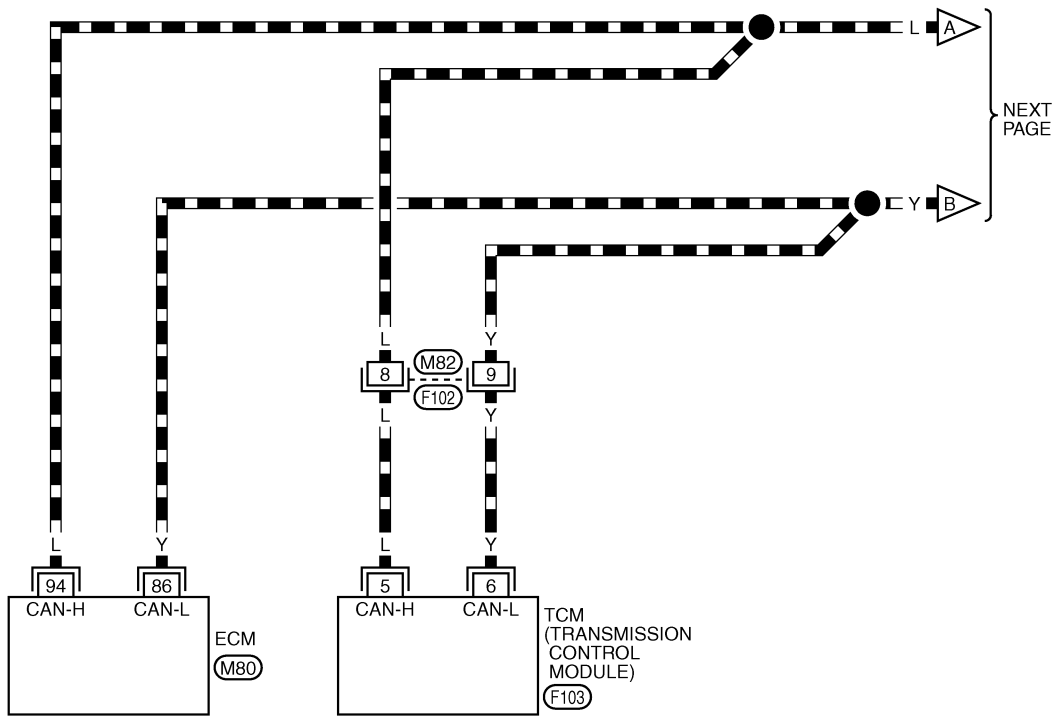
[CAN]

AKS00AHY

Wiring Diagram - CAN -

LAN-CAN-31

▬ : DATA LINE



REFER TO THE FOLLOWING.
 (M80), (F103) -ELECTRICAL
 UNITS

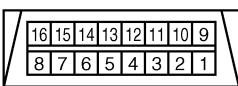
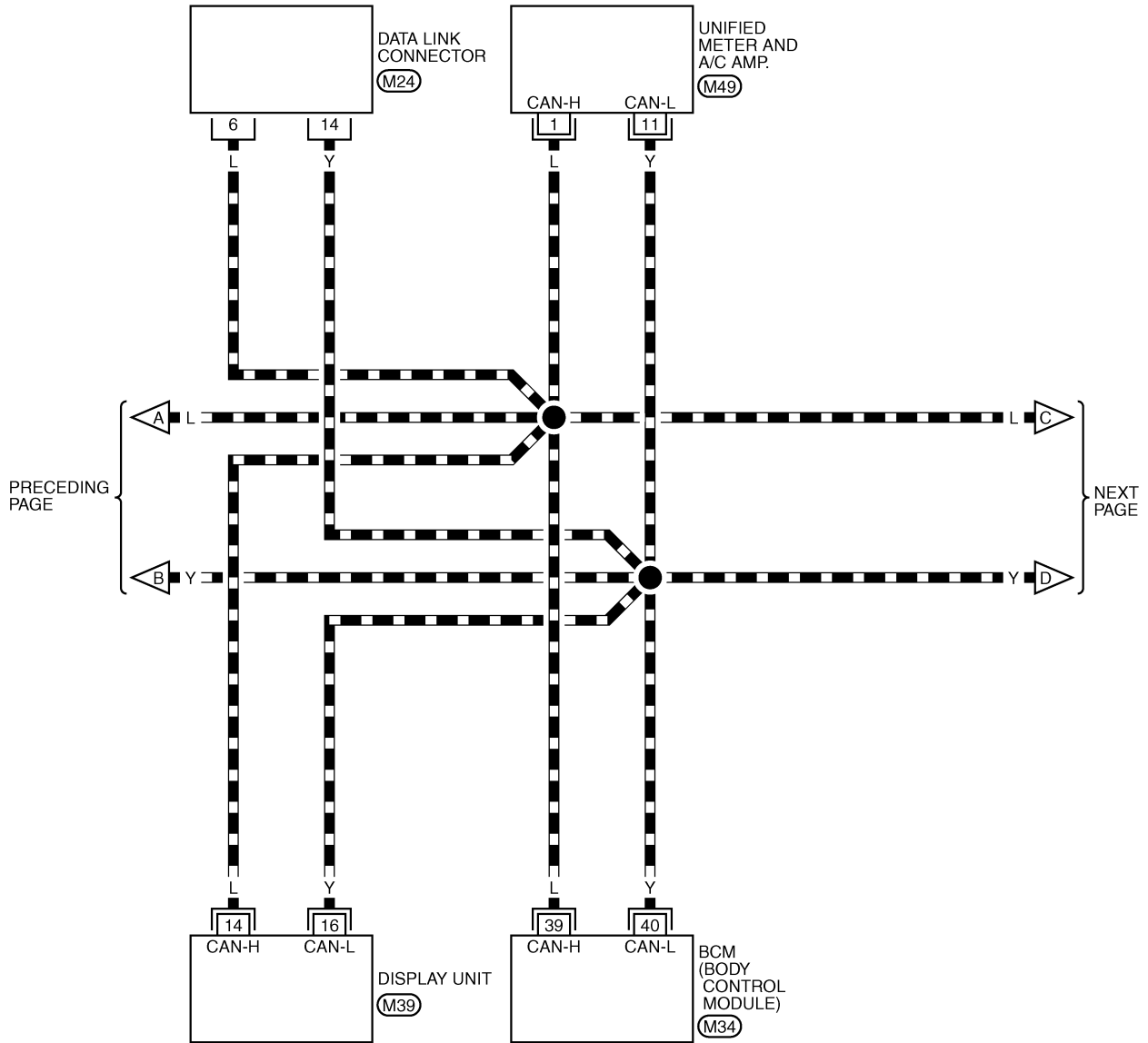
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LAN

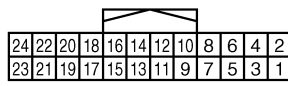
TKWB0046E

LAN-CAN-32

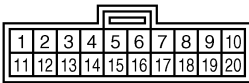
▬ : DATA LINE



(M24)
W



(M39)
W



(M49)
GR



REFER TO THE FOLLOWING.

(M34) -ELECTRICAL UNITS

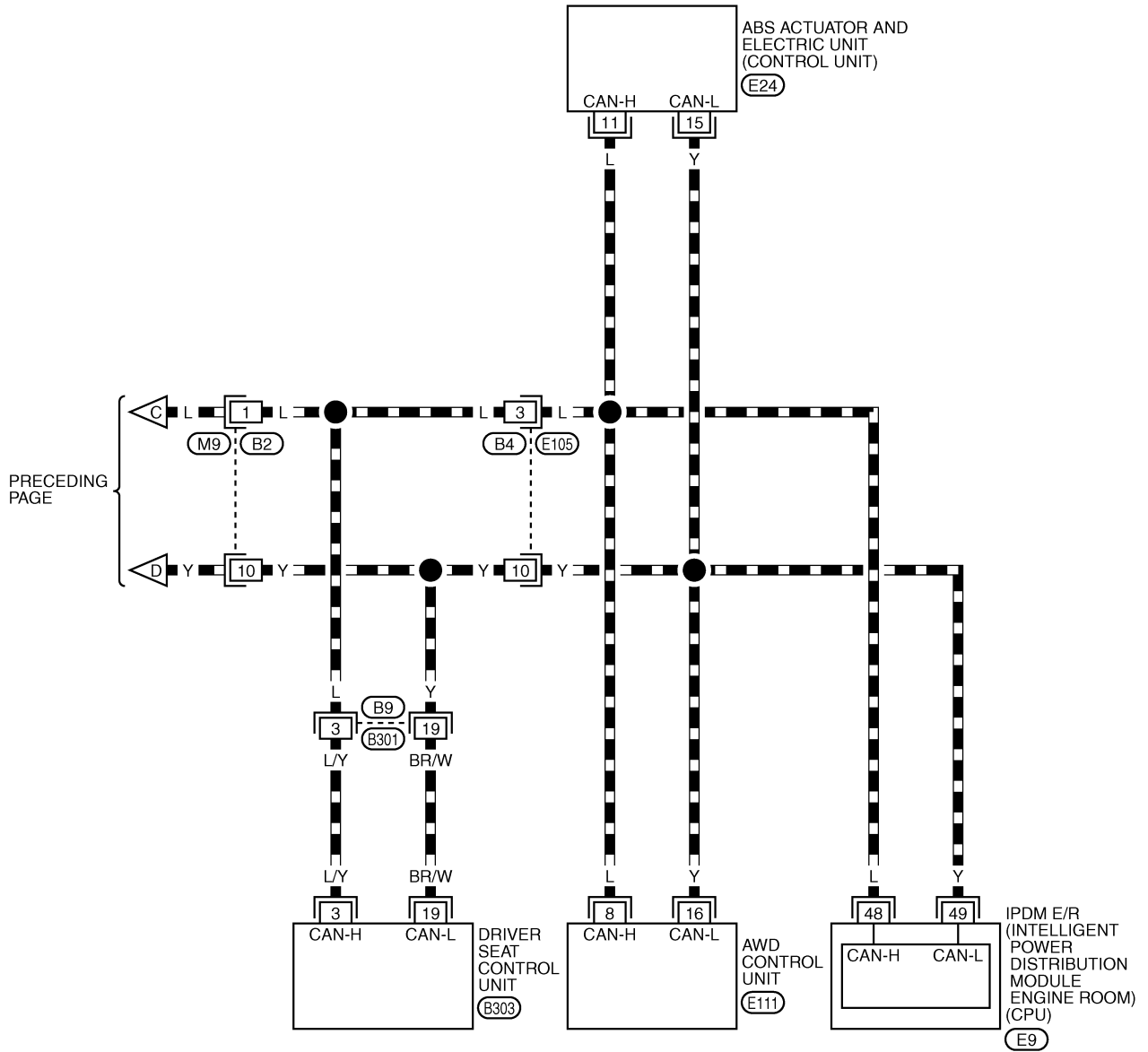
TKWB0047E

CAN SYSTEM (TYPE 11)

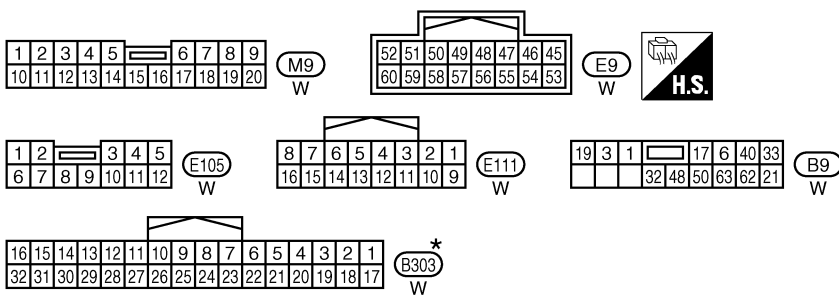
[CAN]

LAN-CAN-33

▬ : DATA LINE



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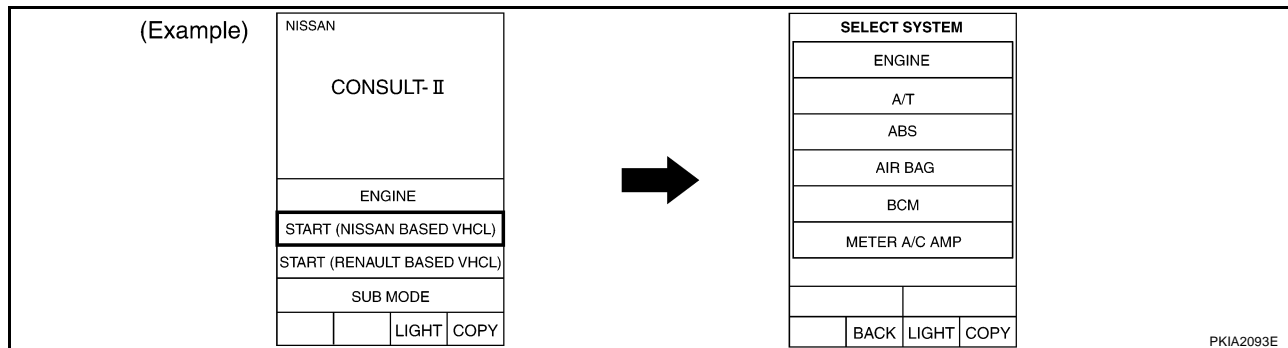
REFER TO THE FOLLOWING.
(E24) -ELECTRICAL UNITS

*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

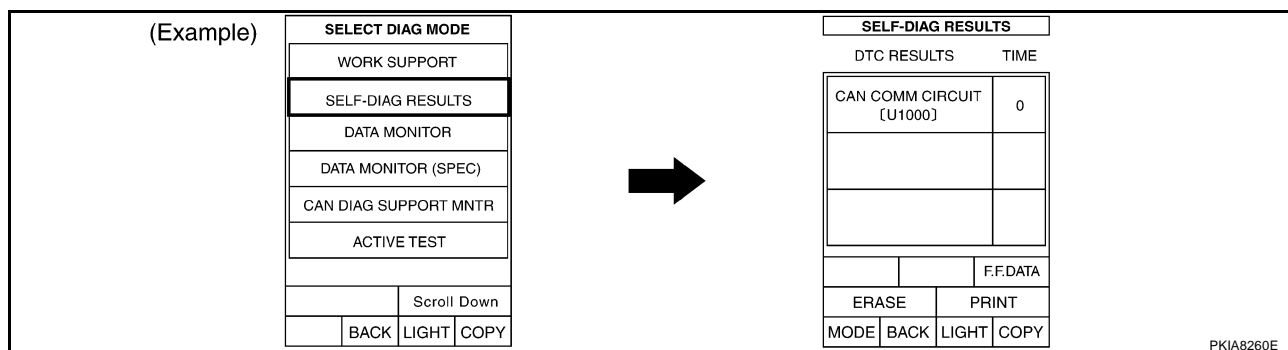
TKWB0048E

Work Flow

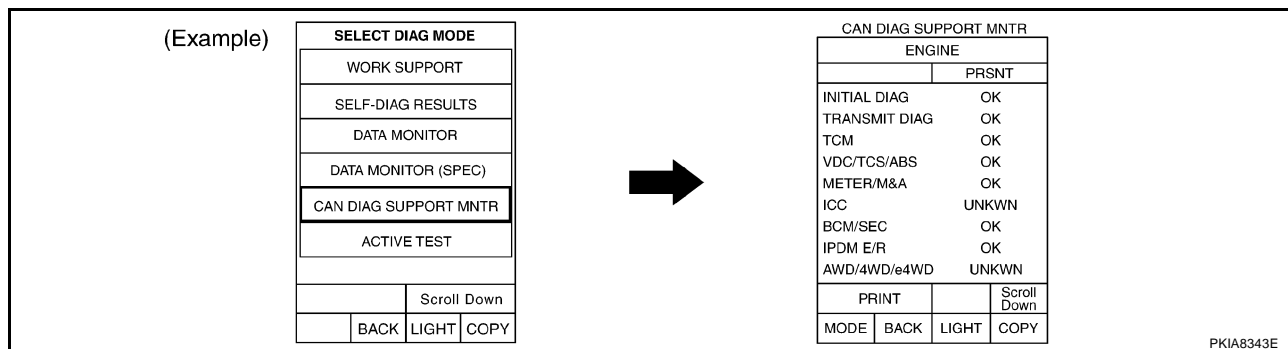
- When there are no indications of "TRANSMISSION", "BCM", "METER A/C AMP", "AUTO DRIVE POS.", or "IPDM E/R" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP", "AUTO DRIVE POS.", "ALL MODE AWD/4WD", "ABS", and "IPDM E/R" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP", "AUTO DRIVE POS.", "ALL MODE AWD/4WD", "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 [LAN-360, "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-360, "CHECK SHEET"](#) .

NOTE:

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual.
So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the integrated display system. Refer to [AV-101, "CAN Communication Line Check"](#) .
- Attach the CAN DIAG MONITOR check sheet onto the check sheet. Refer to [LAN-360, "CHECK SHEET"](#) .

CAN SYSTEM (TYPE 11)

[CAN]

8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG MONITOR check sheet. Refer to [LAN-360, "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-101, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-362, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

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LAN

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M

CAN SYSTEM (TYPE 11)

[CAN]

CHECK SHEET

NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—

Symptoms :

Attach copy of
SELECT SYSTEM

Attach copy of
SELECT SYSTEM

Attach copy of
display unit
CAN DIAG MONITOR check sheet

CAN SYSTEM (TYPE 11)

[CAN]

A
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Attach copy of
ENGINE
SELF-DIAG RESULTS

Attach copy of
TRANSMISSION
SELF-DIAG RESULTS

Attach copy of
BCM
SELF-DIAG RESULTS

Attach copy of
METER A/C AMP
SELF-DIAG RESULTS

Attach copy of
AUTO DRIVE POS.
SELF-DIAG RESULTS

Attach copy of
ALL MODE AWD/4WD
SELF-DIAG RESULTS

Attach copy of
ABS
SELF-DIAG RESULTS

Attach copy of
IPDM E/R
SELF-DIAG RESULTS

Attach copy of
ENGINE
CAN DIAG SUPPORT
MNTR

Attach copy of
TRANSMISSION
CAN DIAG SUPPORT
MNTR

Attach copy of
BCM
CAN DIAG SUPPORT
MNTR

Attach copy of
METER A/C AMP
CAN DIAG SUPPORT
MNTR

Attach copy of
AUTO DRIVE POS.
CAN DIAG SUPPORT
MNTR

Attach copy of
ALL MODE AWD/4WD
CAN DIAG SUPPORT
MNTR

Attach copy of
ABS
CAN DIAG SUPPORT
MNTR

Attach copy of
IPDM E/R
CAN DIAG SUPPORT
MNTR

PKIA8508E

CHECK SHEET RESULTS (EXAMPLE)

NOTE:

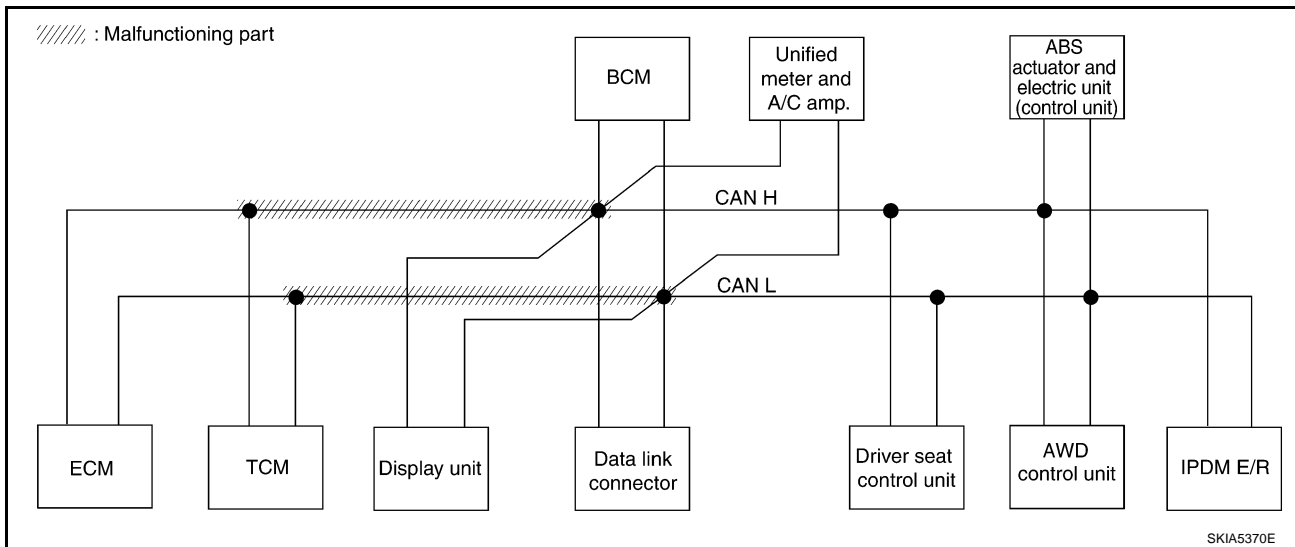
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

Case 1

Check harness between TCM and data link connector. Refer to [LAN-376. "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	

PKIA8509E



CAN SYSTEM (TYPE 11)

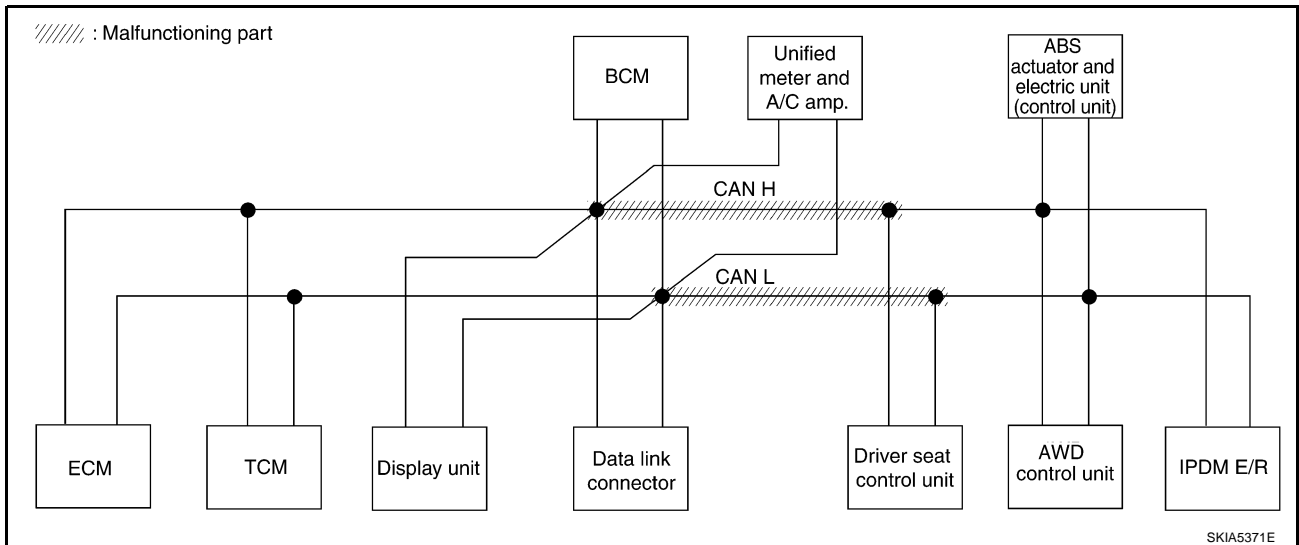
[CAN]

Case 2

Check harness between data link connector and driver seat control unit. Refer to [LAN-376, "Circuit Check Between Data Link Connector and Driver Seat Control Unit"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	—

PKIA8510E



CAN SYSTEM (TYPE 11)

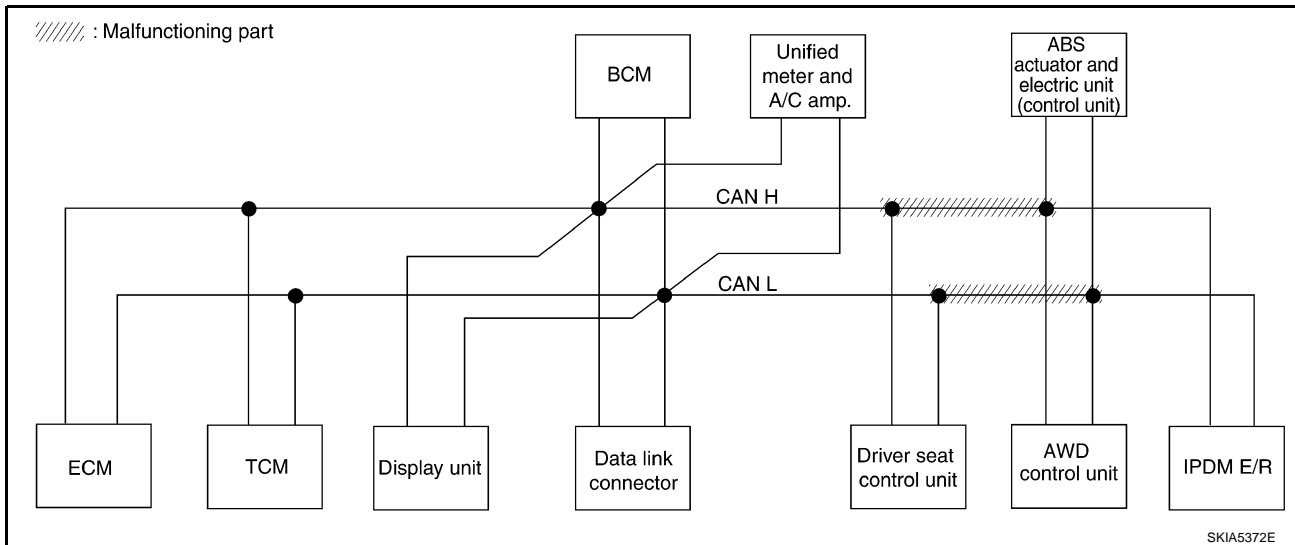
[CAN]

Case 3

Check harness between driver seat control unit and ABS actuator and electric unit (control unit). Refer to [LAN-377, "Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit \(Control Unit\)"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	—

PKIA8511E



SKIA5372E

CAN SYSTEM (TYPE 11)

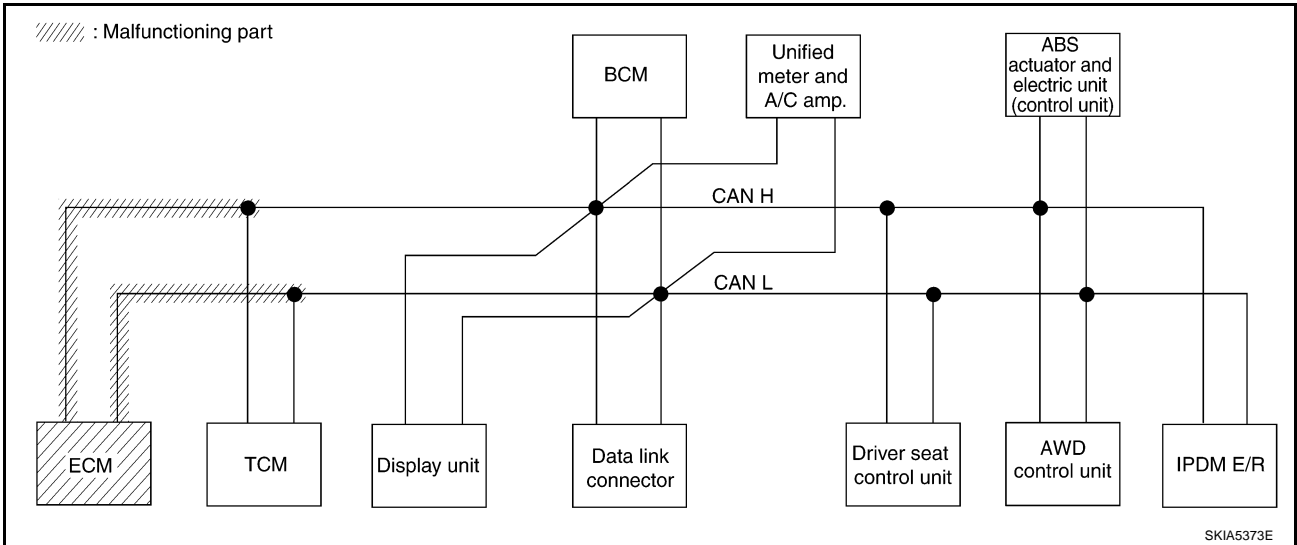
[CAN]

Case 4

Check ECM circuit. Refer to [LAN-378, "ECM Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	

PKIA8512E



CAN SYSTEM (TYPE 11)

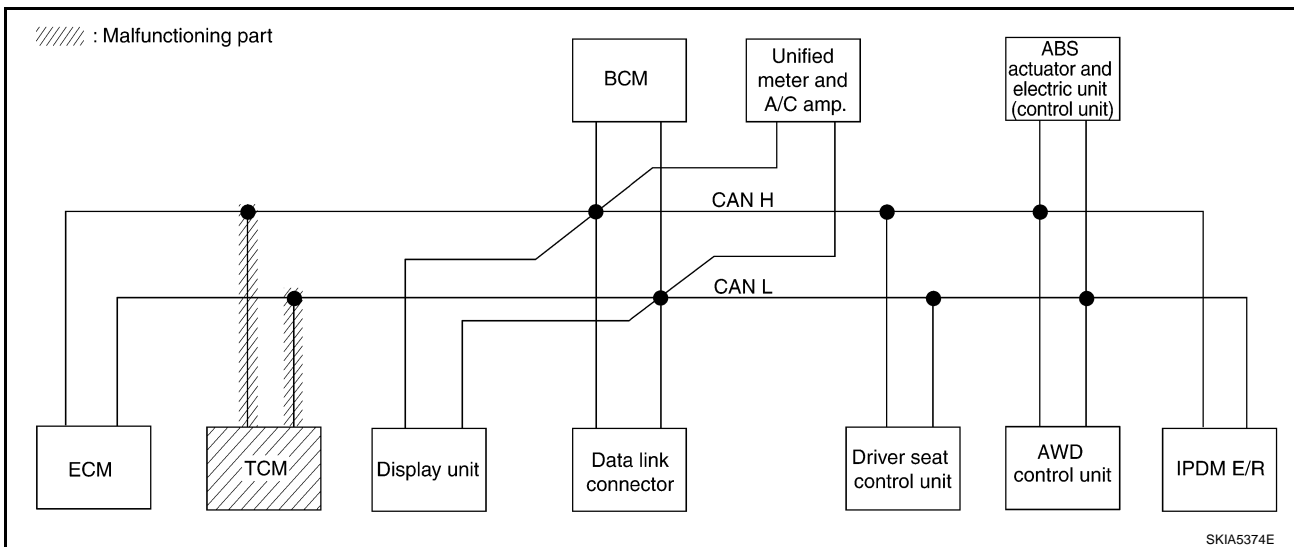
[CAN]

Case 5

Check TCM circuit. Refer to [LAN-379, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWVN	—	UNKWVN	—	UNKWVN	UNKWVN	UNKWVN	—	UNKWVN	
TRANSMISSION	No indication ✓	NG	UNKWVN	UNKWVN	—	—	—	UNKWVN	—	UNKWVN	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	No indication	NG	UNKWVN	UNKWVN	—	—	—	UNKWVN	—	—	UNKWVN	
METER A/C AMP	No indication	—	UNKWVN	UNKWVN	UNKWVN	UNKWVN	UNKWVN	—	UNKWVN	UNKWVN	—	
AUTO DRIVE POS.	No indication	NG	UNKWVN	—	UNKWVN	—	UNKWVN	UNKWVN	—	—	—	
ALL MODE AWD/4WD	—	NG	UNKWVN	UNKWVN	—	—	—	UNKWVN	—	UNKWVN	—	
ABS	—	NG	UNKWVN	UNKWVN	—	—	—	—	—	—	—	
IPDM E/R	No indication	—	UNKWVN	UNKWVN	—	—	UNKWVN	—	—	—	—	

PKIA8513E



SKIA5374E

CAN SYSTEM (TYPE 11)

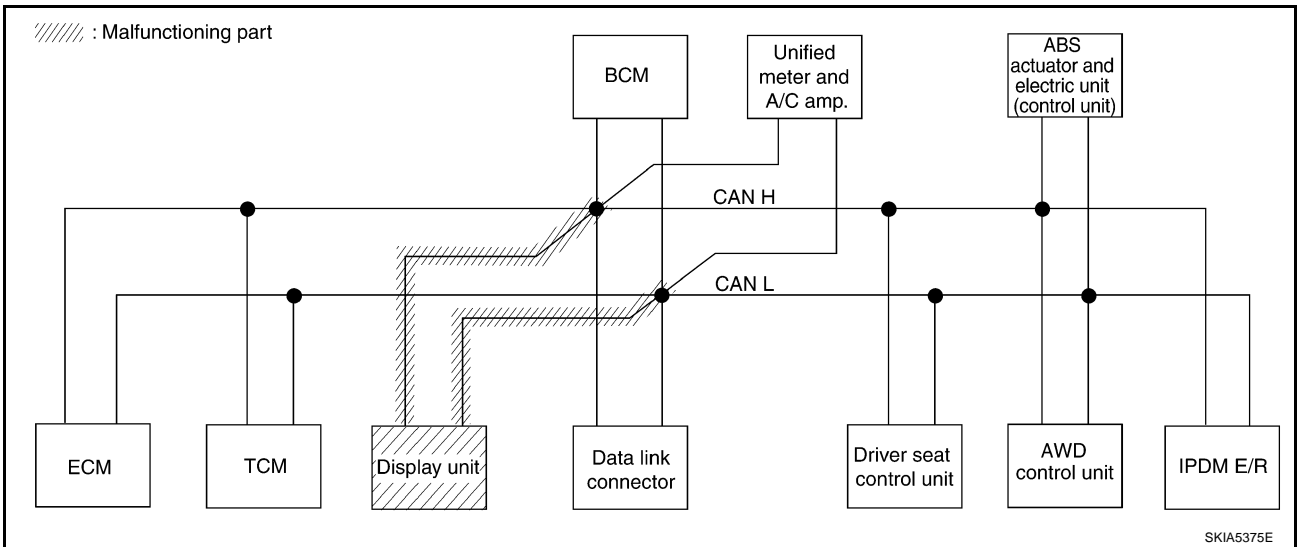
[CAN]

Case 6

Check display unit circuit. Refer to [LAN-379, "Display Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	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	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—

PKIA8514E



CAN SYSTEM (TYPE 11)

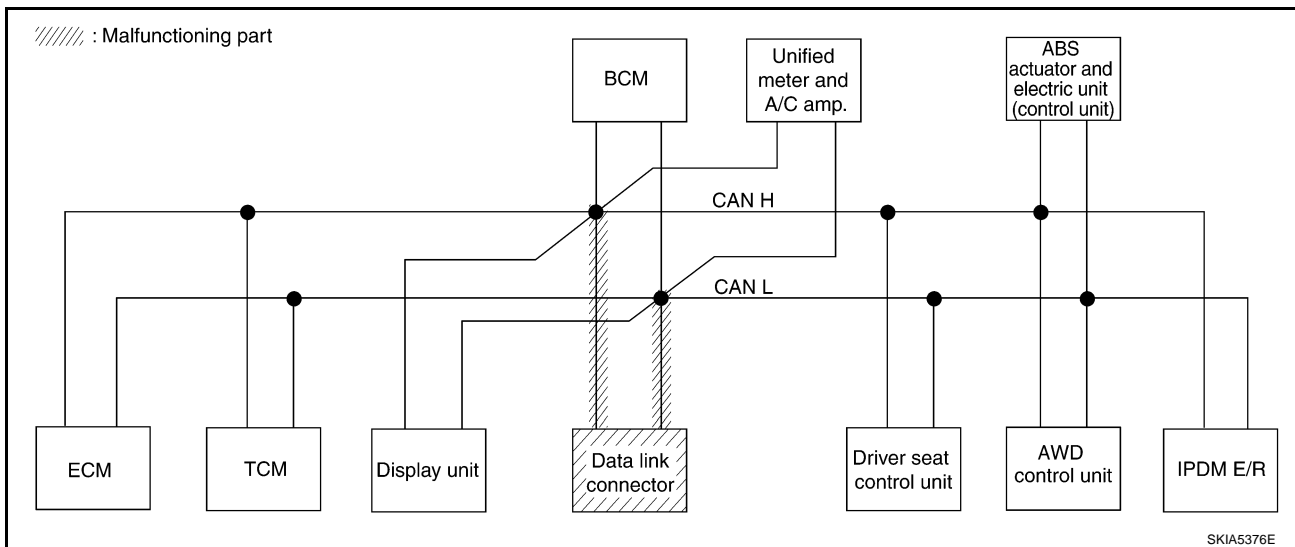
[CAN]

Case 7

Check data link connector circuit. Refer to [LAN-380, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	

PKIA8515E



SKIA5376E

CAN SYSTEM (TYPE 11)

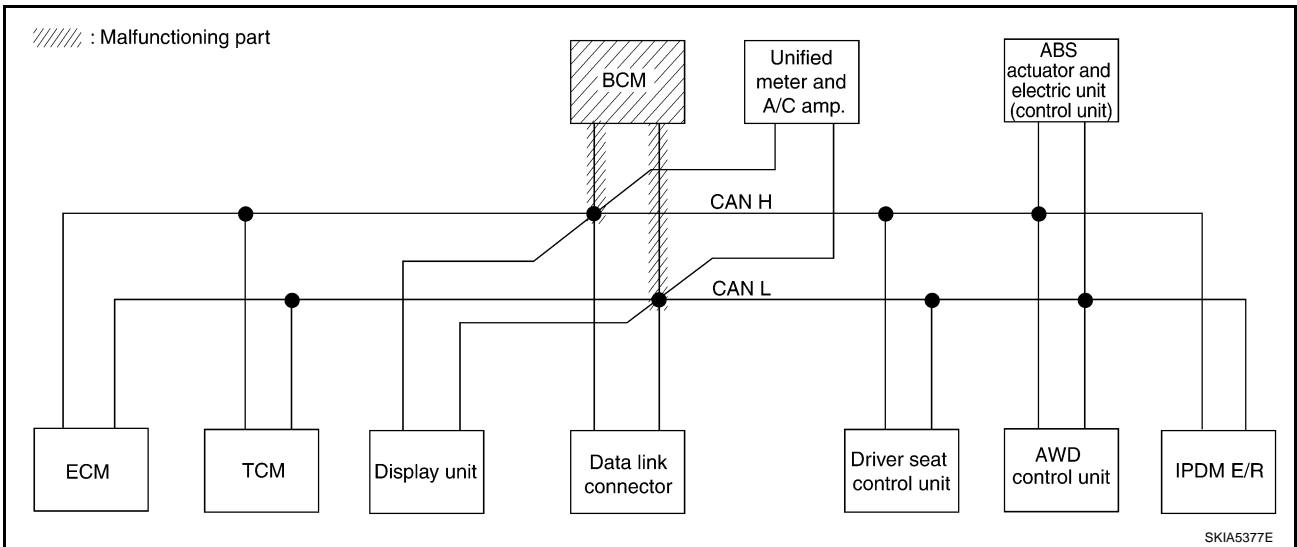
[CAN]

Case 8

Check BCM circuit. Refer to [LAN-380, "BCM Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—

PKIA8516E



CAN SYSTEM (TYPE 11)

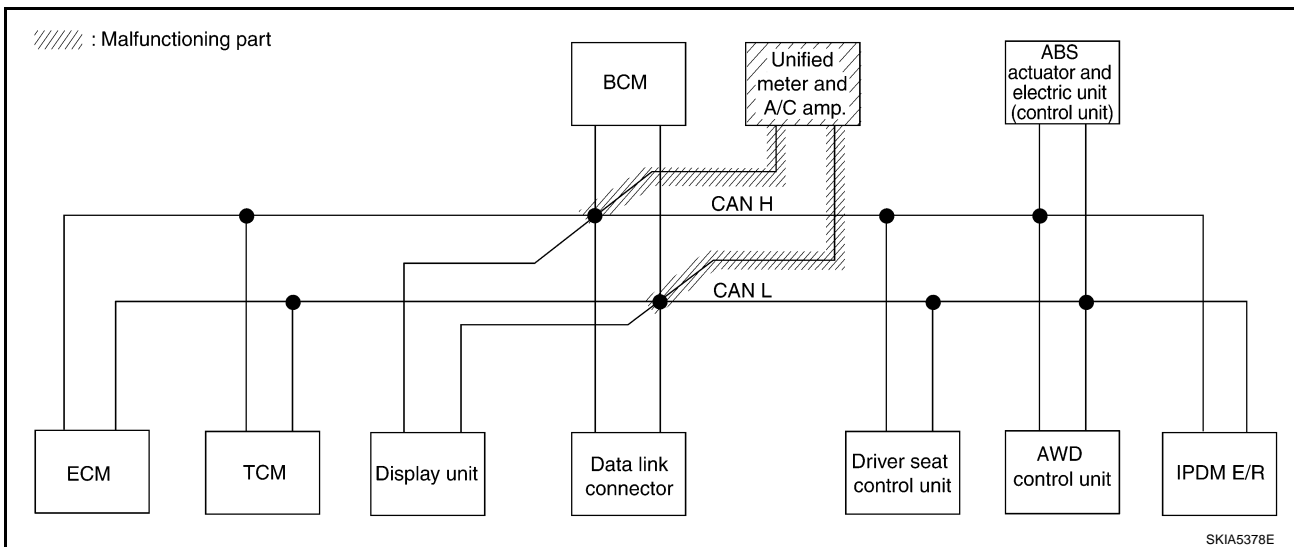
[CAN]

Case 9

Check unified meter and A/C amp. circuit. Refer to [LAN-381, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	

PKIA8517E



CAN SYSTEM (TYPE 11)

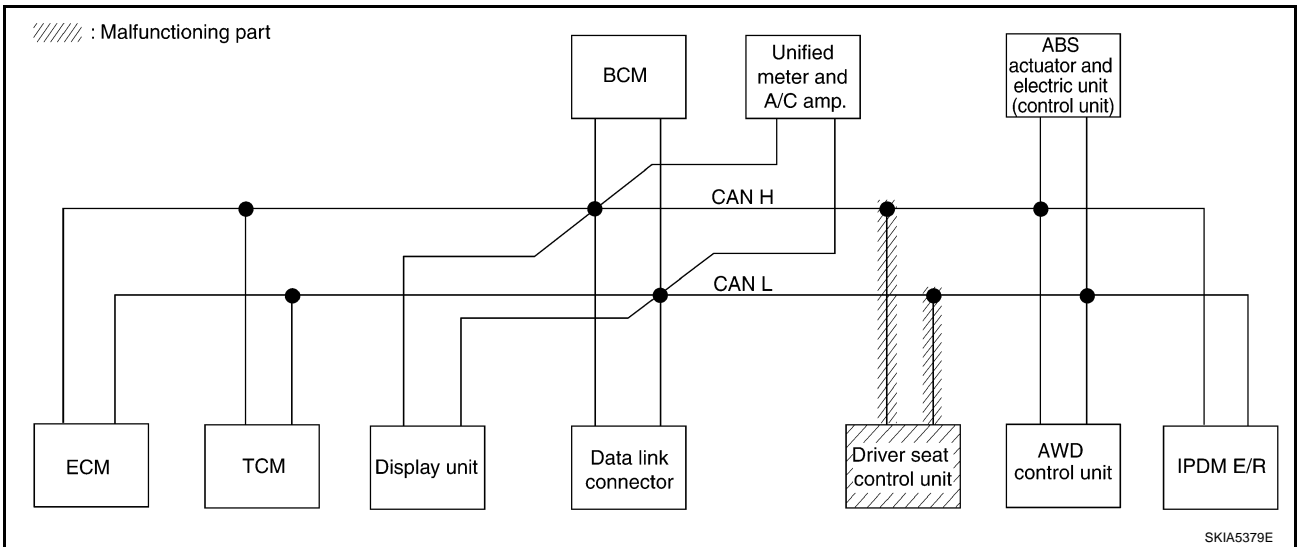
[CAN]

Case 10

Check driver seat control unit circuit. Refer to [LAN-381, "Driver Seat Control Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—

PKIA8518E



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CAN SYSTEM (TYPE 11)

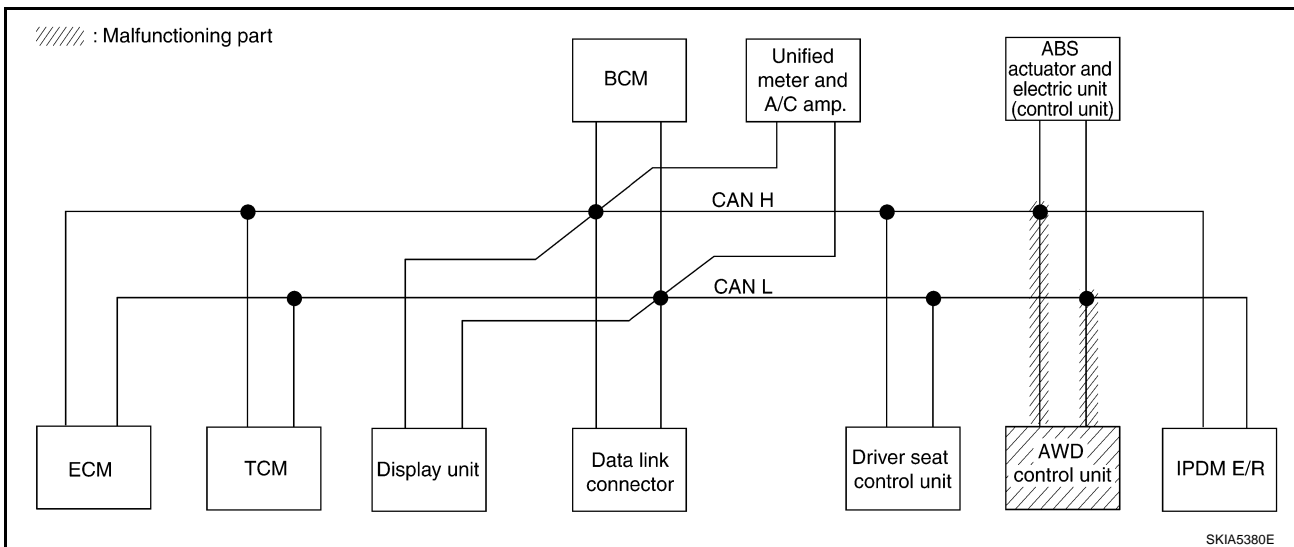
[CAN]

Case 11

Check AWD control unit circuit. Refer to [LAN-382. "AWD Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKW	—	UNKW	—	UNKW	UNKW	UNKW	UNKW	—	UNKW
TRANSMISSION	No indication	NG	UNKW	UNKW	—	—	—	UNKW	—	UNKW	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication	NG	UNKW	UNKW	—	—	—	UNKW	—	—	—	UNKW
METER A/C AMP	No indication	—	UNKW	UNKW	UNKW	UNKW	UNKW	—	UNKW	UNKW	—	—
AUTO DRIVE POS.	No indication	NG	UNKW	—	UNKW	—	UNKW	UNKW	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKW	UNKW	—	—	—	UNKW	—	UNKW	—	—
ABS	—	NG	UNKW	UNKW	—	—	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKW	UNKW	—	—	UNKW	—	—	—	—	—

PKIA8519E



CAN SYSTEM (TYPE 11)

[CAN]

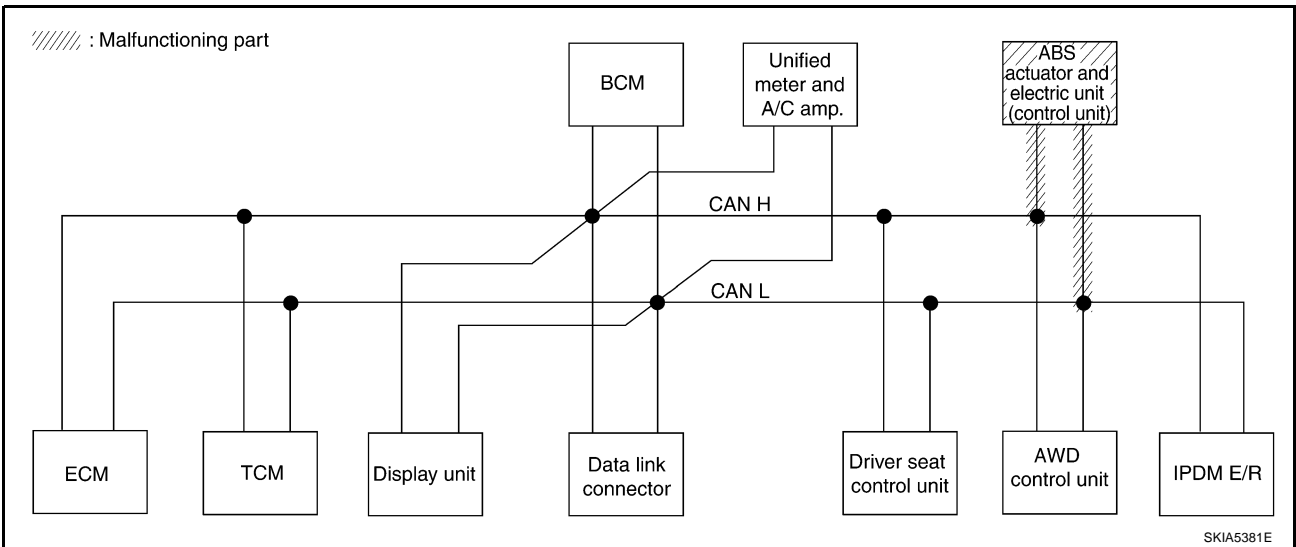
Case 12

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-382, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

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SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—

PKIA8520E



CAN SYSTEM (TYPE 11)

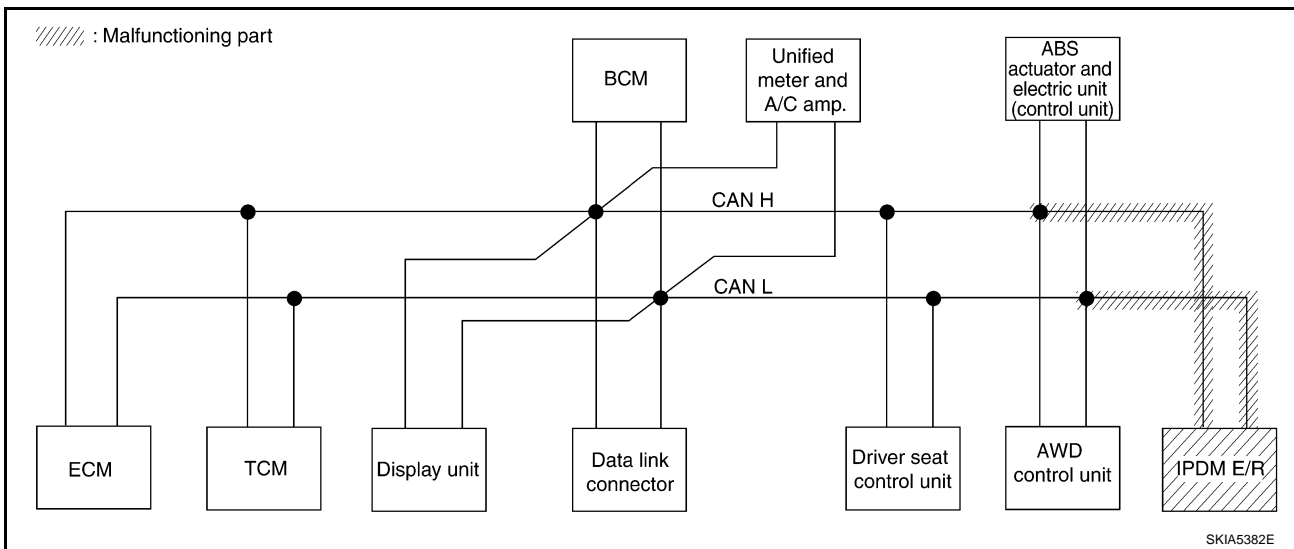
[CAN]

Case 13

Check IPDM E/R circuit. Refer to [LAN-383, "IPDM E/R Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN ✓
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7 ✓
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN ✓
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—

PKIA8521E



CAN SYSTEM (TYPE 11)

[CAN]

Case 14

Check CAN communication circuit. Refer to [LAN-383, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW N	—	UNKW N	—	UNKW N	UNKW N	UNKW N	—	UNKW N
TRANSMISSION	No indication ✓	NG	UNKW N	UNKW N	—	—	—	UNKW N	—	UNKW N	—
Display unit	—	CAN COMM	CAN 1 ✓	CAN 3 ✓	—	—	CAN 2 ✓	CAN 5 ✓	—	—	CAN 7 ✓
BCM	No indication ✓	NG	UNKW N	UNKW N	—	—	—	UNKW N	—	—	UNKW N
METER A/C AMP	No indication ✓	—	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N	—	UNKW N	UNKW N	—
AUTO DRIVE POS.	No indication ✓	NG	UNKW N	—	UNKW N	—	UNKW N	UNKW N	—	—	—
ALL MODE AWD/4WD	—	NG	UNKW N	UNKW N	—	—	—	UNKW N	—	UNKW N	—
ABS	—	NG ✓	UNKW N	UNKW N	—	—	—	—	—	—	—
IPDM E/R	No indication ✓	—	UNKW N	UNKW N	—	—	UNKW N	—	—	—	—

PKIA8522E

Case 15

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-388, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW N	—	UNKW N	—	UNKW N	UNKW N	UNKW N	—	UNKW N
TRANSMISSION	No indication	NG	UNKW N	UNKW N	—	—	—	UNKW N	—	UNKW N	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7
BCM	No indication	NG	UNKW N	UNKW N	—	—	—	UNKW N	—	—	UNKW N
METER A/C AMP	No indication	—	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N	—	UNKW N	UNKW N	—
AUTO DRIVE POS.	No indication	NG	UNKW N	—	UNKW N	—	UNKW N	UNKW N	—	—	—
ALL MODE AWD/4WD	—	NG	UNKW N	UNKW N	—	—	—	UNKW N	—	UNKW N	—
ABS	—	NG	UNKW N	UNKW N	—	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKW N	UNKW N	—	—	UNKW N	—	—	—	—

PKIA8523E

Case 16

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-388, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display unit	—	CAN COMM	CAN 1	CAN 3	—	—	CAN 2	CAN 5	—	—	CAN 7	
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	

PKIA8524E

Circuit Check Between TCM and Data Link Connector

AKS00A10

1. CHECK HARNESS FOR OPEN CIRCUIT

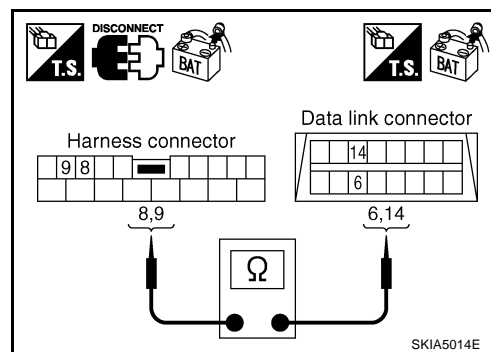
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

8 (L) - 6 (L) : Continuity should exist.

9 (Y) - 14 (Y) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-358, "Work Flow"](#) .
- NG >> Repair harness.



Circuit Check Between Data Link Connector and Driver Seat Control Unit

AKS00A11

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M9
 - Harness connector B2

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

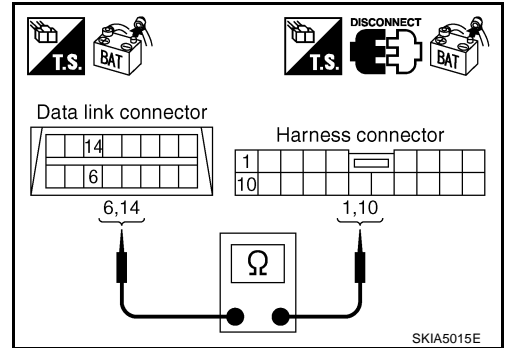
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

6 (L) - 1 (L) : Continuity should exist.
14 (Y) - 10 (Y) : Continuity should exist.

OK or NG

- OK >> GO TO 3.
 NG >> Repair harness.



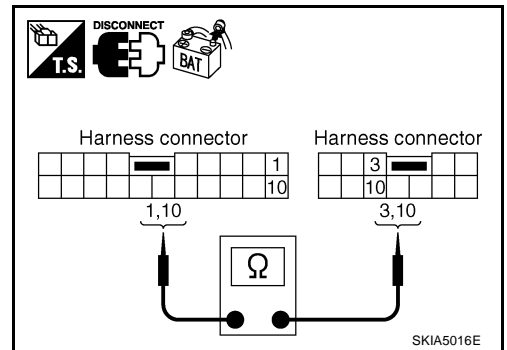
3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

1 (L) - 3 (L) : Continuity should exist.
10 (Y) - 10 (Y) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-358, "Work Flow"](#).
 NG >> Repair harness.



Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit)

AKS00A1Z

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector B4
 - Harness connector E105

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

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2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B2 and harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

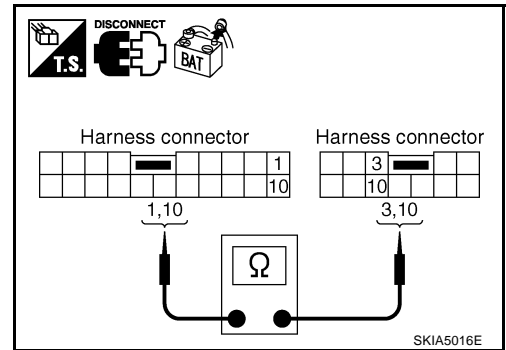
1 (L) - 3 (L) : Continuity should exist.

10 (Y) - 10 (Y) : Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair harness.



3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

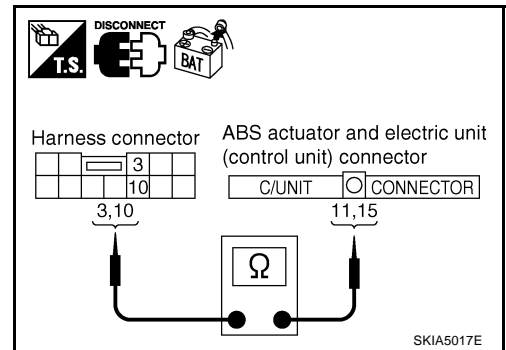
3 (L) - 11 (L) : Continuity should exist.

10 (Y) - 15 (Y) : Continuity should exist.

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-358, "Work Flow"](#).

NG >> Repair harness.



ECM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

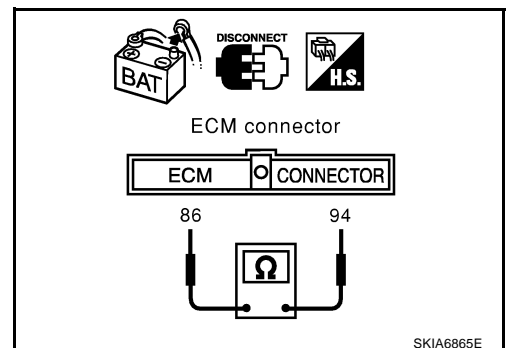
1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

94 (L) - 86 (Y) : Approx. 108 - 132Ω

OK or NG

OK >> Replace ECM.

NG >> Repair harness between ECM and TCM.



TCM Circuit Check

AKS00A14

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
 - TCM connector
 - Harness connector F102
 - Harness connector M82

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

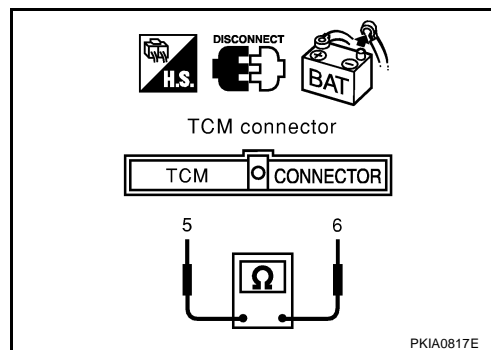
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

5 (L) - 6 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace TCM.
 NG >> Repair harness between TCM and ECM.

**Display Unit Circuit Check**

AKS00A15

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display unit for damage, bend and loose connection (unit side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

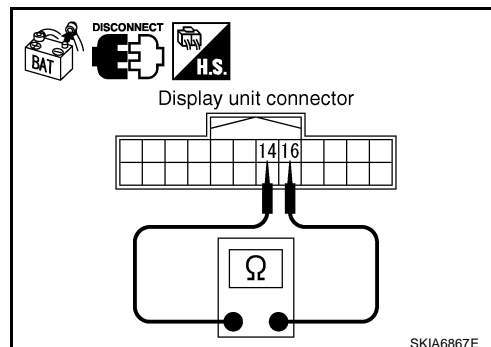
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect display unit connector.
2. Check resistance between display unit harness connector M39 terminals 14 (L) and 16 (Y).

14 (L) - 16 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace display unit.
 NG >> Repair harness between display unit and data link connector.



Data Link Connector Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

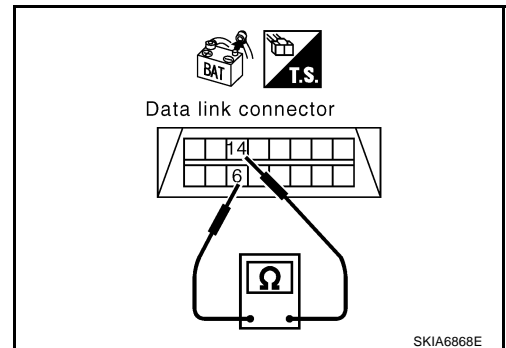
2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

6 (L) - 14 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Diagnose again. Refer to [LAN-358, "Work Flow"](#) .
 NG >> Repair harness between data link connector and BCM.

**BCM Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

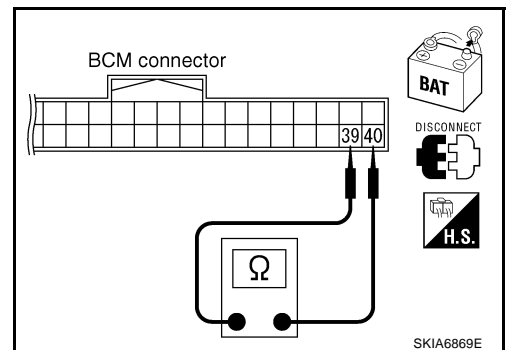
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M34 terminals 39 (L) and 40 (Y).

39 (L) - 40 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace BCM. Refer to [BCS-14, "Removal and Installation of BCM"](#) .
 NG >> Repair harness between BCM and data link connector.



Unified Meter and A/C Amp. Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

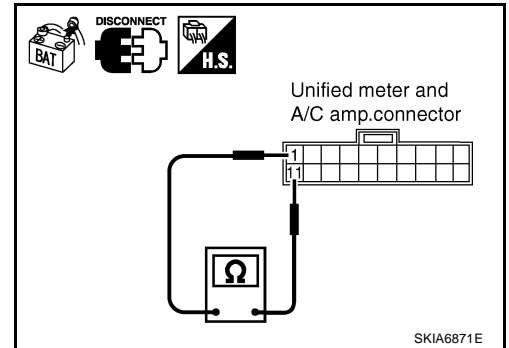
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

1 (L) - 11 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace unified meter and A/C amp.
 NG >> Repair harness between unified meter and A/C amp. and data link connector.



Driver Seat Control Unit Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control unit side and harness side).
 - Driver seat control unit connector
 - Harness connector B301
 - Harness connector B9

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

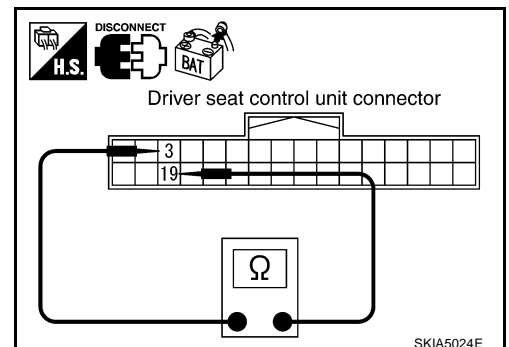
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect driver seat control unit connector.
2. Check resistance between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

3 (L/Y) - 19 (BR/W) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace driver seat control unit.
 NG >> Repair harness between driver seat control unit and harness connector B4.



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AWD Control Unit Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of AWD control unit for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

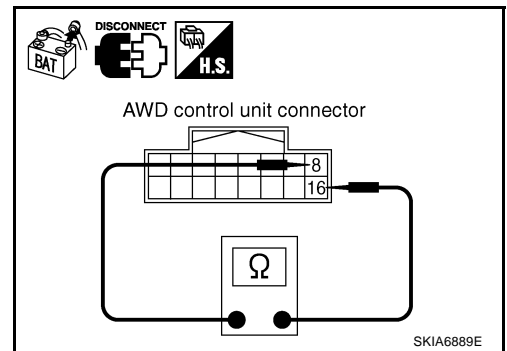
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect AWD control unit connector.
2. Check resistance between AWD control unit harness connector E111 terminals 8 (L) and 16 (Y).

8 (L) - 16 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace AWD control unit.
 NG >> Repair harness between AWD control unit and IPDM E/R.

**ABS Actuator and Electric Unit (Control Unit) Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

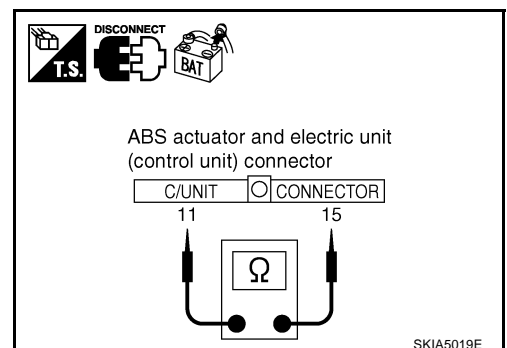
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

11 (L) - 15 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



IPDM E/R Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

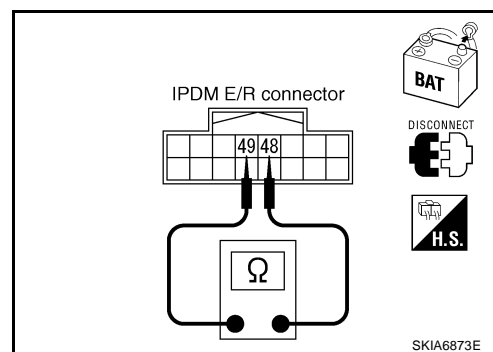
- OK >> GO TO 2.
 NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

48 (L) - 49 (Y)**: Approx. 108 - 132Ω**OK or NG

- OK >> Replace IPDM E/R.
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).

**CAN Communication Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, unit side, meter side, control unit side and harness side).
 - ECM
 - TCM
 - Display unit
 - BCM
 - Unified meter and A/C amp.
 - Driver seat control unit
 - AWD control unit
 - ABS actuator and electric unit (control unit)
 - IPDM E/R
 - Between ECM and IPDM E/R
 - Between ECM and TCM
 - Between ECM and driver seat control unit

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
 - ECM connector
 - Harness connector M82
 - Display unit connector
 - BCM connector
 - Unified meter and A/C amp. connector
 - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

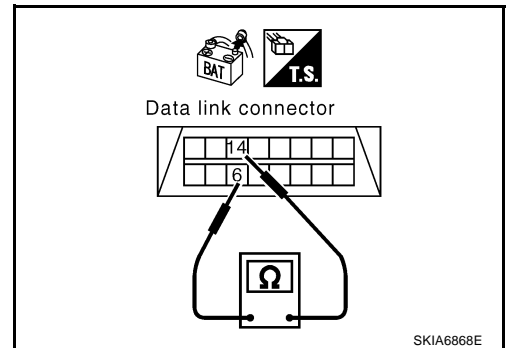
6 (L) - 14 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 3.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM
- Harness between data link connector and harness connector M82
- Harness between data link connector and display unit
- Harness between data link connector and BCM
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9



3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

6 (L) - Ground : Continuity should not exist.

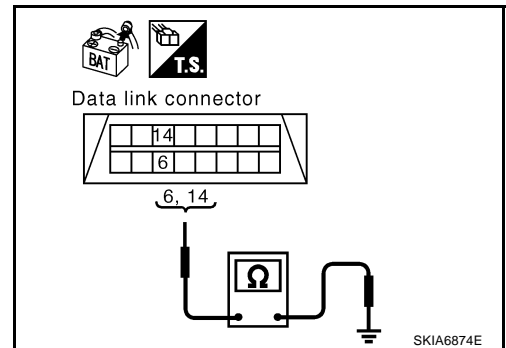
14 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM
- Harness between data link connector and harness connector M82
- Harness between data link connector and display unit
- Harness between data link connector and BCM
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9



4. CHECK HARNESS FOR SHORT CIRCUIT

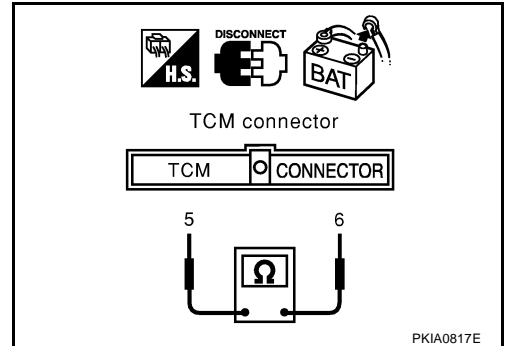
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

5 (L) - 6 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 5.

NG >> Repair harness between TCM and harness connector F102.



5. CHECK HARNESS FOR SHORT CIRCUIT

- Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

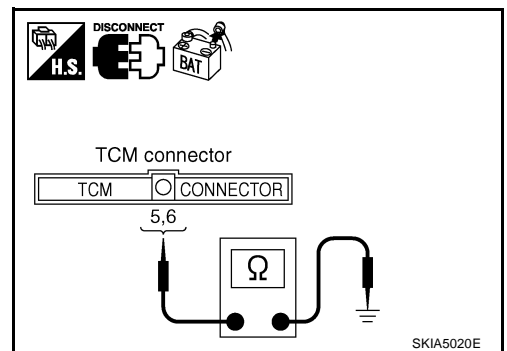
5 (L) - Ground : Continuity should not exist.

6 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 6.

NG >> Repair harness between TCM and harness connector F102.



6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B4 and harness connector B9.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

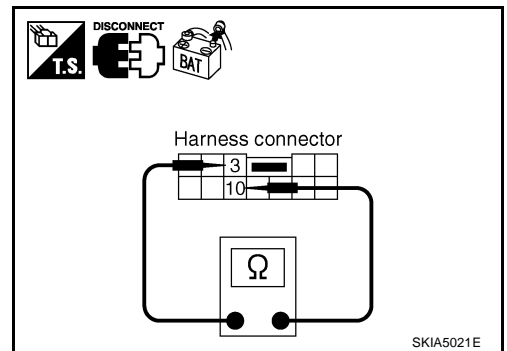
3 (L) - 10 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 7.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between harness connector B4 and harness connector B2
- Harness between harness connector B4 and harness connector B9



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7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

3 (L) - Ground : Continuity should not exist.

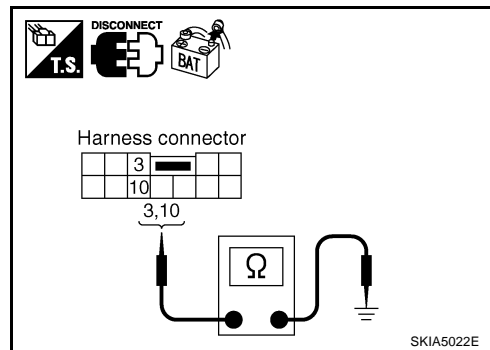
10 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 8.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between harness connector B4 and harness connector B2
- Harness between harness connector B4 and harness connector B9



8. CHECK HARNESS FOR SHORT CIRCUIT

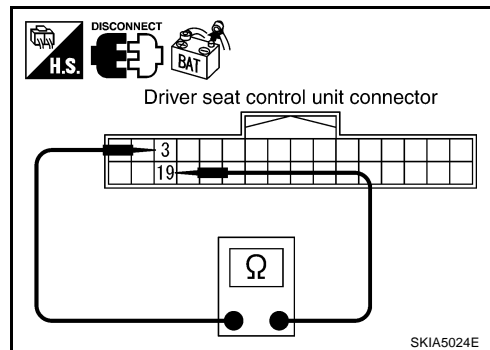
1. Disconnect driver seat control unit connector.
2. Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

3 (L/Y) - 19 (BR/W) : Continuity should not exist.

OK or NG

OK >> GO TO 9.

NG >> Repair harness between driver seat control unit and harness connector B301.



9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y), 19 (BR/W) and ground.

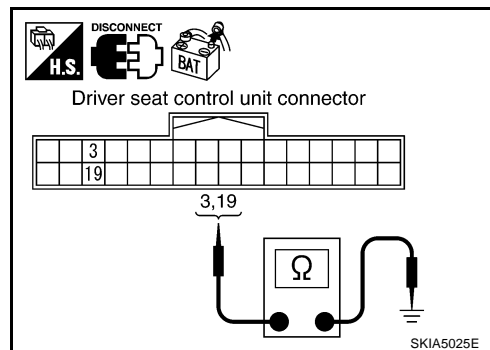
3 (L/Y) - Ground : Continuity should not exist.

19 (BR/W) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 10.

NG >> Repair harness between driver seat control unit and harness connector B301.



10. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect AWD control unit connector, ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

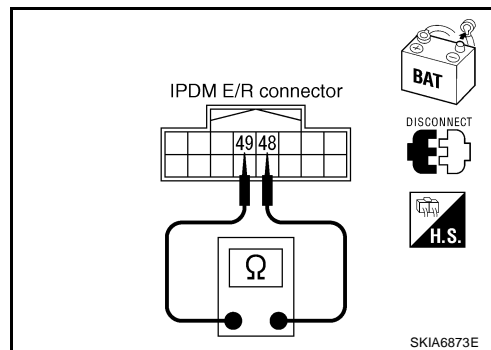
48 (L) - 49 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 11.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit
- Harness between IPDM E/R and ABS actuator and electric unit (control unit)
- Harness between IPDM E/R and harness connector E105



11. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

48 (L) - Ground : Continuity should not exist.

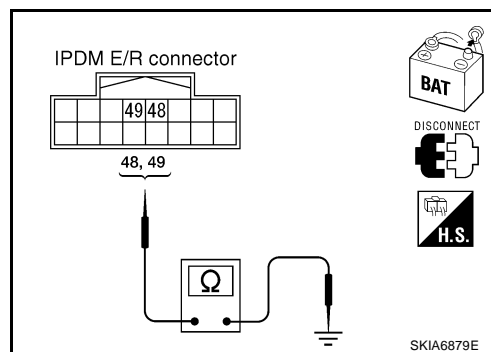
49 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 12.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit
- Harness between IPDM E/R and ABS actuator and electric unit (control unit)
- Harness between IPDM E/R and harness connector E105



12. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-388, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-358, "Work Flow"](#).

NG >> Replace ECM and/or IPDM E/R.

IPDM E/R Ignition Relay Circuit Check

AKS00AIE

Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-27, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#).

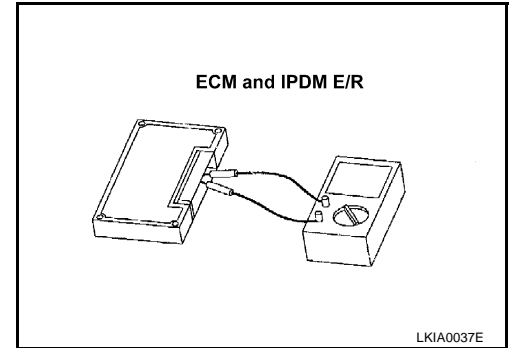
Component Inspection

AKS00AIF

ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



CAN SYSTEM (TYPE 12)

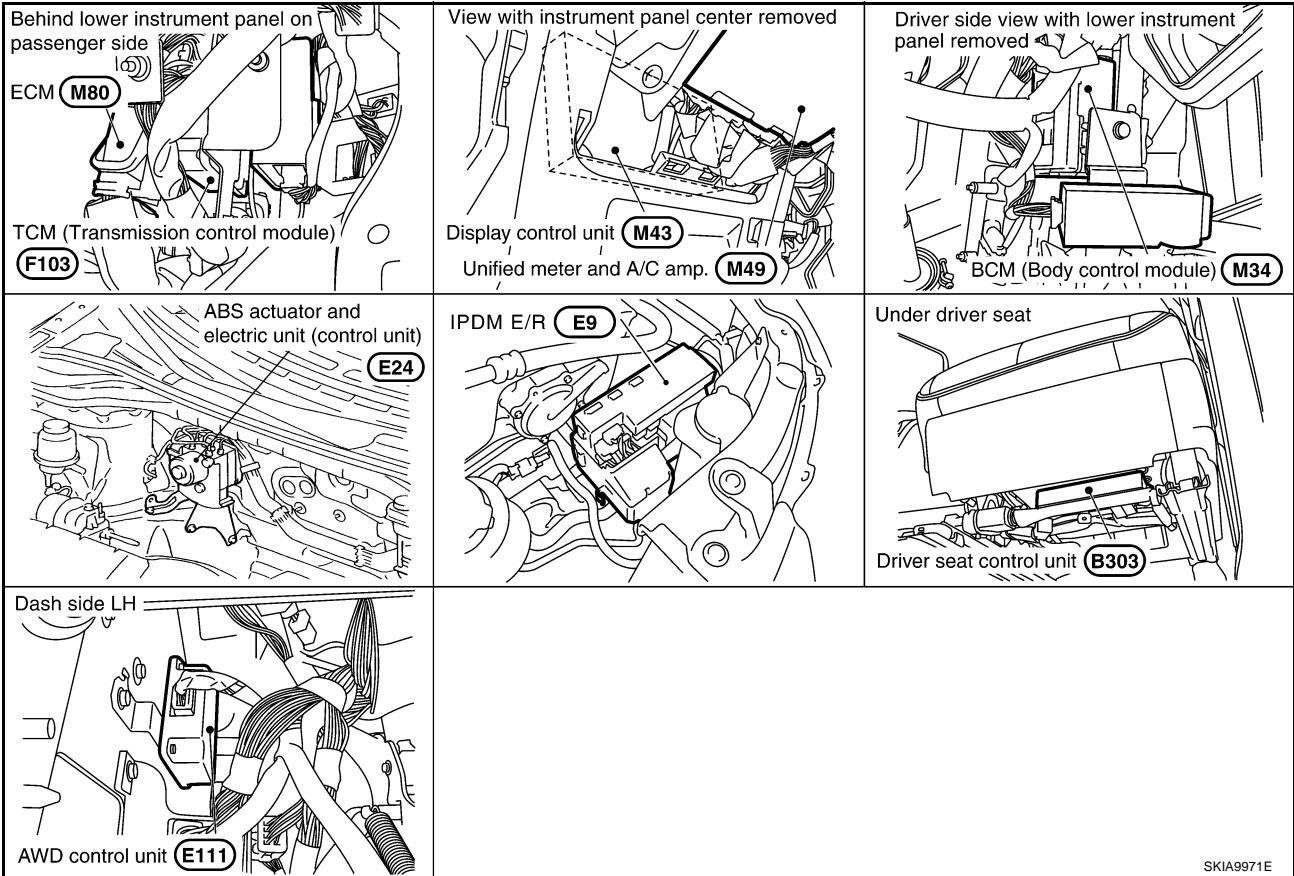
System Description

AKS00A5M

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

AKS00A5N



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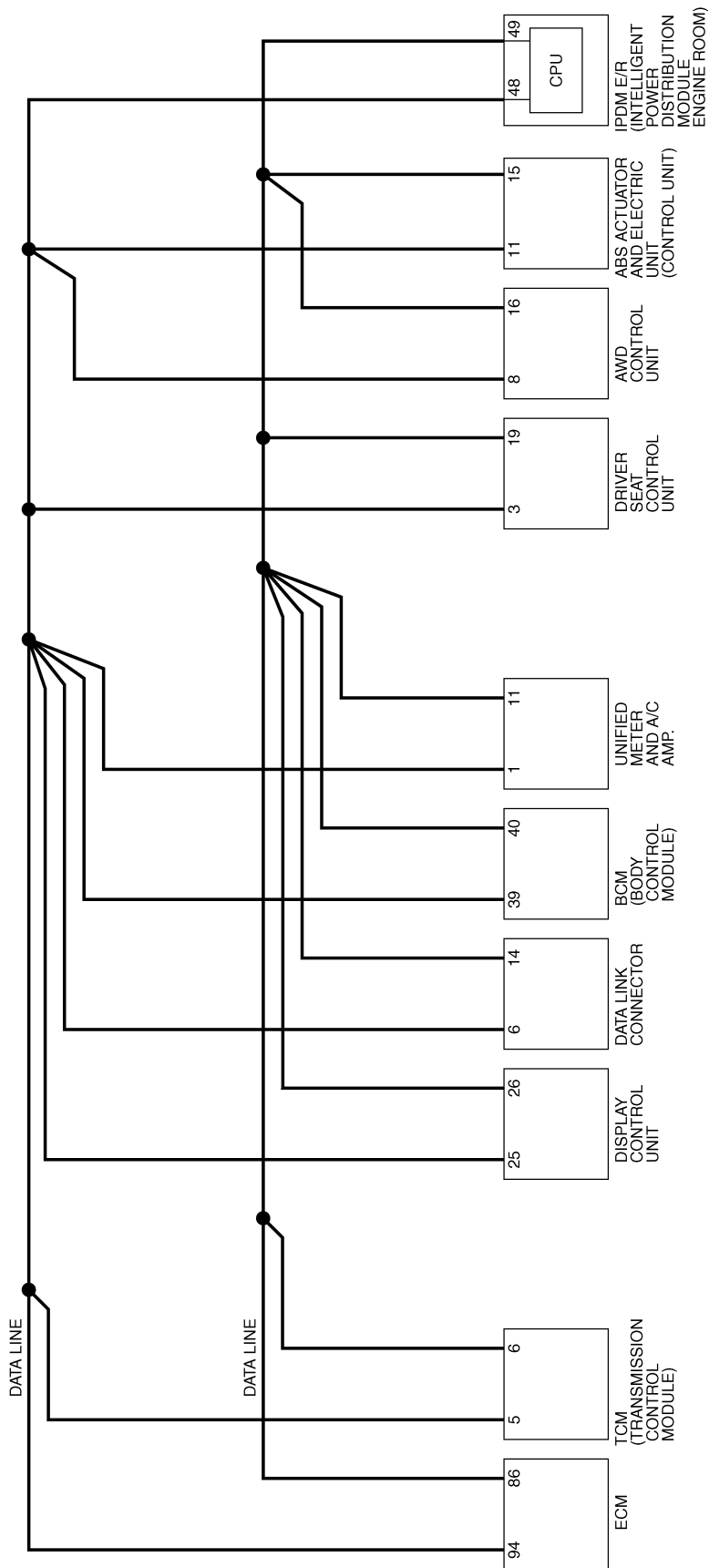
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CAN SYSTEM (TYPE 12)

[CAN]

Schematic

AKS00A50



TKWB0049E

CAN SYSTEM (TYPE 12)

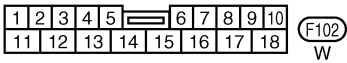
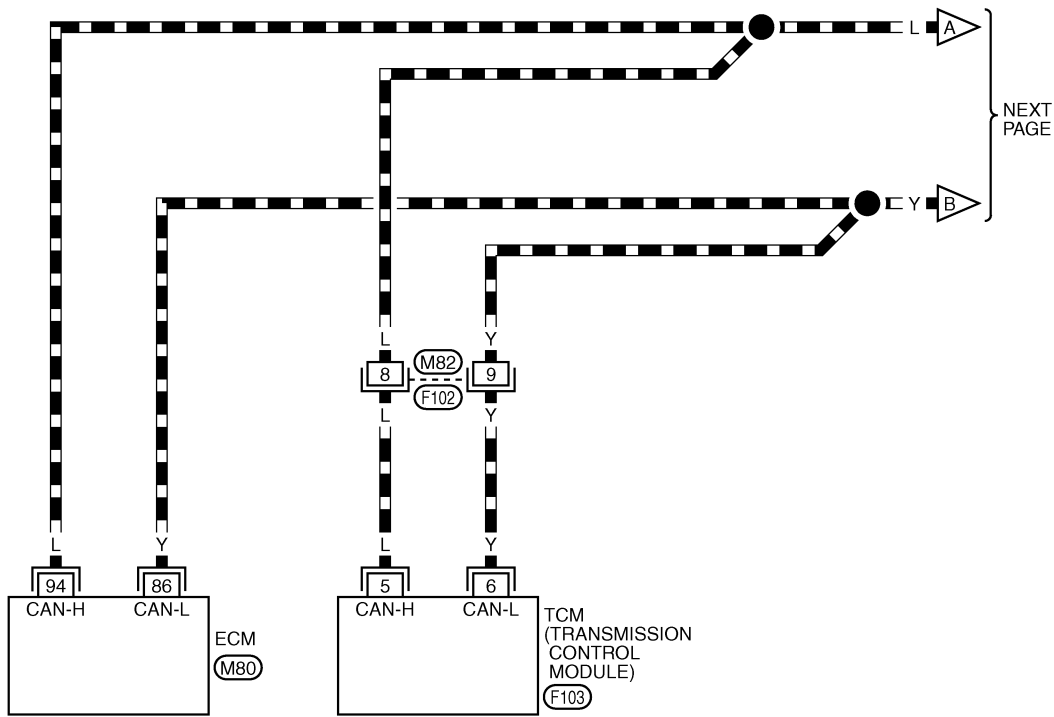
[CAN]

AKS00A5P

Wiring Diagram - CAN -

LAN-CAN-34

▬ : DATA LINE



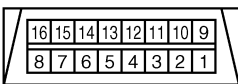
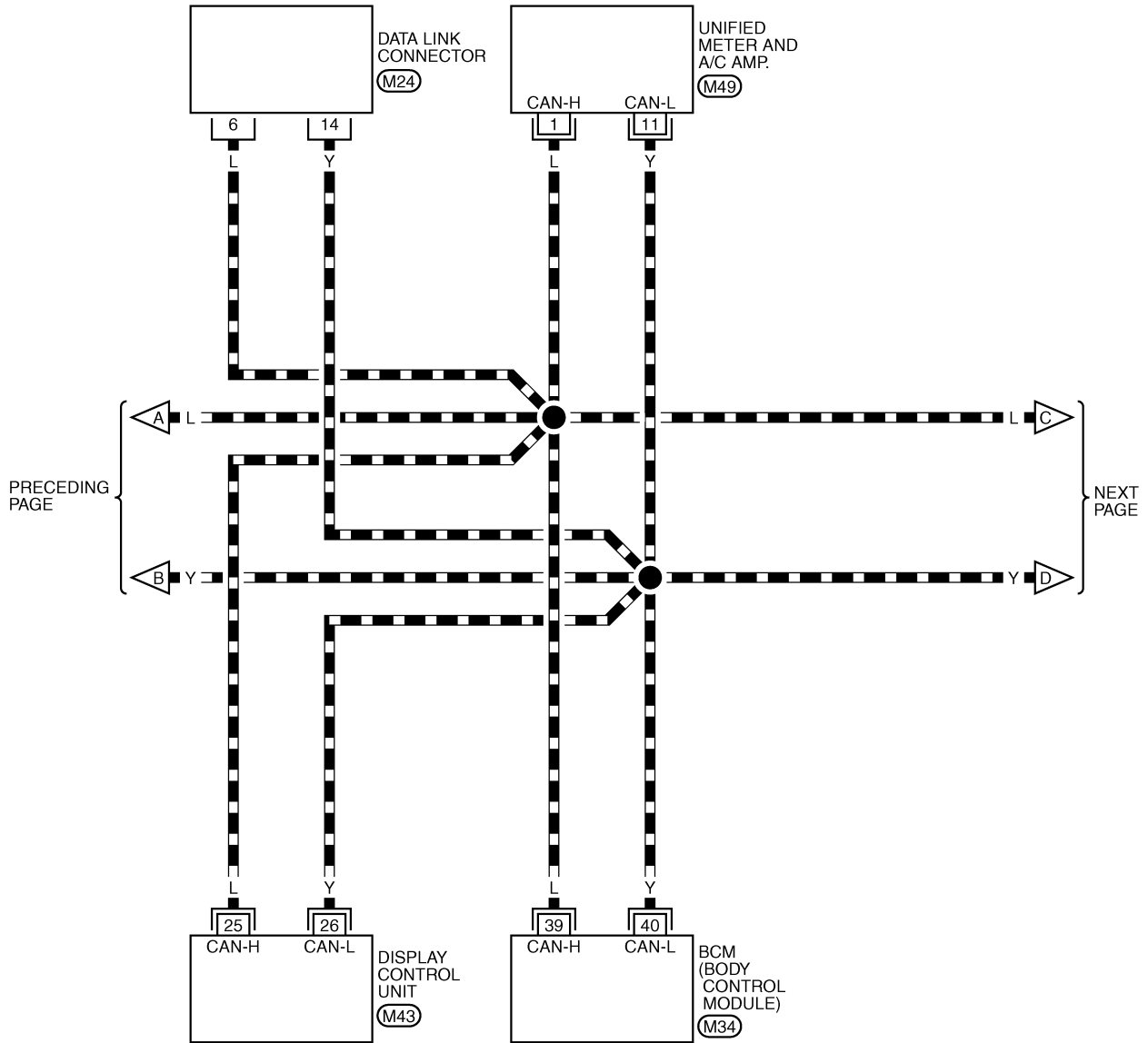
REFER TO THE FOLLOWING.
 (M80), (F103) -ELECTRICAL
 UNITS

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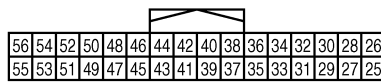
TKWB0050E

LAN-CAN-35

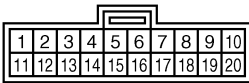
▬ : DATA LINE



(M24)
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(M43)
W



(M49)
GR



REFER TO THE FOLLOWING.

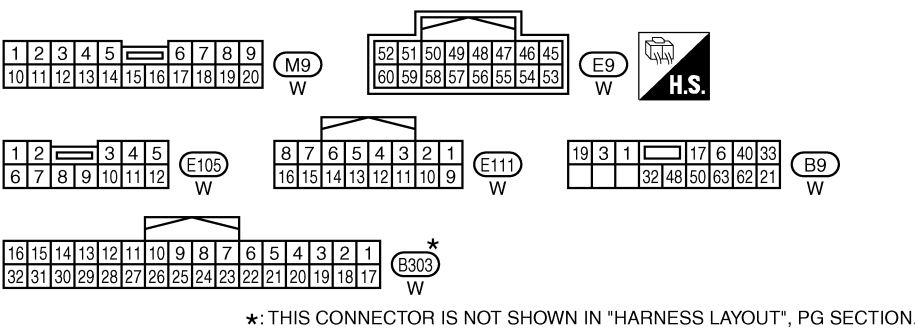
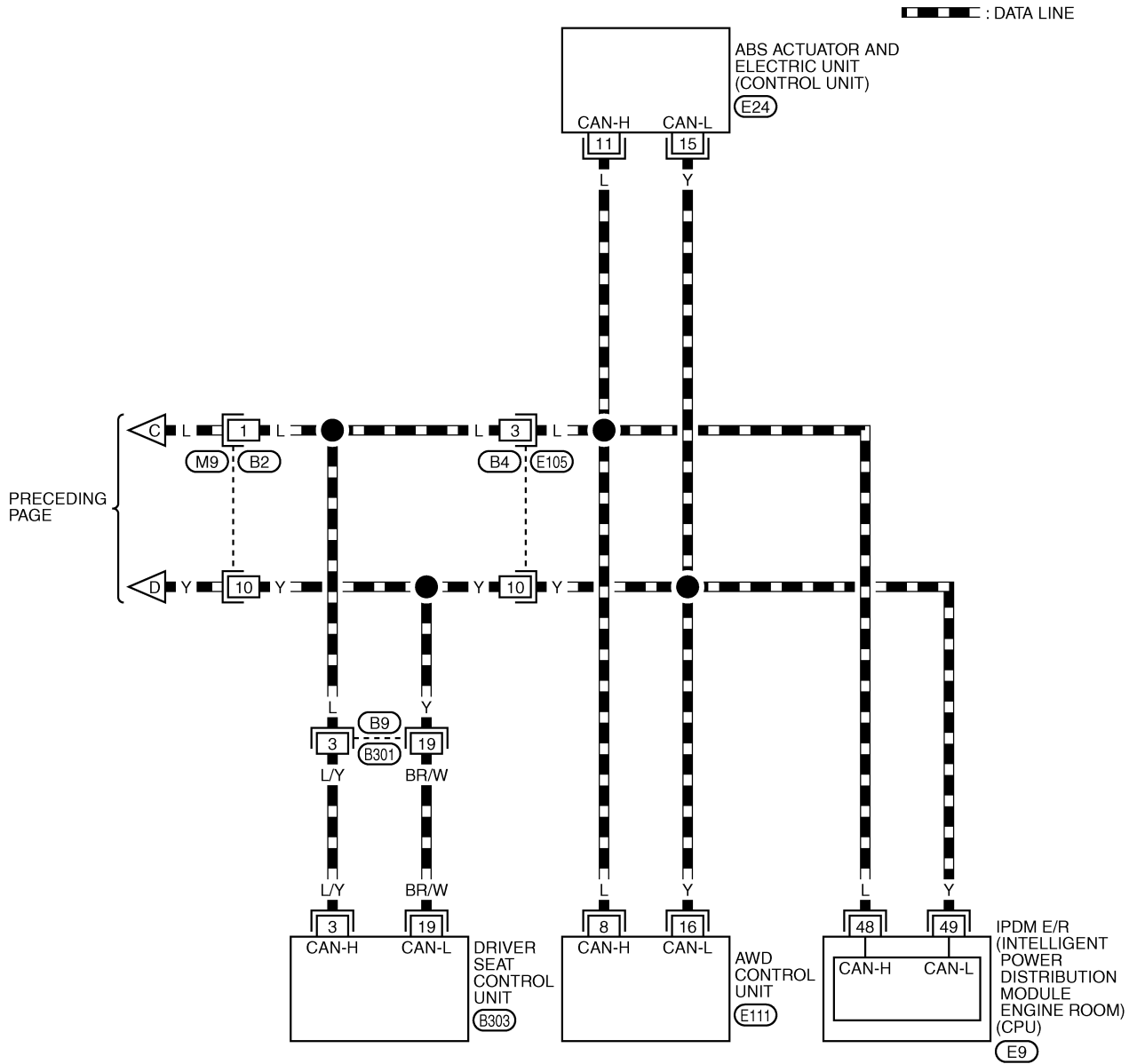
(M34) -ELECTRICAL UNITS

CAN SYSTEM (TYPE 12)

[CAN]

LAN-CAN-36

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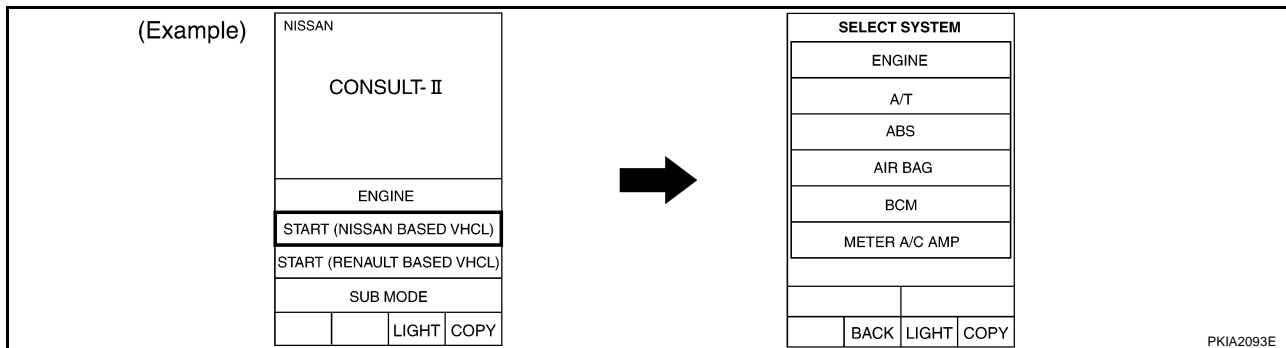
REFER TO THE FOLLOWING.
 -ELECTRICAL UNITS

TKWB0052E

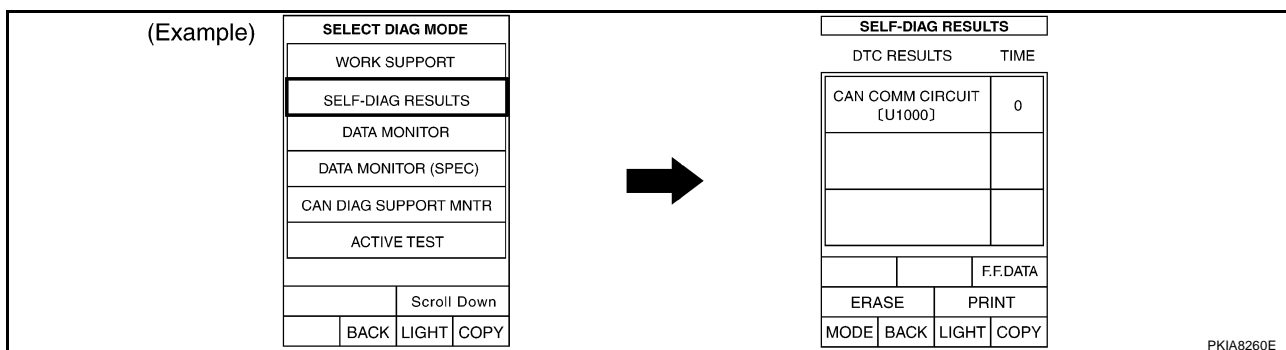
Work Flow

AKS00A5Q

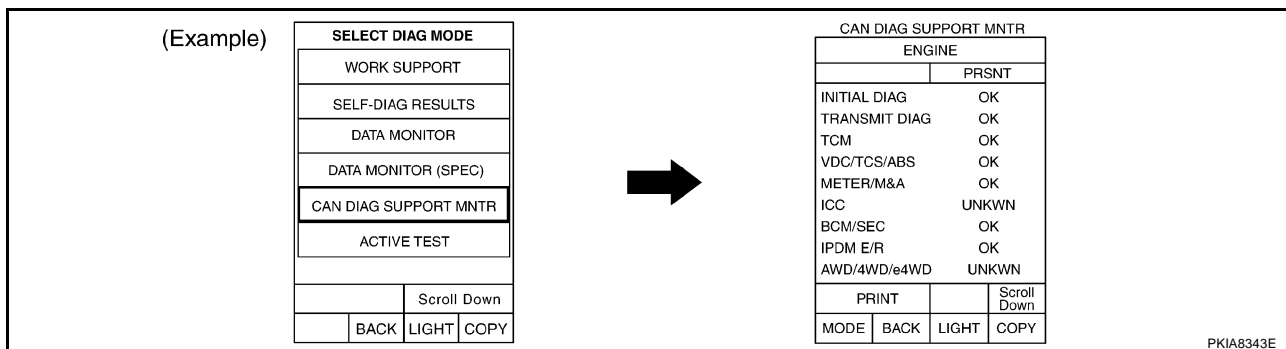
- When there are no indications of "TRANSMISSION", "BCM", "METER A/C AMP", "AUTO DRIVE POS.", or "IPDM E/R" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP", "AUTO DRIVE POS.", "ALL MODE AWD/4WD", "ABS", and "IPDM E/R" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "BCM", "METER A/C AMP", "AUTO DRIVE POS.", "ALL MODE AWD/4WD", "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 [LAN-396. "CHECK SHEET"](#) .
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "V" onto the items with "No indication", "NG", or "UNKWKN" in the check sheet table. Refer to [LAN-396. "CHECK SHEET"](#) .

NOTE:

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual.
So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the navigation system. Refer to [AV-175. "CAN Communication Line Check"](#) .
- Attach the CAN DIAG SUPPORT MONITOR check sheet onto the check sheet. Refer to [LAN-396. "CHECK SHEET"](#) .

CAN SYSTEM (TYPE 12)

[CAN]

8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG SUPPORT MONITOR check sheet. Refer to [LAN-396, "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-175, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-398, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

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CAN SYSTEM (TYPE 12)

[CAN]

CHECK SHEET

NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	

Symptoms :

Attach copy of
SELECT SYSTEM

Attach copy of
SELECT SYSTEM

Attach copy of
display control unit
CAN DIAG SUPPORT MONITOR check sheet

CAN SYSTEM (TYPE 12)

[CAN]

A
B
C
D
E
F
G
H
I
J
LAN
L
M

Attach copy of
ENGINE
SELF-DIAG RESULTS

Attach copy of
TRANSMISSION
SELF-DIAG RESULTS

Attach copy of
BCM
SELF-DIAG RESULTS

Attach copy of
METER A/C AMP
SELF-DIAG RESULTS

Attach copy of
AUTO DRIVE POS.
SELF-DIAG RESULTS

Attach copy of
ALL MODE AWD/4WD
SELF-DIAG RESULTS

Attach copy of
ABS
SELF-DIAG RESULTS

Attach copy of
IPDM E/R
SELF-DIAG RESULTS

Attach copy of
ENGINE
CAN DIAG SUPPORT
MNTR

Attach copy of
TRANSMISSION
CAN DIAG SUPPORT
MNTR

Attach copy of
BCM
CAN DIAG SUPPORT
MNTR

Attach copy of
METER A/C AMP
CAN DIAG SUPPORT
MNTR

Attach copy of
AUTO DRIVE POS.
CAN DIAG SUPPORT
MNTR

Attach copy of
ALL MODE AWD/4WD
CAN DIAG SUPPORT
MNTR

Attach copy of
ABS
CAN DIAG SUPPORT
MNTR

Attach copy of
IPDM E/R
CAN DIAG SUPPORT
MNTR

PKIA8508E

CHECK SHEET RESULTS (EXAMPLE)

NOTE:

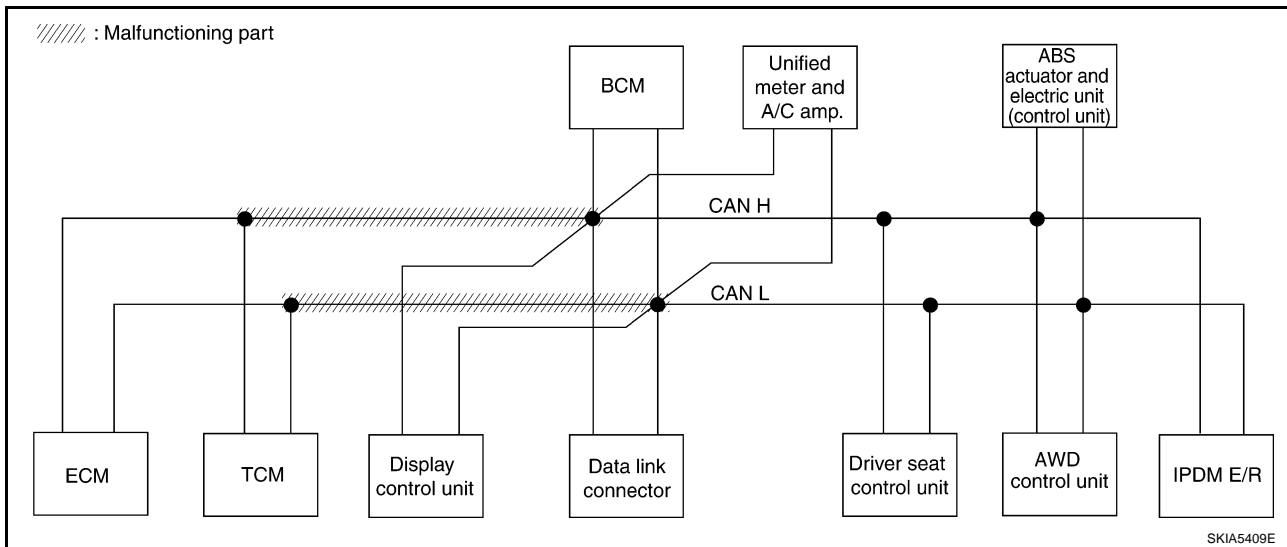
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

Case 1

Check harness between TCM and data link connector. Refer to [LAN-412, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW	—	UNKW	—	UNKW	UNKW	UNKW	—	UNKW
TRANSMISSION	No indication ✓	NG	UNKW	UNKW	—	—	—	UNKW	—	UNKW	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3 ✓	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	No indication	NG	UNKW	UNKW	—	—	—	UNKW	—	—	UNKW
METER A/C AMP	No indication	—	UNKW	UNKW	UNKW	UNKW	UNKW	—	UNKW	UNKW	—
AUTO DRIVE POS.	No indication	NG	UNKW	—	UNKW	—	UNKW	UNKW	—	—	—
ALL MODE AWD/4WD	—	NG	UNKW	UNKW	—	—	—	UNKW	—	UNKW	—
ABS	—	NG	UNKW	UNKW	—	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKW	UNKW	—	—	UNKW	—	—	—	—

PKIA8526E



CAN SYSTEM (TYPE 12)

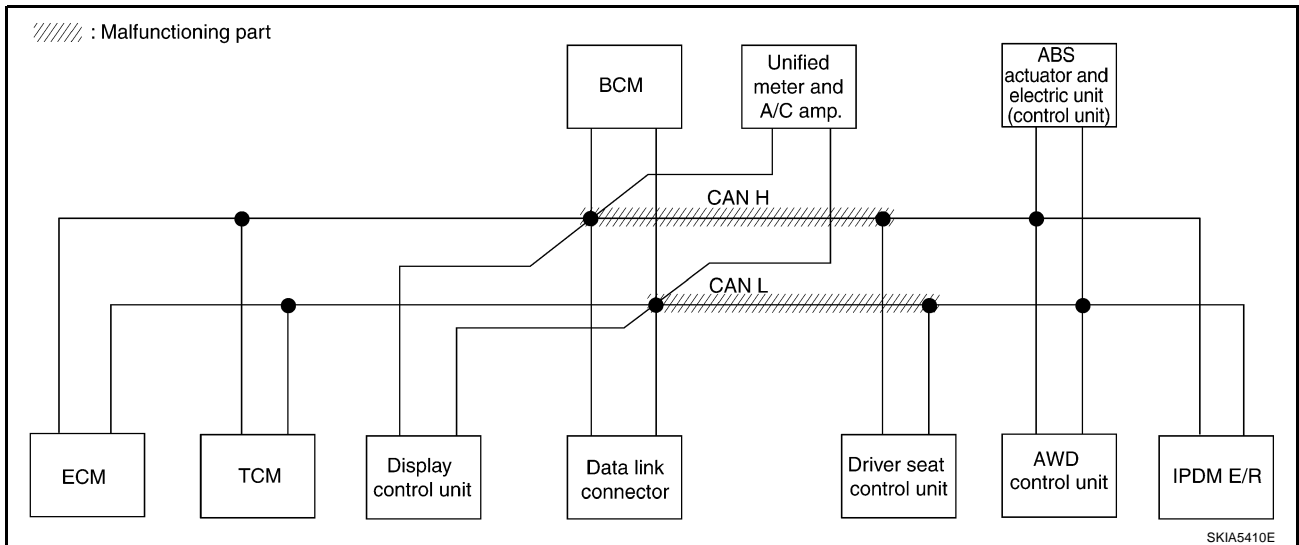
[CAN]

Case 2

Check harness between data link connector and driver seat control unit. Refer to [LAN-412, "Circuit Check Between Data Link Connector and Driver Seat Control Unit"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	

PKIA8527E



LAN

CAN SYSTEM (TYPE 12)

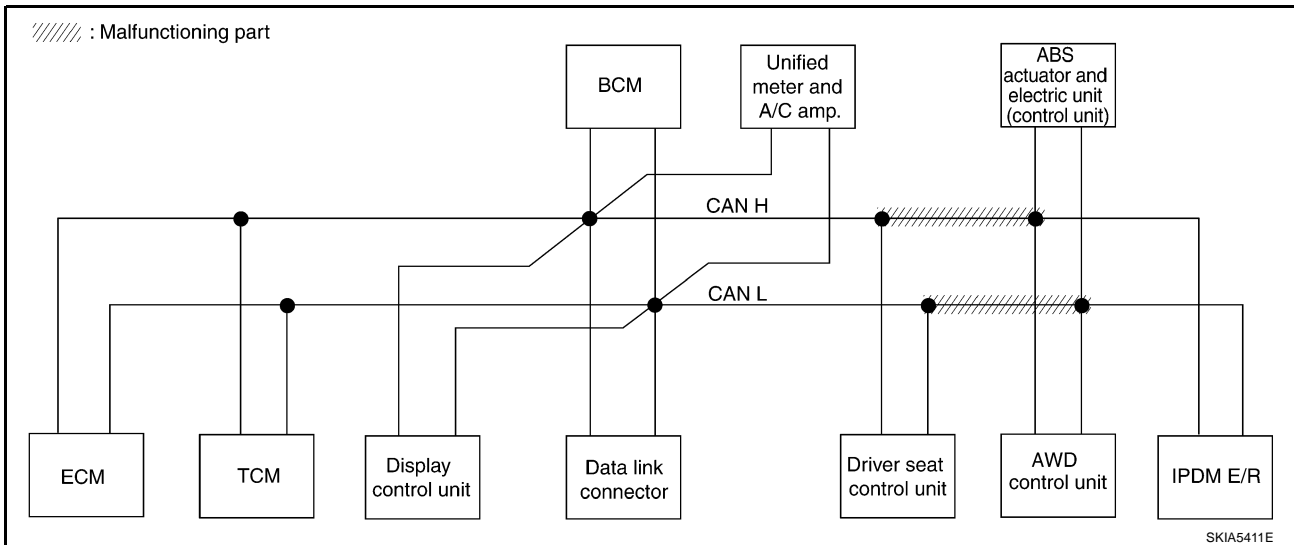
[CAN]

Case 3

Check harness between driver seat control unit and ABS actuator and electric unit (control unit). Refer to LAN-413, "Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit)".

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	—

PKIA8528E



SKIA5411E

CAN SYSTEM (TYPE 12)

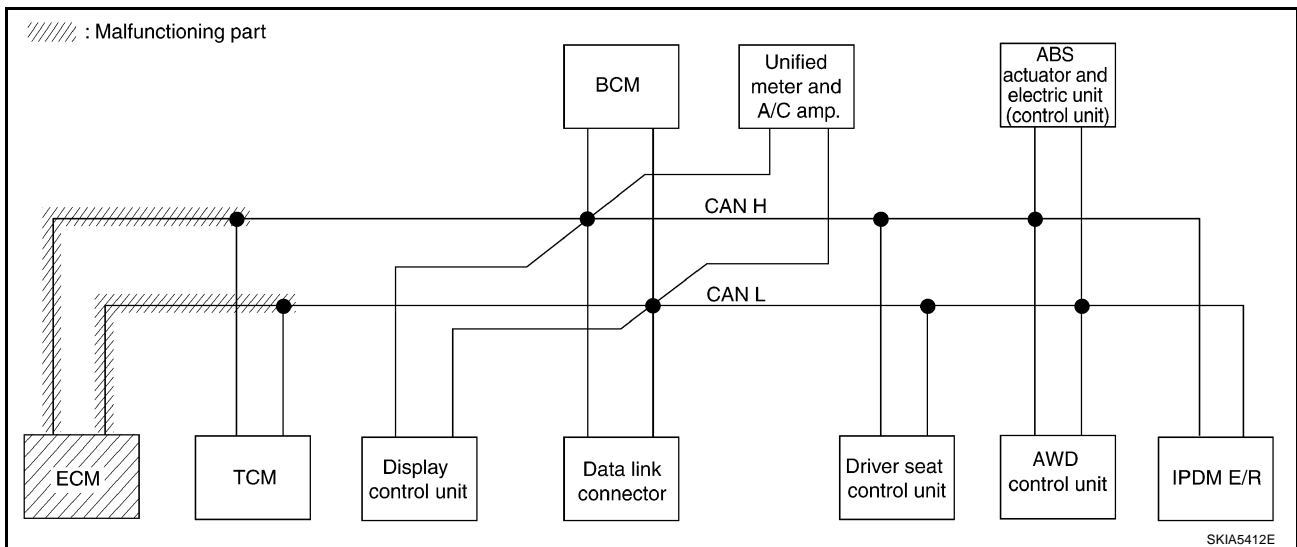
[CAN]

Case 4

Check ECM circuit. Refer to [LAN-414, "ECM Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW ^N	—	UNKW ^N	—	UNKW ^N	UNKW ^N	UNKW ^N	—	UNKW ^N
TRANSMISSION	No indication	NG	UNKW ^N	UNKW ^N	—	—	—	UNKW ^N	—	UNKW ^N	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	No indication	NG	UNKW ^N	UNKW ^N	—	—	—	UNKW ^N	—	—	UNKW ^N
METER A/C AMP	No indication	—	UNKW ^N	UNKW ^N	UNKW ^N	UNKW ^N	UNKW ^N	—	UNKW ^N	UNKW ^N	—
AUTO DRIVE POS.	No indication	NG	UNKW ^N	—	UNKW ^N	—	UNKW ^N	UNKW ^N	—	—	—
ALL MODE AWD/4WD	—	NG	UNKW ^N	UNKW ^N	—	—	—	UNKW ^N	—	UNKW ^N	—
ABS	—	NG	UNKW ^N	UNKW ^N	—	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKW ^N	UNKW ^N	—	—	UNKW ^N	—	—	—	—

PKIA8529E



CAN SYSTEM (TYPE 12)

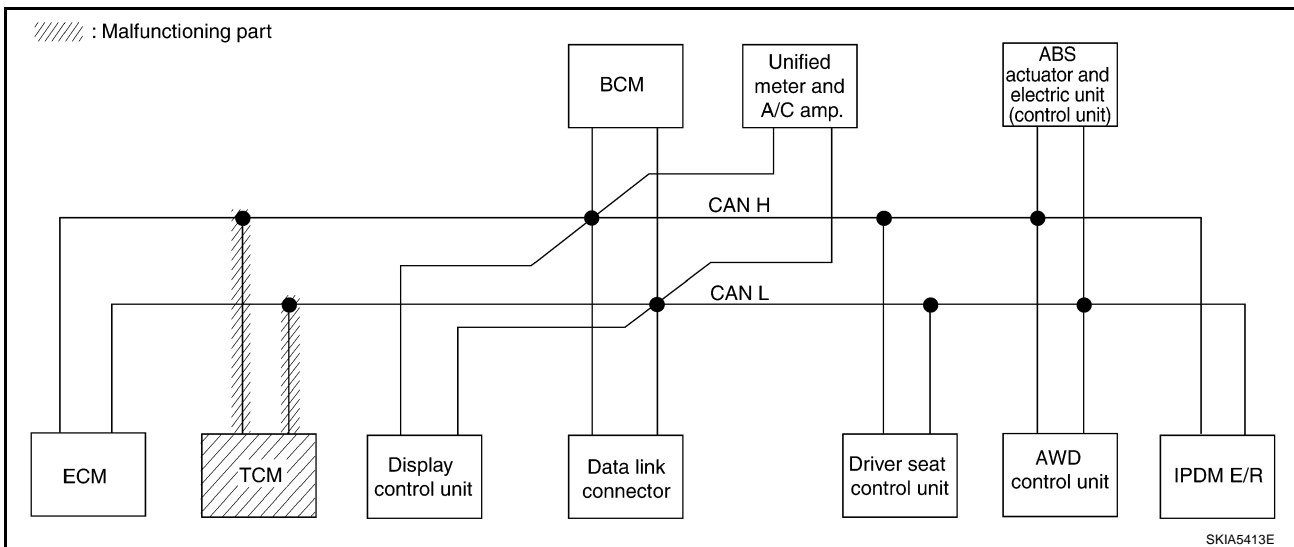
[CAN]

Case 5

Check TCM circuit. Refer to [LAN-415, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWVN	—	UNKWVN	—	UNKWVN	UNKWVN	UNKWVN	—	UNKWVN
TRANSMISSION	No indication ✓	NG	UNKWVN	UNKWVN	—	—	—	UNKWVN	—	UNKWVN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWVN	UNKWVN	—	—	—	UNKWVN	—	—	UNKWVN
METER A/C AMP	No indication	—	UNKWVN	UNKWVN	UNKWVN	UNKWVN	UNKWVN	—	UNKWVN	UNKWVN	—
AUTO DRIVE POS.	No indication	NG	UNKWVN	—	UNKWVN	—	UNKWVN	UNKWVN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWVN	UNKWVN	—	—	—	UNKWVN	—	UNKWVN	—
ABS	—	NG	UNKWVN	UNKWVN	—	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKWVN	UNKWVN	—	—	UNKWVN	—	—	—	—

PKIA8530E



CAN SYSTEM (TYPE 12)

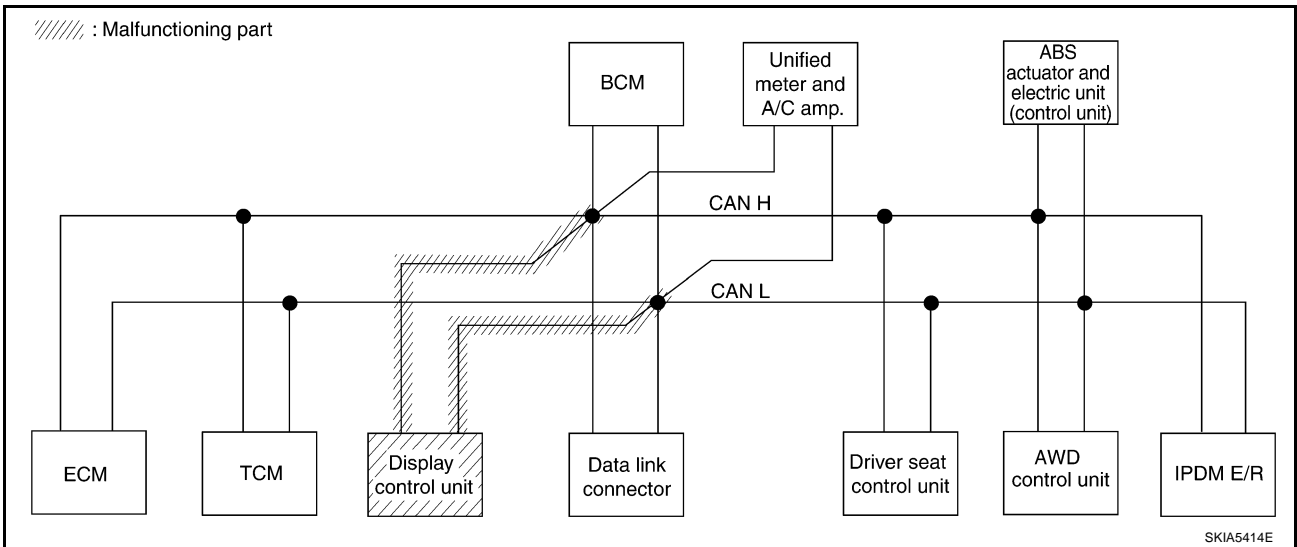
[CAN]

Case 6

Check display control unit circuit. Refer to [LAN-415, "Display Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CRC 1 ✓	CAN CRC 3 ✓	—	—	CAN CRC 2 ✓	CAN CRC 5 ✓	—	—	CAN CRC 7 ✓
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—

PKIA8531E



CAN SYSTEM (TYPE 12)

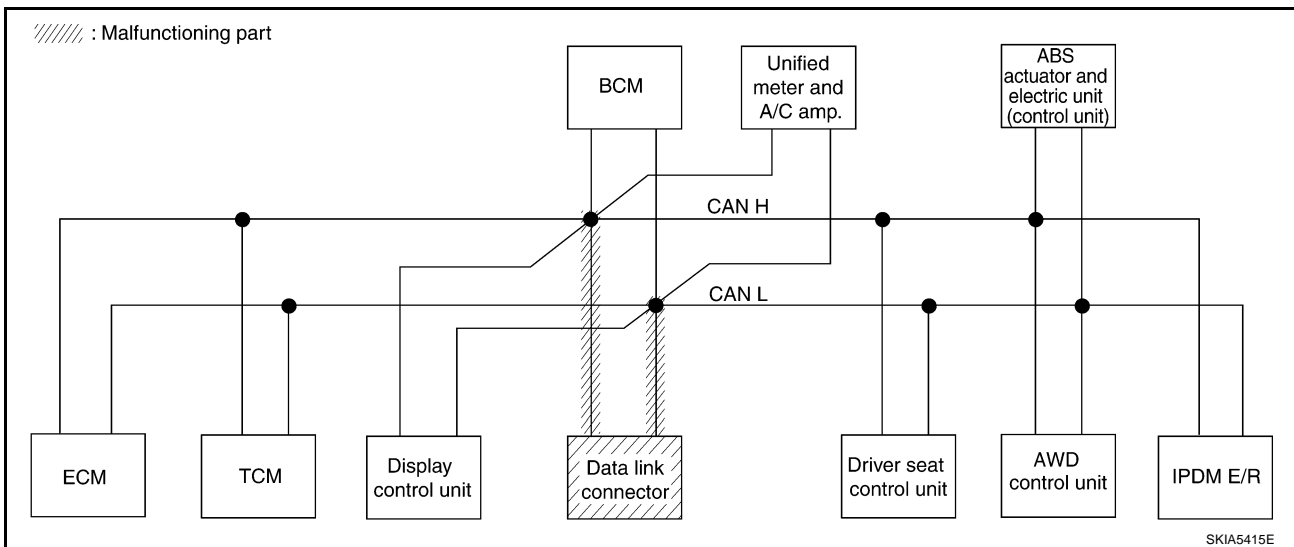
[CAN]

Case 7

Check data link connector circuit. Refer to [LAN-416, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW N	—	UNKW N	—	UNKW N	UNKW N	UNKW N	—	UNKW N
TRANSMISSION	No indication ✓	NG	UNKW N	UNKW N	—	—	—	UNKW N	—	UNKW N	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	No indication ✓	NG	UNKW N	UNKW N	—	—	—	UNKW N	—	—	UNKW N
METER A/C AMP	No indication ✓	—	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N	—	UNKW N	UNKW N	—
AUTO DRIVE POS.	No indication ✓	NG	UNKW N	—	UNKW N	—	UNKW N	UNKW N	—	—	—
ALL MODE AWD/4WD	—	NG	UNKW N	UNKW N	—	—	—	UNKW N	—	UNKW N	—
ABS	—	NG	UNKW N	UNKW N	—	—	—	—	—	—	—
IPDM E/R	No indication ✓	—	UNKW N	UNKW N	—	—	UNKW N	—	—	—	—

PKIA8532E



SKIA5415E

CAN SYSTEM (TYPE 12)

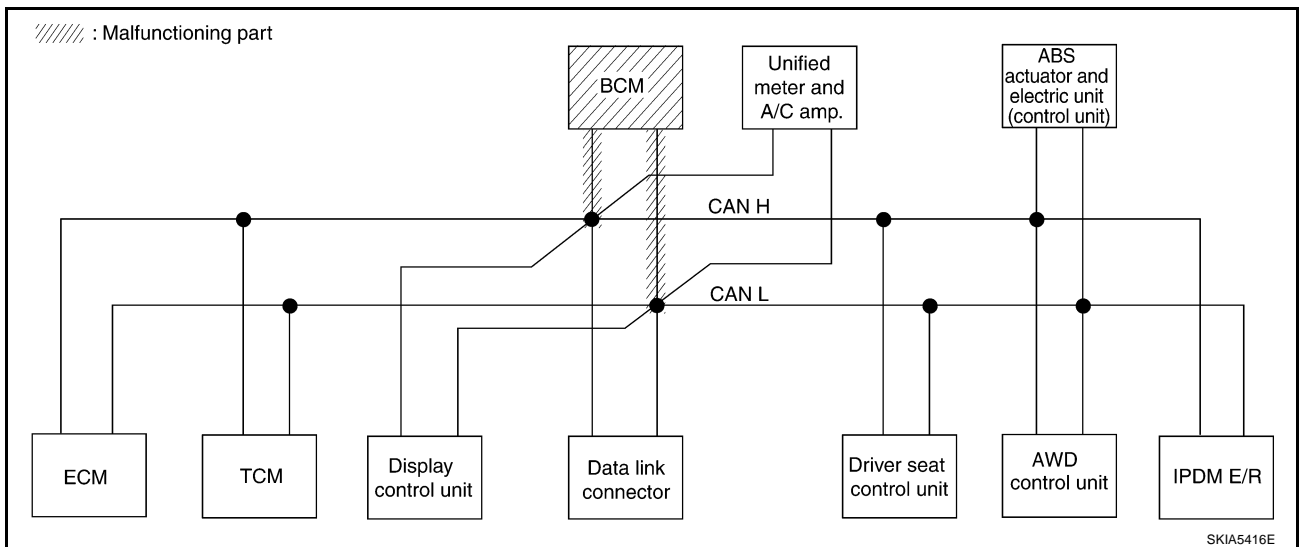
[CAN]

Case 8

Check BCM circuit. Refer to [LAN-416, "BCM Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	No indication ✓	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—

PKIA8533E



CAN SYSTEM (TYPE 12)

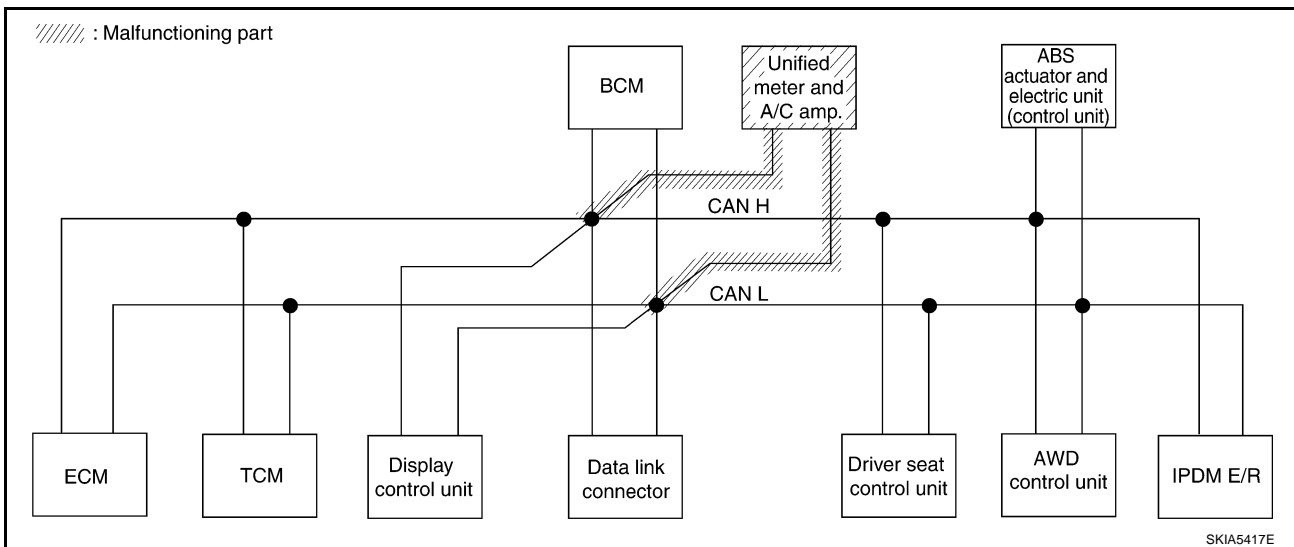
[CAN]

Case 9

Check unified meter and A/C amp. circuit. Refer to [LAN-417, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	

PKIA8534E



CAN SYSTEM (TYPE 12)

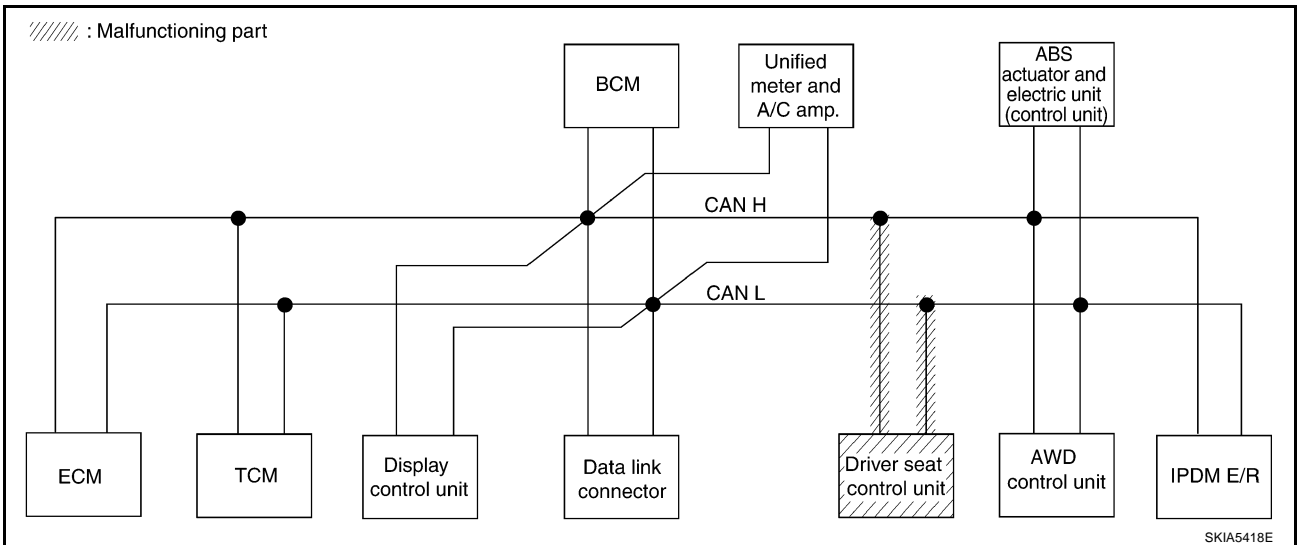
[CAN]

Case 10

Check driver seat control unit circuit. Refer to [LAN-417, "Driver Seat Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	

PKIA8535E



CAN SYSTEM (TYPE 12)

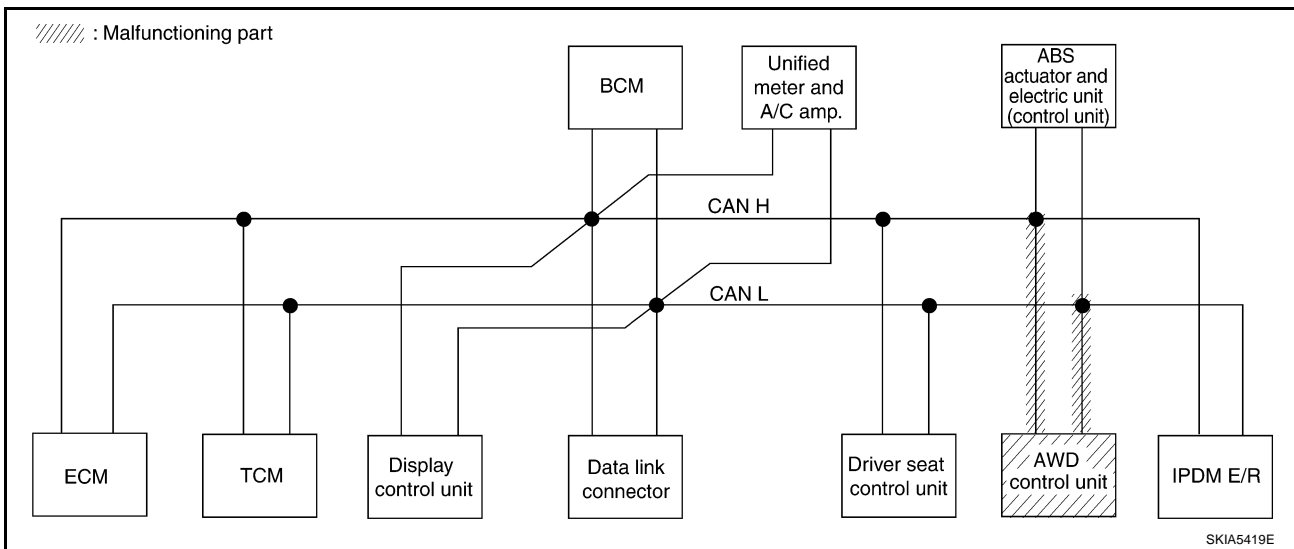
[CAN]

Case 11

Check AWD control unit circuit. Refer to [LAN-418. "AWD Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	✓	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	—

PKIA8536E



CAN SYSTEM (TYPE 12)

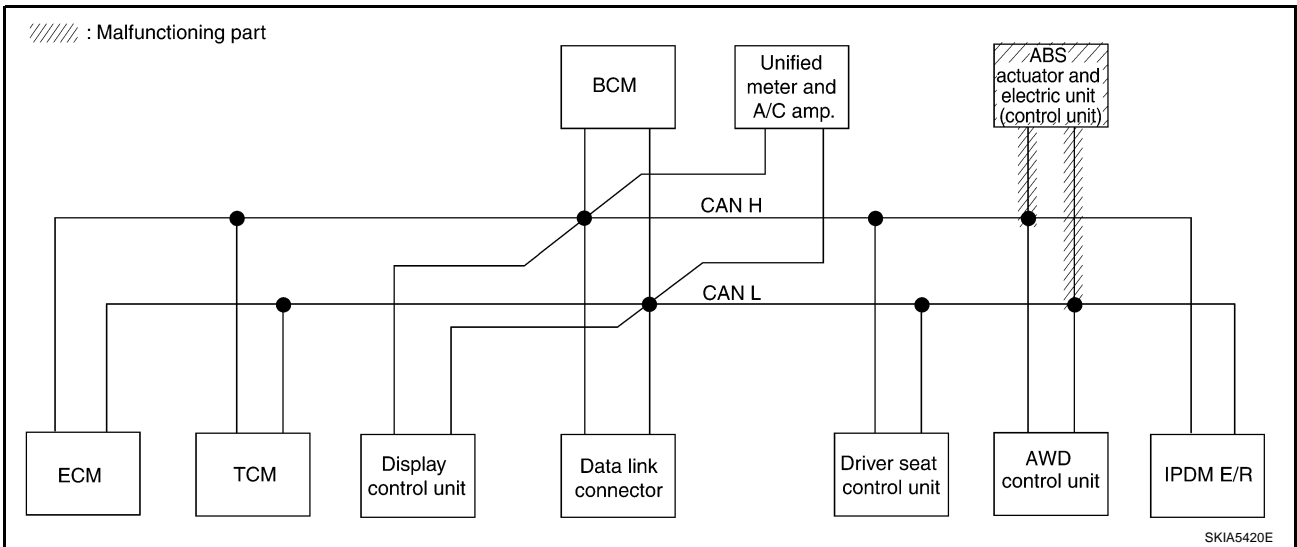
[CAN]

Case 12

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-418, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—

PKIA8537E



CAN SYSTEM (TYPE 12)

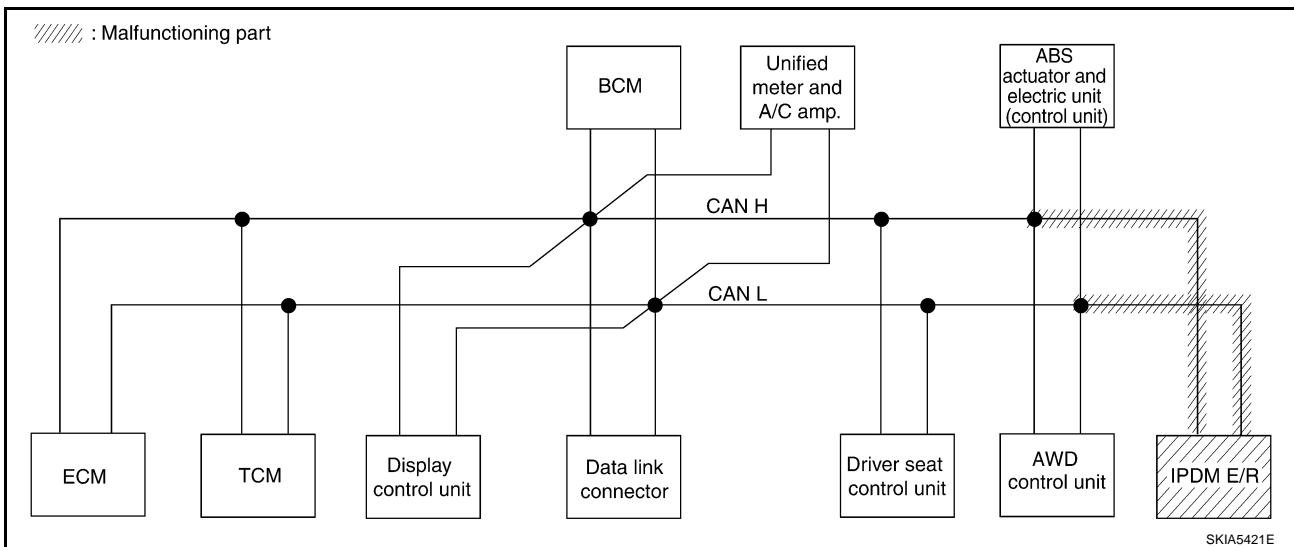
[CAN]

Case 13

Check IPDM E/R circuit. Refer to [LAN-419, "IPDM E/R Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN ✓
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7 ✓
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	—	UNKWN ✓
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—

PKIA8538E



CAN SYSTEM (TYPE 12)

[CAN]

Case 14

Check CAN communication circuit. Refer to [LAN-419, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKW N	—	UNKW N	—	UNKW N	UNKW N	UNKW N	—	UNKW N	
TRANSMISSION	No indication ✓	NG	UNKW N	UNKW N	—	—	—	UNKW N	—	UNKW N	—	
Display control unit	—	CAN COMM	CAN CIRC 1 ✓	CAN CIRC 3 ✓	—	—	CAN CIRC 2 ✓	CAN CIRC 5 ✓	—	—	CAN CIRC 7 ✓	
BCM	No indication ✓	NG	UNKW N	UNKW N	—	—	—	UNKW N	—	—	UNKW N	
METER A/C AMP	No indication ✓	—	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N	—	UNKW N	UNKW N	—	
AUTO DRIVE POS.	No indication ✓	NG	UNKW N	—	UNKW N	—	UNKW N	UNKW N	—	—	—	
ALL MODE AWD/4WD	—	NG	UNKW N	UNKW N	—	—	—	UNKW N	—	UNKW N	—	
ABS	—	NG ✓	UNKW N	UNKW N	—	—	—	—	—	—	—	
IPDM E/R	No indication ✓	—	UNKW N	UNKW N	—	—	UNKW N	—	—	—	—	

PKIA8539E

Case 15

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-424, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKW N	—	UNKW N	—	UNKW N	UNKW N	UNKW N	—	UNKW N	
TRANSMISSION	No indication	NG	UNKW N	UNKW N	—	—	—	UNKW N	—	UNKW N	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	No indication	NG	UNKW N	UNKW N	—	—	—	UNKW N	—	—	UNKW N	
METER A/C AMP	No indication	—	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N	—	UNKW N	UNKW N	—	
AUTO DRIVE POS.	No indication	NG	UNKW N	—	UNKW N	—	UNKW N	UNKW N	—	—	—	
ALL MODE AWD/4WD	—	NG	UNKW N	UNKW N	—	—	—	UNKW N	—	UNKW N	—	
ABS	—	NG	UNKW N	UNKW N	—	—	—	—	—	—	—	
IPDM E/R	No indication	—	UNKW N	UNKW N	—	—	UNKW N	—	—	—	—	

PKIA8540E

Case 16

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-424, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DISPLAY	BCM /SEC	METER /M&A	AWD/4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKW N	—	UNKW N	—	UNKW N	UNKW N	UNKW N	—	UNKW N	
TRANSMISSION	No indication	NG	UNKW N	UNKW N	—	—	—	UNKW N	—	UNKW N	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 2	CAN CIRC 5	—	—	CAN CIRC 7	
BCM	No indication	NG	UNKW N	UNKW N	—	—	—	UNKW N	—	—	UNKW N	
METER A/C AMP	No indication	—	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N	—	UNKW N	UNKW N	—	
AUTO DRIVE POS.	No indication	NG	UNKW N	—	UNKW N	—	UNKW N	UNKW N	—	—	—	
ALL MODE AWD/4WD	—	NG	UNKW N	UNKW N	—	—	—	UNKW N	—	UNKW N	—	
ABS	—	NG	UNKW N	UNKW N	—	—	—	—	—	—	—	
IPDM E/R	No indication	—	UNKW N	UNKW N	—	—	UNKW N	—	—	—	—	

PKIA8541E

Circuit Check Between TCM and Data Link Connector

AKS00A5R

1. CHECK HARNESS FOR OPEN CIRCUIT

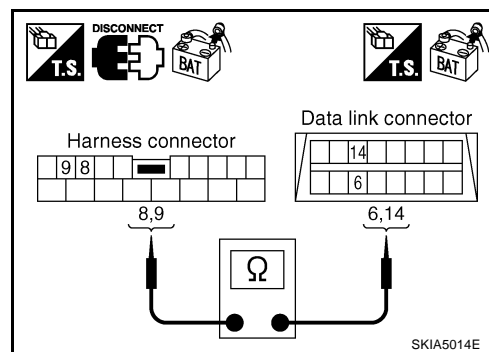
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

8 (L) - 6 (L) : Continuity should exist.

9 (Y) - 14 (Y) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-394, "Work Flow"](#) .
- NG >> Repair harness.



Circuit Check Between Data Link Connector and Driver Seat Control Unit

AKS00A5S

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M9
 - Harness connector B2

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

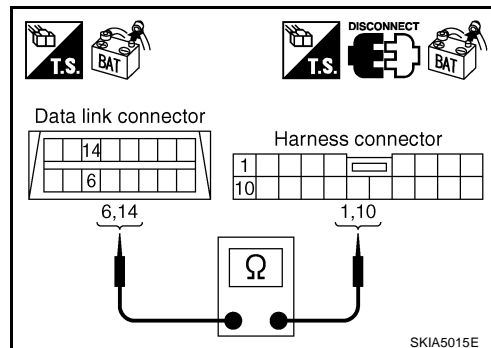
1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

6 (L) - 1 (L) : Continuity should exist.

14 (Y) - 10 (Y) : Continuity should exist.

OK or NG

- OK >> GO TO 3.
NG >> Repair harness.



3. CHECK HARNESS FOR OPEN CIRCUIT

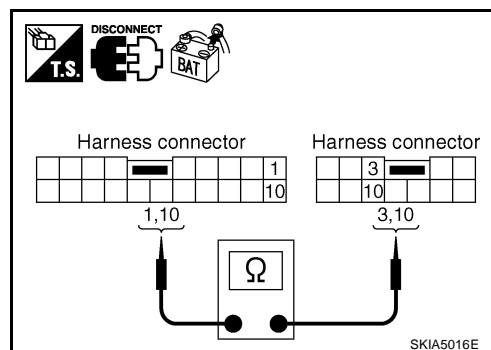
1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

1 (L) - 3 (L) : Continuity should exist.

10 (Y) - 10 (Y) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-394, "Work Flow"](#).
NG >> Repair harness.



Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit)

AKS00A5T

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector B4
 - Harness connector E105

OK or NG

- OK >> GO TO 2.
NG >> Repair terminal or connector.

A
B
C
D
E
F
G
H
I
J
LAN
L
M

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B2 and harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

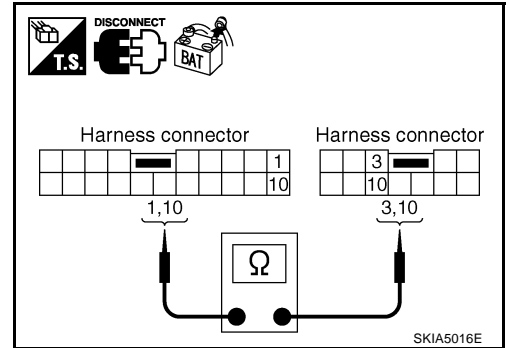
1 (L) - 3 (L) : Continuity should exist.

10 (Y) - 10 (Y) : Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair harness.



3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

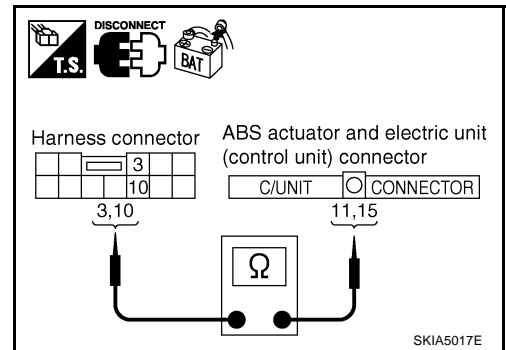
3 (L) - 11 (L) : Continuity should exist.

10 (Y) - 15 (Y) : Continuity should exist.

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-394, "Work Flow"](#).

NG >> Repair harness.



ECM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

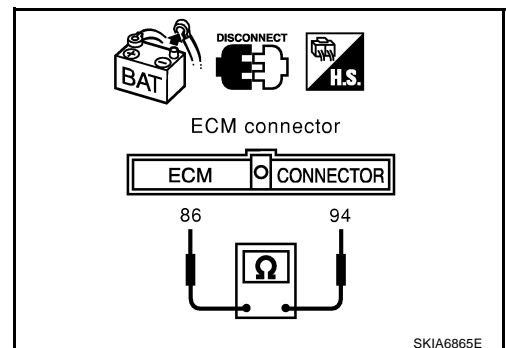
1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

94 (L) - 86 (Y) : Approx. 108 - 132Ω

OK or NG

OK >> Replace ECM.

NG >> Repair harness between ECM and TCM.



TCM Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
 - TCM connector
 - Harness connector F102
 - Harness connector M82

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

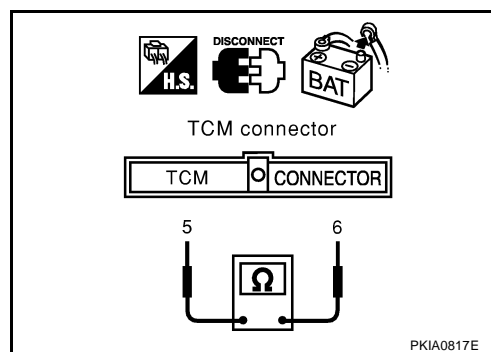
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

5 (L) - 6 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace TCM.
 NG >> Repair harness between TCM and ECM.

**Display Control Unit Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display control unit for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

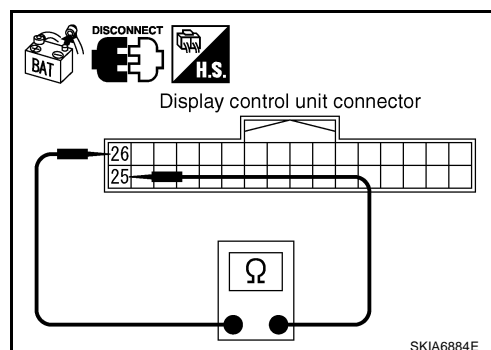
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect display control unit connector.
2. Check resistance between display control unit harness connector M43 terminals 25 (L) and 26 (Y).

25 (L) - 26 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace display control unit.
 NG >> Repair harness between display control unit and data link connector.



Data Link Connector Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

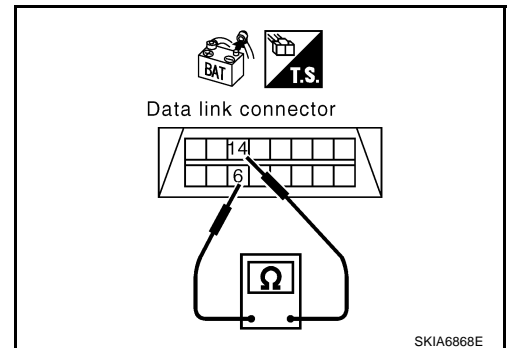
2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

6 (L) - 14 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Diagnose again. Refer to [LAN-394, "Work Flow"](#) .
 NG >> Repair harness between data link connector and BCM.

**BCM Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

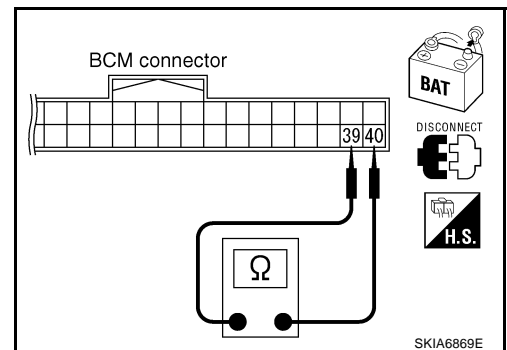
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M34 terminals 39 (L) and 40 (Y).

39 (L) - 40 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace BCM. Refer to [BCS-14, "Removal and Installation of BCM"](#) .
 NG >> Repair harness between BCM and data link connector.



Unified Meter and A/C Amp. Circuit Check

AKS00A5Z

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

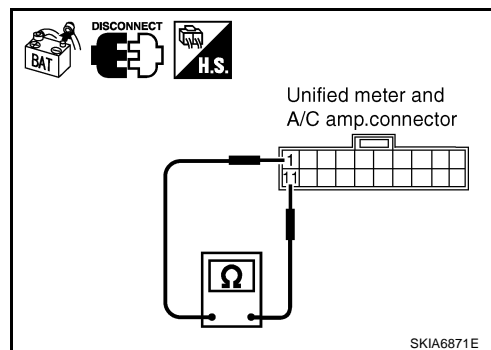
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

1 (L) - 11 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace unified meter and A/C amp.
 NG >> Repair harness between unified meter and A/C amp. and data link connector.

**Driver Seat Control Unit Circuit Check**

AKS00A60

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control unit side and harness side).
 - Driver seat control unit connector
 - Harness connector B301
 - Harness connector B9

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

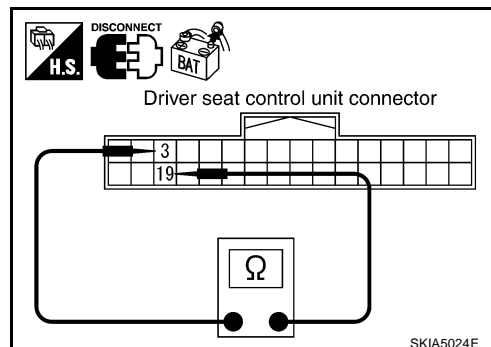
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect driver seat control unit connector.
2. Check resistance between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

3 (L/Y) - 19 (BR/W) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace driver seat control unit.
 NG >> Repair harness between driver seat control unit and harness connector B4.



AWD Control Unit Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of AWD control unit for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

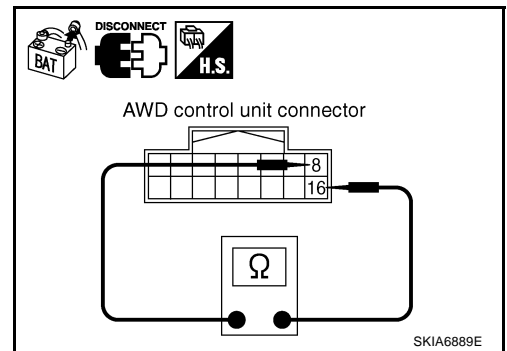
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect AWD control unit connector.
2. Check resistance between AWD control unit harness connector E111 terminals 8 (L) and 16 (Y).

8 (L) - 16 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace AWD control unit.
 NG >> Repair harness between AWD control unit and IPDM E/R.

**ABS Actuator and Electric Unit (Control Unit) Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

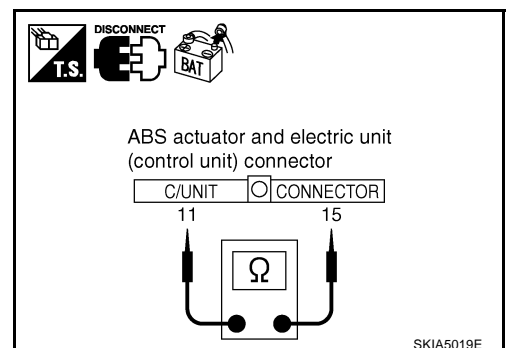
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

11 (L) - 15 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



IPDM E/R Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

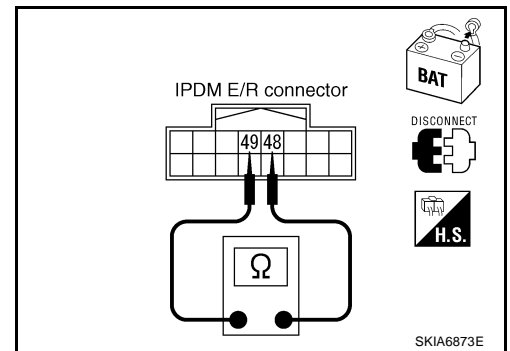
- OK >> GO TO 2.
 NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

48 (L) - 49 (Y)**: Approx. 108 - 132Ω**OK or NG

- OK >> Replace IPDM E/R.
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).

**CAN Communication Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, meter side and harness side).

- ECM
- TCM
- Display control unit
- BCM
- Unified meter and A/C amp.
- Driver seat control unit
- AWD control unit
- ABS actuator and electric unit (control unit)
- IPDM E/R
- Between ECM and IPDM E/R
- Between ECM and TCM
- Between ECM and driver seat control unit

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

2. CHECK HARNESS FOR SHORT CIRCUIT

- Disconnect following connectors.
 - ECM connector
 - Harness connector M82
 - Display control unit connector
 - BCM connector
 - Unified meter and A/C amp. connector
 - Harness connector M9
- Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

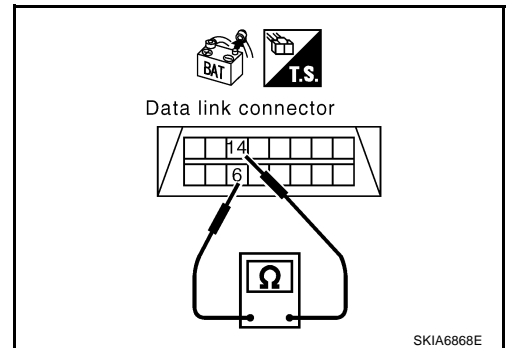
6 (L) - 14 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 3.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM
- Harness between data link connector and harness connector M82
- Harness between data link connector and display control unit
- Harness between data link connector and BCM
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9



3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

6 (L) - Ground : Continuity should not exist.

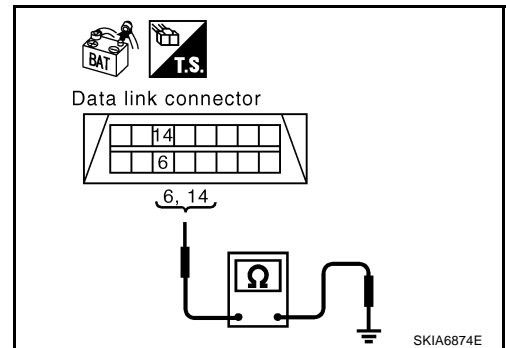
14 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM
- Harness between data link connector and harness connector M82
- Harness between data link connector and display control unit
- Harness between data link connector and BCM
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9



4. CHECK HARNESS FOR SHORT CIRCUIT

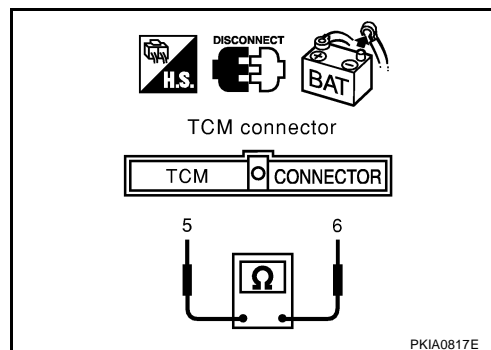
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

5 (L) - 6 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 5.

NG >> Repair harness between TCM and harness connector F102.



5. CHECK HARNESS FOR SHORT CIRCUIT

- Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

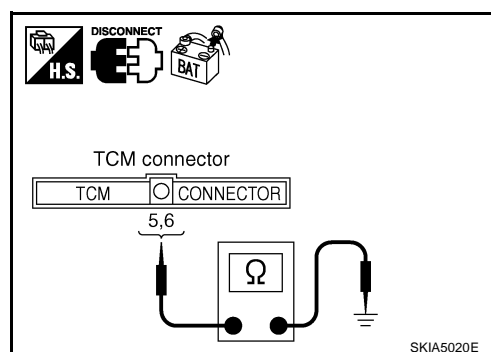
5 (L) - Ground : Continuity should not exist.

6 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 6.

NG >> Repair harness between TCM and harness connector F102.



6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B4 and harness connector B9.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

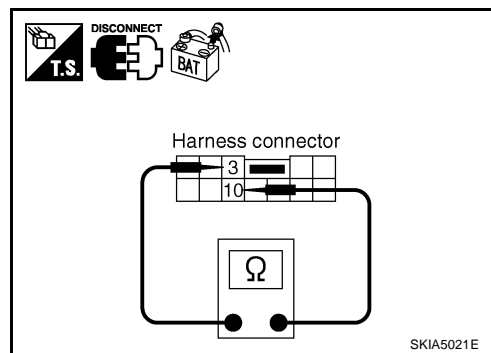
3 (L) - 10 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 7.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between harness connector B4 and harness connector B2
- Harness between harness connector B4 and harness connector B9



7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

3 (L) - Ground : Continuity should not exist.

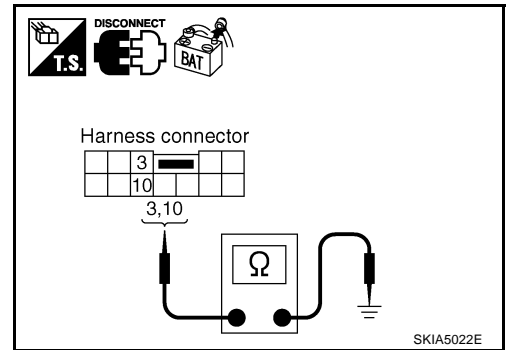
10 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 8.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between harness connector B4 and harness connector B2
- Harness between harness connector B4 and harness connector B9



8. CHECK HARNESS FOR SHORT CIRCUIT

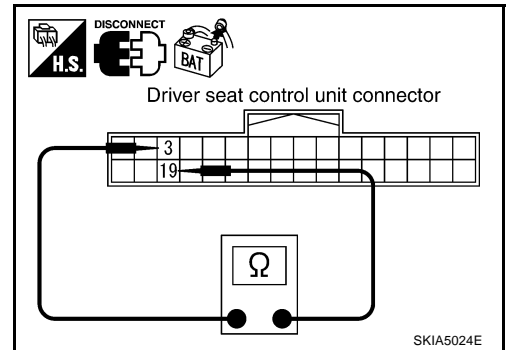
1. Disconnect driver seat control unit connector.
2. Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

3 (L/Y) - 19 (BR/W) : Continuity should not exist.

OK or NG

OK >> GO TO 9.

NG >> Repair harness between driver seat control unit and harness connector B301.



9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y), 19 (BR/W) and ground.

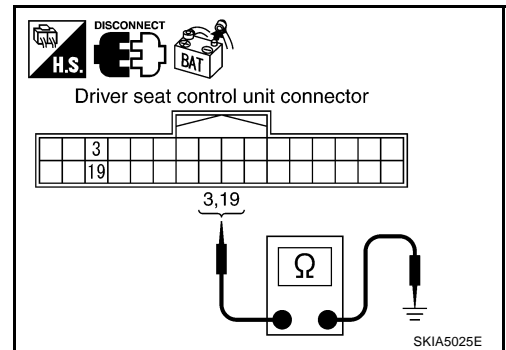
3 (L/Y) - Ground : Continuity should not exist.

19 (BR/W) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 10.

NG >> Repair harness between driver seat control unit and harness connector B301.



10. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect AWD control unit connector, ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

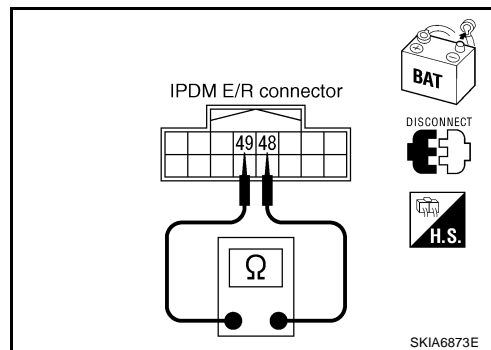
48 (L) - 49 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 11.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit
- Harness between IPDM E/R and ABS actuator and electric unit (control unit)
- Harness between IPDM E/R and harness connector E105



11. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

48 (L) - Ground : Continuity should not exist.

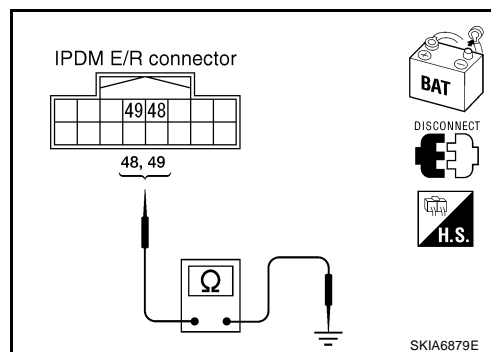
49 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 12.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit
- Harness between IPDM E/R and ABS actuator and electric unit (control unit)
- Harness between IPDM E/R and harness connector E105



12. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-424, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-394, "Work Flow"](#).

NG >> Replace ECM and/or IPDM E/R.

IPDM E/R Ignition Relay Circuit Check

AKS00A65

Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-27, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#).

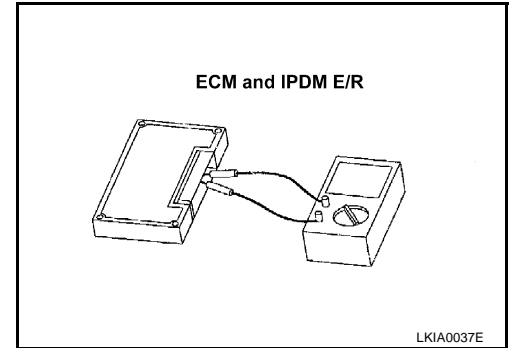
Component Inspection

AKS00A66

ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



CAN SYSTEM (TYPE 13)

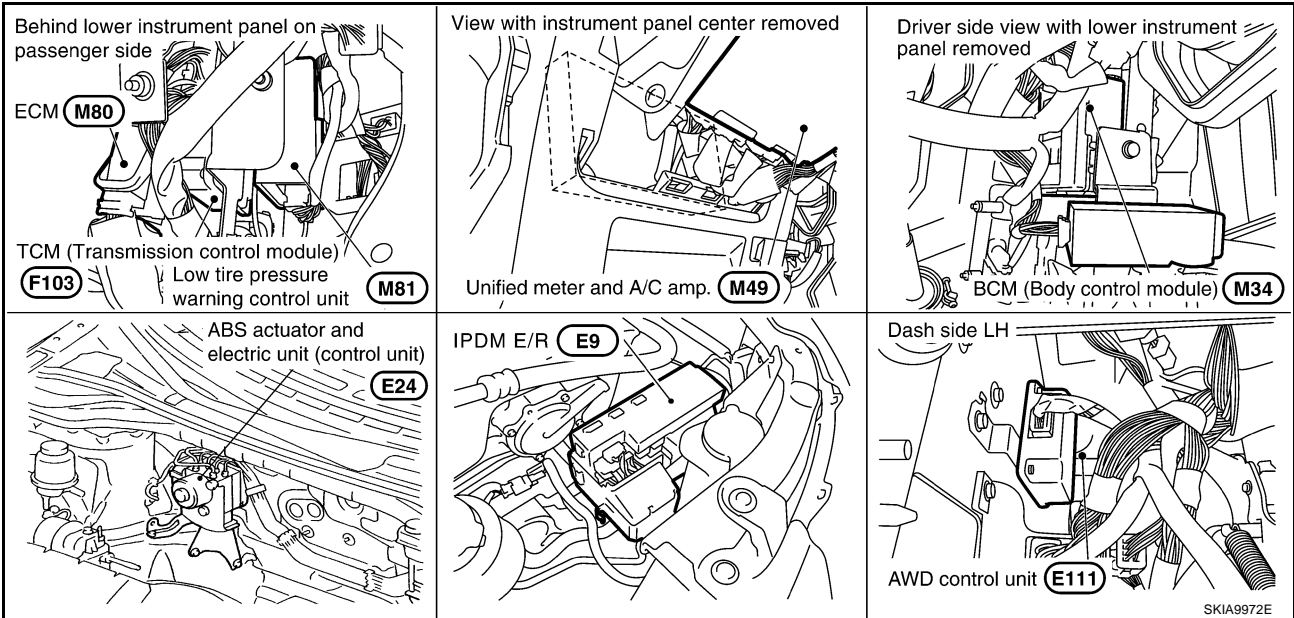
System Description

AKS00A67

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

AKS00A68



A
B
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D
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LAN

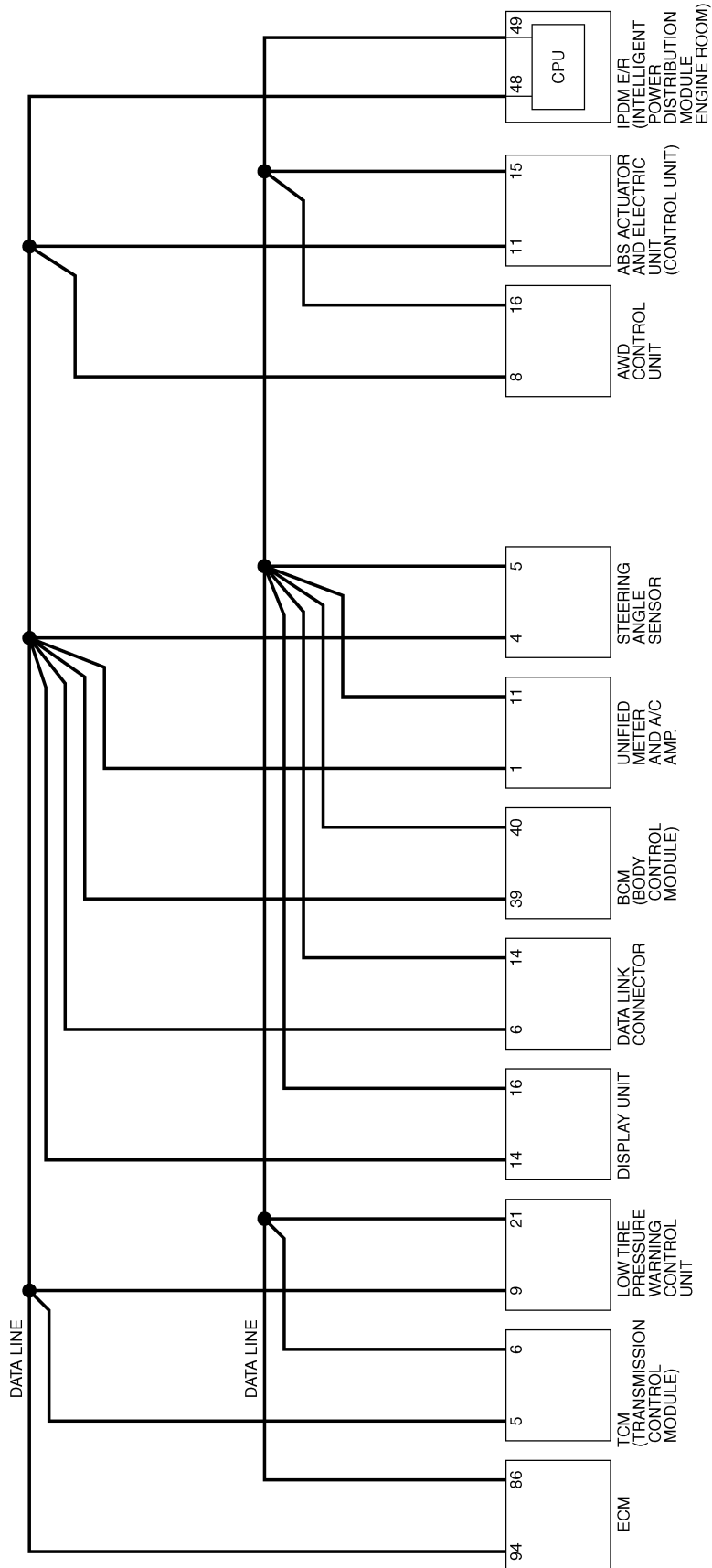
L
M

CAN SYSTEM (TYPE 13)

[CAN]

Schematic

AKS00A69



TKWB0053E

CAN SYSTEM (TYPE 13)

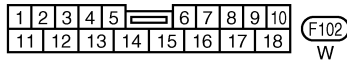
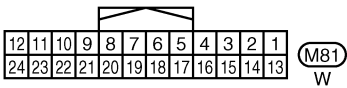
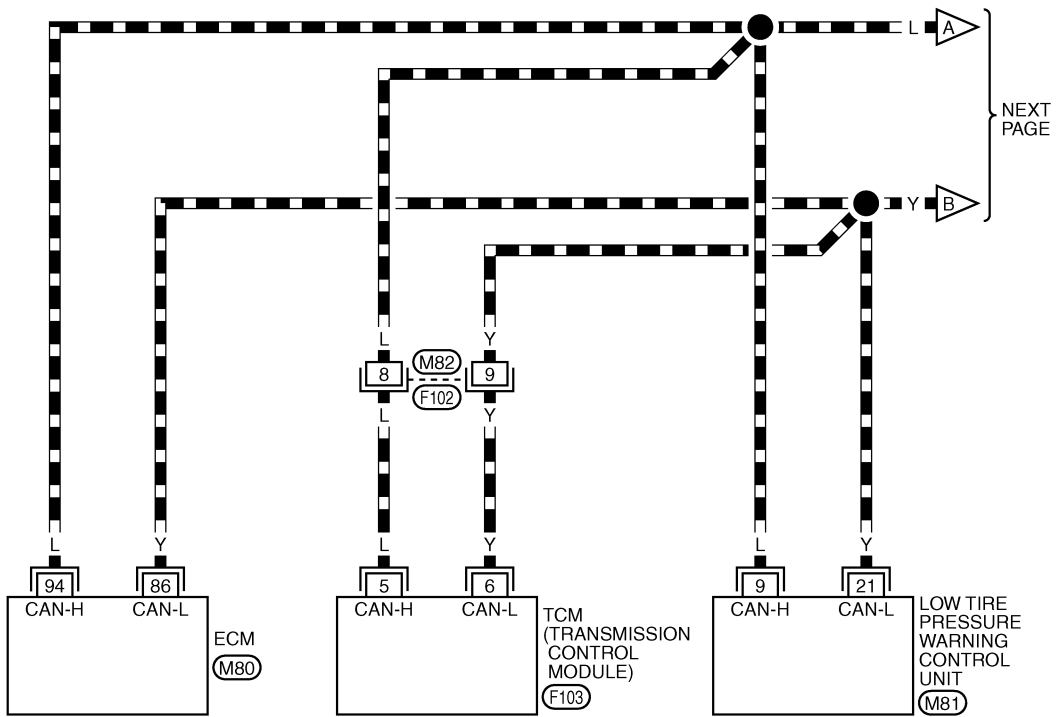
[CAN]

Wiring Diagram - CAN -

AKS00A6A

LAN-CAN-37

▬ : DATA LINE

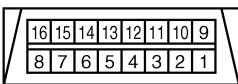
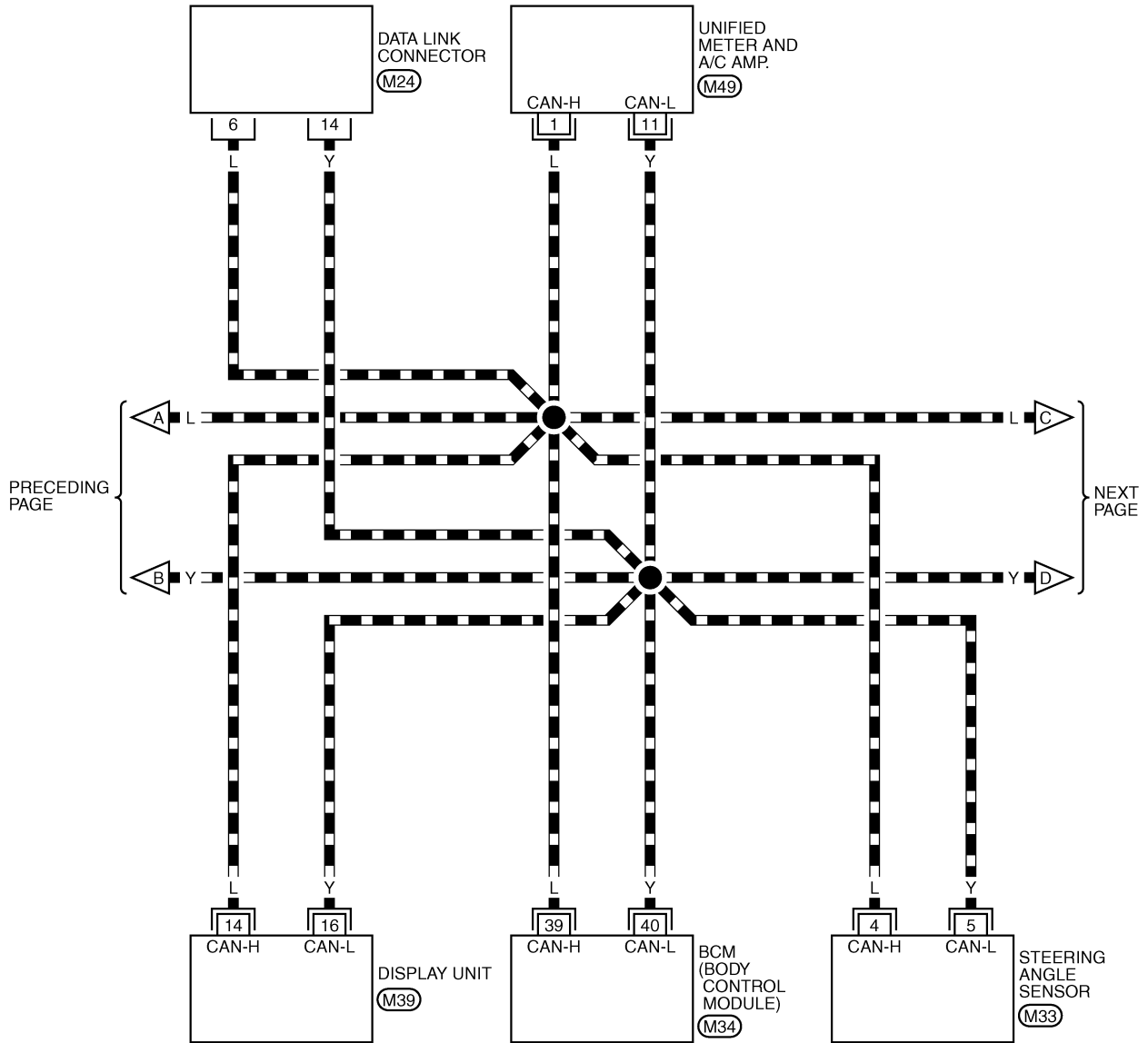


REFER TO THE FOLLOWING.
 (M80), (F103) -ELECTRICAL
 UNITS

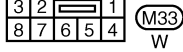
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LAN-CAN-38

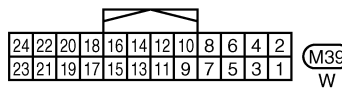
▬ : DATA LINE



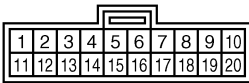
(M24)
W



(M33)
W



(M39)
W



(M49)
GR



REFER TO THE FOLLOWING.

(M34) -ELECTRICAL UNITS

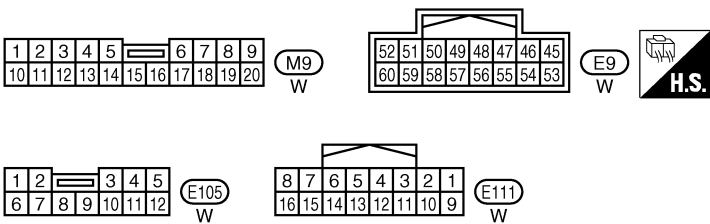
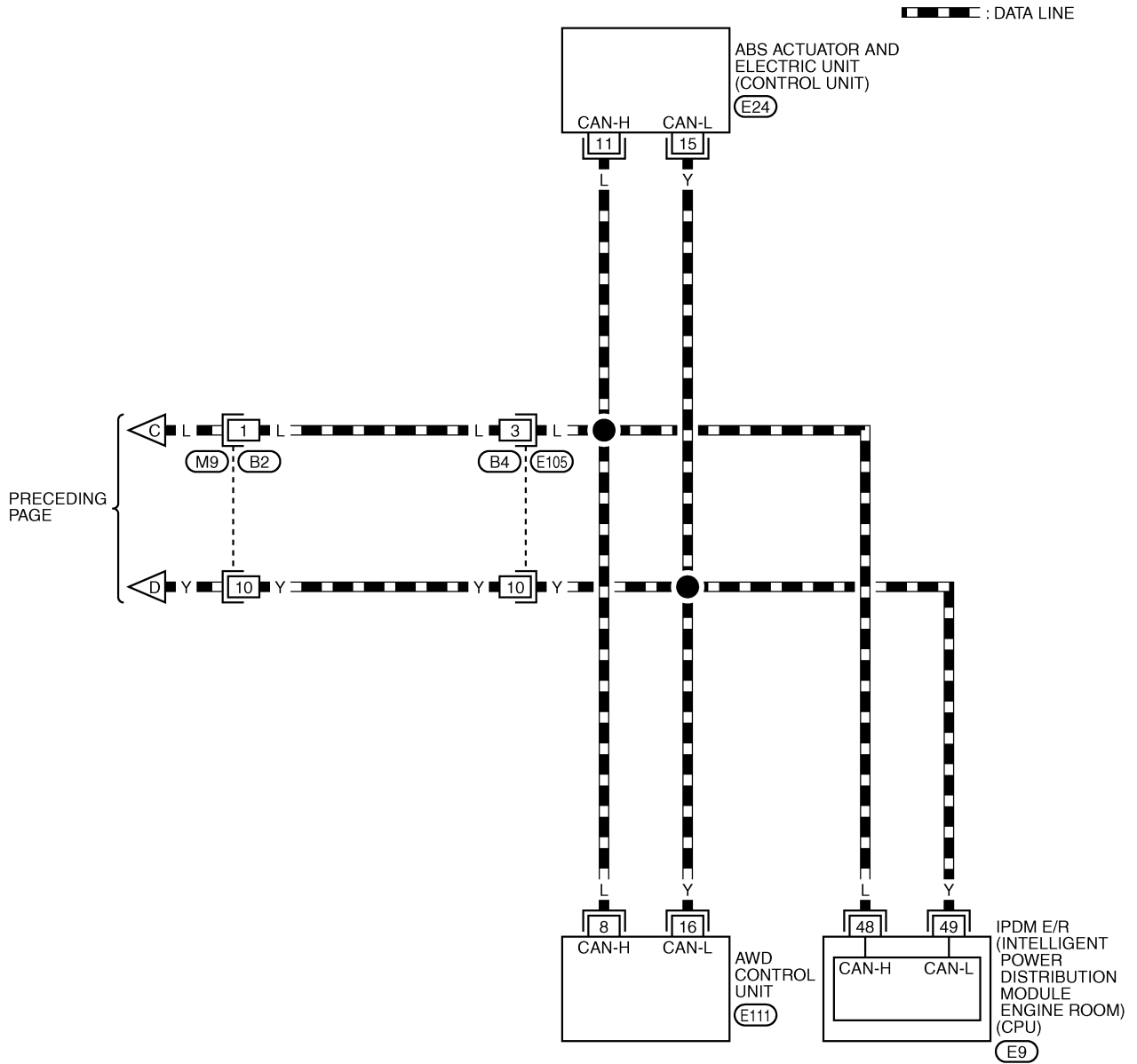
TKWB0056E

CAN SYSTEM (TYPE 13)

[CAN]

LAN-CAN-39

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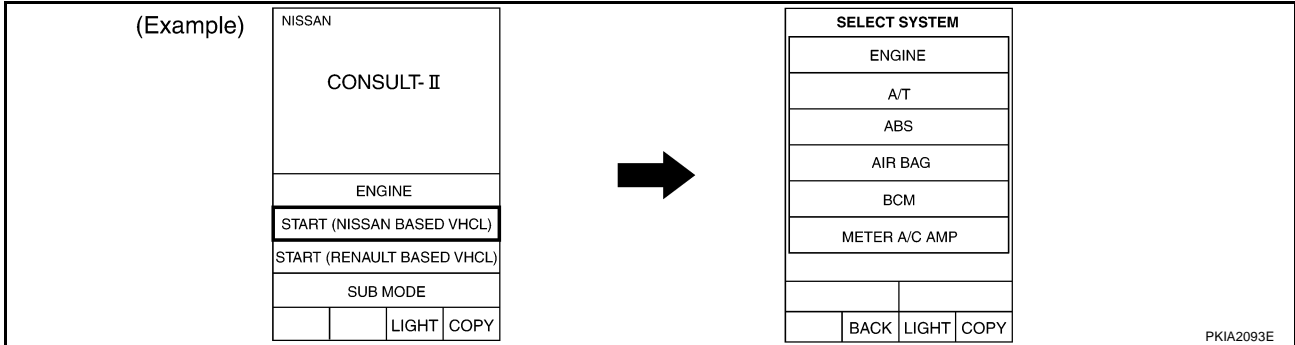


REFER TO THE FOLLOWING.
 (E24) -ELECTRICAL UNITS

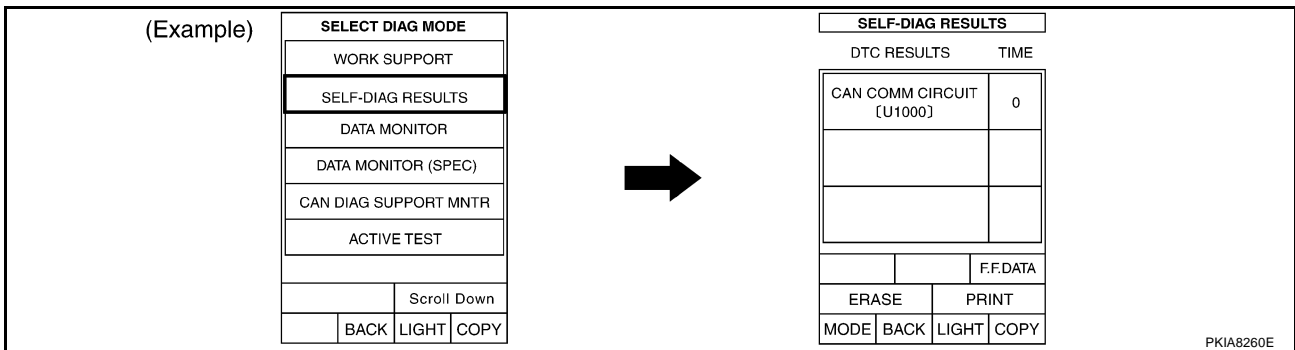
TKWB0057E

Work Flow

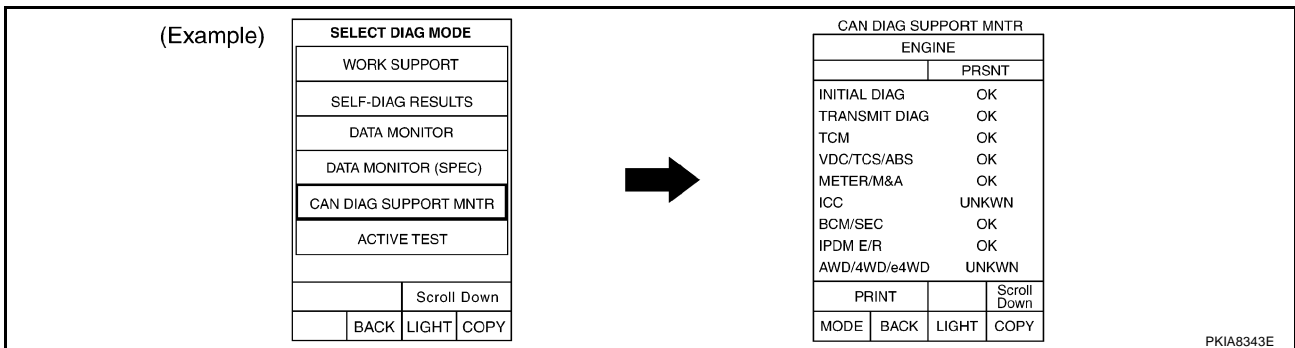
- When there are no indications of "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", or "IPDM E/R" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "ALL MODE AWD/4WD", "ABS", and "IPDM E/R" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "ALL MODE AWD/4WD", "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 [LAN-432. "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-432. "CHECK SHEET"](#) .

NOTE:

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
 - The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual.
So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.
- Check CAN communication line of the integrated display system. Refer to [AV-101. "CAN Communication Line Check"](#) .

CAN SYSTEM (TYPE 13)

[CAN]

7. Attach the CAN DIAG MONITOR check sheet onto the check sheet. Refer to [LAN-432, "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-432, "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-101, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-434, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

A

B

C

D

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F

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H

I

J

LAN

L

M

CAN SYSTEM (TYPE 13)

[CAN]

CHECK SHEET

NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	-	NG	UNKWN	-	UNKWN	-	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	-	-	UNKWN	-	-	UNKWN	-
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	-	-	-	-	UNKWN	-	-	-	-
Display unit	-	CAN COMM	CAN 1	CAN 3	-	CAN 6	-	CAN 2	CAN 5	-	-	-	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	-	-	-	-	UNKWN	-	-	-	UNKWN
METER A/C AMP	No indication	-	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	-	-	UNKWN	UNKWN	-
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	-	-	UNKWN	-	-	UNKWN	-
ABS	-	NG	UNKWN	UNKWN	UNKWN	-	-	-	-	UNKWN	UNKWN	-	-
IPDM E/R	No indication	-	UNKWN	UNKWN	-	-	-	UNKWN	-	-	-	-	-

Symptoms :

Attach copy of
SELECT SYSTEM

Attach copy of
SELECT SYSTEM

Attach copy of
display unit
CAN DIAG MONITOR check sheet

PKIA8542E

CAN SYSTEM (TYPE 13)

[CAN]

A
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Attach copy of
ENGINE
SELF-DIAG RESULTS

Attach copy of
TRANSMISSION
SELF-DIAG RESULTS

Attach copy of
AIR PRESSURE
MONITOR
SELF-DIAG RESULTS

Attach copy of
BCM
SELF-DIAG RESULTS

Attach copy of
METER A/C AMP
SELF-DIAG RESULTS

Attach copy of
ALL MODE AWD/4WD
SELF-DIAG RESULTS

Attach copy of
ABS
SELF-DIAG RESULTS

Attach copy of
IPDM E/R
SELF-DIAG RESULTS

Attach copy of
ENGINE
CAN DIAG SUPPORT
MNTR

Attach copy of
TRANSMISSION
CAN DIAG SUPPORT
MNTR

Attach copy of
AIR PRESSURE
MONITOR
CAN DIAG SUPPORT
MNTR

Attach copy of
BCM
CAN DIAG SUPPORT
MNTR

Attach copy of
METER A/C AMP
CAN DIAG SUPPORT
MNTR

Attach copy of
ALL MODE AWD/4WD
CAN DIAG SUPPORT
MNTR

Attach copy of
ABS
CAN DIAG SUPPORT
MNTR

Attach copy of
IPDM E/R
CAN DIAG SUPPORT
MNTR

PKIA8543E

CHECK SHEET RESULTS (EXAMPLE)

NOTE:

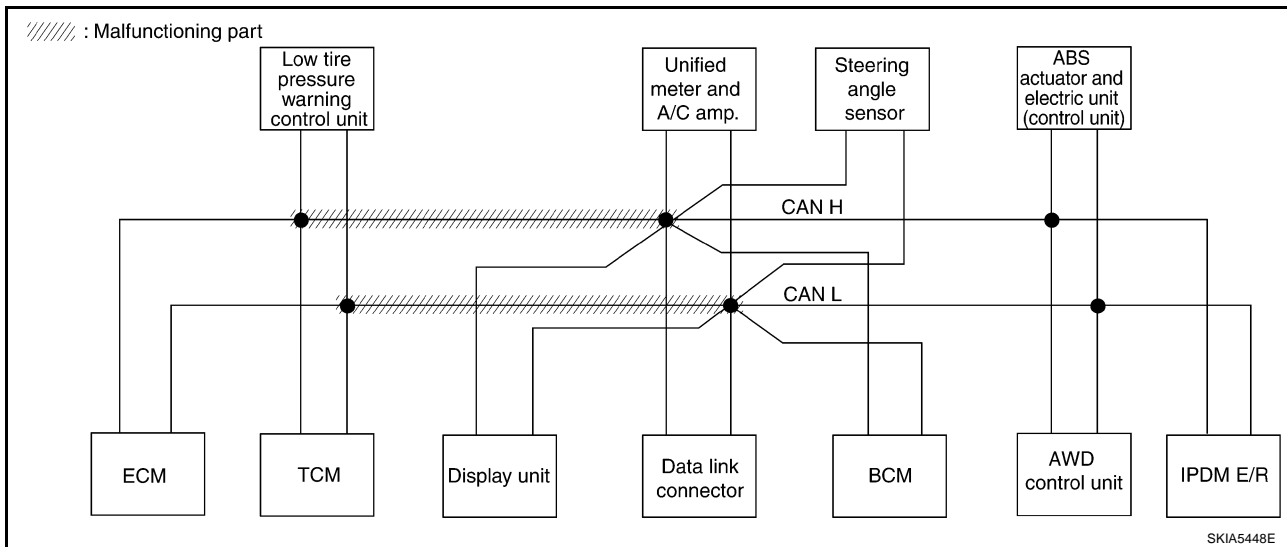
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

Case 1

Check harness between TCM and data link connector. Refer to [LAN-448, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3 ✓	—	CAN 6 ✓	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8544E



CAN SYSTEM (TYPE 13)

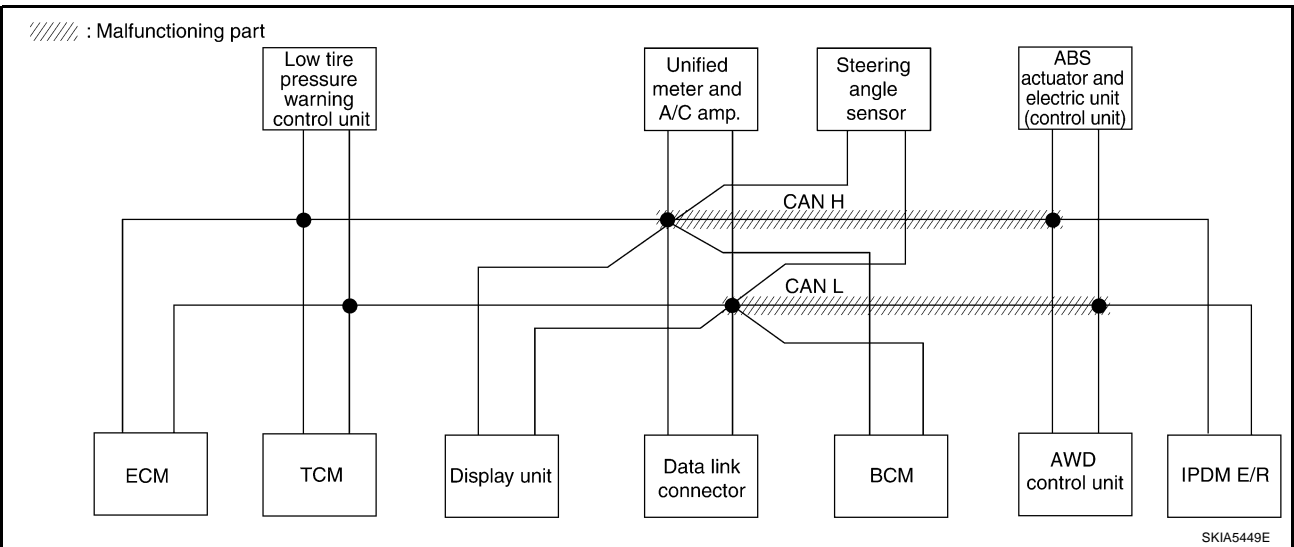
[CAN]

Case 2

Check harness between data link connector and ABS actuator and electric unit (control unit). Refer to [LAN-449, "Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit \(Control Unit\)"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8545E



LAN

CAN SYSTEM (TYPE 13)

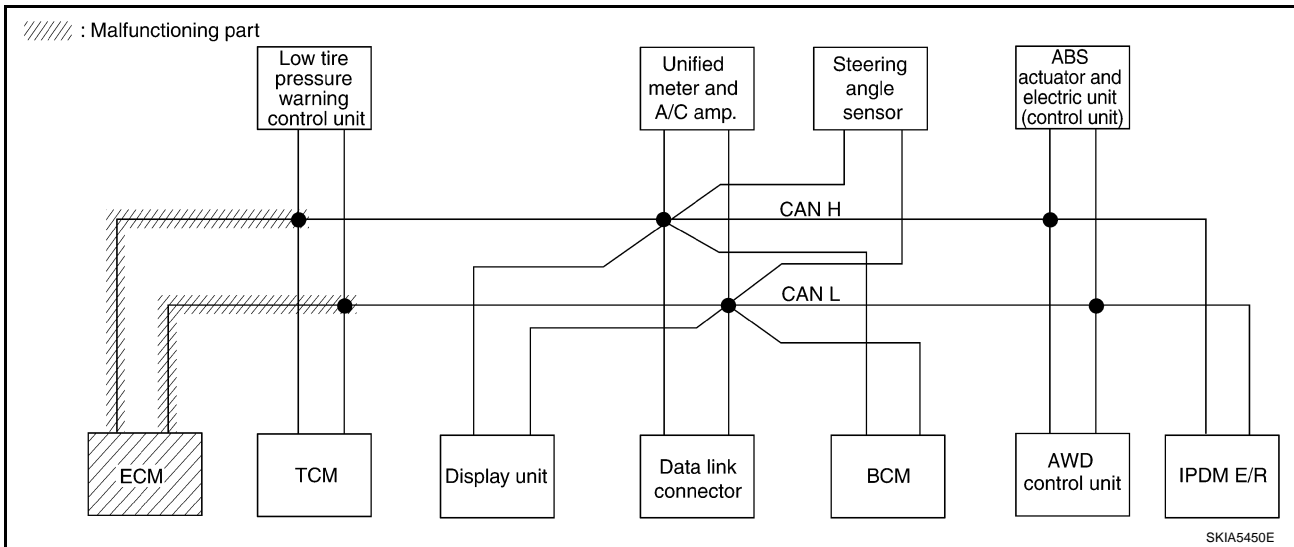
[CAN]

Case 3

Check ECM circuit. Refer to [LAN-450, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN ✓	—	UNKWN ✓	—	—	UNKWN ✓	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	UNKWN ✓
TRANSMISSION	No indication	NG	UNKWN	UNKWN ✓	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3 ✓	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN ✓	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN ✓	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN ✓	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN ✓	—	—	—	UNKWN	—	—	—	—	—

PKIA8546E



SKIA5450E

CAN SYSTEM (TYPE 13)

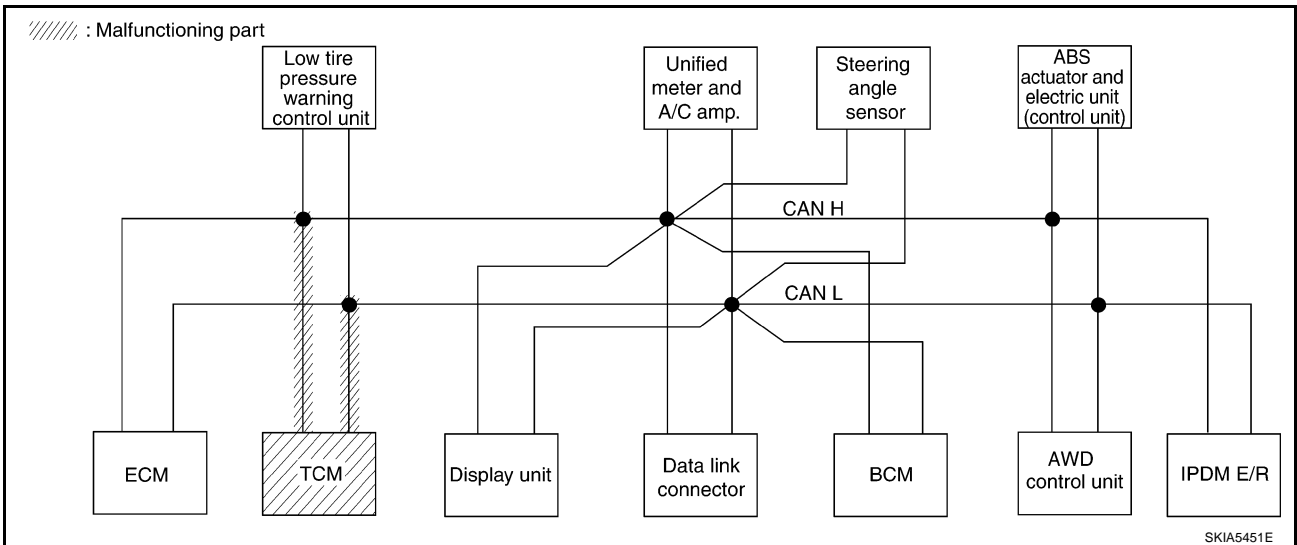
[CAN]

Case 4

Check TCM circuit. Refer to [LAN-450, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8547E



CAN SYSTEM (TYPE 13)

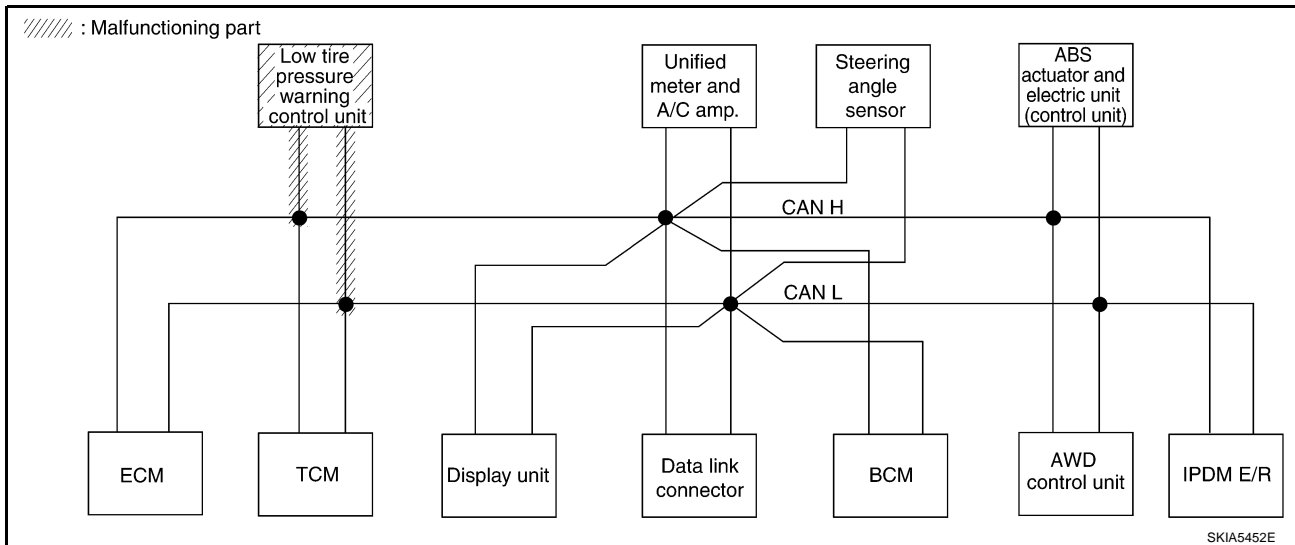
[CAN]

Case 5

Check low tire pressure warning control unit circuit. Refer to [LAN-451, "Low Tire Pressure Warning Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6 ✓	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8548E



CAN SYSTEM (TYPE 13)

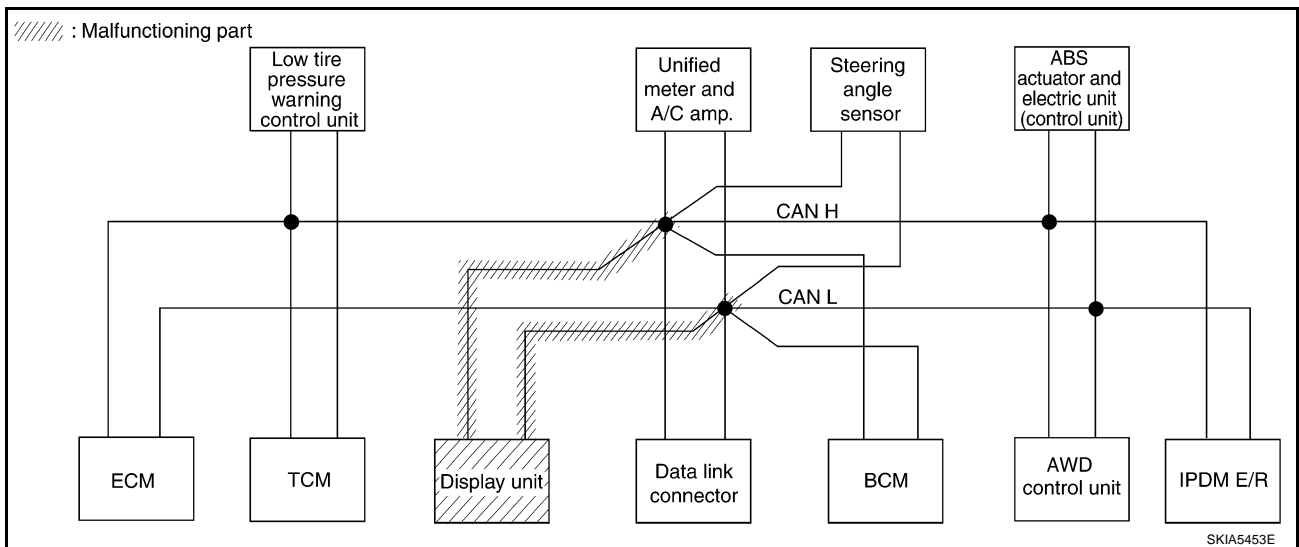
[CAN]

Case 6

Check display unit circuit. Refer to [LAN-451, "Display Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAV 1	CAV 3	—	CAV 6	—	CAV 2	CAV 5	—	—	—	CAV 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8549E



CAN SYSTEM (TYPE 13)

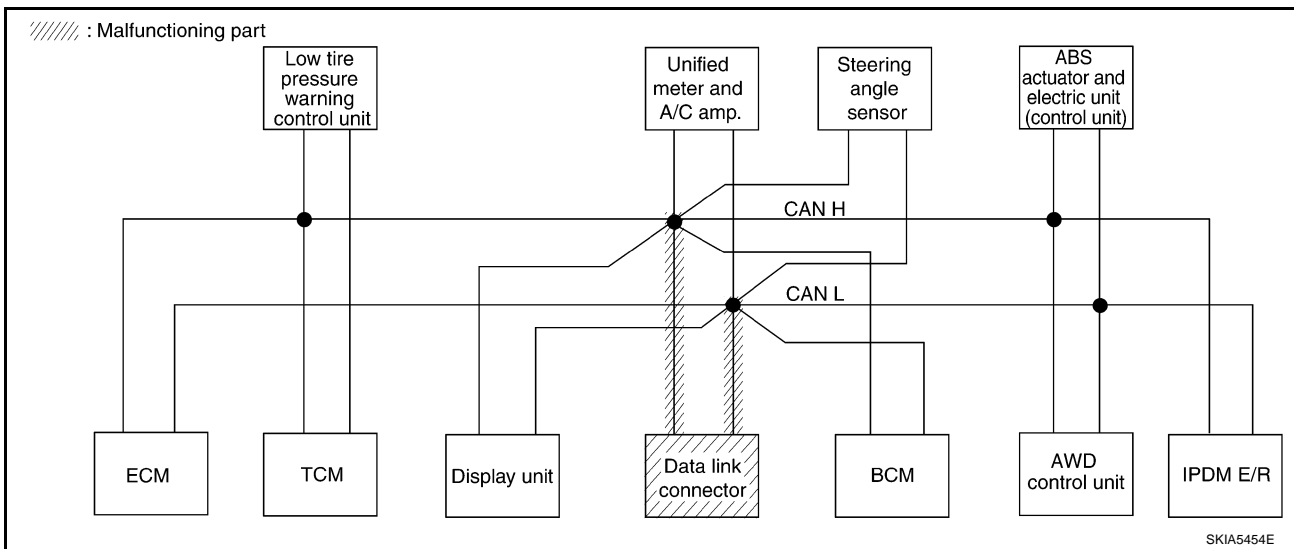
[CAN]

Case 7

Check data link connector circuit. Refer to [LAN-452, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8550E



CAN SYSTEM (TYPE 13)

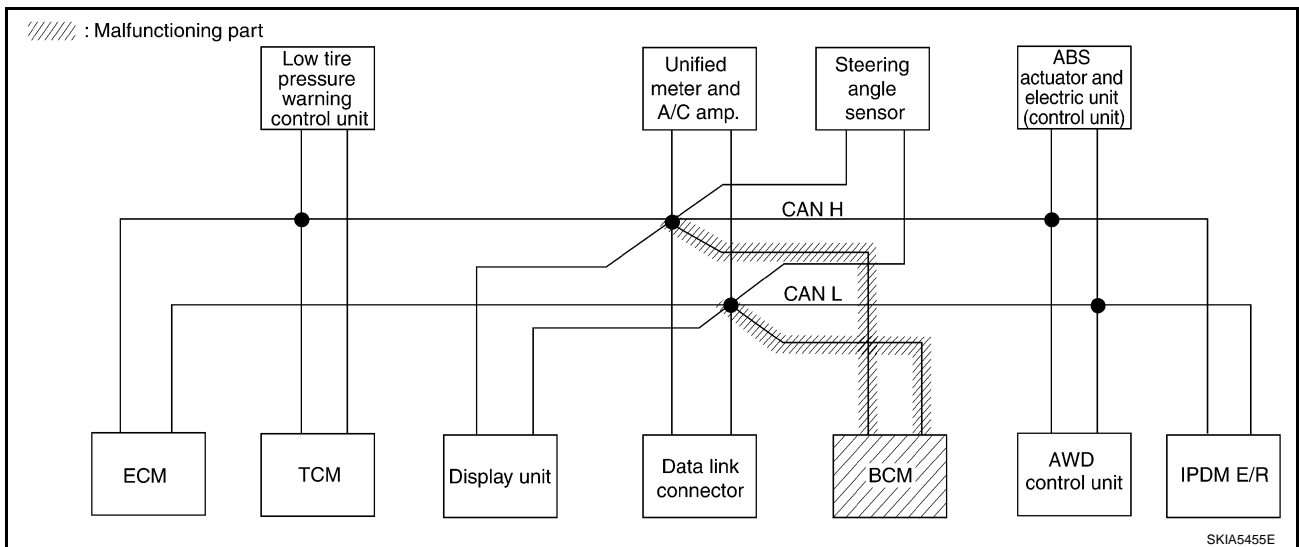
[CAN]

Case 8

Check BCM circuit. Refer to [LAN-452. "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8551E



CAN SYSTEM (TYPE 13)

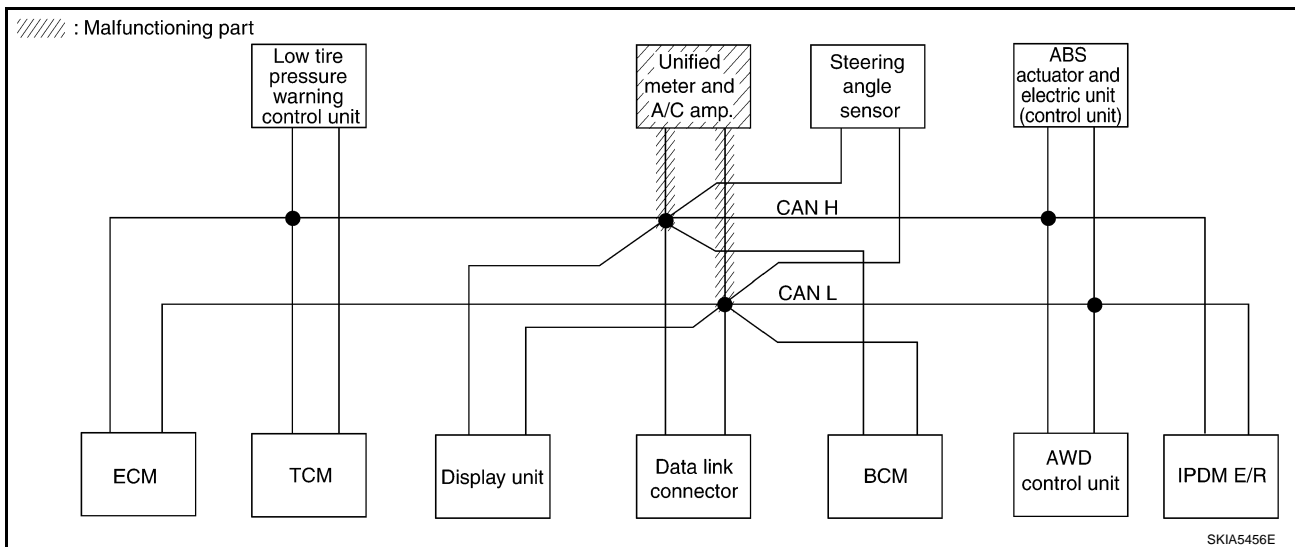
[CAN]

Case 9

Check unified meter and A/C amp. circuit. Refer to [LAN-453, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

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CAN SYSTEM (TYPE 13)

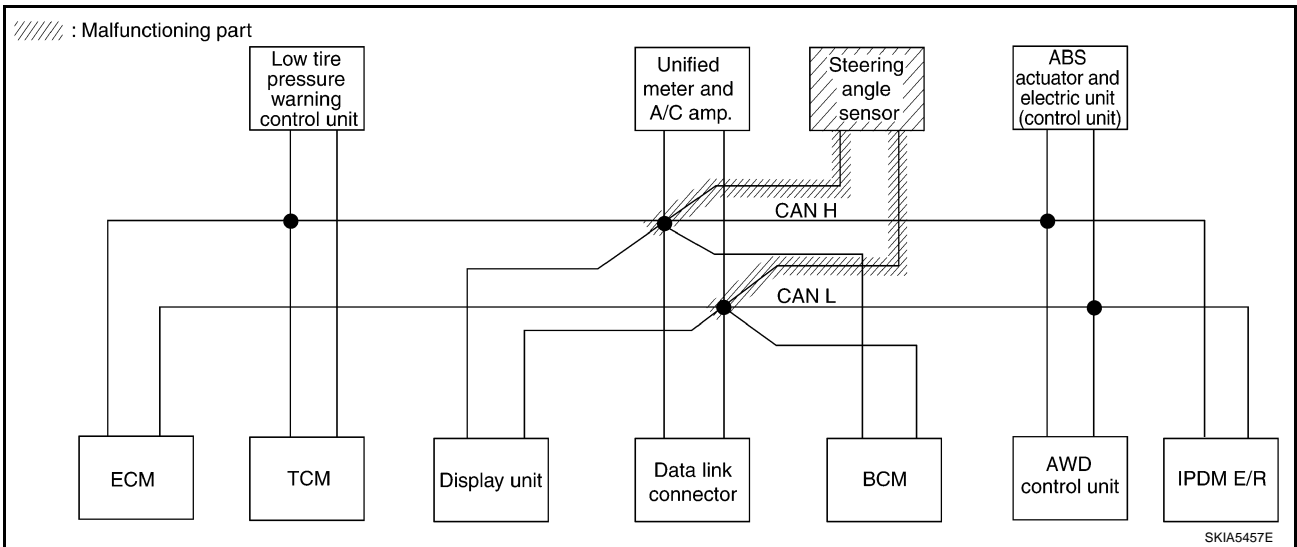
[CAN]

Case 10

Check steering angle sensor circuit. Refer to [LAN-453. "Steering Angle Sensor Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

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CAN SYSTEM (TYPE 13)

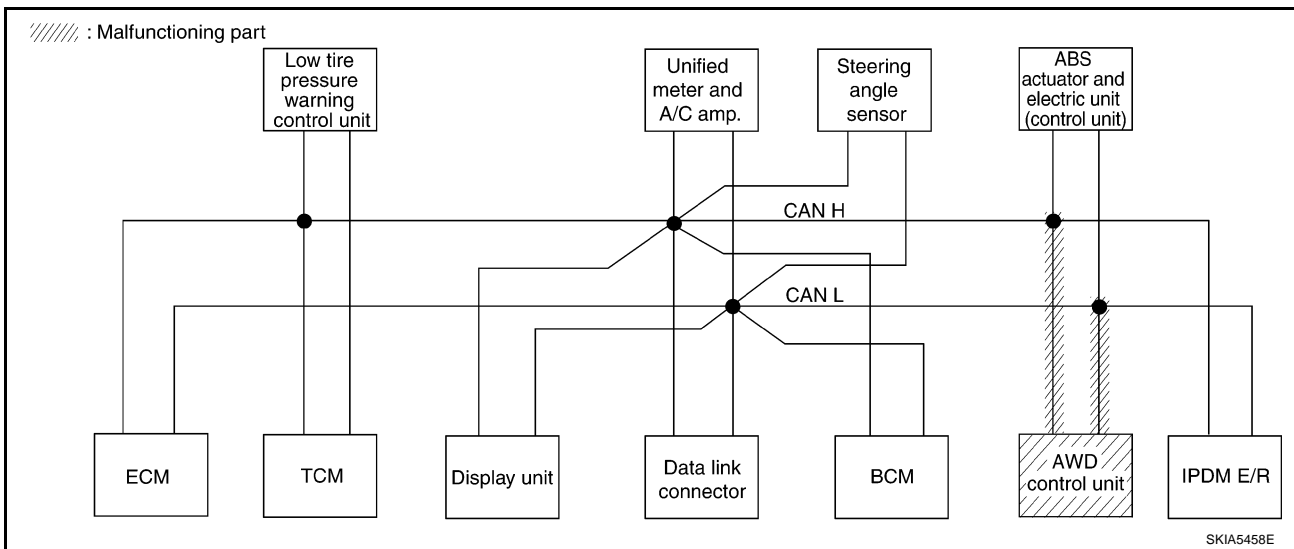
[CAN]

Case 11

Check AWD control unit circuit. Refer to [LAN-454, "AWD Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8554E



CAN SYSTEM (TYPE 13)

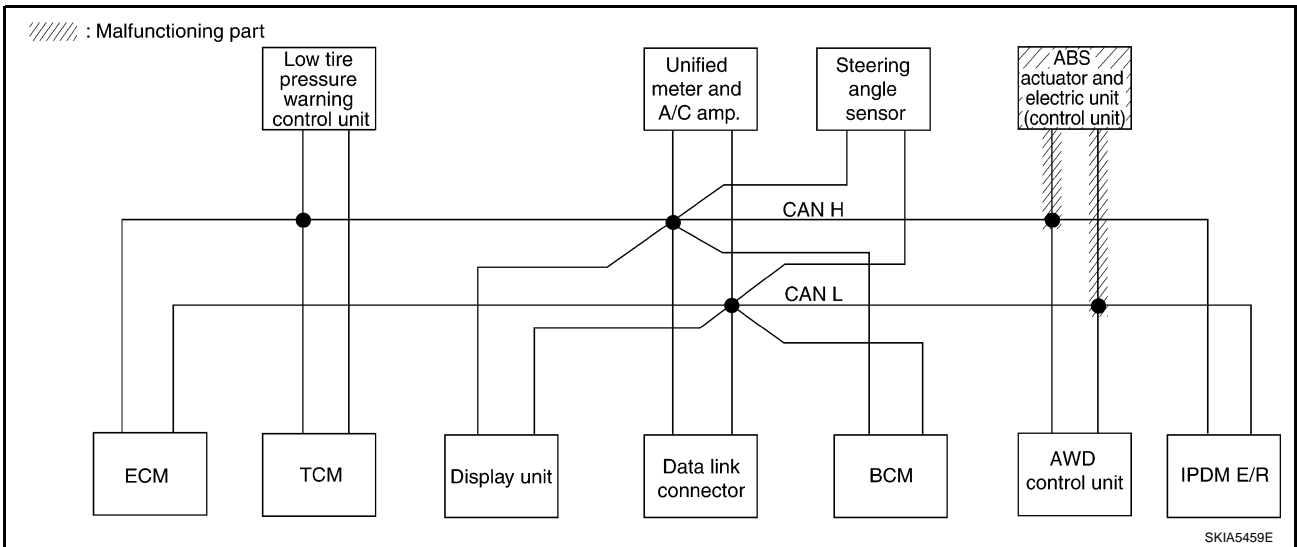
[CAN]

Case 12

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-454, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	✓	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	✓	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	✓	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	✓	—
ABS	—	NG	✓	✓	✓	—	—	—	—	✓	✓	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8555E



CAN SYSTEM (TYPE 13)

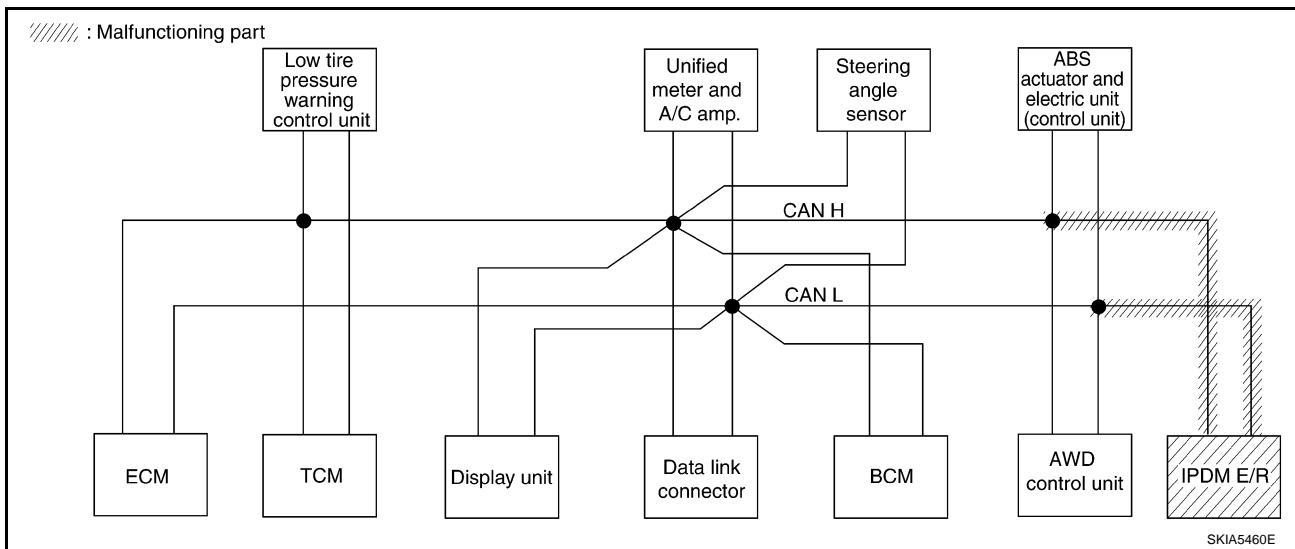
[CAN]

Case 13

Check IPDM E/R circuit. Refer to [LAN-455, "IPDM E/R Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN ✓
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7 ✓
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN ✓
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8556E



CAN SYSTEM (TYPE 13)

[CAN]

Case 14

Check CAN communication circuit. Refer to [LAN-456, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW N	—	UNKW N	—	—	UNKW N	UNKW N	—	UNKW N	UNKW N	UNKW N
TRANSMISSION	No indication	NG	UNKW N	UNKW N	—	—	—	—	UNKW N	—	—	UNKW N	—
AIR PRESSURE MONITOR	No indication	NG	UNKW N	—	—	—	—	—	UNKW N	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication	NG	UNKW N	UNKW N	—	—	—	—	UNKW N	—	—	—	UNKW N
METER A/C AMP	No indication	—	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N	—	—	UNKW N	UNKW N	—
ALL MODE AWD/4WD	—	NG	UNKW N	UNKW N	—	—	—	—	UNKW N	—	—	UNKW N	—
ABS	—	NG	UNKW N	UNKW N	UNKW N	—	—	—	—	UNKW N	UNKW N	—	—
IPDM E/R	No indication	—	UNKW N	UNKW N	—	—	—	UNKW N	—	—	—	—	—

PKIA8557E

Case 15

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-459, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW N	—	UNKW N	—	—	UNKW N	UNKW N	—	UNKW N	UNKW N	UNKW N
TRANSMISSION	No indication	NG	UNKW N	UNKW N	—	—	—	—	UNKW N	—	—	UNKW N	—
AIR PRESSURE MONITOR	No indication	NG	UNKW N	—	—	—	—	—	UNKW N	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication	NG	UNKW N	UNKW N	—	—	—	—	UNKW N	—	—	—	UNKW N
METER A/C AMP	No indication	—	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N	—	—	UNKW N	UNKW N	—
ALL MODE AWD/4WD	—	NG	UNKW N	UNKW N	—	—	—	—	UNKW N	—	—	UNKW N	—
ABS	—	NG	UNKW N	UNKW N	UNKW N	—	—	—	—	UNKW N	UNKW N	—	—
IPDM E/R	No indication	—	UNKW N	UNKW N	—	—	—	UNKW N	—	—	—	—	—

PKIA8558E

Case 16

Case 23: Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-459, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8559E

Circuit Check Between TCM and Data Link Connector

AKS00A6C

1. CHECK HARNESS FOR OPEN CIRCUIT

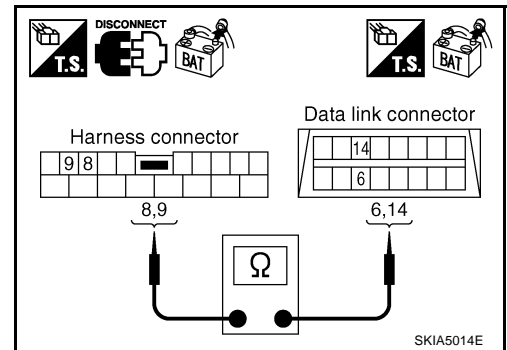
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

8 (L) - 6 (L) : Continuity should exist.

9 (Y) - 14 (Y) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-430, "Work Flow"](#) .
- NG >> Repair harness.



Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit)

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M9
 - Harness connector B2
 - Harness connector B4
 - Harness connector E105

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

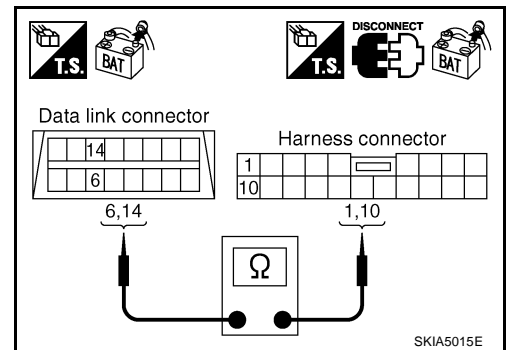
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

6 (L) - 1 (L) : Continuity should exist.
14 (Y) - 10 (Y) : Continuity should exist.

OK or NG

- OK >> GO TO 3.
 NG >> Repair harness.



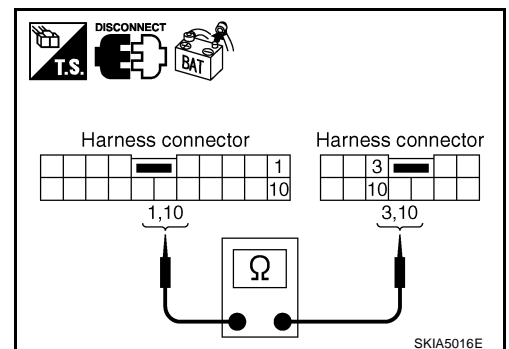
3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

1 (L) - 3 (L) : Continuity should exist.
10 (Y) - 10 (Y) : Continuity should exist.

OK or NG

- OK >> GO TO 4.
 NG >> Repair harness.



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4. CHECK HARNESS FOR OPEN CIRCUIT

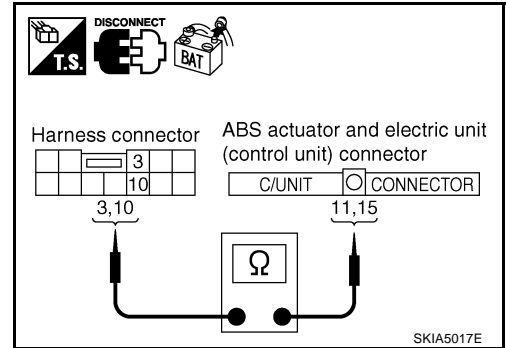
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

3 (L) - 11 (L) : Continuity should exist.

10 (Y) - 15 (Y) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-430, "Work Flow"](#) .
- NG >> Repair harness.



SKIA5017E

AKS00A6E

ECM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

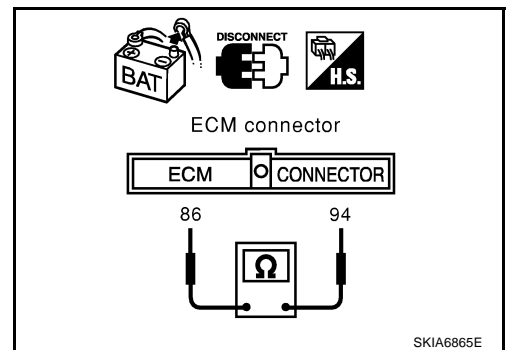
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

94 (L) - 86 (Y) : Approx. 108 - 132Ω

OK or NG

- OK >> Replace ECM.
- NG >> Repair harness between ECM and TCM.



SKIA6865E

AKS00A6F

TCM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
 - TCM connector
 - Harness connector F102
 - Harness connector M82

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

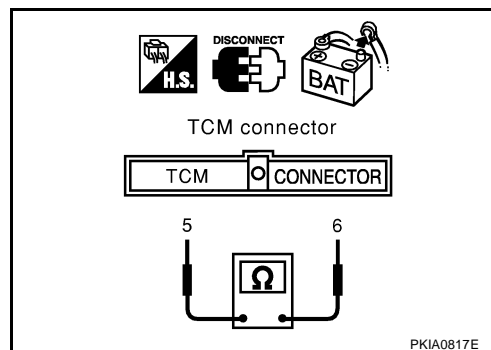
1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

5 (L) - 6 (Y)

: Approx. 54 - 66Ω

OK or NG

- OK >> Replace TCM.
 NG >> Repair harness between TCM and low tire pressure warning control unit.



Low Tire Pressure Warning Control Unit Circuit Check

AKS00A6G

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of low tire pressure warning control unit for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

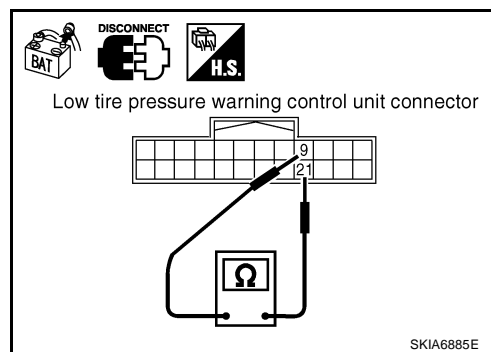
1. Disconnect low tire pressure warning control unit connector.
2. Check resistance between low tire pressure warning control unit harness connector M81 terminals 9 (L) and 21 (Y).

9 (L) - 21 (Y)

: Approx. 54 - 66Ω

OK or NG

- OK >> Replace low tire pressure warning control unit.
 NG >> Repair harness between low tire pressure warning control unit and TCM.



Display Unit Circuit Check

AKS00A6H

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display unit for damage, bend and loose connection (unit side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

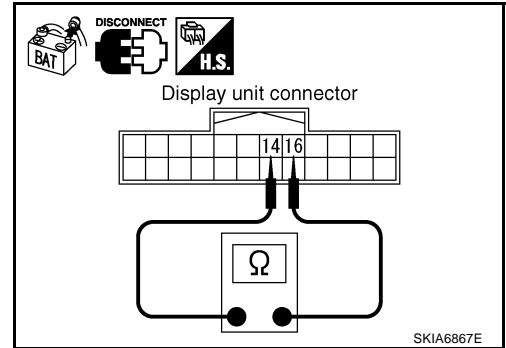
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect display unit connector.
2. Check resistance between display unit harness connector M39 terminals 14 (L) and 16 (Y).

14 (L) - 16 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace display unit.
 NG >> Repair harness between display unit and data link connector.



Data Link Connector Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

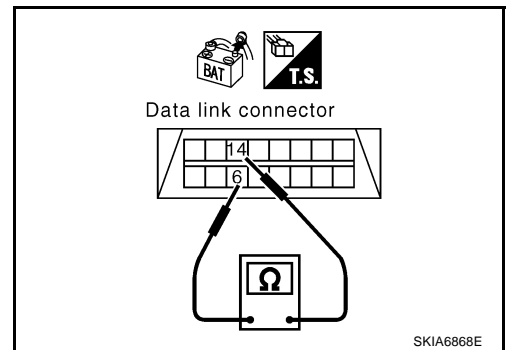
2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

6 (L) - 14 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Diagnose again. Refer to [LAN-430, "Work Flow"](#).
 NG >> Repair harness between data link connector and BCM.



BCM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

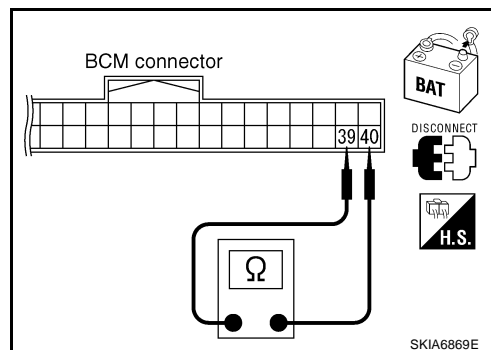
1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M34 terminals 39 (L) and 40 (Y).

39 (L) - 40 (Y)

: Approx. 54 - 66Ω

OK or NG

- OK >> Replace BCM. Refer to [BCS-14, "Removal and Installation of BCM"](#).
- NG >> Repair harness between BCM and data link connector.



AKS00A6K

Unified Meter and A/C Amp. Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

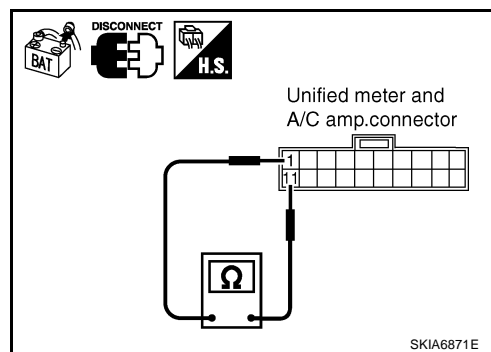
1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

1 (L) - 11 (Y)

: Approx. 54 - 66Ω

OK or NG

- OK >> Replace unified meter and A/C amp.
- NG >> Repair harness between unified meter and A/C amp. and data link connector.



AKS00A6L

Steering Angle Sensor Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of steering angle sensor for damage, bend and loose connection (sensor side and harness side).

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

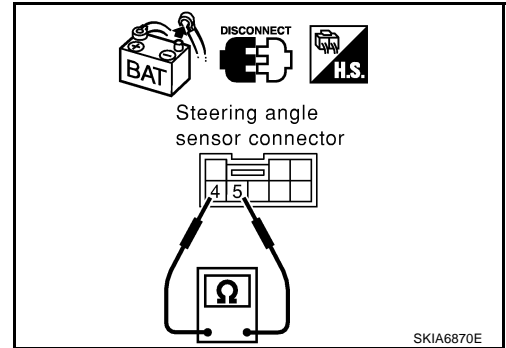
1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M33 terminals 4 (L) and 5 (Y).

4 (L) - 5 (Y)

: Approx. 54 - 66Ω

OK or NG

- OK >> Replace steering angle sensor.
 NG >> Repair harness between steering angle sensor and data link connector.



AWD Control Unit Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of AWD control unit for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

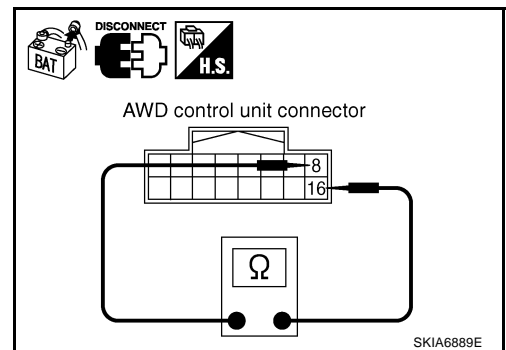
1. Disconnect AWD control unit connector.
2. Check resistance between AWD control unit harness connector E111 terminals 8 (L) and 16 (Y).

8 (L) - 16 (Y)

: Approx. 54 - 66Ω

OK or NG

- OK >> Replace AWD control unit.
 NG >> Repair harness between AWD control unit and IPDM E/R.



ABS Actuator and Electric Unit (Control Unit) Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

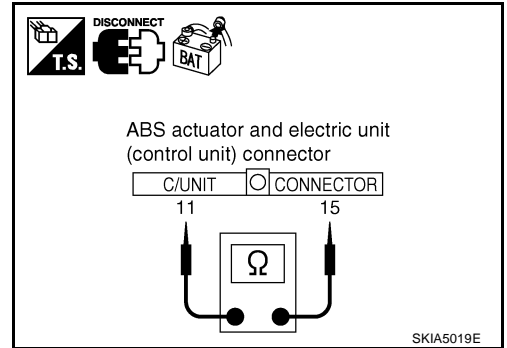
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

11 (L) - 15 (Y)

: Approx. 54 - 66Ω

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



AKS00A60

IPDM E/R Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

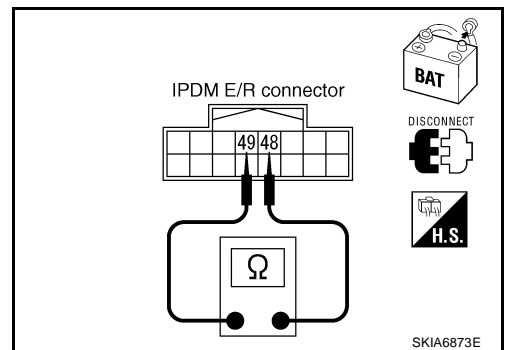
1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

48 (L) - 49 (Y)

: Approx. 108 - 132Ω

OK or NG

- OK >> Replace IPDM E/R.
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



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CAN Communication Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, unit side, meter side, sensor side and harness side).
 - ECM
 - TCM
 - Low tire pressure warning control unit
 - Display unit
 - BCM
 - Unified meter and A/C amp.
 - Steering angle sensor
 - AWD control unit
 - ABS actuator and electric unit (control unit)
 - IPDM E/R
 - Between ECM and IPDM E/R
 - Between ECM and TCM

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

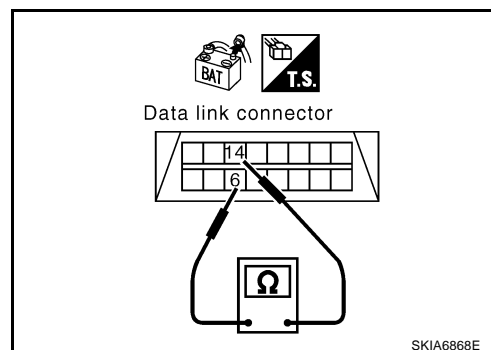
2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
 - ECM connector
 - Low tire pressure warning control unit connector
 - Harness connector M82
 - Display unit connector
 - BCM connector
 - Unified meter and A/C amp. connector
 - Steering angle sensor connector
 - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

6 (L) - 14 (Y) : Continuity should not exist.

OK or NG

- OK >> GO TO 3.
 NG >> Check the following harnesses. If any harness is damaged, repair the harness.
- Harness between data link connector and ECM
 - Harness between data link connector and low tire pressure warning control unit
 - Harness between data link connector and harness connector M82
 - Harness between data link connector and display unit
 - Harness between data link connector and BCM
 - Harness between data link connector and unified meter and A/C amp.
 - Harness between data link connector and steering angle sensor
 - Harness between data link connector and harness connector M9



3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

6 (L) - Ground : Continuity should not exist.

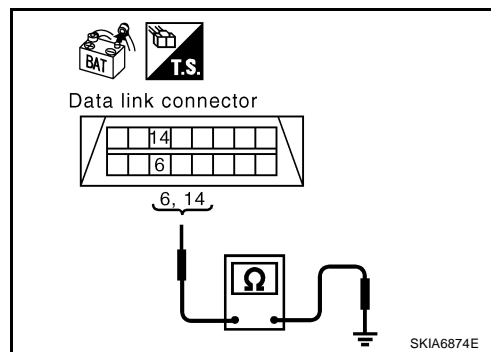
14 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM
- Harness between data link connector and low tire pressure warning control unit
- Harness between data link connector and harness connector M82
- Harness between data link connector and display unit
- Harness between data link connector and BCM
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor
- Harness between data link connector and harness connector M9



4. CHECK HARNESS FOR SHORT CIRCUIT

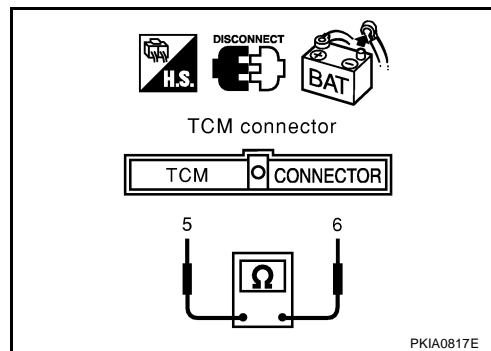
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

5 (L) - 6 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 5.

NG >> Repair harness between TCM and harness connector F102.



5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

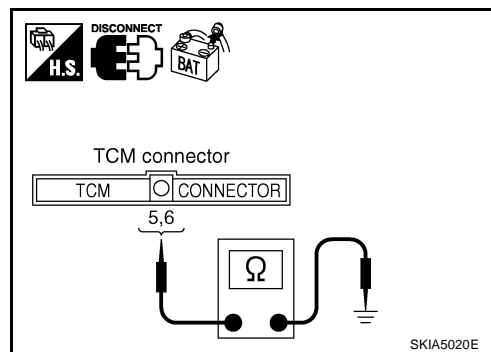
5 (L) - Ground : Continuity should not exist.

6 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 6.

NG >> Repair harness between TCM and harness connector F102.



6. CHECK HARNESS FOR SHORT CIRCUIT

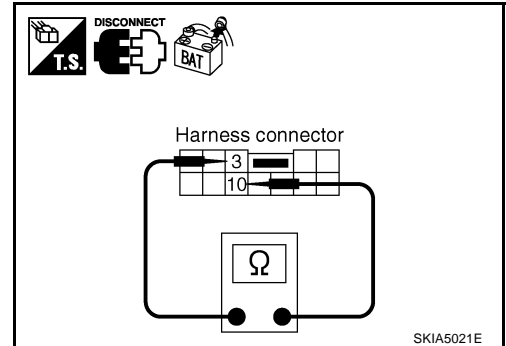
1. Disconnect harness connector B4.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

3 (L) - 10 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 7.

NG >> Repair harness between harness connector B4 and harness connector B2.



7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

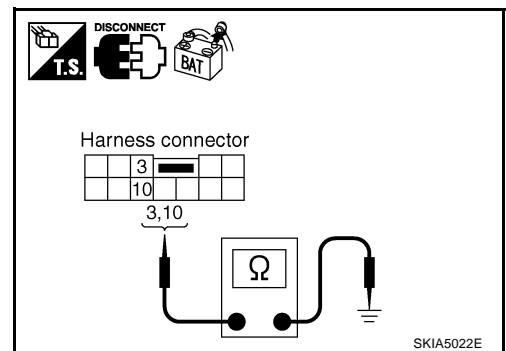
3 (L) - Ground : Continuity should not exist.

10 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 8.

NG >> Repair harness between harness connector B4 and harness connector B2.



8. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect AWD control unit connector, ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

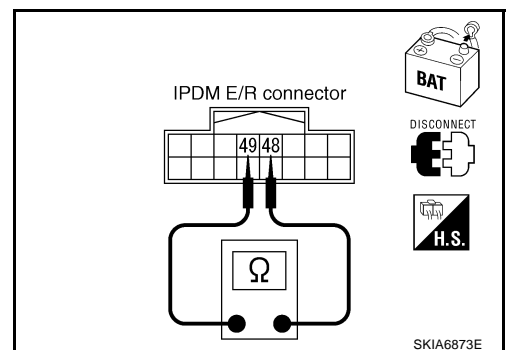
48 (L) - 49 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 9.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit
- Harness between IPDM E/R and ABS actuator and electric unit (control unit)
- Harness between IPDM E/R and harness connector E105



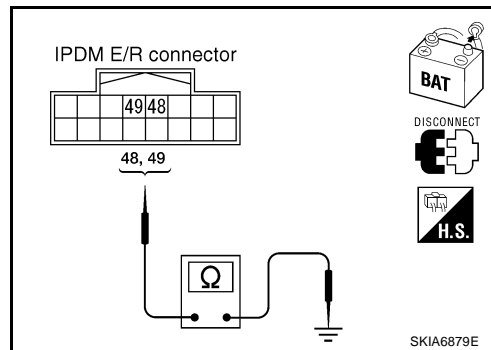
9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

- 48 (L) - Ground : Continuity should not exist.**
- 49 (Y) - Ground : Continuity should not exist.**

OK or NG

- OK >> GO TO 10.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
 - Harness between IPDM E/R and AWD control unit
 - Harness between IPDM E/R and ABS actuator and electric unit (control unit)
 - Harness between IPDM E/R and harness connector E105



10. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-459, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#) .

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-430, "Work Flow"](#) .
- NG >> Replace ECM and/or IPDM E/R.

IPDM E/R Ignition Relay Circuit Check

AKS00A6Q

Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-27, "IPDM E/R Power/Ground Circuit Inspection"](#) .
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START""](#) .

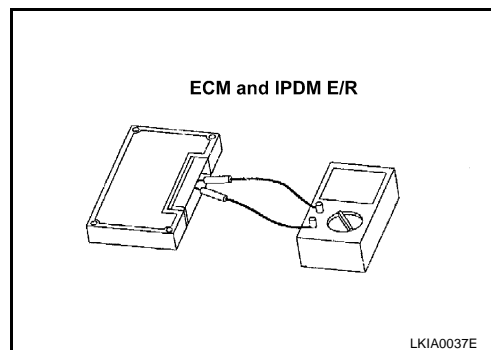
Component Inspection

ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

AKS00A6R

- 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	



LKIA0037E

CAN SYSTEM (TYPE 14)

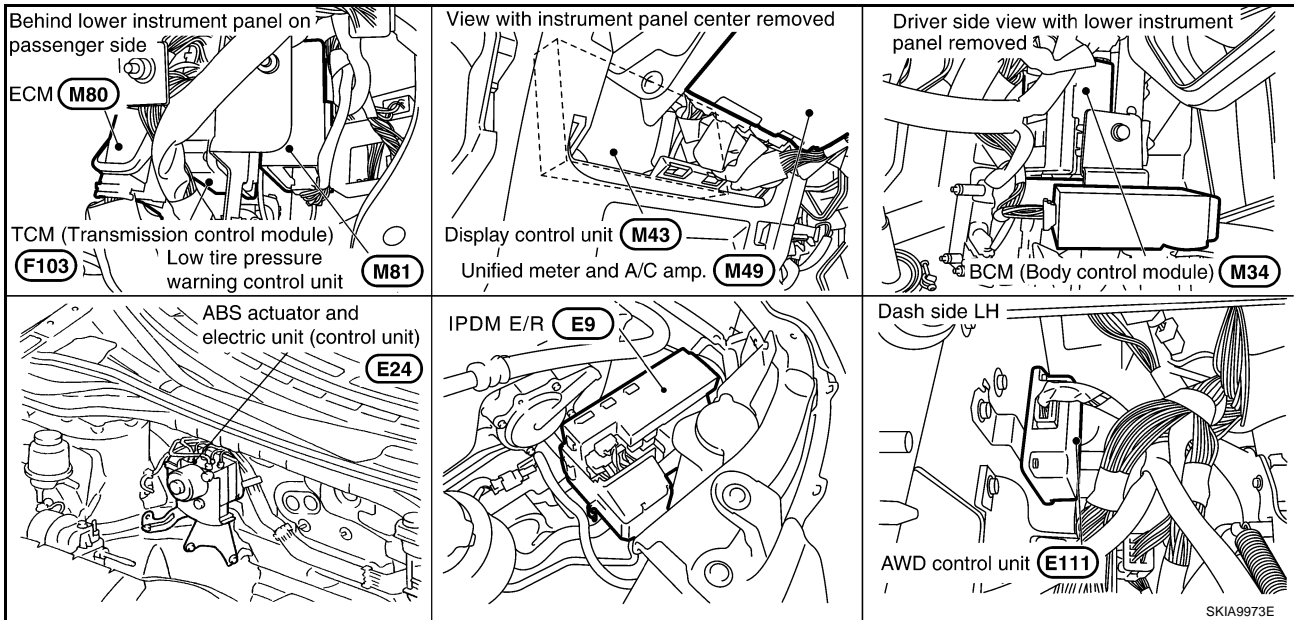
System Description

AKS00A6S

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

AKS00A6T

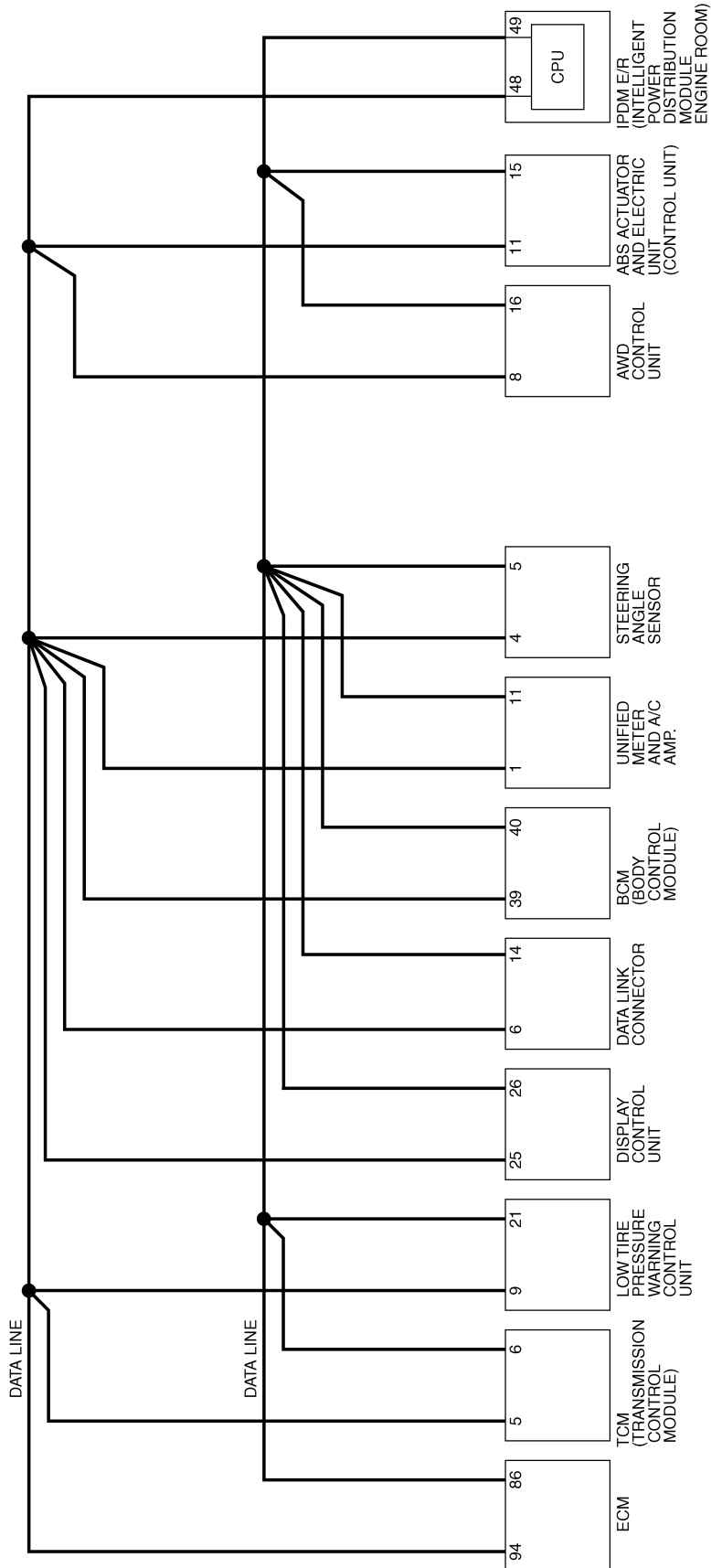


CAN SYSTEM (TYPE 14)

[CAN]

Schematic

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CAN SYSTEM (TYPE 14)

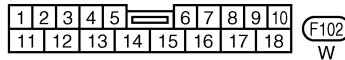
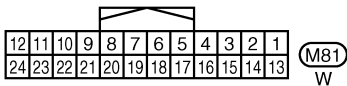
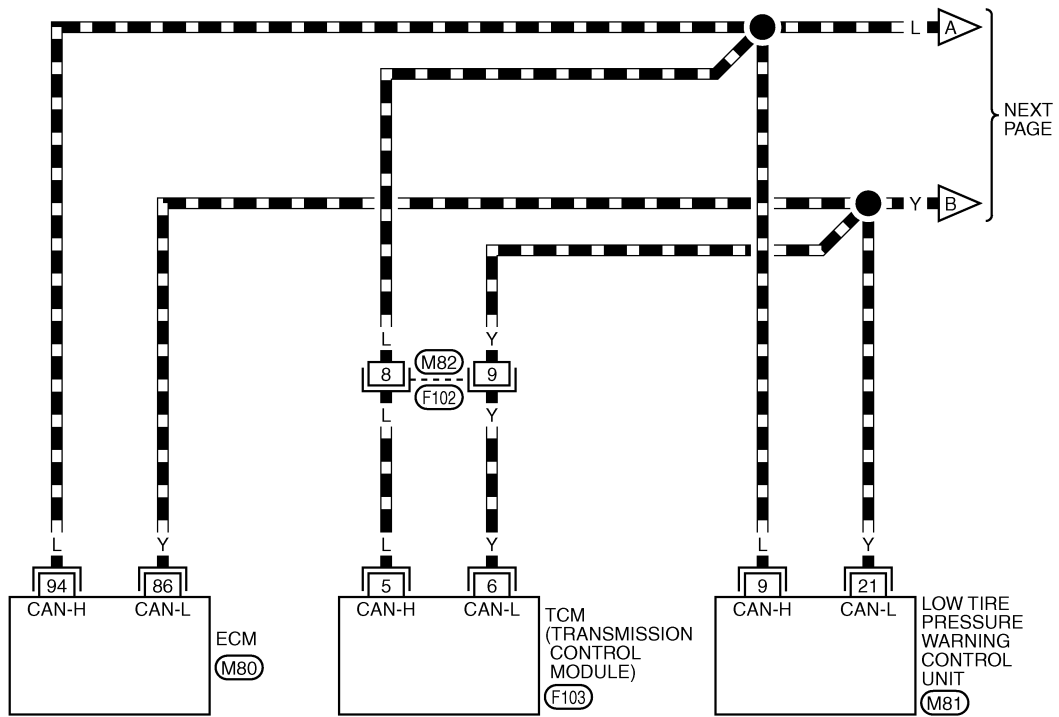
[CAN]

AKS00A6V

Wiring Diagram - CAN -

LAN-CAN-40

▬ : DATA LINE



REFER TO THE FOLLOWING.
 (M80), (F103) -ELECTRICAL
 UNITS

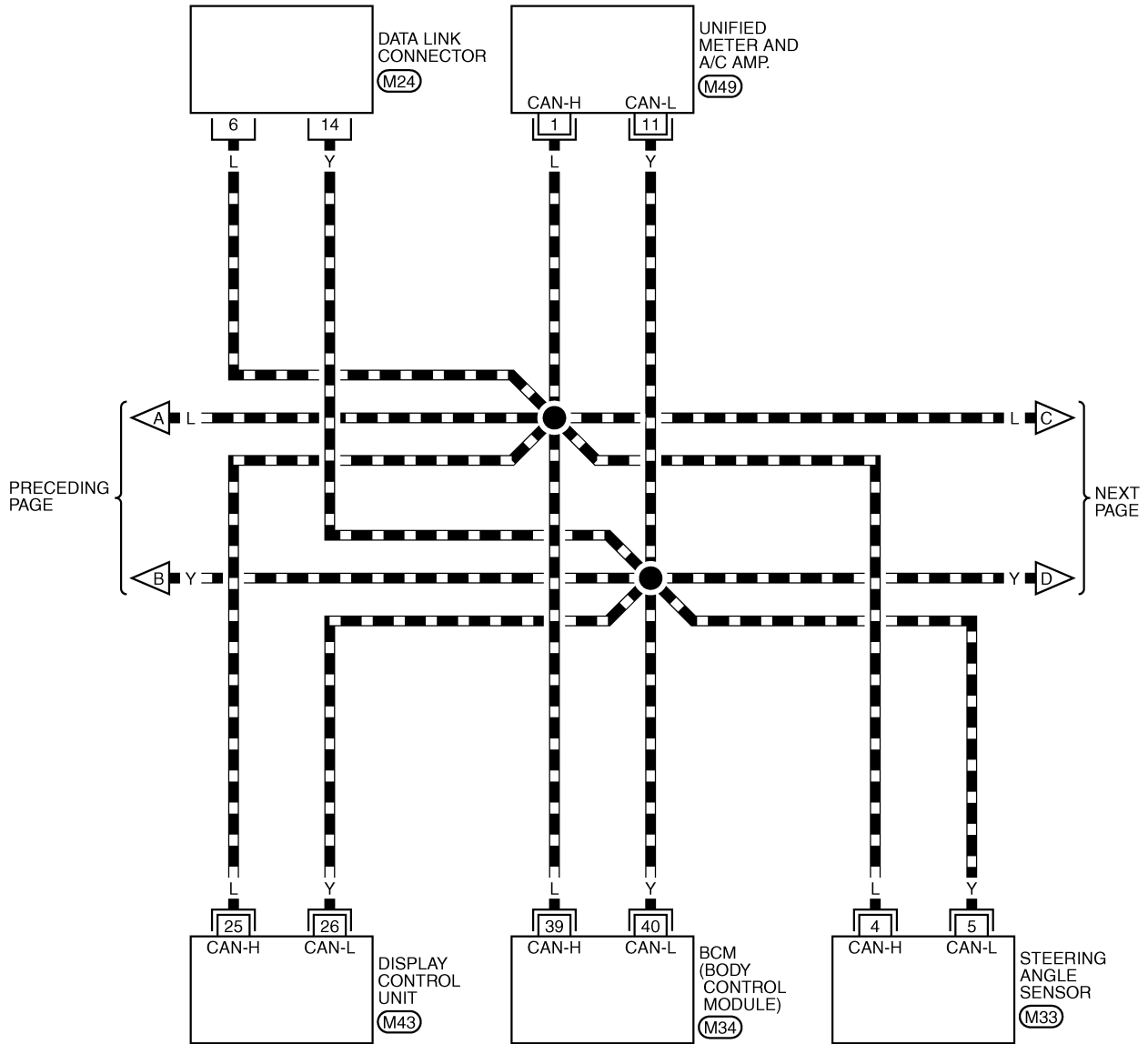
TKWB0059E

CAN SYSTEM (TYPE 14)

[CAN]

LAN-CAN-41

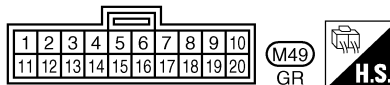
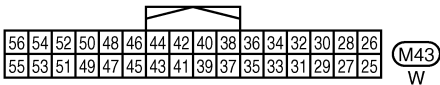
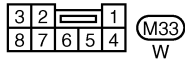
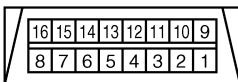
▬ : DATA LINE



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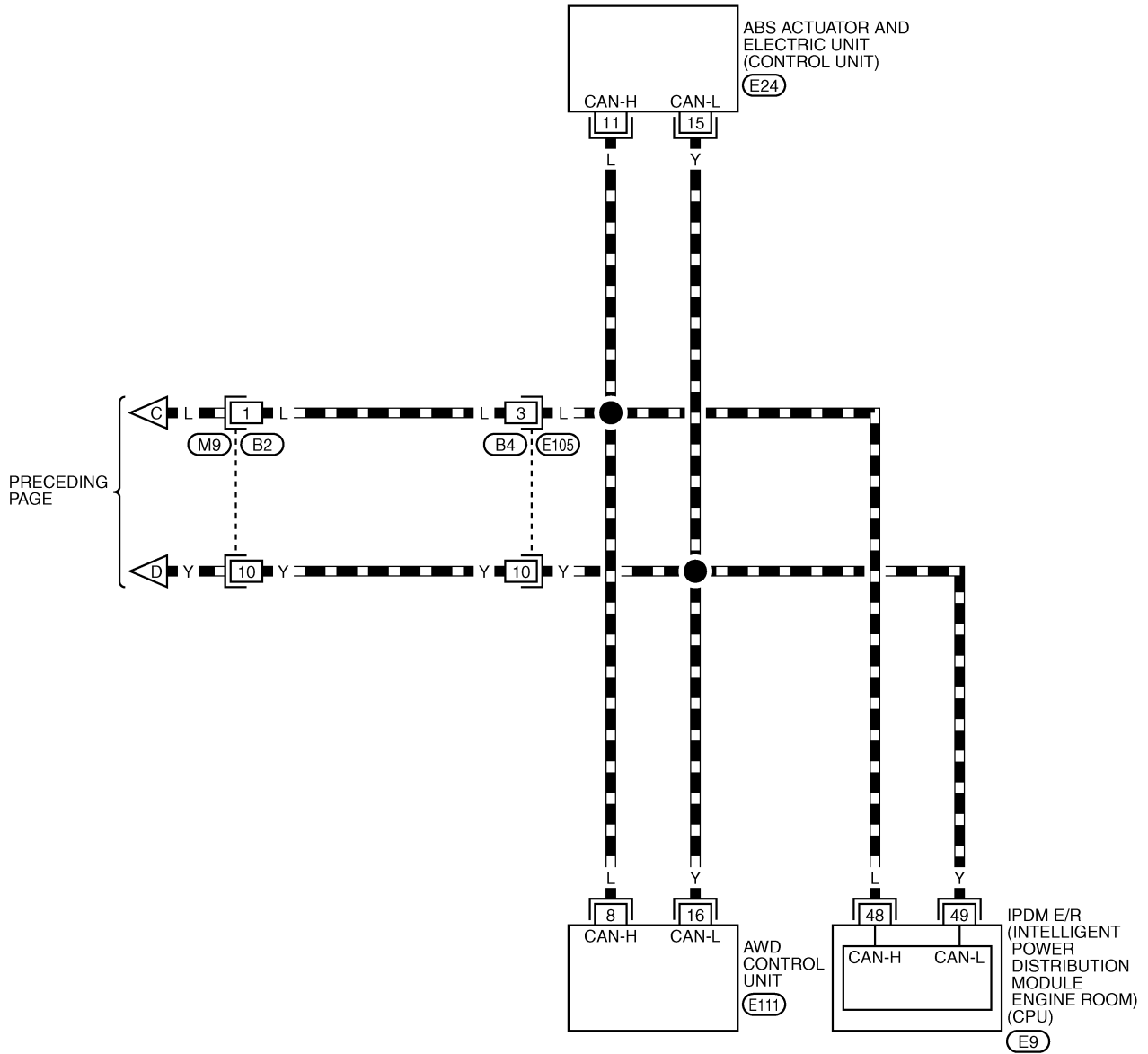


REFER TO THE FOLLOWING.
M34 -ELECTRICAL UNITS

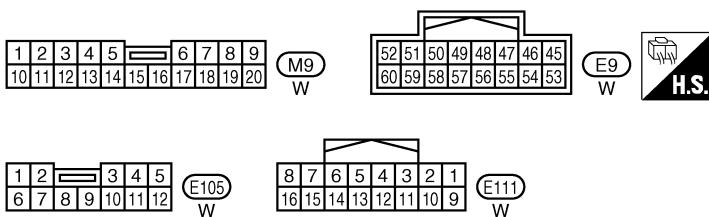
TKWB0060E

LAN-CAN-42

▬ : DATA LINE



PRECEDING PAGE



REFER TO THE FOLLOWING.

(E24) -ELECTRICAL UNITS

TKWB0061E

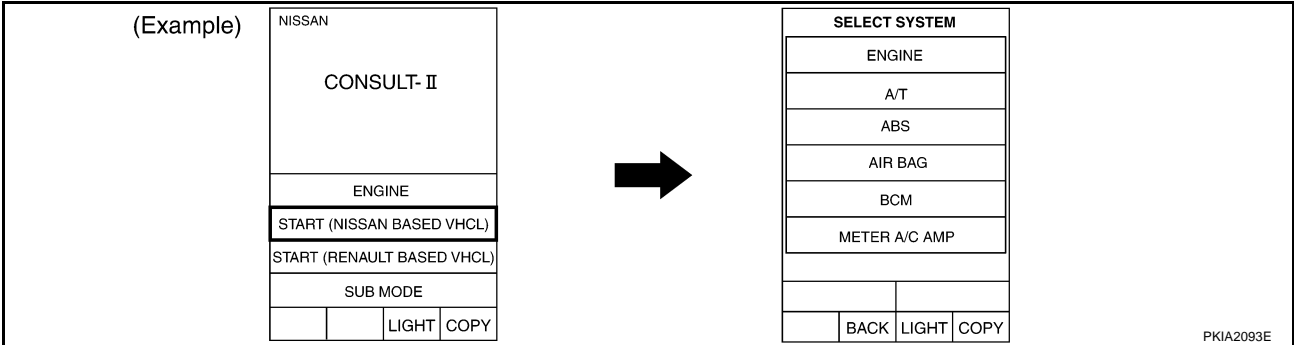
CAN SYSTEM (TYPE 14)

[CAN]

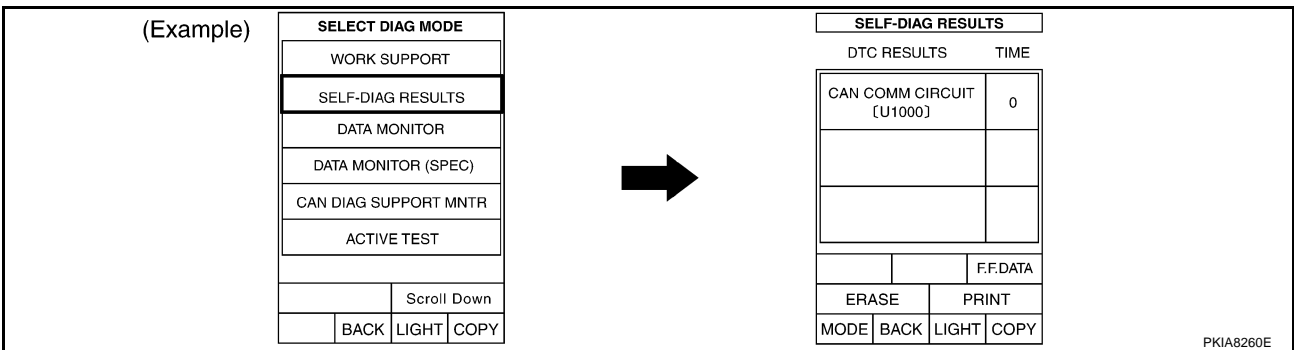
AKS00A6W

Work Flow

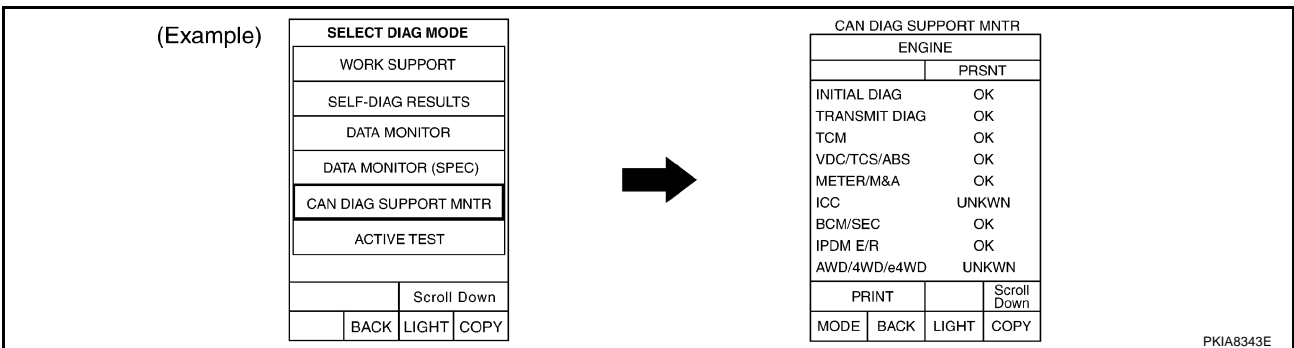
- When there are no indications of "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", or "IPDM E/R" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "ALL MODE AWD/4WD", "ABS", and "IPDM E/R" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "ALL MODE AWD/4WD", "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 [LAN-467, "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-467, "CHECK SHEET"](#).

NOTE:

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual. So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the navigation system. Refer to [AV-175, "CAN Communication Line Check"](#).

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CAN SYSTEM (TYPE 14)

[CAN]

7. Attach the CAN DIAG SUPPORT MONITOR check sheet onto the check sheet. Refer to [LAN-467, "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-467, "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-175, "CAN Communication Line Check"](#).

9. According to the check sheet results (example), start inspection. Refer to [LAN-469, "CHECK SHEET RESULTS \(EXAMPLE\)"](#).

CAN SYSTEM (TYPE 14)

[CAN]

CHECK SHEET

NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

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SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

Symptoms :

Attach copy of
SELECT SYSTEM

Attach copy of
SELECT SYSTEM

Attach copy of
display control unit
CAN DIAG SUPPORT MONITOR check sheet

PKIA8560E

CAN SYSTEM (TYPE 14)

[CAN]

Attach copy of ENGINE SELF-DIAG RESULTS	Attach copy of TRANSMISSION SELF-DIAG RESULTS	Attach copy of AIR PRESSURE MONITOR SELF-DIAG RESULTS	Attach copy of BCM SELF-DIAG RESULTS
Attach copy of METER A/C AMP SELF-DIAG RESULTS	Attach copy of ALL MODE AWD/4WD SELF-DIAG RESULTS	Attach copy of ABS SELF-DIAG RESULTS	Attach copy of IPDM E/R SELF-DIAG RESULTS
Attach copy of ENGINE CAN DIAG SUPPORT MNTR	Attach copy of TRANSMISSION CAN DIAG SUPPORT MNTR	Attach copy of AIR PRESSURE MONITOR CAN DIAG SUPPORT MNTR	Attach copy of BCM CAN DIAG SUPPORT MNTR
Attach copy of METER A/C AMP CAN DIAG SUPPORT MNTR	Attach copy of ALL MODE AWD/4WD CAN DIAG SUPPORT MNTR	Attach copy of ABS CAN DIAG SUPPORT MNTR	Attach copy of IPDM E/R CAN DIAG SUPPORT MNTR

PKIA8543E

CAN SYSTEM (TYPE 14)

[CAN]

CHECK SHEET RESULTS (EXAMPLE)

NOTE:

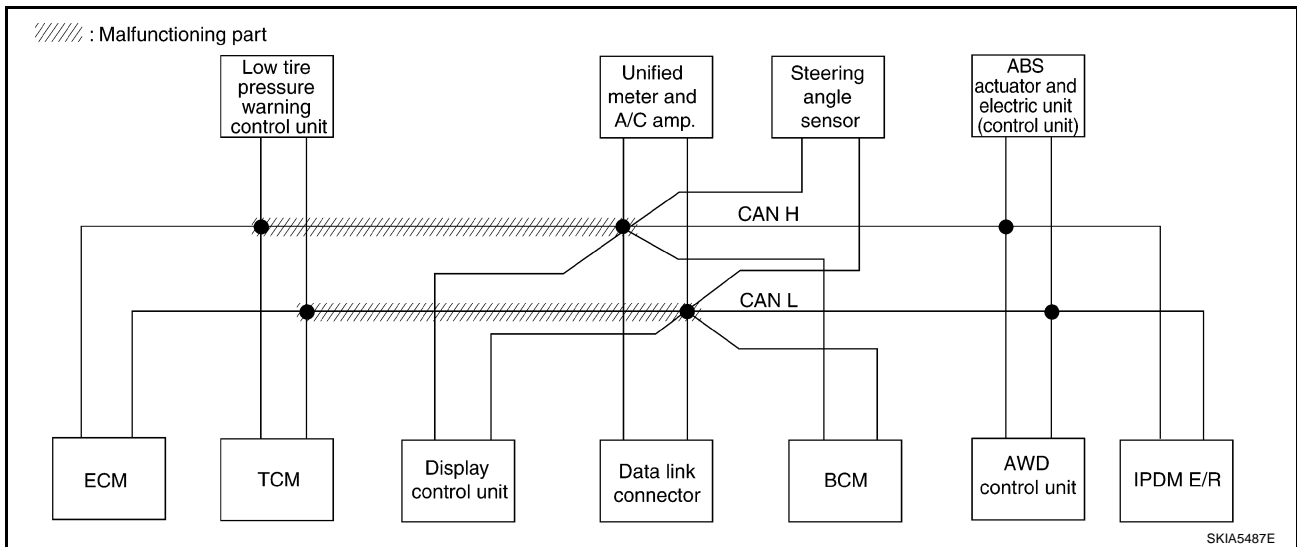
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

Case 1

Check harness between TCM and data link connector. Refer to [LAN-483, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

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CAN SYSTEM (TYPE 14)

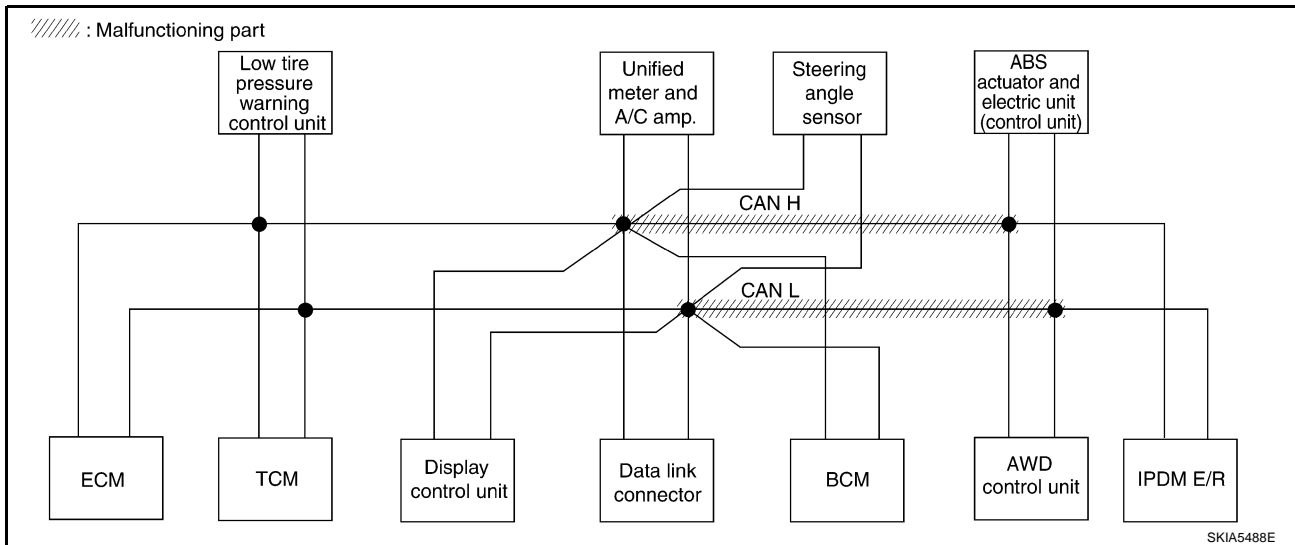
[CAN]

Case 2

Check harness between data link connector and ABS actuator and electric unit (control unit). Refer to [LAN-484, "Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit \(Control Unit\)"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8562E



CAN SYSTEM (TYPE 14)

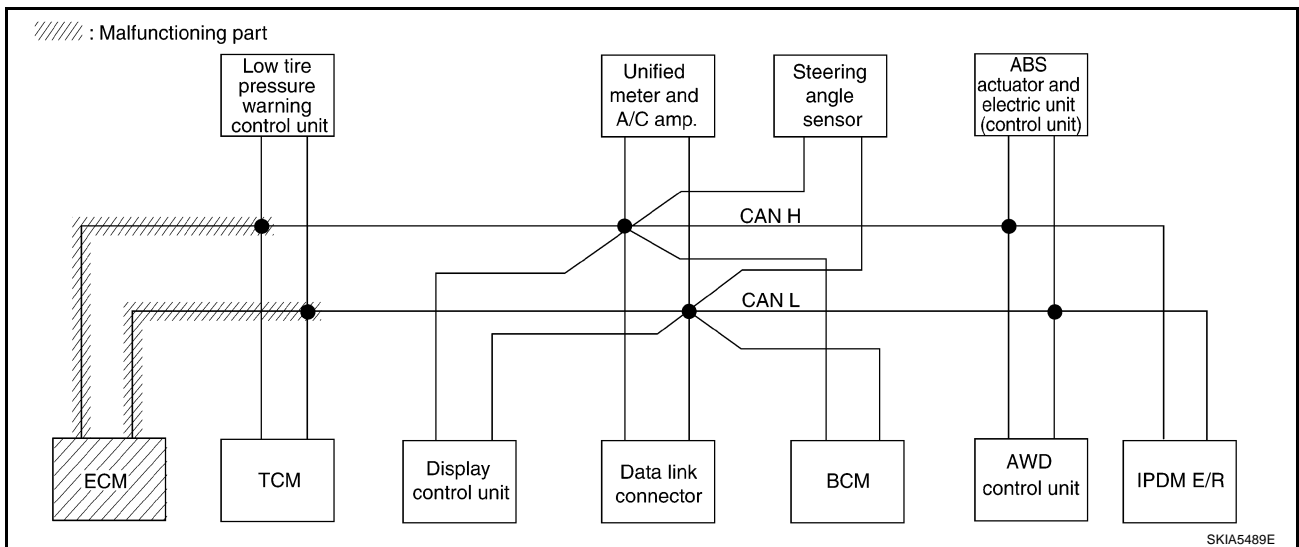
[CAN]

Case 3

Check ECM circuit. Refer to [LAN-485, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8563E



CAN SYSTEM (TYPE 14)

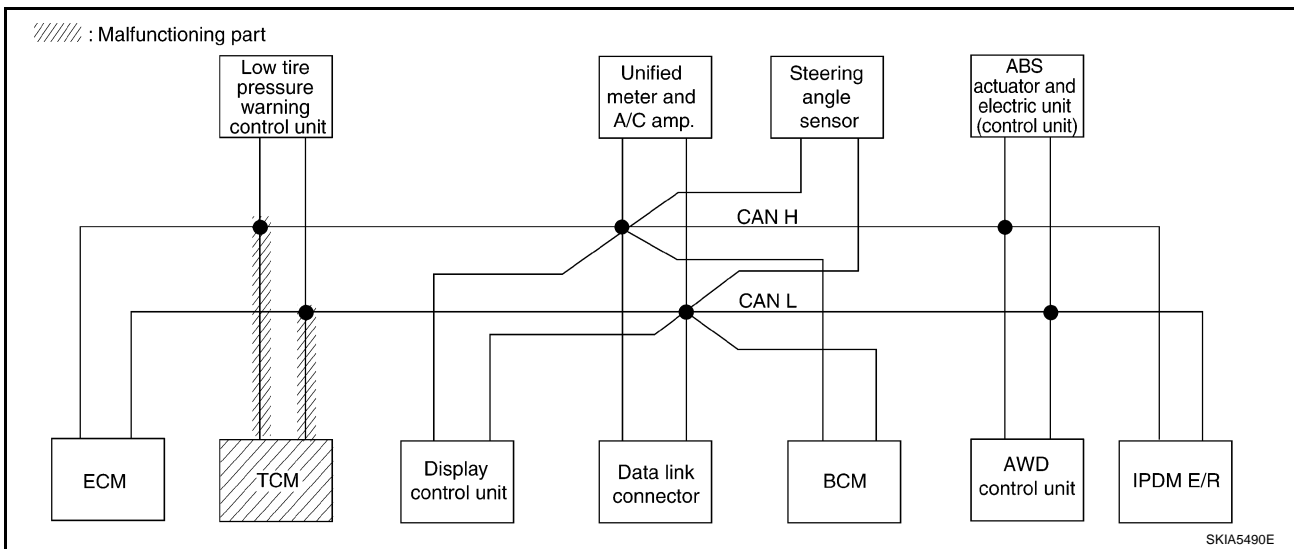
[CAN]

Case 4

Check TCM circuit. Refer to [LAN-485, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8564E



SKIA5490E

CAN SYSTEM (TYPE 14)

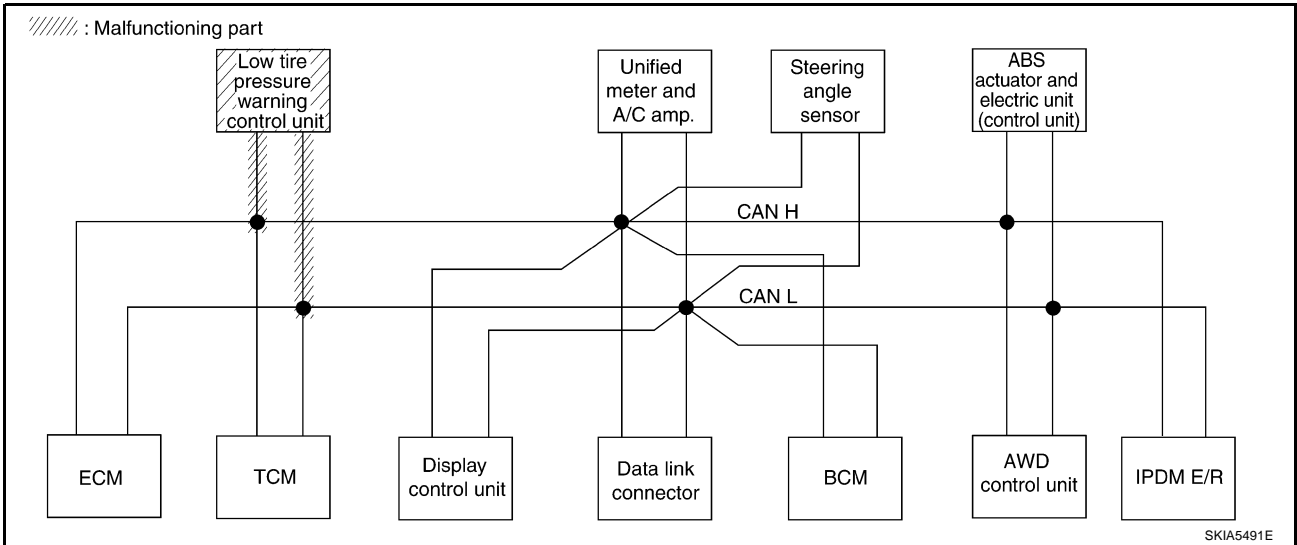
[CAN]

Case 5

Check low tire pressure warning control unit circuit. Refer to [LAN-486, "Low Tire Pressure Warning Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6 ✓	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8565E



CAN SYSTEM (TYPE 14)

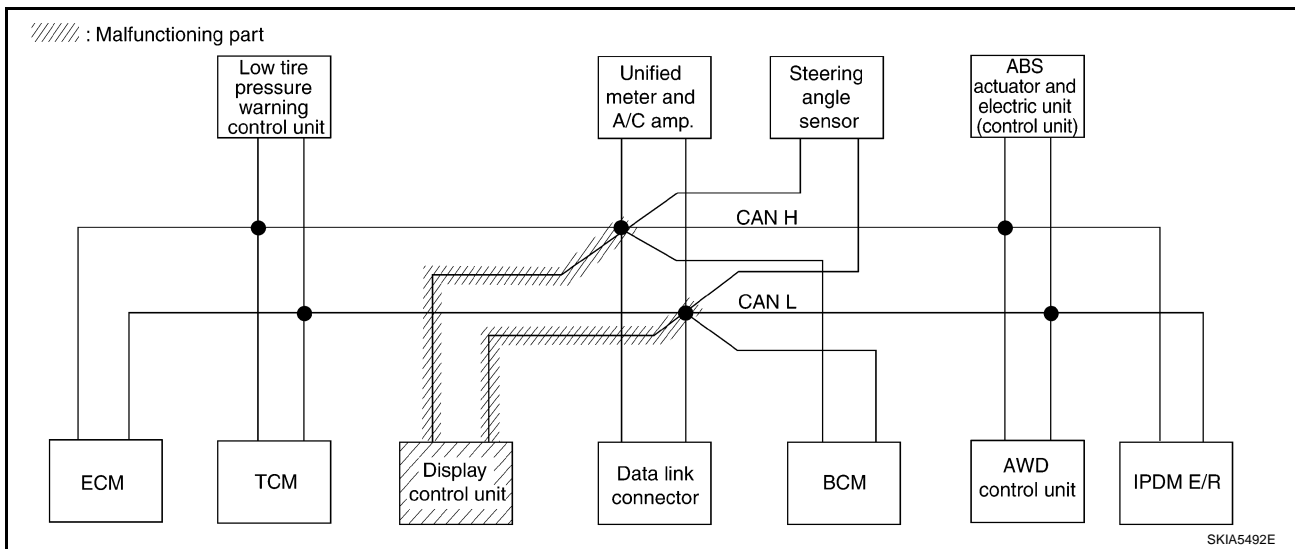
[CAN]

Case 6

Check display control unit circuit. Refer to [LAN-486, "Display Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN✓CRC 1	CAN✓CRC 3	—	CAN✓CRC 6	—	CAN✓CRC 2	CAN✓CRC 5	—	—	—	CAN✓CRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8566E



SKIA5492E

CAN SYSTEM (TYPE 14)

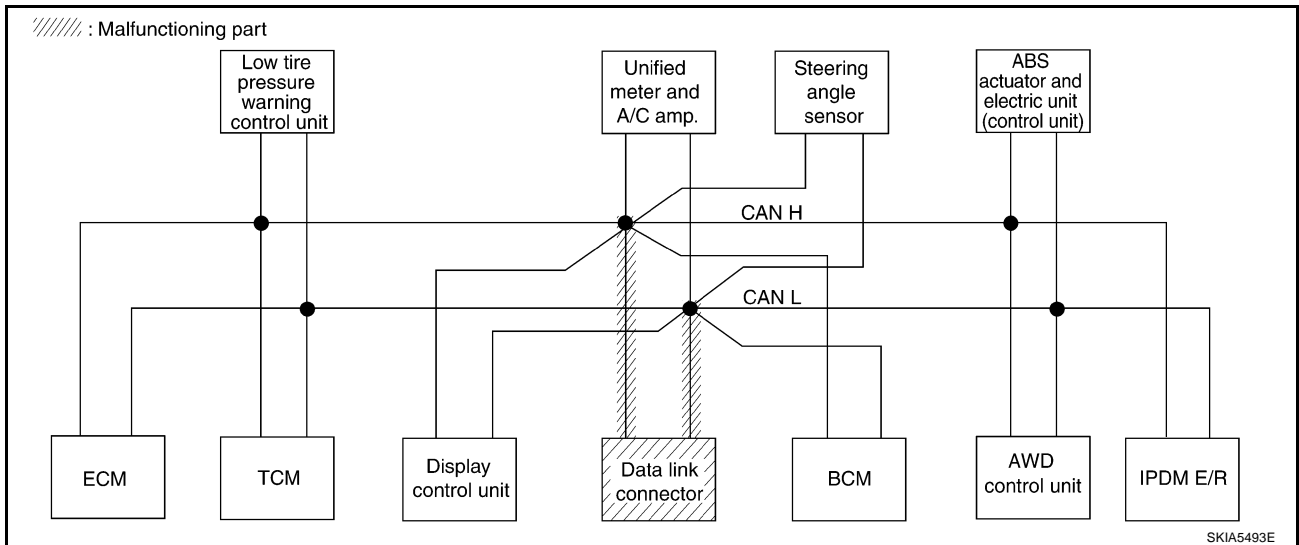
[CAN]

Case 7

Check data link connector circuit. Refer to [LAN-487, "Data Link Connector Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8567E



CAN SYSTEM (TYPE 14)

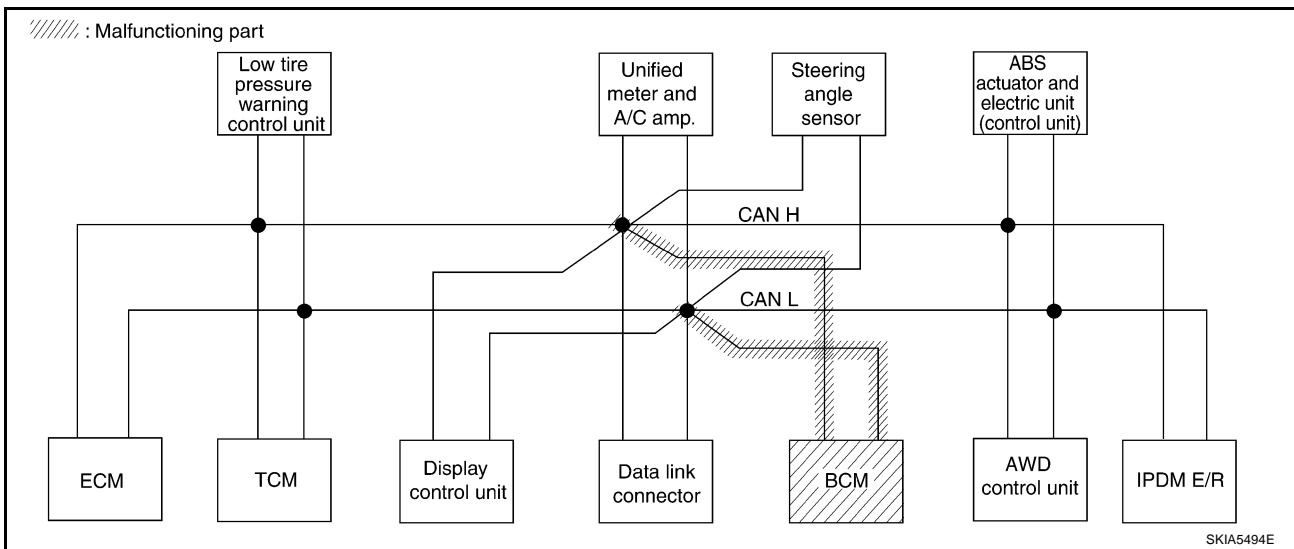
[CAN]

Case 8

Check BCM circuit. Refer to [LAN-487, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8568E



CAN SYSTEM (TYPE 14)

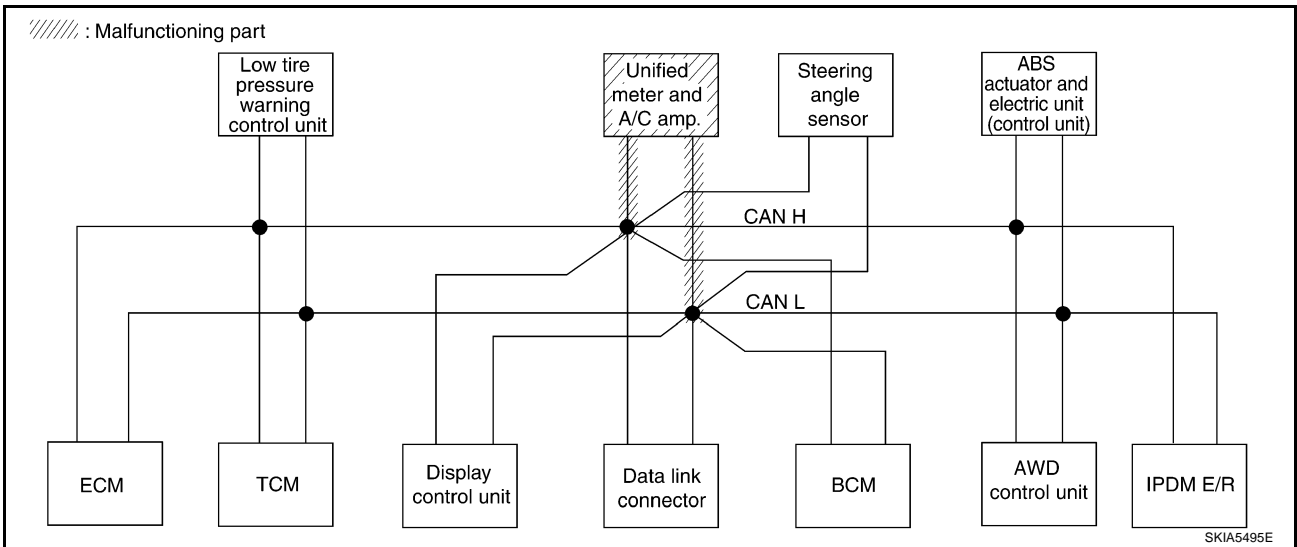
[CAN]

Case 9

Check unified meter and A/C amp. circuit. Refer to [LAN-488, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8569E



CAN SYSTEM (TYPE 14)

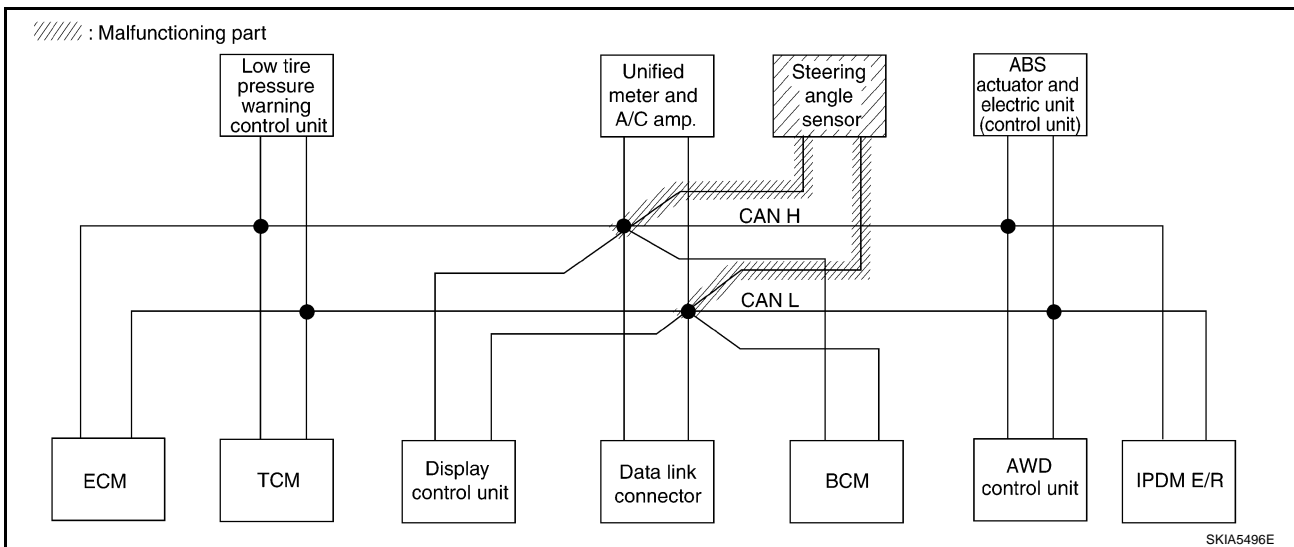
[CAN]

Case 10

Check steering angle sensor circuit. Refer to [LAN-488, "Steering Angle Sensor Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8570E



SKIA5496E

CAN SYSTEM (TYPE 14)

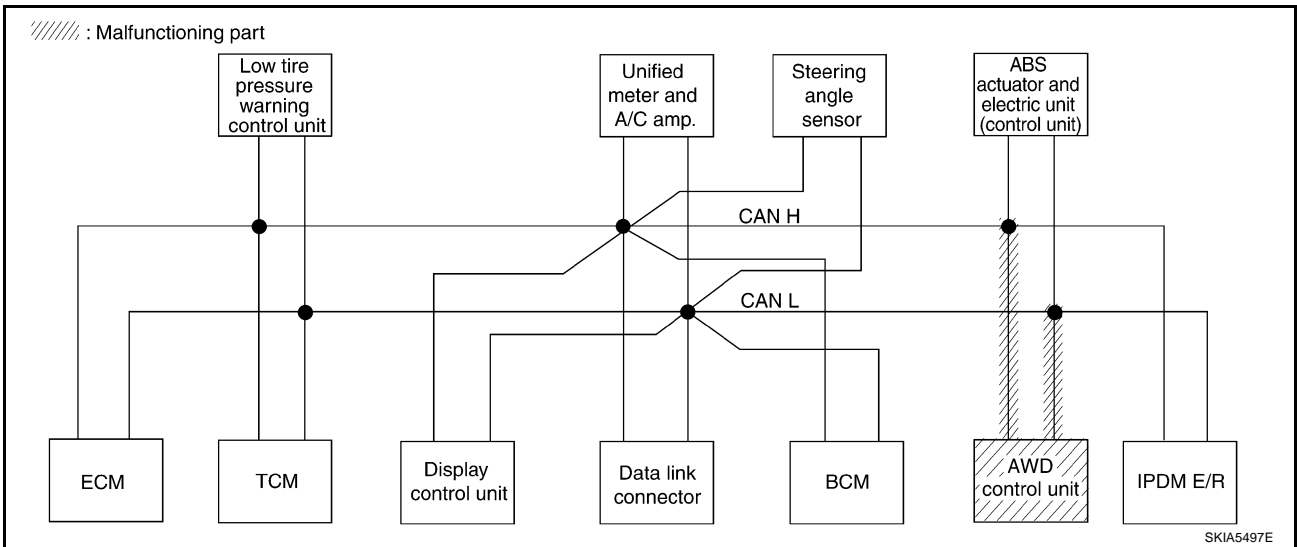
[CAN]

Case 11

Check AWD control unit circuit. Refer to [LAN-489, "AWD Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8571E



CAN SYSTEM (TYPE 14)

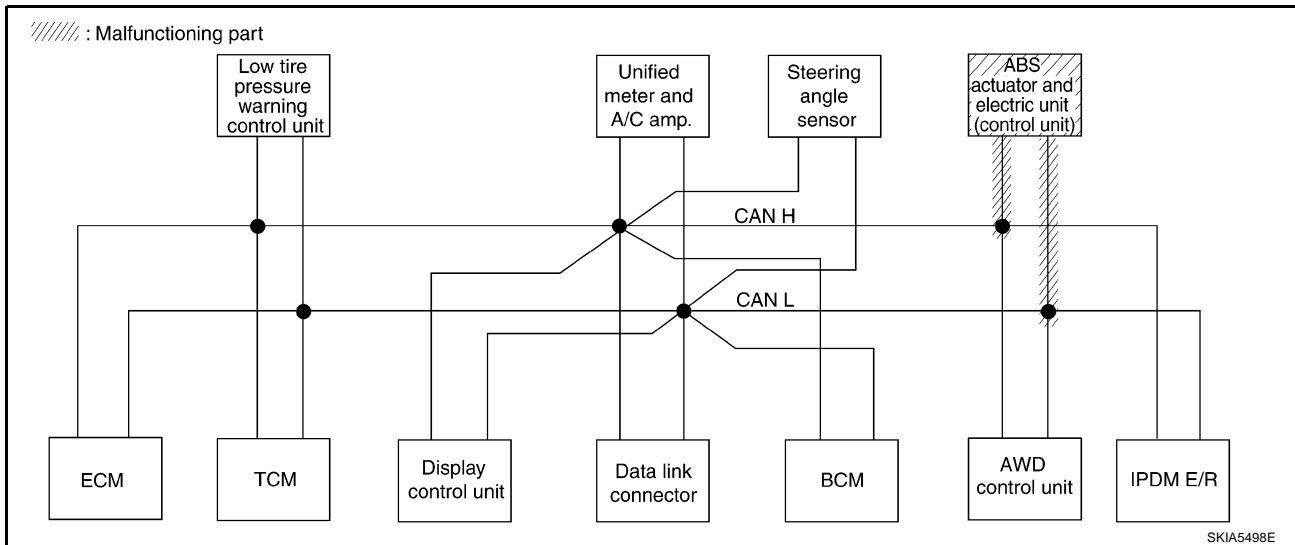
[CAN]

Case 12

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-489, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

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CAN SYSTEM (TYPE 14)

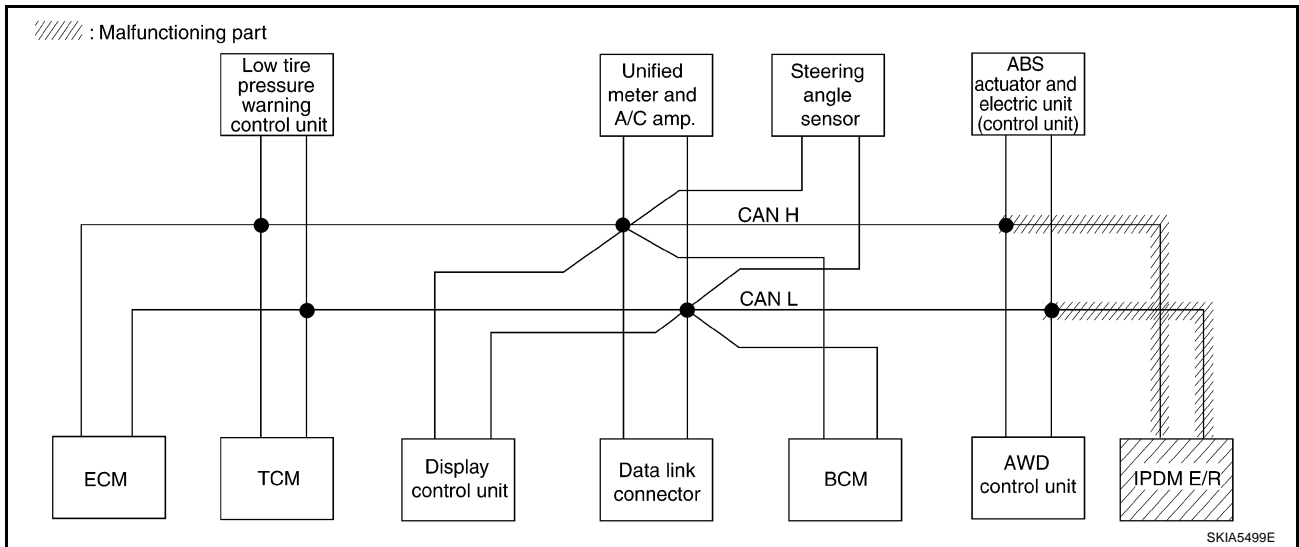
[CAN]

Case 13

Check IPDM E/R circuit. Refer to [LAN-490, "IPDM E/R Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN ✓
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7 ✓
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN ✓
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8573E



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LAN

CAN SYSTEM (TYPE 14)

[CAN]

Case 14

Check CAN communication circuit. Refer to [LAN-491, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR													
		Initial diagnosis	Transmit diagnosis	Receive diagnosis											
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R		
ENGINE	-	NG	UN K W N	-	UN K W N	-	-	-	-	UN K W N	UN K W N	-	UN K W N	UN K W N	UN K W N
TRANSMISSION	No indication	NG	UNKW N	UNKW N	-	-	-	-	-	UNKW N	-	-	UNKW N	-	
AIR PRESSURE MONITOR	No indication	NG	UNKW N	-	-	-	-	-	-	UNKW N	-	-	-	-	
Display control unit	-	CAN COMM	CAN CIRC 1	CAN CIRC 3	-	CAN CIRC 6	-	CAN CIRC 2	CAN CIRC 5	-	-	-	-	CAN CIRC 7	
BCM	No indication	NG	UNKW N	UNKW N	-	-	-	-	-	UNKW N	-	-	-	UNKW N	
METER A/C AMP	No indication	-	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N	-	-	UNKW N	UNKW N	-	-	
ALL MODE AWD/4WD	-	NG	UN K W N	UN K W N	-	-	-	-	UN K W N	-	-	UN K W N	-	-	
ABS	-	NG	UN K W N	UN K W N	UN K W N	-	-	-	-	UN K W N	UN K W N	-	-	-	
IPDM E/R	No indication	-	UNKW N	UNKW N	-	-	-	UNKW N	-	-	-	-	-	-	

PKIA8574E

Case 15

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-494, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR													
		Initial diagnosis	Transmit diagnosis	Receive diagnosis											
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R		
ENGINE	-	NG	UNKW N	-	UN K W N	-	-	-	-	UNKW N	UNKW N	-	UNKW N	UN K W N	UNKW N
TRANSMISSION	No indication	NG	UNKW N	UNKW N	-	-	-	-	-	UNKW N	-	-	UNKW N	-	
AIR PRESSURE MONITOR	No indication	NG	UNKW N	-	-	-	-	-	-	UNKW N	-	-	-	-	
Display control unit	-	CAN COMM	CAN CIRC 1	CAN CIRC 3	-	CAN CIRC 6	-	CAN CIRC 2	CAN CIRC 5	-	-	-	-	CAN CIRC 7	
BCM	No indication	NG	UNKW N	UNKW N	-	-	-	-	-	UNKW N	-	-	-	UNKW N	
METER A/C AMP	No indication	-	UNKW N	UNKW N	UN K W N	UNKW N	UNKW N	UNKW N	-	-	UNKW N	UN K W N	-	-	
ALL MODE AWD/4WD	-	NG	UNKW N	UNKW N	-	-	-	-	UNKW N	-	-	UN K W N	-	-	
ABS	-	NG	UNKW N	UNKW N	UNKW N	-	-	-	-	UNKW N	UNKW N	-	-	-	
IPDM E/R	No indication	-	UNKW N	UNKW N	-	-	-	UNKW N	-	-	-	-	-	-	

PKIA8575E

Case 16

Case 23: Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-494, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8576E

Circuit Check Between TCM and Data Link Connector

AKS00A6X

1. CHECK HARNESS FOR OPEN CIRCUIT

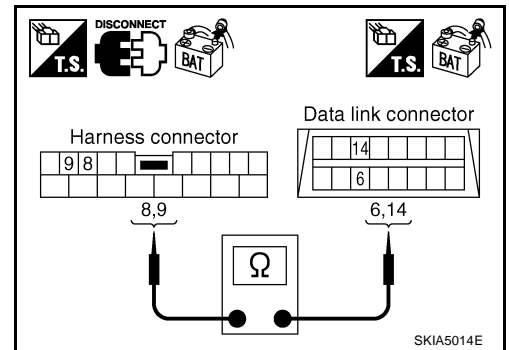
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

8 (L) - 6 (L) : Continuity should exist.

9 (Y) - 14 (Y) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-465, "Work Flow"](#) .
- NG >> Repair harness.



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Circuit Check Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit)

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M9
 - Harness connector B2
 - Harness connector B4
 - Harness connector E105

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

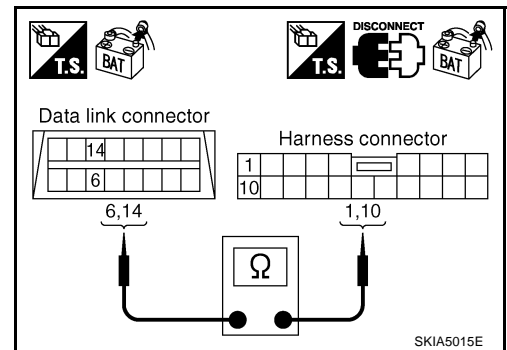
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

6 (L) - 1 (L) : Continuity should exist.
14 (Y) - 10 (Y) : Continuity should exist.

OK or NG

- OK >> GO TO 3.
 NG >> Repair harness.



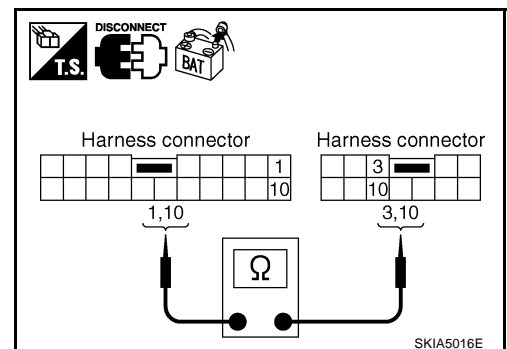
3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

1 (L) - 3 (L) : Continuity should exist.
10 (Y) - 10 (Y) : Continuity should exist.

OK or NG

- OK >> GO TO 4.
 NG >> Repair harness.



4. CHECK HARNESS FOR OPEN CIRCUIT

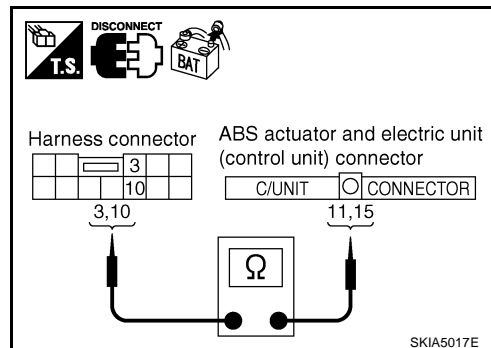
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

3 (L) - 11 (L) : Continuity should exist.

10 (Y) - 15 (Y) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-465, "Work Flow"](#).
- NG >> Repair harness.



AKS00A6Z

ECM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

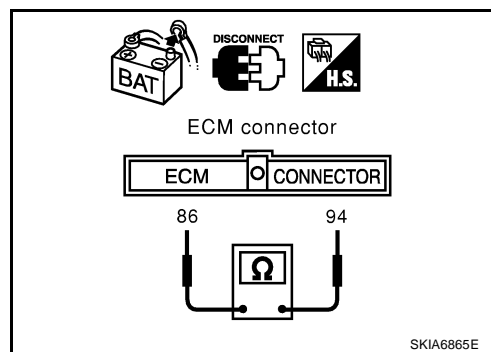
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

94 (L) - 86 (Y) : Approx. 108 - 132Ω

OK or NG

- OK >> Replace ECM.
- NG >> Repair harness between ECM and TCM.



AKS00A70

TCM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
 - TCM connector
 - Harness connector F102
 - Harness connector M82

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

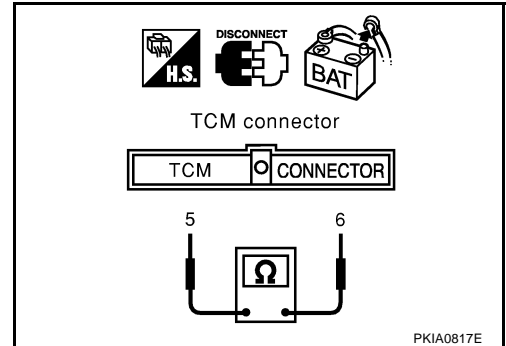
1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

5 (L) - 6 (Y)

: Approx. 54 - 66Ω

OK or NG

- OK >> Replace TCM.
 NG >> Repair harness between TCM and low tire pressure warning control unit.



Low Tire Pressure Warning Control Unit Circuit Check

AKS00A71

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of low tire pressure warning control unit for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

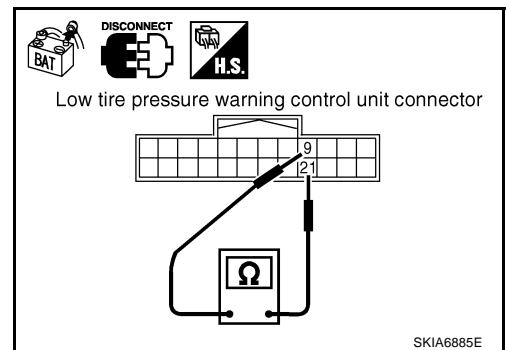
1. Disconnect low tire pressure warning control unit connector.
2. Check resistance between low tire pressure warning control unit harness connector M81 terminals 9 (L) and 21 (Y).

9 (L) - 21 (Y)

: Approx. 54 - 66Ω

OK or NG

- OK >> Replace low tire pressure warning control unit.
 NG >> Repair harness between low tire pressure warning control unit and TCM.



Display Control Unit Circuit Check

AKS00A72

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display control unit for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

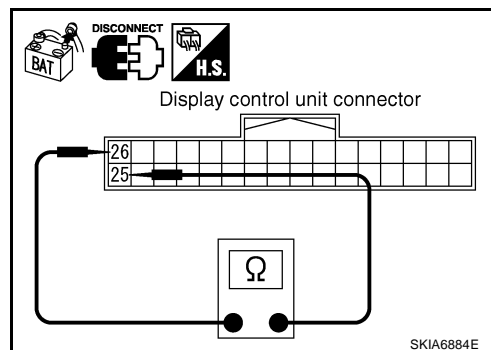
1. Disconnect display control unit connector.
2. Check resistance between display control unit harness connector M43 terminals 25 (L) and 26 (Y).

25 (L) - 26 (Y)

: Approx. 54 - 66Ω

OK or NG

- OK >> Replace display control unit.
 NG >> Repair harness between display control unit and data link connector.



AKS00A73

Data Link Connector Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

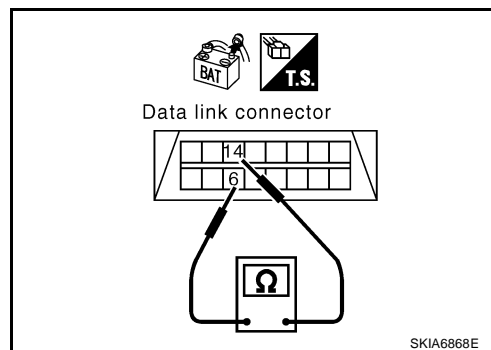
Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

6 (L) - 14 (Y)

: Approx. 54 - 66Ω

OK or NG

- OK >> Diagnose again. Refer to [LAN-465, "Work Flow"](#) .
 NG >> Repair harness between data link connector and BCM.



AKS00A74

BCM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

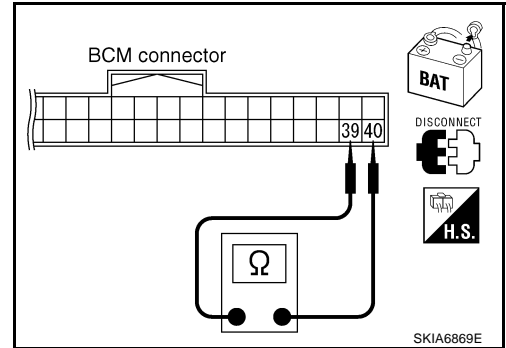
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M34 terminals 39 (L) and 40 (Y).

39 (L) - 40 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace BCM. Refer to [BCS-14, "Removal and Installation of BCM"](#).
- NG >> Repair harness between BCM and data link connector.



Unified Meter and A/C Amp. Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

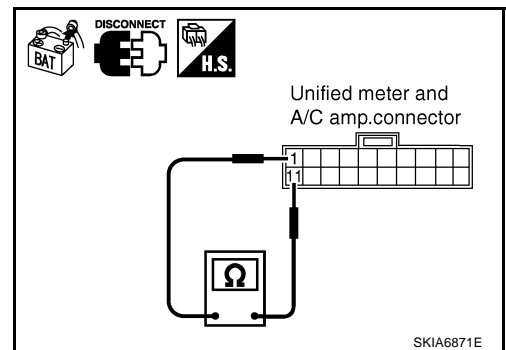
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

1 (L) - 11 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace unified meter and A/C amp.
- NG >> Repair harness between unified meter and A/C amp. and data link connector.



Steering Angle Sensor Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of steering angle sensor for damage, bend and loose connection (sensor side and harness side).

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

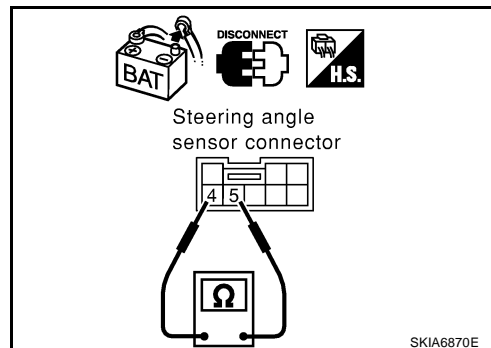
1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M33 terminals 4 (L) and 5 (Y).

4 (L) - 5 (Y)

: Approx. 54 - 66Ω

OK or NG

- OK >> Replace steering angle sensor.
 NG >> Repair harness between steering angle sensor and data link connector.



AWD Control Unit Circuit Check

AKS00A77

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of AWD control unit for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

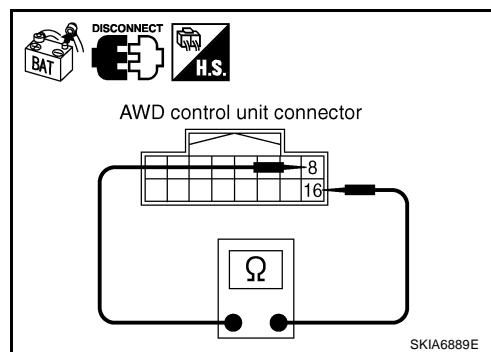
1. Disconnect AWD control unit connector.
2. Check resistance between AWD control unit harness connector E111 terminals 8 (L) and 16 (Y).

8 (L) - 16 (Y)

: Approx. 54 - 66Ω

OK or NG

- OK >> Replace AWD control unit.
 NG >> Repair harness between AWD control unit and IPDM E/R.



ABS Actuator and Electric Unit (Control Unit) Circuit Check

AKS00A78

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

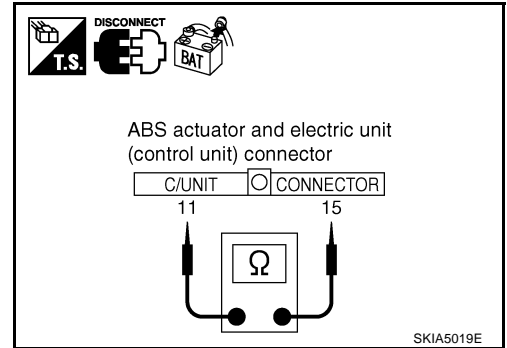
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

11 (L) - 15 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



IPDM E/R Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

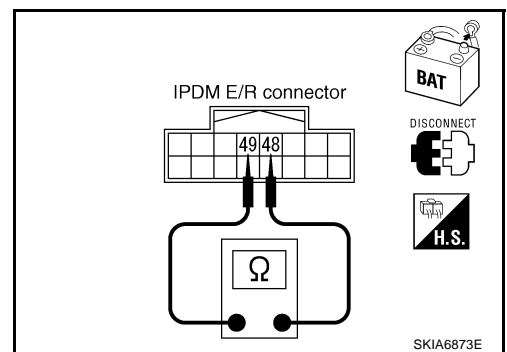
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

48 (L) - 49 (Y) : Approx. 108 - 132Ω

OK or NG

- OK >> Replace IPDM E/R.
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



CAN Communication Circuit Check

AKS00A7A

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, meter side, sensor side and harness side).
 - ECM
 - TCM
 - Low tire pressure warning control unit
 - BCM
 - Display control unit
 - Unified meter and A/C amp.
 - Steering angle sensor
 - AWD control unit
 - ABS actuator and electric unit (control unit)
 - IPDM E/R
 - Between ECM and IPDM E/R
 - Between ECM and TCM

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

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2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
 - ECM connector
 - Low tire pressure warning control unit connector
 - Harness connector M82
 - Display control unit connector
 - BCM connector
 - Unified meter and A/C amp. connector
 - Steering angle sensor connector
 - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

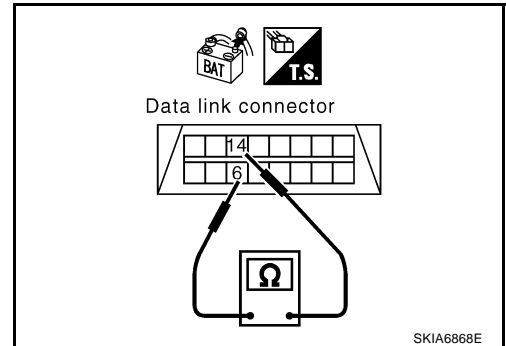
6 (L) - 14 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 3.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM
- Harness between data link connector and low tire pressure warning control unit
- Harness between data link connector and harness connector M82
- Harness between data link connector and display control unit
- Harness between data link connector and BCM
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor
- Harness between data link connector and harness connector M9



3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

6 (L) - Ground : Continuity should not exist.

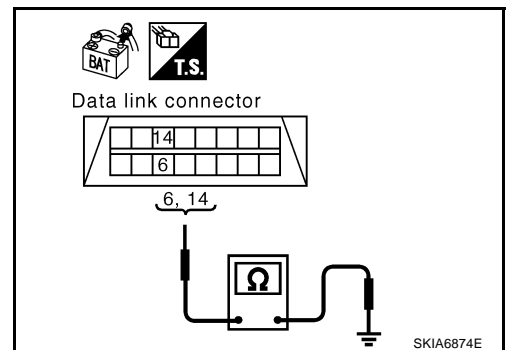
14 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM
- Harness between data link connector and low tire pressure warning control unit
- Harness between data link connector and harness connector M82
- Harness between data link connector and display control unit
- Harness between data link connector and BCM
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor
- Harness between data link connector and harness connector M9



4. CHECK HARNESS FOR SHORT CIRCUIT

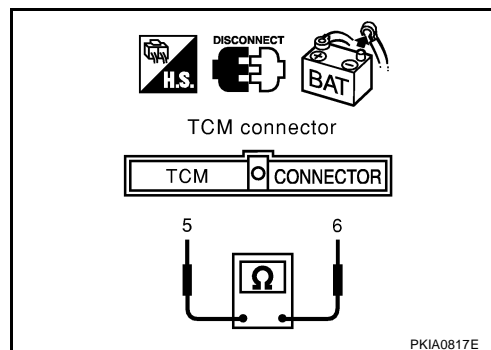
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

5 (L) - 6 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 5.

NG >> Repair harness between TCM and harness connector F102.



5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

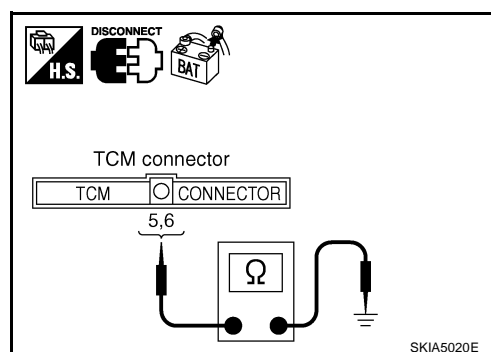
5 (L) - Ground : Continuity should not exist.

6 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 6.

NG >> Repair harness between TCM and harness connector F102.



6. CHECK HARNESS FOR SHORT CIRCUIT

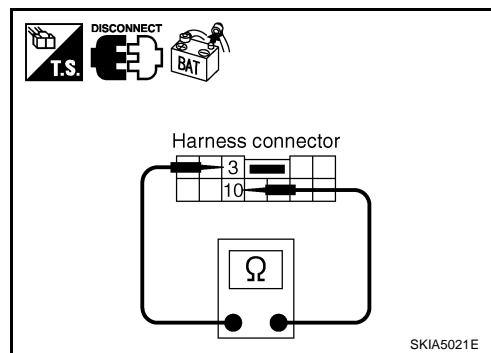
1. Disconnect harness connector B4.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

3 (L) - 10 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 7.

NG >> Repair harness between harness connector B4 and harness connector B2.



7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

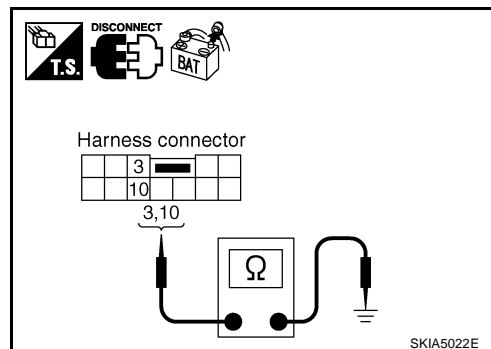
3 (L) - Ground : Continuity should not exist.

10 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 8.

NG >> Repair harness between harness connector B4 and harness connector B2.



8. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect AWD control unit connector, ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

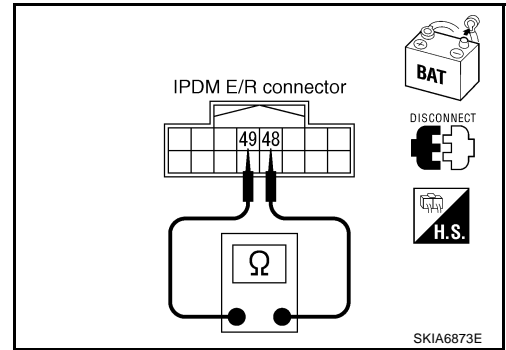
48 (L) - 49 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 9.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit
- Harness between IPDM E/R and ABS actuator and electric unit (control unit)
- Harness between IPDM E/R and harness connector E105



9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

48 (L) - Ground : Continuity should not exist.

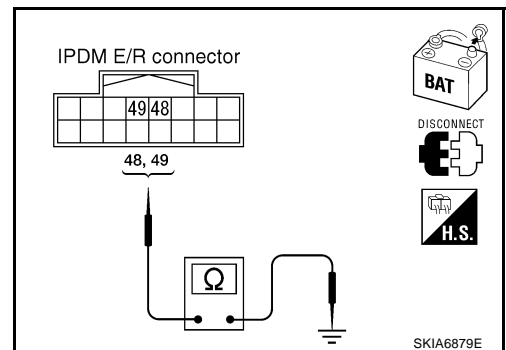
49 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 10.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit
- Harness between IPDM E/R and ABS actuator and electric unit (control unit)
- Harness between IPDM E/R and harness connector E105



10. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-495, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-465, "Work Flow"](#).

NG >> Replace ECM and/or IPDM E/R.

IPDM E/R Ignition Relay Circuit Check

AKS00A7B

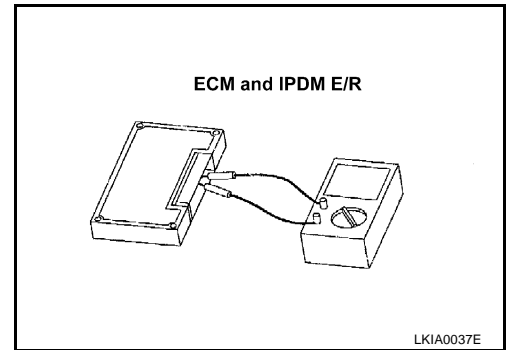
Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-27, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#).

Component Inspection ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



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CAN SYSTEM (TYPE 15)

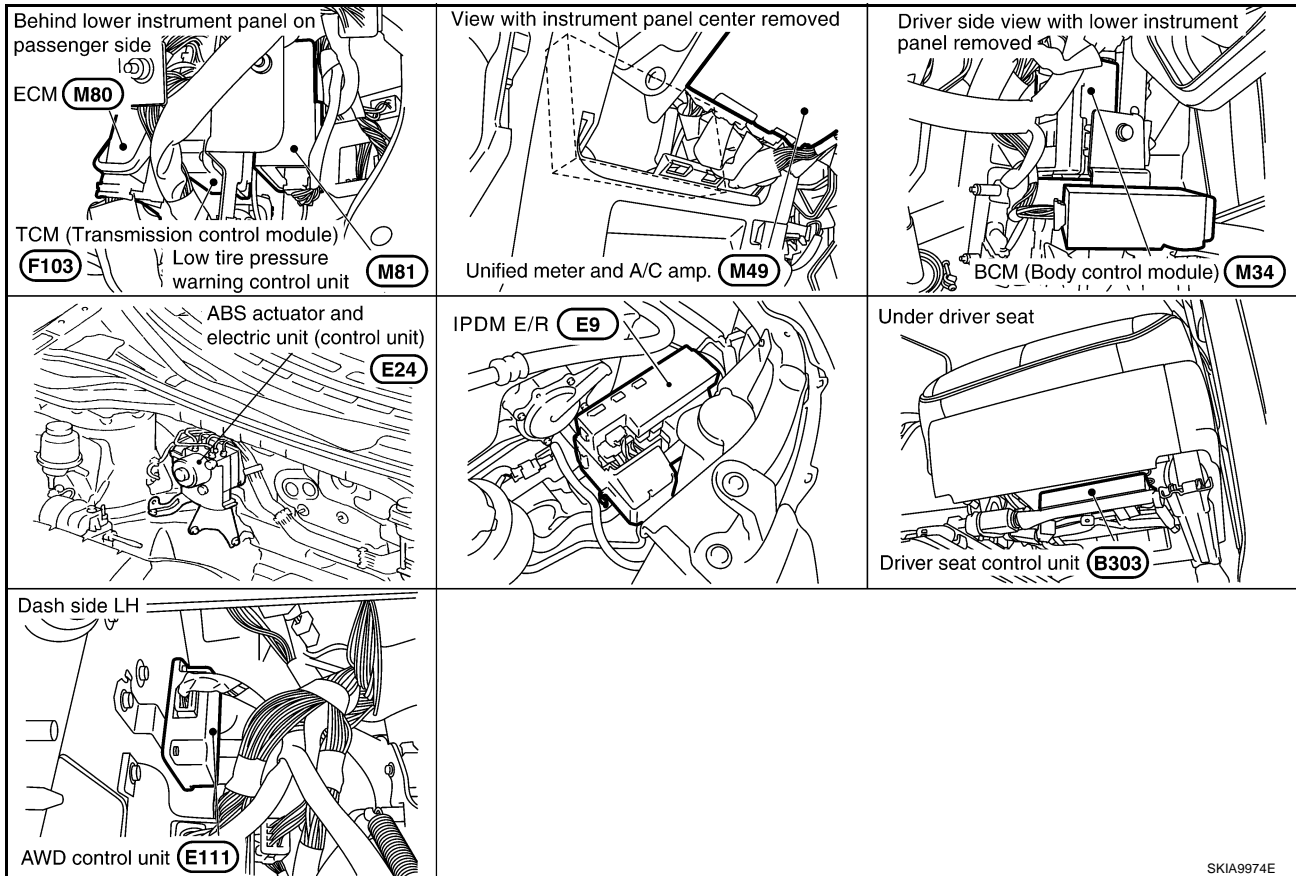
System Description

AKS00A7D

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

AKS00A7E



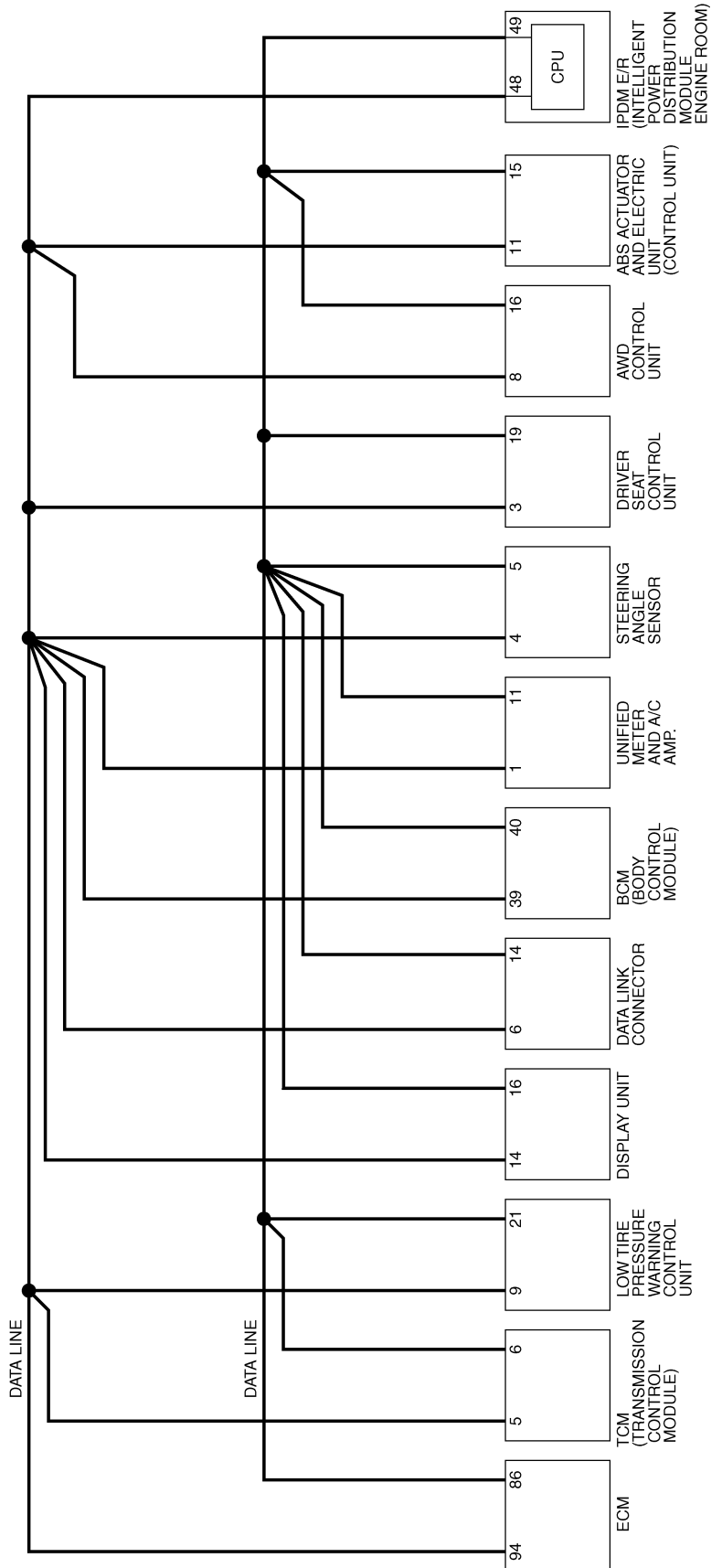
SKIA9974E

CAN SYSTEM (TYPE 15)

[CAN]

Schematic

AKS00A7F



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TKWB0062E

CAN SYSTEM (TYPE 15)

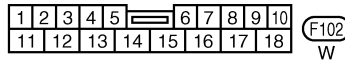
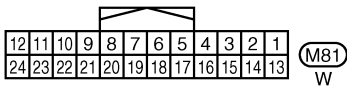
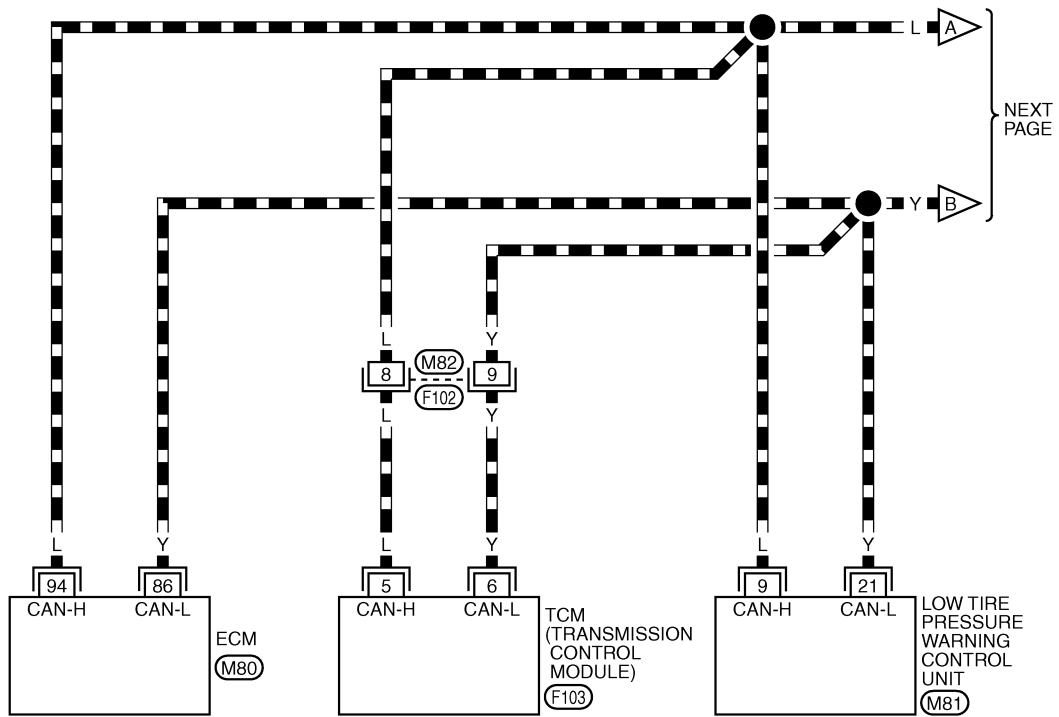
[CAN]

Wiring Diagram - CAN -

AKS00A7G

LAN-CAN-43

▬ : DATA LINE



REFER TO THE FOLLOWING.
 (M80), (F103) -ELECTRICAL
 UNITS

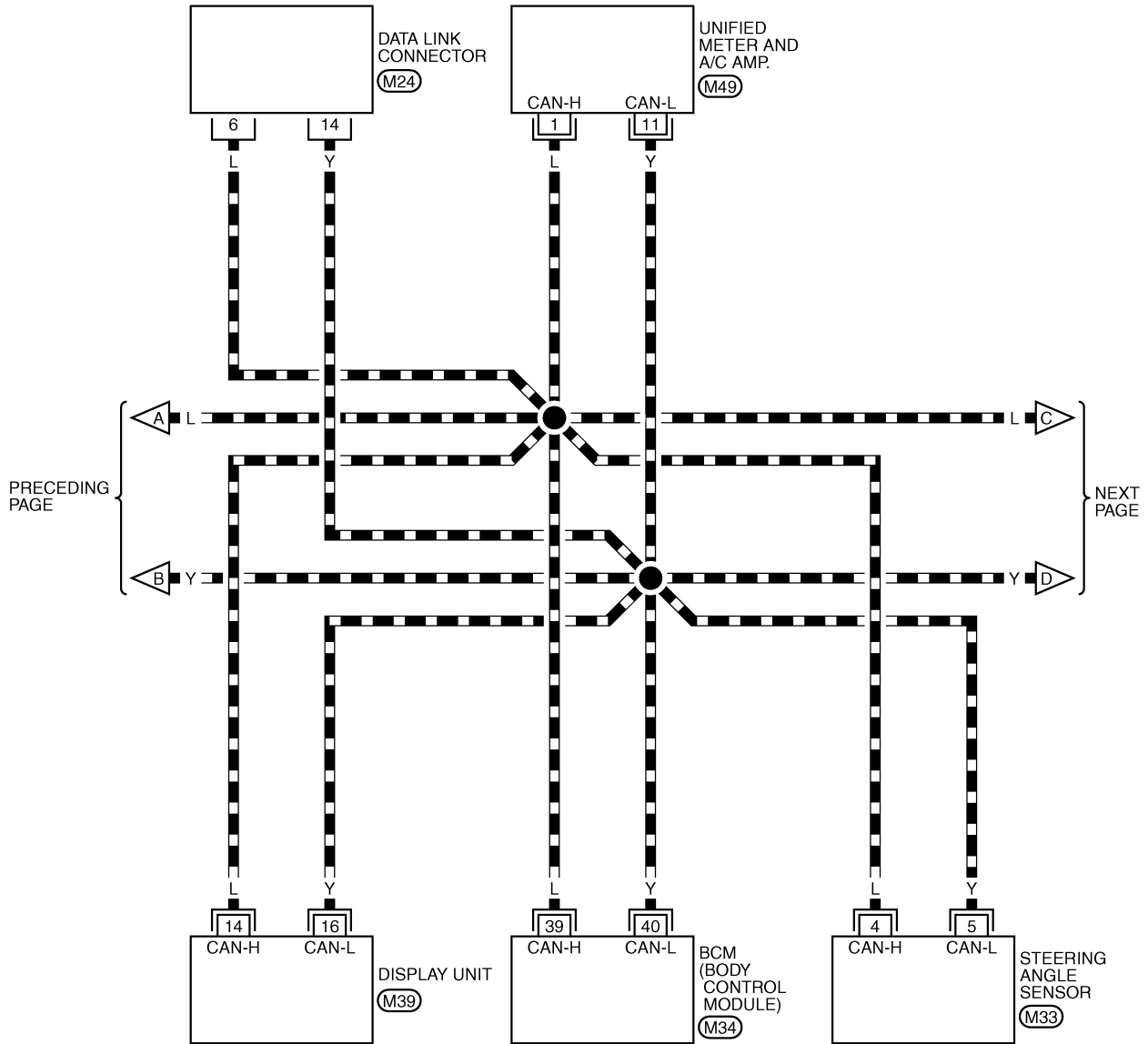
TKWB0063E

CAN SYSTEM (TYPE 15)

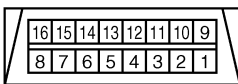
[CAN]

LAN-CAN-44

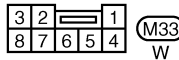
▬ : DATA LINE



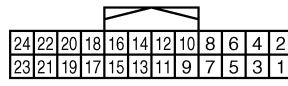
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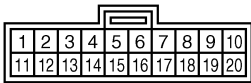
M24
W



M33
W



M39
W



M49
GR



REFER TO THE FOLLOWING.
M34 -ELECTRICAL UNITS

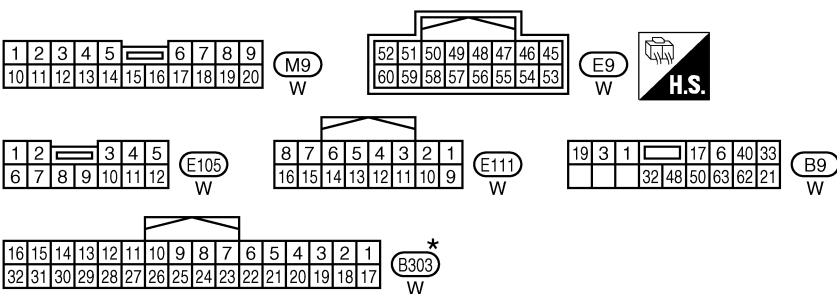
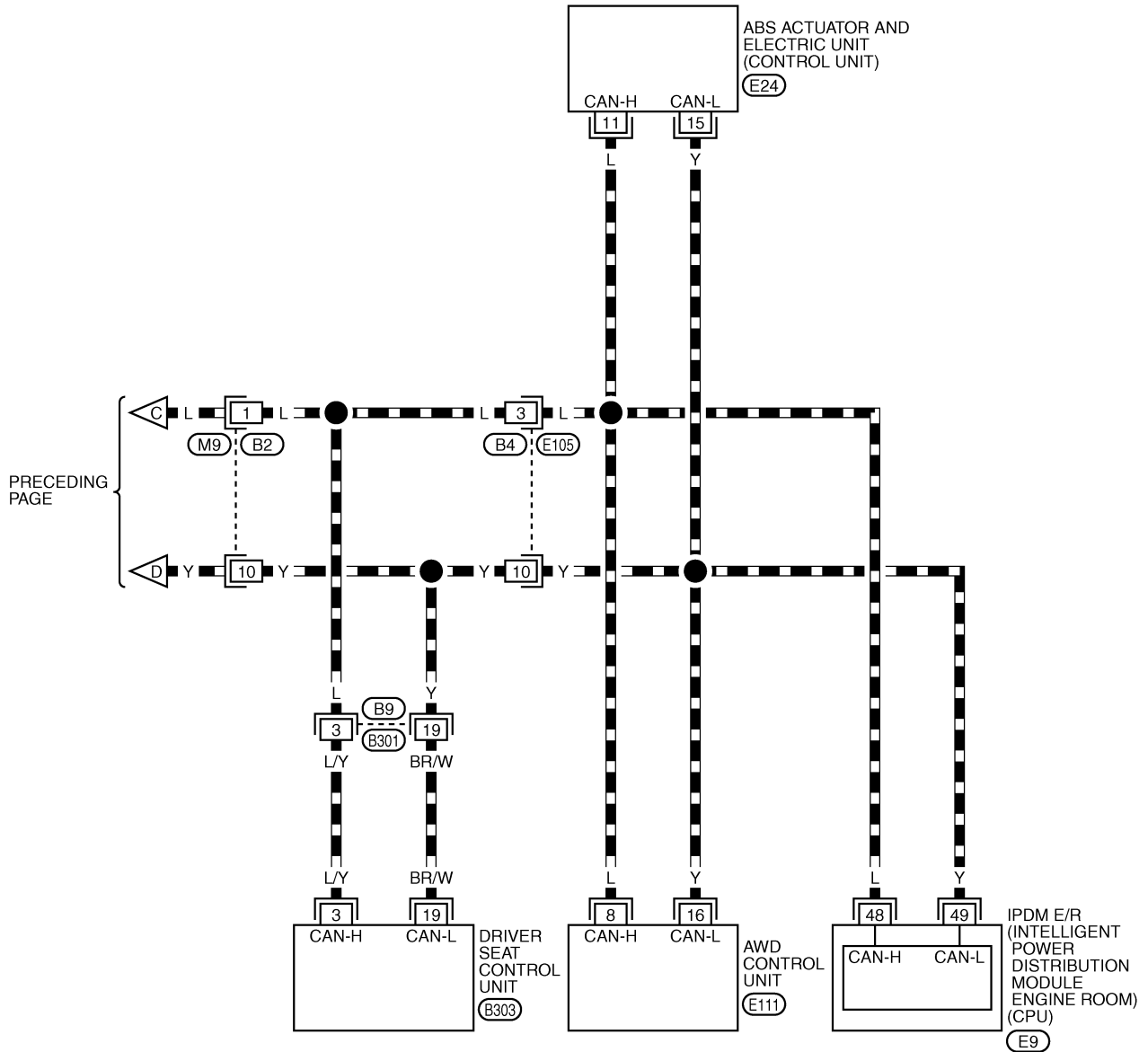
TKWB0064E

CAN SYSTEM (TYPE 15)

[CAN]

LAN-CAN-45

▬ : DATA LINE



*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

REFER TO THE FOLLOWING.

(E24) -ELECTRICAL UNITS

TKWB0065E

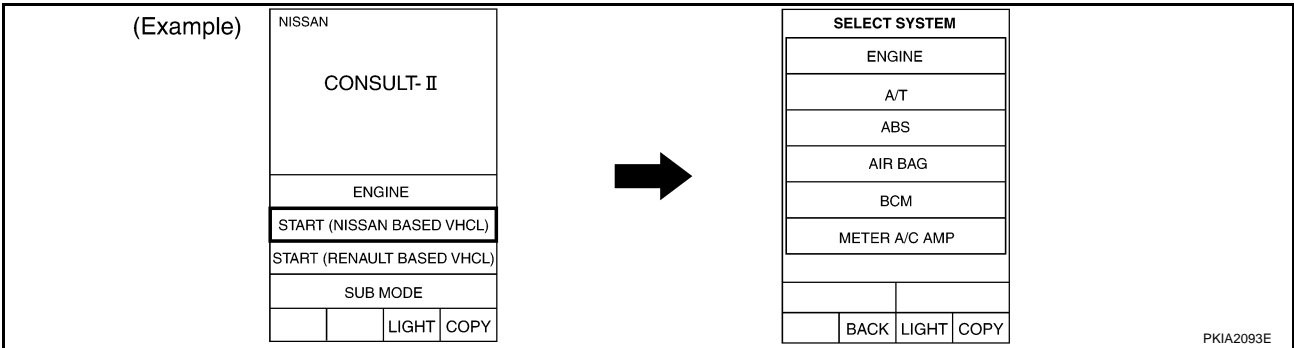
CAN SYSTEM (TYPE 15)

[CAN]

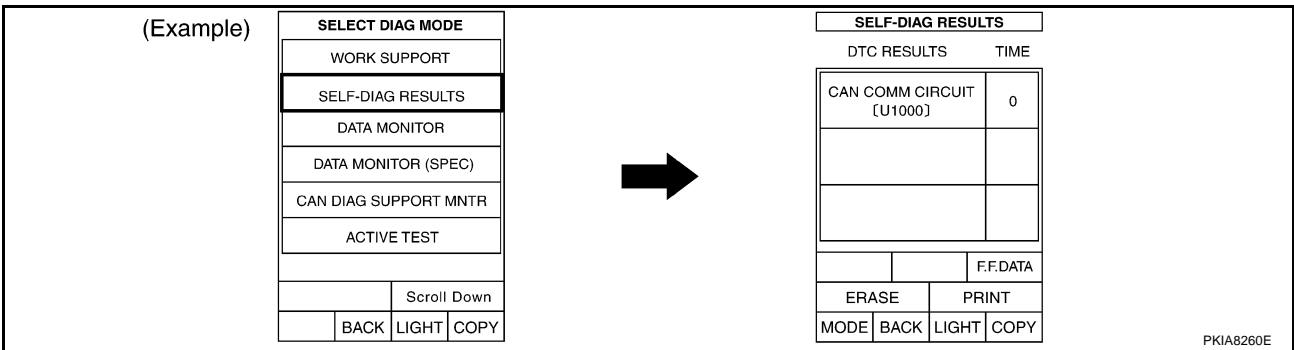
AKS00ASE

Work Flow

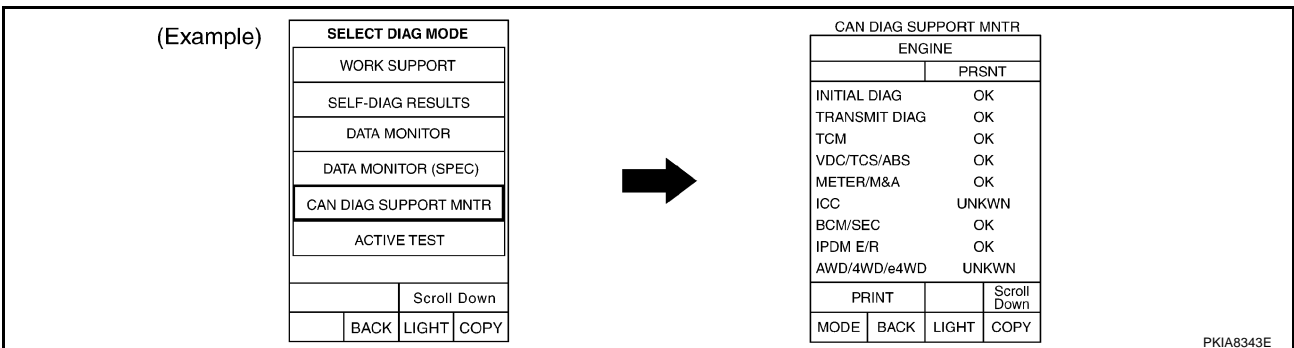
- When there are no indications of "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "AUTO DRIVE POS.", or "IPDM E/R" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "AUTO DRIVE POS.", "ALL MODE AWD/4WD", "ABS", and "IPDM E/R" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "AUTO DRIVE POS.", "ALL MODE AWD/4WD", "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 [LAN-503, "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-503, "CHECK SHEET"](#).

NOTE:

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual. So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the integrated display system. Refer to [AV-101, "CAN Communication Line Check"](#).

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LAN

CAN SYSTEM (TYPE 15)

[CAN]

7. Attach the CAN DIAG MONITOR check sheet onto the check sheet. Refer to [LAN-503, "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-503, "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-101, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-506, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

CAN SYSTEM (TYPE 15)

[CAN]

CHECK SHEET

NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

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SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

Symptoms :

Attach copy of
SELECT SYSTEM

Attach copy of
SELECT SYSTEM

Attach copy of
display unit
CAN DIAG MONITOR check sheet

CAN SYSTEM (TYPE 15)

[CAN]

Attach copy of
ENGINE
SELF-DIAG RESULTS

Attach copy of
TRANSMISSION
SELF-DIAG RESULTS

Attach copy of
AIR PRESSURE
MONITOR
SELF-DIAG RESULTS

Attach copy of
BCM
SELF-DIAG RESULTS

Attach copy of
METER A/C AMP
SELF-DIAG RESULTS

Attach copy of
AUTO DRIVE POS.
SELF-DIAG RESULTS

Attach copy of
ALL MODE AWD/4WD
SELF-DIAG RESULTS

Attach copy of
ABS
SELF-DIAG RESULTS

Attach copy of
IPDM E/R
SELF-DIAG RESULTS

PKIA6230E

CAN SYSTEM (TYPE 15)

[CAN]

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Attach copy of
ENGINE
CAN DIAG SUPPORT
MNTR

Attach copy of
TRANSMISSION
CAN DIAG SUPPORT
MNTR

Attach copy of
AIR PRESSURE
MONITOR
CAN DIAG SUPPORT
MNTR

Attach copy of
BCM
CAN DIAG SUPPORT
MNTR

Attach copy of
METER A/C AMP
CAN DIAG SUPPORT
MNTR

Attach copy of
AUTO DRIVE POS.
CAN DIAG SUPPORT
MNTR

Attach copy of
ALL MODE AWD/4WD
CAN DIAG SUPPORT
MNTR

Attach copy of
ABS
CAN DIAG SUPPORT
MNTR

Attach copy of
IPDM E/R
CAN DIAG SUPPORT
MNTR

PKIA8578E

CAN SYSTEM (TYPE 15)

[CAN]

CHECK SHEET RESULTS (EXAMPLE)

NOTE:

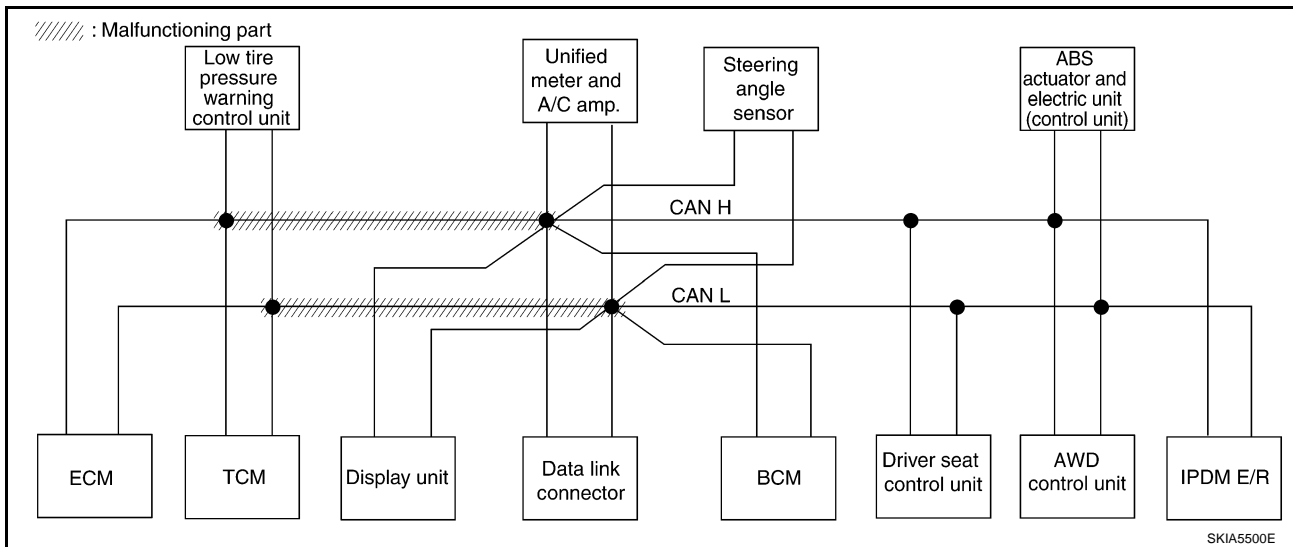
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

Case 1

Check harness between TCM and data link connector. Refer to [LAN-522, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8579E



CAN SYSTEM (TYPE 15)

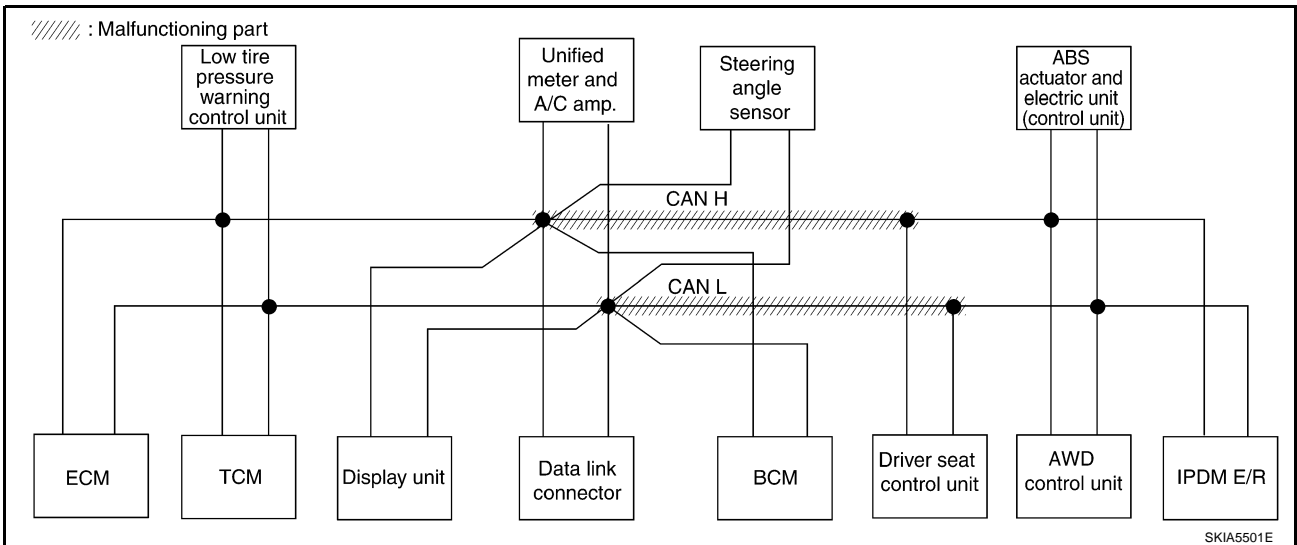
[CAN]

Case 2

Check harness between data link connector and driver seat control unit. Refer to [LAN-522, "Circuit Check Between Data Link Connector and Driver Seat Control Unit"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8580E



CAN SYSTEM (TYPE 15)

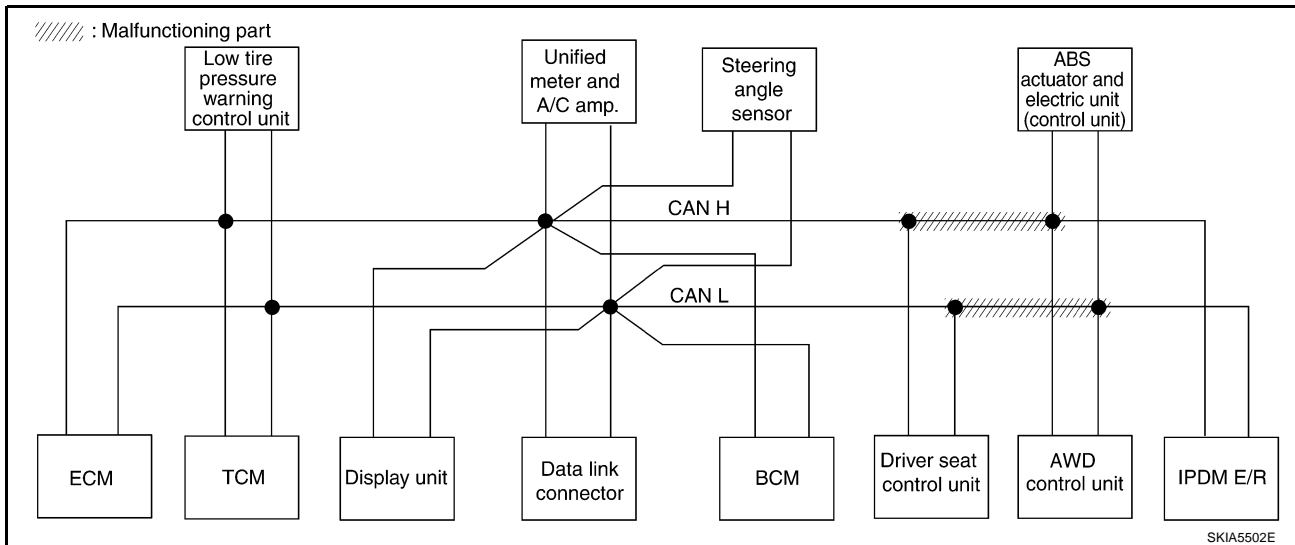
[CAN]

Case 3

Check harness between driver seat control unit and ABS actuator and electric unit (control unit). Refer to [LAN-523, "Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit \(Control Unit\)"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8581E



SKIA5502E

CAN SYSTEM (TYPE 15)

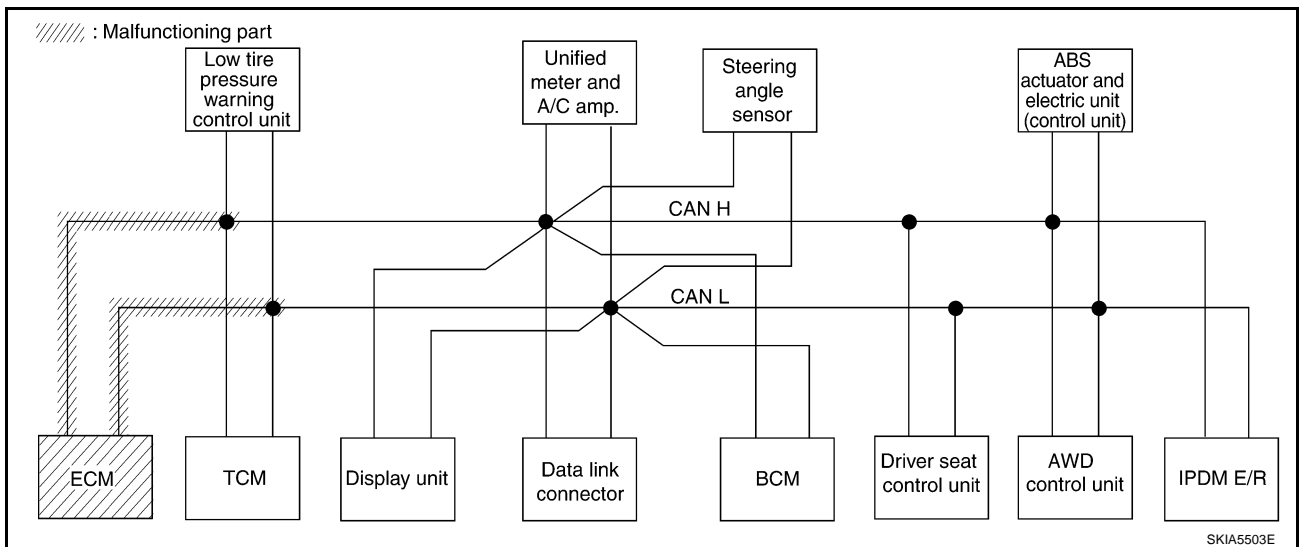
[CAN]

Case 4

Check ECM circuit. Refer to [LAN-524, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8582E



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CAN SYSTEM (TYPE 15)

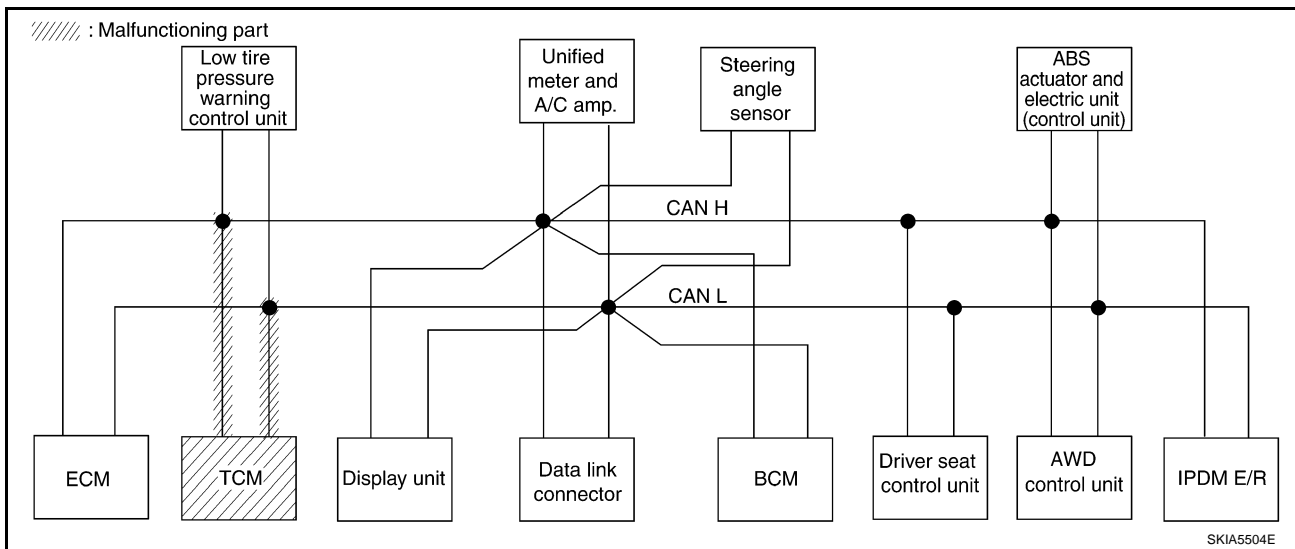
[CAN]

Case 5

Check TCM circuit. Refer to [LAN-525, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8583E



SKIA5504E

CAN SYSTEM (TYPE 15)

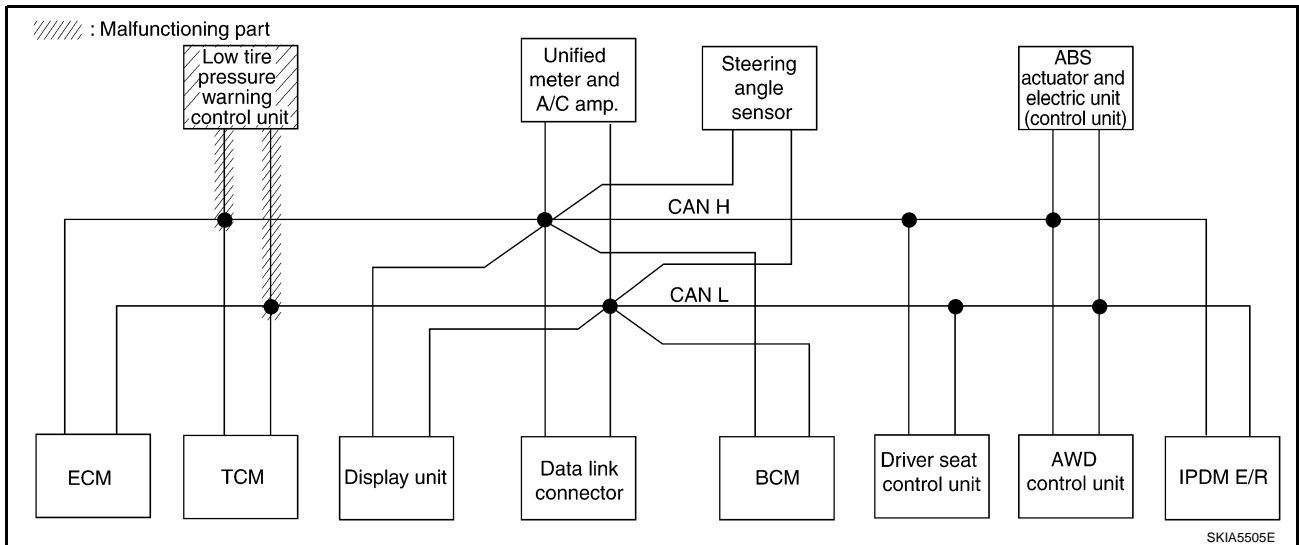
[CAN]

Case 6

Check low tire pressure warning control unit circuit. Refer to [LAN-525, "Low Tire Pressure Warning Control Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6 ✓	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8584E



LAN

CAN SYSTEM (TYPE 15)

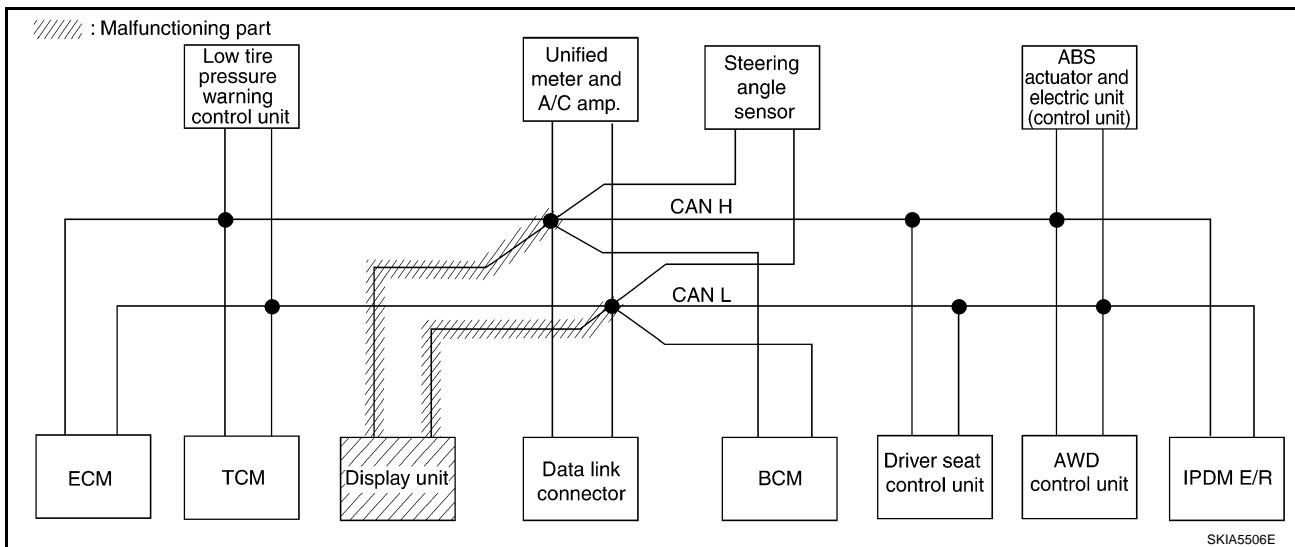
[CAN]

Case 7

Check display unit circuit. Refer to [LAN-526, "Display Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CA \checkmark 1	CA \checkmark 3	—	CA \checkmark 6	—	CA \checkmark 2	CA \checkmark 5	—	—	—	CA \checkmark 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8585E



SKIA5506E

CAN SYSTEM (TYPE 15)

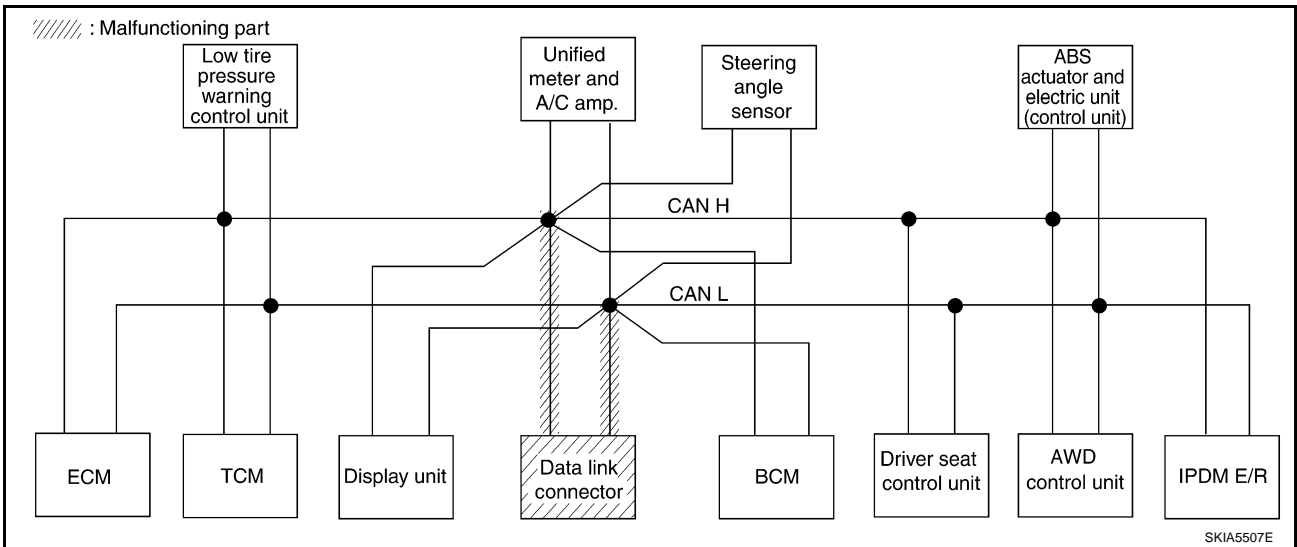
[CAN]

Case 8

Check data link connector circuit. Refer to [LAN-526, "Data Link Connector Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8586E



CAN SYSTEM (TYPE 15)

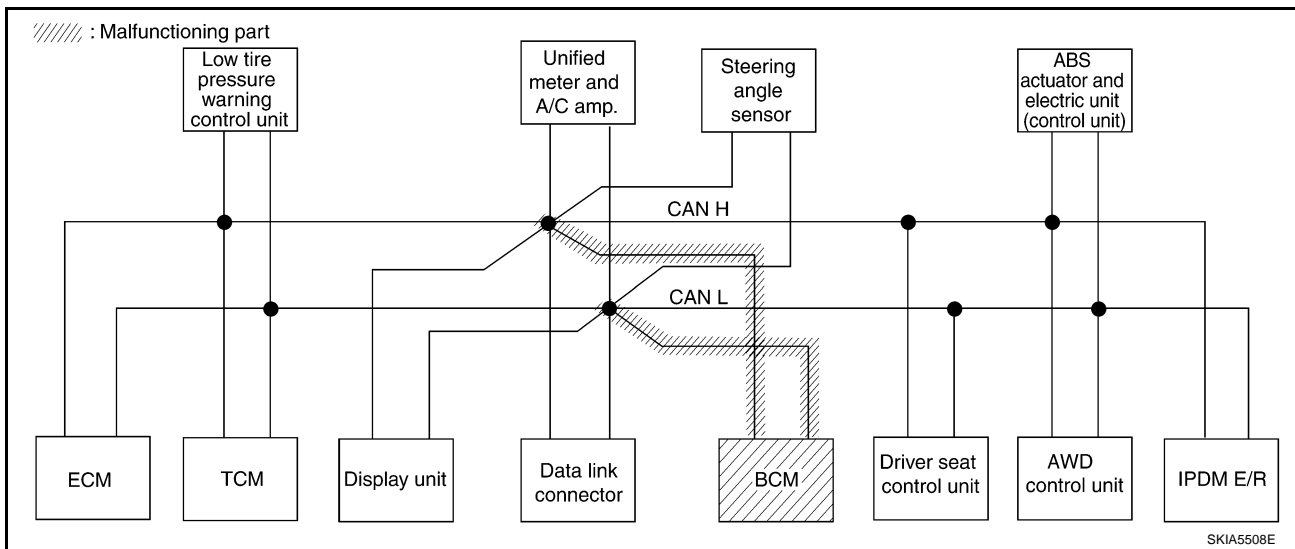
[CAN]

Case 9

Check BCM circuit. Refer to [LAN-527, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8587E



SKIA5508E

CAN SYSTEM (TYPE 15)

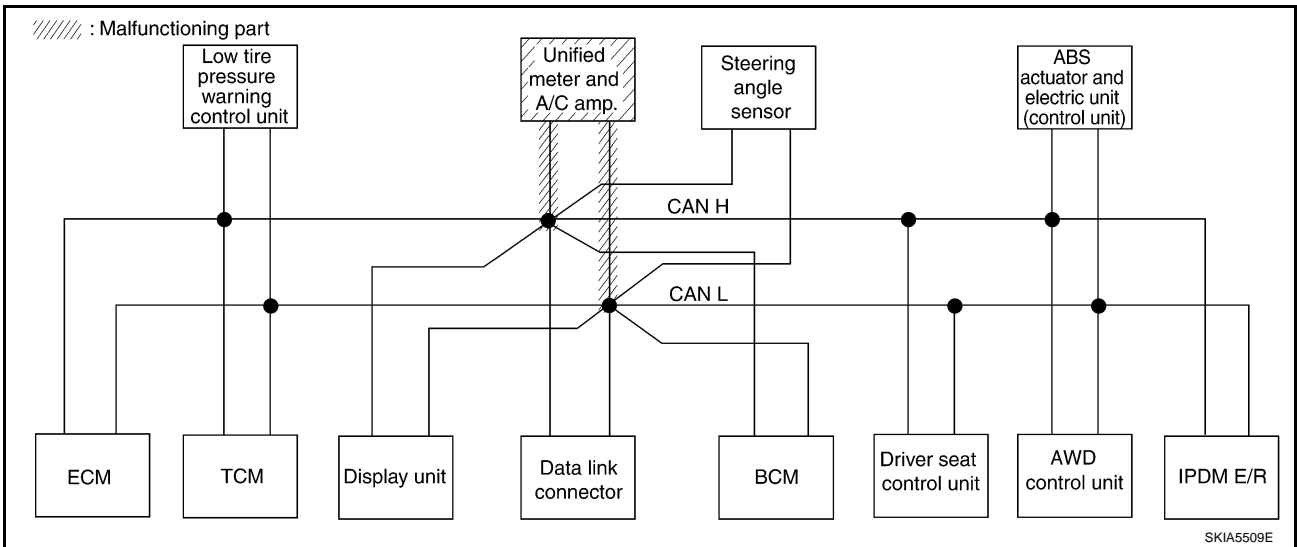
[CAN]

Case 10

Check unified meter and A/C amp. circuit. Refer to [LAN-527, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8588E



CAN SYSTEM (TYPE 15)

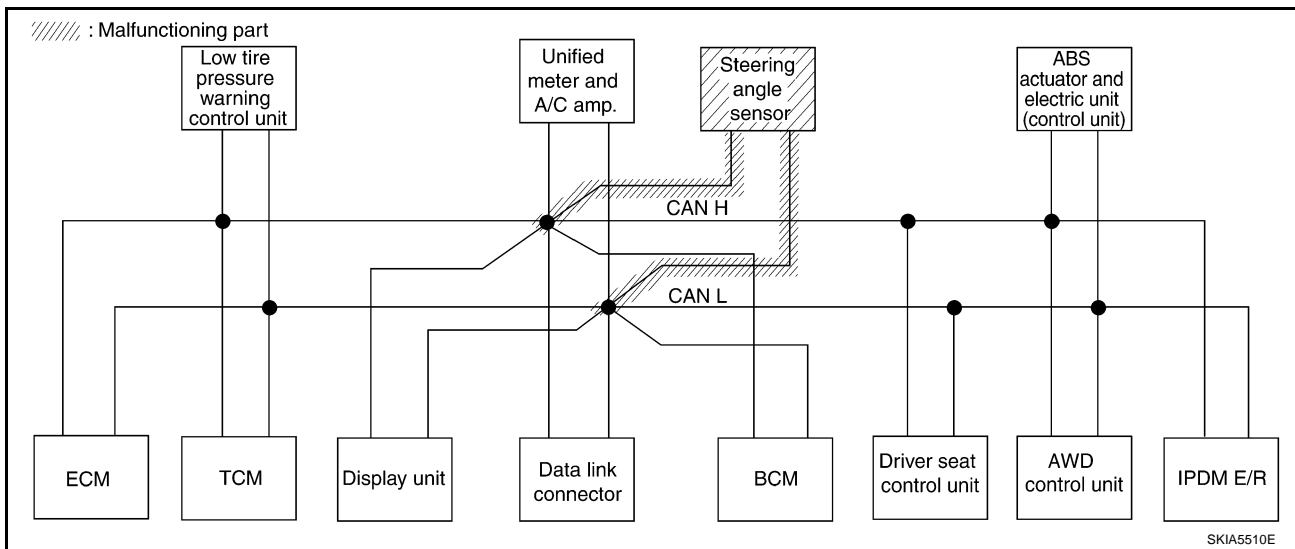
[CAN]

Case 11

Check steering angle sensor circuit. Refer to [LAN-528, "Steering Angle Sensor Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8589E



SKIA5510E

CAN SYSTEM (TYPE 15)

[CAN]

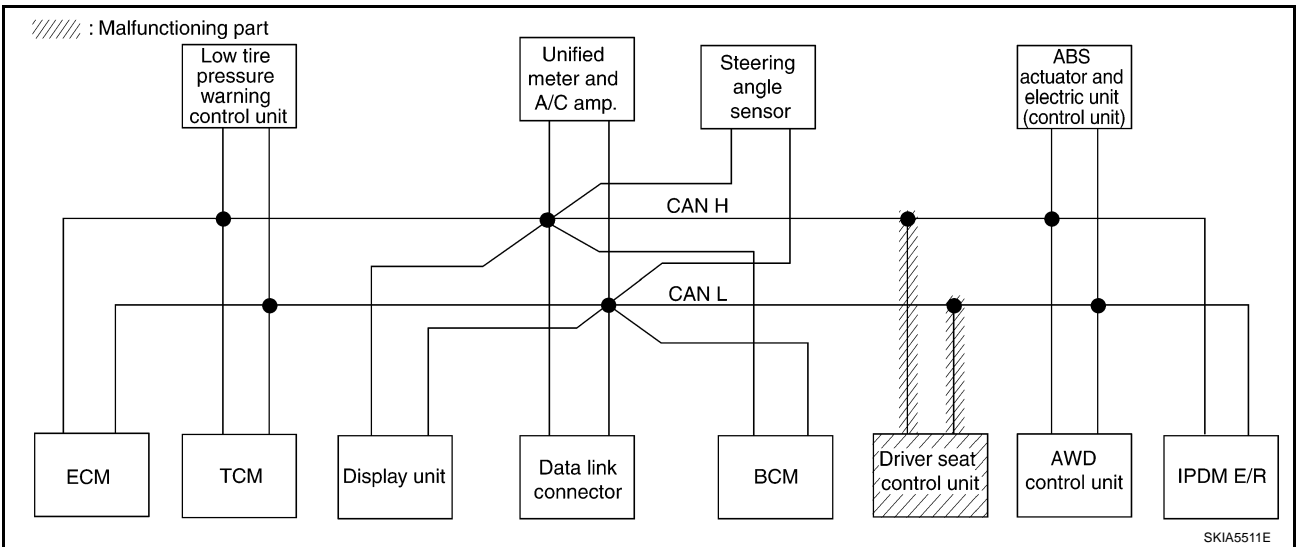
Case 12

Check driver seat control unit circuit. Refer to [LAN-528, "Driver Seat Control Unit Circuit Check"](#) .

A
B
C
D
E
F
G
H
I
J
L
M

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8590E



LAN

CAN SYSTEM (TYPE 15)

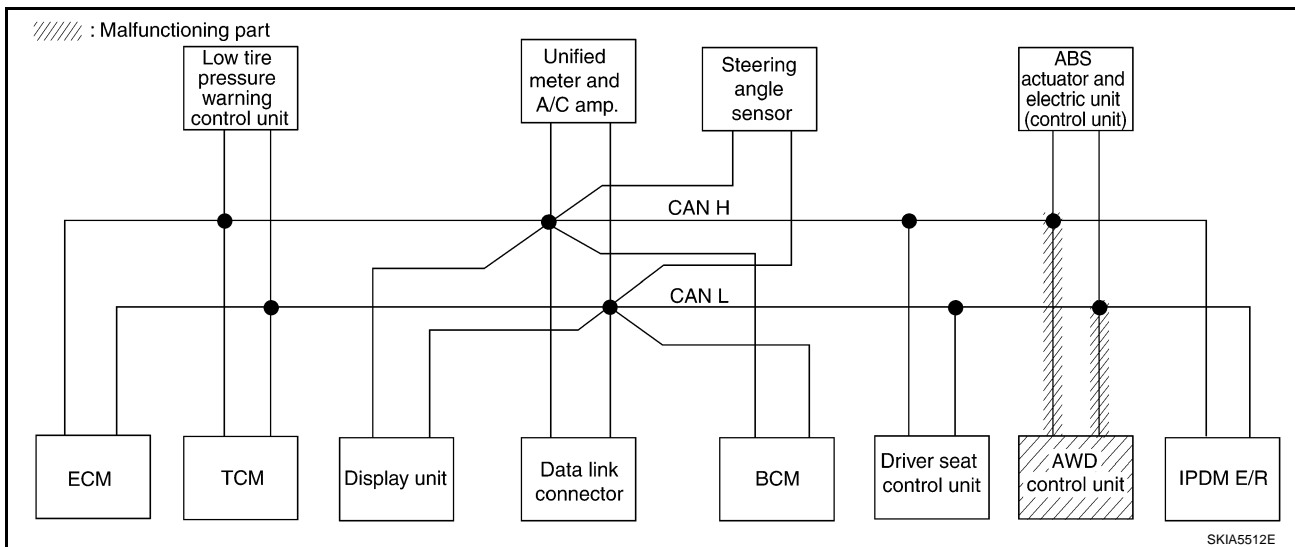
[CAN]

Case 13

Check AWD control unit circuit. Refer to [LAN-529, "AWD Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8591E



SKIA5512E

CAN SYSTEM (TYPE 15)

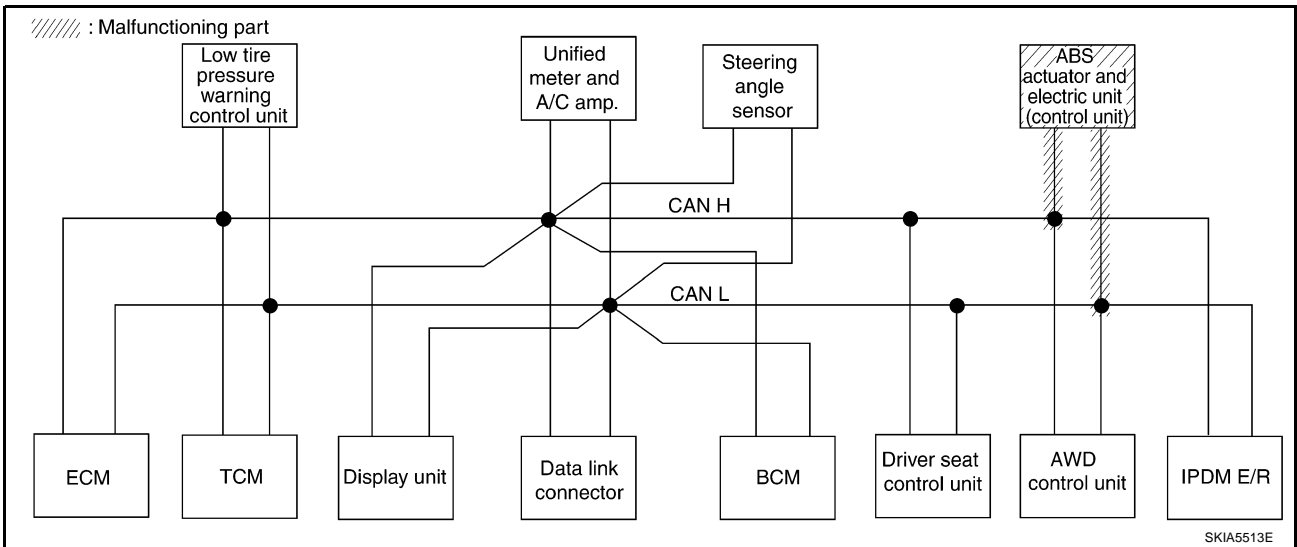
[CAN]

Case 14

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-529, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	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	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8592E



CAN SYSTEM (TYPE 15)

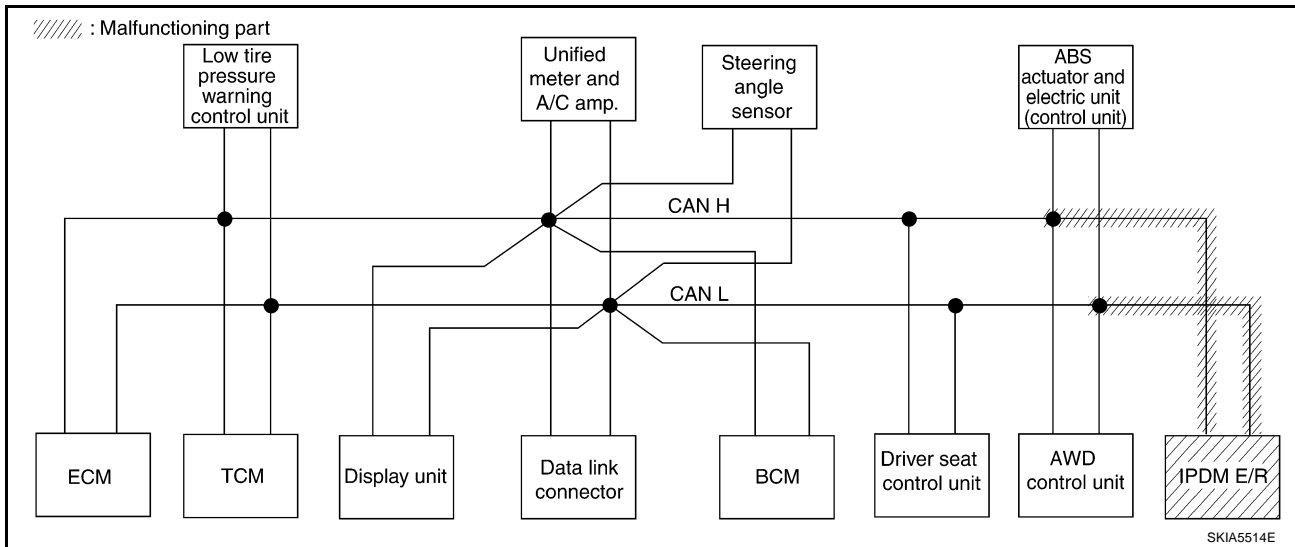
[CAN]

Case 15

Check IPDM E/R circuit. Refer to [LAN-530, "IPDM E/R Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8593E



SKIA5514E

CAN SYSTEM (TYPE 15)

[CAN]

Case 16

Check CAN communication circuit. Refer to [LAN-530, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8594E

Case 17

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-534, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8595E

Case 18

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-534, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display unit	—	CAN COMM	CAN 1	CAN 3	—	CAN 6	—	CAN 2	CAN 5	—	—	—	CAN 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8596E

Circuit Check Between TCM and Data Link Connector

AKS00A7I

1. CHECK HARNESS FOR OPEN CIRCUIT

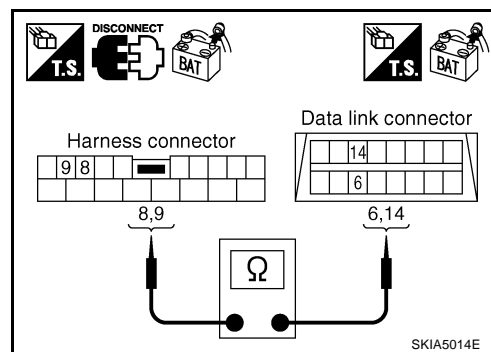
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

8 (L) - 6 (L) : Continuity should exist.

9 (Y) - 14 (Y) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-501, "Work Flow"](#) .
- NG >> Repair harness.



Circuit Check Between Data Link Connector and Driver Seat Control Unit

AKS00A7J

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M9
 - Harness connector B2

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

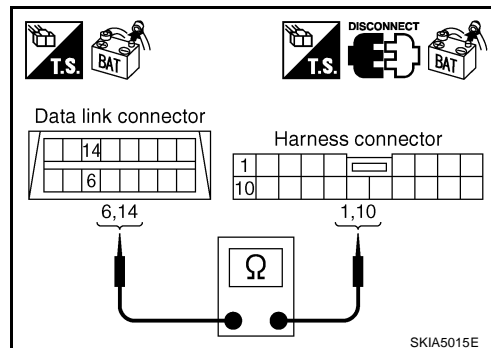
6 (L) - 1 (L) : Continuity should exist.

14 (Y) - 10 (Y) : Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair harness.



3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

1 (L) - 3 (L) : Continuity should exist.

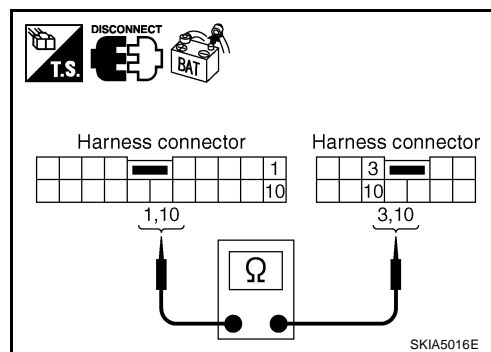
10 (Y) - 10 (Y) : Continuity should exist.

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to

[LAN-501, "Work Flow"](#).

NG >> Repair harness.



Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit)

AKS00A7K

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector B4
 - Harness connector E105

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

LAN

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B2 and harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

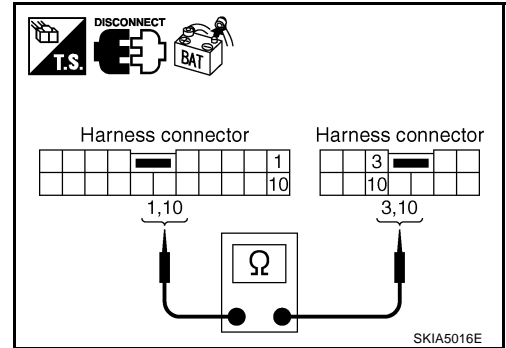
1 (L) - 3 (L) : Continuity should exist.

10 (Y) - 10 (Y) : Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair harness.



3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

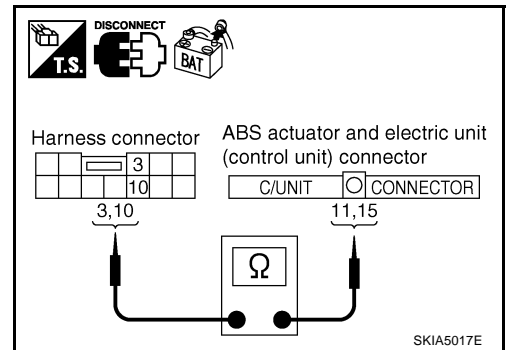
3 (L) - 11 (L) : Continuity should exist.

10 (Y) - 15 (Y) : Continuity should exist.

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-501, "Work Flow"](#).

NG >> Repair harness.



ECM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

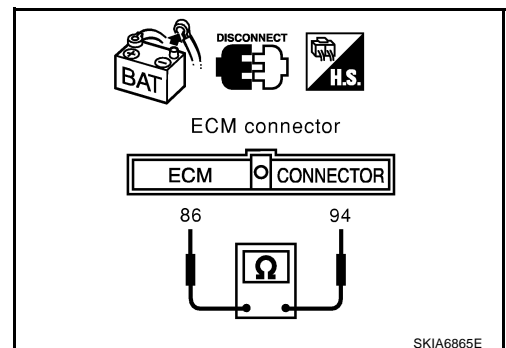
1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

94 (L) - 86 (Y) : Approx. 108 - 132Ω

OK or NG

OK >> Replace ECM.

NG >> Repair harness between ECM and TCM.



TCM Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
 - TCM connector
 - Harness connector F102
 - Harness connector M82

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

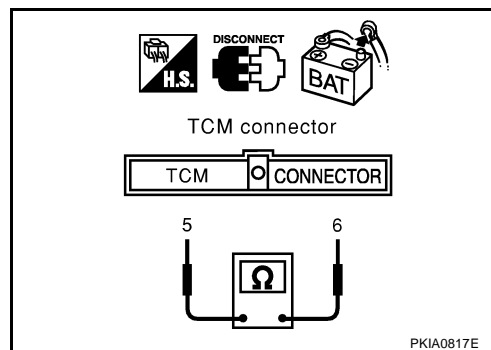
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

5 (L) - 6 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace TCM.
 NG >> Repair harness between TCM and low tire pressure warning control unit.

**Low Tire Pressure Warning Control Unit Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of low tire pressure warning control unit for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

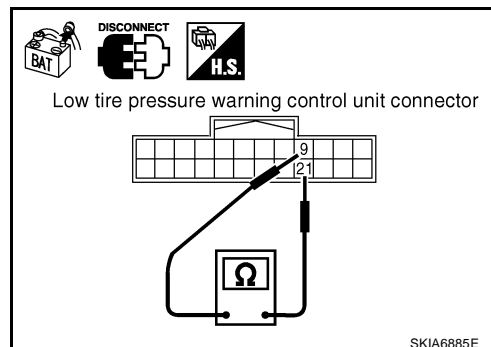
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect low tire pressure warning control unit connector.
2. Check resistance between low tire pressure warning control unit harness connector M81 terminals 9 (L) and 21 (Y).

9 (L) - 21 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace low tire pressure warning control unit.
 NG >> Repair harness between low tire pressure warning control unit and TCM.



Display Unit Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display unit for damage, bend and loose connection (unit side and harness side).

OK or NG

- OK >> GO TO 2.
NG >> Repair terminal or connector.

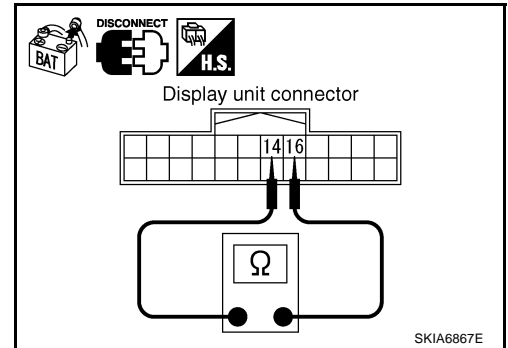
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect display unit connector.
2. Check resistance between display unit harness connector M39 terminals 14 (L) and 16 (Y).

14 (L) - 16 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace display unit.
NG >> Repair harness between display unit and data link connector.



Data Link Connector Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

OK or NG

- OK >> GO TO 2.
NG >> Repair terminal or connector.

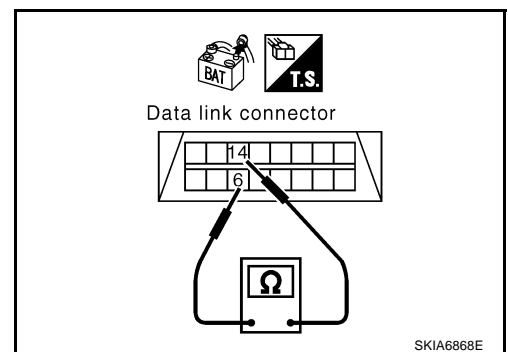
2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

6 (L) - 14 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Diagnose again. Refer to [LAN-501, "Work Flow"](#).
NG >> Repair harness between data link connector and BCM.



BCM Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

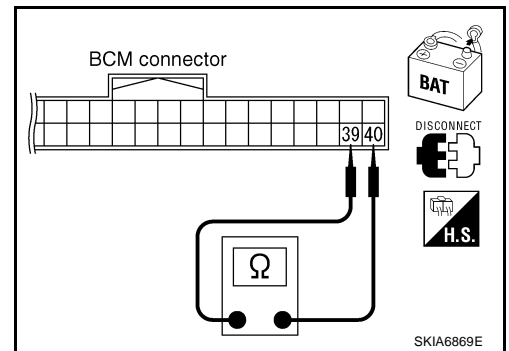
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M34 terminals 39 (L) and 40 (Y).

39 (L) - 40 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace BCM. Refer to [BCS-14, "Removal and Installation of BCM"](#) .
 NG >> Repair harness between BCM and data link connector.

**Unified Meter and A/C Amp. Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

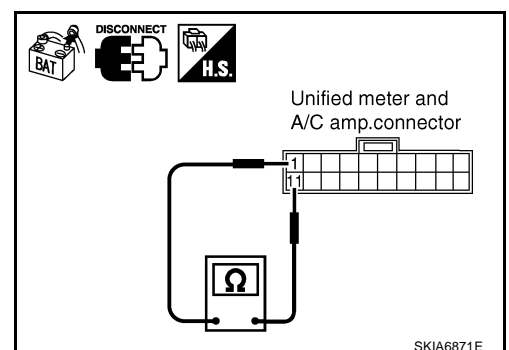
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

1 (L) - 11 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace unified meter and A/C amp.
 NG >> Repair harness between unified meter and A/C amp. and data link connector.



Steering Angle Sensor Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of steering angle sensor for damage, bend and loose connection (sensor side and harness side).

OK or NG

- OK >> GO TO 2.
NG >> Repair terminal or connector.

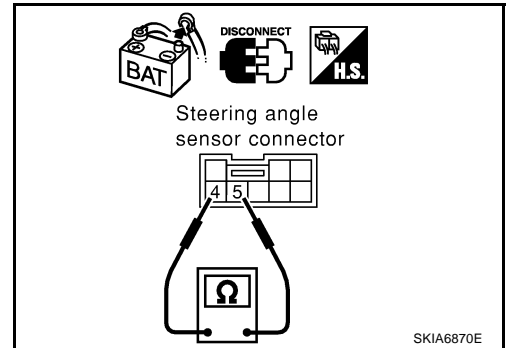
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M33 terminals 4 (L) and 5 (Y).

4 (L) - 5 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace steering angle sensor.
NG >> Repair harness between steering angle sensor and data link connector.



Driver Seat Control Unit Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control unit side and harness side).
 - Driver seat control unit connector
 - Harness connector B301
 - Harness connector B9

OK or NG

- OK >> GO TO 2.
NG >> Repair terminal or connector.

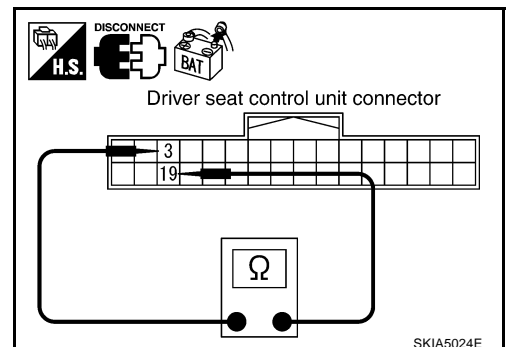
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect driver seat control unit connector.
2. Check resistance between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

3 (L/Y) - 19 (BR/W) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace driver seat control unit.
NG >> Repair harness between driver seat control unit and harness connector B4.



AWD Control Unit Circuit Check

AKS00A7U

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of AWD control unit for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

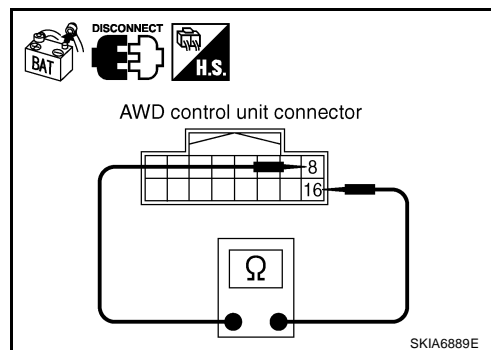
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect AWD control unit connector.
2. Check resistance between AWD control unit harness connector E111 terminals 8 (L) and 16 (Y).

8 (L) - 16 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace AWD control unit.
 NG >> Repair harness between AWD control unit and IPDM E/R.

**ABS Actuator and Electric Unit (Control Unit) Circuit Check**

AKS00A7V

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

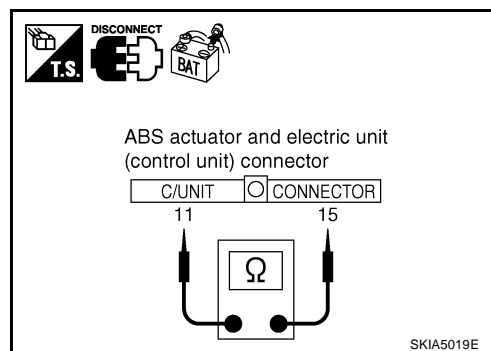
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

11 (L) - 15 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



IPDM E/R Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

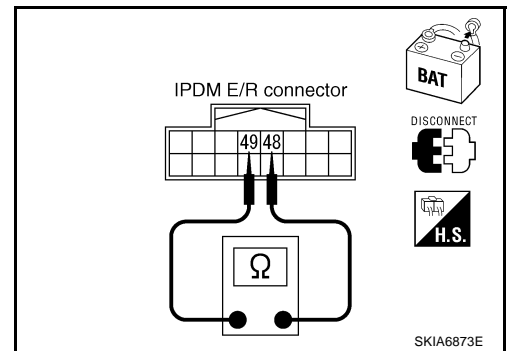
- OK >> GO TO 2.
 NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

48 (L) - 49 (Y)**: Approx. 108 - 132Ω**OK or NG

- OK >> Replace IPDM E/R.
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).

**CAN Communication Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, unit side, meter side, sensor side and harness side).
 - ECM
 - TCM
 - Low tire pressure warning control unit
 - Display unit
 - BCM
 - Unified meter and A/C amp.
 - Steering angle sensor
 - Driver seat control unit
 - AWD control unit
 - ABS actuator and electric unit (control unit)
 - IPDM E/R
 - Between ECM and IPDM E/R
 - Between ECM and TCM
 - Between ECM and driver seat control unit

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
 - ECM connector
 - Low tire pressure warning control unit connector
 - Harness connector M82
 - Display unit connector
 - BCM connector
 - Unified meter and A/C amp. connector
 - Steering angle sensor connector
 - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

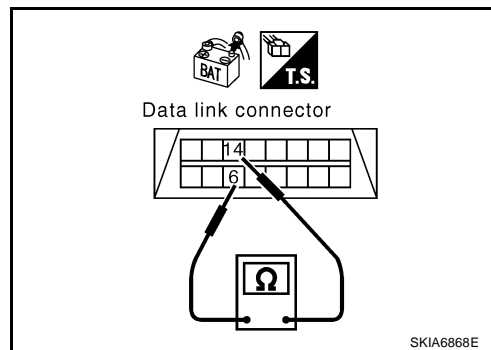
6 (L) - 14 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 3.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM
- Harness between data link connector and low tire pressure warning control unit
- Harness between data link connector and harness connector M82
- Harness between data link connector and display unit
- Harness between data link connector and BCM
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor
- Harness between data link connector and harness connector M9



3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

6 (L) - Ground : Continuity should not exist.

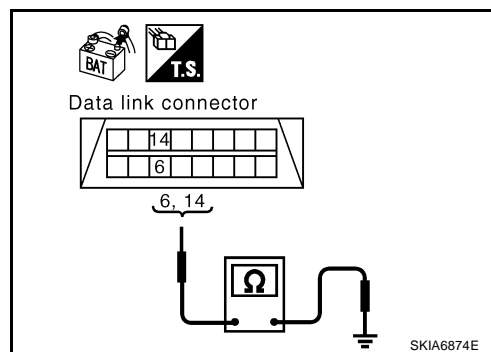
14 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM
- Harness between data link connector and low tire pressure warning control unit
- Harness between data link connector and harness connector M82
- Harness between data link connector and display unit
- Harness between data link connector and BCM
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor
- Harness between data link connector and harness connector M9



4. CHECK HARNESS FOR SHORT CIRCUIT

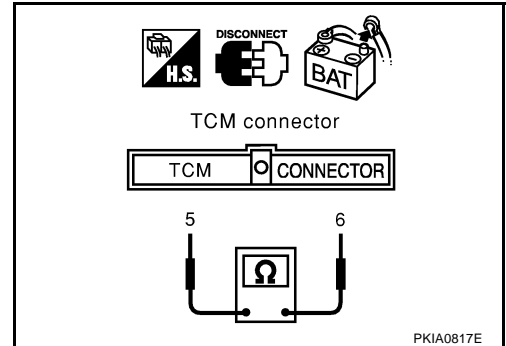
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

5 (L) - 6 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 5.

NG >> Repair harness between TCM and harness connector F102.



5. CHECK HARNESS FOR SHORT CIRCUIT

- Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

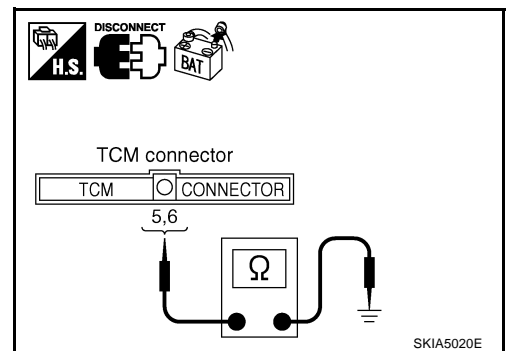
5 (L) - Ground : Continuity should not exist.

6 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 6.

NG >> Repair harness between TCM and harness connector F102.



6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B4 and harness connector B9.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

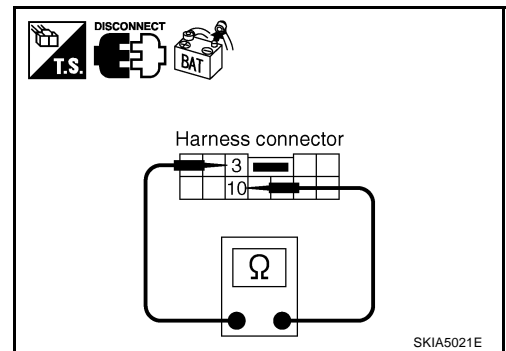
3 (L) - 10 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 7.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between harness connector B4 and harness connector B2
- Harness between harness connector B4 and harness connector B9



7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

3 (L) - Ground : Continuity should not exist.

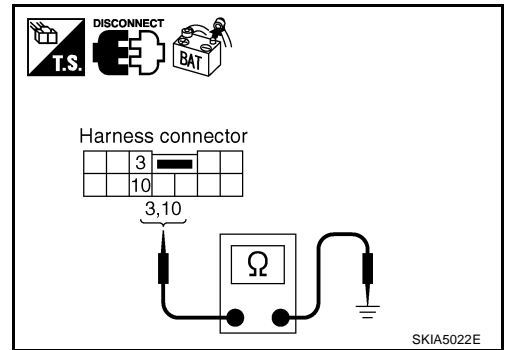
10 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 8.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between harness connector B4 and harness connector B2
- Harness between harness connector B4 and harness connector B9



8. CHECK HARNESS FOR SHORT CIRCUIT

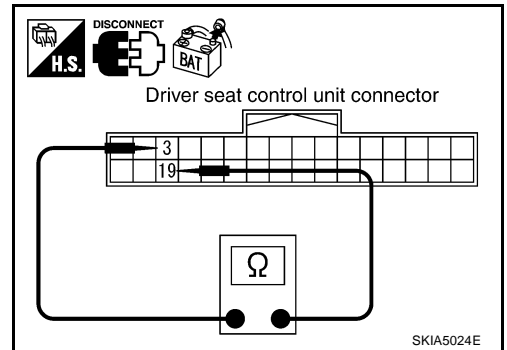
1. Disconnect driver seat control unit connector.
2. Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

3 (L/Y) - 19 (BR/W) : Continuity should not exist.

OK or NG

OK >> GO TO 9.

NG >> Repair harness between driver seat control unit and harness connector B301.



9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y), 19 (BR/W) and ground.

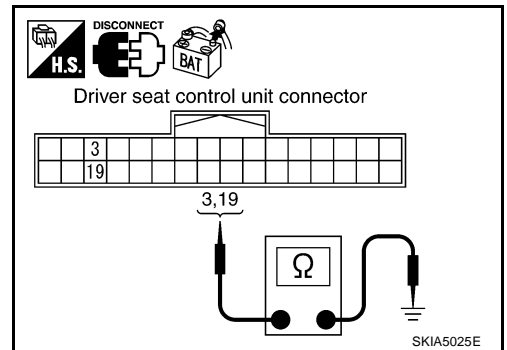
3 (L/Y) - Ground : Continuity should not exist.

19 (BR/W) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 10.

NG >> Repair harness between driver seat control unit and harness connector B301.



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10. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect AWD control unit connector, ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

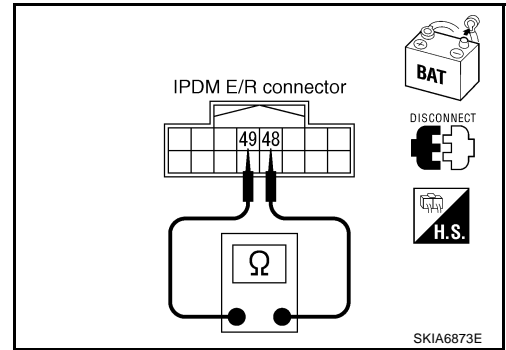
48 (L) - 49 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 11.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit
- Harness between IPDM E/R and ABS actuator and electric unit (control unit)
- Harness between IPDM E/R and harness connector E105



11. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

48 (L) - Ground : Continuity should not exist.

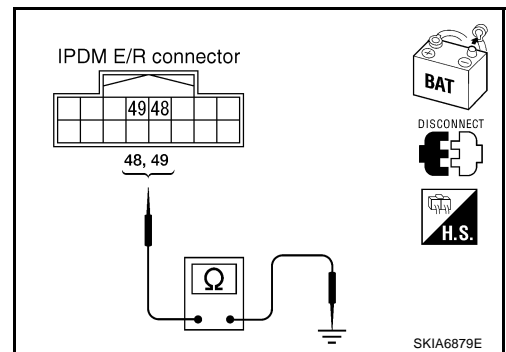
49 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 12.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit
- Harness between IPDM E/R and ABS actuator and electric unit (control unit)
- Harness between IPDM E/R and harness connector E105



12. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-535, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-501, "Work Flow"](#).

NG >> Replace ECM and/or IPDM E/R.

IPDM E/R Ignition Relay Circuit Check

AKS00A7Y

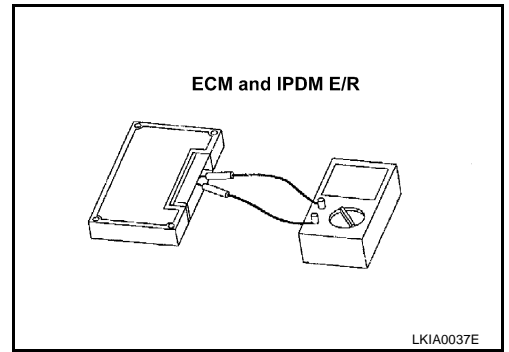
Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-27, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#).

Component Inspection ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



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CAN SYSTEM (TYPE 16)

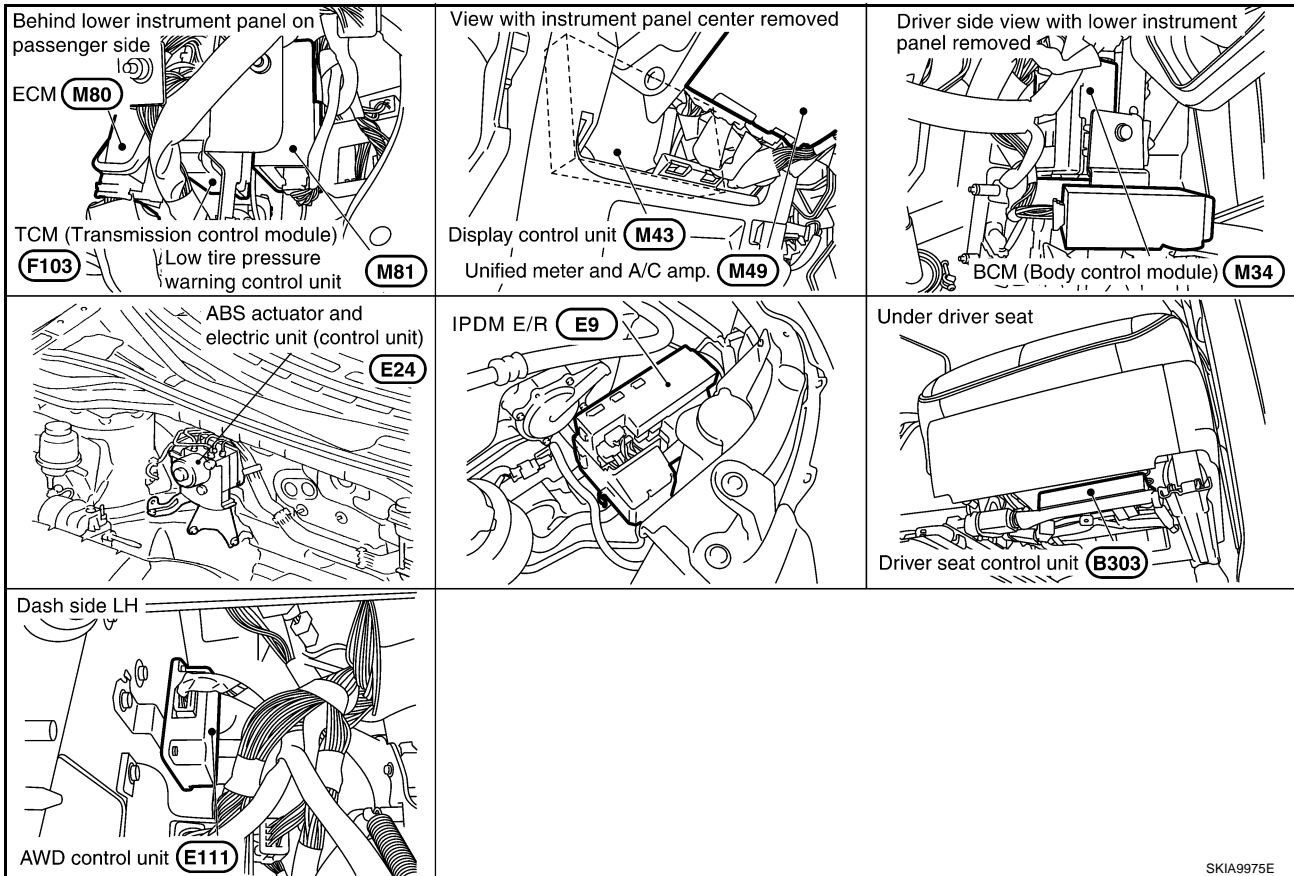
System Description

AKS00A80

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

AKS00A81



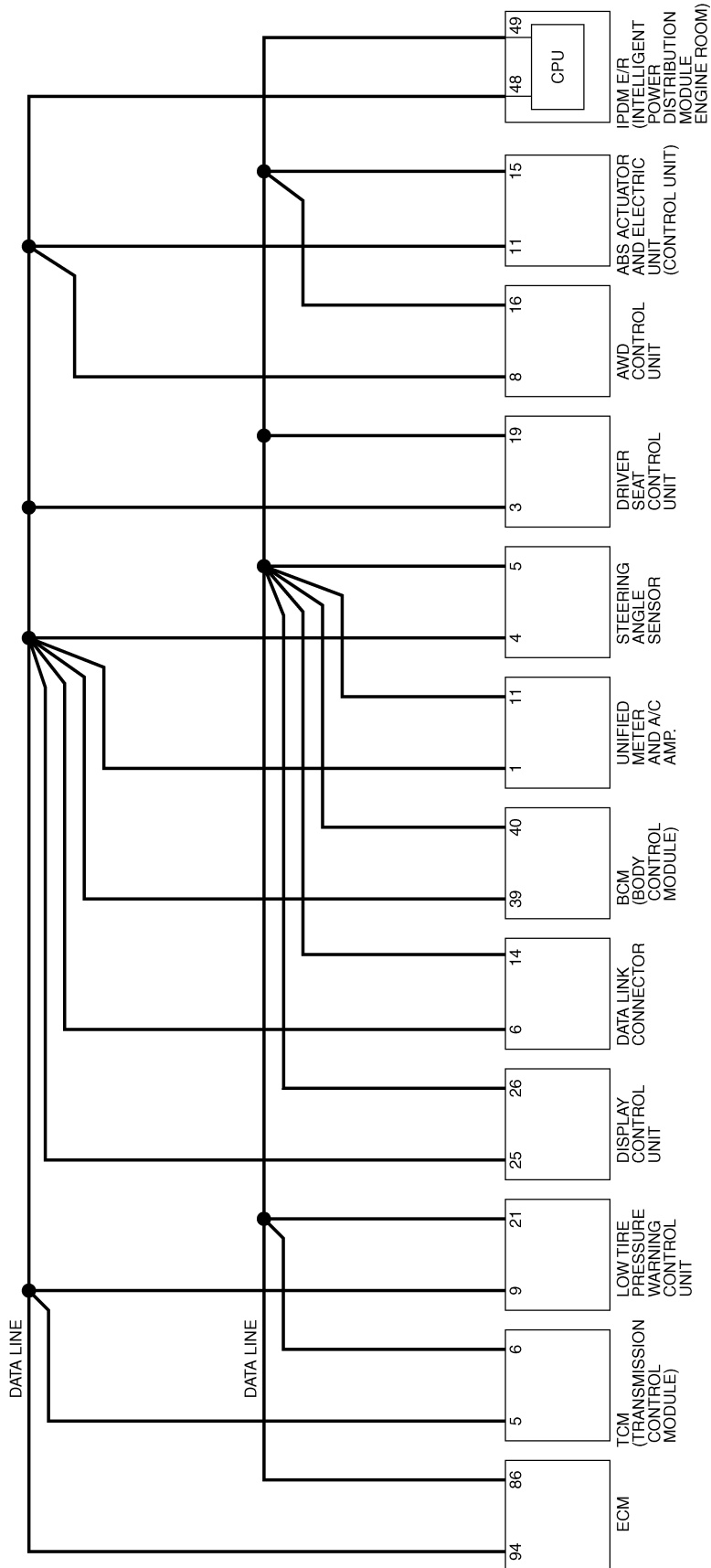
SKIA9975E

CAN SYSTEM (TYPE 16)

[CAN]

Schematic

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CAN SYSTEM (TYPE 16)

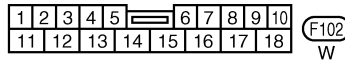
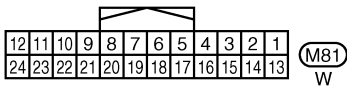
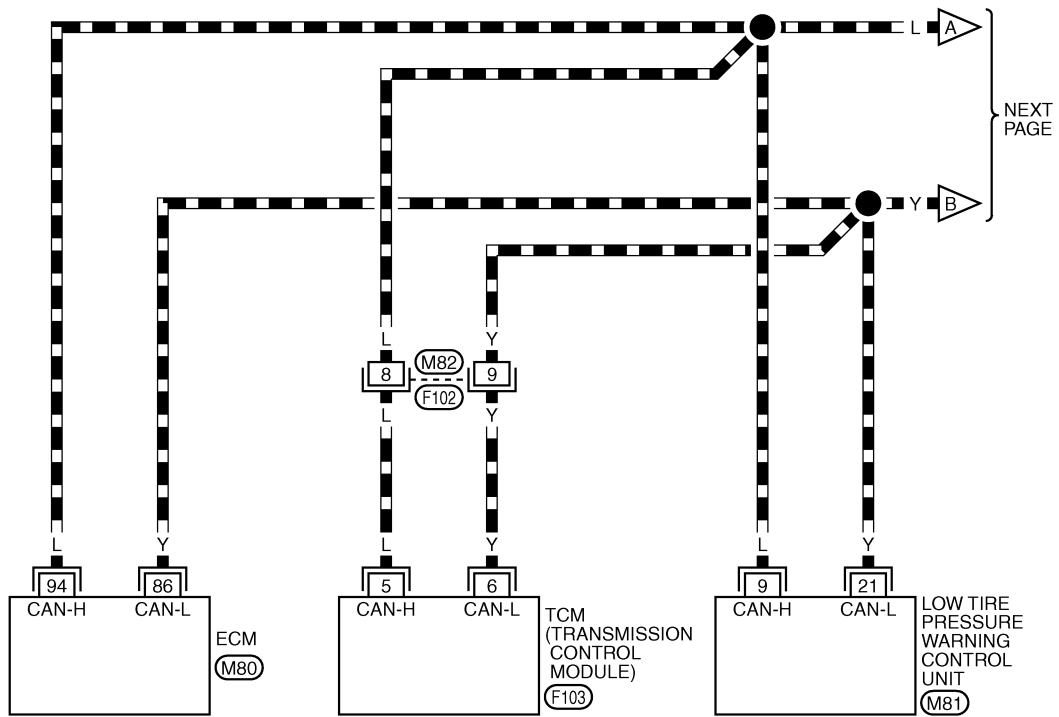
[CAN]

AKS00A83

Wiring Diagram - CAN -

LAN-CAN-46

▬ : DATA LINE



REFER TO THE FOLLOWING.
 (M80), (F103) -ELECTRICAL
 UNITS

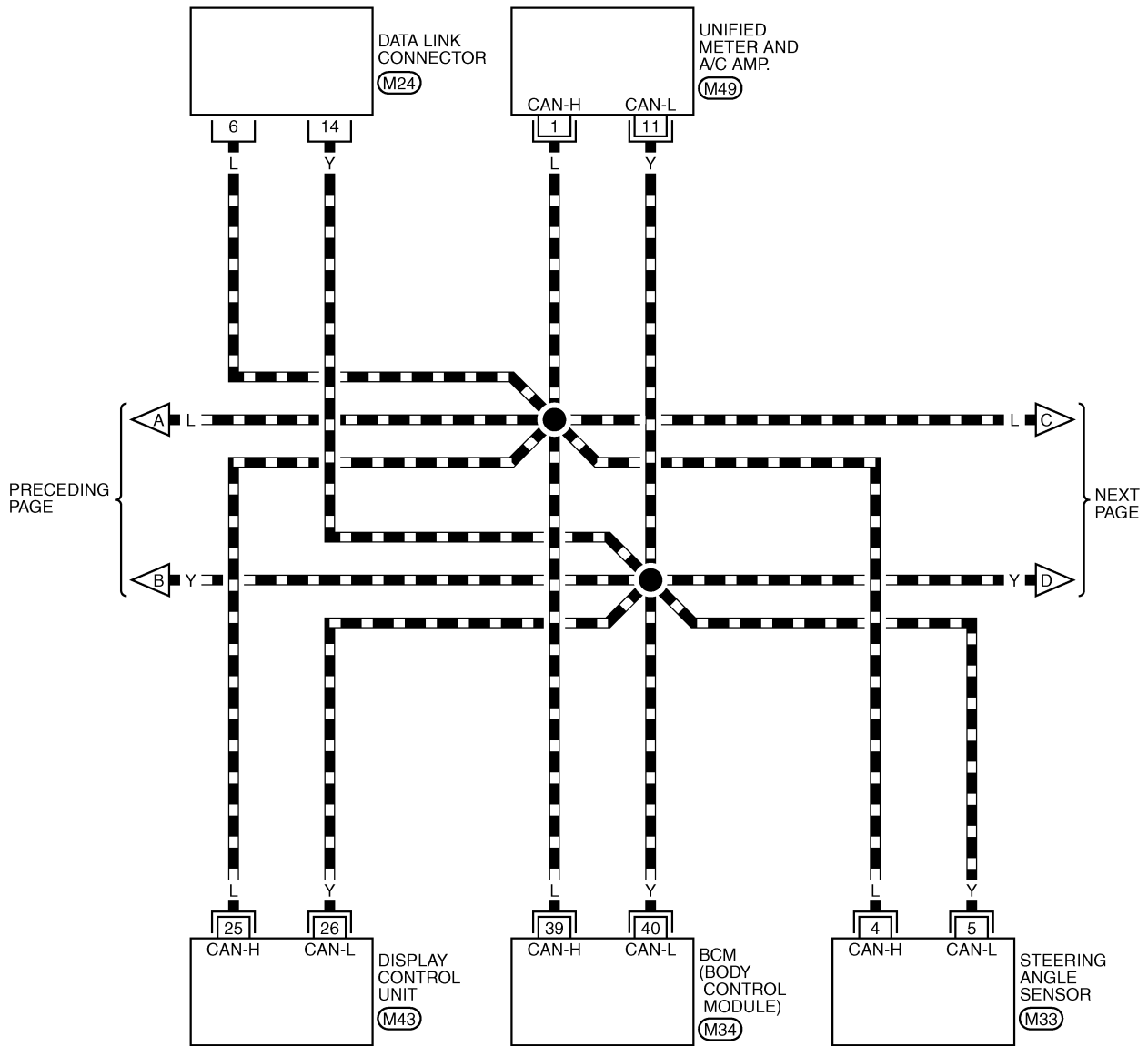
TKWB0067E

CAN SYSTEM (TYPE 16)

[CAN]

LAN-CAN-47

▬ : DATA LINE

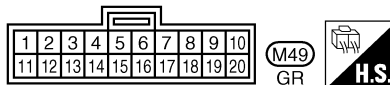
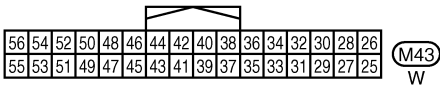
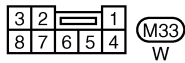
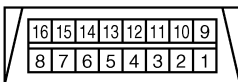


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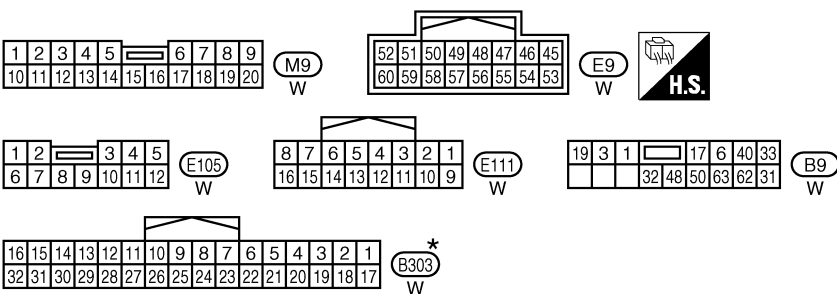
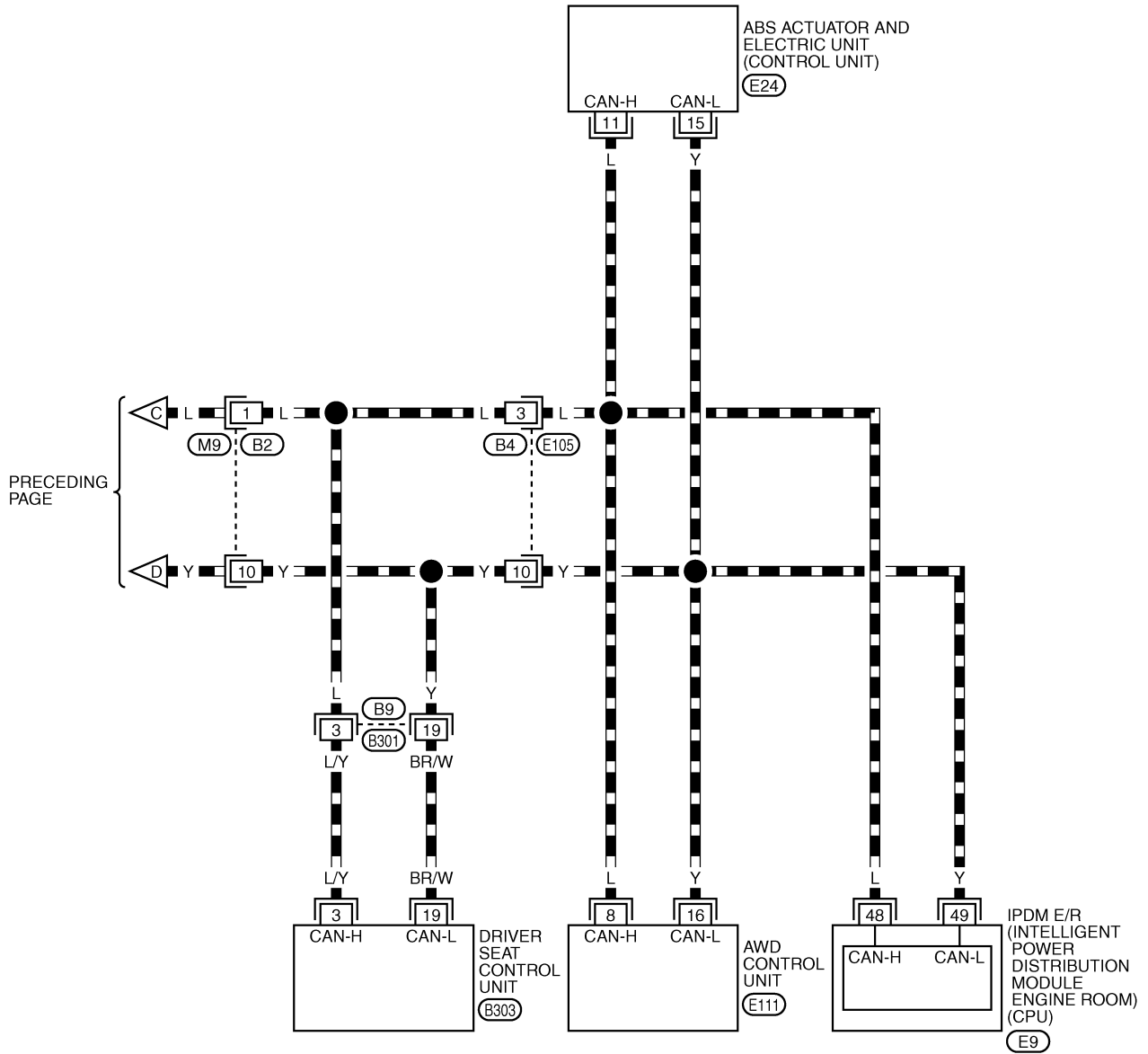


REFER TO THE FOLLOWING.
M34 -ELECTRICAL UNITS

TKWB0068E

LAN-CAN-48

▬ : DATA LINE



REFER TO THE FOLLOWING.

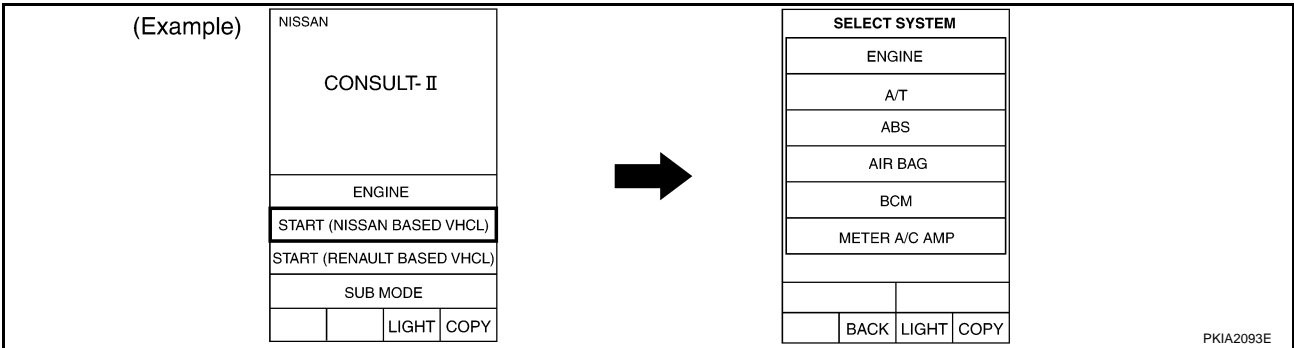
(E24) -ELECTRICAL UNITS

*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

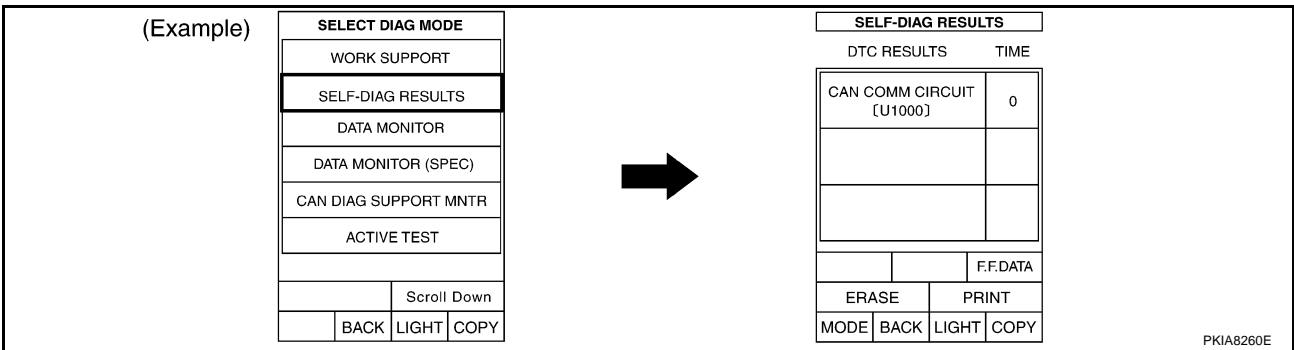
TKWB0069E

Work Flow

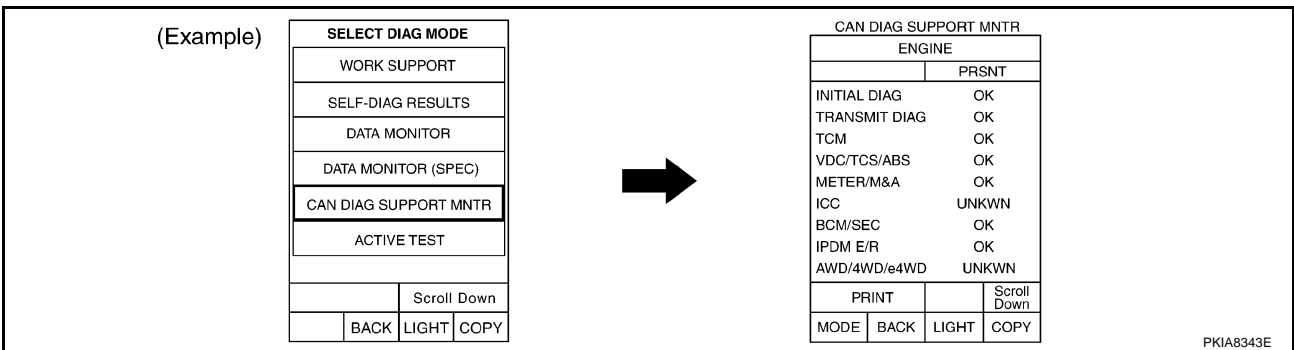
- When there are no indications of "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "AUTO DRIVE POS.", or "IPDM E/R" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "AUTO DRIVE POS.", "ALL MODE AWD/4WD", "ABS", and "IPDM E/R" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "TRANSMISSION", "AIR PRESSURE MONITOR", "BCM", "METER A/C AMP", "AUTO DRIVE POS.", "ALL MODE AWD/4WD", "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 [LAN-543, "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-543, "CHECK SHEET"](#).

NOTE:

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual. So it is not necessary to check the status of "CAN DIAG SUPPORT MNTR" items which are not indicated in check sheet table.

- Check CAN communication line of the navigation system. Refer to [AV-175, "CAN Communication Line Check"](#).

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CAN SYSTEM (TYPE 16)

[CAN]

7. Attach the CAN DIAG SUPPORT MONITOR check sheet onto the check sheet. Refer to [LAN-543, "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-543, "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-175, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-546, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

CAN SYSTEM (TYPE 16)

[CAN]

CHECK SHEET

NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

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Check sheet table

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

Symptoms :

Attach copy of
SELECT SYSTEM

Attach copy of
SELECT SYSTEM

Attach copy of
display control unit
CAN DIAG SUPPORT MONITOR check sheet

CAN SYSTEM (TYPE 16)

[CAN]

Attach copy of
ENGINE
SELF-DIAG RESULTS

Attach copy of
TRANSMISSION
SELF-DIAG RESULTS

Attach copy of
AIR PRESSURE
MONITOR
SELF-DIAG RESULTS

Attach copy of
BCM
SELF-DIAG RESULTS

Attach copy of
METER A/C AMP
SELF-DIAG RESULTS

Attach copy of
AUTO DRIVE POS.
SELF-DIAG RESULTS

Attach copy of
ALL MODE AWD/4WD
SELF-DIAG RESULTS

Attach copy of
ABS
SELF-DIAG RESULTS

Attach copy of
IPDM E/R
SELF-DIAG RESULTS

PKIA6230E

CAN SYSTEM (TYPE 16)

[CAN]

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Attach copy of
ENGINE
CAN DIAG SUPPORT
MNTR

Attach copy of
TRANSMISSION
CAN DIAG SUPPORT
MNTR

Attach copy of
AIR PRESSURE
MONITOR
CAN DIAG SUPPORT
MNTR

Attach copy of
BCM
CAN DIAG SUPPORT
MNTR

Attach copy of
METER A/C AMP
CAN DIAG SUPPORT
MNTR

Attach copy of
AUTO DRIVE POS.
CAN DIAG SUPPORT
MNTR

Attach copy of
ALL MODE AWD/4WD
CAN DIAG SUPPORT
MNTR

Attach copy of
ABS
CAN DIAG SUPPORT
MNTR

Attach copy of
IPDM E/R
CAN DIAG SUPPORT
MNTR

PKIA8578E

CAN SYSTEM (TYPE 16)

[CAN]

CHECK SHEET RESULTS (EXAMPLE)

NOTE:

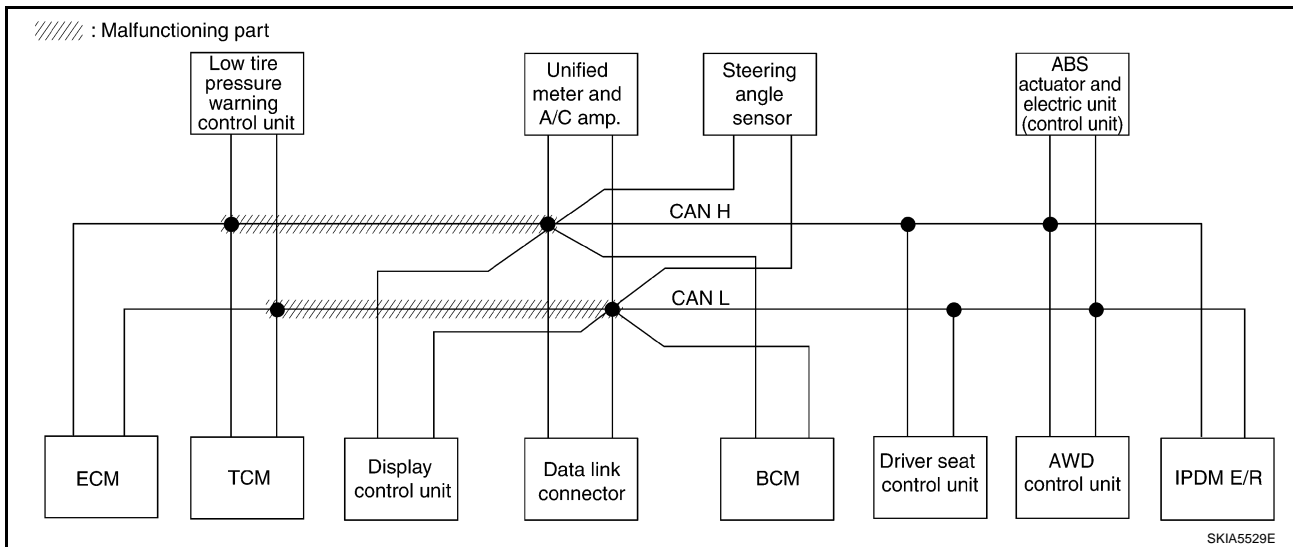
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

Case 1

Check harness between TCM and data link connector. Refer to [LAN-562, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3 ✓	—	CAN CIRC 6 ✓	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8598E



SKIA5529E

CAN SYSTEM (TYPE 16)

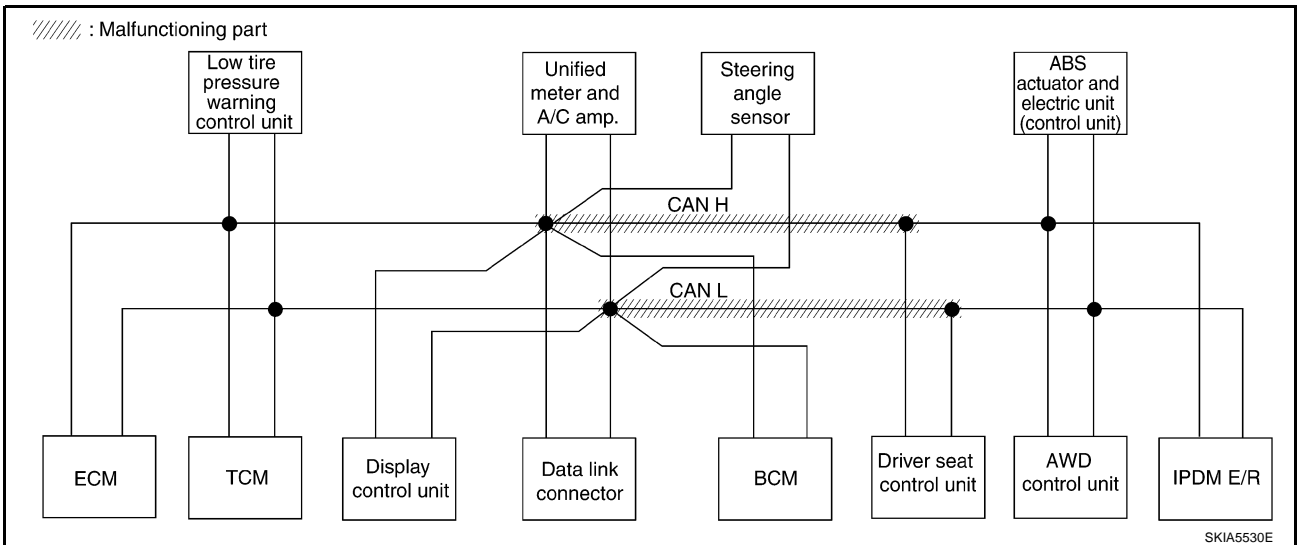
[CAN]

Case 2

Check harness between data link connector and driver seat control unit. Refer to [LAN-562, "Circuit Check Between Data Link Connector and Driver Seat Control Unit"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8599E



CAN SYSTEM (TYPE 16)

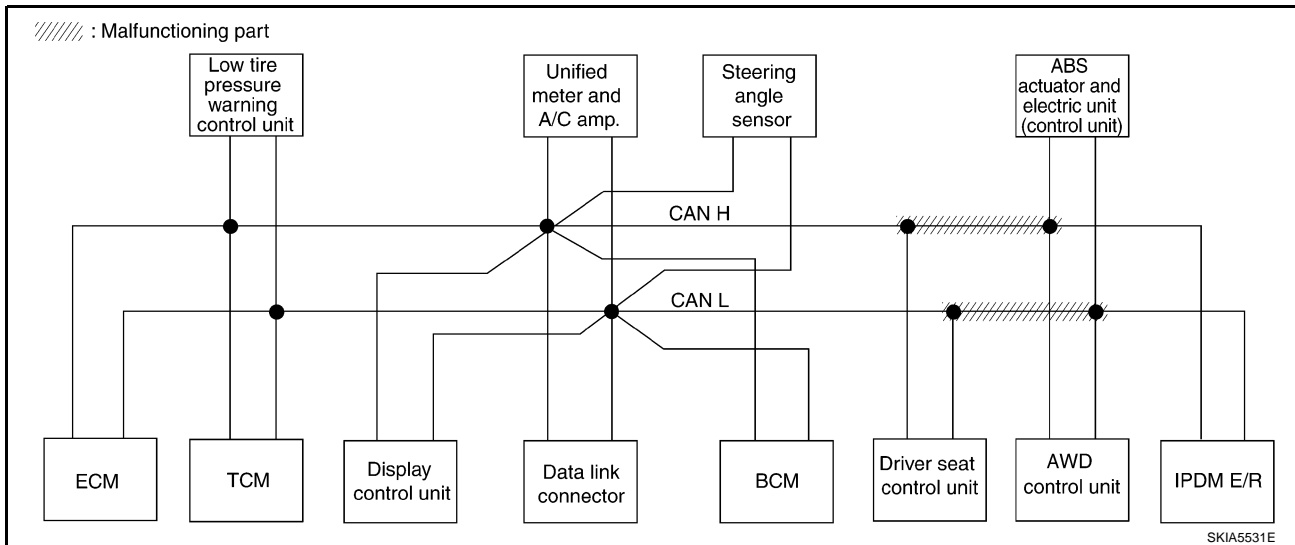
[CAN]

Case 3

Check harness between driver seat control unit and ABS actuator and electric unit (control unit). Refer to [LAN-563, "Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit \(Control Unit\)"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8600E



SKIA5531E

CAN SYSTEM (TYPE 16)

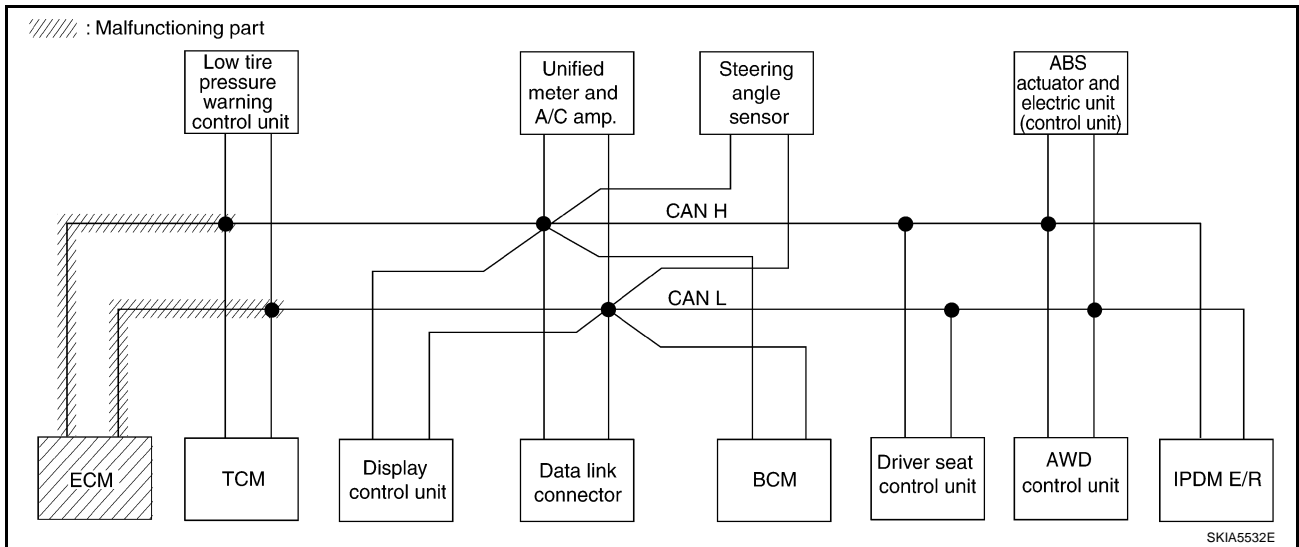
[CAN]

Case 4

Check ECM circuit. Refer to [LAN-564, "ECM Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

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CAN SYSTEM (TYPE 16)

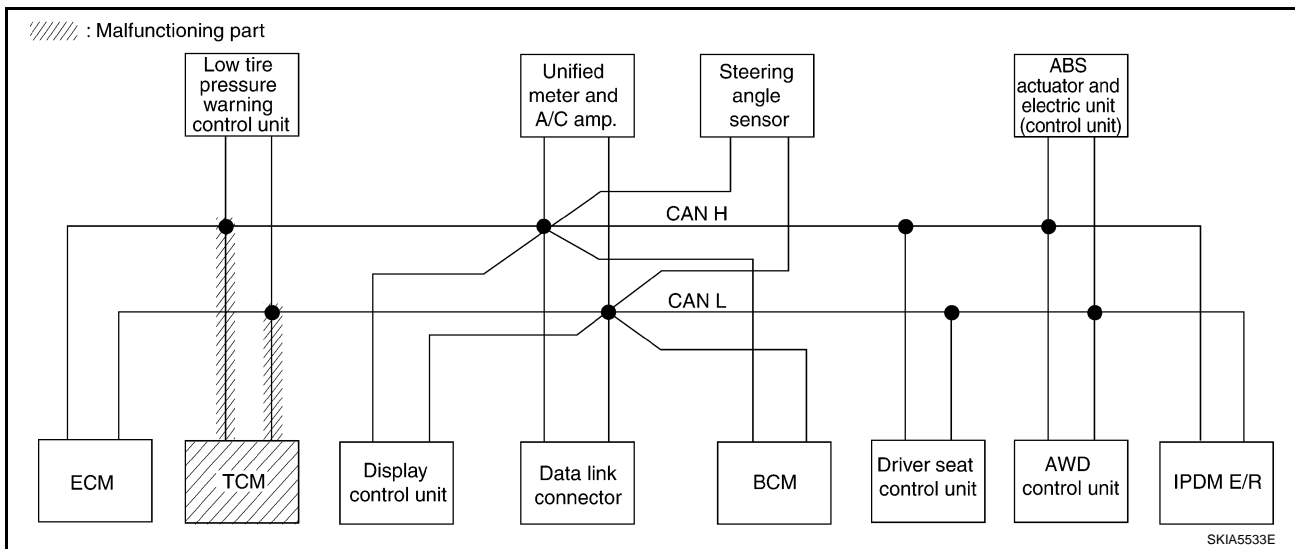
[CAN]

Case 5

Check TCM circuit. Refer to [LAN-565, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR												
		Initial diagnosis	Transmit diagnosis	Receive diagnosis										
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—	—

PKIA8602E



CAN SYSTEM (TYPE 16)

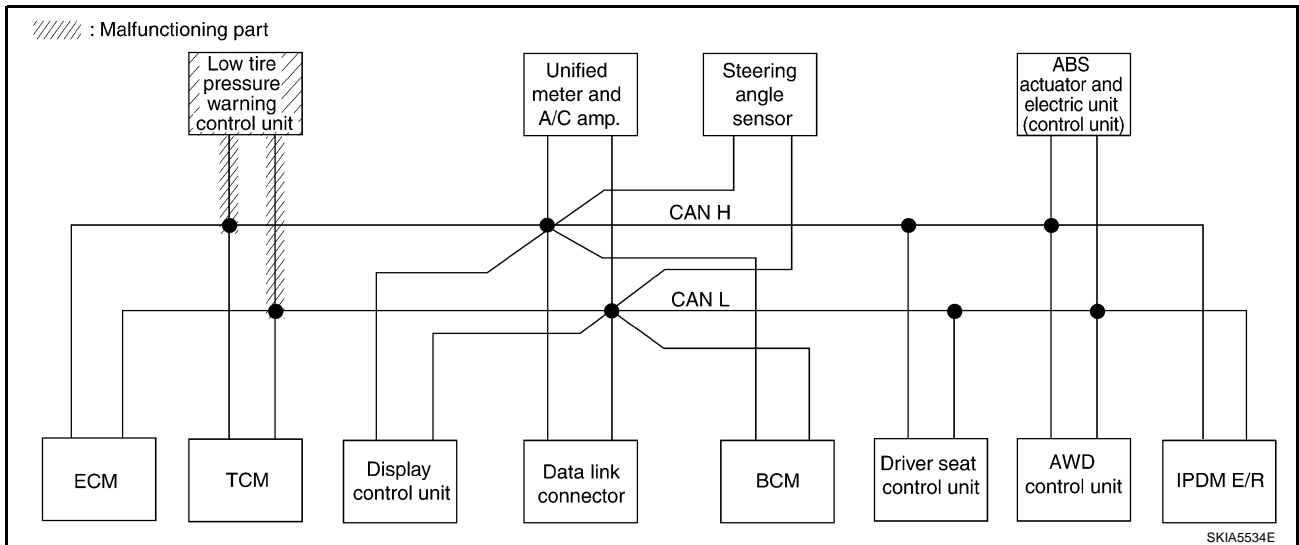
[CAN]

Case 6

Check low tire pressure warning control unit circuit. Refer to [LAN-565, "Low Tire Pressure Warning Control Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6 ✓	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

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CAN SYSTEM (TYPE 16)

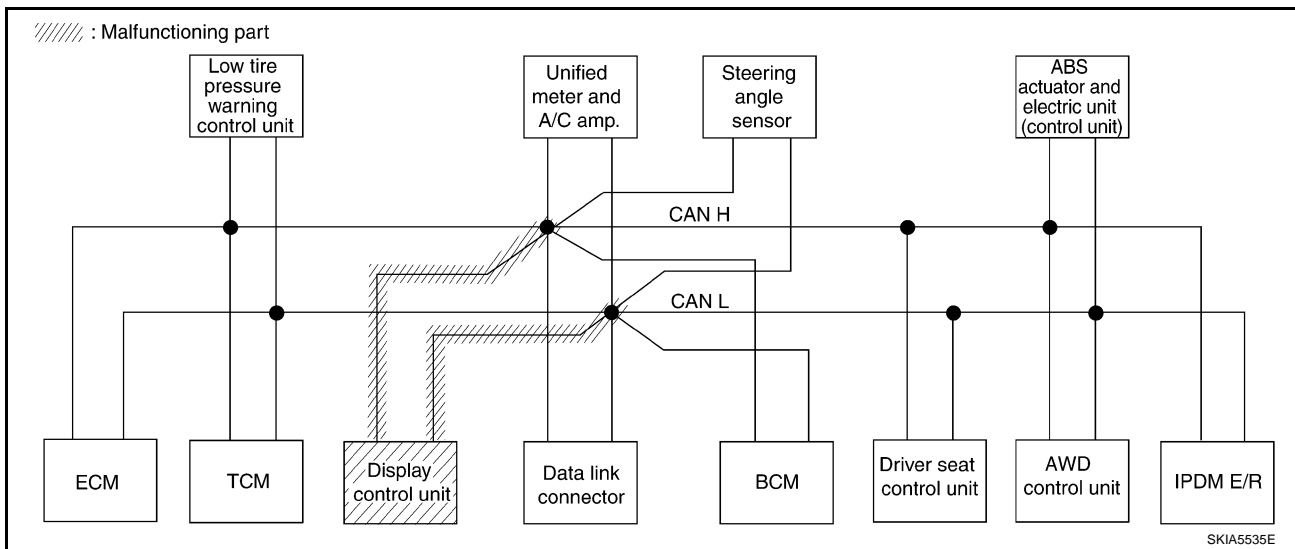
[CAN]

Case 7

Check display control unit circuit. Refer to [LAN-566, "Display Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN DTC 1 ✓	CAN DTC 3 ✓	—	CAN DTC 6 ✓	—	CAN DTC 2 ✓	CAN DTC 5 ✓	—	—	—	CAN DTC 7 ✓
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

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SKIA5535E

CAN SYSTEM (TYPE 16)

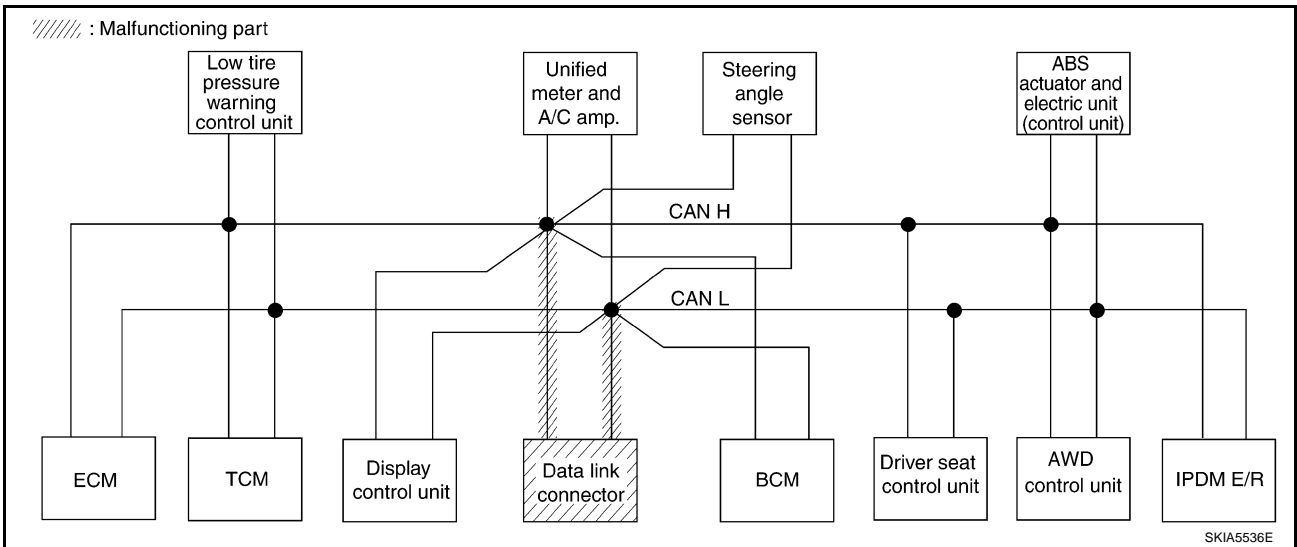
[CAN]

Case 8

Check data link connector circuit. Refer to [LAN-566, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication ✓	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	No indication ✓	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

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CAN SYSTEM (TYPE 16)

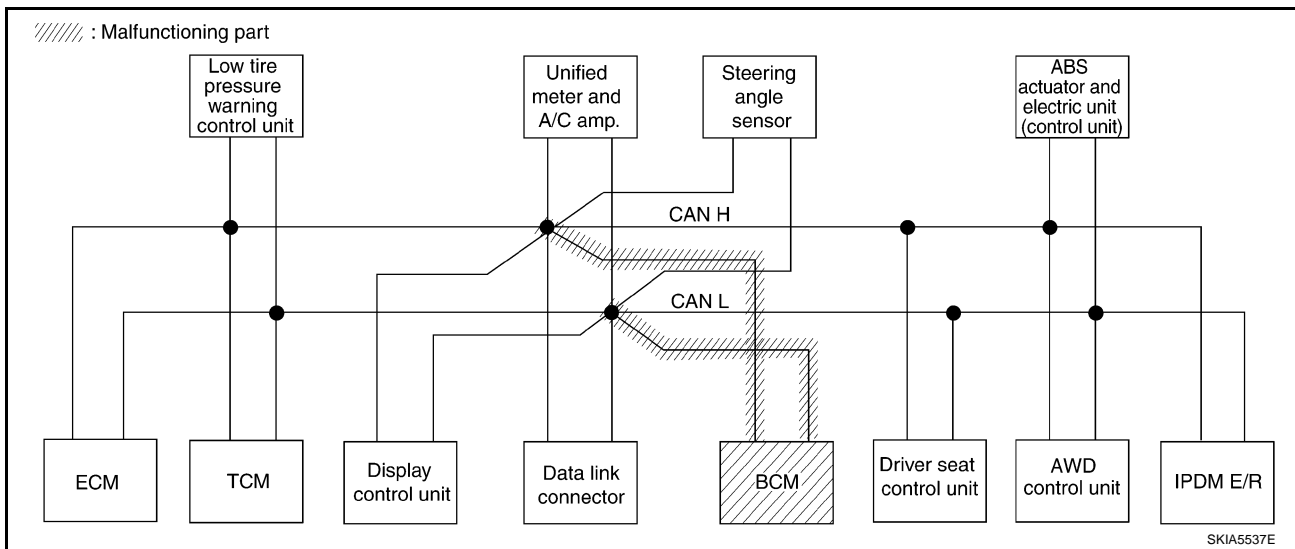
[CAN]

Case 9

Check BCM circuit. Refer to [LAN-567, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8606E



SKIA5537E

CAN SYSTEM (TYPE 16)

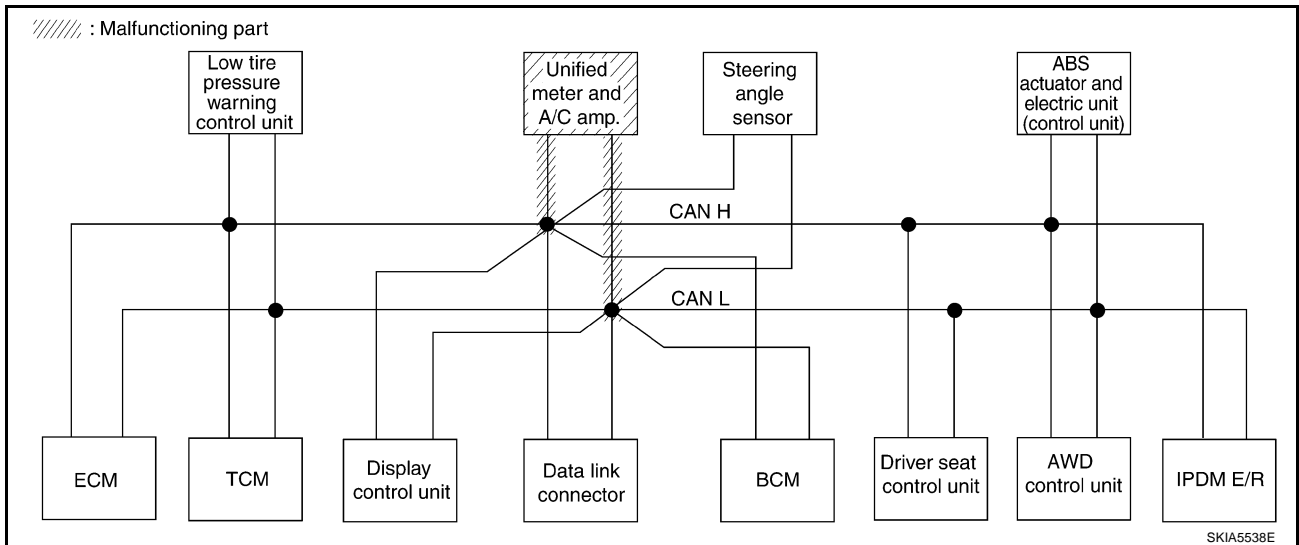
[CAN]

Case 10

Check unified meter and A/C amp. circuit. Refer to [LAN-567, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8607E



CAN SYSTEM (TYPE 16)

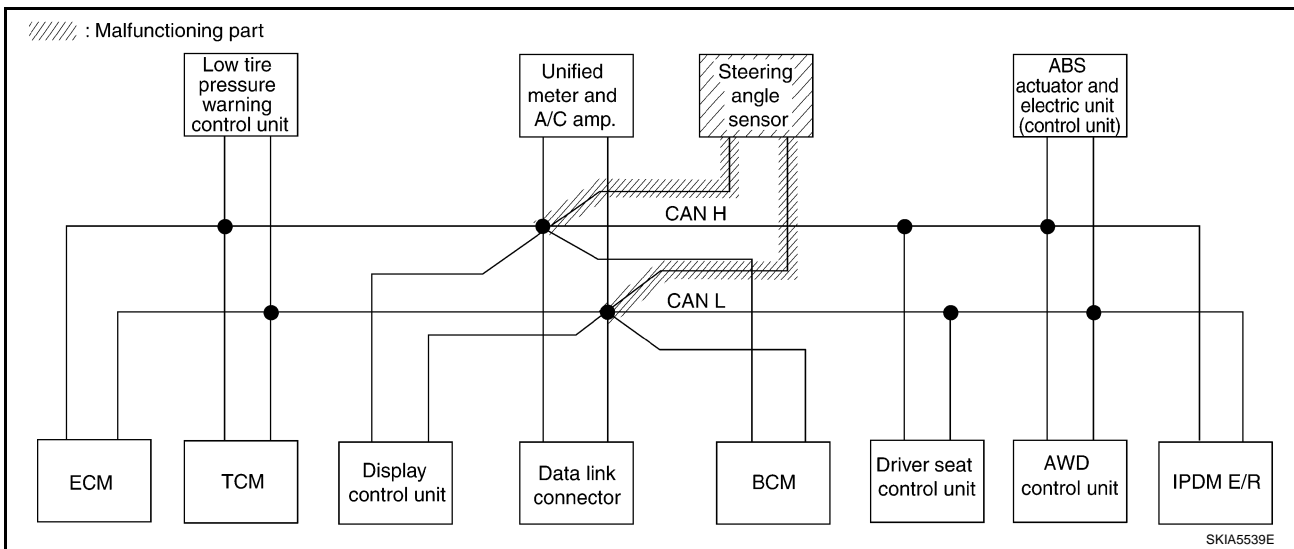
[CAN]

Case 11

Check steering angle sensor circuit. Refer to [LAN-568, "Steering Angle Sensor Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8608E



SKIA5539E

CAN SYSTEM (TYPE 16)

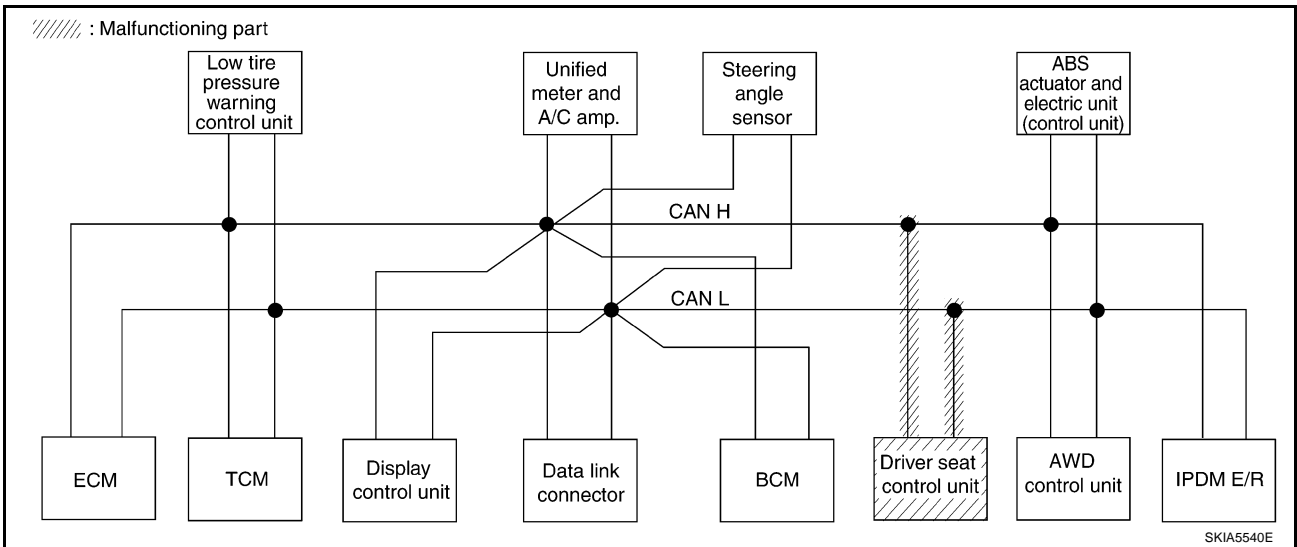
[CAN]

Case 12

Check driver seat control unit circuit. Refer to [LAN-568, "Driver Seat Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8609E



CAN SYSTEM (TYPE 16)

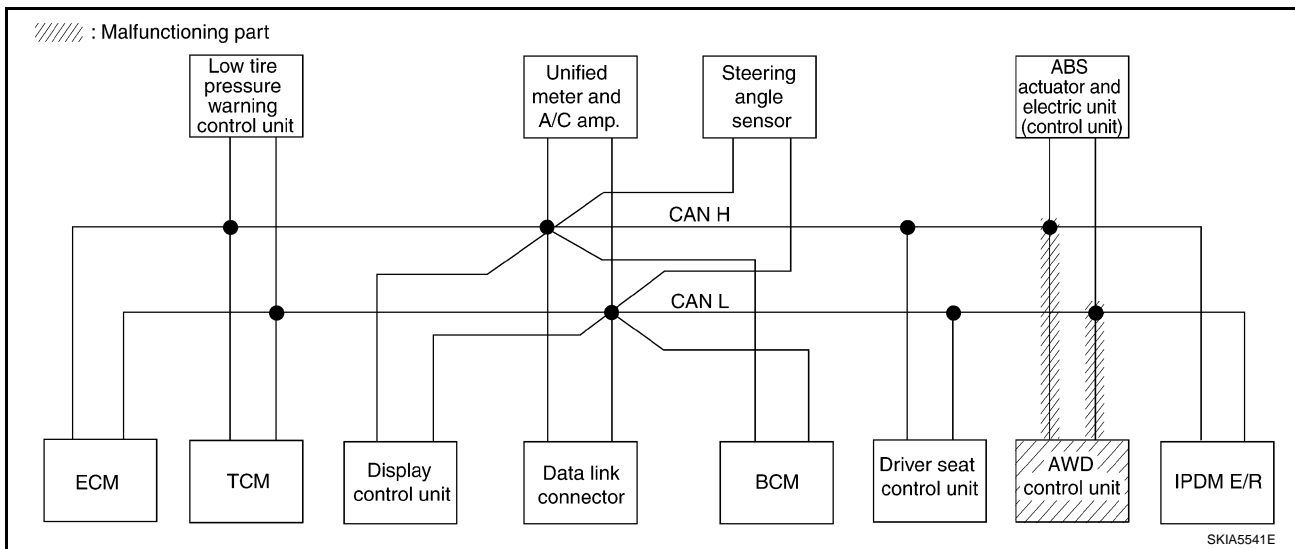
[CAN]

Case 13

Check AWD control unit circuit. Refer to [LAN-569, "AWD Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8610E



SKIA5541E

CAN SYSTEM (TYPE 16)

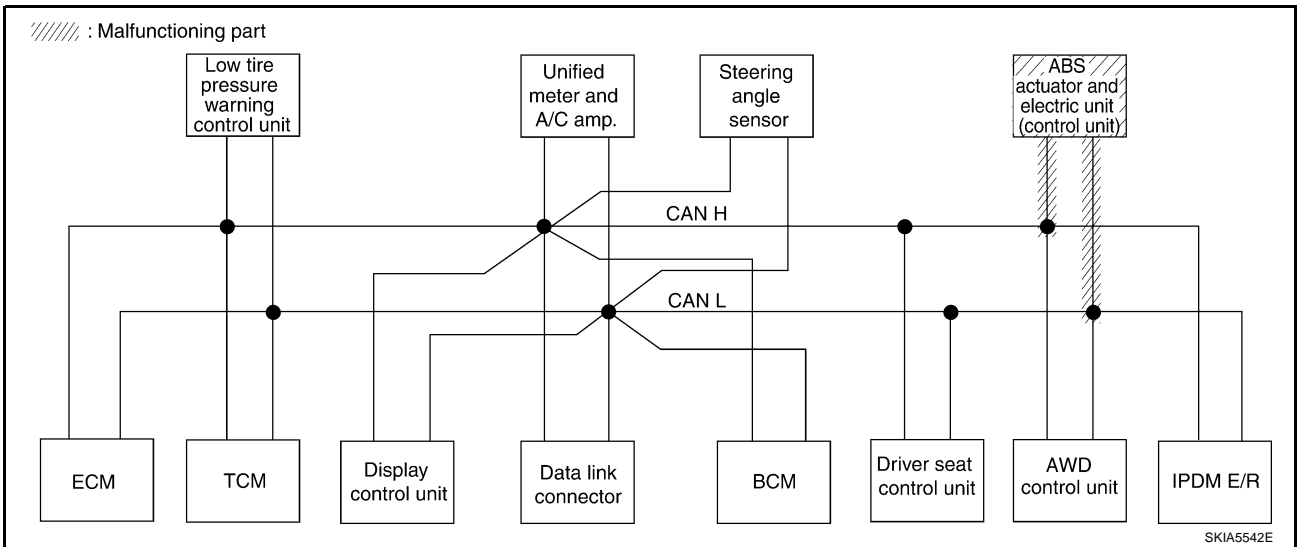
[CAN]

Case 14

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-569, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN ✓	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN ✓	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN ✓	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN ✓	—
ABS	—	NG ✓	UNKWN ✓	UNKWN ✓	UNKWN ✓	—	—	—	—	UNKWN ✓	UNKWN ✓	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8611E



CAN SYSTEM (TYPE 16)

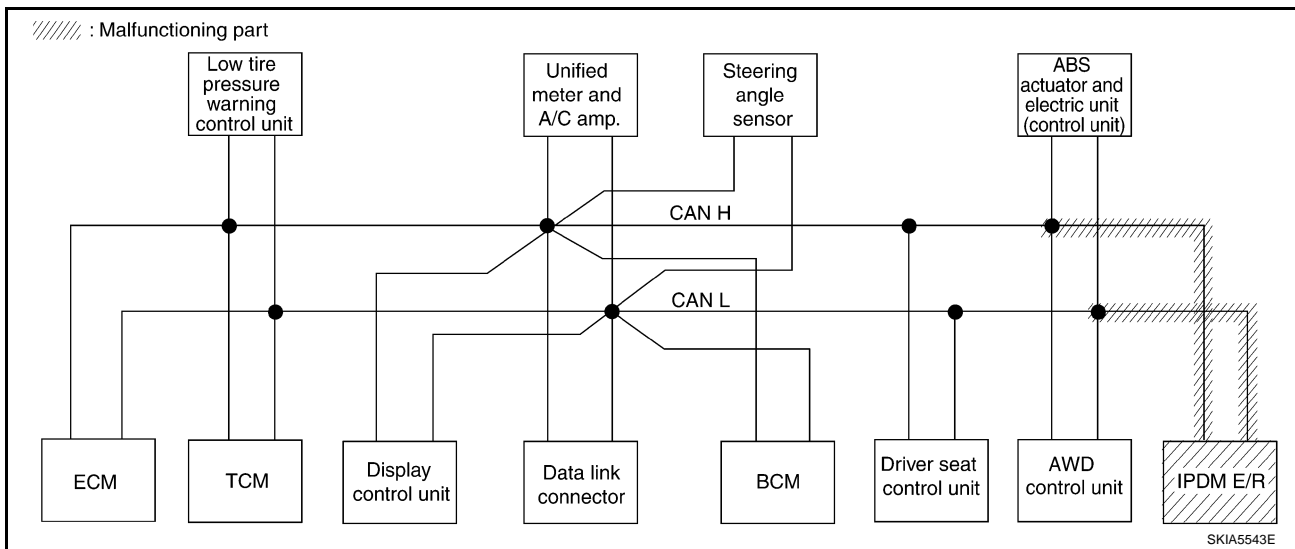
[CAN]

Case 15

Check IPDM E/R circuit. Refer to [LAN-570, "IPDM E/R Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN ✓
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7 ✓
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN ✓
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8612E



SKIA5543E

CAN SYSTEM (TYPE 16)

[CAN]

Case 16

Check CAN communication circuit. Refer to [LAN-570, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR												
		Initial diagnosis	Transmit diagnosis	Receive diagnosis										
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—	—

PKIA8613E

Case 17

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-574, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR												
		Initial diagnosis	Transmit diagnosis	Receive diagnosis										
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—	—

PKIA8614E

Case 18

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-574, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	TIRE-P	DISPLAY	BCM /SEC	METER /M&A	STRG	AWD /4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 6	—	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIA8615E

Circuit Check Between TCM and Data Link Connector

AKS00A85

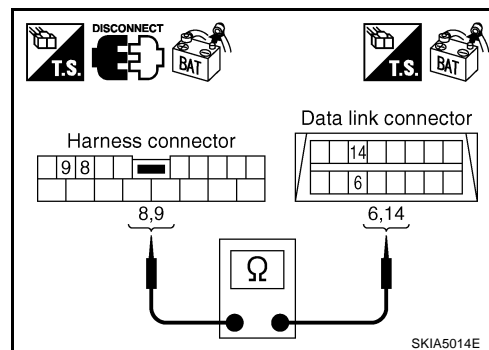
1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and harness connector M82.
4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

8 (L) - 6 (L) : Continuity should exist.
9 (Y) - 14 (Y) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-541, "Work Flow"](#) .
- NG >> Repair harness.



Circuit Check Between Data Link Connector and Driver Seat Control Unit

AKS00A86

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M9
 - Harness connector B2

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector M9.
2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 10 (Y).

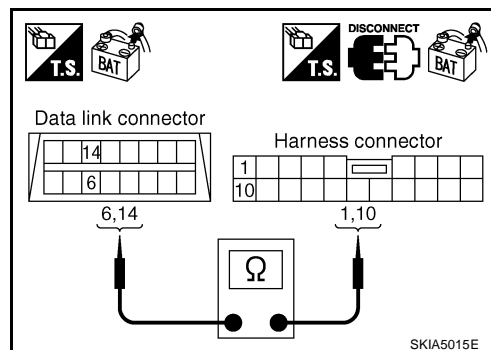
6 (L) - 1 (L) : Continuity should exist.

14 (Y) - 10 (Y) : Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair harness.



3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

1 (L) - 3 (L) : Continuity should exist.

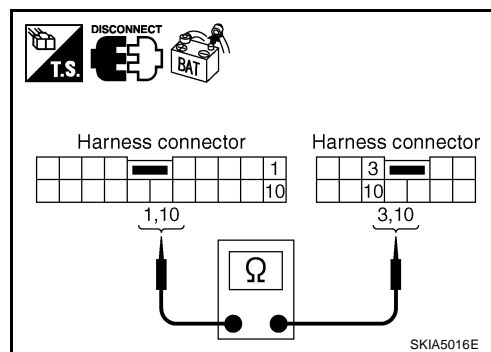
10 (Y) - 10 (Y) : Continuity should exist.

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to

[LAN-541, "Work Flow"](#).

NG >> Repair harness.



Circuit Check Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit)

AKS00A87

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector B4
 - Harness connector E105

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

LAN

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B2 and harness connector B4.
2. Check continuity between harness connector B2 terminals 1 (L), 10 (Y) and harness connector B4 terminals 3 (L), 10 (Y).

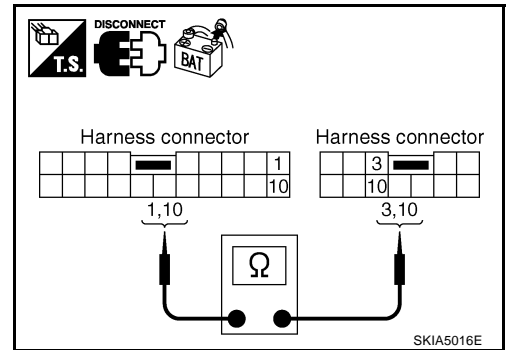
1 (L) - 3 (L) : Continuity should exist.

10 (Y) - 10 (Y) : Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair harness.



3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E105 terminals 3 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).

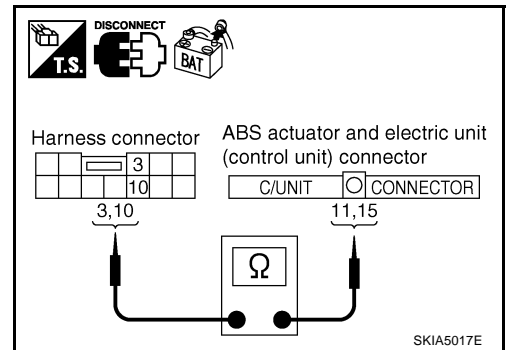
3 (L) - 11 (L) : Continuity should exist.

10 (Y) - 15 (Y) : Continuity should exist.

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-541, "Work Flow"](#).

NG >> Repair harness.



ECM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ECM for damage, bend and loose connection (control module side and harness side).

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

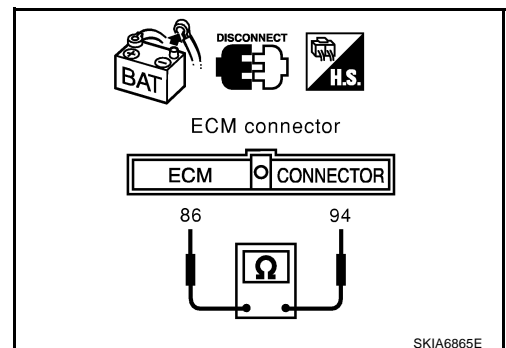
1. Disconnect ECM connector.
2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

94 (L) - 86 (Y) : Approx. 108 - 132Ω

OK or NG

OK >> Replace ECM.

NG >> Repair harness between ECM and TCM.



TCM Circuit Check

AKS00A89

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
 - TCM connector
 - Harness connector F102
 - Harness connector M82

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

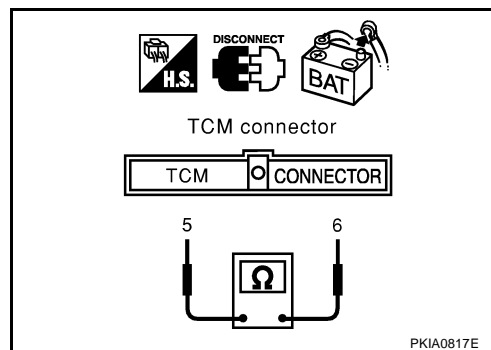
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

5 (L) - 6 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace TCM.
 NG >> Repair harness between TCM and low tire pressure warning control unit.

**Low Tire Pressure Warning Control Unit Circuit Check**

AKS00A8A

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of low tire pressure warning control unit for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

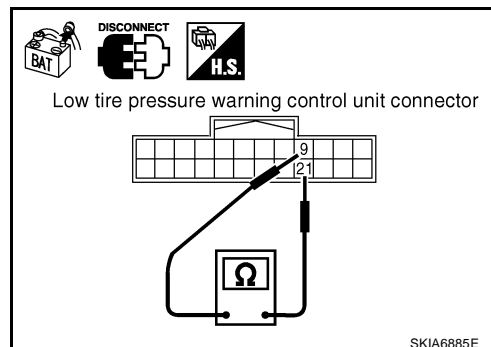
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect low tire pressure warning control unit connector.
2. Check resistance between low tire pressure warning control unit harness connector M81 terminals 9 (L) and 21 (Y).

9 (L) - 21 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace low tire pressure warning control unit.
 NG >> Repair harness between low tire pressure warning control unit and TCM.



Display Control Unit Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display control unit for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.
NG >> Repair terminal or connector.

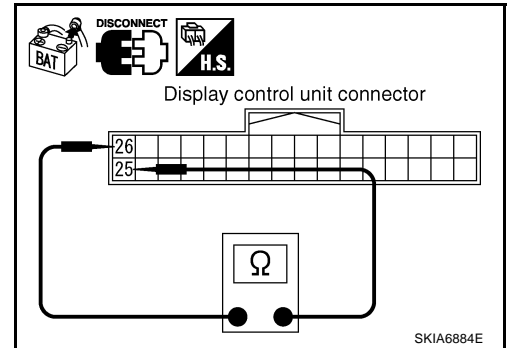
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect display control unit connector.
2. Check resistance between display control unit harness connector M43 terminals 25 (L) and 26 (Y).

25 (L) - 26 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace display control unit.
NG >> Repair harness between display control unit and data link connector.



Data Link Connector Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).

OK or NG

- OK >> GO TO 2.
NG >> Repair terminal or connector.

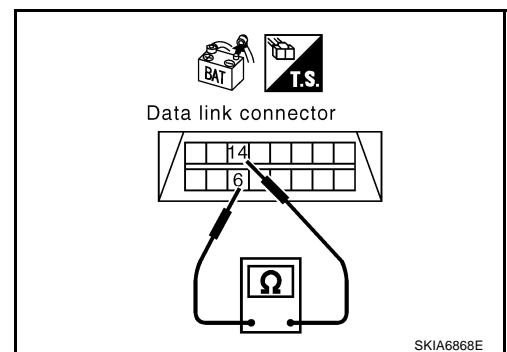
2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

6 (L) - 14 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Diagnose again. Refer to [LAN-541, "Work Flow"](#).
NG >> Repair harness between data link connector and BCM.



BCM Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

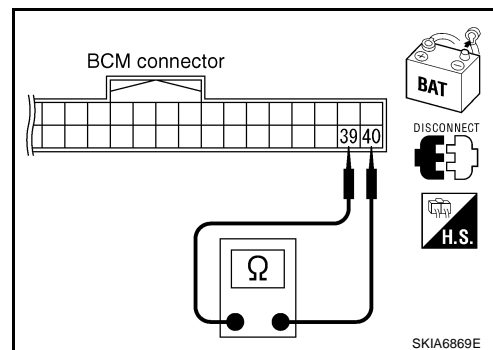
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M34 terminals 39 (L) and 40 (Y).

39 (L) - 40 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace BCM. Refer to [BCS-14, "Removal and Installation of BCM"](#) .
 NG >> Repair harness between BCM and data link connector.

**Unified Meter and A/C Amp. Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

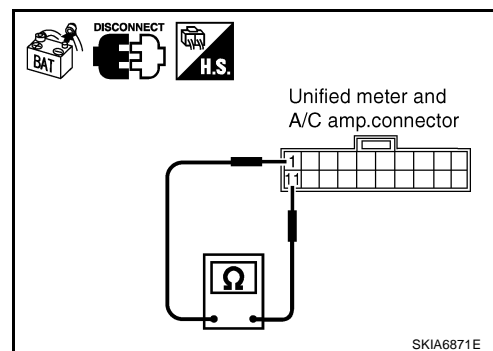
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

1 (L) - 11 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace unified meter and A/C amp.
 NG >> Repair harness between unified meter and A/C amp. and data link connector.



Steering Angle Sensor Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of steering angle sensor for damage, bend and loose connection (sensor side and harness side).

OK or NG

- OK >> GO TO 2.
NG >> Repair terminal or connector.

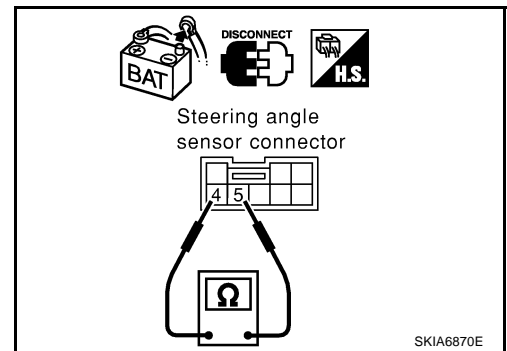
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M33 terminals 4 (L) and 5 (Y).

4 (L) - 5 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace steering angle sensor.
NG >> Repair harness between steering angle sensor and data link connector.



Driver Seat Control Unit Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control unit side and harness side).
 - Driver seat control unit connector
 - Harness connector B301
 - Harness connector B9

OK or NG

- OK >> GO TO 2.
NG >> Repair terminal or connector.

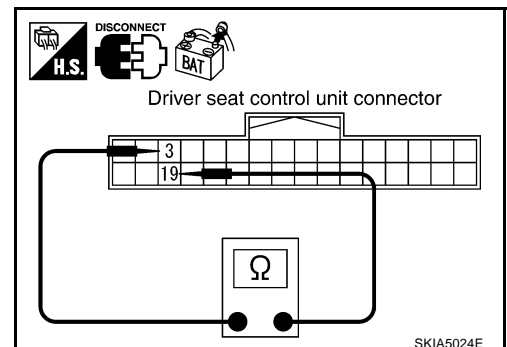
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect driver seat control unit connector.
2. Check resistance between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

3 (L/Y) - 19 (BR/W) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace driver seat control unit.
NG >> Repair harness between driver seat control unit and harness connector B4.



AWD Control Unit Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of AWD control unit for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

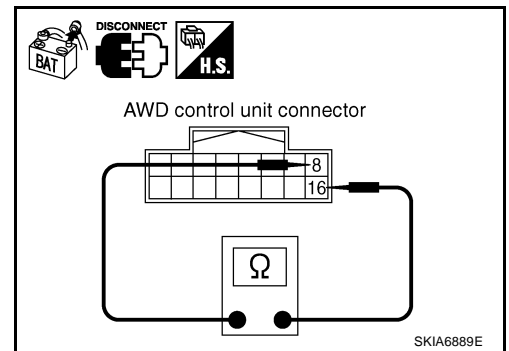
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect AWD control unit connector.
2. Check resistance between AWD control unit harness connector E111 terminals 8 (L) and 16 (Y).

8 (L) - 16 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace AWD control unit.
 NG >> Repair harness between AWD control unit and IPDM E/R.

**ABS Actuator and Electric Unit (Control Unit) Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose connection (control unit side and harness side).

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

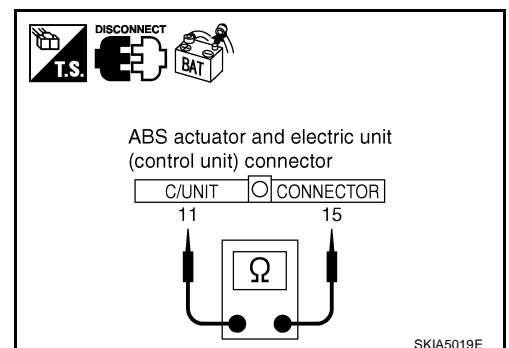
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

11 (L) - 15 (Y) : Approx. 54 - 66Ω

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).
 NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



IPDM E/R Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

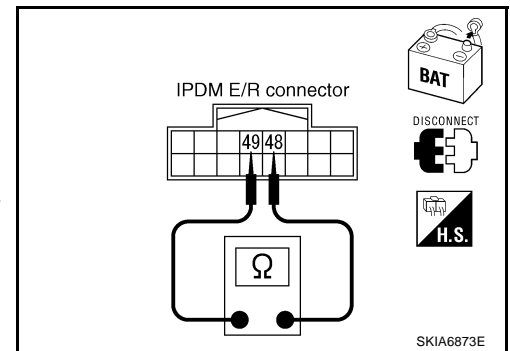
- OK >> GO TO 2.
 NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

48 (L) - 49 (Y)**: Approx. 108 - 132Ω**OK or NG

- OK >> Replace IPDM E/R.
 NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).

**CAN Communication Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, meter side, sensor side and harness side).
 - ECM
 - TCM
 - Low tire pressure warning control unit
 - Display control unit
 - BCM
 - Unified meter and A/C amp.
 - Steering angle sensor
 - Driver seat control unit
 - AWD control unit
 - ABS actuator and electric unit (control unit)
 - IPDM E/R
 - Between ECM and IPDM E/R
 - Between ECM and TCM
 - Between ECM and driver seat control unit

OK or NG

- OK >> GO TO 2.
 NG >> Repair terminal or connector.

2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
 - ECM connector
 - Low tire pressure warning control unit connector
 - Harness connector M82
 - Display control unit connector
 - BCM connector
 - Unified meter and A/C amp. connector
 - Steering angle sensor connector
 - Harness connector M9
2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

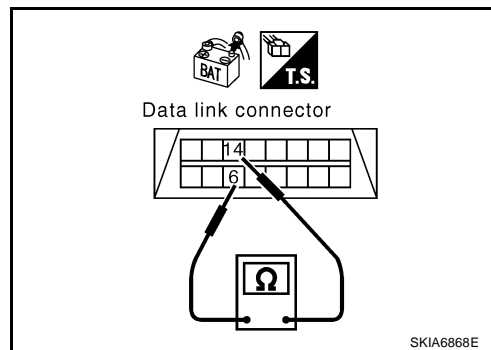
6 (L) - 14 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 3.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM
- Harness between data link connector and low tire pressure warning control unit
- Harness between data link connector and harness connector M82
- Harness between data link connector and display control unit
- Harness between data link connector and BCM
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor
- Harness between data link connector and harness connector M9



3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

6 (L) - Ground : Continuity should not exist.

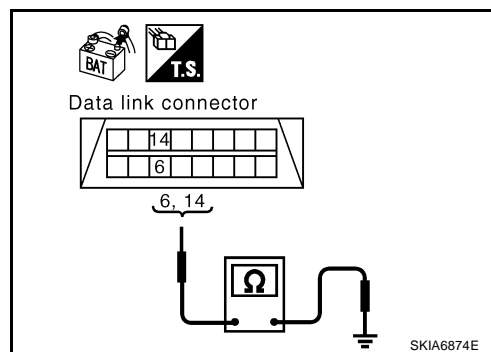
14 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 4.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between data link connector and ECM
- Harness between data link connector and low tire pressure warning control unit
- Harness between data link connector and harness connector M82
- Harness between data link connector and display control unit
- Harness between data link connector and BCM
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and steering angle sensor
- Harness between data link connector and harness connector M9



4. CHECK HARNESS FOR SHORT CIRCUIT

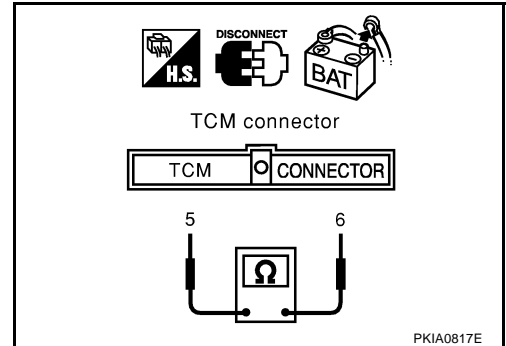
1. Disconnect TCM connector.
2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

5 (L) - 6 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 5.

NG >> Repair harness between TCM and harness connector F102.



5. CHECK HARNESS FOR SHORT CIRCUIT

- Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

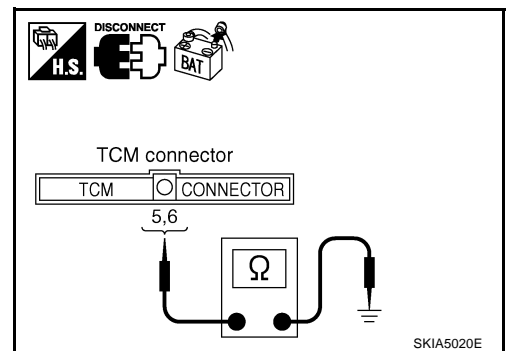
5 (L) - Ground : Continuity should not exist.

6 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 6.

NG >> Repair harness between TCM and harness connector F102.



6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B4 and harness connector B9.
2. Check continuity between harness connector B4 terminals 3 (L) and 10 (Y).

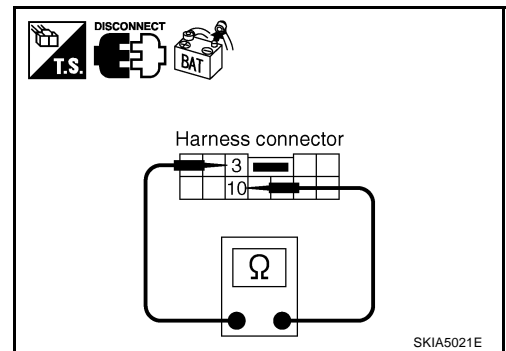
3 (L) - 10 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 7.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between harness connector B4 and harness connector B2
- Harness between harness connector B4 and harness connector B9



7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B4 terminals 3 (L), 10 (Y) and ground.

3 (L) - Ground : Continuity should not exist.

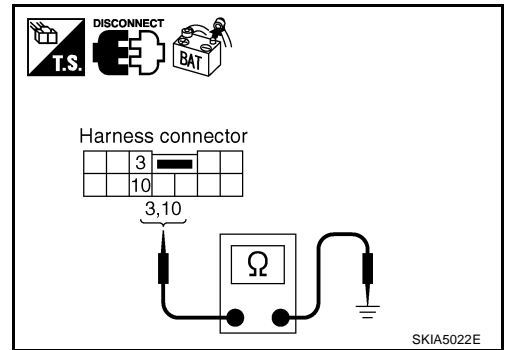
10 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 8.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between harness connector B4 and harness connector B2
- Harness between harness connector B4 and harness connector B9



8. CHECK HARNESS FOR SHORT CIRCUIT

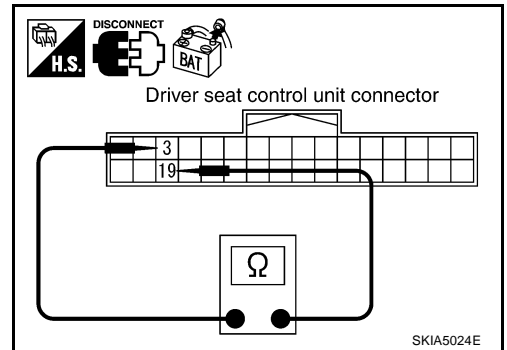
1. Disconnect driver seat control unit connector.
2. Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

3 (L/Y) - 19 (BR/W) : Continuity should not exist.

OK or NG

OK >> GO TO 9.

NG >> Repair harness between driver seat control unit and harness connector B301.



9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y), 19 (BR/W) and ground.

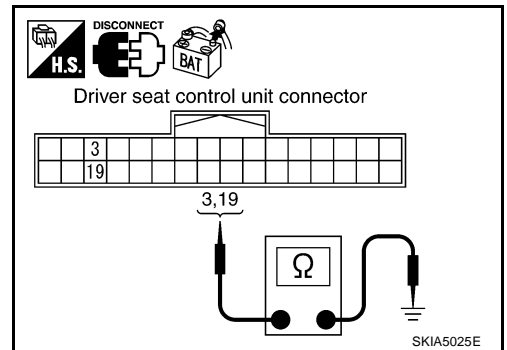
3 (L/Y) - Ground : Continuity should not exist.

19 (BR/W) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 10.

NG >> Repair harness between driver seat control unit and harness connector B301.



A
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C
D
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M

LAN

10. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect AWD control unit connector, ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

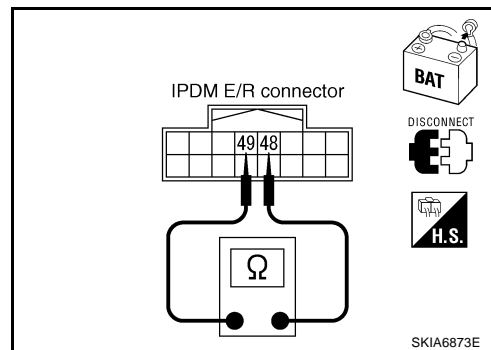
48 (L) - 49 (Y) : Continuity should not exist.

OK or NG

OK >> GO TO 11.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit
- Harness between IPDM E/R and ABS actuator and electric unit (control unit)
- Harness between IPDM E/R and harness connector E105



11. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

48 (L) - Ground : Continuity should not exist.

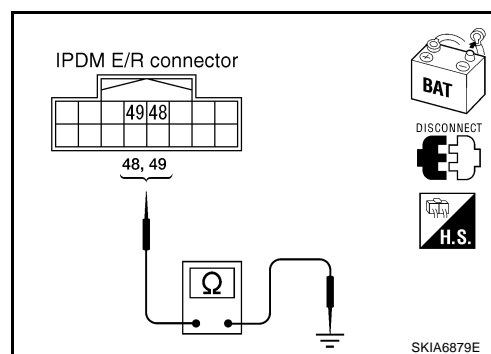
49 (Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 12.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between IPDM E/R and AWD control unit
- Harness between IPDM E/R and ABS actuator and electric unit (control unit)
- Harness between IPDM E/R and harness connector E105



12. ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to [LAN-575, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-541, "Work Flow"](#).

NG >> Replace ECM and/or IPDM E/R.

IPDM E/R Ignition Relay Circuit Check

AKS00A8L

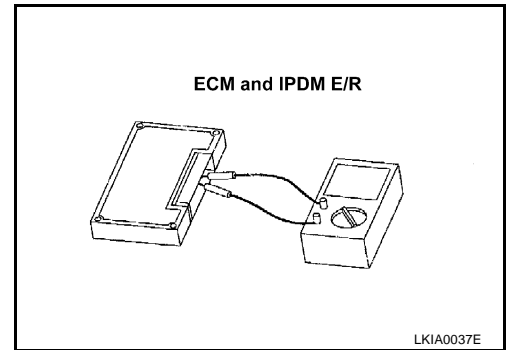
Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-27, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON" AND/OR "START" "](#).

Component Inspection ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 48 and 49.

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	48 - 49	



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