

SECTION

LAN

LAN SYSTEM

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## PRECAUTIONS

PFP:00001

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

AKS0031A

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 harness connectors.

### Precautions for Battery Service

AKS003TZ

This vehicle is equipped with the automatic window adjusting function. When a door is opened, the window automatically lowers slightly to avoid contact between the window and the side roof panel. After the door is closed, the window will automatically raise slightly.

On vehicles equipped with the automatic window adjusting function, lower both the driver and front passenger side windows before disconnecting the battery cables. This will prevent interference between the side window and the roof panel when either door is opened/closed.

#### **CAUTION:**

After the battery cables are disconnected, do not open/close the driver and/or front passenger door with the window in the full up position. The automatic window adjusting function will not work and the side roof panel may be damaged.

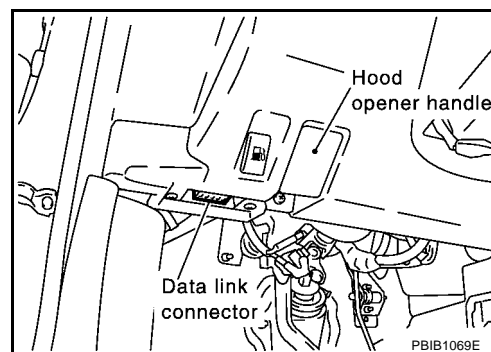
### Precautions When Using CONSULT-II

AKS003M4

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

#### **CAUTION:**

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



## CHECK POINTS FOR USING CONSULT-II

1. Has CONSULT-II been used without connecting CONSULT-II CONVERTER on this vehicle?  
 – If YES, GO TO 2.  
 – If NO, GO TO 5.
2. Is there any indication other than indications relating to CAN communication system in the self-diagnosis results?  
 – If YES, GO TO 3.  
 – If NO, GO TO 4.
3. Based on self-diagnosis results unrelated to CAN communication, carry out the inspection.
4. Malfunctions may be detected in self-diagnosis depending on control units carrying out CAN communication. Therefore, erase the self-diagnosis results.
5. Diagnose CAN communication system. Refer to [LAN-6, "CAN Communication Unit"](#).

## Precautions For Trouble Diagnosis CAN SYSTEM

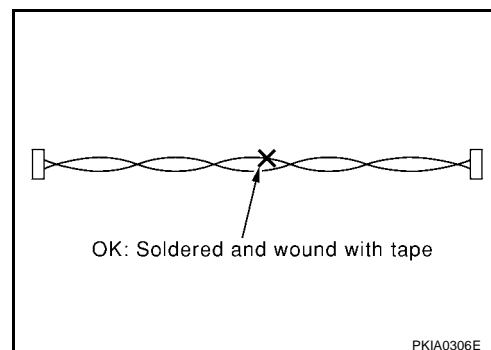
AKS000ZD

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

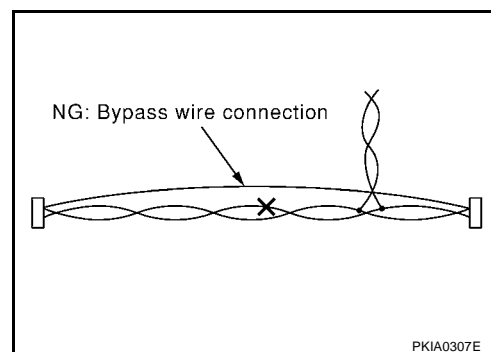
## Precautions For Harness Repair CAN SYSTEM

AKS000ZE

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



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



## CAN COMMUNICATION

## System Description

AKS000ZF

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

AKS000ZG

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

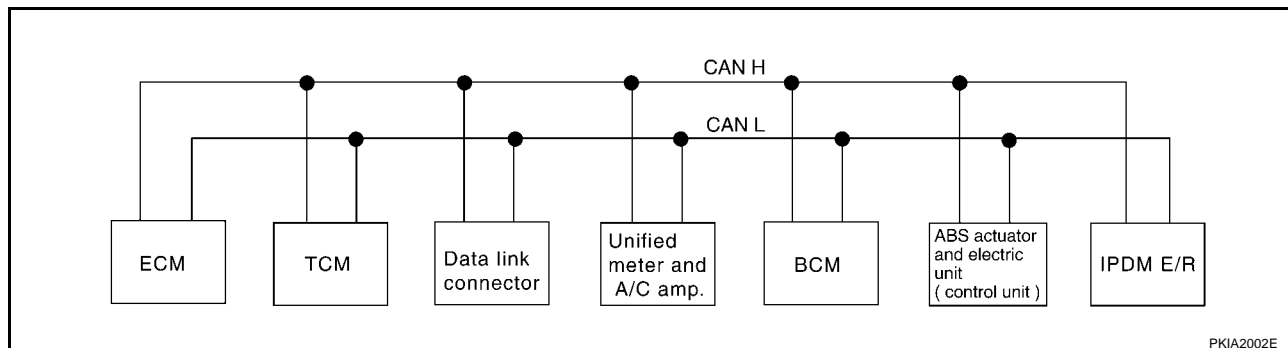
Body type	Coupe						
Axle	2WD						
Engine	VQ35DE						
Transmission	A/T	M/T					
Brake control	TCS	ABS		TCS		VDC	
Low tire pressure warning system	Not Applicable	Not Applicable	Applicable	Not Applicable	Applicable	Not Applicable	Applicable
CAN communication unit							
ECM	×	×	×	×	×	×	×
TCM	×						
Data link connector	×	×	×	×	×	×	×
Unified meter and A/C amp.	×	×	×	×	×	×	×
BCM	×	×	×	×	×	×	×
Low tire pressure warning control unit			×		×		×
Steering angle sensor						×	×
ABS actuator and electric unit (control unit)	×	×	×	×	×		
VDC/TCS/ABS control unit						×	×
IPDM E/R	×	×	×	×	×	×	×
CAN communication type	<a href="#">LAN-7. "TYPE 1"</a>	<a href="#">LAN-8. "TYPE 2/TYPE3"</a>		<a href="#">LAN-10. "TYPE 4/TYPE5"</a>		<a href="#">LAN-12. "TYPE 6/TYPE7"</a>	
CAN system trouble diagnosis	<a href="#">LAN-14. "CAN SYS-TEM (TYPE 1)"</a>	<a href="#">LAN-38. "CAN SYS-TEM (TYPE 2)"</a>	<a href="#">LAN-57. "CAN SYS-TEM (TYPE 3)"</a>	<a href="#">LAN-80. "CAN SYS-TEM (TYPE 4)"</a>	<a href="#">LAN-99. "CAN SYS-TEM (TYPE 5)"</a>	<a href="#">LAN-122. "CAN SYS-TEM (TYPE 6)"</a>	<a href="#">LAN-144. "CAN SYS-TEM (TYPE 7)"</a>

×: Applicable

## TYPE 1

## System diagram

- Type1



## Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	Unified meter and A/C amp.	BCM	ABS actuator and electric unit (control unit)	IPDM E/R
Engine speed signal	T	R	R		R	
Engine torque signal	T	R				
Engine coolant temperature signal	T	R	R			
Accelerator pedal position signal	T	R			R	
Closed throttle position signal	T	R				
Wide open throttle position signal	T	R				
Battery voltage signal	T	R				
Stop lamp switch signal		R	T			
Fuel consumption monitor signal	T		R			
A/T self-diagnosis signal	R	T				
A/T CHECK indicator lamp signal		T	R			
A/T position indicator signal		T	R		R	
ABS operation signal		R			T	
A/T shift schedule change demand signal		R			T	
Air conditioner switch signal	R			T		
A/C compressor request signal	T					R
A/C compressor feedback signal	T		R			
Blower fan motor switch signal	R			T		
Cooling fan speed request signal	T					R
Position lights request signal			R	T		R
Low beam request signal				T		R
Low beam status signal	R					T
High beam request signal			R	T		R
High beam status signal	R					T
Vehicle speed signal			R		T	
	R	R	T	R		
Sleep request 1 signal			R	T		
Sleep request 2 signal				T		R

# CAN COMMUNICATION

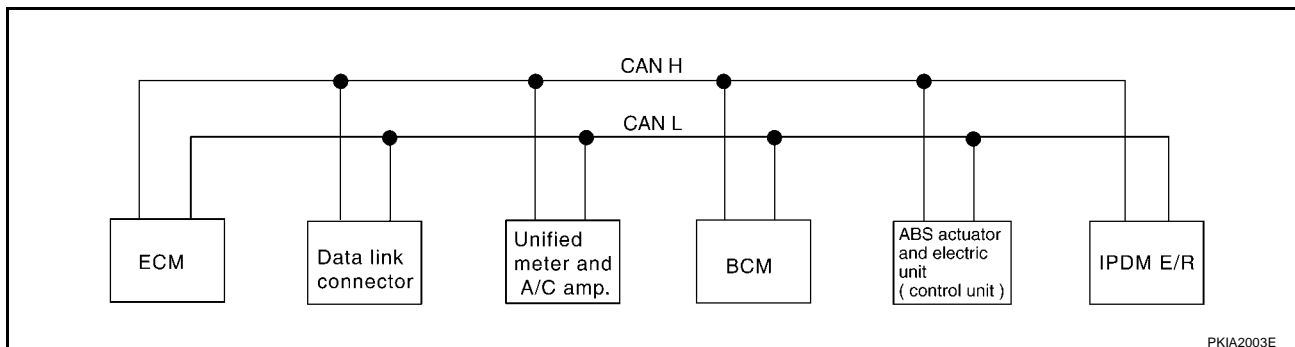
[CAN]

Signals	ECM	TCM	Unified meter and A/C amp.	BCM	ABS actuator and electric unit (control unit)	IPDM E/R
Wake up request 1 signal			R	T		
Door switch signal			R	T		R
Turn indicator signal			R	T		
Seat belt buckle switch signal			T	R		
Buzzer output signal			R	T		
Fuel level sensor signal	R		T			
Malfunction indicator lamp signal	T		R			
ASCD SET lamp signal	T		R			
ASCD operation signal	T	R				
ASCD CRUISE lamp signal	T		R			
Overdrive cancel signal	T	R				
Output shaft revolution signal	R	T				
Turbine 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					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			
Hood switch signal				R		T
Theft warning horn request signal				T		R
Horn chirp signal				T		R
ABS warning lamp signal			R		T	
TCS OFF indicator lamp signal			R		T	
SLIP indicator lamp signal			R		T	
Brake (EBD) warning lamp signal			R		T	

## TYPE 2/TYPE3

### System diagram

- Type2



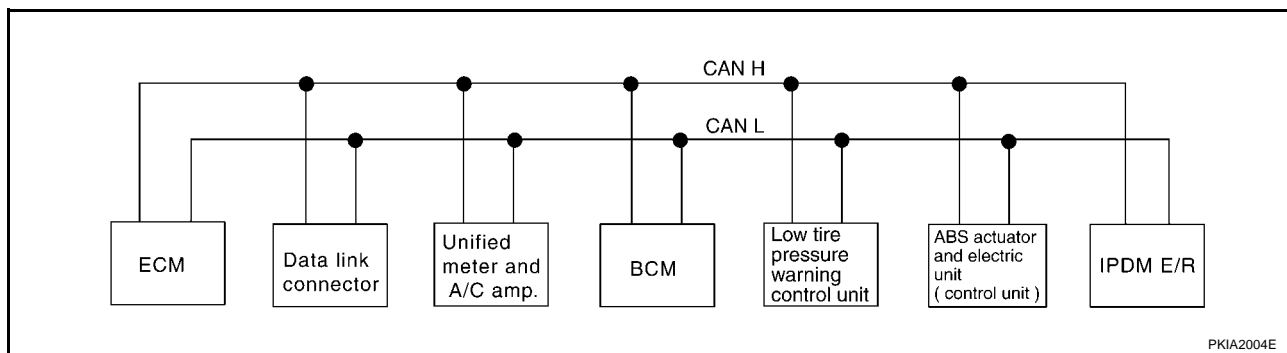
PKIA2003E



# CAN COMMUNICATION

[CAN]

## ● Type3



## Input/output signal chart

T: Transmit R: Receive

Signals	ECM	Unified meter and A/C amp.	BCM	Low tire pressure warning control unit	ABS actuator and electric unit (control unit)	IPDM E/R
Engine speed signal	T	R			R	
Engine coolant temperature signal	T	R				
Accelerator pedal position signal	T				R	
Fuel consumption monitor signal	T	R				
Air conditioner switch signal	R		T			
A/C compressor request signal	T					R
A/C compressor feedback signal	T	R				
Blower fan motor switch signal	R		T			
Cooling fan speed request signal	T					R
Position lights request signal			R	T		R
Low beam request signal			T			R
Low beam status signal	R					T
High beam request signal		R	T			R
High beam status signal	R					T
Vehicle speed signal		R			T	
	R	T	R	R		
Sleep request 1 signal		R	T			
Sleep request 2 signal			T			R
Wake up request 1 signal		R	T			
Door switch signal		R	T			R
Turn indicator signal		R	T			
Seat belt buckle switch signal		T	R			
Buzzer output signal		R	T			
Fuel level sensor signal	R	T				
Malfunction indicator lamp 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

# CAN COMMUNICATION

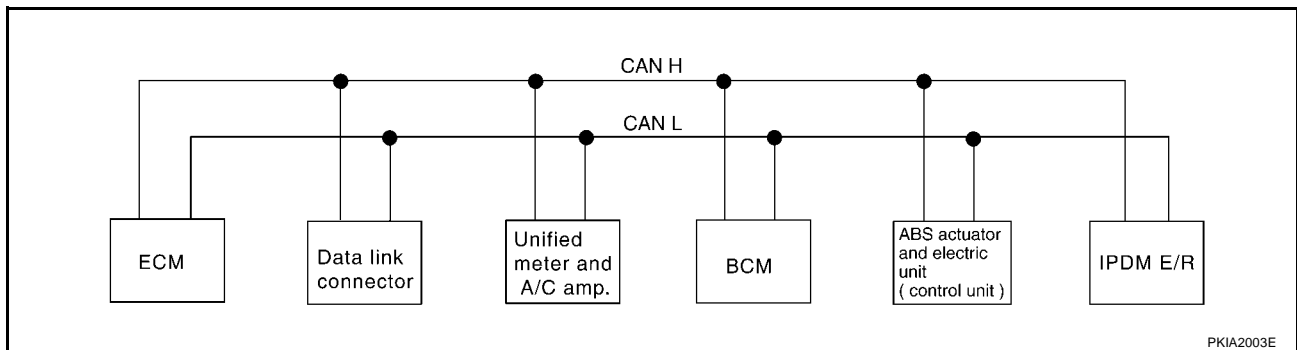
[CAN]

Signals	ECM	Unified meter and A/C amp.	BCM	Low tire pressure warning control unit	ABS actuator and electric unit (control unit)	IPDM E/R
Rear window defogger control signal	R					T
Hood switch signal			R			T
Theft warning horn request signal			T			R
Horn chirp signal			T			R
Tire pressure signal		R		T		
ABS warning lamp signal		R			T	
Brake (EBD) warning lamp signal		R			T	

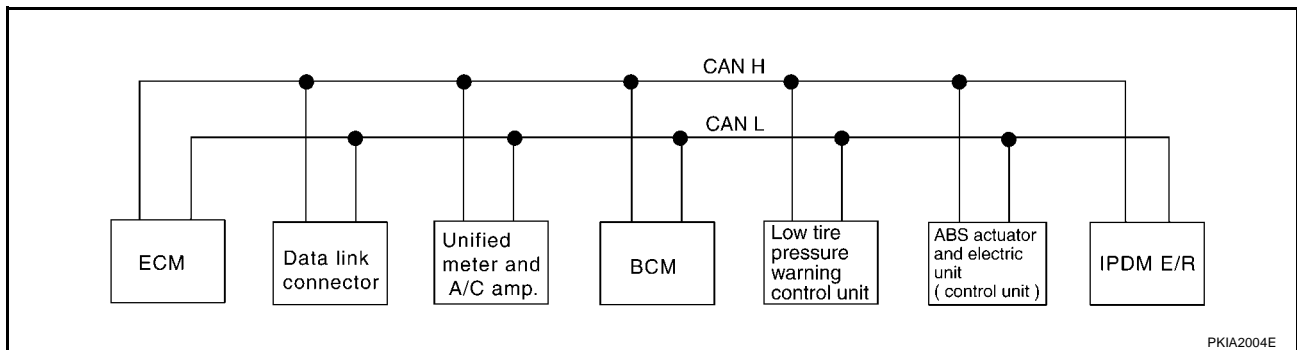
## TYPE 4/TYPE5

### System diagram

- Type4



- Type5



### Input/output signal chart

T: Transmit R: Receive

Signals	ECM	Unified meter and A/C amp.	BCM	Low tire pressure warning control unit	ABS actuator and electric unit (control unit)	IPDM E/R
Engine speed signal	T	R			R	
Engine coolant temperature signal	T	R				
Accelerator pedal position signal	T				R	
Fuel consumption monitor signal	T	R				
Air conditioner switch signal	R		T			
A/C compressor request signal	T					R
A/C compressor feedback signal	T	R				
Blower fan motor switch signal	R		T			

# CAN COMMUNICATION

[CAN]

Signals	ECM	Unified meter and A/C amp.	BCM	Low tire pressure warning control unit	ABS actuator and electric unit (control unit)	IPDM E/R
Cooling fan speed request signal	T					R
Position lights request signal		R	T			R
Low beam request signal			T			R
Low beam status signal	R					T
High beam request signal		R	T			R
High beam status signal	R					T
Vehicle speed signal		R			T	
	R	T	R	R		
Sleep request 1 signal		R	T			
Sleep request 2 signal			T			R
Wake up request 1 signal		R	T			
Door switch signal		R	T			R
Turn indicator signal		R	T			
Seat belt buckle switch signal		T	R			
Buzzer output signal		R	T			
Fuel level sensor signal	R	T				
Malfunction indicator lamp 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					T
Hood switch signal			R			T
Theft warning horn request signal			T			R
Horn chirp signal			T			R
Tire pressure signal		R		T		
ABS warning lamp signal		R			T	
TCS OFF indicator lamp signal		R			T	
SLIP indicator lamp signal		R			T	
Brake (EBD) warning lamp signal		R			T	

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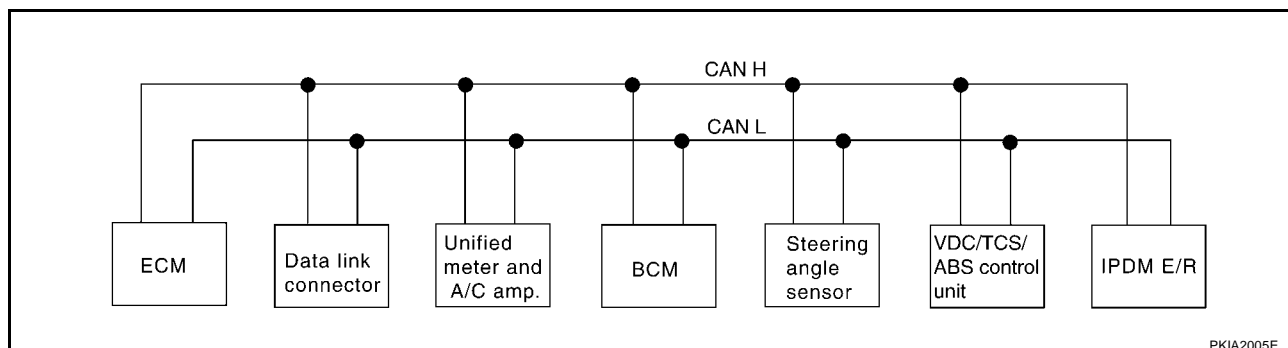
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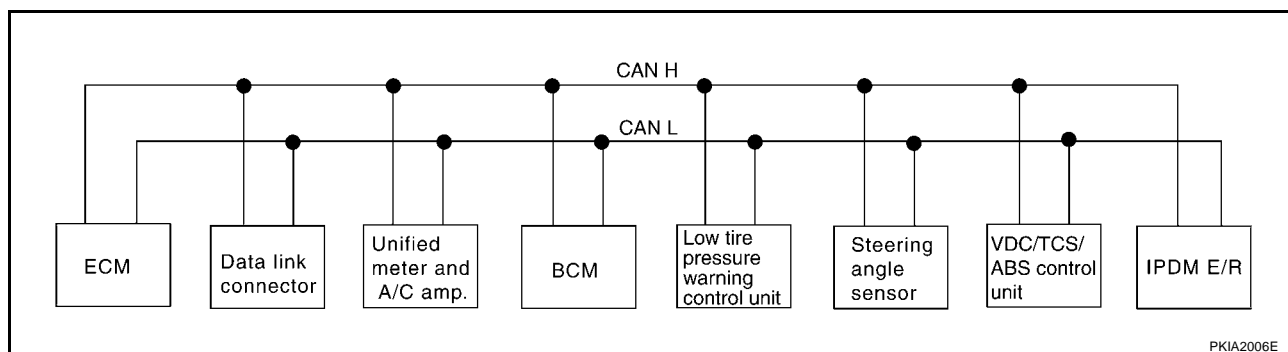
## TYPE 6/TYPE7

### System diagram

- Type6



- Type7



### Input/output signal chart

T: Transmit R: Receive

Signals	ECM	Unified meter and A/C amp.	BCM	Low tire pressure warning control unit	Steering angle sensor	VDC/TCS/ABS control unit	IPDM E/R
Engine speed signal	T	R				R	
Engine coolant temperature signal	T	R					
Accelerator pedal position signal	T					R	
Fuel consumption monitor signal	T	R					
Air conditioner switch signal	R		T				
A/C compressor request signal	T						R
A/C compressor feedback signal	T	R					
Blower fan motor switch signal	R		T				
Cooling fan speed request signal	T						R
Position lights request signal		R	T				R
Low beam request signal			T				R
Low beam status signal	R						T
High beam request signal		R	T				R
High beam status signal	R						T
Vehicle speed signal		R				T	
	R	T	R	R			
Sleep request 1 signal		R	T				
Sleep request 2 signal			T				R
Wake up request 1 signal		R	T				

# CAN COMMUNICATION

[CAN]

Signals	ECM	Unified meter and A/C amp.	BCM	Low tire pressure warning control unit	Steering angle sensor	VDC/TCS/ABS control unit	IPDM E/R
Door switch signal		R	T				R
Turn indicator signal		R	T				
Seat belt buckle switch signal		T	R				
Buzzer output signal		R	T				
Fuel level sensor signal	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						T
Hood switch signal			R				T
Theft warning horn request signal			T				R
Horn chirp signal			T				R
Steering angle sensor signal					T	R	
Tire pressure signal		R		T			
ABS warning lamp signal		R				T	
VDC OFF indicator lamp signal		R				T	
SLIP indicator lamp signal		R				T	
Brake (EBD) warning lamp signal		R				T	

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## CAN SYSTEM (TYPE 1)

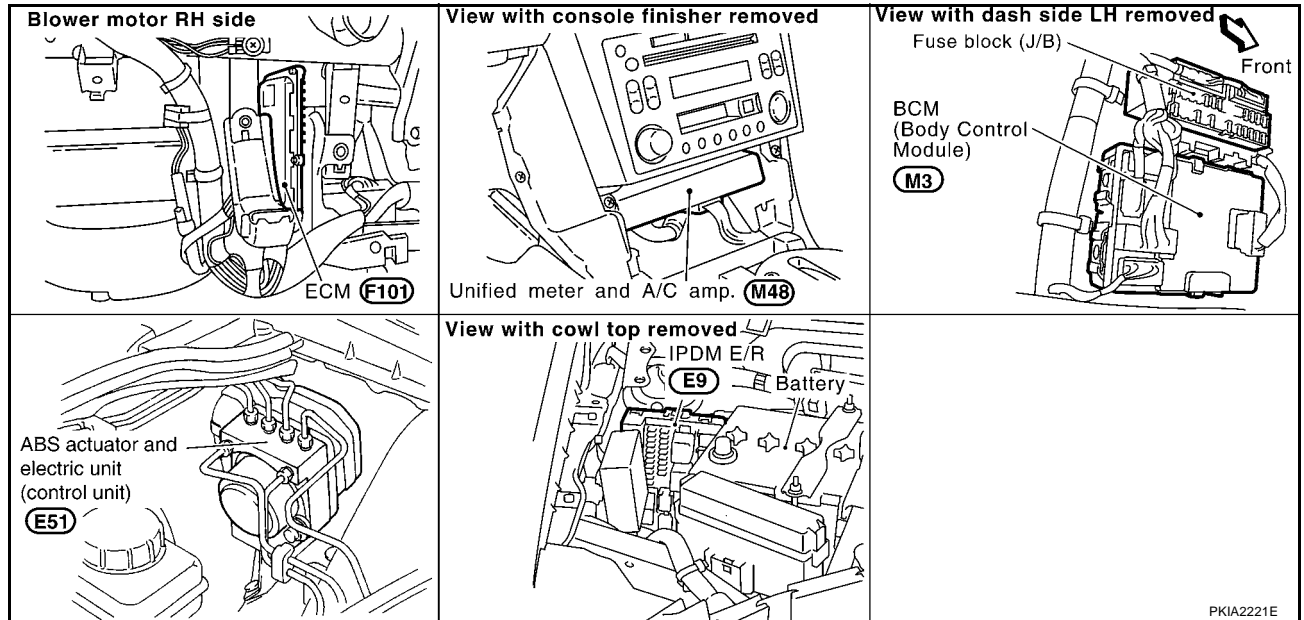
## System Description

AKS0035L

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

AKS0035M



PKIA2221E

# CAN SYSTEM (TYPE 1)

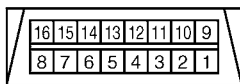
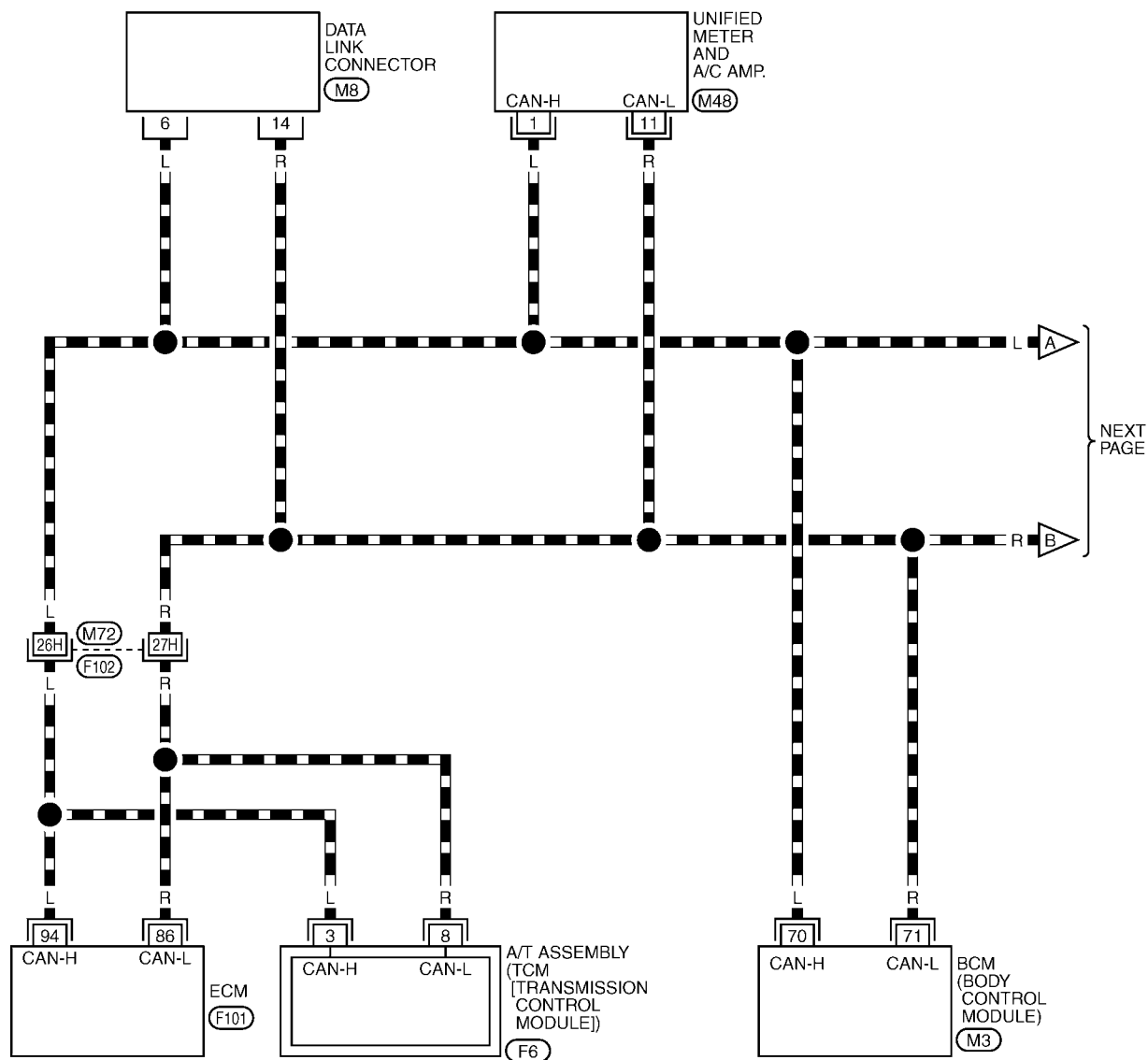
[CAN]

## Wiring Diagram — CAN —

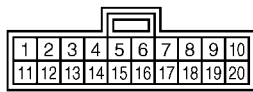
AKS0035N

LAN-CAN-01

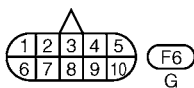
DATA LINE



(M8)  
W



(M48)  
GY



(F6)  
G

REFER TO THE FOLLOWING.

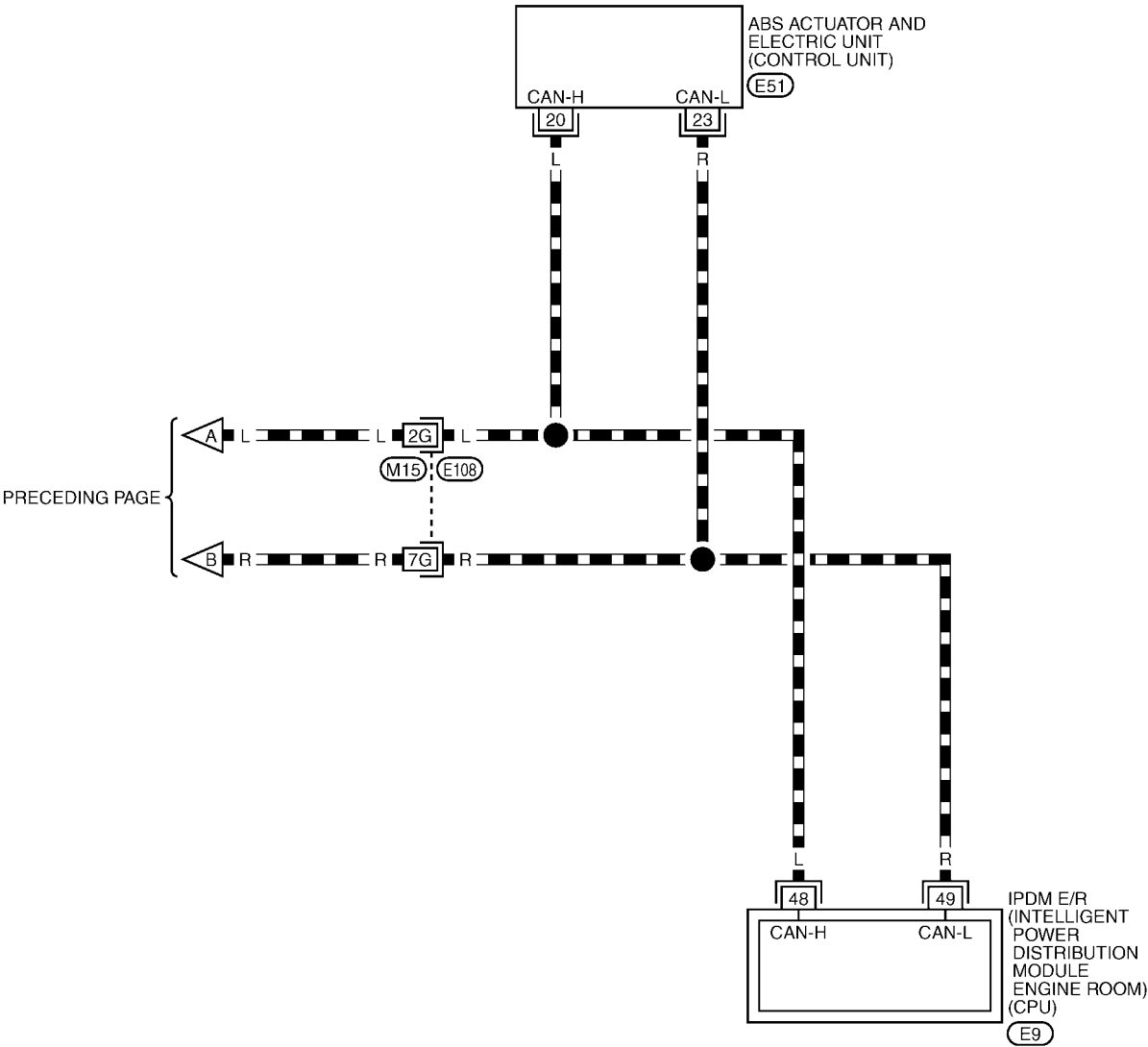
(F102) -SUPER MULTIPLE JUNCTION (SMJ)

(M3), (F101) -ELECTRICAL UNITS

TKWT0406E

LAN-CAN-02

DATA LINE



49	48	47	46	45
56	55	54	53	52
51	50			



REFER TO THE FOLLOWING.

- (E108) -SUPER MULTIPLE JUNCTION (SMJ)
- (E51) -ELECTRICAL UNITS



## Work Flow

AKS00350

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

(Example)

NISSAN	
CONSULT-II	
ENGINE	
START (NISSAN BASED VHCL)	
START (RENAULT BASED VHCL)	
SUB MODE	
	LIGHT COPY

SELECT SYSTEM	
ENGINE	
A/T	
ABS	
AIR BAG	
BCM	
METER A/C AMP	
BACK	LIGHT COPY

PKIA2093E

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

(Example)

SELECT DIAG MODE	
WORK SUPPORT	
SELF-DIAG RESULTS	
DATA MONITOR	
DATA MONITOR (SPEC)	
ACTIVE TEST	
FUNCTION TEST	
Scroll Down	
BACK	LIGHT COPY

SELF-DIAG RESULTS	
DTC RESULTS	TIME
CAN COMM CIRCUIT [U1000]	0
F.F.DATA	
ERASE	PRINT
MODE BACK	LIGHT COPY

PKIA2094E

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

(Example)

SELECT DIAG MODE	
WORK SUPPORT	
SELF-DIAG RESULTS	
DATA MONITOR	
DATA MONITOR (SPEC)	
ACTIVE TEST	
FUNCTION TEST	
Scroll Down	
BACK	LIGHT COPY

DATA MONITOR	
SELECT MONITOR ITEM	
ECM INPUT SIGNALS	
MAIN SIGNALS	
CAN DIAG SUPPORT MNTR	
SELECTION FROM MENU	
SETTING	Numerical Display
MODE BACK	LIGHT COPY

DATA MONITOR	
MONITOR	NO DTC
CAN COMM	OK
CAN CIRC 1	OK
CAN CIRC 2	OK
CAN CIRC 3	OK
CAN CIRC 4	OK
CAN CIRC 5	UNKWN
CAN CIRC 6	OK
CAN CIRC 7	OK
RECORD	
MODE BACK	LIGHT COPY

PKIA2095E

- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" onto the check sheet. Refer to [LAN-18, "CHECK SHEET"](#).
- Based on the indications of "SELECT SYSTEM" and the results of "DATA MONITOR (CAN DIAG SUPPORT MNTR)", put marks "V" onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-18, "CHECK SHEET"](#).

**NOTE:**

- If "NG" is displayed on "CAN COMM" as "DATA MONITOR (CAN DIAG SUPPORT MNTR)" for the diagnosed control unit, replace the control unit.
  - The "DATA MONITOR (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 the "DATA MONITOR (CAN DIAG SUPPORT MNTR)" items not in check sheet table.
- According to the check sheet results (example), start inspection. Refer to [LAN-20, "CHECK SHEET RESULTS \(EXAMPLE\)"](#).

# CAN SYSTEM (TYPE 1)

[CAN]

## CHECK SHEET

Check sheet table

SELECT SYSTEM		DATA MONITOR (CAN DIAG SUPPORT MNTR)							
ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	CAN CIRC 4	CAN CIRC 6	CAN CIRC 3	CAN CIRC 7
A/T	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 3	—
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	—	—	—

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

PKIA2202E

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

Attach copy of  
ENGINE  
SELF-DIAG RESULTS

Attach copy of  
A/T  
SELF-DIAG RESULTS

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

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

Attach copy of  
ENGINE  
DATA MONITOR

Attach copy of  
A/T  
DATA MONITOR

Attach copy of  
METER A/C AMP  
DATA MONITOR

Attach copy of  
BCM  
DATA MONITOR

Attach copy of  
ABS  
DATA MONITOR

# CAN SYSTEM (TYPE 1)

[CAN]

## CHECK SHEET RESULTS (EXAMPLE)

Case 1 : Replace ECM

ENGINE	—	<del>CAN COMM</del>	CAN CIRC 1	—	CAN CIRC 2	CAN CIRC 4	CAN CIRC 6	CAN CIRC 3	CAN CIRC 7
A/T	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 3	—
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	—	—	—

ENGINE	—	CAN COMM	CAN CIRC 1	—	<del>CAN CIRC 2</del>	<del>CAN CIRC 4</del>	<del>CAN CIRC 6</del>	<del>CAN CIRC 3</del>	<del>CAN CIRC 7</del>
A/T	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 3	—
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	—	—	—

Case 2 : Replace A/T assembly

ENGINE	—	CAN COMM	CAN CIRC 1	—	<del>CAN CIRC 2</del>	CAN CIRC 4	CAN CIRC 6	CAN CIRC 3	CAN CIRC 7
A/T	—	<del>CAN COMM</del>	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 3	—
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	<del>CAN CIRC 3</del>	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	<del>CAN CIRC 3</del>	—	—	—	—

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	CAN CIRC 4	CAN CIRC 6	CAN CIRC 3	CAN CIRC 7
A/T	—	CAN COMM	CAN CIRC 1	<del>CAN CIRC 2</del>	—	<del>CAN CIRC 4</del>	—	<del>CAN CIRC 3</del>	—
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	—	—	—

# CAN SYSTEM (TYPE 1)

[CAN]

Case 3 : Replace unified meter and A/C amp.

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	CAN CIRC 4	CAN CIRC 6	CAN CIRC 3	CAN CIRC 7
A/T	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 3	—
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2 ✓	CAN CIRC 3 ✓	—	CAN CIRC 6 ✓	CAN CIRC 3 ✓	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	—	—	—

Case 4 : Replace BCM

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	CAN CIRC 4	CAN CIRC 6	CAN CIRC 3	CAN CIRC 7
A/T	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 3	—
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM ✓	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	—	—	—

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	CAN CIRC 4	CAN CIRC 6	CAN CIRC 3	CAN CIRC 7
A/T	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 3	—
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2 ✓	—	CAN CIRC 4 ✓	—	—	CAN CIRC 3 ✓
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	—	—	—

Case 5 : Replace ABS actuator and electric unit (control unit)

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	CAN CIRC 4	CAN CIRC 6	CAN CIRC 3 ✓	CAN CIRC 7
A/T	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 3 ✓	—
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	CAN CIRC 4	CAN CIRC 3 ✓	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM ✓	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	—	—	—

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	CAN CIRC 4	CAN CIRC 6	CAN CIRC 3	CAN CIRC 7
A/T	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 3	—
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2 ✓	CAN CIRC 3 ✓	—	—	—	—

PKIA2205E

# CAN SYSTEM (TYPE 1)

[CAN]

Case 6

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	CAN CIRC 3	CAN CIRC 4	CAN CIRC 5	CAN CIRC 6
A/T	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 3	—	CAN CIRC 5	—
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 3	CAN CIRC 5	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	CAN CIRC 5	—	—	—	—

Case 7

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	CAN CIRC 3	CAN CIRC 4	CAN CIRC 5	CAN CIRC 6
A/T	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 3	—	CAN CIRC 5	—
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	CAN CIRC 5	—	—	—	—

Case 8

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	CAN CIRC 4	CAN CIRC 5	CAN CIRC 6	CAN CIRC 7
A/T	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 6	—
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	CAN CIRC 5	CAN CIRC 6	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	CAN CIRC 5	—	—	—	—

Case 9

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	CAN CIRC 4	CAN CIRC 6	CAN CIRC 7	CAN CIRC 8
A/T	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 7	—
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	CAN CIRC 4	CAN CIRC 7	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	—	CAN CIRC 8
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	CAN CIRC 5	—	—	—	—

PKIA2206E

# CAN SYSTEM (TYPE 1)

[CAN]

Case 10

ENGINE	—	CAN COMM	CAN CIRC ✓	—	CAN CIRC ✓	CAN CIRC ✓	CAN CIRC ✓	CAN CIRC ✓	CAN CIRC ✓
A/T	—	CAN COMM	CAN CIRC 1	CAN CIRC ✓	—	CAN CIRC 4	—	CAN CIRC 3	—
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC ✓	CAN CIRC 3	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC ✓	—	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC ✓	CAN CIRC 3	—	—	—	—

Case 11

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC ✓	CAN CIRC 4	CAN CIRC 6	CAN CIRC 3	CAN CIRC 7
A/T	—	CAN COMM	CAN CIRC ✓	CAN CIRC ✓	—	CAN CIRC ✓	—	CAN CIRC ✓	—
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	CAN CIRC ✓	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC ✓	—	—	—	—

Case 12

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	CAN CIRC 4	CAN CIRC 6	CAN CIRC 3	CAN CIRC 7
A/T	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 3	—
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	—	—	—

Case 13

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	CAN CIRC ✓	CAN CIRC 6	CAN CIRC 3	CAN CIRC 7
A/T	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC ✓	—	CAN CIRC 3	—
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC ✓	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	—	—	—

PKIA2207E

# CAN SYSTEM (TYPE 1)

[CAN]

Case 14

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	CAN CIRC 4	CAN CIRC 6	CAN CIRC 3	CAN CIRC 7
A/T	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 3	—
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	CAN CIRC 6	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	—	CAN CIRC 7
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	—	—	—

Case 15

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	CAN CIRC 4	CAN CIRC 6	CAN CIRC 3	CAN CIRC 7
A/T	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 3	—
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	—	—	—

Case 16

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	CAN CIRC 4	CAN CIRC 6	CAN CIRC 3	CAN CIRC 7
A/T	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 3	—
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	—	CAN CIRC 7
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	—	—	—

Case 17

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	CAN CIRC 4	CAN CIRC 6	CAN CIRC 3	CAN CIRC 7
A/T	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 3	—
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	—	CAN CIRC 7
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	—	—	—

PKIA2208E



# CAN SYSTEM (TYPE 1)

[CAN]

Case 18

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	CAN CIRC 4	CAN CIRC 6	CAN CIRC 3	CAN CIRC 7
A/T	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 3	—
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	—	—	—

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	CAN CIRC 4	CAN CIRC 6	CAN CIRC 3	CAN CIRC 7
A/T	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 3	—
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 3	—	—	—	—

PKIA2209E

## INSPECTION

Proceed trouble diagnosis according to the check sheet results (example).

Case 1: Replace ECM.

Case 2: Replace A/T assembly.

Case 3: Replace unified meter and A/C amp.

Case 4: Replace BCM.

Case 5: Replace ABS actuator and electric unit (control unit).

Case 6: Check harness between TCM and data link connector. Refer to [LAN-26, "Circuit Check Between TCM and Data Link Connector"](#).

Case 7: Check harness between data link connector and unified meter and A/C amp. Refer to [LAN-27, "Circuit Check Between Data Link Connector and Unified Meter and A/C Amp."](#).

Case 8: Check harness between unified meter and A/C amp. and BCM. Refer to [LAN-27, "Circuit Check Between Unified Meter and A/C Amp. and BCM"](#).

Case 9: Check harness between BCM and ABS actuator and electric unit (control unit). Refer to [LAN-28, "Circuit Check Between BCM and ABS Actuator and Electric Unit \(Control Unit\)"](#).

Case 10: Check ECM circuit. Refer to [LAN-29, "ECM Circuit Check"](#).

Case 11: Check TCM circuit. Refer to [LAN-30, "TCM Circuit Check"](#).

Case 12: Check data link connector circuit. Refer to [LAN-31, "Data Link Connector Circuit Check"](#).

Case 13: Check unified meter and A/C amp. circuit. Refer to [LAN-31, "Unified Meter and A/C Amp. Circuit Check"](#).

Case 14: Check BCM circuit. Refer to [LAN-32, "BCM Circuit Check"](#).

Case 15: Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-33, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#).

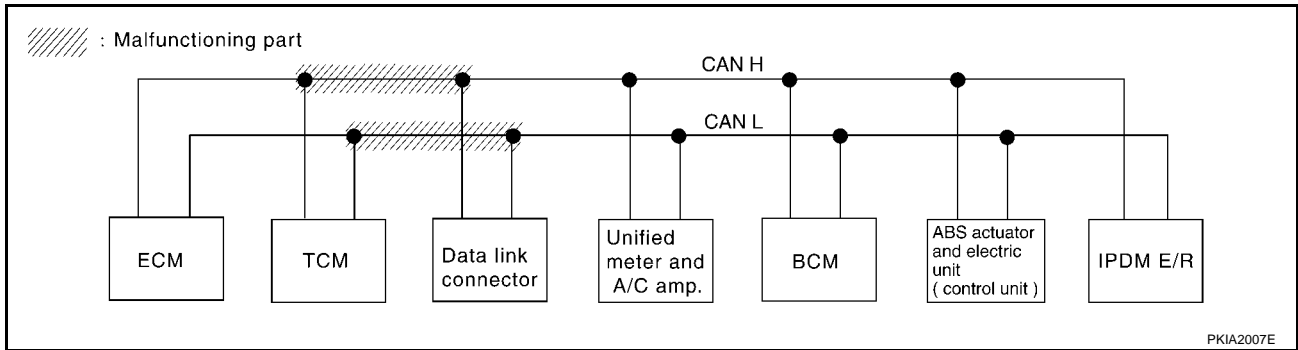
Case 16: Check IPDM E/R circuit. Refer to [LAN-33, "IPDM E/R Circuit Check"](#).

Case 17: Check CAN communication circuit. Refer to [LAN-34, "CAN Communication Circuit Check"](#).

Case 18: Check IPDM E/R Ignition relay circuit. Refer to [LAN-37, "IPDM E/R Ignition Relay Circuit Check"](#).

## Circuit Check Between TCM and Data Link Connector

AKS0035P



### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connector for damage, bend and loose connection (connector-side and harness-side).
  - Harness connector F102
  - Harness connector M72

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect A/T assembly connector and harness connector F102.
2. Check continuity between A/T assembly harness connector F6 terminals 3 (L), 8 (R) and harness connector F102 terminals 26H (L), 27H (R).

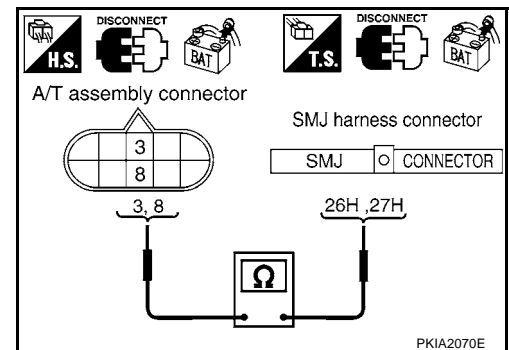
**3 (L) – 26H (L) : Continuity should exist.**

**8 (R) – 27H (R) : Continuity should exist.**

OK or NG

OK >> GO TO 3.

NG >> Repair harness.



### 3. CHECK HARNESS FOR OPEN CIRCUIT

Check continuity between harness connector M72 terminals 26H (L), 27H (R) and data link connector M8 terminals 6 (L), 14 (R).

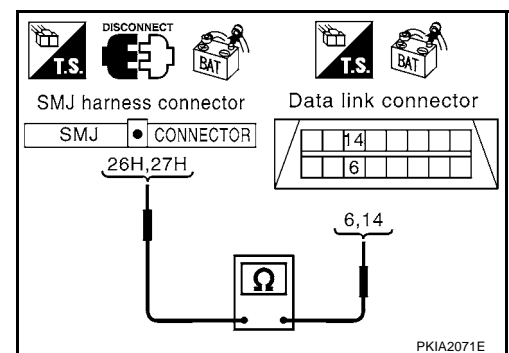
**26H (L) – 6 (L) : Continuity should exist.**

**27H (R) – 14 (R) : Continuity should exist.**

OK or NG

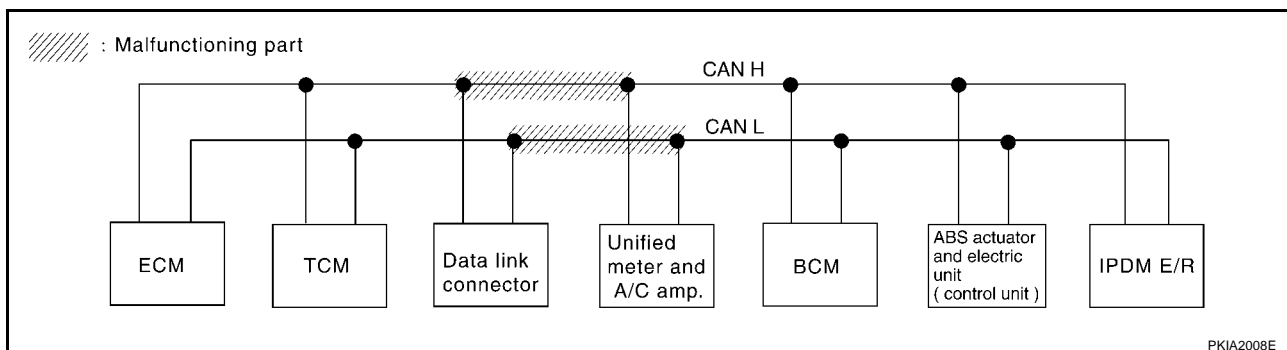
OK >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-17, "Work Flow"](#).

NG >> Repair harness.



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

AKS0035Q



## 1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and unified meter and A/C amp. connector.
4. Check continuity between data link connector M8 terminals 6 (L), 14 (R) and unified meter and A/C amp. harness connector M48 terminals 1 (L), 11 (R).

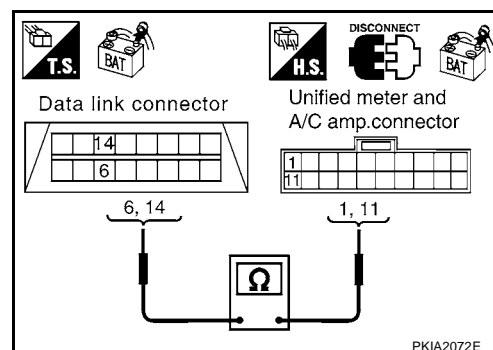
6 (L) – 1 (L) : Continuity should exist.

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

OK or NG

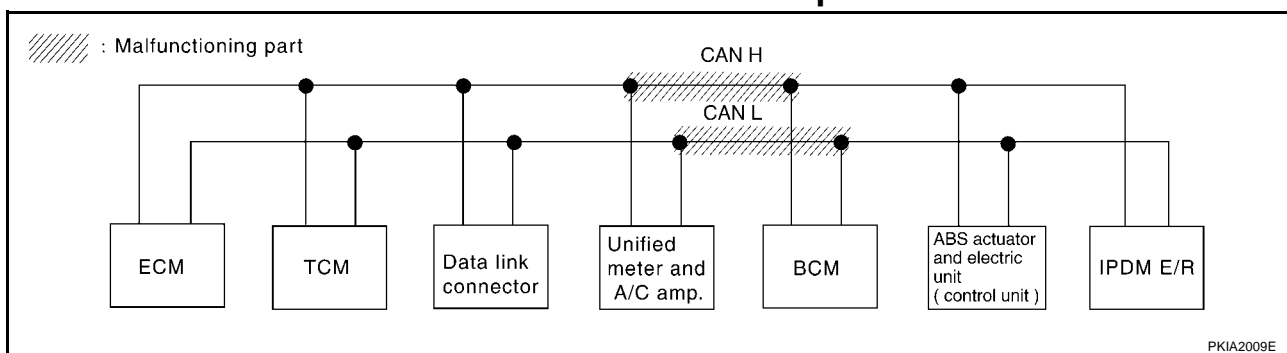
OK >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-17, "Work Flow"](#).

NG >> Repair harness.



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

AKS0035R

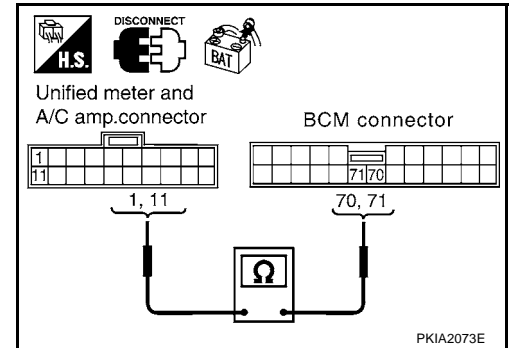


## 1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect the following connectors.
  - ECM connector
  - Unified meter and A/C amp. connector
  - BCM connector
4. Check continuity between unified meter and A/C amp. harness connector M48 terminals 1 (L), 11 (R) and BCM harness connector M3 terminals 70 (L), 71 (R).

**1 (L) – 70 (L) : Continuity should exist.**

**11 (R) – 71 (R) : Continuity should exist.**



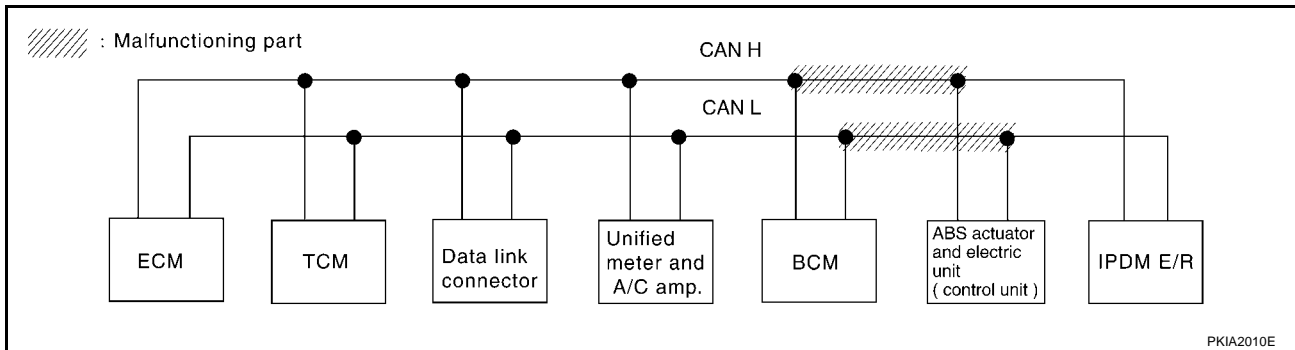
### OK or NG

OK >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-17, "Work Flow"](#).

NG >> Repair harness.

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

AKS0035S



## 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connector for damage, bend and loose connection (connector-side and harness-side).
  - Harness connector M15
  - Harness connector E108

### OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector and harness connector M15.
2. Check continuity between BCM harness connector M3 terminals 70 (L), 71 (R) and harness connector M15 terminals 2G (L), 7G (R).

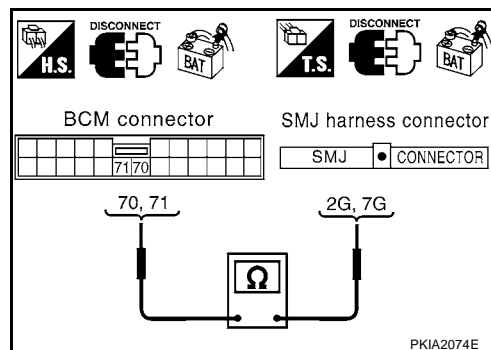
**70 (L) – 2G (L) : Continuity should exist.**

**71 (R) – 7G (R) : Continuity should exist.**

OK or NG

OK >> GO TO 3.

NG >> Repair harness.



## 3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E108 terminals 2G (L), 7G (R) and ABS actuator and electric unit (control unit) harness connector E51 terminals 20 (L), 23 (R).

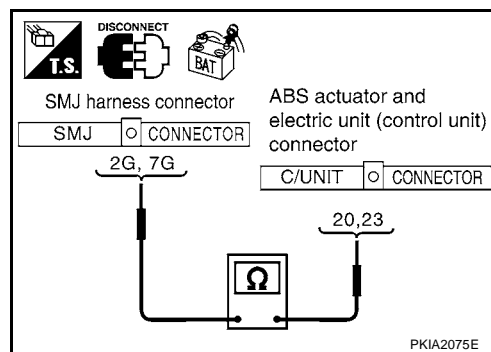
**2G (L) – 20 (L) : Continuity should exist.**

**7G (R) – 23 (R) : Continuity should exist.**

OK or NG

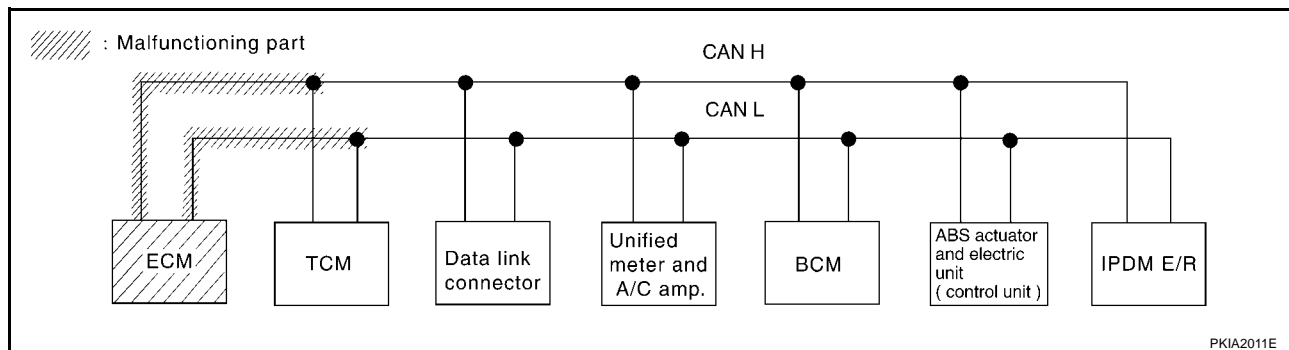
OK >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-17, "Work Flow"](#).

NG >> Repair harness.



## ECM Circuit Check

AKS0035T



## 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connector for damage, bend and loose connection (control module-side and harness-side).
  - ECM connector
  - Harness connector F102
  - Harness connector M72

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

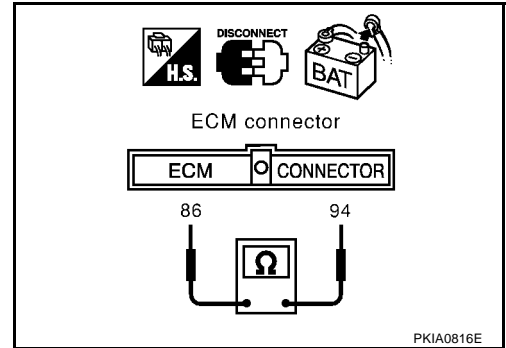
1. Disconnect ECM connector.
2. Check resistance between ECM harness connector F101 terminals 94 (L) and 86 (R).

**94 (L) – 86 (R)**

**: Approx. 108 – 132Ω**

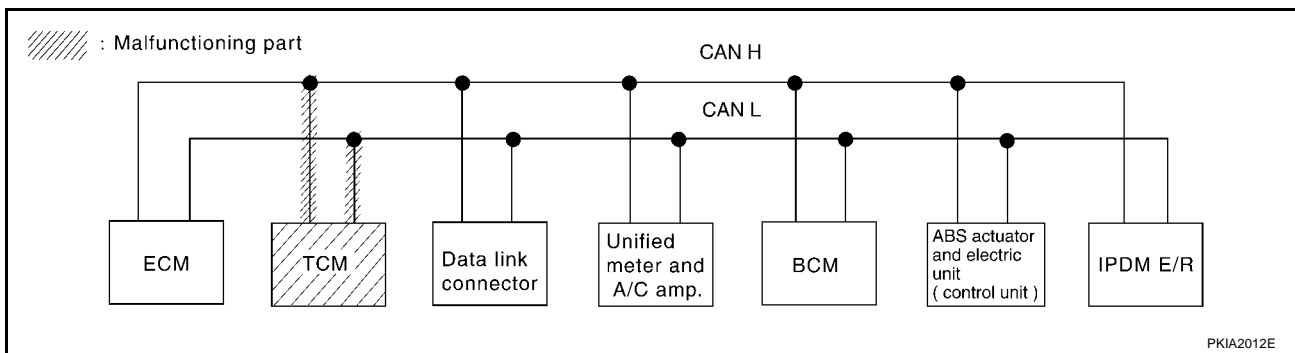
OK or NG

- OK >> Replace ECM.  
NG >> Repair harness between ECM and A/T assembly.



## TCM Circuit Check

AKS0035U



## 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check the terminals and connector of A/T assembly 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

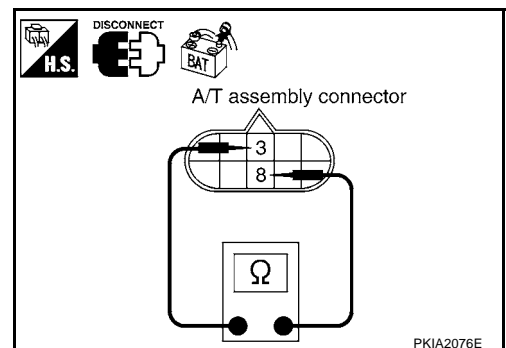
1. Disconnect A/T assembly connector.
2. Check resistance between A/T assembly harness connector F6 terminals 3 (L) and 8 (R).

**3 (L) – 8 (R)**

**: Approx. 54 – 66Ω**

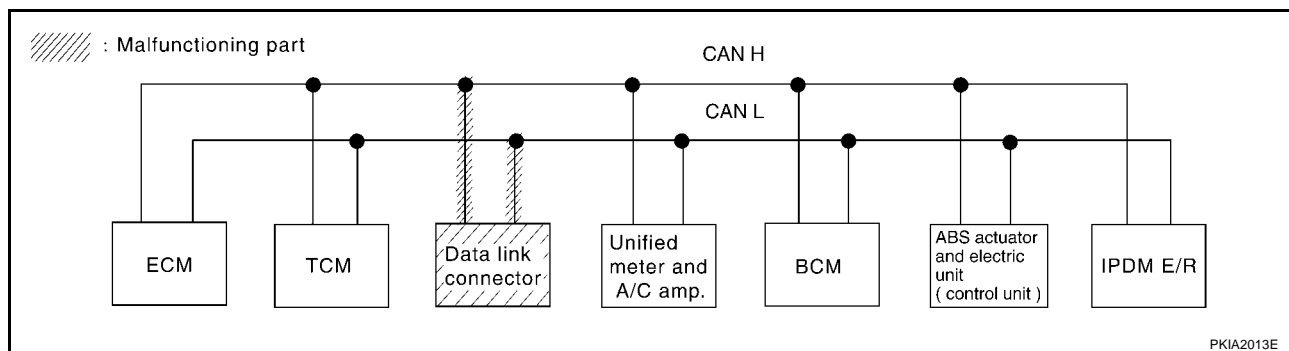
OK or NG

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



## Data Link Connector Circuit Check

AKS0035V



PKIA2013E

## 1. CHECK CONNECTOR

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

## OK or NG

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

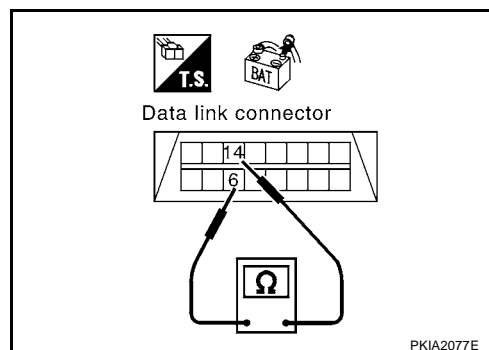
## 2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M8 terminals 6 (L) and 14 (R).

**6 (L) – 14 (R) : Approx. 54 – 66Ω**

## OK or NG

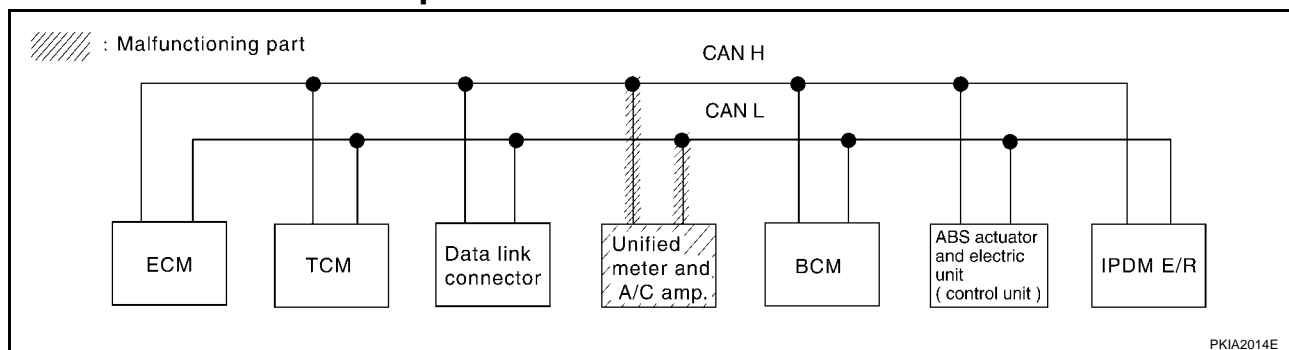
- OK >> Perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-17, "Work Flow"](#).
- NG >> Repair harness between data link connector and unified meter and A/C amp.



PKIA2077E

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

AKS0035W



PKIA2014E

## 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.

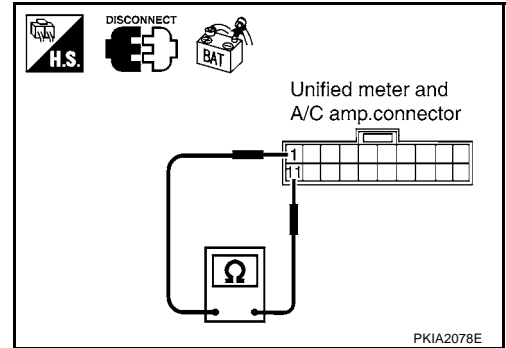
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M48 terminals 1 (L) and 11 (R).

**1 (L) – 11 (R) : Approx. 54 – 66Ω**

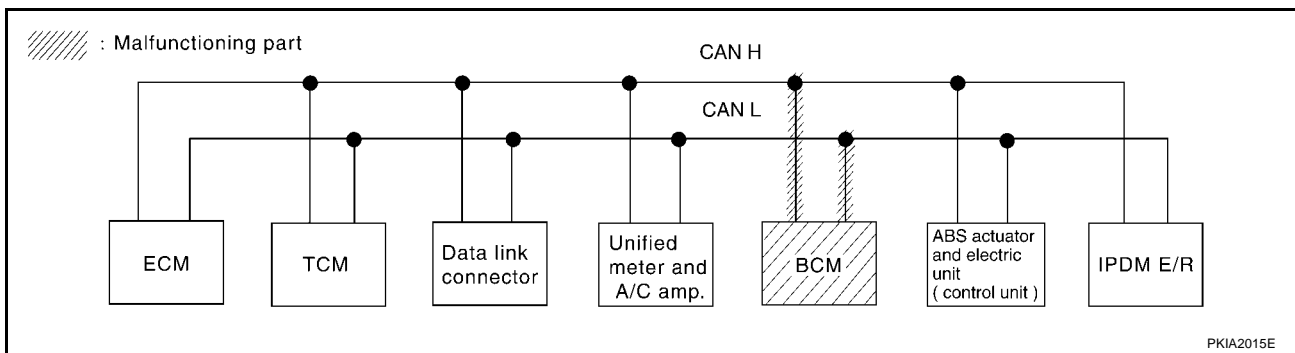
OK or NG

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



## BCM Circuit Check

AKS0035X



## 1. CHECK CONNECTOR

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

OK or NG

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

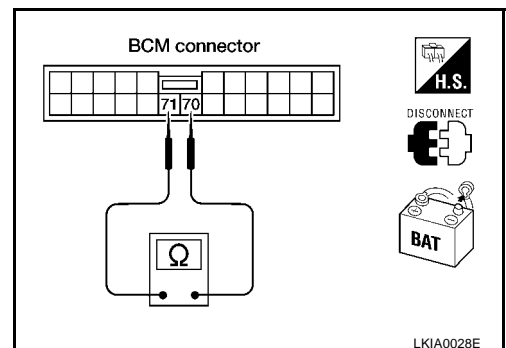
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M3 terminals 70 (L) and 71 (R).

**70 (L) – 71 (R) : Approx. 54 – 66Ω**

OK or NG

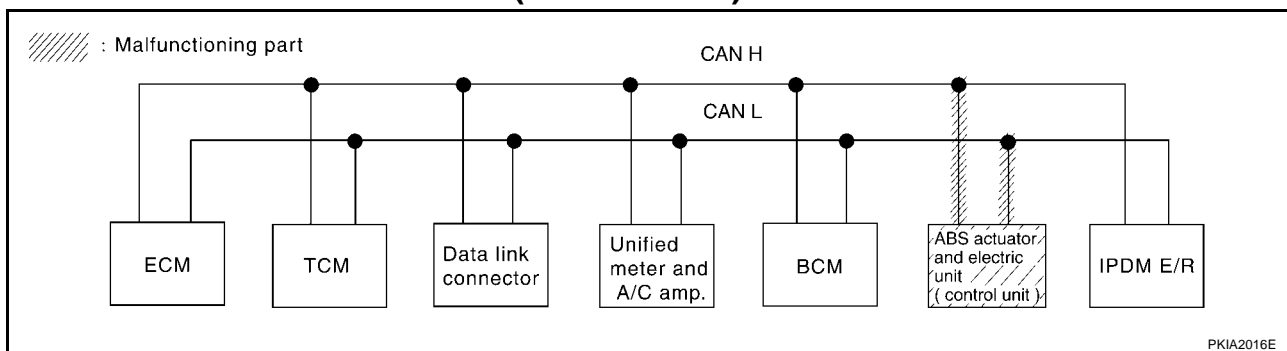
- OK >> Replace BCM.  
 NG >> Repair harness between BCM and harness connector M15.





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

AKS0035Y



## 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check the 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 &gt;&gt; GO TO 2.

NG &gt;&gt; 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 E51 terminals 20 (L) and 23 (R).

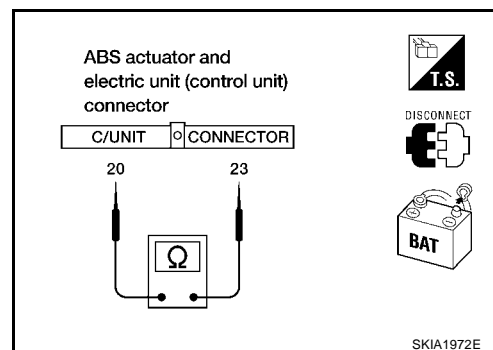
20 (L) – 23 (R)

: Approx. 54 – 66Ω

OK or NG

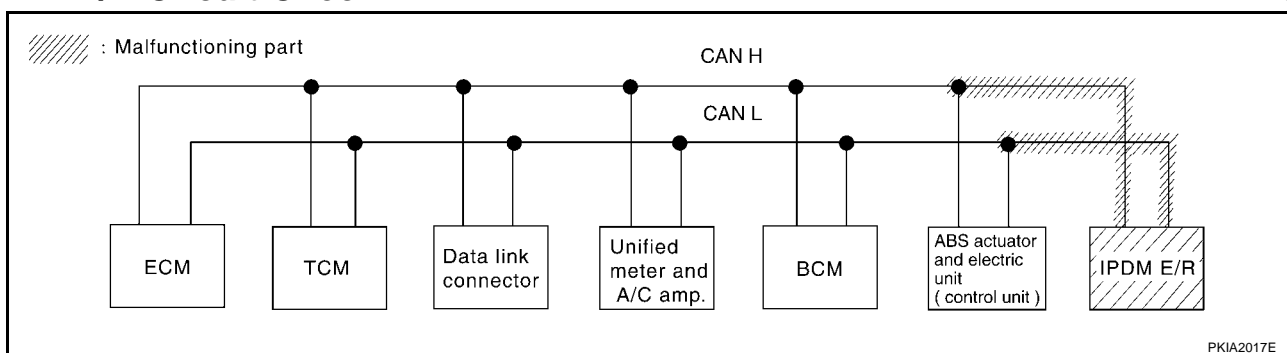
OK &gt;&gt; Replace ABS actuator and electric unit (control unit).

NG &gt;&gt; Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



## IPDM E/R Circuit Check

AKS0035Z



## 1. CHECK CONNECTOR

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

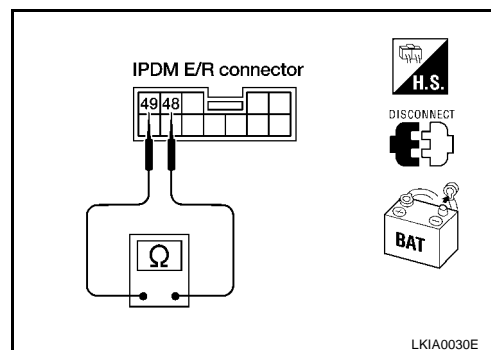
## 2. CHECK HARNESS FOR OPEN CIRCUIT

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

**48 (L) – 49 (R) : Approx. 108 – 132Ω**

OK or NG

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



## CAN Communication Circuit Check

### 1. CHECK CONNECTOR

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

OK or NG

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

AKS00360

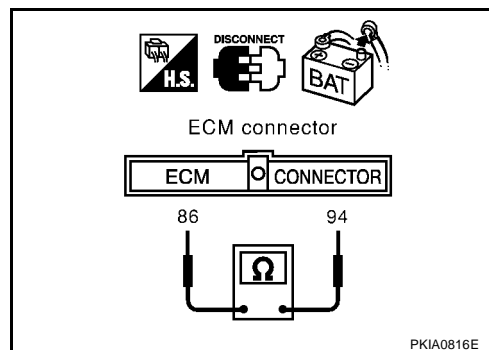
## 2. CHECK HARNESS FOR SHORT CIRCUIT

- Disconnect following connectors.
  - ECM connector
  - A/T assembly connector
  - Harness connector F102
- Check continuity between ECM harness connector F101 terminals 94 (L) and 86 (R).

**94 (L) – 86 (R) : Continuity should not exist.**

OK or NG

- OK >> GO TO 3.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
- Harness between ECM and A/T assembly.
  - Harness between ECM and harness connector F102.



## 3. CHECK HARNESS FOR SHORT CIRCUIT

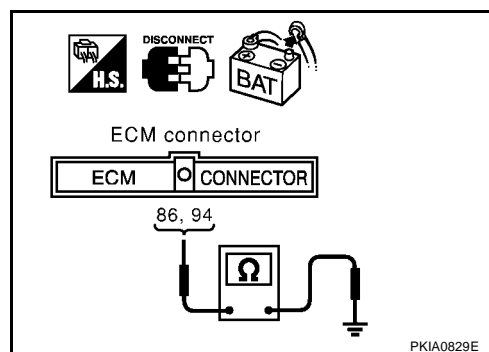
Check continuity between ECM harness connector F101 terminals 94 (L), 86 (R) and ground.

**94 (L) – ground : Continuity should not exist.**

**86 (R) – ground : Continuity should not exist.**

OK or NG

- OK >> GO TO 4.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
- Harness between ECM and A/T assembly.
  - Harness between ECM and harness connector F102.



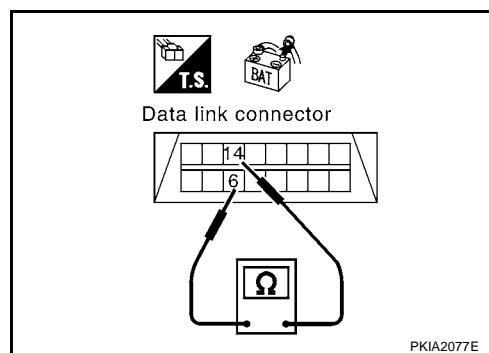
## 4. CHECK HARNESS FOR SHORT CIRCUIT

- Disconnect following connectors.
  - Unified meter and A/C amp. connector
  - BCM connector
  - Harness connector M15
- Check continuity between data link connector M8 terminals 6 (L) and 14 (R).

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

OK or NG

- OK >> GO TO 5.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
- Harness between data link connector and harness connector M72.
  - Harness between data link connector and unified meter and A/C amp.
  - Harness between data link connector and BCM.
  - Harness between data link connector and harness connector M15.



## 5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M8 terminals 6 (L), 14 (R) and ground.

**6 (L) – ground : Continuity should not exist.**

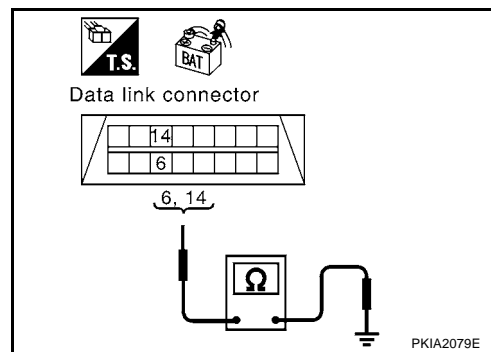
**14 (R) – ground : Continuity should not exist.**

OK or NG

OK >> GO TO 6.

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

- Harness between data link connector and harness connector M72.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and BCM.
- Harness between data link connector and harness connector M15.



## 6. 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 (R).

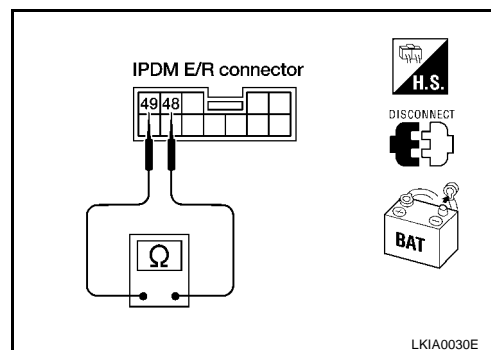
**48 (L) – 49 (R) : Continuity should not exist.**

OK or NG

OK >> GO TO 7.

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

- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E108.



## 7. CHECK HARNESS FOR SHORT CIRCUIT

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

**48 (L) – ground : Continuity should not exist.**

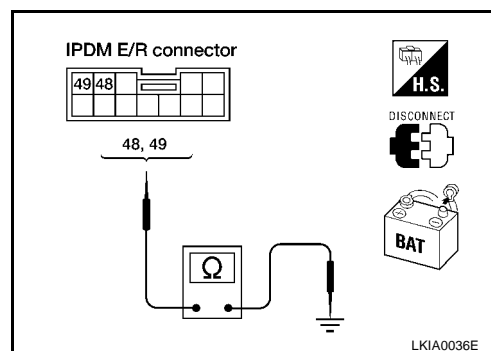
**49 (R) – ground : Continuity should not exist.**

OK or NG

OK >> GO TO 8.

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 E108.



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

Check components inspection. Refer to [LAN-37, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

OK or NG

OK >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-17, "Work Flow"](#).

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

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

AKS00362

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

- IPDM E/R power supply circuit. Refer to [PG-29, "IPDM E/R Power/Ground Circuit Inspection"](#) .
- Ignition power supply circuit. Refer to [PG-11, "IGNITION POWER SUPPLY — IGNITION SW. IN "ON" AND/OR "START" "](#) .

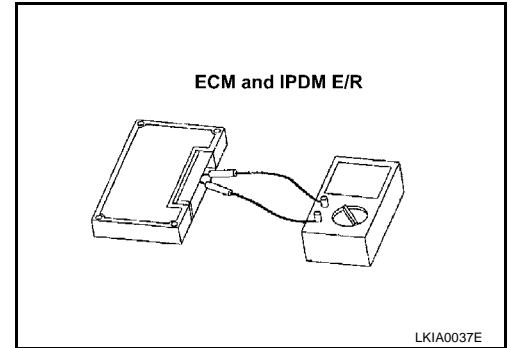
**Component Inspection**

AKS00363

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

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

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



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

## CAN SYSTEM (TYPE 2)

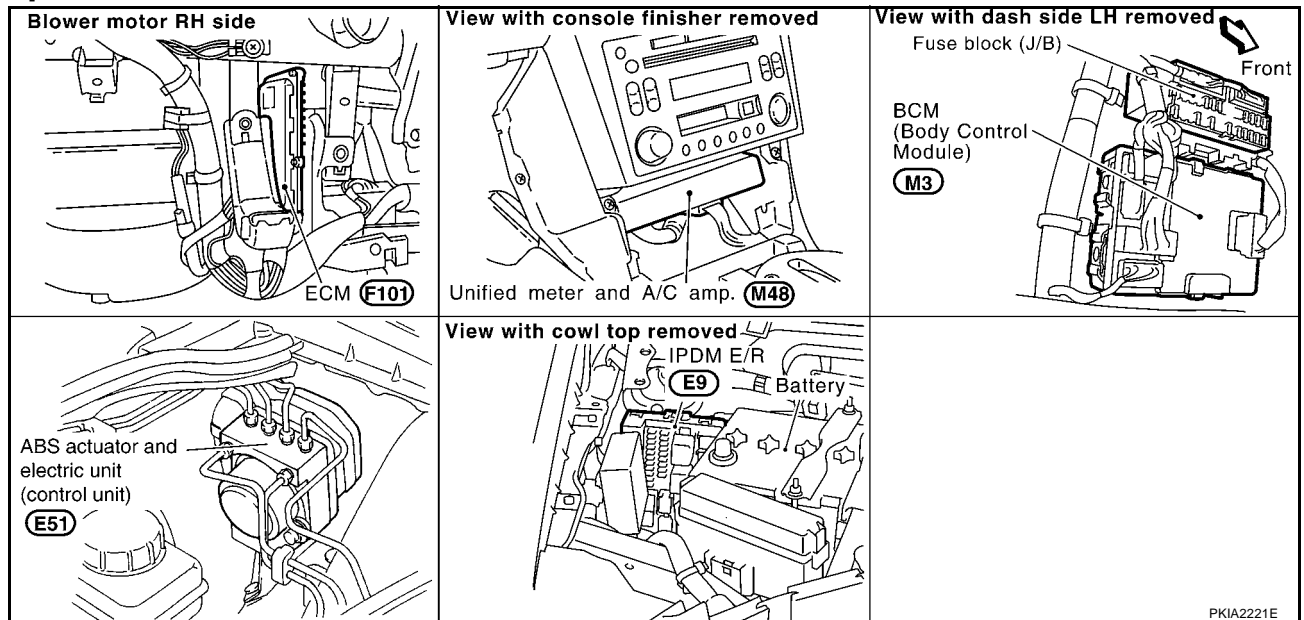
## System Description

AKS00326

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

AKS00327


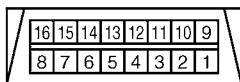
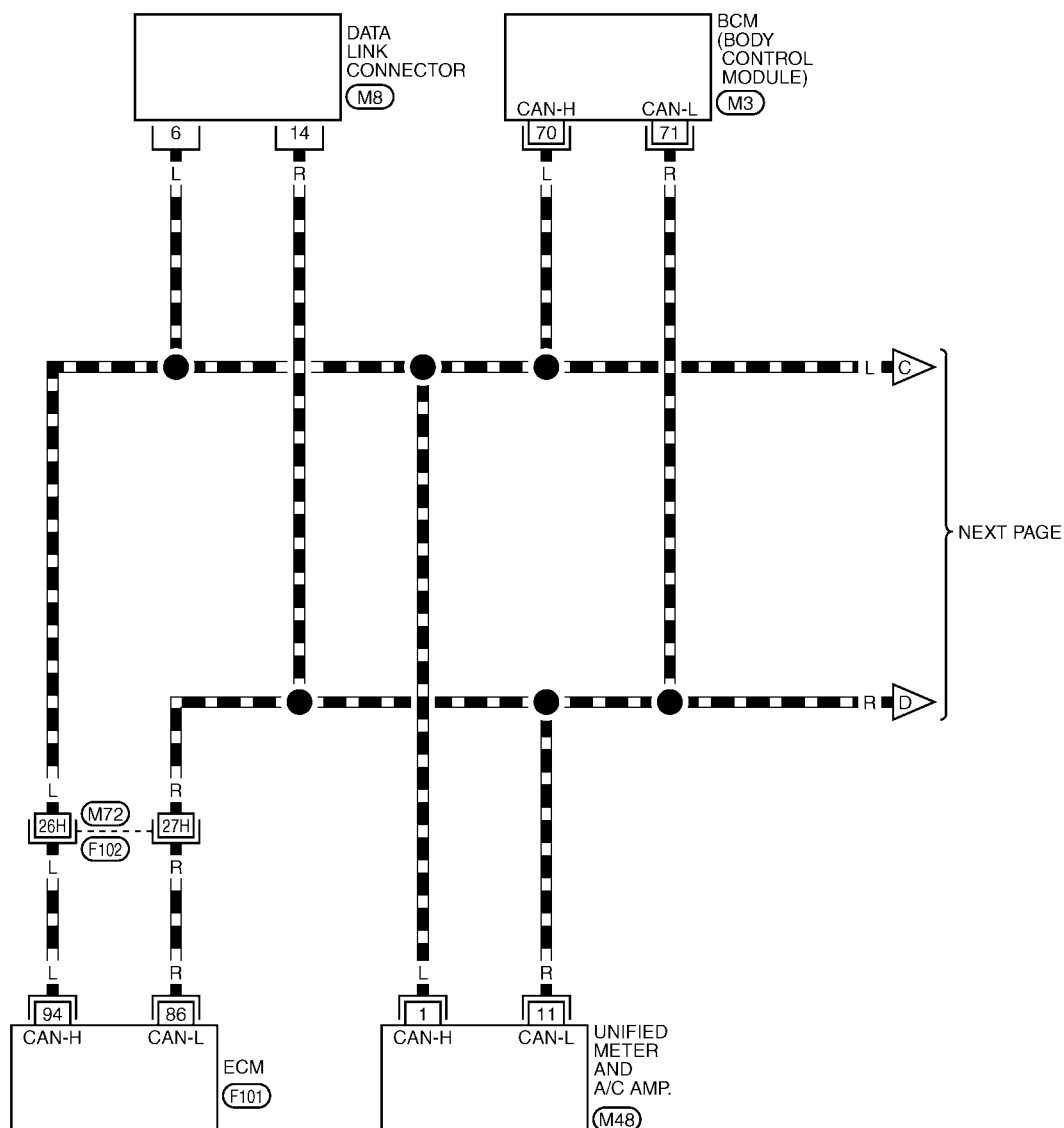


PKIA2221E

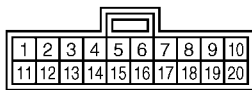
## Wiring Diagram — CAN —

AKS00329

## LAN-CAN-03

 : DATA LINE


(M8)  
W



(M48)  
GY

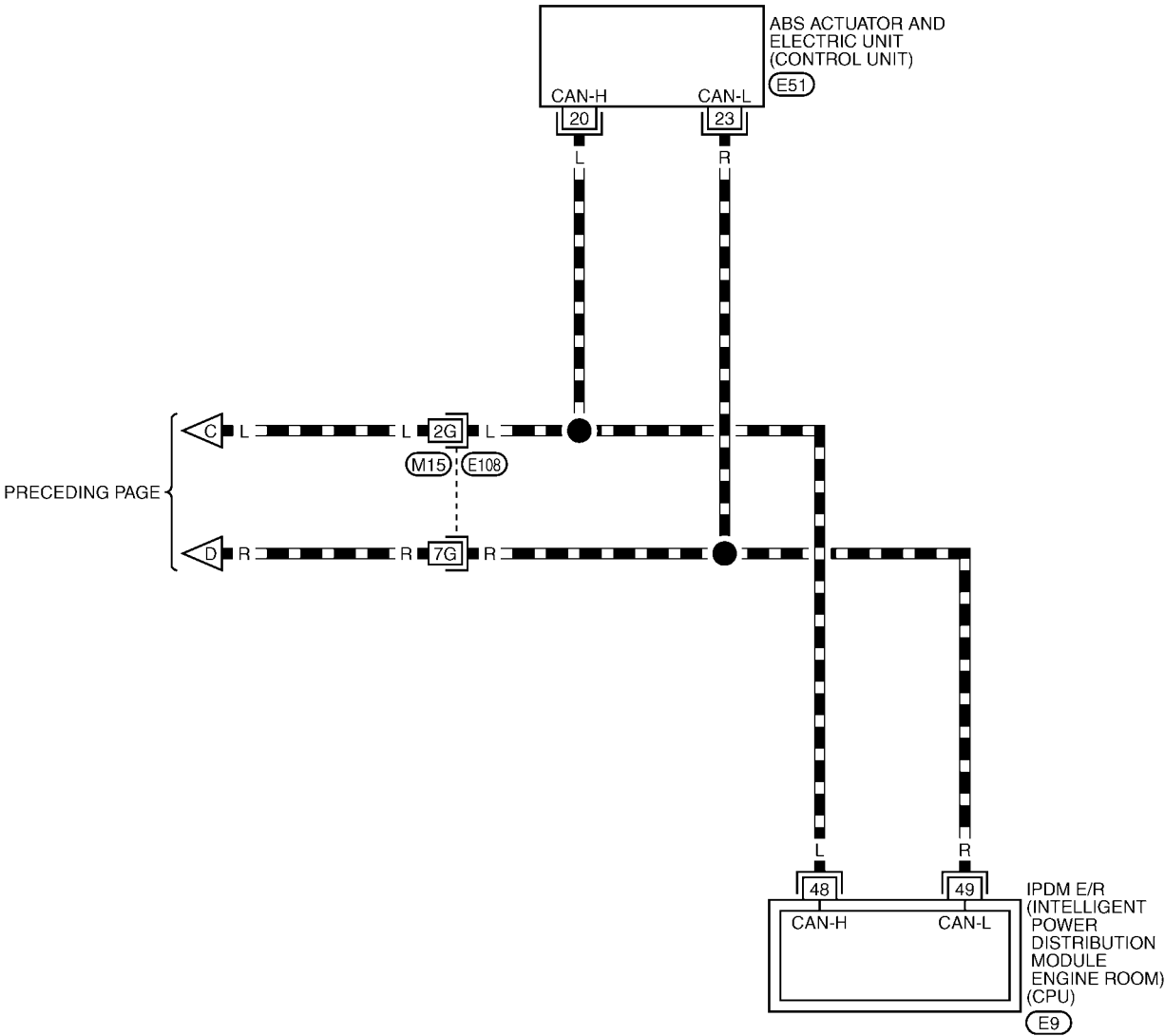


REFER TO THE FOLLOWING.

(F102) -SUPER MULTIPLE  
JUNCTION (SMJ)

(M3), (F101) -ELECTRICAL  
UNITS

DATA LINE



49	48	47	46	45
56	55	54	53	52
51	50			

E9  
W



REFER TO THE FOLLOWING.

E108 -SUPER MULTIPLE  
JUNCTION (SMJ)

E51 -ELECTRICAL UNITS



## Work Flow

AKS0032A

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

(Example)

NISSAN	
CONSULT-II	
ENGINE	
START (NISSAN BASED VHCL)	
START (RENAULT BASED VHCL)	
SUB MODE	
	LIGHT COPY

SELECT SYSTEM	
ENGINE	
A/T	
ABS	
AIR BAG	
BCM	
METER A/C AMP	
BACK	LIGHT COPY

PKIA2093E

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

(Example)

SELECT DIAG MODE	
WORK SUPPORT	
SELF-DIAG RESULTS	
DATA MONITOR	
DATA MONITOR (SPEC)	
ACTIVE TEST	
FUNCTION TEST	
Scroll Down	
BACK	LIGHT COPY

SELF-DIAG RESULTS	
DTC RESULTS	TIME
CAN COMM CIRCUIT [U1000]	0
F.F.DATA	
ERASE	PRINT
MODE BACK	LIGHT COPY

PKIA2094E

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

(Example)

SELECT DIAG MODE	
WORK SUPPORT	
SELF-DIAG RESULTS	
DATA MONITOR	
DATA MONITOR (SPEC)	
ACTIVE TEST	
FUNCTION TEST	
Scroll Down	
BACK	LIGHT COPY

DATA MONITOR	
SELECT MONITOR ITEM	
ECM INPUT SIGNALS	
MAIN SIGNALS	
CAN DIAG SUPPORT MNTR	
SELECTION FROM MENU	
SETTING	Numerical Display
MODE BACK	LIGHT COPY

DATA MONITOR	
MONITOR	NO DTC
CAN COMM	OK
CAN CIRC 1	OK
CAN CIRC 2	OK
CAN CIRC 3	OK
CAN CIRC 4	OK
CAN CIRC 5	UNKWN
CAN CIRC 6	OK
CAN CIRC 7	OK
RECORD	
MODE BACK	LIGHT COPY

PKIA2095E

- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" onto the check sheet. Refer to [LAN-42, "CHECK SHEET"](#).
- Based on the indications of "SELECT SYSTEM" and the results of "DATA MONITOR (CAN DIAG SUPPORT MNTR)", put marks "V" onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-42, "CHECK SHEET"](#).

**NOTE:**

- If "NG" is displayed on "CAN COMM" as "DATA MONITOR (CAN DIAG SUPPORT MNTR)" for the diagnosed control unit, replace the control unit.
  - The "DATA MONITOR (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 the "DATA MONITOR (CAN DIAG SUPPORT MNTR)" items not in check sheet table.
- According to the check sheet results (example), start inspection. Refer to [LAN-44, "CHECK SHEET RESULTS \(EXAMPLE\)"](#).

# CAN SYSTEM (TYPE 2)

[CAN]

## CHECK SHEET

Check sheet table

SELECT SYSTEM		DATA MONITOR (CAN DIAG SUPPORT MNTR)						
ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

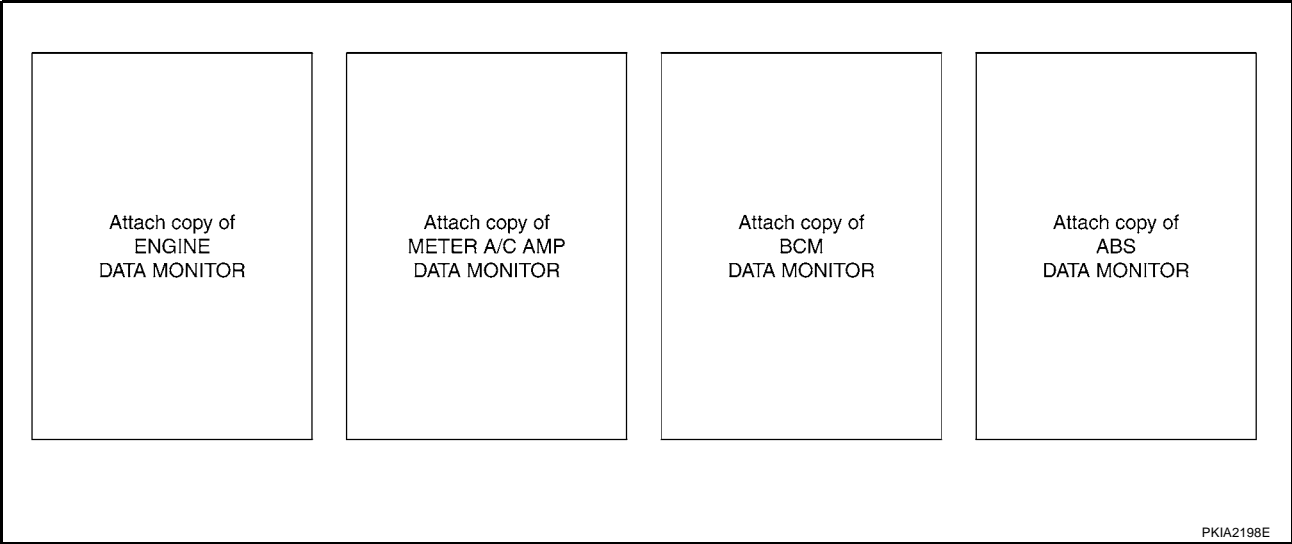
Attach copy of  
ENGINE  
SELF-DIAG RESULTS

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

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

PKIA2197E



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

# CAN SYSTEM (TYPE 2)

[CAN]

## CHECK SHEET RESULTS (EXAMPLE)

### Case 1 : Replace ECM

ENGINE	—	CAN✓COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN✓CIRC 4	CAN✓CIRC 6	—	CAN✓CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—

### Case 2 : Replace unified meter and A/C amp.

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN✓CIRC 2	—	CAN✓CIRC 4	CAN✓CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—

### Case 3 : Replace BCM

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN✓COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN✓CIRC 2	CAN✓CIRC 4	—	—	CAN✓CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—

### Case 4 : Replace ABS actuator and electric unit (control unit)

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN✓CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN✓COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—

### Case 5

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN✓CIRC 4	CAN✓CIRC 6	—	CAN✓CIRC 7
METER A/C AMP	No indication✓	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN✓CIRC 2	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN✓CIRC 2	—	—	—	—

### Case 6

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN✓CIRC 6	—	CAN✓CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN✓CIRC 4	CAN✓CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN✓CIRC 2	CAN✓CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN✓CIRC 2	—	—	—	—

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# CAN SYSTEM (TYPE 2)

[CAN]

Case 7

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—

Case 8

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—

Case 9

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—

Case 10

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—

Case 11

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—

Case 12

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—

Case 13

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—

Case 14

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—

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Case 15

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—

Case 16

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—

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## INSPECTION

Proceed trouble diagnosis according to the check sheet results (example).

Case 1: Replace ECM.

Case 2: Replace unified meter and A/C amp.

Case 3: Replace BCM.

Case 4: Replace ABS actuator and electric unit (control unit).

Case 5: Check harness between data link connector and unified meter and A/C amp. Refer to [LAN-46, "Circuit Check Between Data Link Connector and Unified Meter and A/C Amp."](#) .

Case 6: Check harness between unified meter and A/C amp. and BCM. Refer to [LAN-47, "Circuit Check Between Unified Meter and A/C Amp. and BCM"](#) .

Case 7: Check harness between BCM and ABS actuator and electric unit (control unit). Refer to [LAN-48, "Circuit Check Between BCM and ABS Actuator and Electric Unit \(Control Unit\)"](#) .

Case 8: Check ECM circuit. Refer to [LAN-49, "ECM Circuit Check"](#) .

Case 9: Check data link connector circuit. Refer to [LAN-49, "Data Link Connector Circuit Check"](#) .

Case 10: Check unified meter and A/C amp. circuit. Refer to [LAN-50, "Unified Meter and A/C Amp. Circuit Check"](#) .

Case 11: Check BCM circuit. Refer to [LAN-51, "BCM Circuit Check"](#) .

Case 12: Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-52, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

Case 13: Check IPDM E/R circuit. Refer to [LAN-52, "IPDM E/R Circuit Check"](#) .

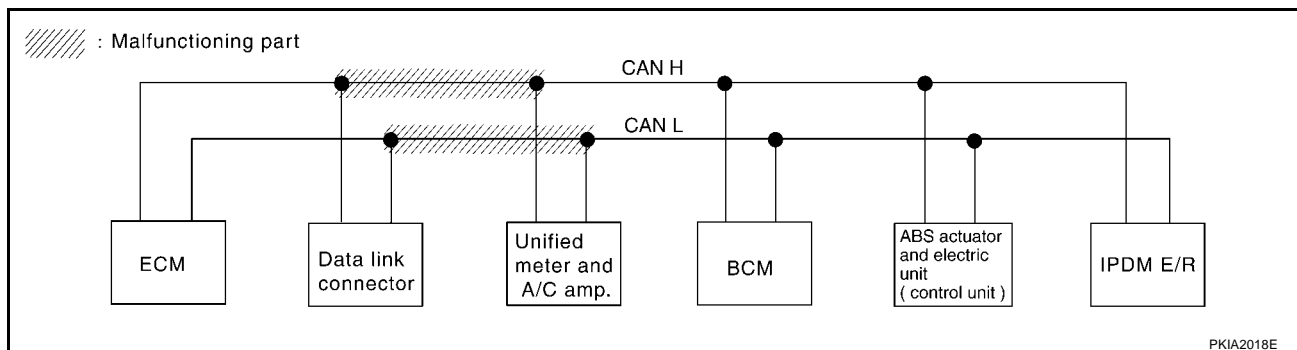
Case 14: Check CAN communication circuit. Refer to [LAN-53, "CAN Communication Circuit Check"](#) .

Case 15: Check IPDM E/R. Refer to [LAN-55, "IPDM E/R Check"](#) .

Case 16: Check IPDM E/R Ignition relay circuit. Refer to [LAN-55, "IPDM E/R Ignition Relay Circuit Check"](#) .

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

AKS0032C



PKIA2018E

## 1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and unified meter and A/C amp. connector.
4. Check continuity between data link connector M8 terminals 6 (L), 14 (R) and unified meter and A/C amp. harness connector M48 terminals 1 (L), 11 (R).

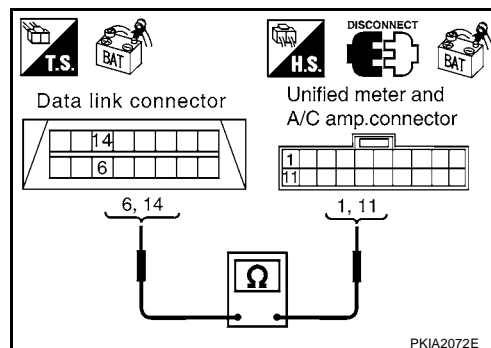
**6 (L) – 1 (L) : Continuity should exist.**

**14 (R) – 11 (R) : Continuity should exist.**

OK or NG

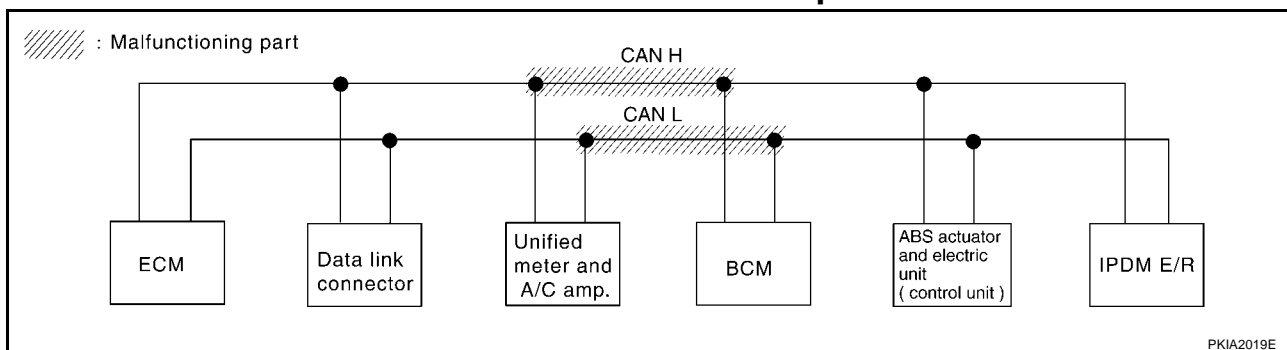
OK >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-41, "Work Flow"](#).

NG >> Repair harness.



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

AKS0033F



## 1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect the following connectors.
  - ECM connector
  - Unified meter and A/C amp. connector
  - BCM connector
4. Check continuity between unified meter and A/C amp. harness connector M48 terminals 1 (L), 11 (R) and BCM harness connector M3 terminals 70 (L), 71 (R).

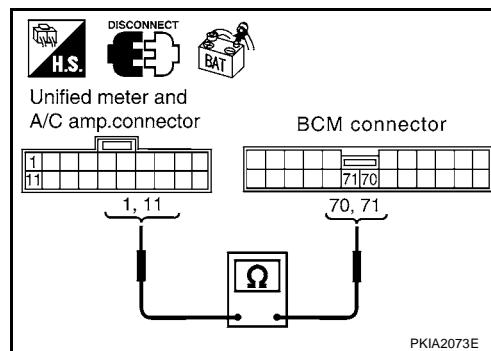
**1 (L) – 70 (L) : Continuity should exist.**

**11 (R) – 71 (R) : Continuity should exist.**

OK or NG

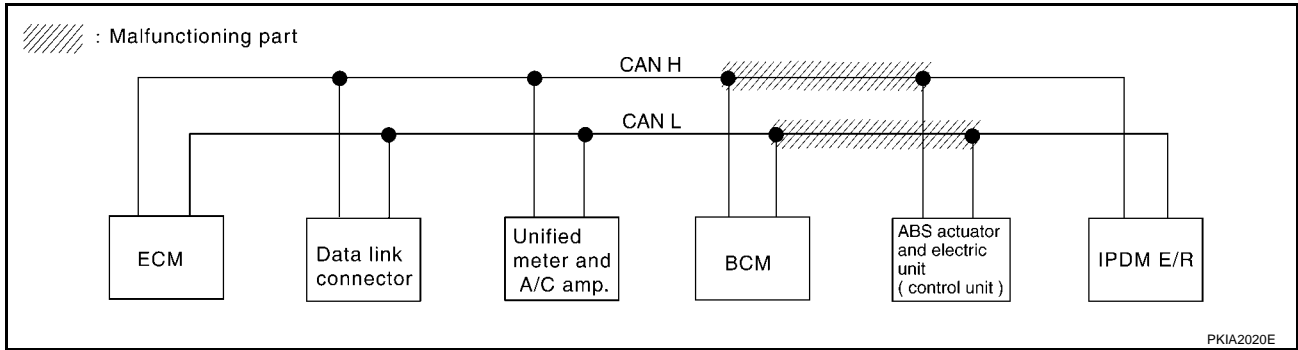
OK >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-41, "Work Flow"](#).

NG >> Repair harness.



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

AKS0033G



### 1. CHECK CONNECTOR

- Turn ignition switch OFF.
- Disconnect the negative battery terminal.
- Check following terminals and connector for damage, bend and loose connection (connector-side and harness-side).
  - Harness connector M15
  - Harness connector E108

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect BCM connector and harness connector M15.
- Check continuity between BCM harness connector M3 terminals 70 (L), 71 (R) and harness connector M15 terminals 2G (L), 7G (R).

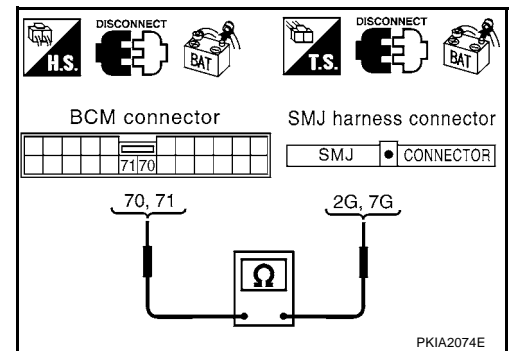
**70 (L) – 2G (L) : Continuity should exist.**

**71 (R) – 7G (R) : Continuity should exist.**

OK or NG

OK >> GO TO 3.

NG >> Repair harness.



### 3. CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect ABS actuator and electric unit (control unit) connector.
- Check continuity between harness connector E108 terminals 2G (L), 7G (R) and ABS actuator and electric unit (control unit) harness connector E51 terminals 20 (L), 23 (R).

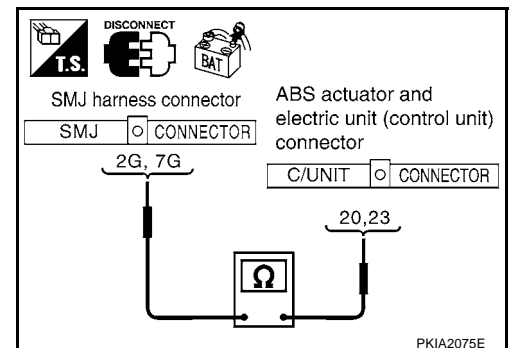
**2G (L) – 20 (L) : Continuity should exist.**

**7G (R) – 23 (R) : Continuity should exist.**

OK or NG

OK >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-41, "Work Flow"](#).

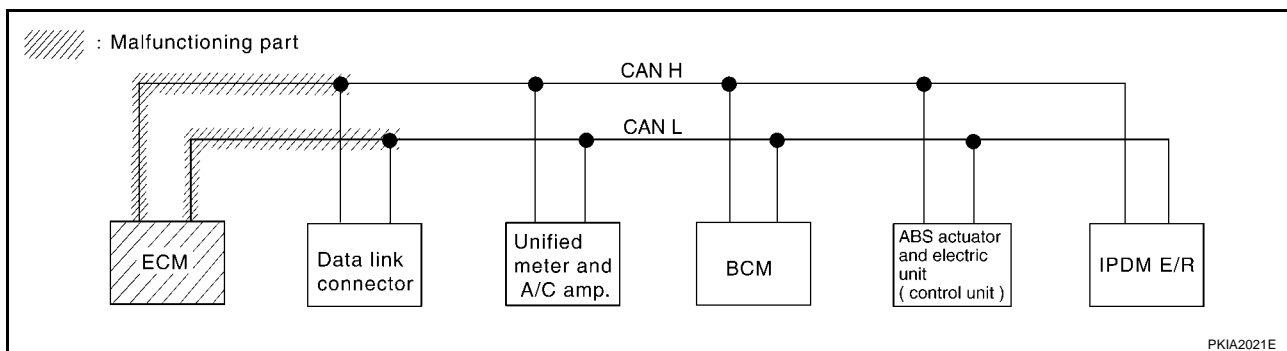
NG >> Repair harness.





## ECM Circuit Check

AKS0032D



## 1. CHECK CONNECTOR

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

- ECM connector
- Harness connector F102
- Harness connector M72

OK or NG

OK &gt;&gt; GO TO 2.

NG &gt;&gt; Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector F101 terminals 94 (L) and 86 (R).

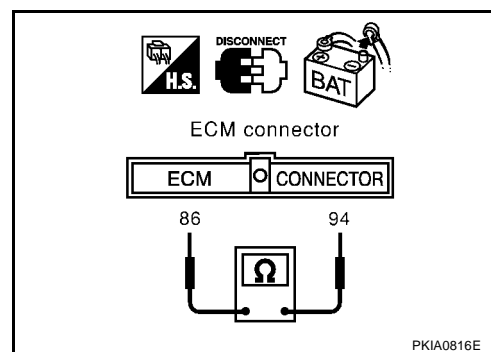
94 (L) – 86 (R)

: Approx. 108 – 132Ω

OK or NG

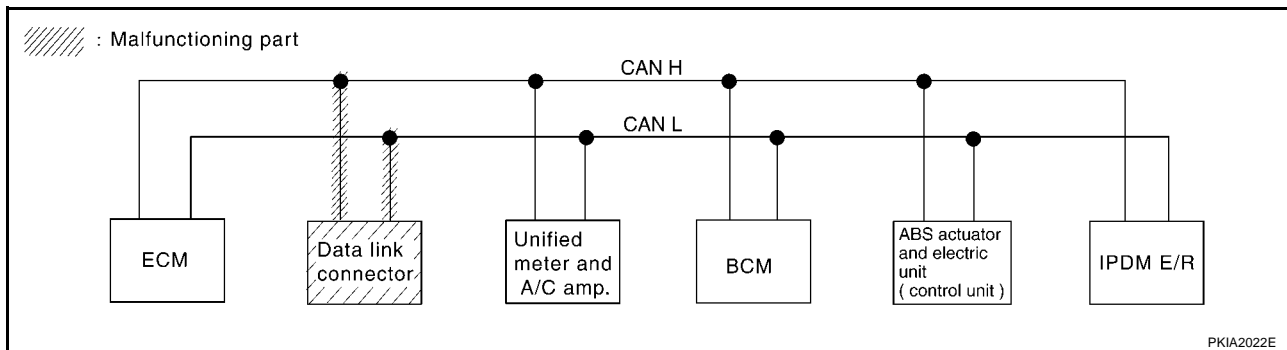
OK &gt;&gt; Replace ECM.

NG &gt;&gt; Repair harness between ECM and data link connector.



## Data Link Connector Circuit Check

AKS0032E



## 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check the terminals and connector of data link connector 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

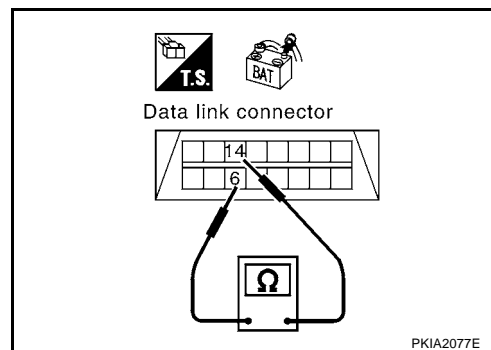
Check resistance between data link connector M8 terminals 6 (L) and 14 (R).

**6 (L) – 14 (R) : Approx. 54 – 66Ω**

OK or NG

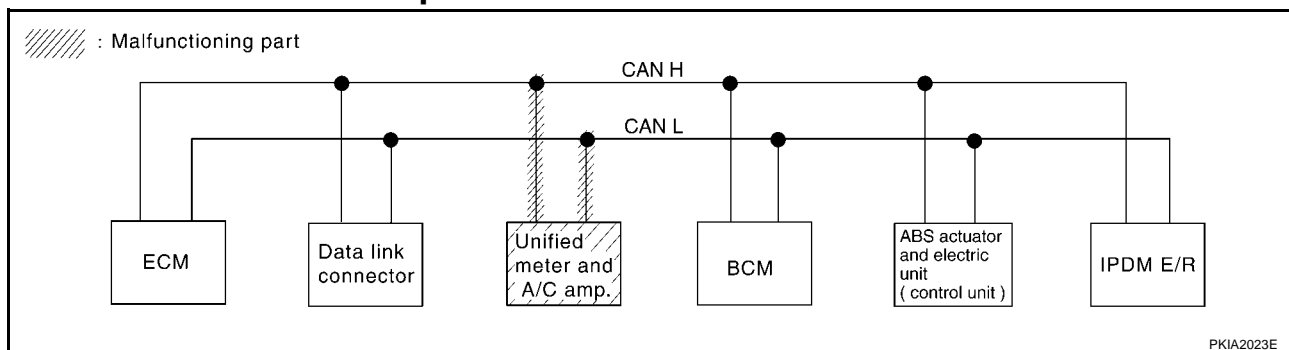
OK >> Perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-41, "Work Flow"](#).

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



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

AKS0032F



## 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

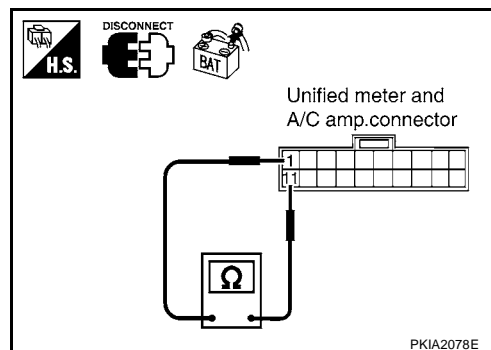
1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M48 terminals 1 (L) and 11 (R).

**1 (L) – 11 (R)**

**: Approx. 54 – 66Ω**

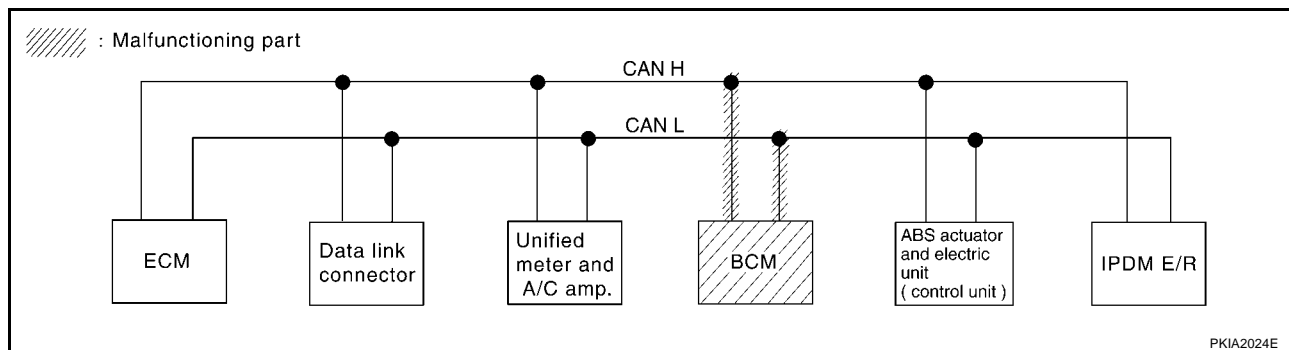
OK or NG

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



## BCM Circuit Check

AKS0032G



## 1. CHECK CONNECTOR

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

OK or NG

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

## 2. CHECK HARNESS FOR OPEN CIRCUIT

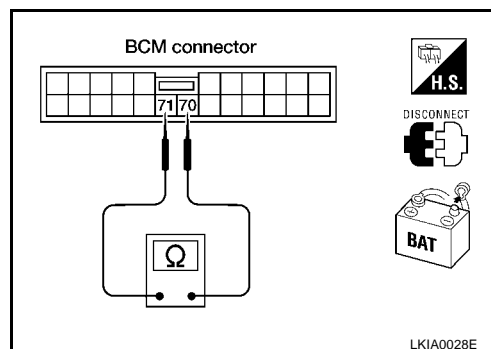
1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M3 terminals 70 (L) and 71 (R).

**70 (L) – 71 (R)**

**: Approx. 54 – 66Ω**

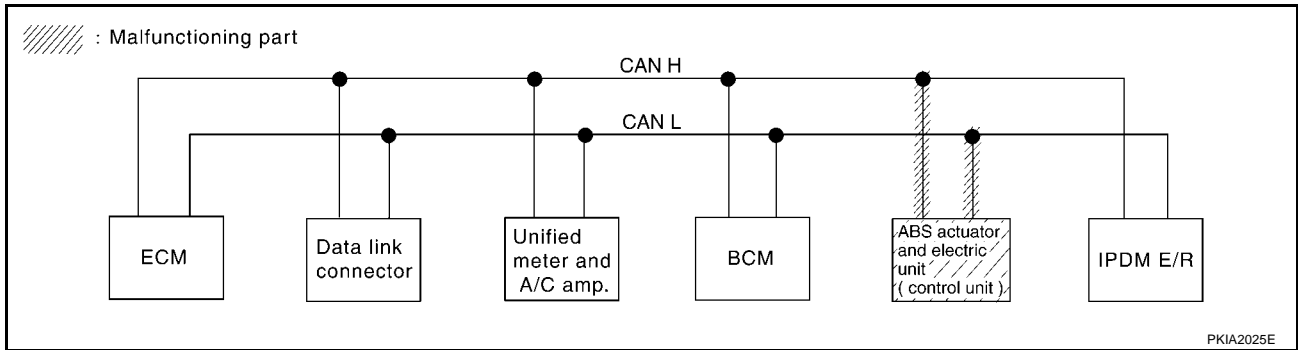
OK or NG

- OK >> Replace BCM.  
 NG >> Repair harness between BCM and harness connector M15.



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

AKS0032H



### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check the 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 E51 terminals 20 (L) and 23 (R).

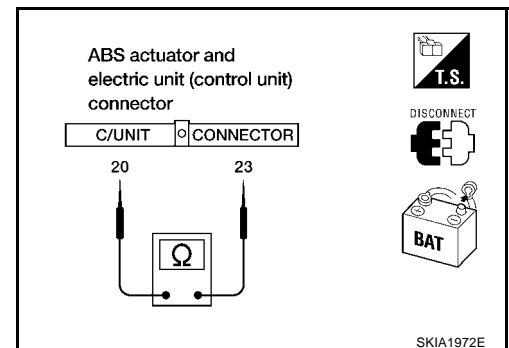
**20 (L) – 23 (R)**

**: Approx. 54 – 66Ω**

OK or NG

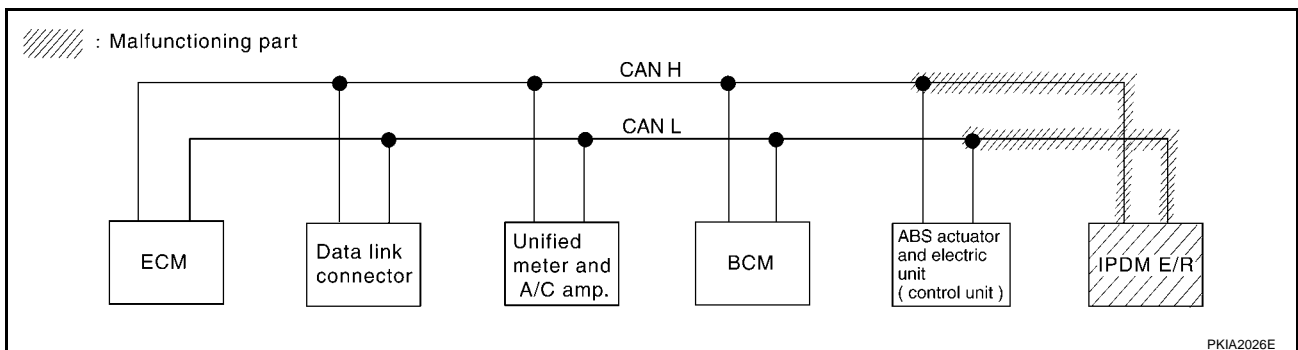
OK >> Replace ABS actuator and electric unit (control unit).

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



### IPDM E/R Circuit Check

AKS0032I



## 1. CHECK CONNECTOR

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

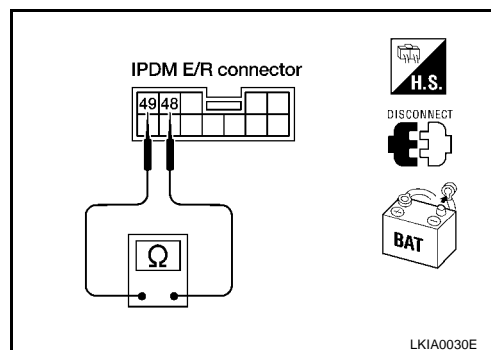
1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (R).

**48 (L) – 49 (R)**

**: Approx. 108 – 132Ω**

OK or NG

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



AKS0032J

## CAN Communication Circuit Check

### 1. CHECK CONNECTOR

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

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

OK or NG

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

### 2. CHECK HARNESS FOR SHORT CIRCUIT

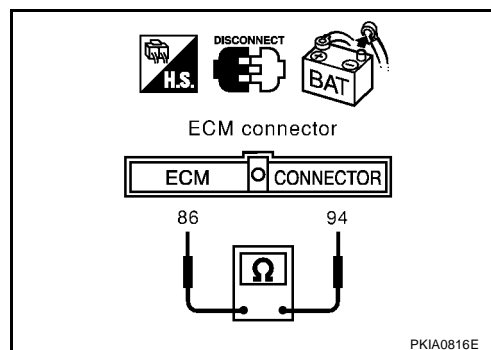
1. Disconnect ECM connector and harness connector F102.
2. Check continuity between ECM harness connector F101 terminals 94 (L) and 86 (R).

**94 (L) – 86 (R)**

**: Continuity should not exist.**

OK or NG

- OK >> GO TO 3.  
NG >> Repair harness between ECM and harness connector F102.



### 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between ECM harness connector F101 terminals 94 (L), 86 (R) and ground.

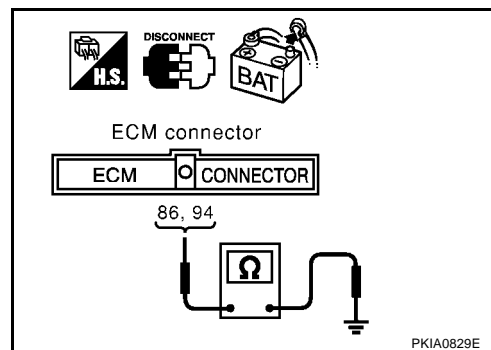
**94 (L) – ground : Continuity should not exist.**

**86 (R) – ground : Continuity should not exist.**

OK or NG

OK >> GO TO 4.

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



### 4. CHECK HARNESS FOR SHORT CIRCUIT

- Disconnect following connectors.
  - Unified meter and A/C amp. connector
  - BCM connector
  - Harness connector M15
- Check continuity between data link connector M8 terminals 6 (L) and 14 (R).

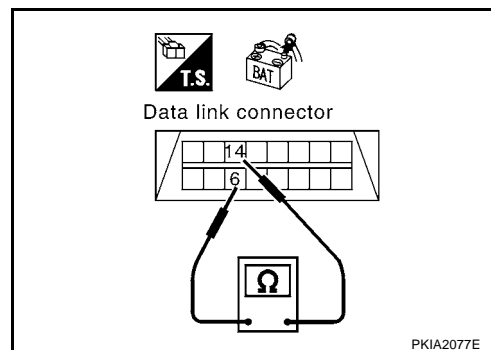
**6 (L) – 14 (R) : Continuity should not exist.**

OK or NG

OK >> GO TO 5.

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

- Harness between data link connector and harness connector M72.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and BCM.
- Harness between data link connector and harness connector M15.



### 5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M8 terminals 6 (L), 14 (R) and ground.

**6 (L) – ground : Continuity should not exist.**

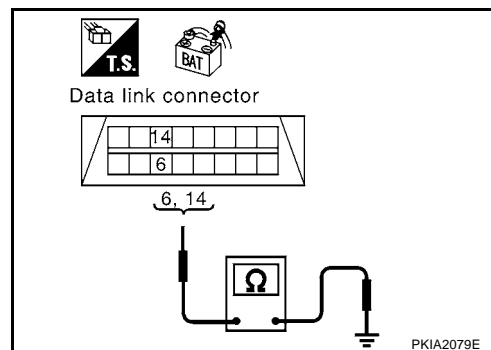
**14 (R) – ground : Continuity should not exist.**

OK or NG

OK >> GO TO 6.

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

- Harness between data link connector and harness connector M72.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and BCM.
- Harness between data link connector and harness connector M15.



## 6. 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 (R).

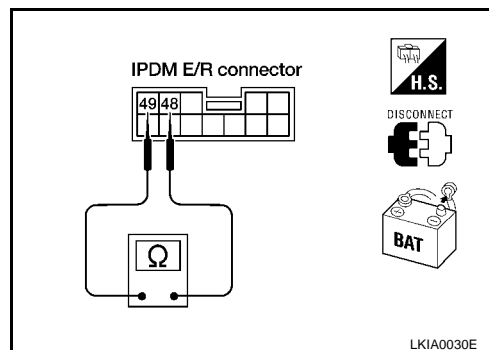
**48 (L) – 49 (R) : Continuity should not exist.**

OK or NG

OK >> GO TO 7.

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

- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E108.



## 7. CHECK HARNESS FOR SHORT CIRCUIT

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

**48 (L) – ground : Continuity should not exist.**

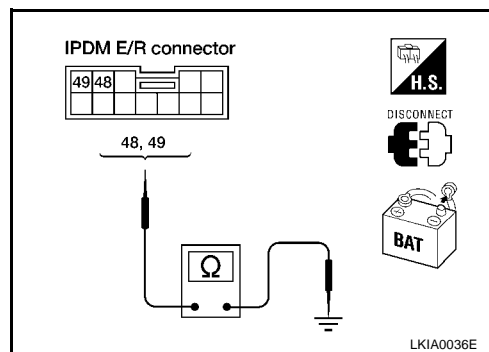
**49 (R) – ground : Continuity should not exist.**

OK or NG

OK >> GO TO 8.

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 E108.



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

Check components inspection. Refer to [LAN-56, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

OK or NG

OK >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-41, "Work Flow"](#).

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

### IPDM E/R Check

#### 1. CHECK IPDM E/R

1. Turn ignition switch ON and then OFF.
2. Check for illuminated parking lamps and tail lamps.

**Parking lamps and tail lamps should not illuminate.**

OK or NG

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

NG >> Replace IPDM E/R.

### IPDM E/R Ignition Relay Circuit Check

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

- IPDM E/R power supply circuit. Refer to [PG-29, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-11, "IGNITION POWER SUPPLY — IGNITION SW. IN "ON" AND/OR "START" "](#).

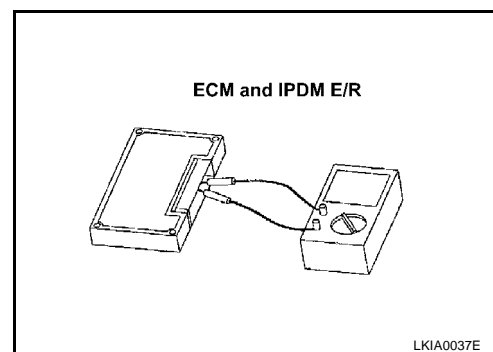
**Component Inspection**

AKS0032L

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

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

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



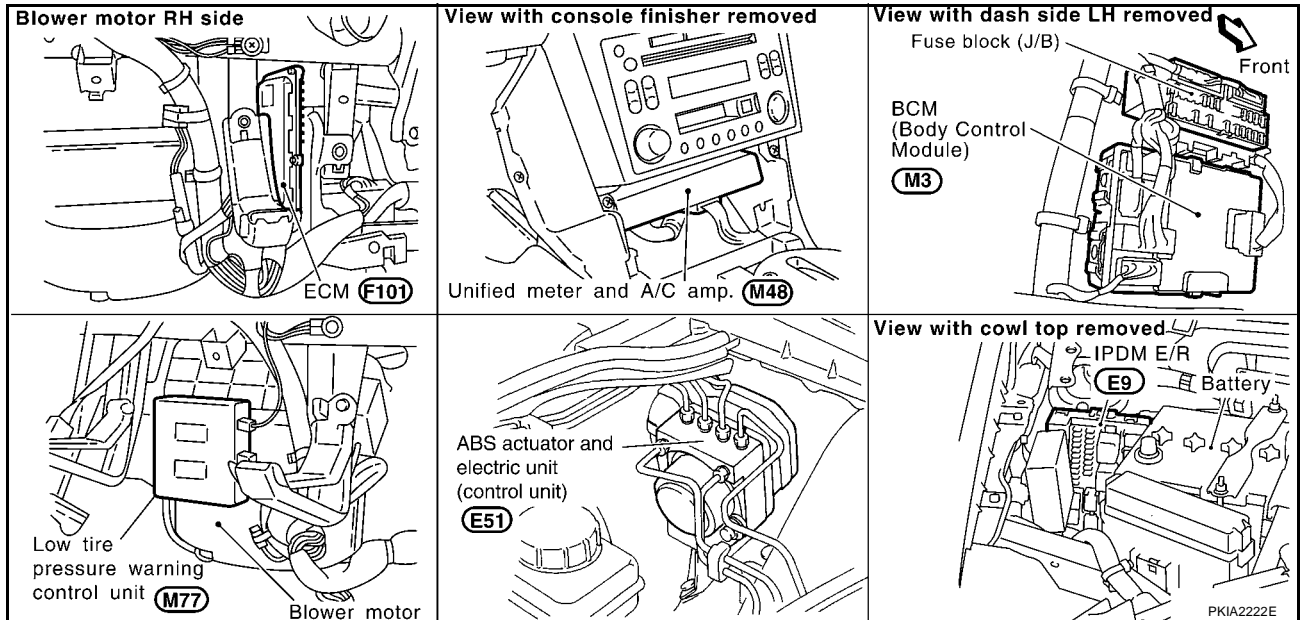


## CAN SYSTEM (TYPE 3)

## System Description

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

## Component Parts and Harness Connector Location



# CAN SYSTEM (TYPE 3)

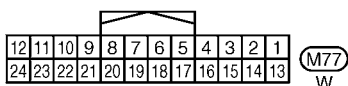
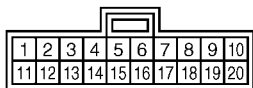
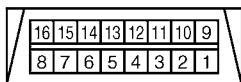
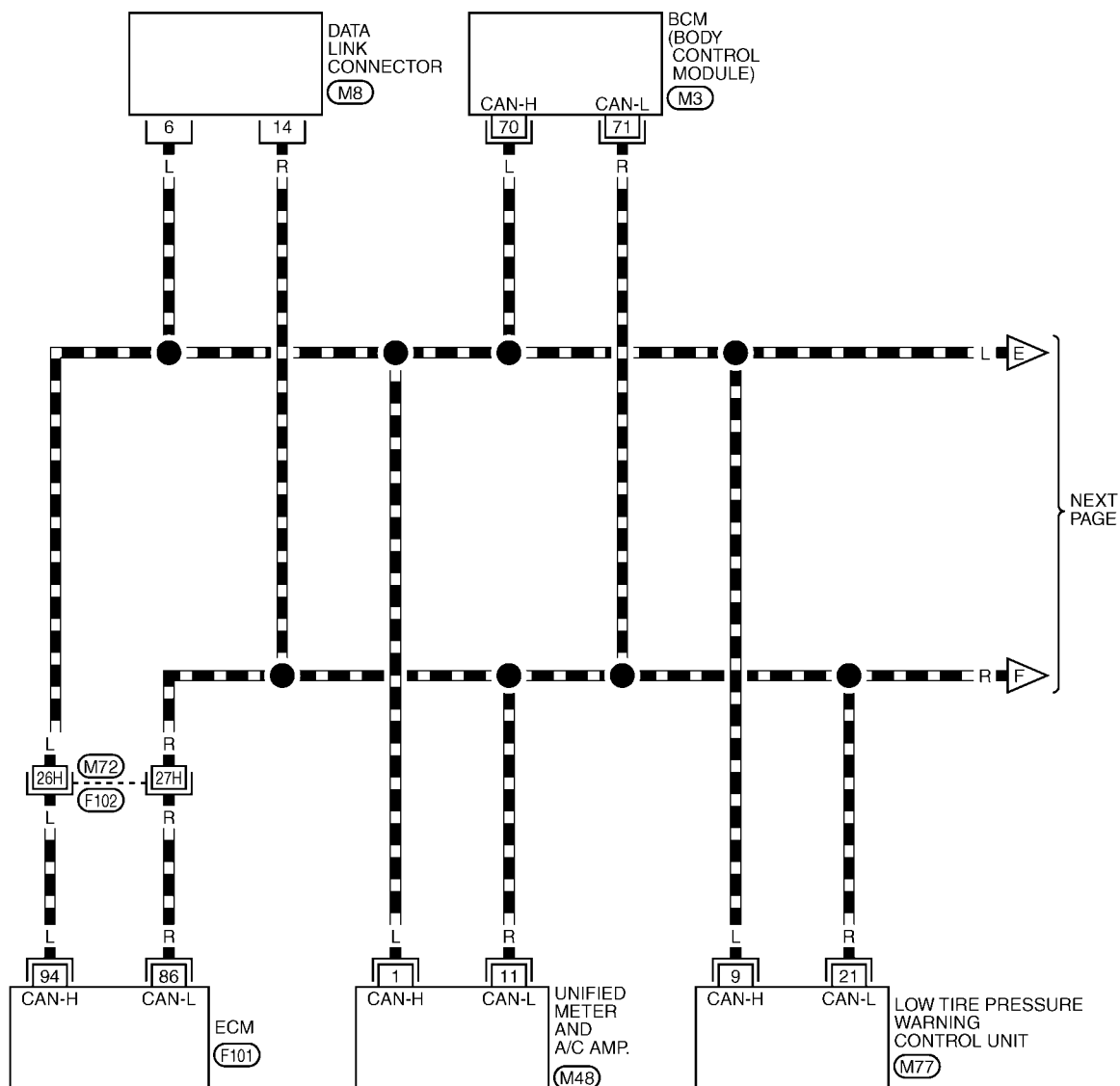
[CAN]

## Wiring Diagram — CAN —

AKS00340

LAN-CAN-05

DATA LINE



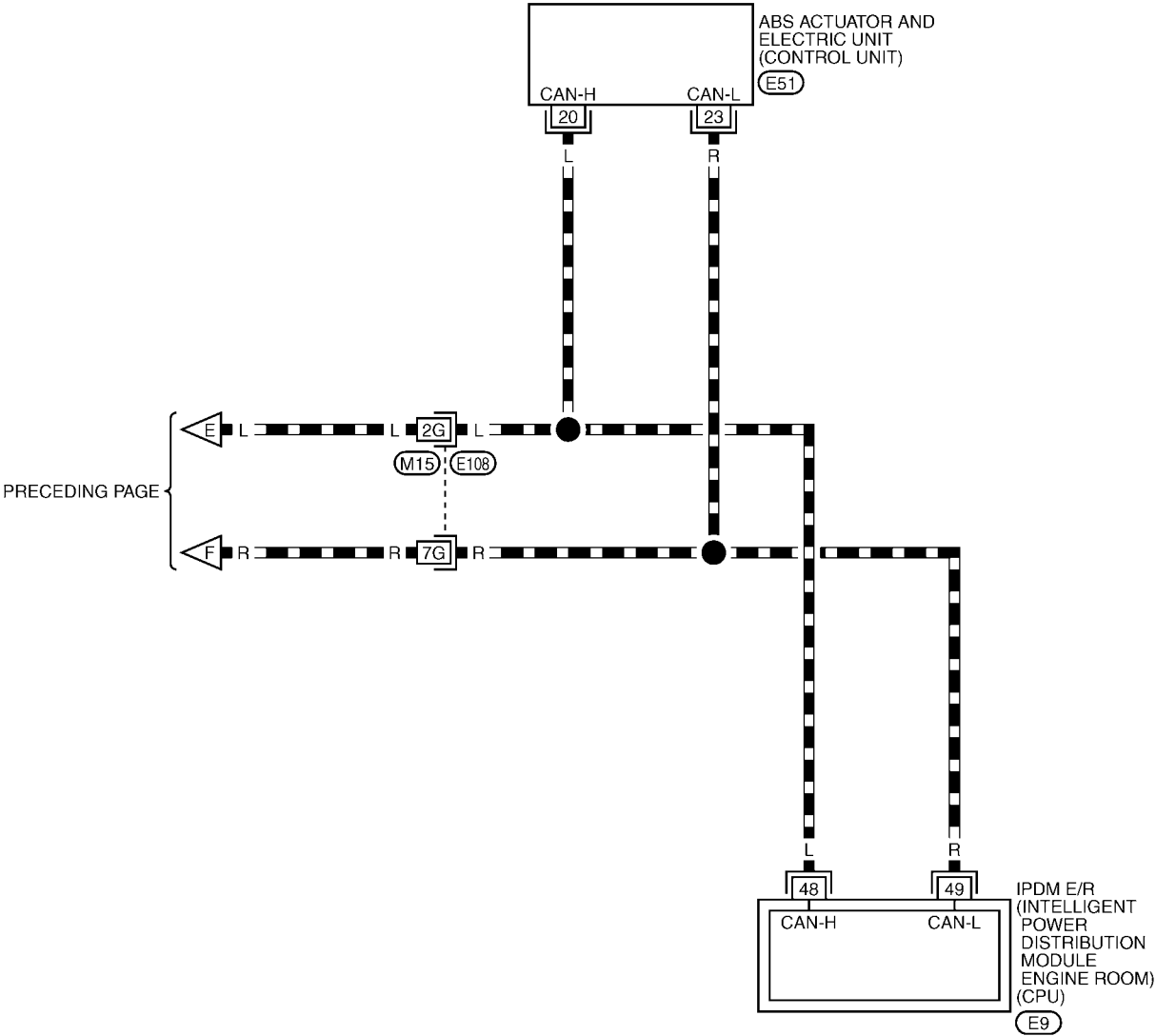
REFER TO THE FOLLOWING.

(F102) -SUPER MULTIPLE JUNCTION (SMJ)

(M3), (F101) -ELECTRICAL UNITS

TKWT0410E

DATA LINE



49	48	47	46	45
56	55	54	53	52
51	50			

E9  
W




REFER TO THE FOLLOWING.  
E108 -SUPER MULTIPLE JUNCTION (SMJ)  
E51 -ELECTRICAL UNITS

## Work Flow

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

(Example)

NISSAN	
CONSULT- II	
ENGINE	
START (NISSAN BASED VHCL)	
START (RENAULT BASED VHCL)	
SUB MODE	
	LIGHT COPY




SELECT SYSTEM			
ENGINE			
A/T			
ABS			
AIR BAG			
BCM			
METER A/C AMP			
	BACK	LIGHT	COPY

PKIA2093E

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

(Example)

SELECT DIAG MODE	
WORK SUPPORT	
SELF-DIAG RESULTS	
DATA MONITOR	
DATA MONITOR (SPEC)	
ACTIVE TEST	
FUNCTION TEST	
Scroll Down	
	BACK LIGHT COPY




SELF-DIAG RESULTS	
DTC RESULTS TIME	
CAN COMM CIRCUIT [U1000]	0
F.F.DATA	
ERASE PRINT	
MODE BACK	LIGHT COPY

PKIA2094E


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

(Example)

SELECT DIAG MODE	
WORK SUPPORT	
SELF-DIAG RESULTS	
DATA MONITOR	
DATA MONITOR (SPEC)	
ACTIVE TEST	
FUNCTION TEST	
Scroll Down	
	BACK LIGHT COPY



DATA MONITOR	
SELECT MONITOR ITEM	
ECM INPUT SIGNALS	
MAIN SIGNALS	
CAN DIAG SUPPORT MNTR	
SELECTION FROM MENU	
SETTING	Numerical Display
MODE BACK	LIGHT COPY



DATA MONITOR	
MONITOR	NO DTC
CAN COMM	OK
CAN CIRC 1	OK
CAN CIRC 2	OK
CAN CIRC 3	OK
CAN CIRC 4	OK
CAN CIRC 5	UNKWN
CAN CIRC 6	OK
CAN CIRC 7	OK
RECORD	
MODE BACK	LIGHT COPY

PKIA2095E

- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" onto the check sheet. Refer to [LAN-61, "CHECK SHEET"](#) .
- Based on the indications of "SELECT SYSTEM" and the results of "DATA MONITOR (CAN DIAG SUPPORT MNTR)", put marks "v" onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-61, "CHECK SHEET"](#) .

**NOTE:**

- If "NG" is displayed on "CAN COMM" as "DATA MONITOR (CAN DIAG SUPPORT MNTR)" for the diagnosed control unit, replace the control unit.
- The "DATA MONITOR (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 the "DATA MONITOR (CAN DIAG SUPPORT MNTR)" items not in check sheet table.

- According to the check sheet results (example), start inspection. Refer to [LAN-63, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

# CAN SYSTEM (TYPE 3)

[CAN]

## CHECK SHEET

Check sheet table

SELECT SYSTEM		DATA MONITOR (CAN DIAG SUPPORT MNTR)							
ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

PKIA2190E

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

Attach copy of  
ENGINE  
SELF-DIAG RESULTS

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

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
AIR PRESSURE  
MONITOR  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

Attach copy of  
ENGINE  
DATA MONITOR

Attach copy of  
METER A/C AMP  
DATA MONITOR

Attach copy of  
BCM  
DATA MONITOR

Attach copy of  
AIR PRESSURE  
MONITOR  
DATA MONITOR

Attach copy of  
ABS  
DATA MONITOR

# CAN SYSTEM (TYPE 3)

[CAN]

## CHECK SHEET RESULTS (EXAMPLE)

Case 1 : Replace ECM

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

Case 2 : Replace unified meter and A/C amp.

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

Case 3 : Replace BCM

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

PKIA2192E

# CAN SYSTEM (TYPE 3)

[CAN]

Case 4 : Replace low tire pressure warning control unit

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 4 ✓	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM ✓	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 4 ✓	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

Case 5 : Replace ABS actuator and electric unit (control unit)

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5 ✓	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM ✓	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

Case 6

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4 ✓	CAN CIRC 6 ✓	—	—	CAN CIRC 7 ✓
METER A/C AMP	No indication ✓	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2 ✓	CAN CIRC 4	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication ✓	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2 ✓	—	—	—	—	—

Case 7

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6 ✓	—	—	CAN CIRC 7 ✓
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4 ✓	CAN CIRC 14 ✓	CAN CIRC 5 ✓	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2 ✓	CAN CIRC 4 ✓	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication ✓	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2 ✓	—	—	—	—	—

PKIA2193E



# CAN SYSTEM (TYPE 3)

[CAN]

Case 8

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 7 ✓
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14 ✓	CAN CIRC 5 ✓	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3 ✓
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2 ✓	—	—	—	—	—

Case 9

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 7 ✓
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5 ✓	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3 ✓
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2 ✓	—	—	—	—	—

Case 10

ENGINE	—	CAN COMM	CAN CIRC 7 ✓	—	CAN CIRC 4 ✓	CAN CIRC 6 ✓	—	—	CAN CIRC 7 ✓
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2 ✓	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2 ✓	CAN CIRC 4	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2 ✓	—	—	—	—	—

Case 11

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

PKIA2194E

# CAN SYSTEM (TYPE 3)

[CAN]

Case 12

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 5	CAN CIRC 6	—	—	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 5	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

Case 13

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 5	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 5	CAN CIRC 5	CAN CIRC 5	—	—	—	CAN CIRC 5
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

Case 14

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

Case 15

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 5	CAN CIRC 2	—	—	—	—	—

# CAN SYSTEM (TYPE 3)

[CAN]

Case 16

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 7 ✓
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 7 ✓
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

Case 17

ENGINE	—	CAN COMM	CAN CIRC 1 ✓	—	CAN CIRC 4 ✓	CAN CIRC 6 ✓	—	—	CAN CIRC 7 ✓
METER A/C AMP	No indication ✓	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1 ✓	CAN CIRC 2 ✓	CAN CIRC 4 ✓	—	—	—	CAN CIRC 7 ✓
AIR PRESSURE MONITOR	No indication ✓	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1 ✓	CAN CIRC 2 ✓	—	—	—	—	—

Case 18

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2 ✓	—	—	—	—	—

Case 19

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5 ✓	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

PKIA2196E

## INSPECTION

Proceed trouble diagnosis according to the check sheet results (example).

Case 1: Replace ECM.

LAN-67

A  
B  
C  
D  
E  
F  
G  
H  
I  
J

LAN

L  
M

Case 2: Replace unified meter and A/C amp.

Case 3: Replace BCM.

Case 4: Replace low tire pressure warning control unit.

Case 5: Replace ABS actuator and electric unit (control unit).

Case 6: Check harness between data link connector and unified meter and A/C amp. Refer to [LAN-68, "Circuit Check Between Data Link Connector and Unified Meter and A/C Amp."](#)

Case 7: Check harness between unified meter and A/C amp. and BCM. Refer to [LAN-69, "Circuit Check Between Unified Meter and A/C Amp. and BCM"](#)

Case 8: Check harness between BCM and low tire pressure warning control unit. Refer to [LAN-69, "Circuit Check Between BCM and Low Tire Pressure Warning Control Unit"](#)

Case 9: Check harness between low tire pressure warning control unit and ABS actuator and electric unit (control unit). Refer to [LAN-70, "Circuit Check Between Low Tire Pressure Warning Control Unit and ABS Actuator and Electric Unit \(Control Unit\)"](#)

Case 10: Check ECM circuit. Refer to [LAN-71, "ECM Circuit Check"](#)

Case 11: Check data link connector circuit. Refer to [LAN-72, "Data Link Connector Circuit Check"](#)

Case 12: Check unified meter and A/C amp. circuit. Refer to [LAN-73, "Unified Meter and A/C Amp. Circuit Check"](#)

Case 13: Check BCM circuit. Refer to [LAN-73, "BCM Circuit Check"](#)

Case 14: Check low tire pressure warning control unit circuit. Refer to [LAN-74, "Low Tire Pressure Warning Control Unit Circuit Check"](#)

Case 15: Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-75, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#)

Case 16: Check IPDM E/R circuit. Refer to [LAN-76, "IPDM E/R Circuit Check"](#)

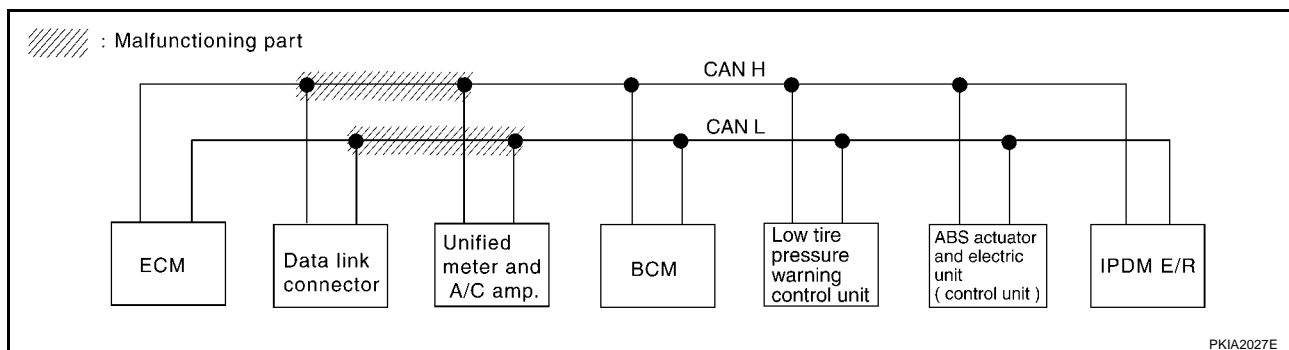
Case 17: Check CAN communication circuit. Refer to [LAN-76, "CAN Communication Circuit Check"](#)

Case 18: Check IPDM E/R. Refer to [LAN-79, "IPDM E/R Check"](#)

Case 19: Check IPDM E/R Ignition relay circuit. Refer to [LAN-79, "IPDM E/R Ignition Relay Circuit Check"](#)

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

AKS00342



PKIA2072E

### 1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and unified meter and A/C amp. connector.
4. Check continuity between data link connector M8 terminals 6 (L), 14 (R) and unified meter and A/C amp. harness connector M48 terminals 1 (L), 11 (R).

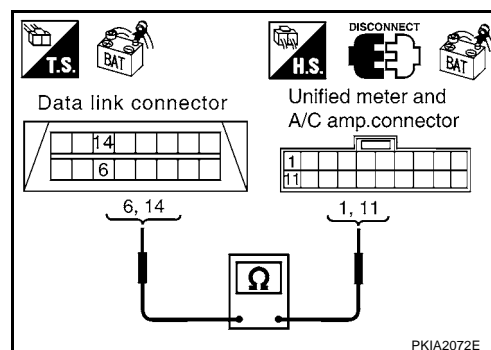
**6 (L) – 1 (L) : Continuity should exist.**

**14 (R) – 11 (R) : Continuity should exist.**

OK or NG

OK >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-60, "Work Flow"](#).

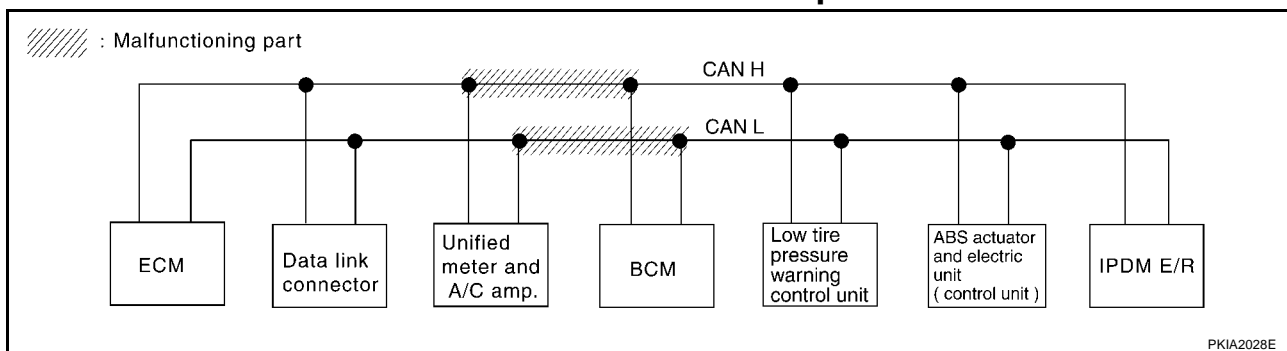
NG >> Repair harness.



PKIA2072E

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

AKS00343



## 1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect the following connectors.
  - ECM connector
  - Unified meter and A/C amp. connector
  - BCM connector
4. Check continuity between unified meter and A/C amp. harness connector M48 terminals 1 (L), 11 (R) and BCM harness connector M3 terminals 70 (L), 71 (R).

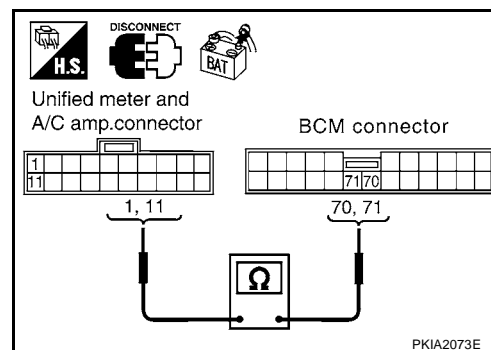
**1 (L) – 70 (L) : Continuity should exist.**

**11 (R) – 71 (R) : Continuity should exist.**

## OK or NG

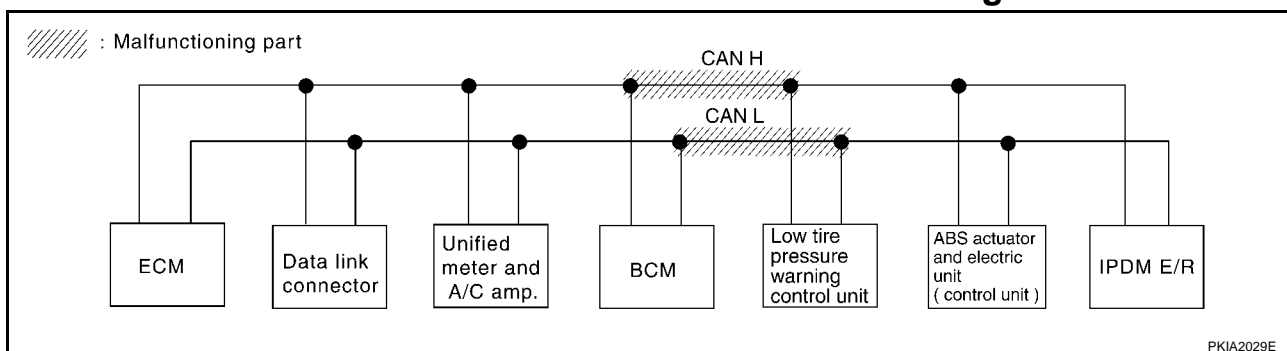
OK >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-60, "Work Flow"](#).

NG >> Repair harness.



## Circuit Check Between BCM and Low Tire Pressure Warning Control Unit

AKS00346

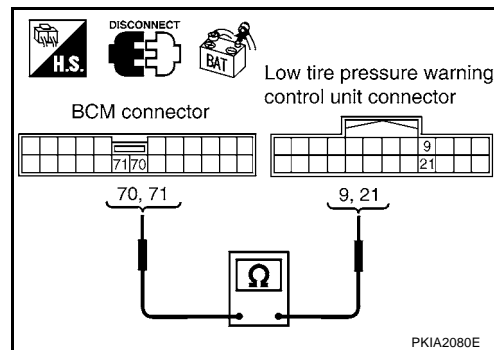


## 1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect the following connectors.
  - ECM connector
  - BCM connector
  - Low tire pressure warning control unit connector
4. Check continuity between BCM harness connector M3 terminals 70 (L), 71 (R) and low tire pressure warning control unit harness connector M77 terminals 9 (L), 21 (R).

**70 (L) – 9 (L) : Continuity should exist.**

**71 (R) – 21 (R) : Continuity should exist.**



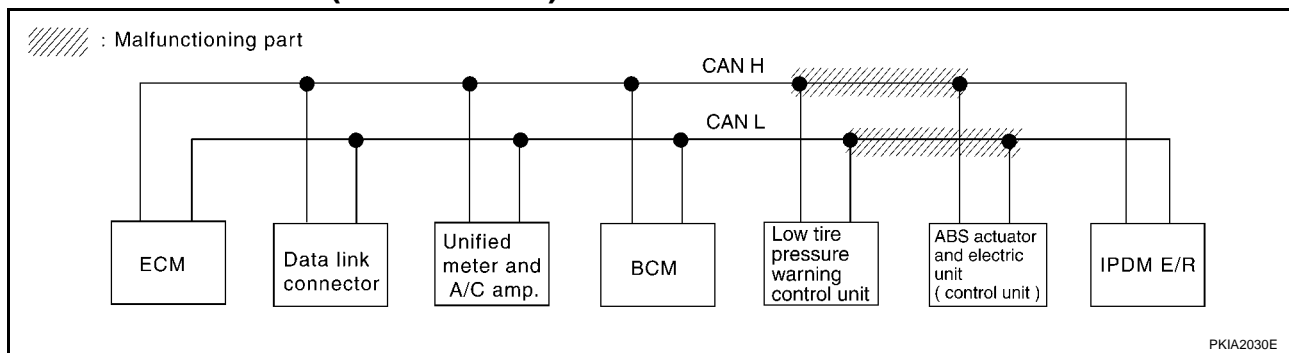
### OK or NG

OK >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-60, "Work Flow"](#).

NG >> Repair harness.

## Circuit Check Between Low Tire Pressure Warning Control Unit and ABS Actuator and Electric Unit (Control Unit)

AKS00344



## 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connector for damage, bend and loose connection (connector-side and harness-side).
  - Harness connector M15
  - Harness connector E108

### 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 and harness connector M15.
2. Check continuity between low tire pressure warning control unit harness connector M77 terminals 9 (L), 21 (R) and harness connector M15 terminals 2G (L), 7G (R).

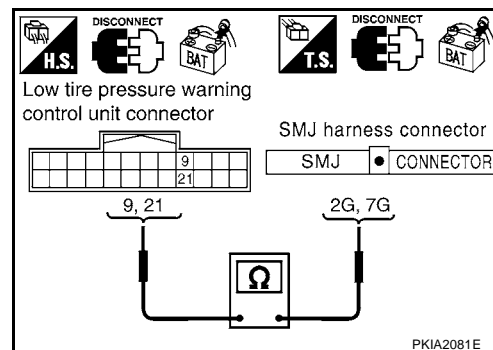
**9 (L) – 2G (L) : Continuity should exist.**

**21 (R) – 7G (R) : Continuity should exist.**

OK or NG

OK >> GO TO 3.

NG >> Repair harness.



## 3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E108 terminals 2G (L), 7G (R) and ABS actuator and electric unit (control unit) harness connector E51 terminals 20 (L), 23 (R).

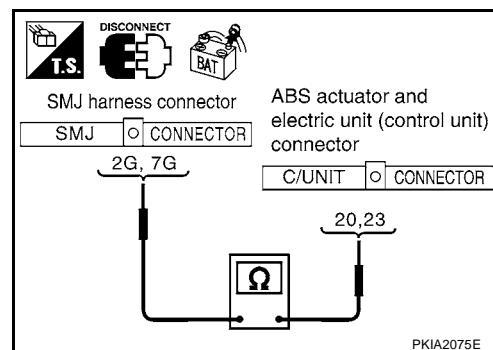
**2G (L) – 20 (L) : Continuity should exist.**

**7G (R) – 23 (R) : Continuity should exist.**

OK or NG

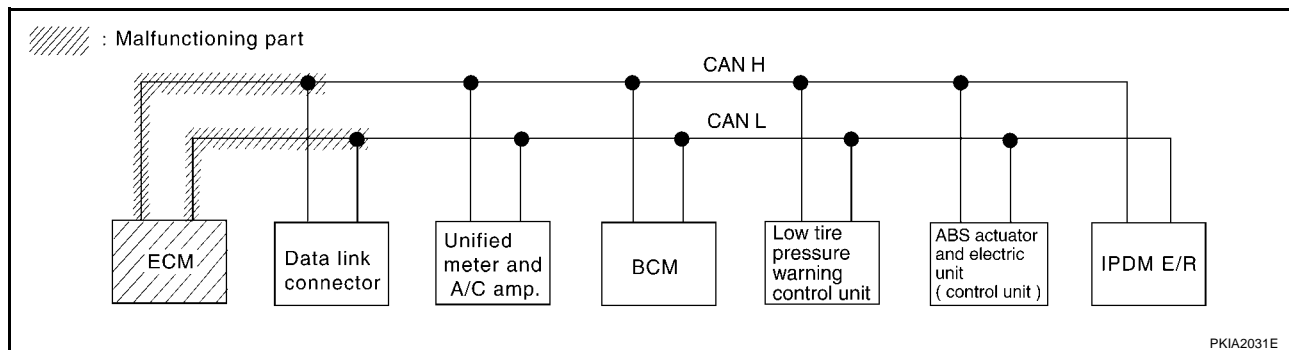
OK >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-60, "Work Flow"](#).

NG >> Repair harness.



## ECM Circuit Check

AKS00345



LAN

## 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connector for damage, bend and loose connection (control module-side and harness-side).
  - ECM connector
  - Harness connector F102
  - Harness connector M72

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

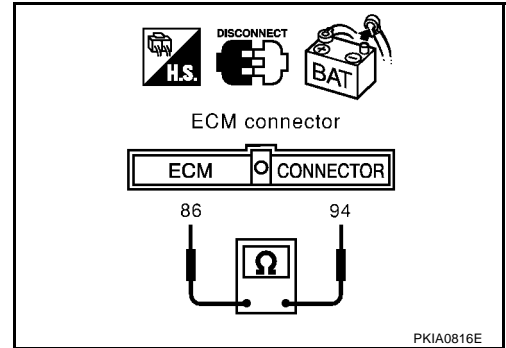
1. Disconnect ECM connector.
2. Check resistance between ECM harness connector F101 terminals 94 (L) and 86 (R).

**94 (L) – 86 (R)**

**: Approx. 108 – 132Ω**

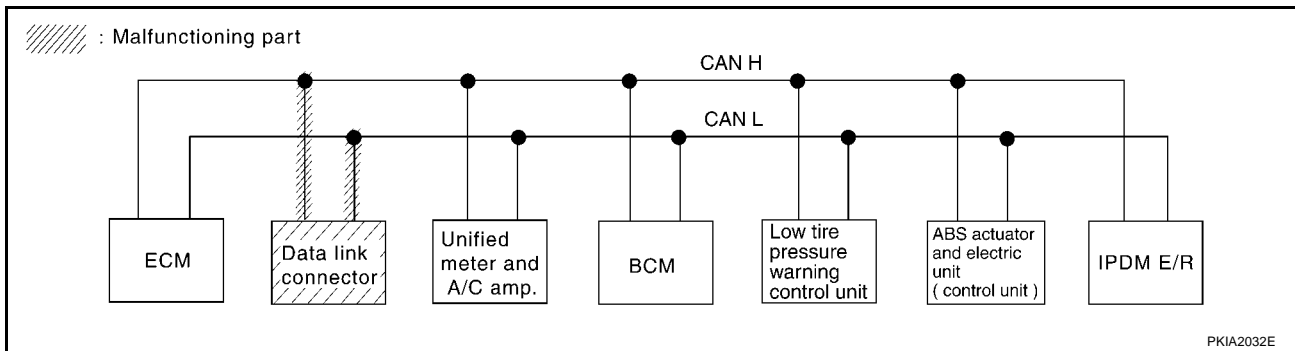
OK or NG

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



## Data Link Connector Circuit Check

AKS00346



## 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check the terminals and connector of data link connector 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

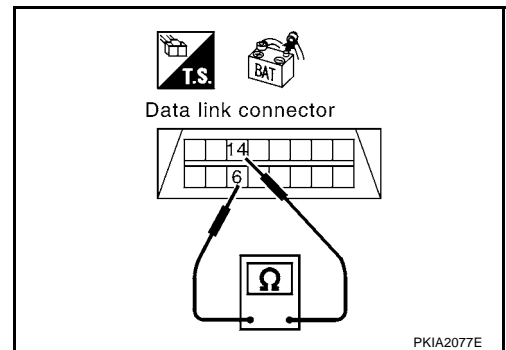
Check resistance between data link connector M8 terminals 6 (L) and 14 (R).

**6 (L) – 14 (R)**

**: Approx. 54 – 66Ω**

OK or NG

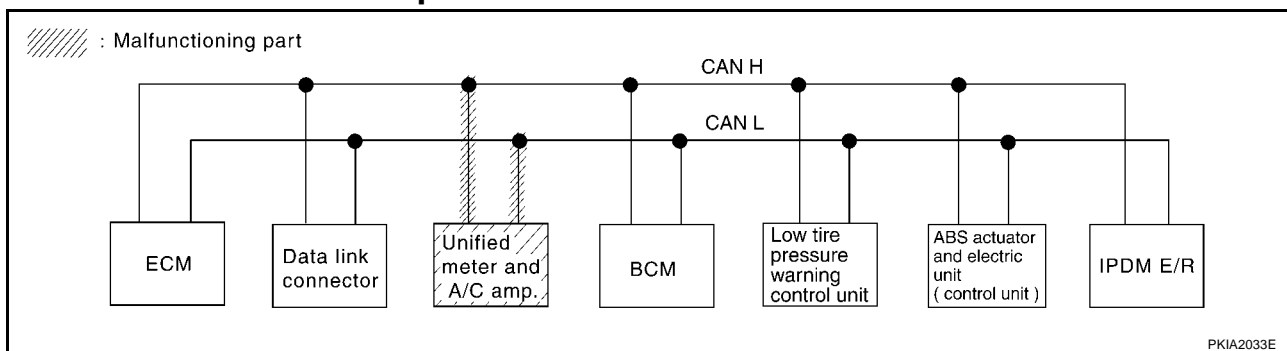
- OK >> Perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-60, "Work Flow"](#).
- NG >> Repair harness between data link connector and unified meter and A/C amp.





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

AKS00347



## 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 &gt;&gt; GO TO 2.

NG &gt;&gt; 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 M48 terminals 1 (L) and 11 (R).

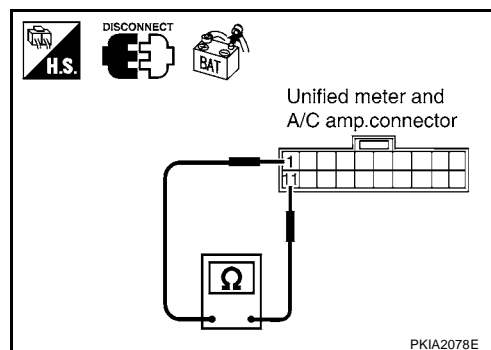
1 (L) – 11 (R)

: Approx. 54 – 66Ω

OK or NG

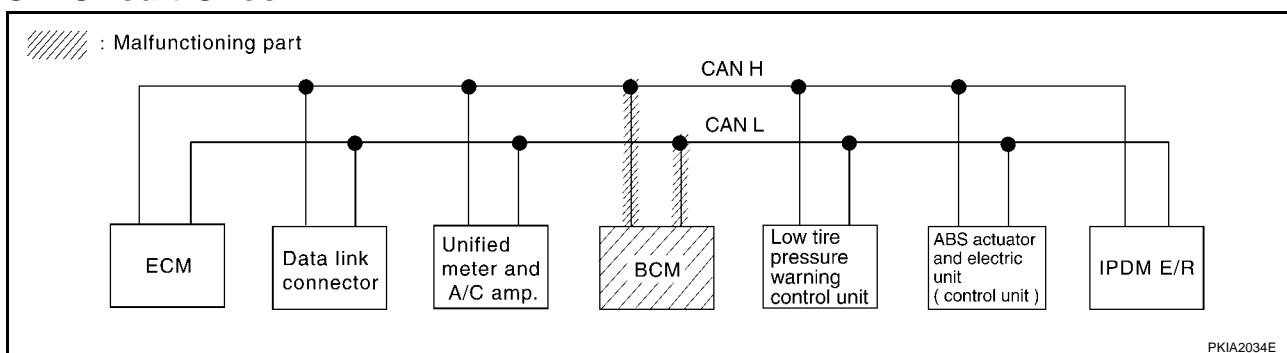
OK &gt;&gt; Replace unified meter and A/C amp.

NG &gt;&gt; Repair harness between unified meter and A/C amp. and BCM.



## BCM Circuit Check

AKS00348



## 1. CHECK CONNECTOR

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

OK or NG

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

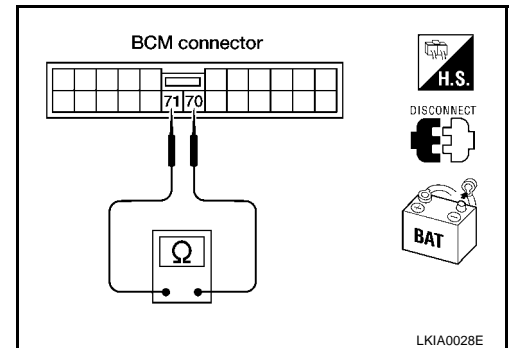
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M3 terminals 70 (L) and 71 (R).

**70 (L) – 71 (R) : Approx. 54 – 66Ω**

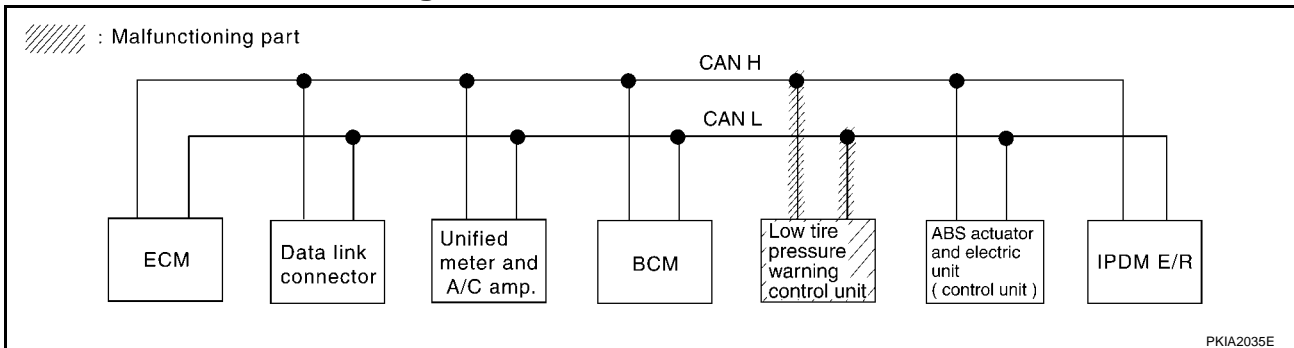
OK or NG

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



## Low Tire Pressure Warning Control Unit Circuit Check

AKS00349



## 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

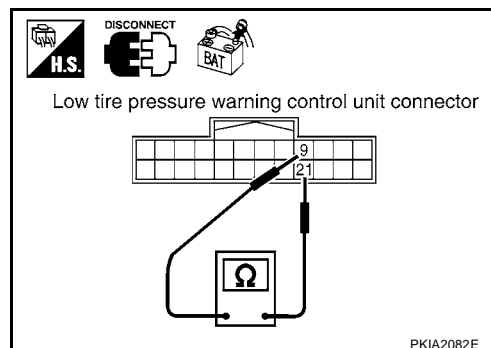
1. Disconnect low tire pressure warning control unit connector.
2. Check resistance between low tire pressure warning control unit harness connector M77 terminals 9 (L) and 21 (R).

**9 (L) – 21 (R)**

**: Approx. 54 – 66Ω**

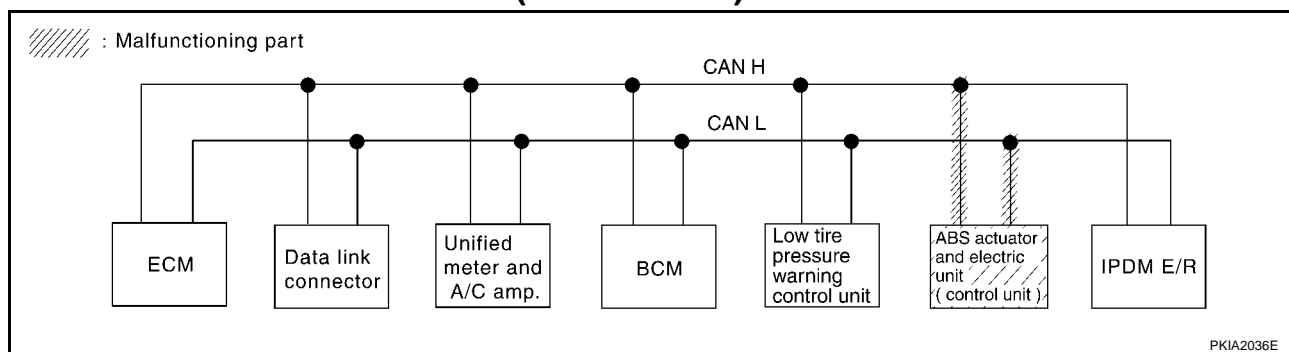
OK or NG

- OK >> Replace low tire pressure warning control unit.  
 NG >> Repair harness between low tire pressure warning control unit and harness connector M15.



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

AKS0034A



### 1. CHECK CONNECTOR

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

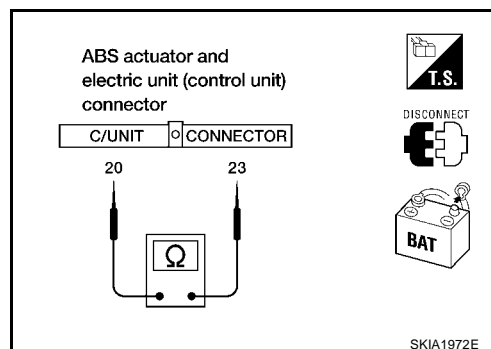
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E51 terminals 20 (L) and 23 (R).

**20 (L) – 23 (R)**

**: Approx. 54 – 66Ω**

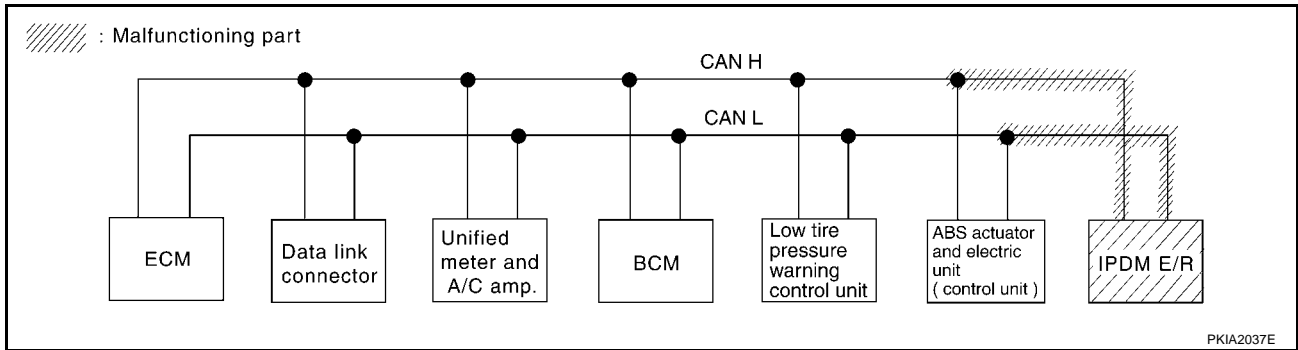
OK or NG

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



## IPDM E/R Circuit Check

AKS0034B



## 1. CHECK CONNECTOR

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

OK or NG

OK &gt;&gt; GO TO 2.

NG &gt;&gt; Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

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

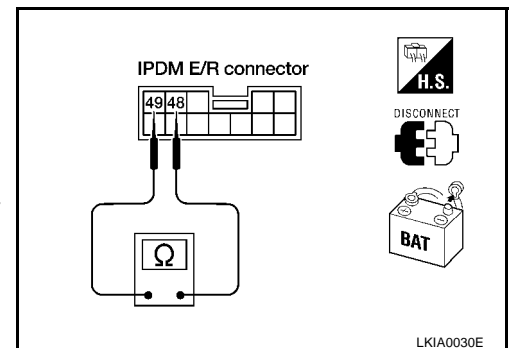
48 (L) – 49 (R)

: Approx. 108 – 132Ω

OK or NG

OK &gt;&gt; Replace IPDM E/R.

NG &gt;&gt; Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



## CAN Communication Circuit Check

AKS0034C

## 1. CHECK CONNECTOR

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

OK or NG

OK &gt;&gt; GO TO 2.

NG &gt;&gt; Repair terminal or connector.

## 2. CHECK HARNESS FOR SHORT CIRCUIT

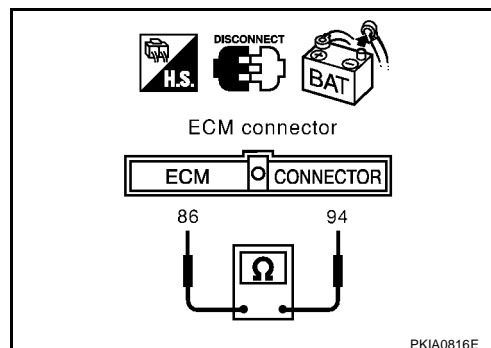
1. Disconnect ECM connector and harness connector F102.
2. Check continuity between ECM harness connector F101 terminals 94 (L) and 86 (R).

**94 (L) – 86 (R) : Continuity should not exist.**

OK or NG

OK >> GO TO 3.

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



## 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between ECM harness connector F101 terminals 94 (L), 86 (R) and ground.

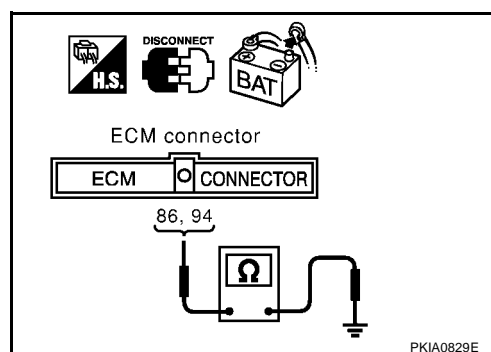
**94 (L) – ground : Continuity should not exist.**

**86 (R) – ground : Continuity should not exist.**

OK or NG

OK >> GO TO 4.

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



## 4. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
  - Unified meter and A/C amp. connector
  - BCM connector
  - Low tire pressure warning control unit connector
  - Harness connector M15
2. Check continuity between data link connector M8 terminals 6 (L) and 14 (R).

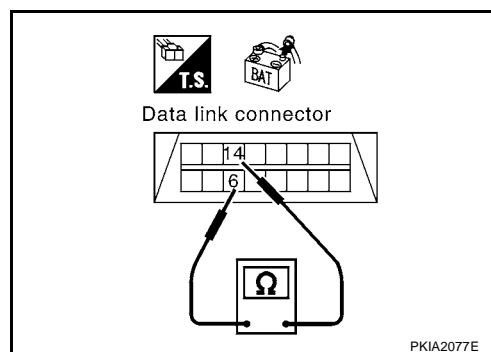
**6 (L) – 14 (R) : Continuity should not exist.**

OK or NG

OK >> GO TO 5.

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

- Harness between data link connector and harness connector M72.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and BCM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M15.



## 5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M8 terminals 6 (L), 14 (R) and ground.

**6 (L) – ground : Continuity should not exist.**

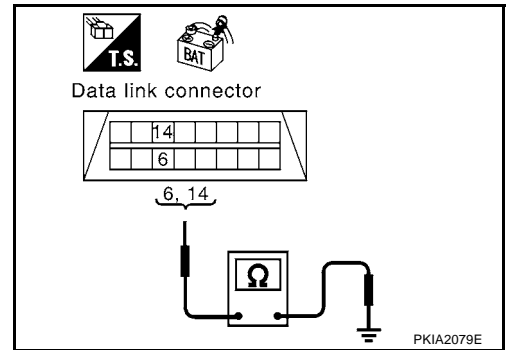
**14 (R) – ground : Continuity should not exist.**

OK or NG

OK >> GO TO 6.

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

- Harness between data link connector and harness connector M72.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and BCM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M15.



## 6. 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 (R).

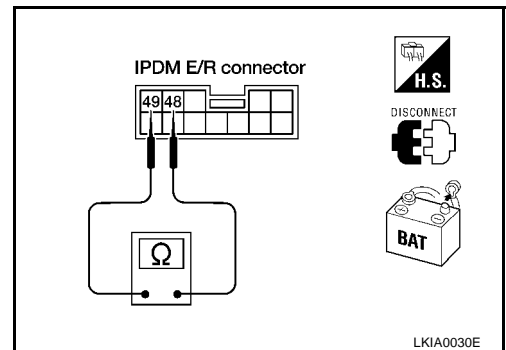
**48 (L) – 49 (R) : Continuity should not exist.**

OK or NG

OK >> GO TO 7.

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

- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E108.



## 7. CHECK HARNESS FOR SHORT CIRCUIT

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

**48 (L) – ground : Continuity should not exist.**

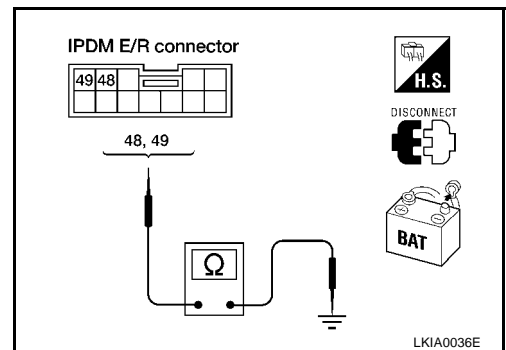
**49 (R) – ground : Continuity should not exist.**

OK or NG

OK >> GO TO 8.

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 E108.



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

Check components inspection. Refer to [LAN-79, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

OK or NG

OK >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-60, "Work Flow"](#).

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

**IPDM E/R Check**

AKS0034D

**1. CHECK IPDM E/R**

1. Turn ignition switch ON and then OFF.
2. Check for illuminated parking lamps and tail lamps.

**Parking lamps and tail lamps should not illuminate.**

OK or NG

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

NG >> Replace IPDM E/R.

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

AKS0034E

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

- IPDM E/R power supply circuit. Refer to [PG-29, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-11, "IGNITION POWER SUPPLY — IGNITION SW. IN "ON" AND/OR "START" "](#).

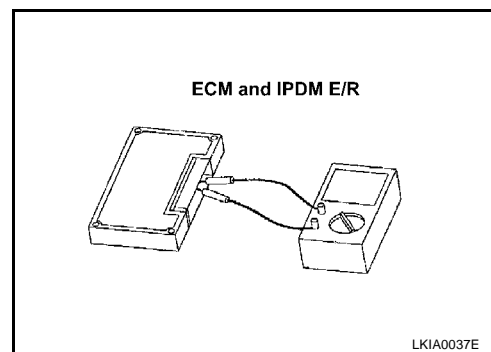
**Component Inspection**

AKS0034F

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

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

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



## CAN SYSTEM (TYPE 4)

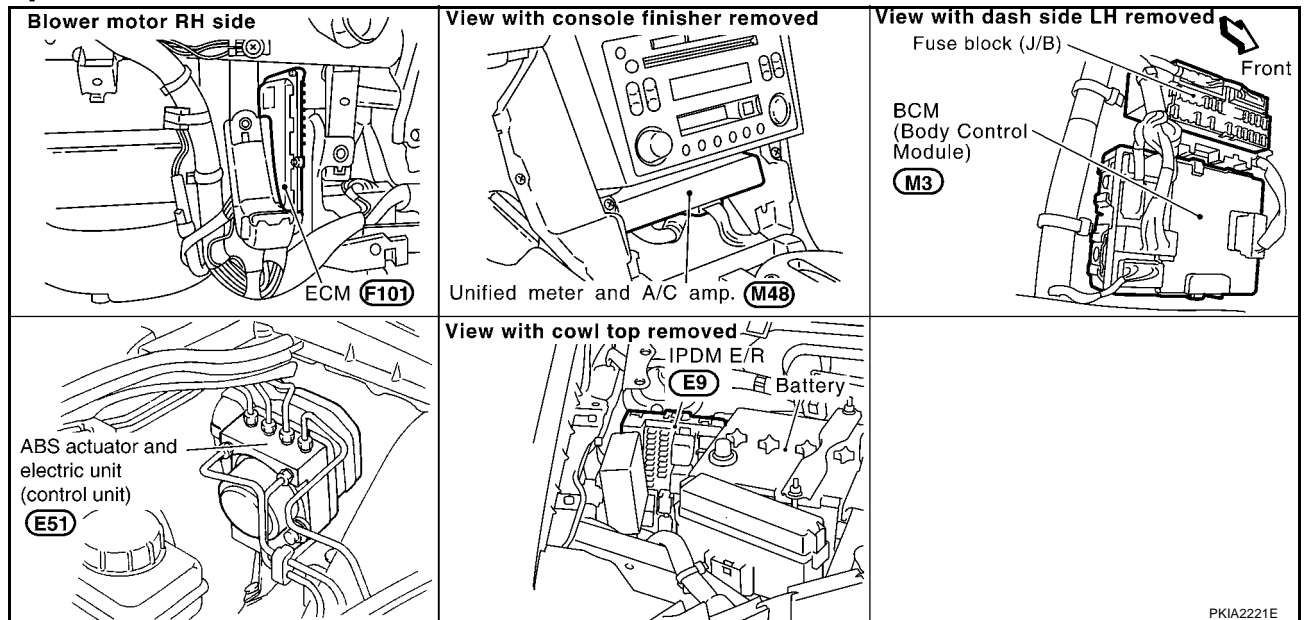
## System Description

AKS00364

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

AKS00365





# CAN SYSTEM (TYPE 4)

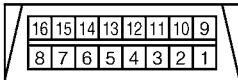
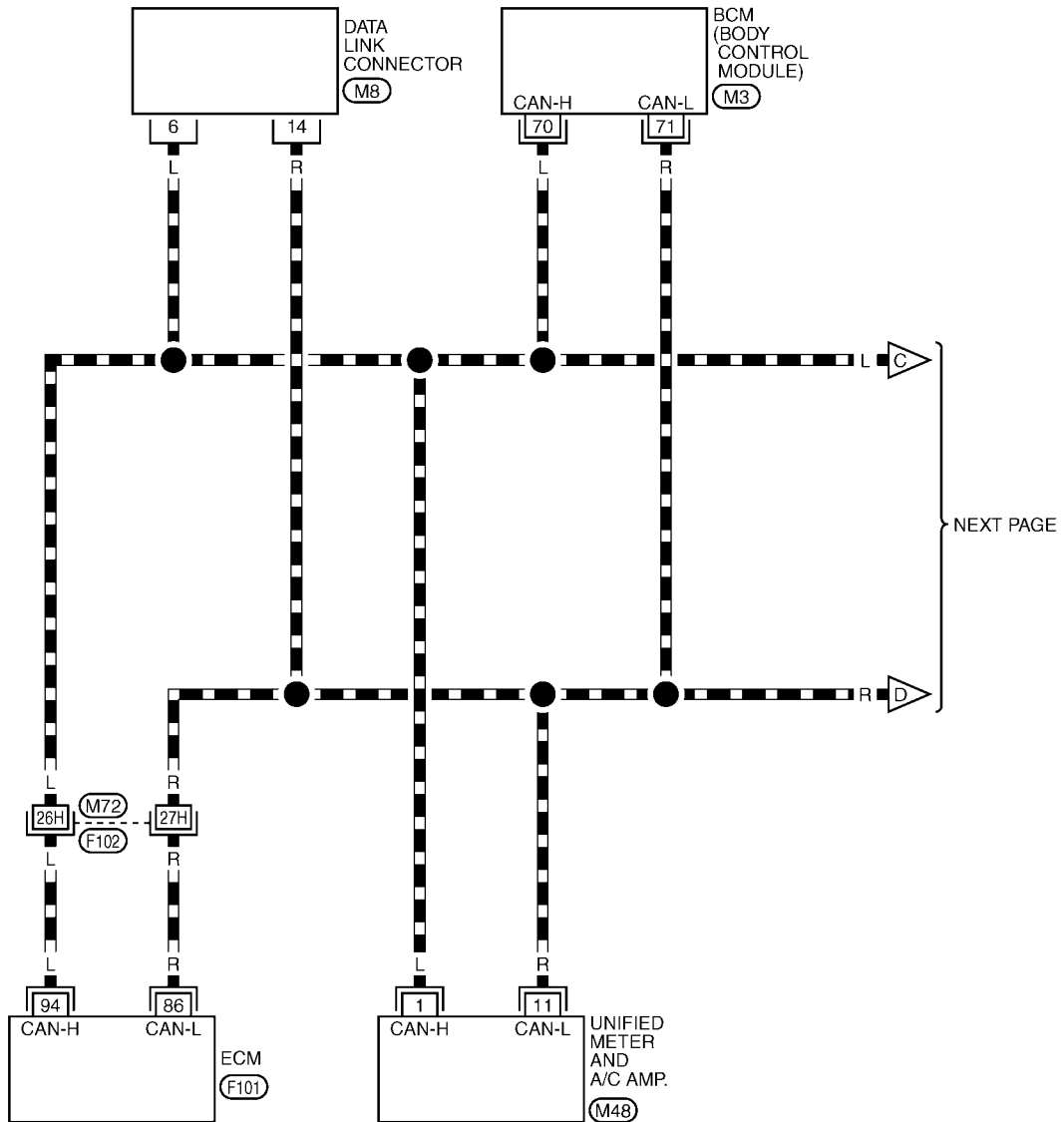
[CAN]

## Wiring Diagram — CAN —

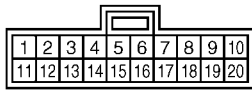
AKS00366

### LAN-CAN-03

DATA LINE



(M8)  
W



(M48)  
GY



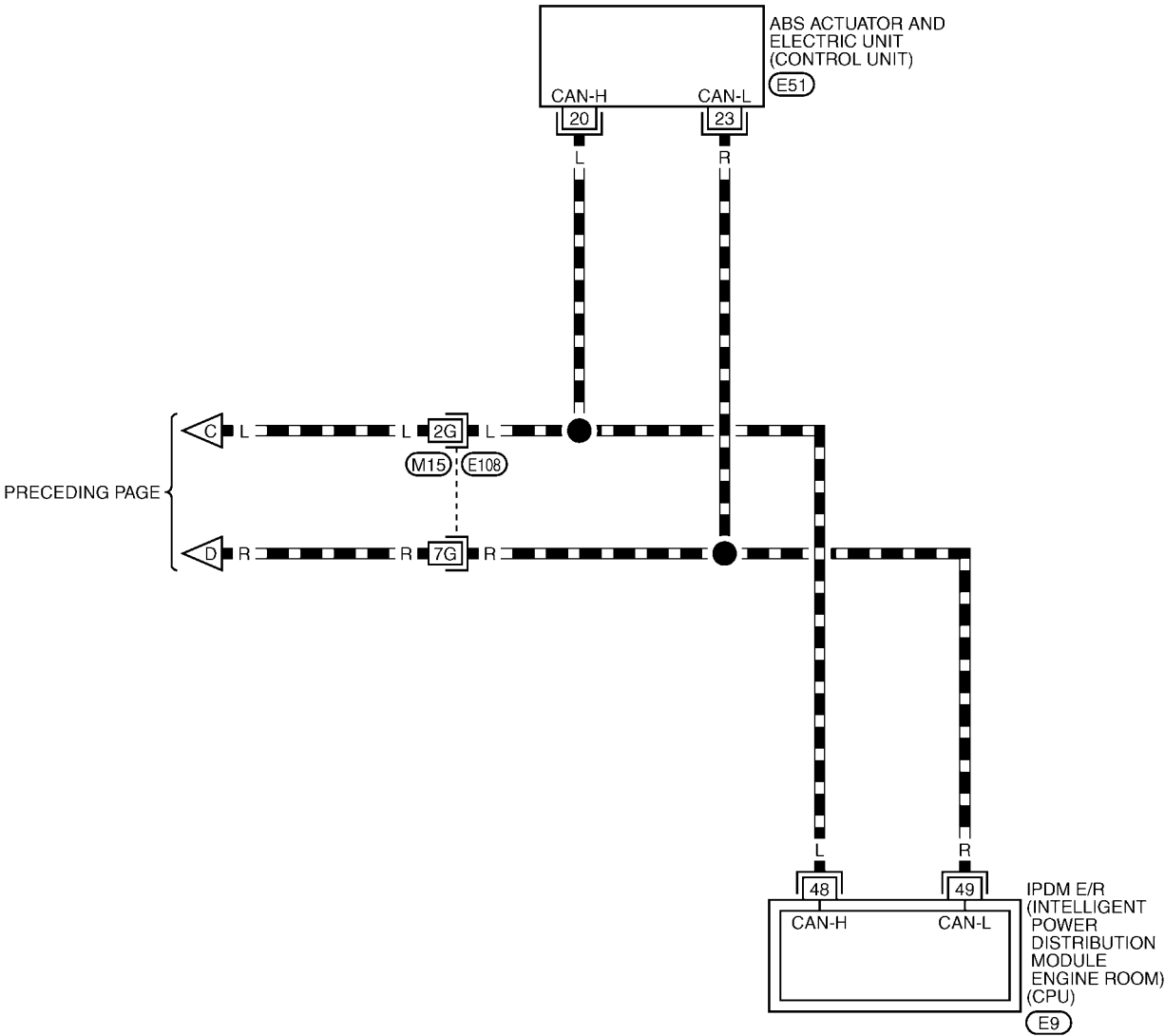
REFER TO THE FOLLOWING.

(F102) -SUPER MULTIPLE JUNCTION (SMJ)

(M3), (F101) -ELECTRICAL UNITS

TKWT0408E

DATA LINE



49	48	47	46	45
56	55	54	53	52
51	50			

E9  
W



REFER TO THE FOLLOWING.

(E108) -SUPER MULTIPLE JUNCTION (SMJ)

(E51) -ELECTRICAL UNITS

## Work Flow

AKS00367

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

(Example)

NISSAN	
CONSULT-II	
ENGINE	
START (NISSAN BASED VHCL)	
START (RENAULT BASED VHCL)	
SUB MODE	
	LIGHT COPY

SELECT SYSTEM	
ENGINE	
A/T	
ABS	
AIR BAG	
BCM	
METER A/C AMP	
BACK	LIGHT COPY

PKIA2093E

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

(Example)

SELECT DIAG MODE	
WORK SUPPORT	
SELF-DIAG RESULTS	
DATA MONITOR	
DATA MONITOR (SPEC)	
ACTIVE TEST	
FUNCTION TEST	
Scroll Down	
BACK	LIGHT COPY

SELF-DIAG RESULTS	
DTC RESULTS	TIME
CAN COMM CIRCUIT [U1000]	0
F.F.DATA	
ERASE	PRINT
MODE BACK	LIGHT COPY

PKIA2094E

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

(Example)

SELECT DIAG MODE	
WORK SUPPORT	
SELF-DIAG RESULTS	
DATA MONITOR	
DATA MONITOR (SPEC)	
ACTIVE TEST	
FUNCTION TEST	
Scroll Down	
BACK	LIGHT COPY

DATA MONITOR	
SELECT MONITOR ITEM	
ECM INPUT SIGNALS	
MAIN SIGNALS	
CAN DIAG SUPPORT MNTR	
SELECTION FROM MENU	
SETTING	Numerical Display
MODE BACK	LIGHT COPY

DATA MONITOR	
MONITOR	NO DTC
CAN COMM	OK
CAN CIRC 1	OK
CAN CIRC 2	OK
CAN CIRC 3	OK
CAN CIRC 4	OK
CAN CIRC 5	UNKWN
CAN CIRC 6	OK
CAN CIRC 7	OK
RECORD	
MODE BACK	LIGHT COPY

PKIA2095E

- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" onto the check sheet. Refer to [LAN-84, "CHECK SHEET"](#).
- Based on the indications of "SELECT SYSTEM" and the results of "DATA MONITOR (CAN DIAG SUPPORT MNTR)", put marks "V" onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-84, "CHECK SHEET"](#).

**NOTE:**

- If "NG" is displayed on "CAN COMM" as "DATA MONITOR (CAN DIAG SUPPORT MNTR)" for the diagnosed control unit, replace the control unit.
  - The "DATA MONITOR (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 the "DATA MONITOR (CAN DIAG SUPPORT MNTR)" items not in check sheet table.
- According to the check sheet results (example), start inspection. Refer to [LAN-86, "CHECK SHEET RESULTS \(EXAMPLE\)"](#).

# CAN SYSTEM (TYPE 4)

[CAN]

## CHECK SHEET

Check sheet table

SELECT SYSTEM		DATA MONITOR (CAN DIAG SUPPORT MNTR)						
ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

Attach copy of  
ENGINE  
SELF-DIAG RESULTS

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

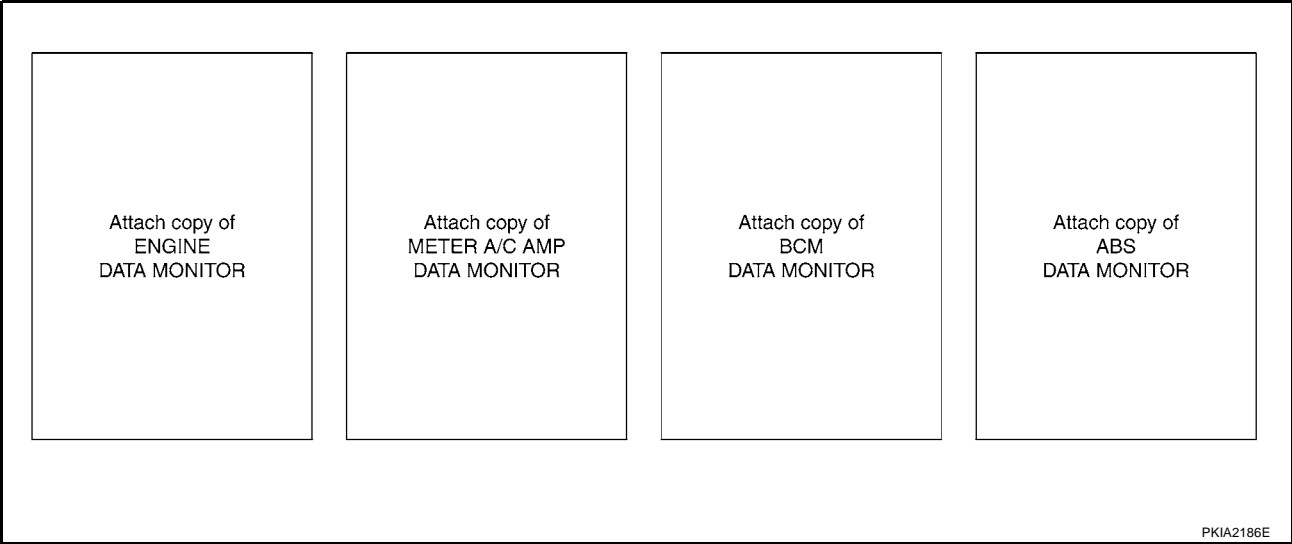
Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

PKIA2185E

CAN SYSTEM (TYPE 4)

[CAN]



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

# CAN SYSTEM (TYPE 4)

[CAN]

## CHECK SHEET RESULTS (EXAMPLE)

### Case 1 : Replace ECM

ENGINE	—	CAN <input checked="" type="checkbox"/> COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN <input checked="" type="checkbox"/> CIRC 4	CAN <input checked="" type="checkbox"/> CIRC 6	CAN <input checked="" type="checkbox"/> CIRC 3	CAN <input checked="" type="checkbox"/> CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—

### Case 2 : Replace unified meter and A/C amp.

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN <input checked="" type="checkbox"/> CIRC 2	—	CAN <input checked="" type="checkbox"/> CIRC 4	CAN <input checked="" type="checkbox"/> CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—

### Case 3 : Replace BCM

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN <input checked="" type="checkbox"/> COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN <input checked="" type="checkbox"/> CIRC 2	CAN <input checked="" type="checkbox"/> CIRC 4	—	—	CAN <input checked="" type="checkbox"/> CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—

### Case 4 : Replace ABS actuator and electric unit (control unit)

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	CAN <input checked="" type="checkbox"/> CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN <input checked="" type="checkbox"/> CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN <input checked="" type="checkbox"/> COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—

### Case 5

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN <input checked="" type="checkbox"/> CIRC 4	CAN <input checked="" type="checkbox"/> CIRC 6	CAN <input checked="" type="checkbox"/> CIRC 3	CAN <input checked="" type="checkbox"/> CIRC 7
METER A/C AMP	No <input checked="" type="checkbox"/> indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN <input checked="" type="checkbox"/> CIRC 2	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN <input checked="" type="checkbox"/> CIRC 2	—	—	—	—

### Case 6

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN <input checked="" type="checkbox"/> CIRC 6	CAN <input checked="" type="checkbox"/> CIRC 3	CAN <input checked="" type="checkbox"/> CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN <input checked="" type="checkbox"/> CIRC 4	CAN <input checked="" type="checkbox"/> CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN <input checked="" type="checkbox"/> CIRC 2	CAN <input checked="" type="checkbox"/> CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN <input checked="" type="checkbox"/> CIRC 2	—	—	—	—

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# CAN SYSTEM (TYPE 4)

[CAN]

Case 7

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	CAN ✓CIRC 3	CAN ✓CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN ✓CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	CAN ✓CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN ✓CIRC 2	—	—	—	—

Case 8

ENGINE	—	CAN COMM	CAN ✓CIRC 1	—	CAN ✓CIRC 4	CAN ✓CIRC 6	CAN ✓CIRC 3	CAN ✓CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN ✓CIRC 2	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN ✓CIRC 2	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN ✓CIRC 2	—	—	—	—

Case 9

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication ✓	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—

Case 10

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN ✓CIRC 4	CAN CIRC 6	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication ✓	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN ✓CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—

Case 11

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN ✓CIRC 6	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN ✓CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN ✓CIRC 1	CAN ✓CIRC 2	CAN ✓CIRC 4	—	—	CAN ✓CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—

Case 12

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	CAN ✓CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN ✓CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN ✓CIRC 1	CAN CIRC 2	—	—	—	—

Case 13

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	CAN CIRC 3	CAN ✓CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	CAN ✓CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—

Case 14

ENGINE	—	CAN COMM	CAN ✓CIRC 1	—	CAN ✓CIRC 4	CAN ✓CIRC 6	CAN ✓CIRC 3	CAN ✓CIRC 7
METER A/C AMP	No indication ✓	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN ✓CIRC 1	CAN ✓CIRC 2	CAN ✓CIRC 4	—	—	CAN ✓CIRC 3
ABS	—	CAN COMM	CAN ✓CIRC 1	CAN ✓CIRC 2	—	—	—	—

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Case 15

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—

Case 16

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—

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## INSPECTION

Proceed trouble diagnosis according to the check sheet results (example).

Case 1: Replace ECM.

Case 2: Replace unified meter and A/C amp.

Case 3: Replace BCM.

Case 4: Replace ABS actuator and electric unit (control unit).

Case 5: Check harness between data link connector and unified meter and A/C amp. Refer to [LAN-88, "Circuit Check Between Data Link Connector and Unified Meter and A/C Amp."](#)

Case 6: Check harness between unified meter and A/C amp. and BCM. Refer to [LAN-89, "Circuit Check Between Unified Meter and A/C Amp. and BCM"](#).

Case 7: Check harness between BCM and ABS actuator and electric unit (control unit). Refer to [LAN-90, "Circuit Check Between BCM and ABS Actuator and Electric Unit \(Control Unit\)"](#).

Case 8: Check ECM circuit. Refer to [LAN-91, "ECM Circuit Check"](#).

Case 9: Check data link connector circuit. Refer to [LAN-91, "Data Link Connector Circuit Check"](#).

Case 10: Check unified meter and A/C amp. circuit. Refer to [LAN-92, "Unified Meter and A/C Amp. Circuit Check"](#).

Case 11: Check BCM circuit. Refer to [LAN-93, "BCM Circuit Check"](#).

Case 12: Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-94, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#).

Case 13: Check IPDM E/R circuit. Refer to [LAN-94, "IPDM E/R Circuit Check"](#).

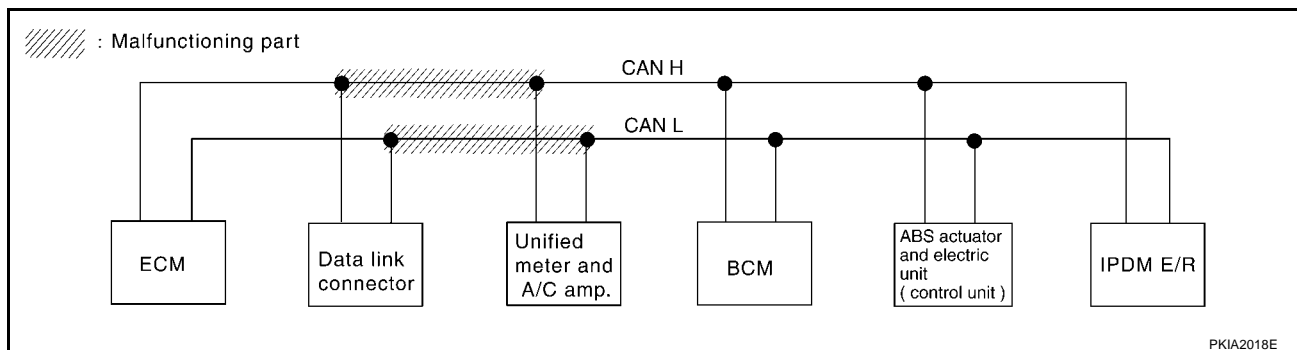
Case 14: Check CAN communication circuit. Refer to [LAN-95, "CAN Communication Circuit Check"](#).

Case 15: Check IPDM E/R. Refer to [LAN-97, "IPDM E/R Check"](#).

Case 16: Check IPDM E/R Ignition relay circuit. Refer to [LAN-97, "IPDM E/R Ignition Relay Circuit Check"](#).

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

AKS00368



PKIA2018E



## 1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and unified meter and A/C amp. connector.
4. Check continuity between data link connector M8 terminals 6 (L), 14 (R) and unified meter and A/C amp. harness connector M48 terminals 1 (L), 11 (R).

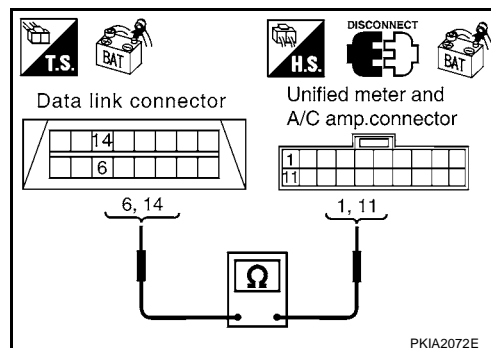
**6 (L) – 1 (L) : Continuity should exist.**

**14 (R) – 11 (R) : Continuity should exist.**

OK or NG

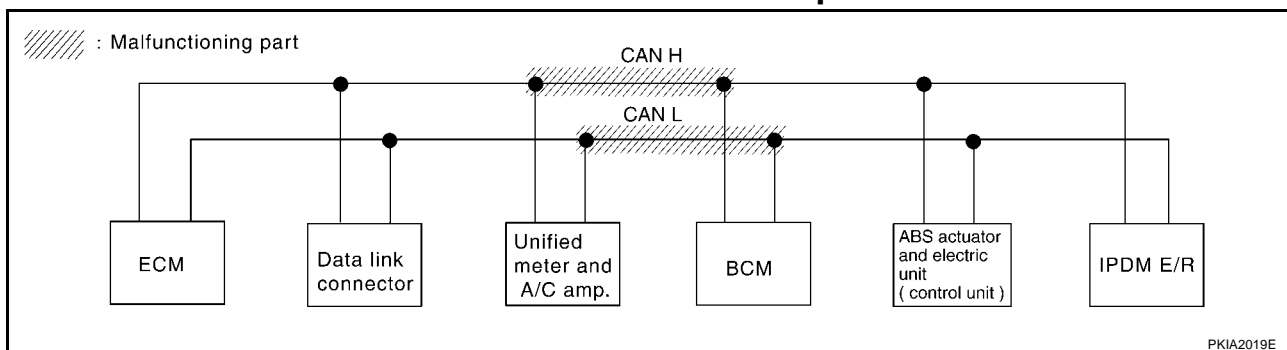
OK >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-83, "Work Flow"](#).

NG >> Repair harness.



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

AKS00369



## 1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect the following connectors.
  - ECM connector
  - Unified meter and A/C amp. connector
  - BCM connector
4. Check continuity between unified meter and A/C amp. harness connector M48 terminals 1 (L), 11 (R) and BCM harness connector M3 terminals 70 (L), 71 (R).

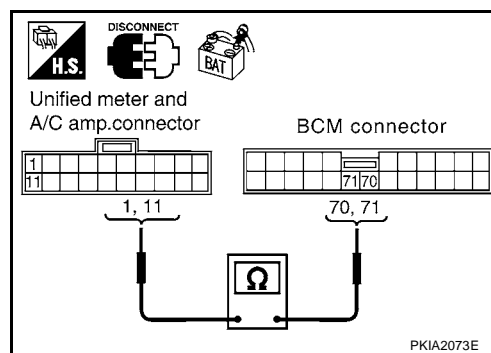
**1 (L) – 70 (L) : Continuity should exist.**

**11 (R) – 71 (R) : Continuity should exist.**

OK or NG

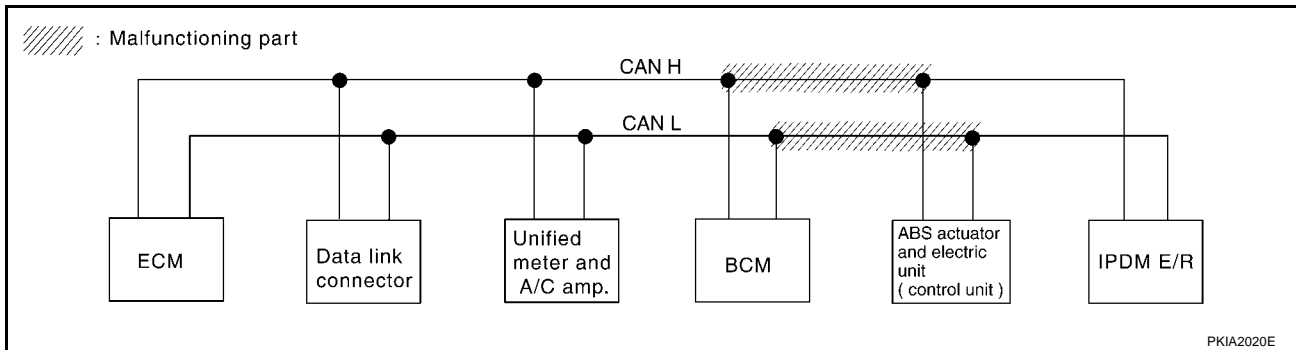
OK >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-83, "Work Flow"](#).

NG >> Repair harness.



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

AKS0036A



## 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connector for damage, bend and loose connection (connector-side and harness-side).
  - Harness connector M15
  - Harness connector E108

OK or NG

OK &gt;&gt; GO TO 2.

NG &gt;&gt; Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector and harness connector M15.
2. Check continuity between BCM harness connector M3 terminals 70 (L), 71 (R) and harness connector M15 terminals 2G (L), 7G (R).

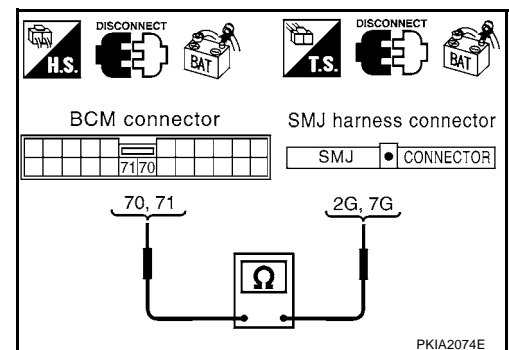
70 (L) – 2G (L) : Continuity should exist.

71 (R) – 7G (R) : Continuity should exist.

OK or NG

OK &gt;&gt; GO TO 3.

NG &gt;&gt; Repair harness.



## 3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E108 terminals 2G (L), 7G (R) and ABS actuator and electric unit (control unit) harness connector E51 terminals 20 (L), 23 (R).

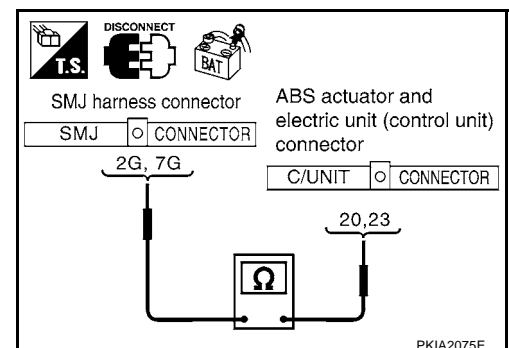
2G (L) – 20 (L) : Continuity should exist.

7G (R) – 23 (R) : Continuity should exist.

OK or NG

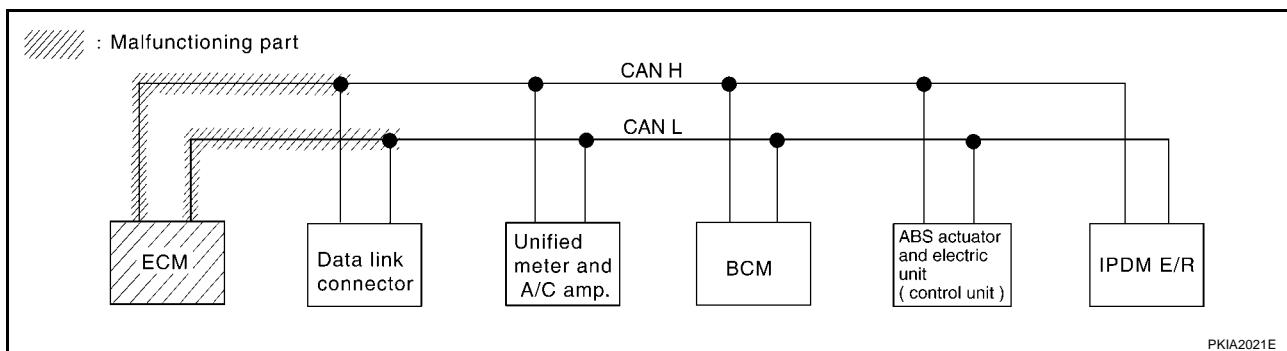
OK >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to LAN-83, "Work Flow".

NG &gt;&gt; Repair harness.



## ECM Circuit Check

AKS0036B



## 1. CHECK CONNECTOR

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

- ECM connector
- Harness connector F102
- Harness connector M72

OK or NG

OK &gt;&gt; GO TO 2.

NG &gt;&gt; Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector F101 terminals 94 (L) and 86 (R).

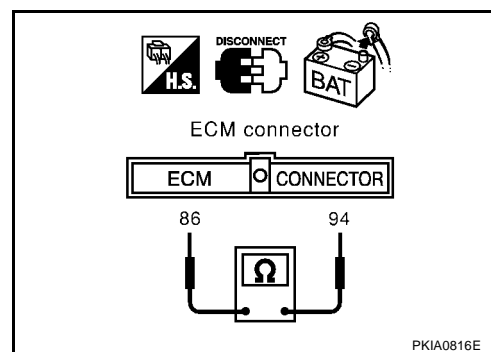
94 (L) – 86 (R)

: Approx. 108 – 132Ω

OK or NG

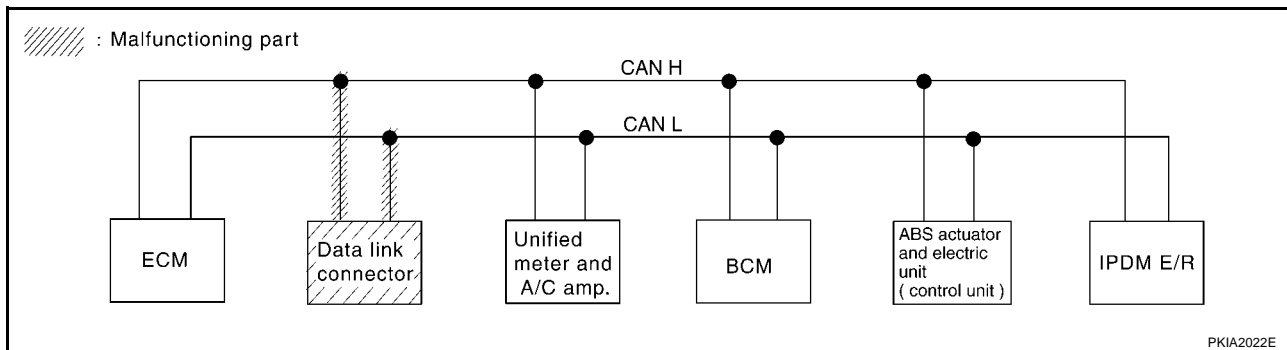
OK &gt;&gt; Replace ECM.

NG &gt;&gt; Repair harness between ECM and data link connector.



## Data Link Connector Circuit Check

AKS0036C



## 1. CHECK CONNECTOR

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

OK or NG

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

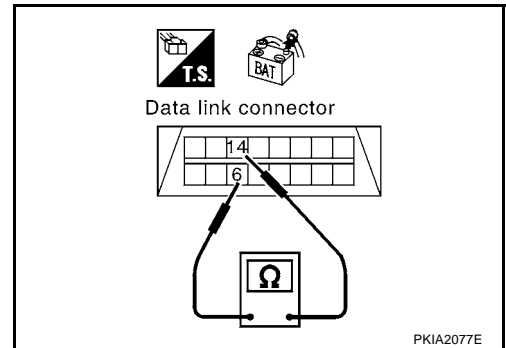
## 2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M8 terminals 6 (L) and 14 (R).

**6 (L) – 14 (R) : Approx. 54 – 66Ω**

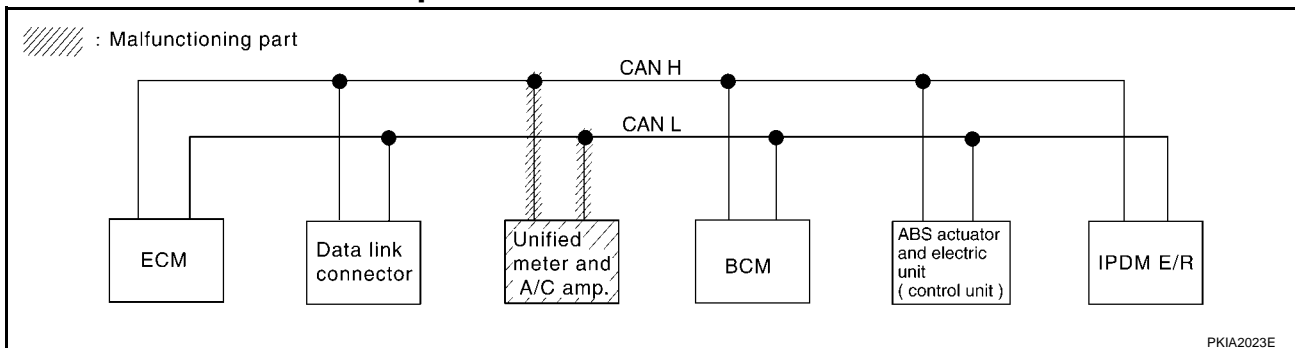
OK or NG

- OK >> Perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-83, "Work Flow"](#).
- NG >> Repair harness between data link connector and unified meter and A/C amp.



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

AKS0036D



PKIA2023E

## 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.

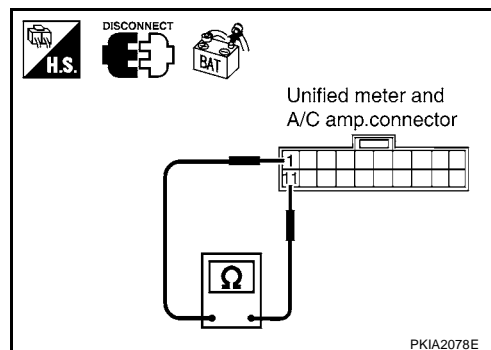
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M48 terminals 1 (L) and 11 (R).

**1 (L) – 11 (R) : Approx. 54 – 66Ω**

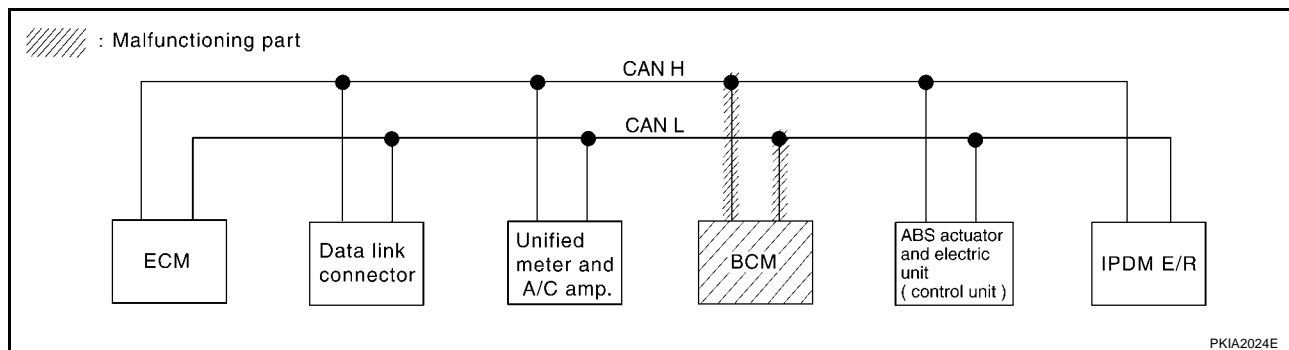
### OK or NG

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



## BCM Circuit Check

AKS0036E



## 1. CHECK CONNECTOR

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

### OK or NG

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

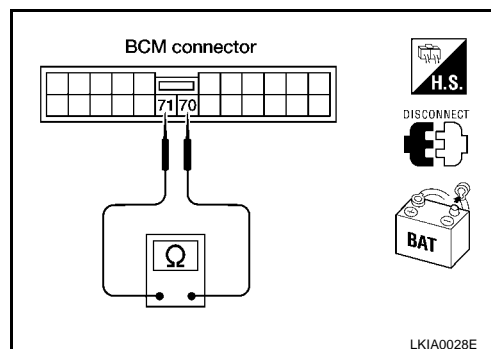
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M3 terminals 70 (L) and 71 (R).

**70 (L) – 71 (R) : Approx. 54 – 66Ω**

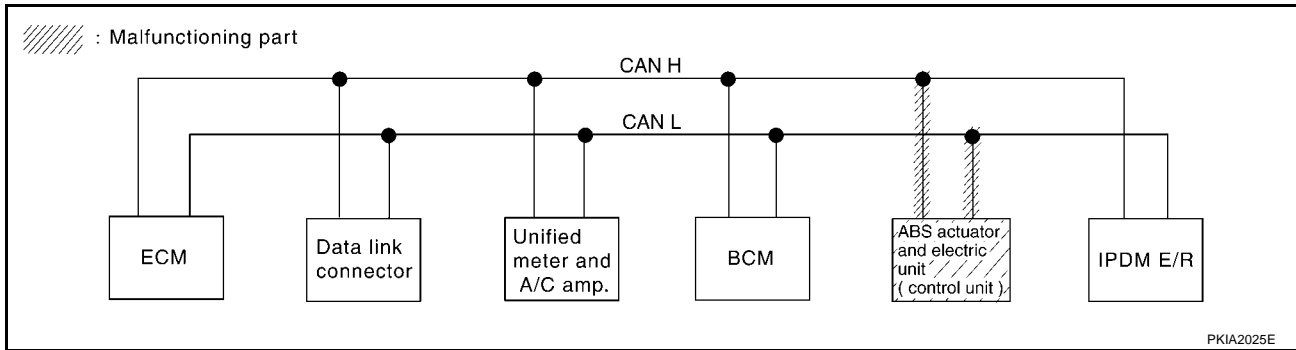
### OK or NG

- OK >> Replace BCM.  
 NG >> Repair harness between BCM and harness connector M15.



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

AKS0036F



### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check the 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 &gt;&gt; GO TO 2.

NG &gt;&gt; Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

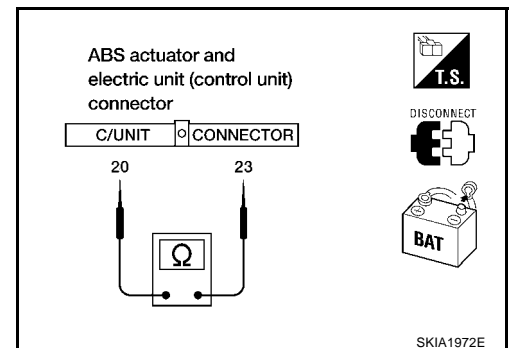
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E51 terminals 20 (L) and 23 (R).

**20 (L) – 23 (R)****: Approx. 54 – 66Ω**

OK or NG

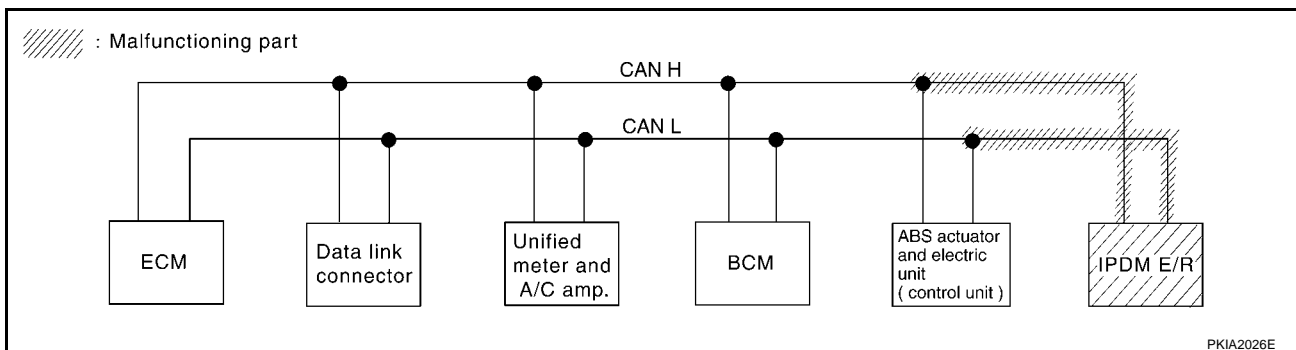
OK &gt;&gt; Replace ABS actuator and electric unit (control unit).

NG &gt;&gt; Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



## IPDM E/R Circuit Check

AKS0036G



## 1. CHECK CONNECTOR

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

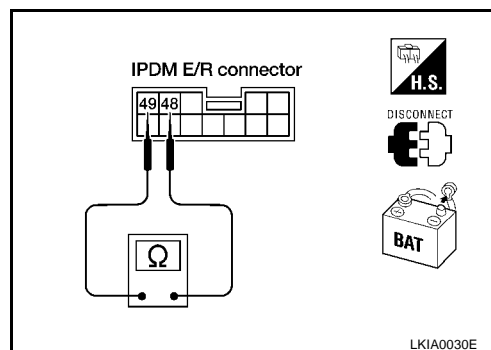
1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (R).

**48 (L) – 49 (R)**

**: Approx. 108 – 132Ω**

OK or NG

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



AKS0036H

## CAN Communication Circuit Check

### 1. CHECK CONNECTOR

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

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

OK or NG

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

### 2. CHECK HARNESS FOR SHORT CIRCUIT

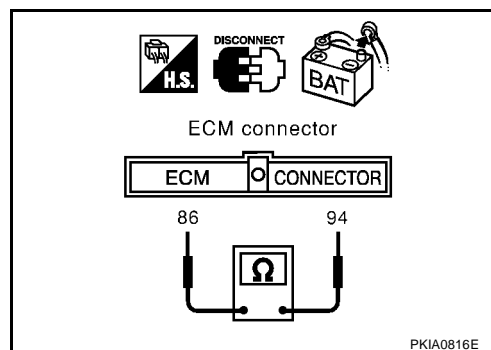
1. Disconnect ECM connector and harness connector F102.
2. Check continuity between ECM harness connector F101 terminals 94 (L) and 86 (R).

**94 (L) – 86 (R)**

**: Continuity should not exist.**

OK or NG

- OK >> GO TO 3.  
NG >> Repair harness between ECM and harness connector F102.



### 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between ECM harness connector F101 terminals 94 (L), 86 (R) and ground.

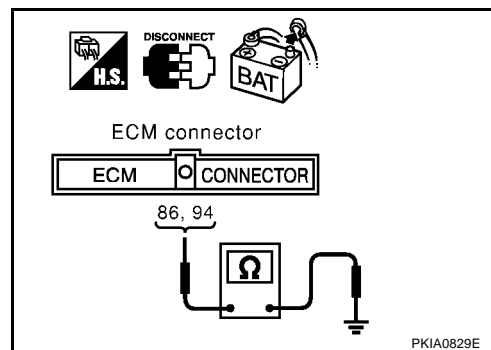
**94 (L) – ground : Continuity should not exist.**

**86 (R) – ground : Continuity should not exist.**

OK or NG

OK >> GO TO 4.

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



### 4. CHECK HARNESS FOR SHORT CIRCUIT

- Disconnect following connectors.
  - Unified meter and A/C amp. connector
  - BCM connector
  - Harness connector M15
- Check continuity between data link connector M8 terminals 6 (L) and 14 (R).

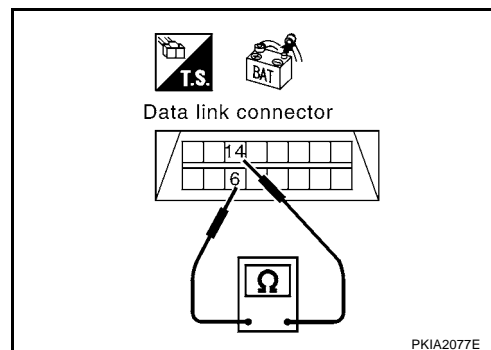
**6 (L) – 14 (R) : Continuity should not exist.**

OK or NG

OK >> GO TO 5.

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

- Harness between data link connector and harness connector M72.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and BCM.
- Harness between data link connector and harness connector M15.



### 5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M8 terminals 6 (L), 14 (R) and ground.

**6 (L) – ground : Continuity should not exist.**

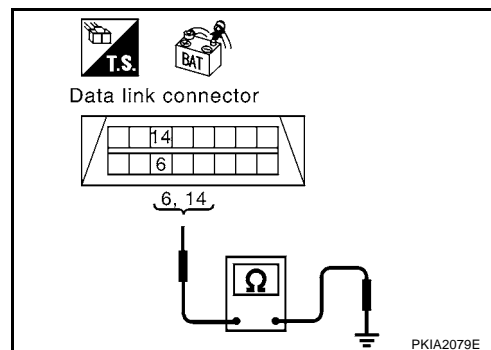
**14 (R) – ground : Continuity should not exist.**

OK or NG

OK >> GO TO 6.

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

- Harness between data link connector and harness connector M72.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and BCM.
- Harness between data link connector and harness connector M15.





## 6. 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 (R).

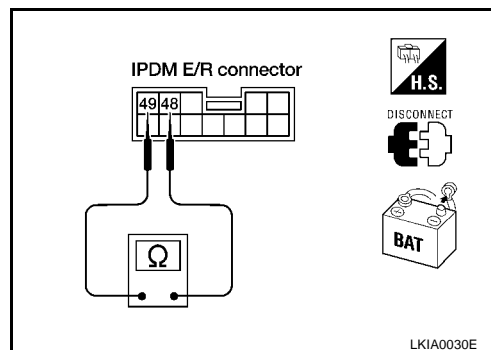
**48 (L) – 49 (R) : Continuity should not exist.**

OK or NG

OK >> GO TO 7.

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

- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E108.



## 7. CHECK HARNESS FOR SHORT CIRCUIT

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

**48 (L) – ground : Continuity should not exist.**

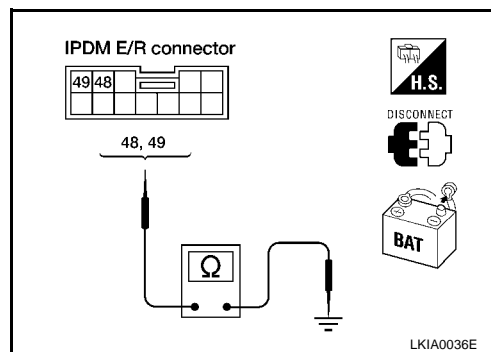
**49 (R) – ground : Continuity should not exist.**

OK or NG

OK >> GO TO 8.

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 E108.



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

Check components inspection. Refer to [LAN-98, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

OK or NG

OK >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-83, "Work Flow"](#).

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

### IPDM E/R Check

#### 1. CHECK IPDM E/R

1. Turn ignition switch ON and then OFF.
2. Check for illuminated parking lamps and tail lamps.

**Parking lamps and tail lamps should not illuminate.**

OK or NG

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

NG >> Replace IPDM E/R.

### IPDM E/R Ignition Relay Circuit Check

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

- IPDM E/R power supply circuit. Refer to [PG-29, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-11, "IGNITION POWER SUPPLY — IGNITION SW. IN "ON" AND/OR "START" "](#).

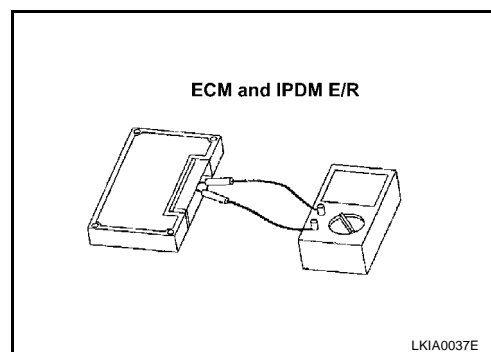
**Component Inspection**

AKS0036K

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

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

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

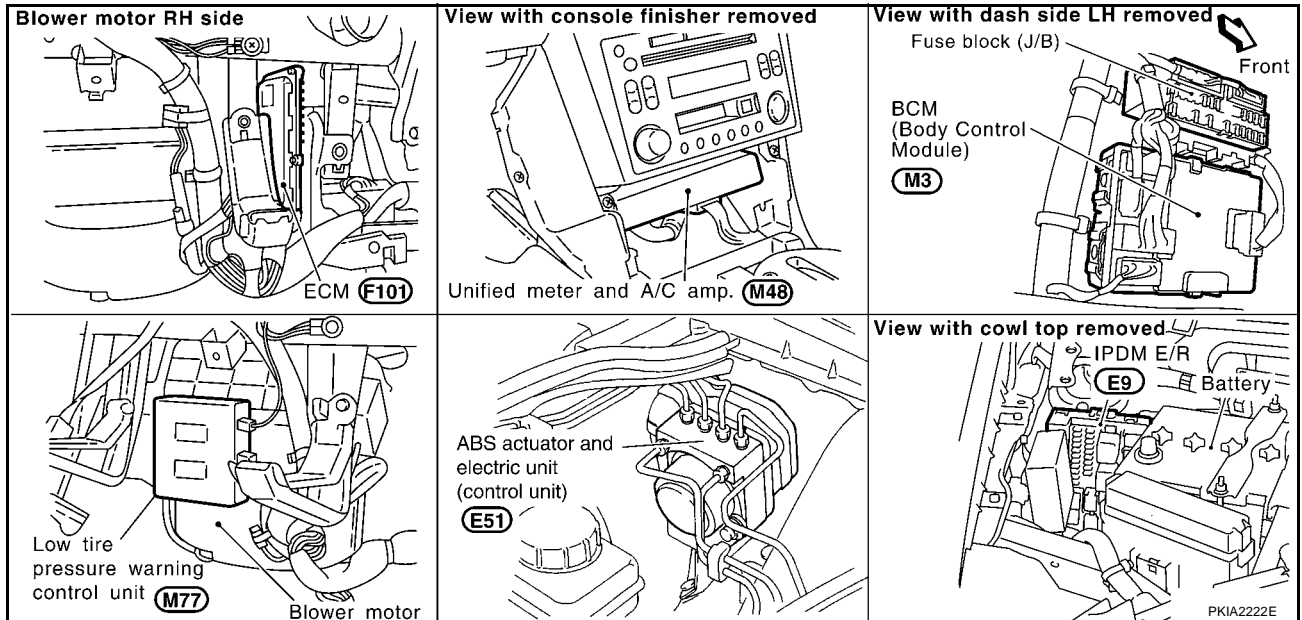


## CAN SYSTEM (TYPE 5)

## System Description

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

## Component Parts and Harness Connector Location



# CAN SYSTEM (TYPE 5)

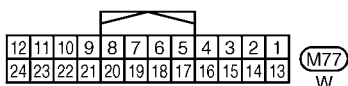
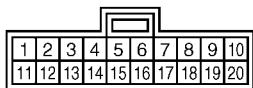
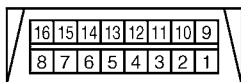
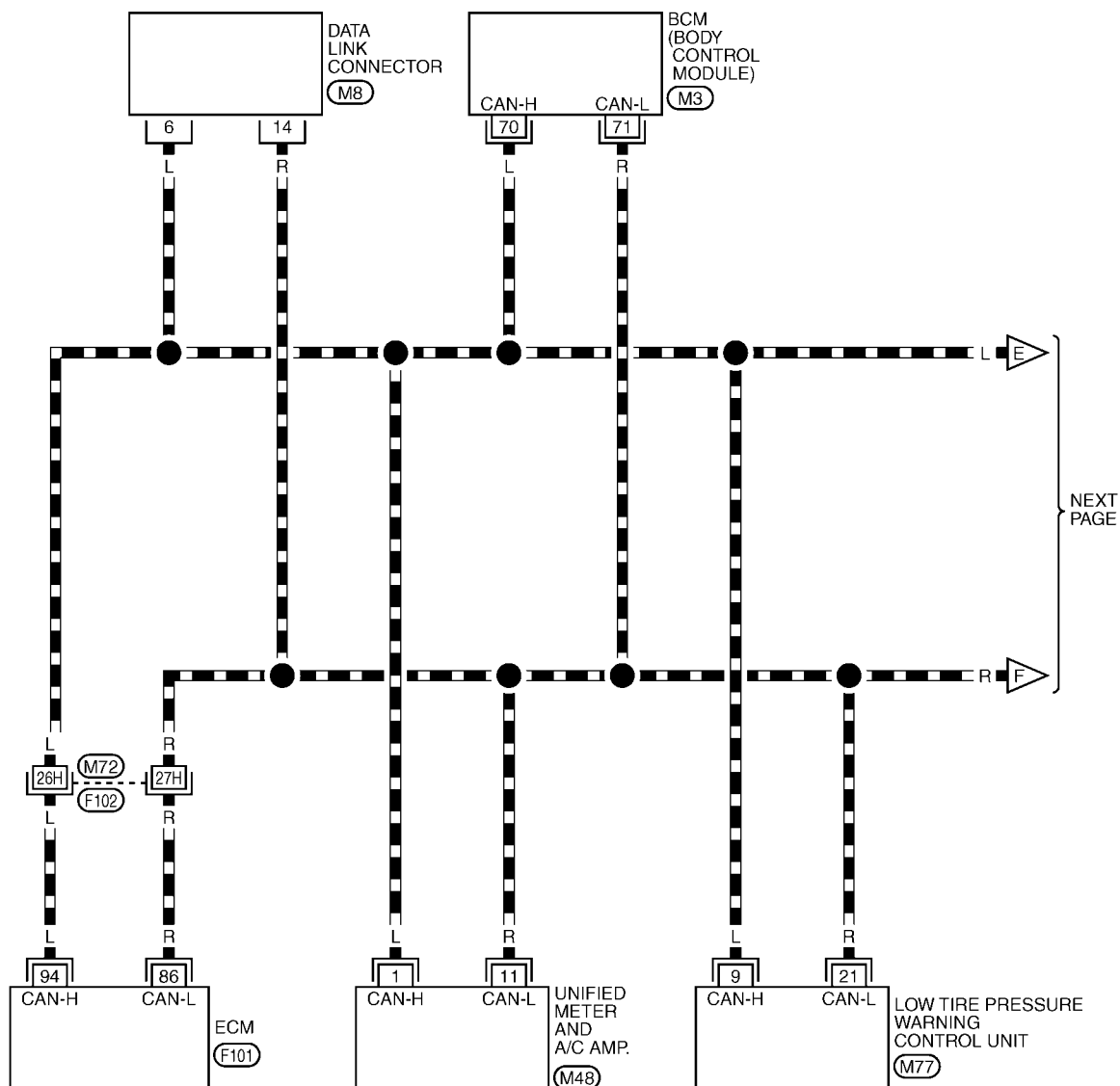
[CAN]

## Wiring Diagram — CAN —

AKS0036N

### LAN-CAN-05

DATA LINE



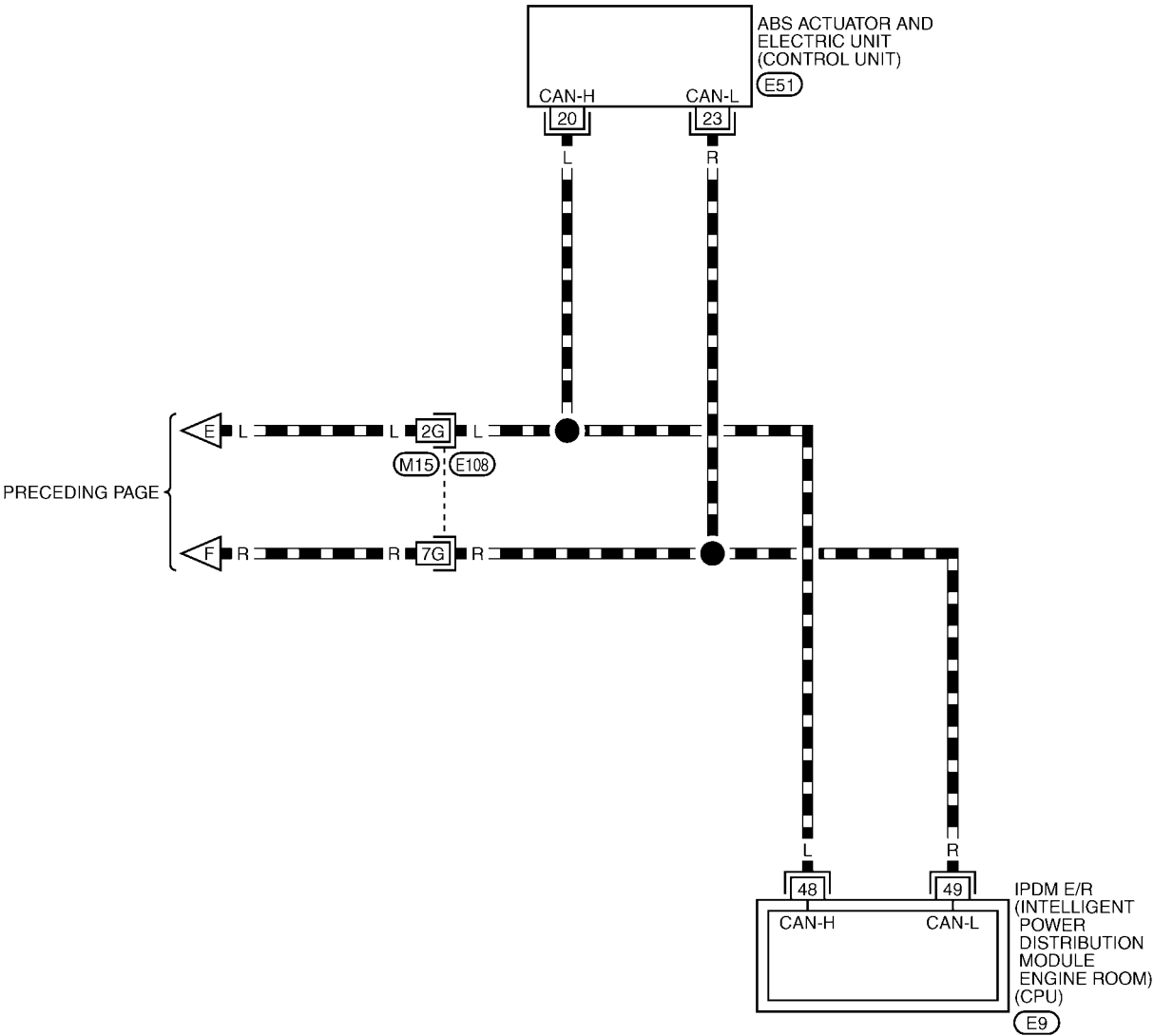
REFER TO THE FOLLOWING.

(F102) -SUPER MULTIPLE JUNCTION (SMJ)

(M3), (F101) -ELECTRICAL UNITS

TKWT0410E

DATA LINE



49	48	47	46	45
56	55	54	53	52
51	50			

E9  
W



REFER TO THE FOLLOWING.

(E108) -SUPER MULTIPLE JUNCTION (SMJ)


(E51) -ELECTRICAL UNITS

## Work Flow

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

(Example)

NISSAN	
CONSULT- II	
ENGINE	
START (NISSAN BASED VHCL)	
START (RENAULT BASED VHCL)	
SUB MODE	
	LIGHT COPY




SELECT SYSTEM			
ENGINE			
A/T			
ABS			
AIR BAG			
BCM			
METER A/C AMP			
	BACK	LIGHT	COPY

PKIA2093E

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

(Example)

SELECT DIAG MODE	
WORK SUPPORT	
SELF-DIAG RESULTS	
DATA MONITOR	
DATA MONITOR (SPEC)	
ACTIVE TEST	
FUNCTION TEST	
Scroll Down	
	BACK LIGHT COPY




SELF-DIAG RESULTS	
DTC RESULTS TIME	
CAN COMM CIRCUIT [U1000]	0
F.F.DATA	
ERASE PRINT	
MODE BACK	LIGHT COPY

PKIA2094E


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

(Example)

SELECT DIAG MODE	
WORK SUPPORT	
SELF-DIAG RESULTS	
DATA MONITOR	
DATA MONITOR (SPEC)	
ACTIVE TEST	
FUNCTION TEST	
Scroll Down	
	BACK LIGHT COPY



DATA MONITOR		
SELECT MONITOR ITEM		
ECM INPUT SIGNALS		
MAIN SIGNALS		
CAN DIAG SUPPORT MNTR		
SELECTION FROM MENU		
SETTING	Numerical Display	
MODE BACK	LIGHT COPY	



DATA MONITOR	
MONITOR	NO DTC
CAN COMM	OK
CAN CIRC 1	OK
CAN CIRC 2	OK
CAN CIRC 3	OK
CAN CIRC 4	OK
CAN CIRC 5	UNKWN
CAN CIRC 6	OK
CAN CIRC 7	OK
RECORD	
MODE BACK	LIGHT COPY

PKIA2095E

- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" onto the check sheet. Refer to [LAN-103, "CHECK SHEET"](#).
- Based on the indications of "SELECT SYSTEM" and the results of "DATA MONITOR (CAN DIAG SUPPORT MNTR)", put marks "v" onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-103, "CHECK SHEET"](#).

**NOTE:**

- If "NG" is displayed on "CAN COMM" as "DATA MONITOR (CAN DIAG SUPPORT MNTR)" for the diagnosed control unit, replace the control unit.
  - The "DATA MONITOR (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 the "DATA MONITOR (CAN DIAG SUPPORT MNTR)" items not in check sheet table.
- According to the check sheet results (example), start inspection. Refer to [LAN-105, "CHECK SHEET RESULTS \(EXAMPLE\)"](#).

# CAN SYSTEM (TYPE 5)

[CAN]

## CHECK SHEET

Check sheet table

SELECT SYSTEM		DATA MONITOR (CAN DIAG SUPPORT MNTR)							
ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

PKIA2178E

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

Attach copy of  
ENGINE  
SELF-DIAG RESULTS

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

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
AIR PRESSURE  
MONITOR  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

Attach copy of  
ENGINE  
DATA MONITOR

Attach copy of  
METER A/C AMP  
DATA MONITOR

Attach copy of  
BCM  
DATA MONITOR

Attach copy of  
AIR PRESSURE  
MONITOR  
DATA MONITOR

Attach copy of  
ABS  
DATA MONITOR



# CAN SYSTEM (TYPE 5)

[CAN]

## CHECK SHEET RESULTS (EXAMPLE)

Case 1 : Replace ECM

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

Case 2 : Replace unified meter and A/C amp.

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

Case 3 : Replace BCM

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

PKIA2180E

# CAN SYSTEM (TYPE 5)

[CAN]

Case 4 : Replace low tire pressure warning control unit

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

Case 5 : Replace ABS actuator and electric unit (control unit)

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

Case 6

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

Case 7

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

PKIA2181E

# CAN SYSTEM (TYPE 5)

[CAN]

Case 8

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 9	CAN CIRC 10
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 9	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 10
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

Case 9

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 9	CAN CIRC 10
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 9	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 10
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

Case 10

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 9	CAN CIRC 10
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

Case 11

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

PKIA2182E

# CAN SYSTEM (TYPE 5)

[CAN]

Case 12

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 5	CAN CIRC 6	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 5	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 5	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

Case 13

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 5	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 5	CAN CIRC 5	CAN CIRC 5	—	—	—	CAN CIRC 5
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

Case 14

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 4	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

Case 15

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 5	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 5	CAN CIRC 2	—	—	—	—	—

PKIA2183E

# CAN SYSTEM (TYPE 5)

[CAN]

Case 16

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 3	CAN CIRC 7 ✓
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 7 ✓
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

Case 17

ENGINE	—	CAN COMM	CAN CIRC 1 ✓	—	CAN CIRC 4 ✓	CAN CIRC 6 ✓	—	CAN CIRC 3 ✓	CAN CIRC 7 ✓
METER A/C AMP	No indication ✓	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1 ✓	CAN CIRC 2 ✓	CAN CIRC 4 ✓	—	—	—	CAN CIRC 7 ✓
AIR PRESSURE MONITOR	No indication ✓	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1 ✓	CAN CIRC 2 ✓	—	—	—	—	—

Case 18

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2 ✓	—	—	—	—	—

Case 19

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 3 ✓	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	CAN CIRC 5 ✓	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	—	—

PKIA2184E

## INSPECTION

Proceed trouble diagnosis according to the check sheet results (example).

Case 1: Replace ECM.

A  
B  
C  
D  
E  
F  
G  
H  
I  
J

LAN

L  
M

Case 2: Replace unified meter and A/C amp.

Case 3: Replace BCM.

Case 4: Replace low tire pressure warning control unit.

Case 5: Replace ABS actuator and electric unit (control unit).

Case 6: Check harness between data link connector and unified meter and A/C amp. Refer to [LAN-110, "Circuit Check Between Data Link Connector and Unified Meter and A/C Amp."](#)

Case 7: Check harness between unified meter and A/C amp. and BCM. Refer to [LAN-111, "Circuit Check Between Unified Meter and A/C Amp. and BCM"](#)

Case 8: Check harness between BCM and low tire pressure warning control unit. Refer to [LAN-111, "Circuit Check Between BCM and Low Tire Pressure Warning Control Unit"](#)

Case 9: Check harness between low tire pressure warning control unit and ABS actuator and electric unit (control unit). Refer to [LAN-112, "Circuit Check Between Low Tire Pressure Warning Control Unit and ABS Actuator and Electric Unit \(Control Unit\)"](#)

Case 10: Check ECM circuit. Refer to [LAN-113, "ECM Circuit Check"](#)

Case 11: Check data link connector circuit. Refer to [LAN-114, "Data Link Connector Circuit Check"](#)

Case 12: Check unified meter and A/C amp. circuit. Refer to [LAN-115, "Unified Meter and A/C Amp. Circuit Check"](#)

Case 13: Check BCM circuit. Refer to [LAN-115, "BCM Circuit Check"](#)

Case 14: Check low tire pressure warning control unit circuit. Refer to [LAN-116, "Low Tire Pressure Warning Control Unit Circuit Check"](#)

Case 15: Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-117, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#)

Case 16: Check IPDM E/R circuit. Refer to [LAN-118, "IPDM E/R Circuit Check"](#)

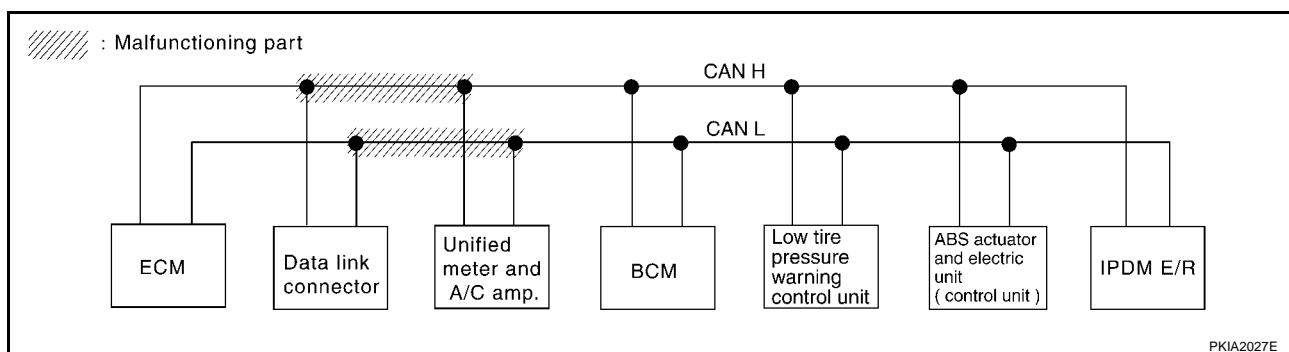
Case 17: Check CAN communication circuit. Refer to [LAN-118, "CAN Communication Circuit Check"](#)

Case 18: Check IPDM E/R. Refer to [LAN-121, "IPDM E/R Check"](#)

Case 19: Check IPDM E/R Ignition relay circuit. Refer to [LAN-121, "IPDM E/R Ignition Relay Circuit Check"](#)

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

AKS0036P



PKIA2072E

### 1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and unified meter and A/C amp. connector.
4. Check continuity between data link connector M8 terminals 6 (L), 14 (R) and unified meter and A/C amp. harness connector M48 terminals 1 (L), 11 (R).

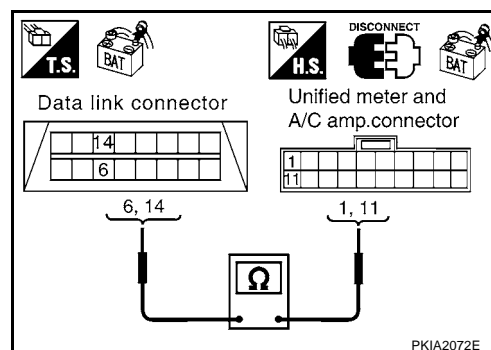
**6 (L) – 1 (L) : Continuity should exist.**

**14 (R) – 11 (R) : Continuity should exist.**

OK or NG

OK >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-102, "Work Flow"](#).

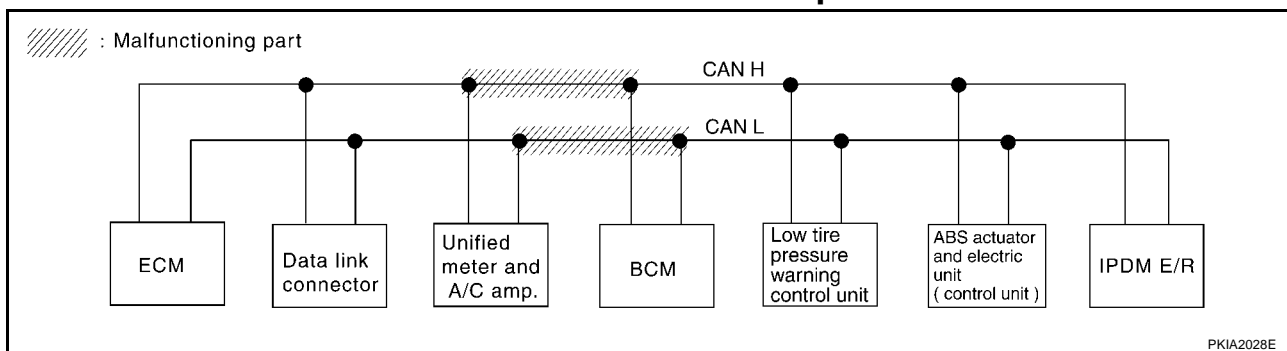
NG >> Repair harness.



PKIA2072E

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

AKS0036Q



## 1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect the following connectors.
  - ECM connector
  - Unified meter and A/C amp. connector
  - BCM connector
4. Check continuity between unified meter and A/C amp. harness connector M48 terminals 1 (L), 11 (R) and BCM harness connector M3 terminals 70 (L), 71 (R).

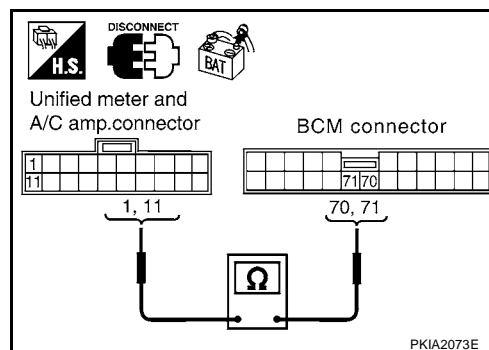
**1 (L) – 70 (L) : Continuity should exist.**

**11 (R) – 71 (R) : Continuity should exist.**

## OK or NG

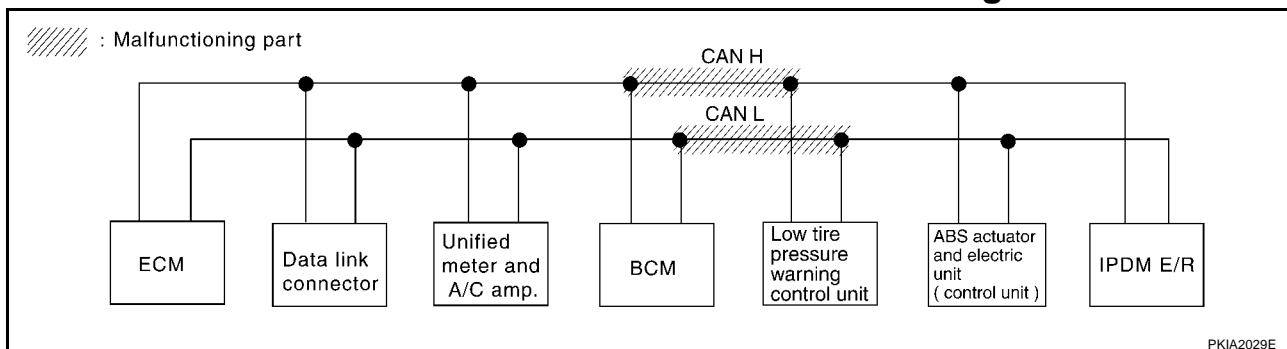
OK >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-102, "Work Flow"](#).

NG >> Repair harness.



## Circuit Check Between BCM and Low Tire Pressure Warning Control Unit

AKS0036R

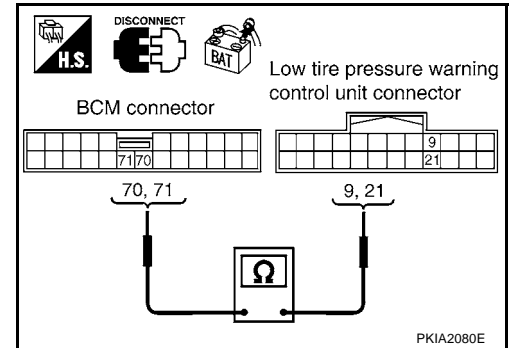


## 1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect the following connectors.
  - ECM connector
  - BCM connector
  - Low tire pressure warning control unit connector
4. Check continuity between BCM harness connector M3 terminals 70 (L), 71 (R) and low tire pressure warning control unit harness connector M77 terminals 9 (L), 21 (R).

**70 (L) – 9 (L) : Continuity should exist.**

**71 (R) – 21 (R) : Continuity should exist.**



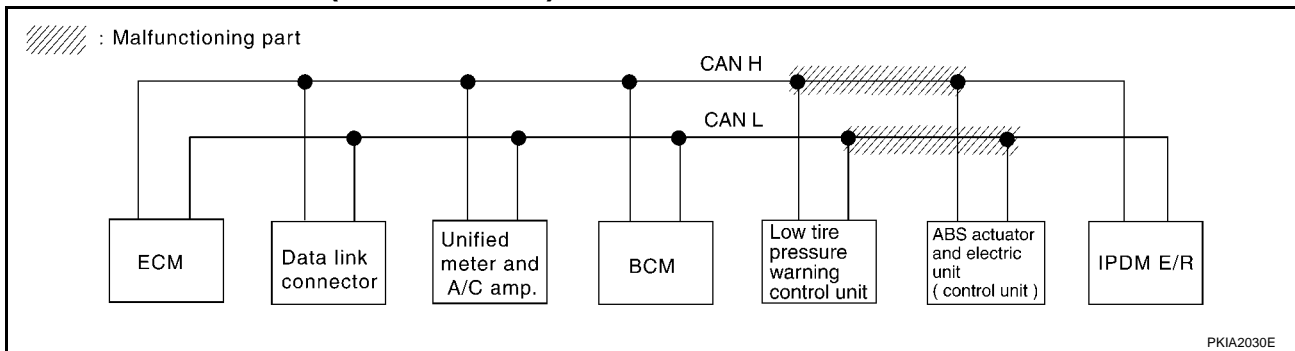
### OK or NG

**OK** >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-102, "Work Flow"](#).

**NG** >> Repair harness.

## Circuit Check Between Low Tire Pressure Warning Control Unit and ABS Actuator and Electric Unit (Control Unit)

AKS0036S



## 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connector for damage, bend and loose connection (connector-side and harness-side).
  - Harness connector M15
  - Harness connector E108

### 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 and harness connector M15.
2. Check continuity between low tire pressure warning control unit harness connector M77 terminals 9 (L), 21 (R) and harness connector M15 terminals 2G (L), 7G (R).

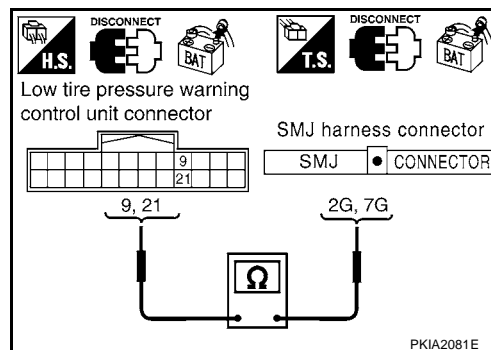
**9 (L) – 2G (L) : Continuity should exist.**

**21 (R) – 7G (R) : Continuity should exist.**

OK or NG

OK >> GO TO 3.

NG >> Repair harness.



## 3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E108 terminals 2G (L), 7G (R) and ABS actuator and electric unit (control unit) harness connector E51 terminals 20 (L), 23 (R).

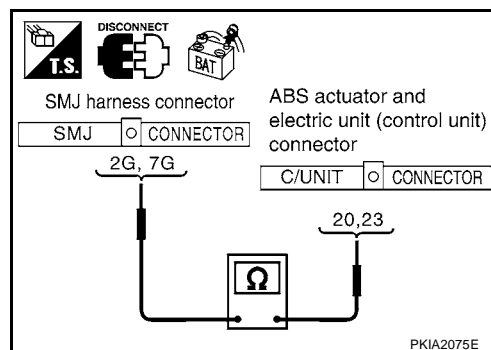
**2G (L) – 20 (L) : Continuity should exist.**

**7G (R) – 23 (R) : Continuity should exist.**

OK or NG

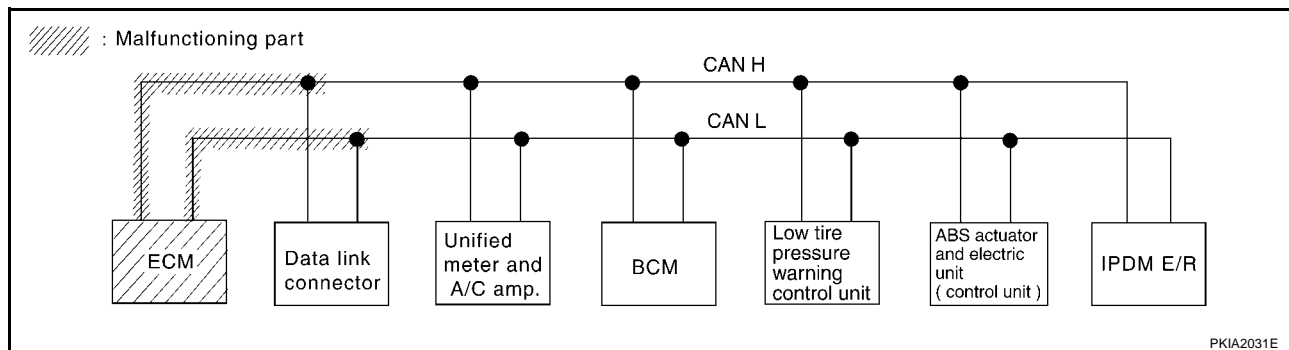
OK >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-102, "Work Flow"](#).

NG >> Repair harness.



## ECM Circuit Check

AKS0036T



## 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
  2. Disconnect the negative battery terminal.
  3. Check following terminals and connector for damage, bend and loose connection (control module-side and harness-side).
- ECM connector
  - Harness connector F102
  - Harness connector M72

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

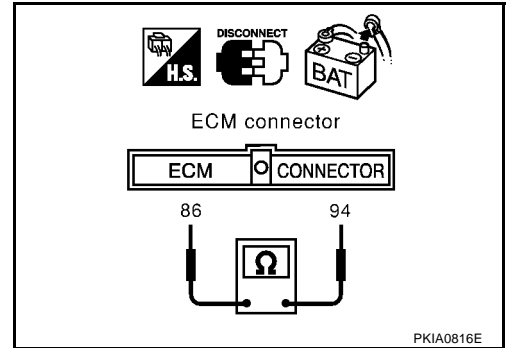
1. Disconnect ECM connector.
2. Check resistance between ECM harness connector F101 terminals 94 (L) and 86 (R).

**94 (L) – 86 (R)**

**: Approx. 108 – 132Ω**

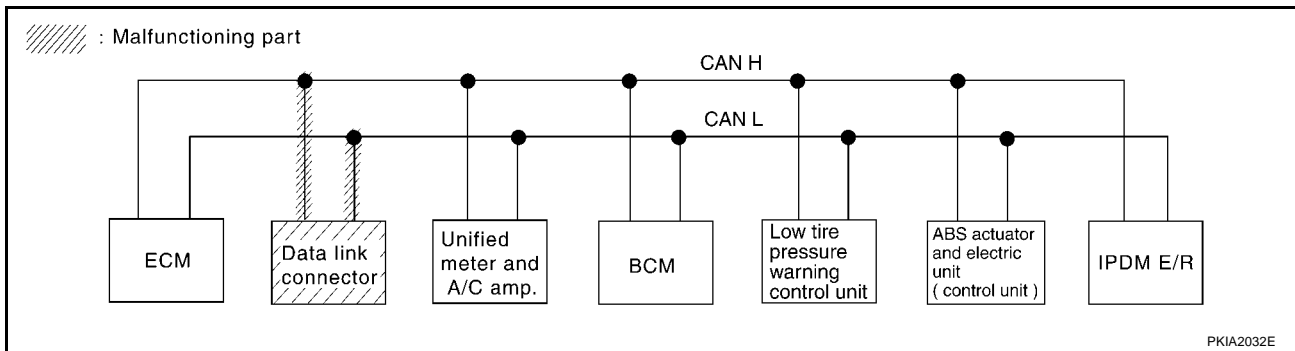
OK or NG

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



## Data Link Connector Circuit Check

AKS0036U



## 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check the terminals and connector of data link connector 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

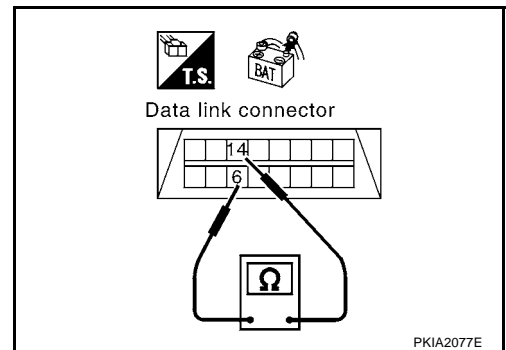
Check resistance between data link connector M8 terminals 6 (L) and 14 (R).

**6 (L) – 14 (R)**

**: Approx. 54 – 66Ω**

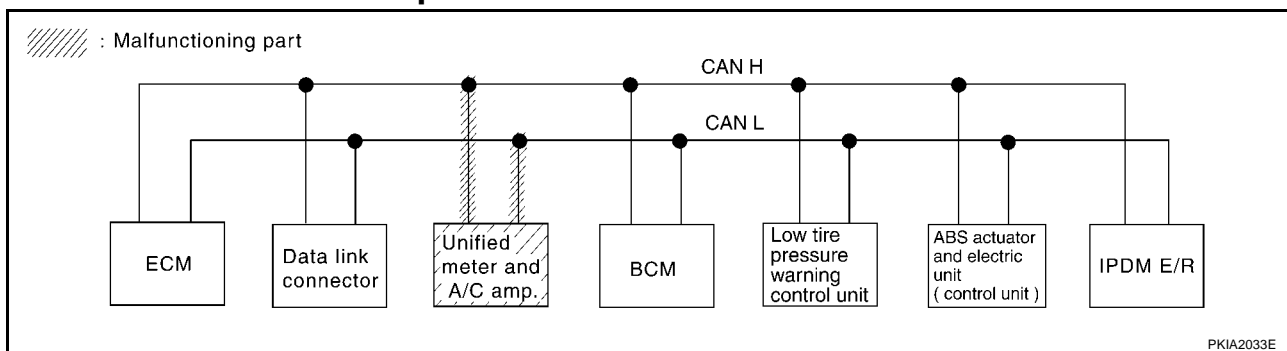
OK or NG

- OK >> Perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-102, "Work Flow"](#).
- NG >> Repair harness between data link connector and unified meter and A/C amp.



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

AKS0036V



## 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 &gt;&gt; GO TO 2.

NG &gt;&gt; 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 M48 terminals 1 (L) and 11 (R).

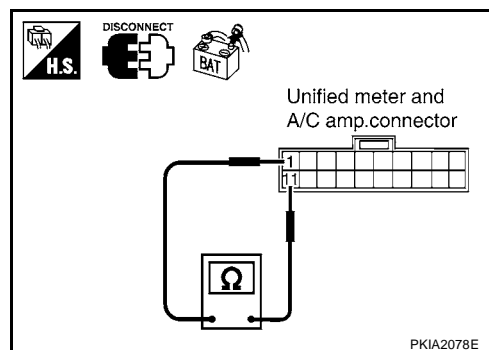
1 (L) – 11 (R)

: Approx. 54 – 66Ω

OK or NG

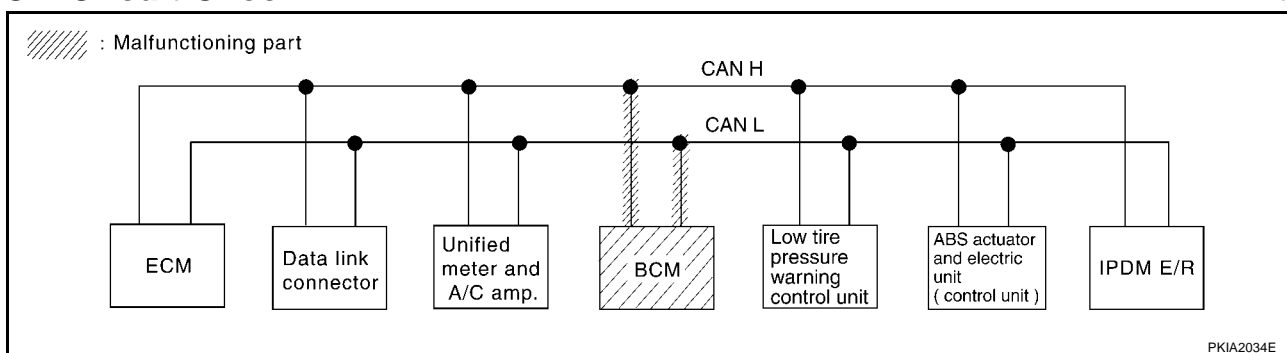
OK &gt;&gt; Replace unified meter and A/C amp.

NG &gt;&gt; Repair harness between unified meter and A/C amp. and BCM.



## BCM Circuit Check

AKS0036W



## 1. CHECK CONNECTOR

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

OK or NG

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

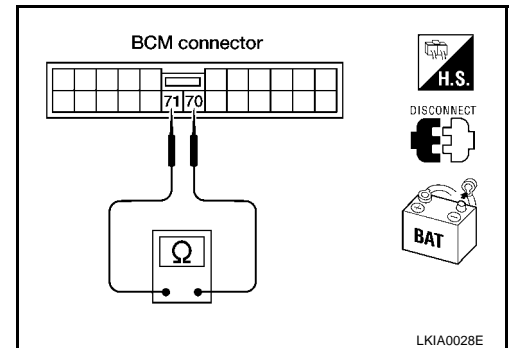
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M3 terminals 70 (L) and 71 (R).

**70 (L) – 71 (R) : Approx. 54 – 66Ω**

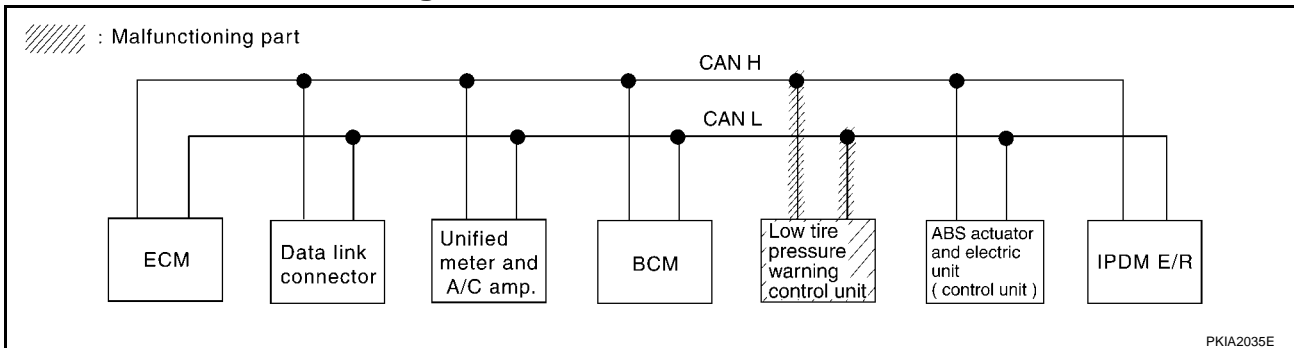
OK or NG

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



## Low Tire Pressure Warning Control Unit Circuit Check

AKS0036X



## 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

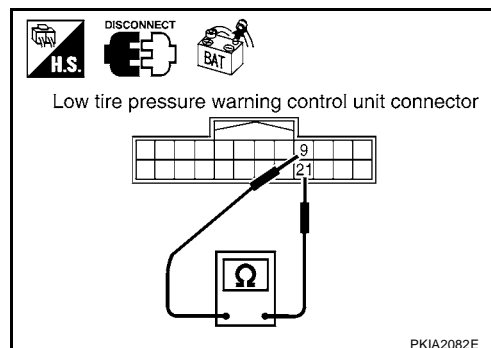
1. Disconnect low tire pressure warning control unit connector.
2. Check resistance between low tire pressure warning control unit harness connector M77 terminals 9 (L) and 21 (R).

**9 (L) – 21 (R)**

**: Approx. 54 – 66Ω**

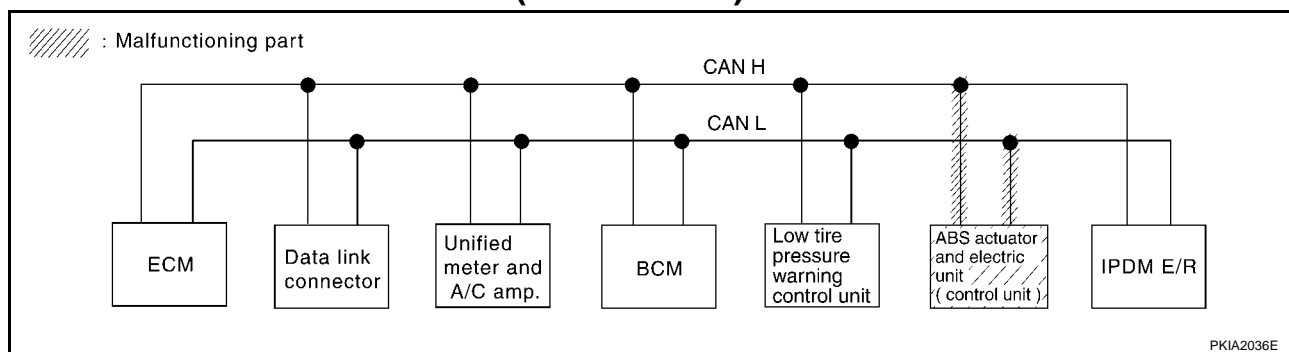
OK or NG

- OK >> Replace low tire pressure warning control unit.  
 NG >> Repair harness between low tire pressure warning control unit and harness connector M15.



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

AKS0036Y



### 1. CHECK CONNECTOR

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

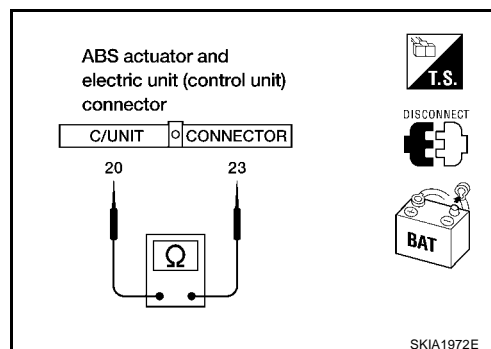
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E51 terminals 20 (L) and 23 (R).

**20 (L) – 23 (R)**

**: Approx. 54 – 66Ω**

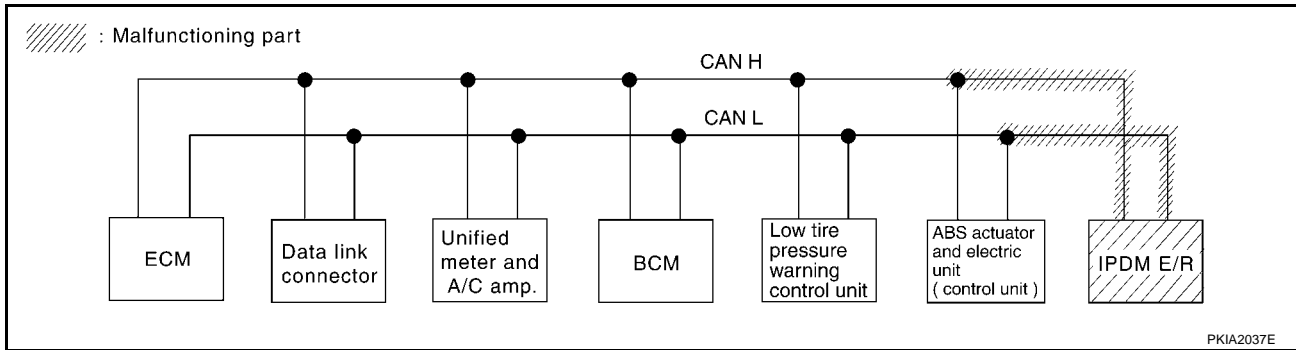
OK or NG

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



## IPDM E/R Circuit Check

AKS0036Z



## 1. CHECK CONNECTOR

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

OK or NG

OK &gt;&gt; GO TO 2.

NG &gt;&gt; Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

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

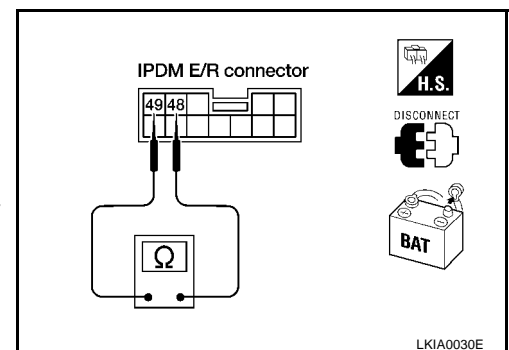
48 (L) – 49 (R)

: Approx. 108 – 132Ω

OK or NG

OK &gt;&gt; Replace IPDM E/R.

NG &gt;&gt; Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



## CAN Communication Circuit Check

AKS00370

## 1. CHECK CONNECTOR

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

OK or NG

OK &gt;&gt; GO TO 2.

NG &gt;&gt; Repair terminal or connector.

## 2. CHECK HARNESS FOR SHORT CIRCUIT

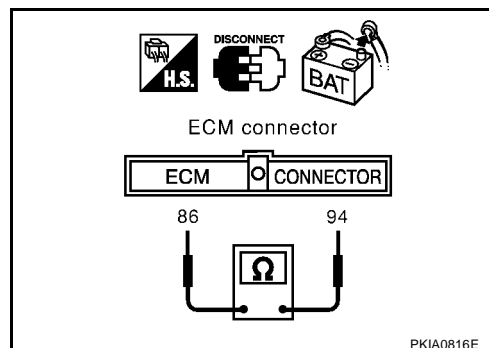
1. Disconnect ECM connector and harness connector F102.
2. Check continuity between ECM harness connector F101 terminals 94 (L) and 86 (R).

**94 (L) – 86 (R) : Continuity should not exist.**

OK or NG

OK >> GO TO 3.

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



## 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between ECM harness connector F101 terminals 94 (L), 86 (R) and ground.

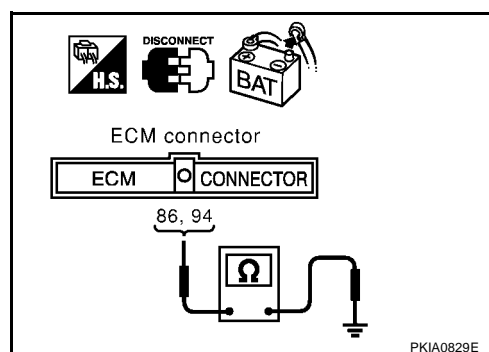
**94 (L) – ground : Continuity should not exist.**

**86 (R) – ground : Continuity should not exist.**

OK or NG

OK >> GO TO 4.

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



## 4. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
  - Unified meter and A/C amp. connector
  - BCM connector
  - Low tire pressure warning control unit connector
  - Harness connector M15
2. Check continuity between data link connector M8 terminals 6 (L) and 14 (R).

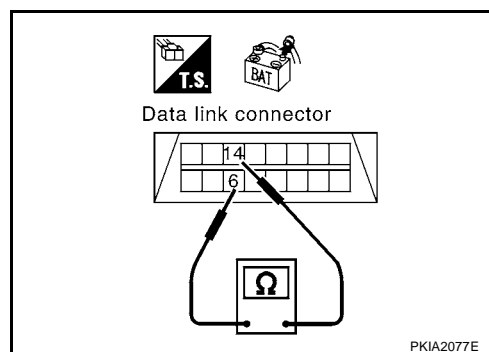
**6 (L) – 14 (R) : Continuity should not exist.**

OK or NG

OK >> GO TO 5.

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

- Harness between data link connector and harness connector M72.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and BCM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M15.



## 5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M8 terminals 6 (L), 14 (R) and ground.

**6 (L) – ground : Continuity should not exist.**

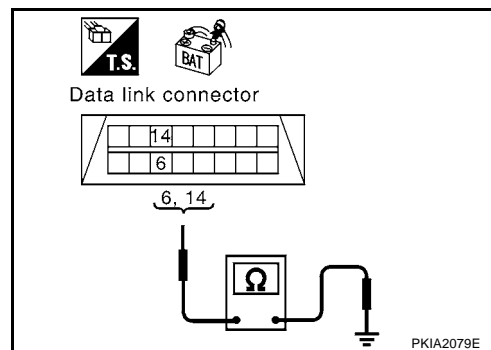
**14 (R) – ground : Continuity should not exist.**

OK or NG

OK >> GO TO 6.

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

- Harness between data link connector and harness connector M72.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and BCM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and harness connector M15.



## 6. 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 (R).

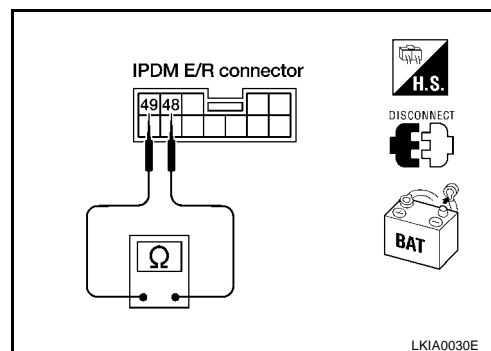
**48 (L) – 49 (R) : Continuity should not exist.**

OK or NG

OK >> GO TO 7.

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

- Harness between IPDM E/R and ABS actuator and electric unit (control unit).
- Harness between IPDM E/R and harness connector E108.



## 7. CHECK HARNESS FOR SHORT CIRCUIT

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

**48 (L) – ground : Continuity should not exist.**

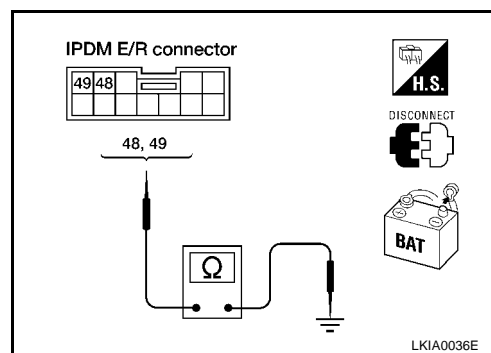
**49 (R) – ground : Continuity should not exist.**

OK or NG

OK >> GO TO 8.

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 E108.



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

Check components inspection. Refer to [LAN-121, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

OK or NG

OK >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-102, "Work Flow"](#).

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



**IPDM E/R Check**

AKS00371

**1. CHECK IPDM E/R**

1. Turn ignition switch ON and then OFF.
2. Check for illuminated parking lamps and tail lamps.

**Parking lamps and tail lamps should not illuminate.**

OK or NG

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

NG >> Replace IPDM E/R.

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

AKS00372

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

- IPDM E/R power supply circuit. Refer to [PG-29, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-11, "IGNITION POWER SUPPLY — IGNITION SW. IN "ON" AND/OR "START"."](#)

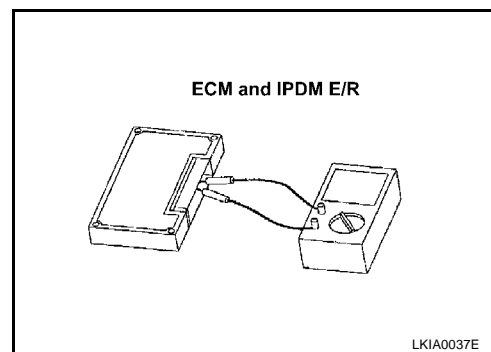
**Component Inspection**

AKS00373

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

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

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



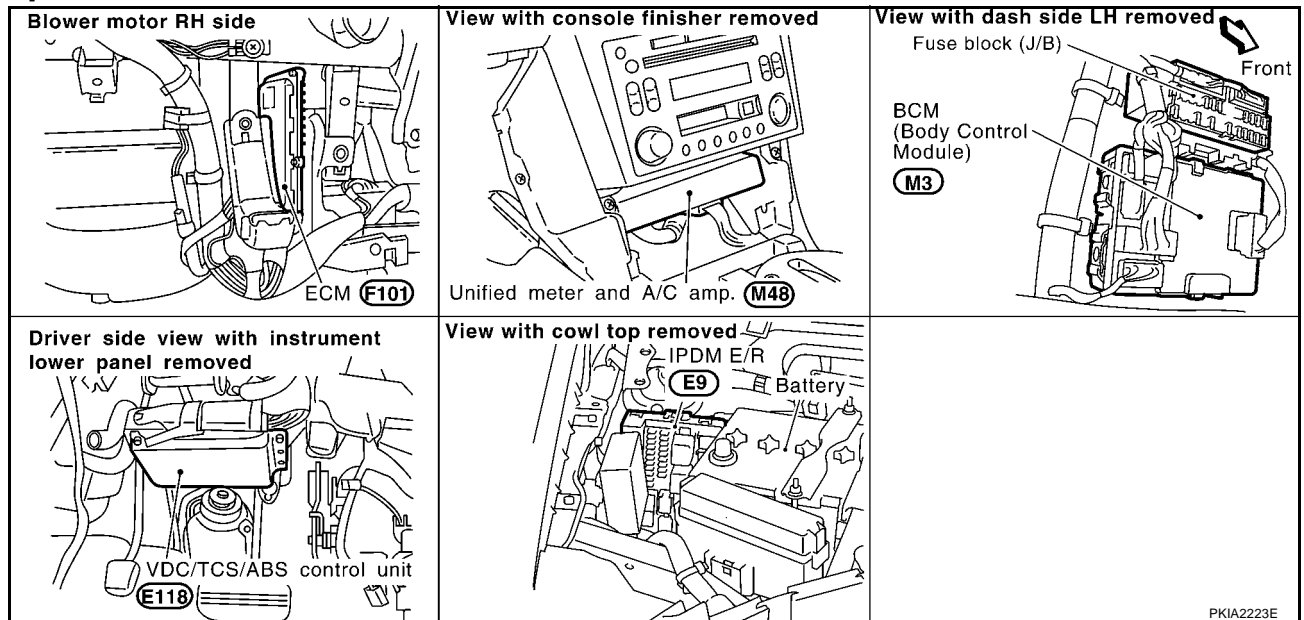
**CAN SYSTEM (TYPE 6)****System Description**

AKS0034H

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**

AKS0034I



# CAN SYSTEM (TYPE 6)

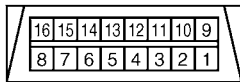
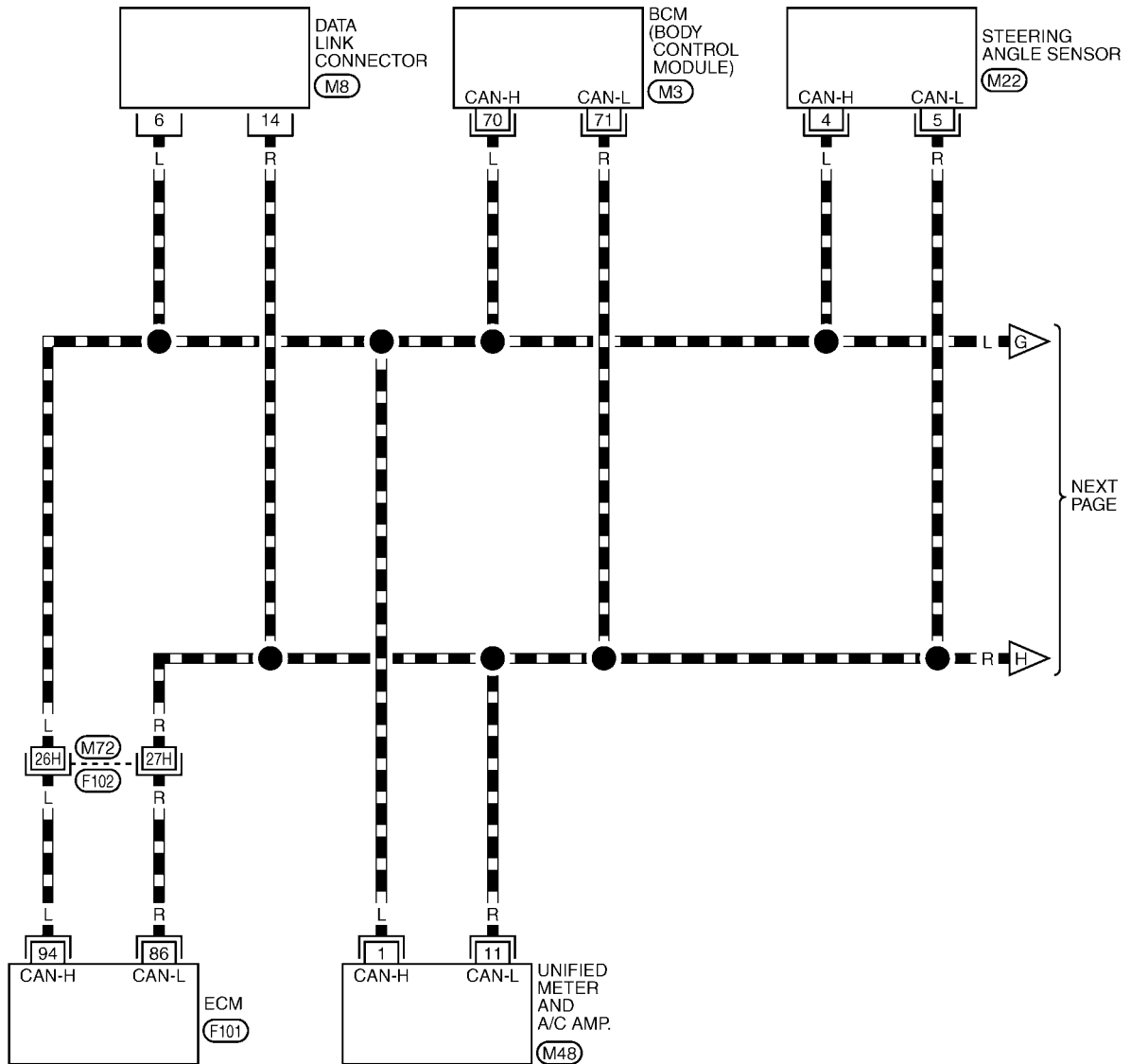
[CAN]

## Wiring Diagram — CAN —

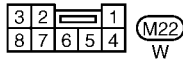
AKS0034J

LAN-CAN-07

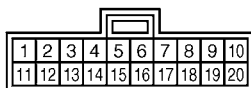
DATA LINE



(M8)  
W



(M22)  
W



(M48)  
GY

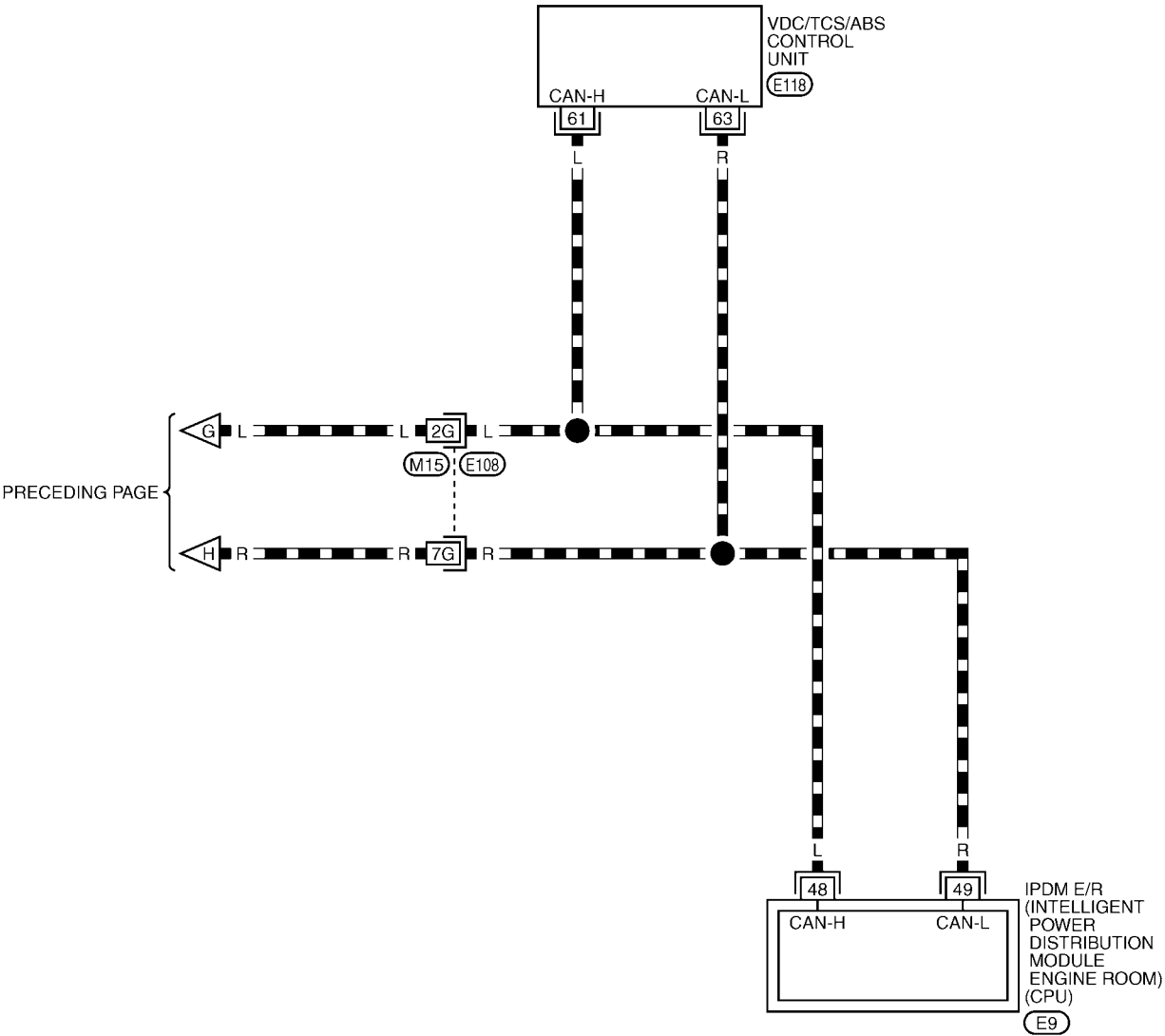


REFER TO THE FOLLOWING.

(F102) -SUPER MULTIPLE JUNCTION (SMJ)

(M3), (F101) -ELECTRICAL UNITS

DATA LINE



49	48	47	46	45
56	55	54	53	52
51	50			

E9  
W



REFER TO THE FOLLOWING.

E108 -SUPER MULTIPLE JUNCTION (SMJ)

E118 -ELECTRICAL UNITS

## Work Flow

AKS0034K

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

(Example)

NISSAN	
CONSULT-II	
ENGINE	
START (NISSAN BASED VHCL)	
START (RENAULT BASED VHCL)	
SUB MODE	
	LIGHT COPY

SELECT SYSTEM	
ENGINE	
A/T	
ABS	
AIR BAG	
BCM	
METER A/C AMP	
BACK	LIGHT COPY

PKIA2093E

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

(Example)

SELECT DIAG MODE	
WORK SUPPORT	
SELF-DIAG RESULTS	
DATA MONITOR	
DATA MONITOR (SPEC)	
ACTIVE TEST	
FUNCTION TEST	
Scroll Down	
BACK	LIGHT COPY

SELF-DIAG RESULTS	
DTC RESULTS	TIME
CAN COMM CIRCUIT [U1000]	0
F.F.DATA	
ERASE	PRINT
MODE BACK	LIGHT COPY

PKIA2094E

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

(Example)

SELECT DIAG MODE	
WORK SUPPORT	
SELF-DIAG RESULTS	
DATA MONITOR	
DATA MONITOR (SPEC)	
ACTIVE TEST	
FUNCTION TEST	
Scroll Down	
BACK	LIGHT COPY

DATA MONITOR	
SELECT MONITOR ITEM	
ECM INPUT SIGNALS	
MAIN SIGNALS	
CAN DIAG SUPPORT MNTR	
SELECTION FROM MENU	
SETTING	Numerical Display
MODE BACK	LIGHT COPY

DATA MONITOR	
MONITOR	NO DTC
CAN COMM	OK
CAN CIRC 1	OK
CAN CIRC 2	OK
CAN CIRC 3	OK
CAN CIRC 4	OK
CAN CIRC 5	UNKWN
CAN CIRC 6	OK
CAN CIRC 7	OK
RECORD	
MODE BACK	LIGHT COPY

PKIA2095E

- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" onto the check sheet. Refer to [LAN-126, "CHECK SHEET"](#).
- Based on the indications of "SELECT SYSTEM" and the results of "DATA MONITOR (CAN DIAG SUPPORT MNTR)", put marks "v" onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-126, "CHECK SHEET"](#).

**NOTE:**

- If "NG" is displayed on "CAN COMM" as "DATA MONITOR (CAN DIAG SUPPORT MNTR)" for the diagnosed control unit, replace the control unit.
- The "DATA MONITOR (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 the "DATA MONITOR (CAN DIAG SUPPORT MNTR)" items not in check sheet table.

- According to the check sheet results (example), start inspection. Refer to [LAN-128, "CHECK SHEET RESULTS \(EXAMPLE\)"](#).

# CAN SYSTEM (TYPE 6)

[CAN]

## CHECK SHEET

Check sheet table

SELECT SYSTEM		DATA MONITOR (CAN DIAG SUPPORT MNTR)							
ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	CAN CIRC 5	—	—

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

Attach copy of  
ENGINE  
SELF-DIAG RESULTS

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

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

PKIA2172E

CAN SYSTEM (TYPE 6)

[CAN]

Attach copy of ENGINE DATA MONITOR	Attach copy of METER A/C AMP DATA MONITOR	Attach copy of BCM DATA MONITOR	Attach copy of ABS DATA MONITOR
PKIA2173E			

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

# CAN SYSTEM (TYPE 6)

[CAN]

## CHECK SHEET RESULTS (EXAMPLE)

### Case 1 : Replace ECM

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	CAN CIRC 5	—	—

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	CAN CIRC 5	—	—

### Case 2 : Replace unified meter and A/C amp.

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	CAN CIRC 5	—	—

### Case 3 : Replace BCM

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	CAN CIRC 5	—	—

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	CAN CIRC 5	—	—

### Case 4 : Replace VDC/TCS/ABS control unit

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	CAN CIRC 5	—	—

PKIA2174E



# CAN SYSTEM (TYPE 6)

[CAN]

Case 5

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	CAN CIRC 3	—	CAN CIRC 4	CAN CIRC 5
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	CAN CIRC 5	—	—

Case 6

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 5	CAN CIRC 3
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	CAN CIRC 5	—	—

Case 7

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 5	CAN CIRC 3
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	CAN CIRC 5	—	—

Case 8

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 5	CAN CIRC 3
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	CAN CIRC 5	—	—

Case 9

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 5	CAN CIRC 3
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	CAN CIRC 5	—	—

PKIA2175E

# CAN SYSTEM (TYPE 6)

[CAN]

Case 10

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	CAN CIRC 5	—	—

Case 11

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	CAN CIRC 5	—	—

Case 12

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	CAN CIRC 5	—	—

Case 13

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	CAN CIRC 5	—	—

Case 14

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	CAN CIRC 5	—	—

PKIA2176E

# CAN SYSTEM (TYPE 6)

[CAN]

Case 15

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 3	CAN CIRC 7 ✓
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 7 ✓
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	CAN CIRC 5	—	—

Case 16

ENGINE	—	CAN COMM	CAN CIRC 1 ✓	—	CAN CIRC 4 ✓	CAN CIRC 6 ✓	—	CAN CIRC 3 ✓	CAN CIRC 7 ✓
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1 ✓	CAN CIRC 2 ✓	CAN CIRC 4 ✓	—	—	—	CAN CIRC 7 ✓
ABS	—	CAN COMM	CAN CIRC 1 ✓	CAN CIRC 2 ✓	—	—	CAN CIRC 5 ✓	—	—

Case 17

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2 ✓	—	—	CAN CIRC 5 ✓	—	—

Case 18

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	CAN CIRC 3 ✓	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 5 ✓	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 3
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	CAN CIRC 5	—	—

PKIA2177E

## INSPECTION

Proceed trouble diagnosis according to the check sheet results (example).

Case 1: Replace ECM.

Case 2: Replace unified meter and A/C amp.

Case 3: Replace BCM.

Case 4: Replace VDC/TCS/ABS control unit.

Case 5: Check harness between data link connector and unified meter and A/C amp. Refer to [LAN-132, "Circuit Check Between Data Link Connector and Unified Meter and A/C Amp."](#)

Case 6: Check harness between unified meter and A/C amp. and BCM. Refer to [LAN-132, "Circuit Check Between Unified Meter and A/C Amp. and BCM."](#)

Case 7: Check harness between BCM and steering angle sensor. Refer to [LAN-133, "Circuit Check Between BCM and Steering Angle Sensor"](#)

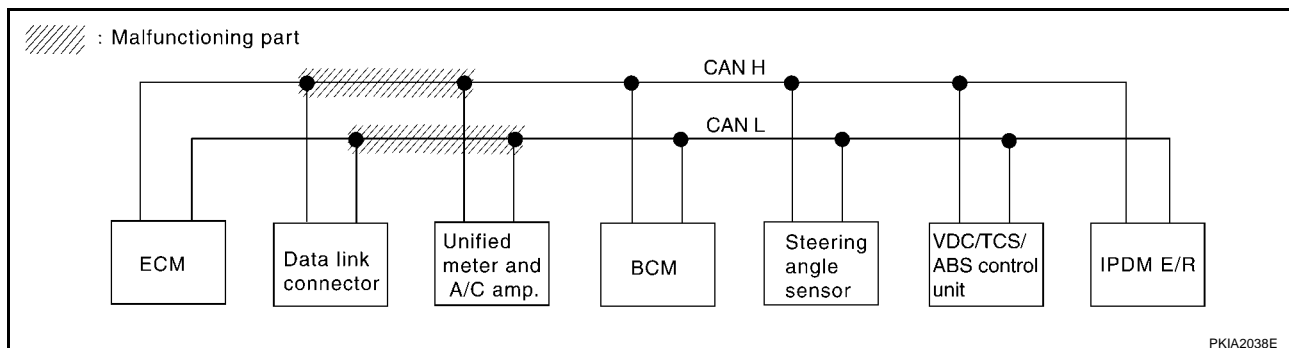
Case 8: Check harness between steering angle sensor and VDC/TCS/ABS control unit. Refer to [LAN-134, "Circuit Check Between Steering Angle Sensor and VDC/TCS/ABS Control Unit"](#)

Case 9: Check ECM circuit. Refer to [LAN-135, "ECM Circuit Check"](#)

- Case 10: Check data link connector circuit. Refer to [LAN-135, "Data Link Connector Circuit Check"](#) .
- Case 11: Check unified meter and A/C amp. circuit. Refer to [LAN-136, "Unified Meter and A/C Amp. Circuit Check"](#) .
- Case 12: Check BCM circuit. Refer to [LAN-137, "BCM Circuit Check"](#) .
- Case 13: Check steering angle sensor circuit. Refer to [LAN-138, "Steering Angle Sensor Circuit Check"](#) .
- Case 14: Check VDC/TCS/ABS control unit circuit. Refer to [LAN-138, "VDC/TCS/ABS Control Unit Circuit Check"](#) .
- Case 15: Check IPDM E/R circuit. Refer to [LAN-139, "IPDM E/R Circuit Check"](#) .
- Case 16: Check CAN communication circuit. Refer to [LAN-140, "CAN Communication Circuit Check"](#) .
- Case 17: Check IPDM E/R. Refer to [LAN-142, "IPDM E/R Check"](#) .
- Case 18: Check IPDM E/R Ignition relay circuit. Refer to [LAN-142, "IPDM E/R Ignition Relay Circuit Check"](#) .

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

AKS0034L



### 1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and unified meter and A/C amp. connector.
4. Check continuity between data link connector M8 terminals 6 (L), 14 (R) and unified meter and A/C amp. harness connector M48 terminals 1 (L), 11 (R).

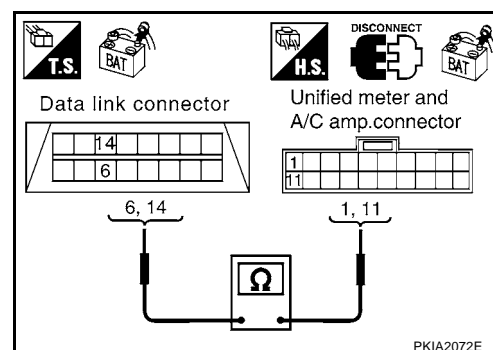
**6 (L) – 1 (L) : Continuity should exist.**

**14 (R) – 11 (R) : Continuity should exist.**

OK or NG

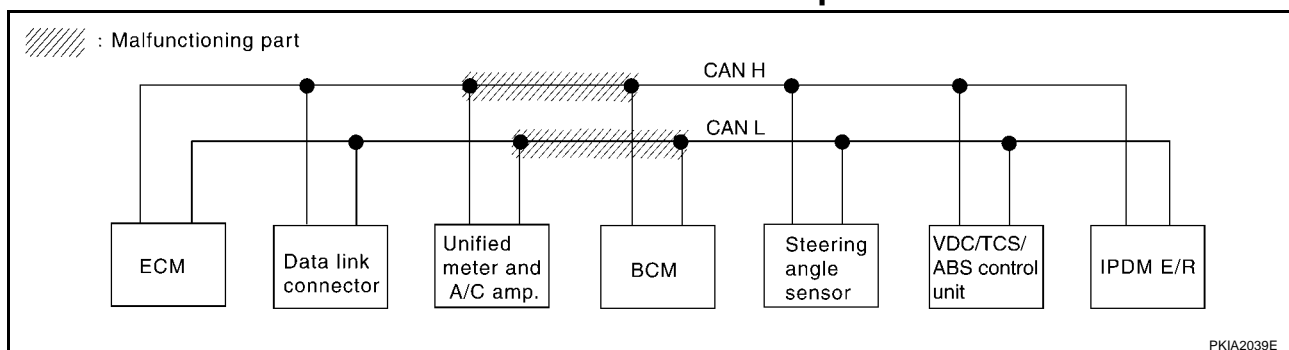
OK >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-125, "Work Flow"](#) .

NG >> Repair harness.



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

AKS0034M



## 1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect the following connectors.
  - ECM connector
  - Unified meter and A/C amp. connector
  - BCM connector
4. Check continuity between unified meter and A/C amp. harness connector M48 terminals 1 (L), 11 (R) and BCM harness connector M3 terminals 70 (L), 71 (R).

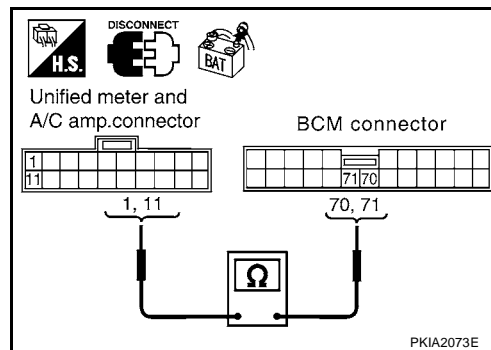
**1 (L) – 70 (L) : Continuity should exist.**

**11 (R) – 71 (R) : Continuity should exist.**

### OK or NG

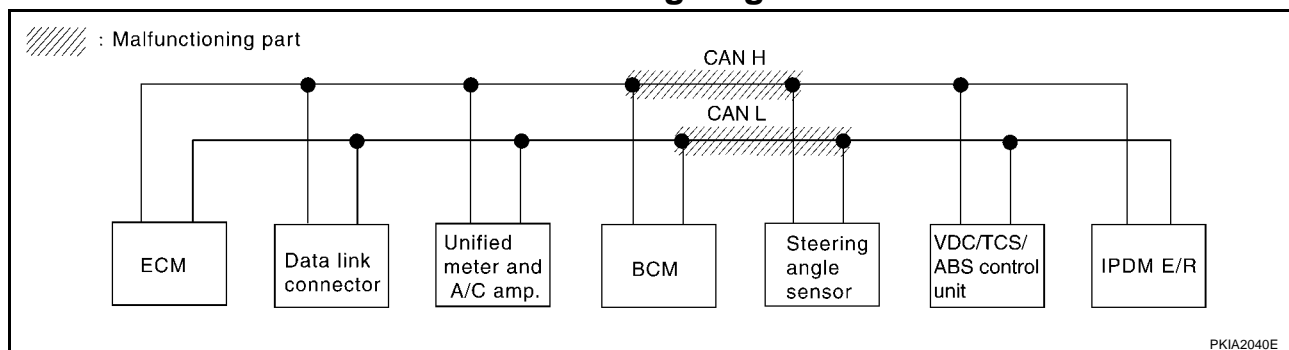
OK >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-125, "Work Flow"](#).

NG >> Repair harness.



## Circuit Check Between BCM and Steering Angle Sensor

AKS0034N



## 1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect the following connectors.
  - ECM connector
  - BCM connector
  - Steering angle sensor connector
4. Check continuity between BCM harness connector M3 terminals 70 (L), 71 (R) and steering angle sensor harness connector M22 terminals 4 (L), 5 (R).

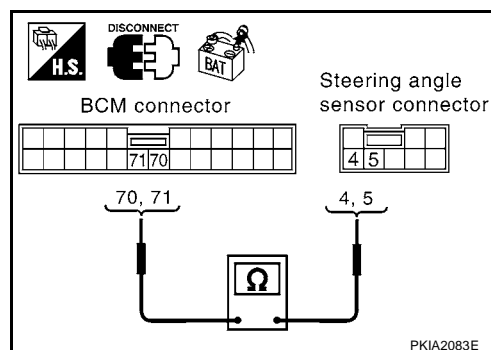
**70 (L) – 4 (L) : Continuity should exist.**

**71 (R) – 5 (R) : Continuity should exist.**

### OK or NG

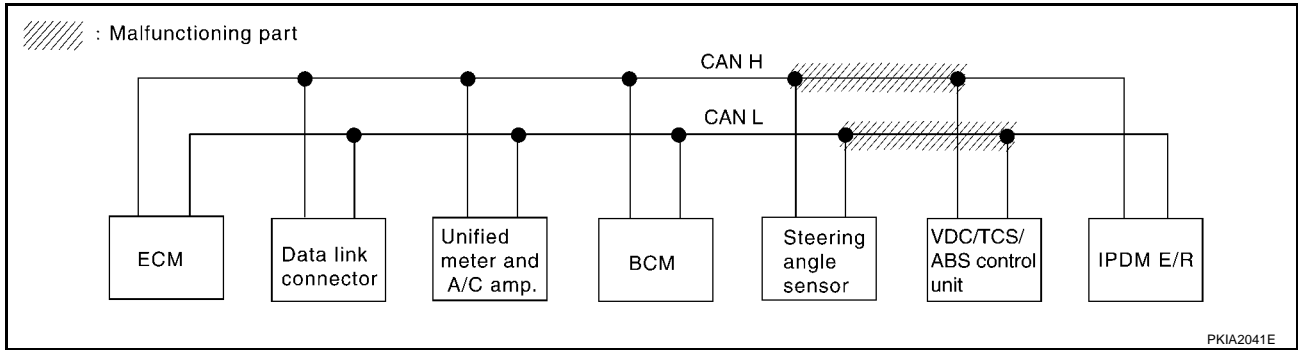
OK >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-125, "Work Flow"](#).

NG >> Repair harness.



## Circuit Check Between Steering Angle Sensor and VDC/TCS/ABS Control Unit

AKS00340



### 1. CHECK CONNECTOR

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

- Harness connector M15
- Harness connector E108

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect steering angle sensor connector and harness connector M15.
2. Check continuity between steering angle sensor harness connector M22 terminals 4 (L), 5 (R) and harness connector M15 terminals 2G (L), 7G (R).

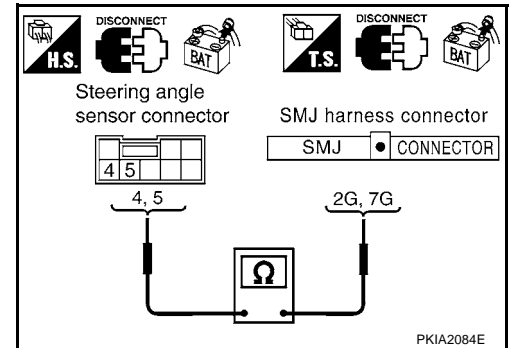
**4 (L) – 2G (L) : Continuity should exist.**

**5 (R) – 7G (R) : Continuity should exist.**

OK or NG

OK >> GO TO 3.

NG >> Repair harness.



### 3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect VDC/TCS/ABS control unit connector.
2. Check continuity between harness connector E108 terminals 2G (L), 7G (R) and VDC/TCS/ABS control unit harness connector E118 terminals 61 (L), 63 (R).

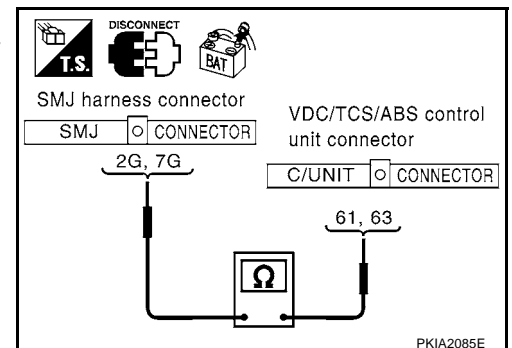
**2G (L) – 61 (L) : Continuity should exist.**

**7G (R) – 63 (R) : Continuity should exist.**

OK or NG

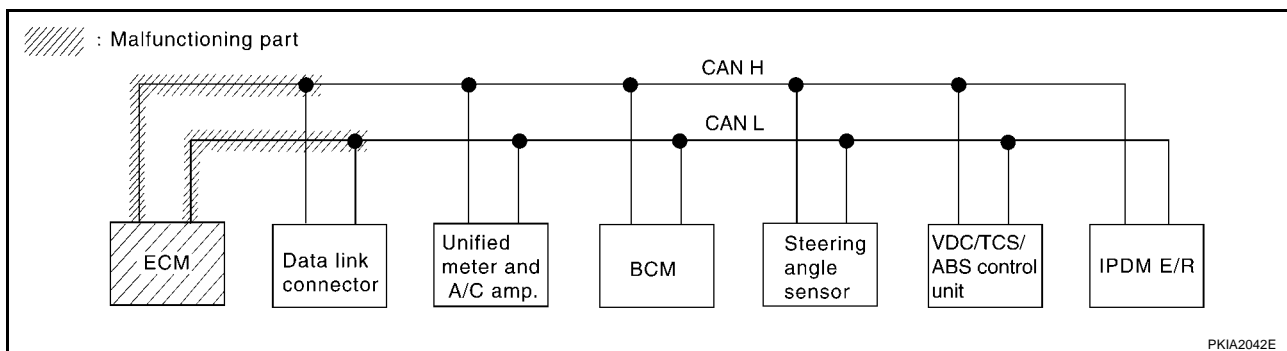
OK >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-125, "Work Flow"](#).

NG >> Repair harness.



## ECM Circuit Check

AKS0034P



## 1. CHECK CONNECTOR

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

- ECM connector
- Harness connector F102
- Harness connector M72

OK or NG

OK &gt;&gt; GO TO 2.

NG &gt;&gt; Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector F101 terminals 94 (L) and 86 (R).

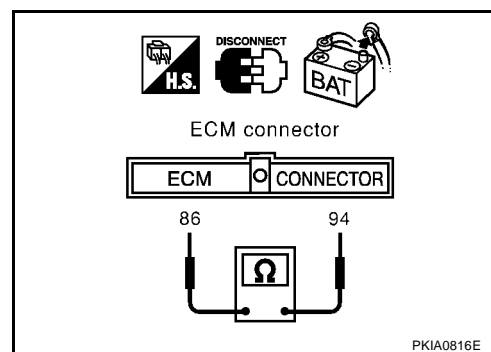
94 (L) – 86 (R)

: Approx. 108 – 132Ω

OK or NG

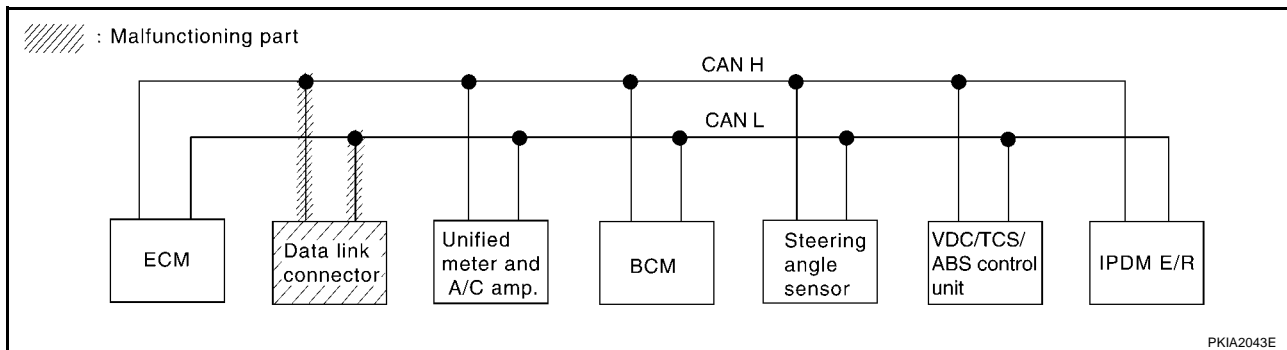
OK &gt;&gt; Replace ECM.

NG &gt;&gt; Repair harness between ECM and data link connector.



## Data Link Connector Circuit Check

AKS0034Q



## 1. CHECK CONNECTOR

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

OK or NG

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

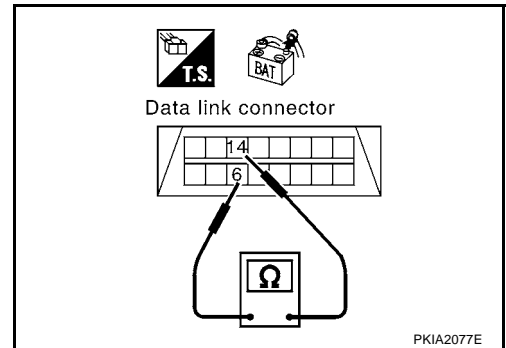
## 2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M8 terminals 6 (L) and 14 (R).

**6 (L) – 14 (R) : Approx. 54 – 66Ω**

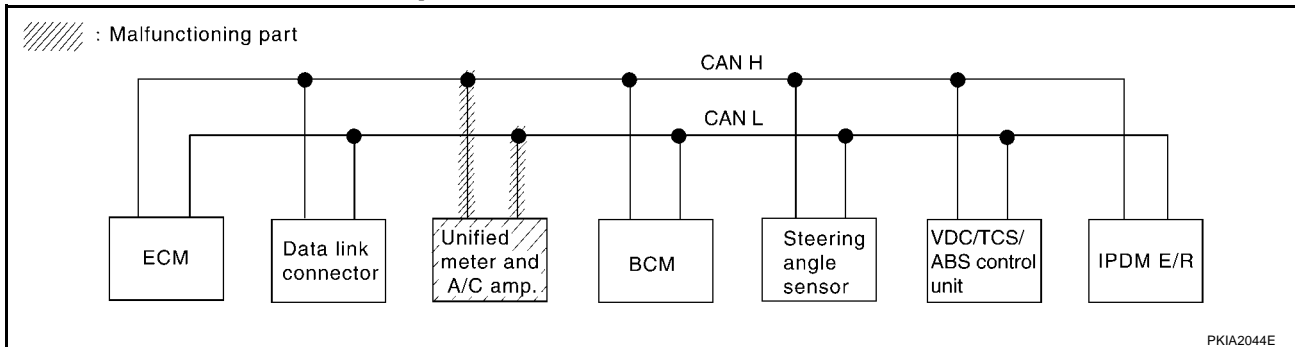
OK or NG

- OK >> Perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-125, "Work Flow"](#).
- NG >> Repair harness between data link connector and unified meter and A/C amp.



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

AKS0034R



## 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.



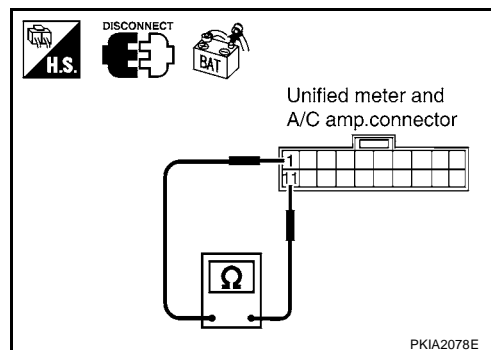
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M48 terminals 1 (L) and 11 (R).

**1 (L) – 11 (R) : Approx. 54 – 66Ω**

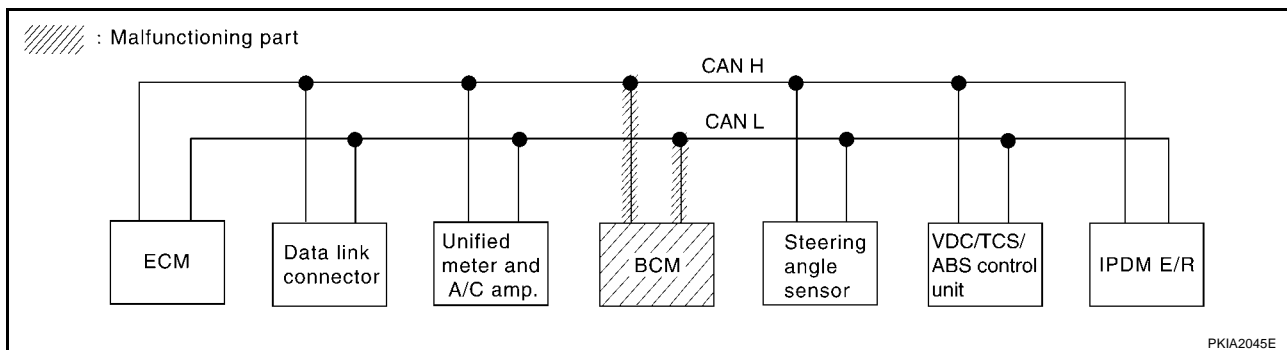
### OK or NG

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



## BCM Circuit Check

AKS0034S



## 1. CHECK CONNECTOR

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

### OK or NG

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

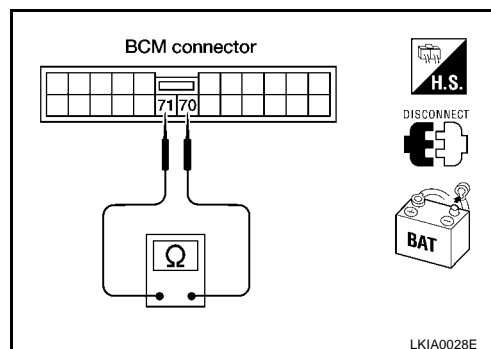
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M3 terminals 70 (L) and 71 (R).

**70 (L) – 71 (R) : Approx. 54 – 66Ω**

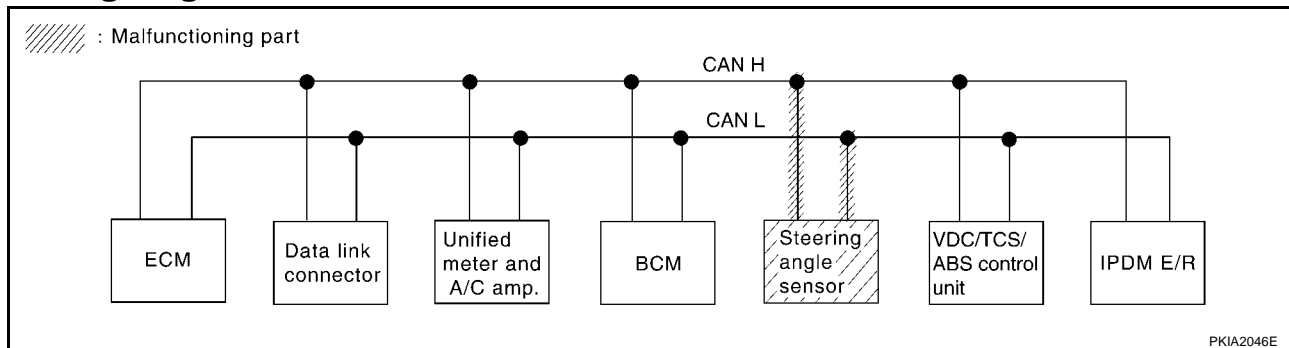
### OK or NG

- OK >> Replace BCM.  
 NG >> Repair harness between BCM and steering angle sensor.



## Steering Angle Sensor Circuit Check

AKS0034T



## 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 &gt;&gt; GO TO 2.

NG &gt;&gt; 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 M22 terminals 4 (L) and 5 (R).

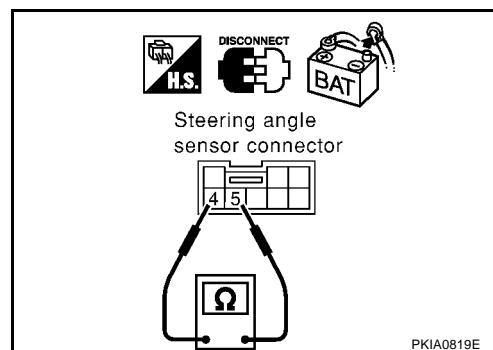
4 (L) – 5 (R)

: Approx. 54 – 66Ω

OK or NG

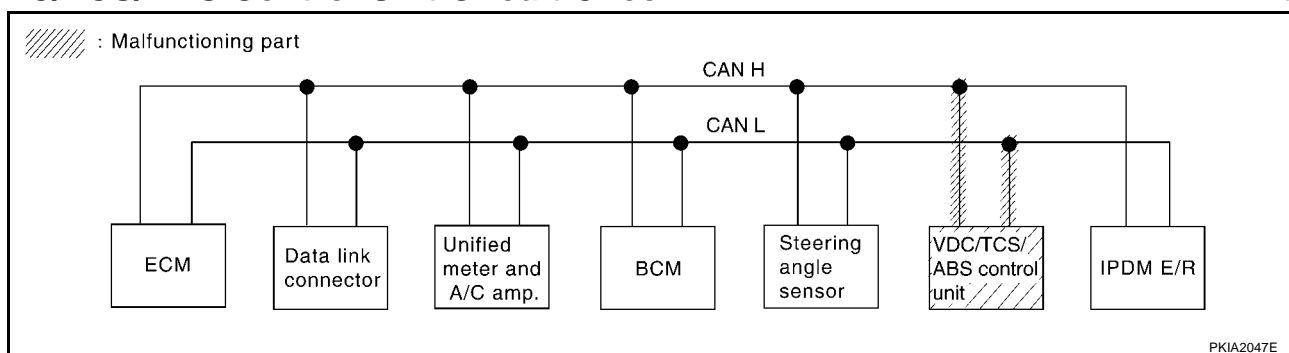
OK &gt;&gt; Replace steering angle sensor.

NG &gt;&gt; Repair harness between steering angle sensor and harness connector M15.



## VDC/TCS/ABS Control Unit Circuit Check

AKS0034U



## 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check the terminals and connector of VDC/TCS/ABS 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.

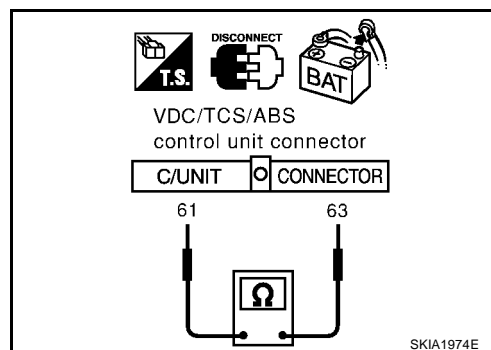
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect VDC/TCS/ABS control unit connector.
2. Check resistance between VDC/TCS/ABS control unit harness connector E118 terminals 61 (L) and 63 (R).

**61 (L) – 63 (R) : Approx. 54 – 66Ω**

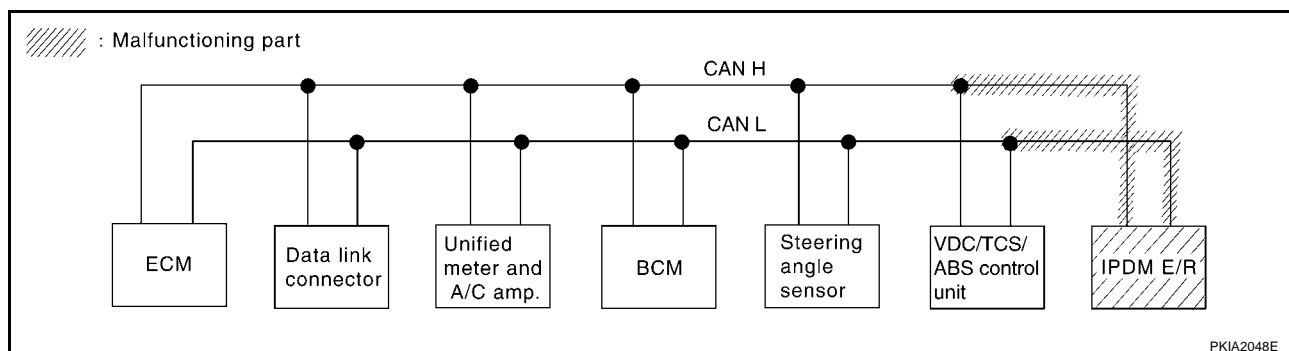
OK or NG

- OK >> Replace VDC/TCS/ABS control unit.  
NG >> Repair harness between VDC/TCS/ABS control unit and IPDM E/R.



## IPDM E/R Circuit Check

AKS0034V



## 1. CHECK CONNECTOR

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

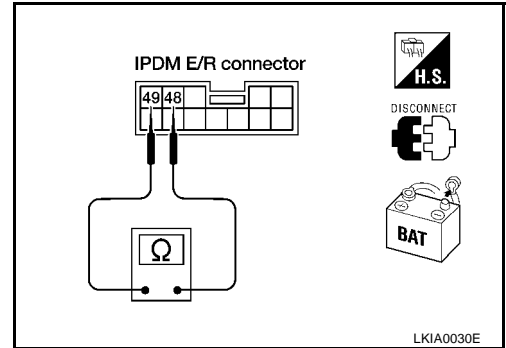
1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (R).

**48 (L) – 49 (R)**

**: Approx. 108 – 132Ω**

OK or NG

- OK >> Replace IPDM E/R.  
 NG >> Repair harness between IPDM E/R and VDC/TCS/ABS 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 connector for damage, bend and loose connection (control module-side, meter-side, sensor-side, control unit-side and harness-side).
  - ECM
  - Unified meter and A/C amp.
  - BCM
  - Steering angle sensor
  - VDC/TCS/ABS control unit
  - IPDM E/R
  - Between ECM and IPDM E/R

OK or NG

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

### 2. CHECK HARNESS FOR SHORT CIRCUIT

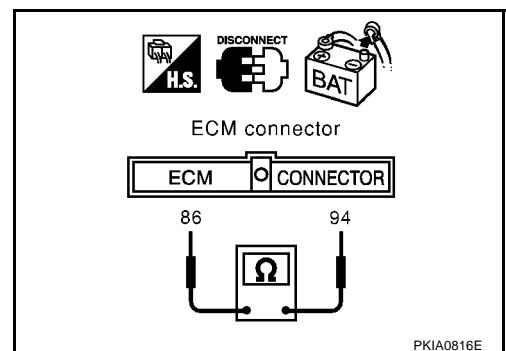
1. Disconnect ECM connector and harness connector F102.
2. Check continuity between ECM harness connector F101 terminals 94 (L) and 86 (R).

**94 (L) – 86 (R)**

**: Continuity should not exist.**

OK or NG

- OK >> GO TO 3.  
 NG >> Repair harness between ECM and harness connector F102.



### 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between ECM harness connector F101 terminals 94 (L), 86 (R) and ground.

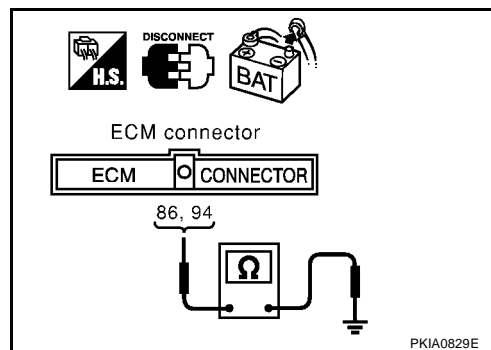
**94 (L) – ground : Continuity should not exist.**

**86 (R) – ground : Continuity should not exist.**

OK or NG

OK >> GO TO 4.

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



### 4. CHECK HARNESS FOR SHORT CIRCUIT

- Disconnect following connectors.
  - Unified meter and A/C amp. connector
  - BCM connector
  - Steering angle sensor connector
  - Harness connector M15
- Check continuity between data link connector M8 terminals 6 (L) and 14 (R).

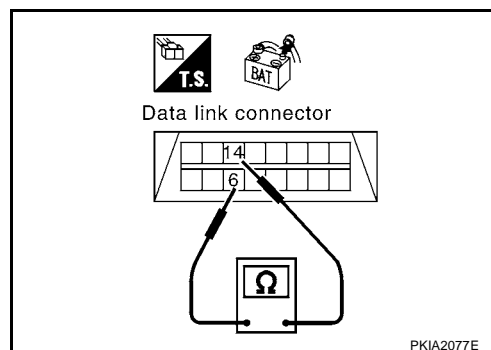
**6 (L) – 14 (R) : Continuity should not exist.**

OK or NG

OK >> GO TO 5.

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

- Harness between data link connector and harness connector M72.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and BCM.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M15.



### 5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M8 terminals 6 (L), 14 (R) and ground.

**6 (L) – ground : Continuity should not exist.**

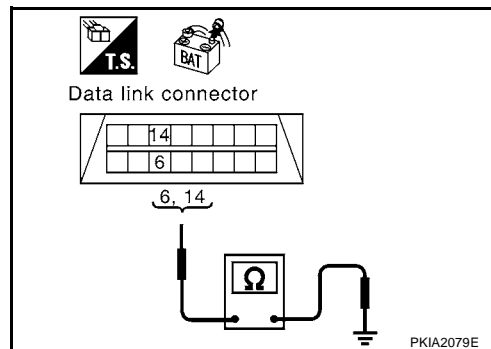
**14 (R) – ground : Continuity should not exist.**

OK or NG

OK >> GO TO 6.

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

- Harness between data link connector and harness connector M72.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and BCM.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M15.



## 6. CHECK HARNESS FOR SHORT CIRCUIT

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

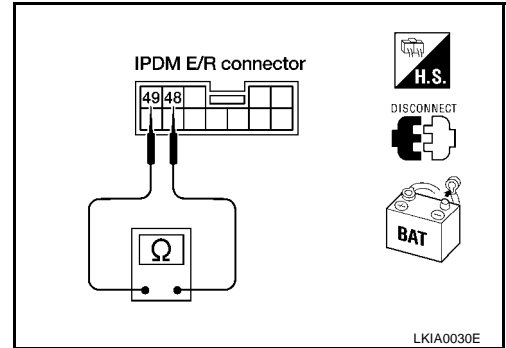
**48 (L) – 49 (R) : Continuity should not exist.**

OK or NG

OK >> GO TO 7.

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

- Harness between IPDM E/R and VDC/TCS/ABS control unit.
- Harness between IPDM E/R and harness connector E108.



## 7. CHECK HARNESS FOR SHORT CIRCUIT

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

**48 (L) – ground : Continuity should not exist.**

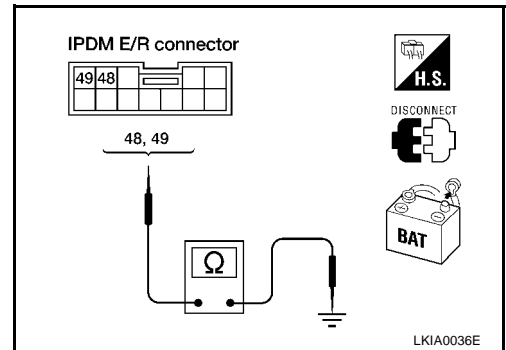
**49 (R) – ground : Continuity should not exist.**

OK or NG

OK >> GO TO 8.

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

- Harness between IPDM E/R and VDC/TCS/ABS control unit.
- Harness between IPDM E/R and harness connector E108.



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

Check components inspection. Refer to [LAN-143, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

OK or NG

OK >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-125, "Work Flow"](#).

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

### IPDM E/R Check

AKS0034X

#### 1. CHECK IPDM E/R

1. Turn ignition switch ON and then OFF.
2. Check for illuminated parking lamps and tail lamps.

**Parking lamps and tail lamps should not illuminate.**

OK or NG

OK >> Replace VDC/TCS/ABS control unit.

NG >> Replace IPDM E/R.

### IPDM E/R Ignition Relay Circuit Check

AKS0034Y

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

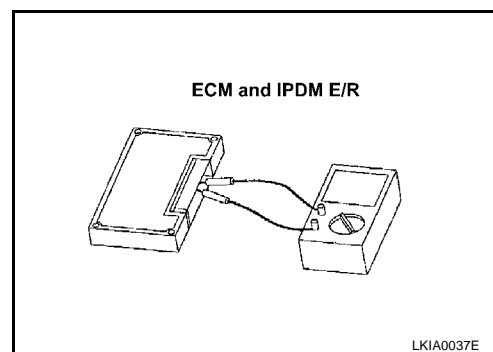
- IPDM E/R power supply circuit. Refer to [PG-29, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-11, "IGNITION POWER SUPPLY — IGNITION SW. IN "ON" AND/OR "START" "](#).

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

AKS0034Z

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

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



A

B

C

D

E

F

G

H

I

J

LAN

L

M

## CAN SYSTEM (TYPE 7)

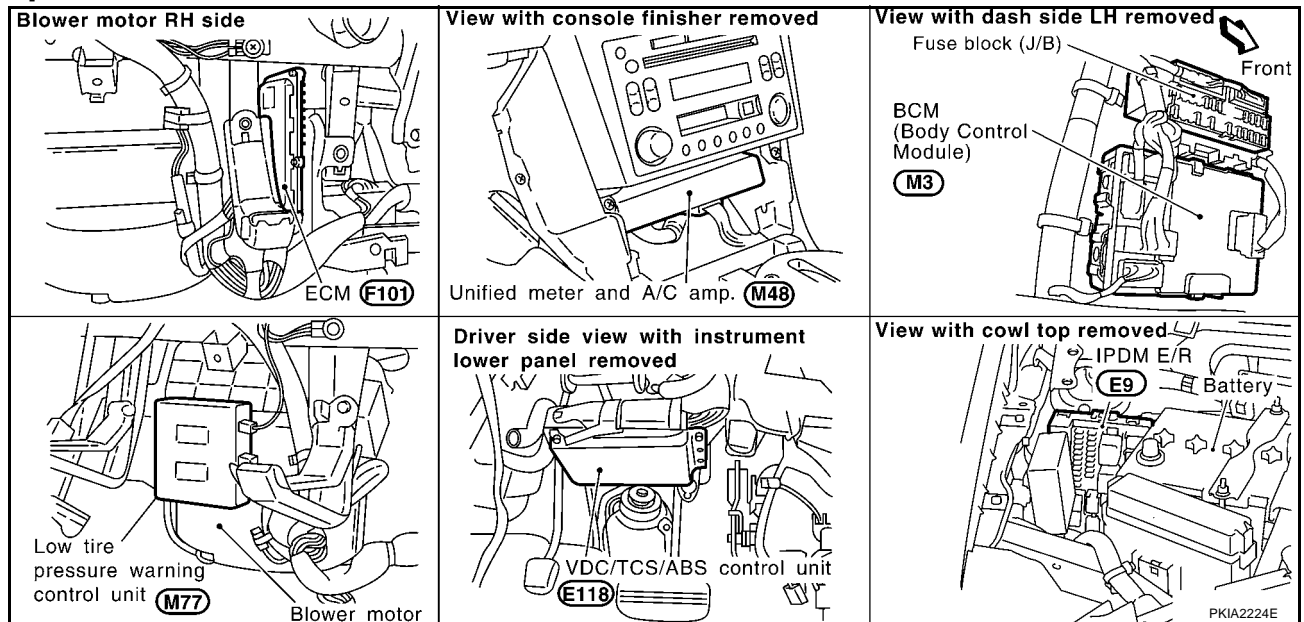
## System Description

AKS00350

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

AKS00351





# CAN SYSTEM (TYPE 7)

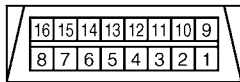
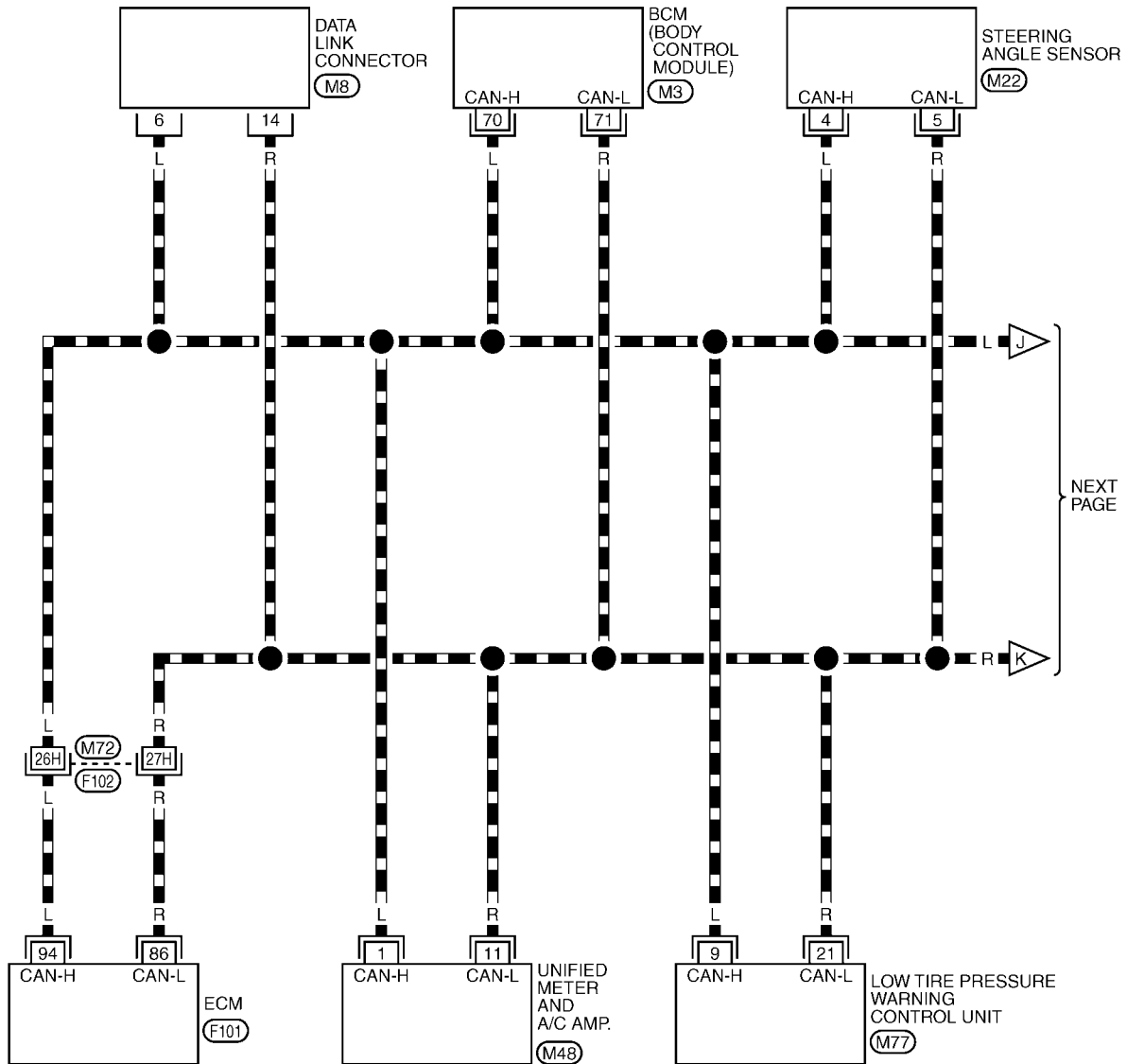
[CAN]

## Wiring Diagram — CAN —

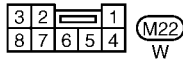
AKS00352

LAN-CAN-09

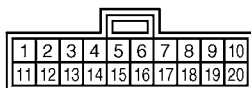
DATA LINE



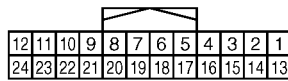
(M8)  
W



(M22)  
W



(M48)  
GY



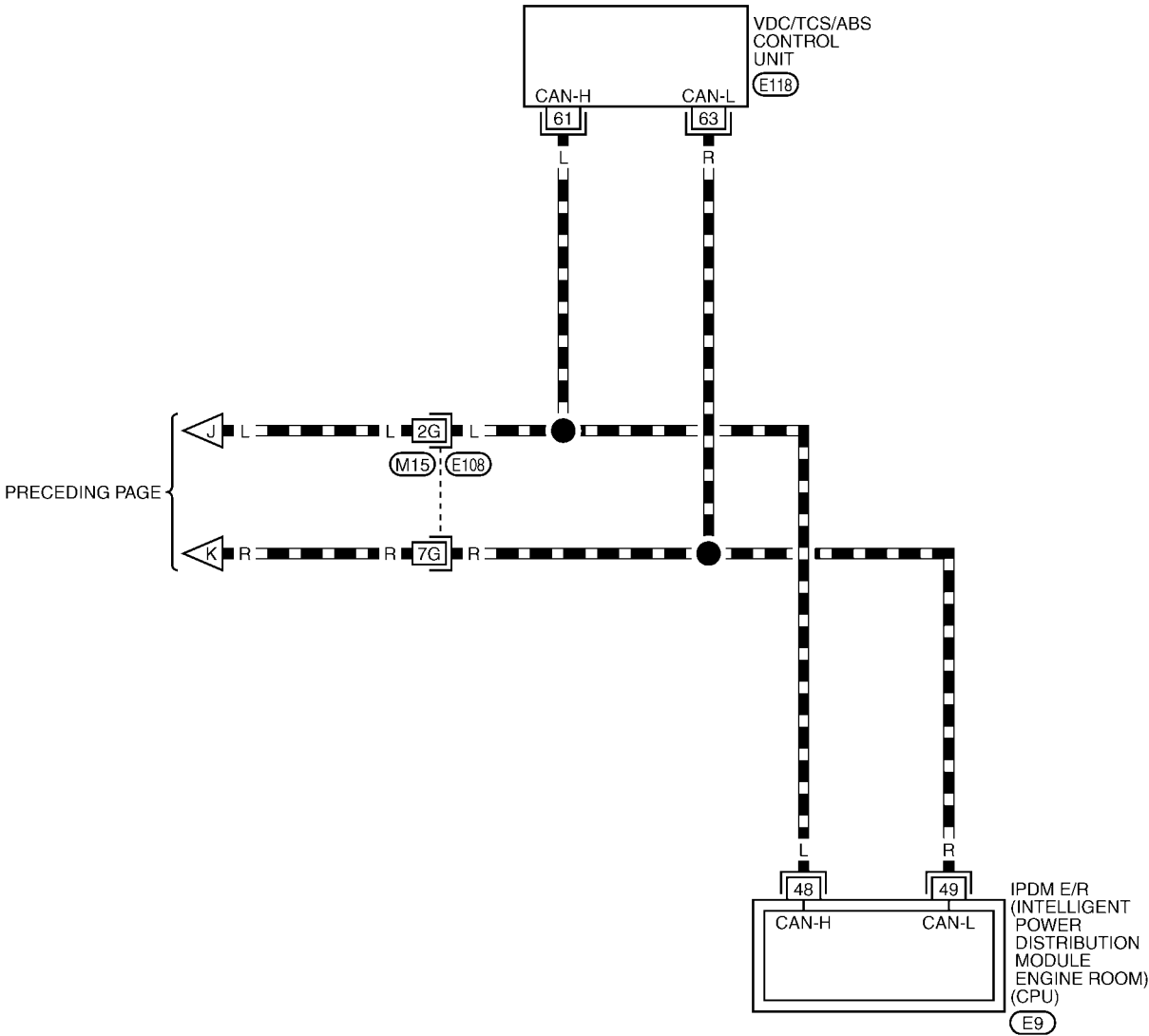
(M77)  
W

REFER TO THE FOLLOWING.

(F102) -SUPER MULTIPLE JUNCTION (SMJ)

(M3), (F101) -ELECTRICAL UNITS

DATA LINE



49	48	47	46	45
56	55	54	53	52
51	50			

E9  
W



REFER TO THE FOLLOWING.

E108 -SUPER MULTIPLE  
JUNCTION (SMJ)


E118 -ELECTRICAL UNITS

## Work Flow

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

(Example)

NISSAN	
CONSULT-II	
ENGINE	
START (NISSAN BASED VHCL)	
START (RENAULT BASED VHCL)	
SUB MODE	
	LIGHT COPY




SELECT SYSTEM	
ENGINE	
A/T	
ABS	
AIR BAG	
BCM	
METER A/C AMP	
BACK	LIGHT COPY

PKIA2093E

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

(Example)

SELECT DIAG MODE	
WORK SUPPORT	
SELF-DIAG RESULTS	
DATA MONITOR	
DATA MONITOR (SPEC)	
ACTIVE TEST	
FUNCTION TEST	
Scroll Down	
BACK	LIGHT COPY




SELF-DIAG RESULTS	
DTC RESULTS	TIME
CAN COMM CIRCUIT [U1000]	0
F.F.DATA	
ERASE	PRINT
MODE BACK	LIGHT COPY

PKIA2094E


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

(Example)

SELECT DIAG MODE	
WORK SUPPORT	
SELF-DIAG RESULTS	
DATA MONITOR	
DATA MONITOR (SPEC)	
ACTIVE TEST	
FUNCTION TEST	
Scroll Down	
BACK	LIGHT COPY



DATA MONITOR	
SELECT MONITOR ITEM	
ECM INPUT SIGNALS	
MAIN SIGNALS	
CAN DIAG SUPPORT MNTR	
SELECTION FROM MENU	
SETTING	Numerical Display
MODE BACK	LIGHT COPY



DATA MONITOR	
MONITOR	NO DTC
CAN COMM	OK
CAN CIRC 1	OK
CAN CIRC 2	OK
CAN CIRC 3	OK
CAN CIRC 4	OK
CAN CIRC 5	UNKWN
CAN CIRC 6	OK
CAN CIRC 7	OK
RECORD	
MODE BACK	LIGHT COPY

PKIA2095E

- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" onto the check sheet. Refer to [LAN-148, "CHECK SHEET"](#).
- Based on the indications of "SELECT SYSTEM" and the results of "DATA MONITOR (CAN DIAG SUPPORT MNTR)", put marks "v" onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-148, "CHECK SHEET"](#).

**NOTE:**

- If "NG" is displayed on "CAN COMM" as "DATA MONITOR (CAN DIAG SUPPORT MNTR)" for the diagnosed control unit, replace the control unit.
- The "DATA MONITOR (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 the "DATA MONITOR (CAN DIAG SUPPORT MNTR)" items not in check sheet table.

- According to the check sheet results (example), start inspection. Refer to [LAN-150, "CHECK SHEET RESULTS \(EXAMPLE\)"](#).

# CAN SYSTEM (TYPE 7)

[CAN]

## CHECK SHEET

Check sheet table

SELECT SYSTEM		DATA MONITOR (CAN DIAG SUPPORT MNTR)								
ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	CAN CIRC 5	—	—

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

PKIA2164E

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

Attach copy of  
ENGINE  
SELF-DIAG RESULTS

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

Attach copy of  
BCM  
SELF-DIAG RESULTS

Attach copy of  
AIR PRESSURE  
MONITOR  
SELF-DIAG RESULTS

Attach copy of  
ABS  
SELF-DIAG RESULTS

Attach copy of  
ENGINE  
DATA MONITOR

Attach copy of  
METER A/C AMP  
DATA MONITOR

Attach copy of  
BCM  
DATA MONITOR

Attach copy of  
AIR PRESSURE  
MONITOR  
DATA MONITOR

Attach copy of  
ABS  
DATA MONITOR

# CAN SYSTEM (TYPE 7)

[CAN]

## CHECK SHEET RESULTS (EXAMPLE)

Case 1 : Replace ECM

ENGINE	—	<del>CAN</del> COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	CAN CIRC 5	—	—

ENGINE	—	CAN COMM	CAN CIRC 1	—	<del>CAN</del> CIRC 4	<del>CAN</del> CIRC 6	—	—	<del>CAN</del> CIRC 3	<del>CAN</del> CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	CAN CIRC 5	—	—

Case 2 : Replace unified meter and A/C amp.

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	<del>CAN</del> CIRC 2	—	<del>CAN</del> CIRC 4	<del>CAN</del> CIRC 14	—	<del>CAN</del> CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	CAN CIRC 5	—	—

Case 3 : Replace BCM

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	—	CAN CIRC 5	—
BCM	—	<del>CAN</del> COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	CAN CIRC 5	—	—

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	<del>CAN</del> CIRC 2	<del>CAN</del> CIRC 4	—	—	—	—	<del>CAN</del> CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	CAN CIRC 5	—	—

PKIA2166E

# CAN SYSTEM (TYPE 7)

[CAN]

Case 4 : Replace low tire pressure warning control unit

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	CAN CIRC 5	—	—

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	CAN CIRC 5	—	—

Case 5 : Replace VDC/TCS/ABS control unit

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	CAN CIRC 5	—	—

Case 6

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	CAN CIRC 5	—	—

Case 7

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	CAN CIRC 5	—	—

PKIA2167E

# CAN SYSTEM (TYPE 7)

[CAN]

Case 8

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	<del>CAN CIRC 3</del>	<del>CAN CIRC 7</del>
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	<del>CAN CIRC 14</del>	—	<del>CAN CIRC 5</del>	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	—	<del>CAN CIRC 3</del>
AIR PRESSURE MONITOR	<del>No indication</del>	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	<del>CAN CIRC 2</del>	—	—	—	CAN CIRC 5	—	—

Case 9

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	<del>CAN CIRC 3</del>	<del>CAN CIRC 7</del>
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	—	<del>CAN CIRC 5</del>	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	—	<del>CAN CIRC 3</del>
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	<del>CAN CIRC 2</del>	—	—	—	CAN CIRC 5	—	—

Case 10

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	<del>CAN CIRC 3</del>	<del>CAN CIRC 7</del>
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	—	<del>CAN CIRC 5</del>	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	—	<del>CAN CIRC 3</del>
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	<del>CAN CIRC 2</del>	—	—	—	<del>CAN CIRC 5</del>	—	—

Case 11

ENGINE	—	CAN COMM	<del>CAN CIRC 1</del>	—	<del>CAN CIRC 4</del>	<del>CAN CIRC 6</del>	—	—	<del>CAN CIRC 3</del>	<del>CAN CIRC 7</del>
METER A/C AMP	No indication	—	CAN CIRC 1	<del>CAN CIRC 2</del>	—	CAN CIRC 4	CAN CIRC 14	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	<del>CAN CIRC 2</del>	CAN CIRC 4	—	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	<del>CAN CIRC 2</del>	—	—	—	CAN CIRC 5	—	—

PKIA2168E



# CAN SYSTEM (TYPE 7)

[CAN]

Case 12

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	CAN CIRC 5	—	—

Case 13

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	CAN CIRC 5	—	—

Case 14

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	CAN CIRC 5	—	—

Case 15

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	CAN CIRC 5	—	—

PKIA2169E

# CAN SYSTEM (TYPE 7)

[CAN]

Case 16

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	CAN CIRC 5	—	—

Case 17

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	CAN CIRC 5	—	—

Case 18

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	CAN CIRC 5	—	—

Case 19

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	CAN CIRC 5	—	—

PKIA2170E

# CAN SYSTEM (TYPE 7)

[CAN]

Case 20

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	CAN CIRC 5	—	—

Case 21

ENGINE	—	CAN COMM	CAN CIRC 1	—	CAN CIRC 4	CAN CIRC 6	—	—	CAN CIRC 3	CAN CIRC 7
METER A/C AMP	No indication	—	CAN CIRC 1	CAN CIRC 2	—	CAN CIRC 4	CAN CIRC 14	—	CAN CIRC 5	—
BCM	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	CAN CIRC 4	—	—	—	—	CAN CIRC 3
AIR PRESSURE MONITOR	No indication	CAN COMM	CAN CIRC 1	—	CAN CIRC 2	—	—	—	—	—
ABS	—	CAN COMM	CAN CIRC 1	CAN CIRC 2	—	—	—	CAN CIRC 5	—	—

PKIA2171E

## INSPECTION

Proceed trouble diagnosis according to the check sheet results (example).

Case 1: Replace ECM.

Case 2: Replace unified meter and A/C amp.

Case 3: Replace BCM.

Case 4: Replace low tire pressure warning control unit.

Case 5: Replace VDC/TCS/ABS control unit.

Case 6: Check harness between data link connector and unified meter and A/C amp. Refer to [LAN-156, "Circuit Check Between Data Link Connector and Unified Meter and A/C Amp."](#)

Case 7: Check harness between unified meter and A/C amp. and BCM. Refer to [LAN-156, "Circuit Check Between Unified Meter and A/C Amp. and BCM"](#).

Case 8: Check harness between BCM and low tire pressure warning control unit. Refer to [LAN-157, "Circuit Check Between BCM and Low Tire Pressure Warning Control Unit"](#).

Case 9: Check harness between low tire pressure warning control unit and steering angle sensor. Refer to [LAN-158, "Circuit Check Between Low Tire Pressure Warning Control Unit and Steering Angle Sensor"](#).

Case 10: Check harness between steering angle sensor and VDC/TCS/ABS control unit. Refer to [LAN-158, "Circuit Check Between Steering Angle Sensor and VDC/TCS/ABS Control Unit"](#).

Case 11: Check ECM circuit. Refer to [LAN-159, "ECM Circuit Check"](#).

Case 12: Check data link connector circuit. Refer to [LAN-160, "Data Link Connector Circuit Check"](#).

Case 13: Check unified meter and A/C amp. circuit. Refer to [LAN-161, "Unified Meter and A/C Amp. Circuit Check"](#).

Case 14: Check BCM circuit. Refer to [LAN-162, "BCM Circuit Check"](#).

Case 15: Check low tire pressure warning control unit circuit. Refer to [LAN-162, "Low Tire Pressure Warning Control Unit Circuit Check"](#).

Case 16: Check steering angle sensor circuit. Refer to [LAN-163, "Steering Angle Sensor Circuit Check"](#).

Case 17: Check VDC/TCS/ABS control unit circuit. Refer to [LAN-164, "VDC/TCS/ABS Control Unit Circuit Check"](#).

Case 18: Check IPDM E/R circuit. Refer to [LAN-165, "IPDM E/R Circuit Check"](#).

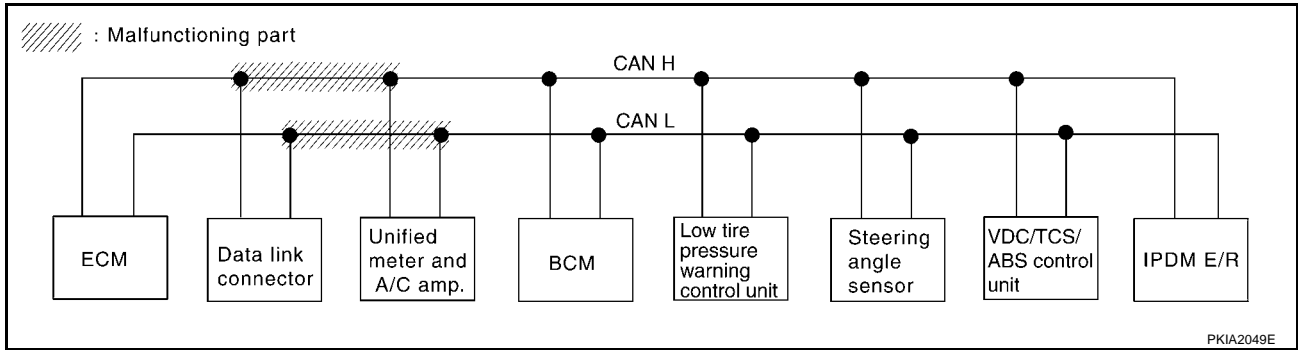
Case 19: Check CAN communication circuit. Refer to [LAN-165, "CAN Communication Circuit Check"](#).

Case 20: Check IPDM E/R. Refer to [LAN-168, "IPDM E/R Check"](#).

Case 21: Check IPDM E/R Ignition relay circuit. Refer to [LAN-168, "IPDM E/R Ignition Relay Circuit Check"](#).

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

AKS00354



### 1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and unified meter and A/C amp. connector.
4. Check continuity between data link connector M8 terminals 6 (L), 14 (R) and unified meter and A/C amp. harness connector M48 terminals 1 (L), 11 (R).

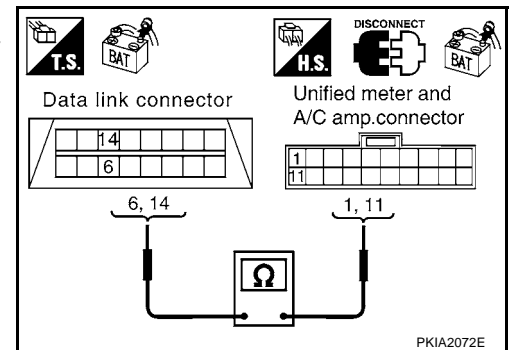
**6 (L) – 1 (L) : Continuity should exist.**

**14 (R) – 11 (R) : Continuity should exist.**

OK or NG

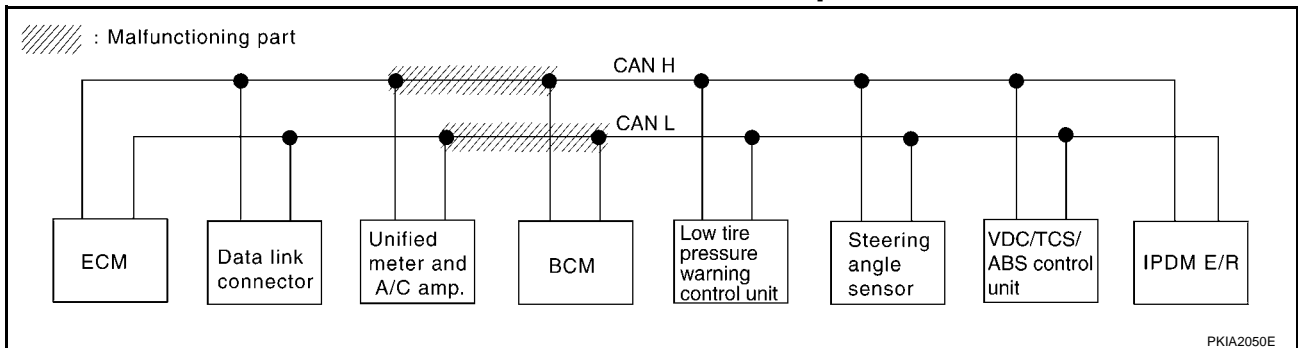
OK >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-147, "Work Flow"](#).

NG >> Repair harness.



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

AKS00355



## 1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect the following connectors.
  - ECM connector
  - Unified meter and A/C amp. connector
  - BCM connector
4. Check continuity between unified meter and A/C amp. harness connector M48 terminals 1 (L), 11 (R) and BCM harness connector M3 terminals 70 (L), 71 (R).

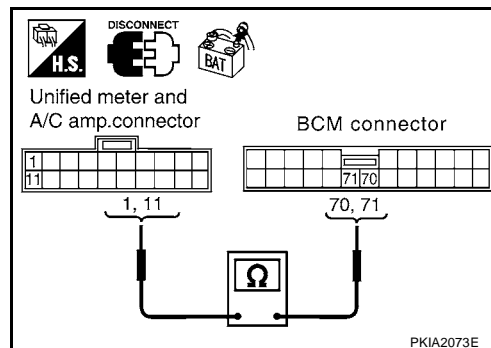
**1 (L) – 70 (L) : Continuity should exist.**

**11 (R) – 71 (R) : Continuity should exist.**

### OK or NG

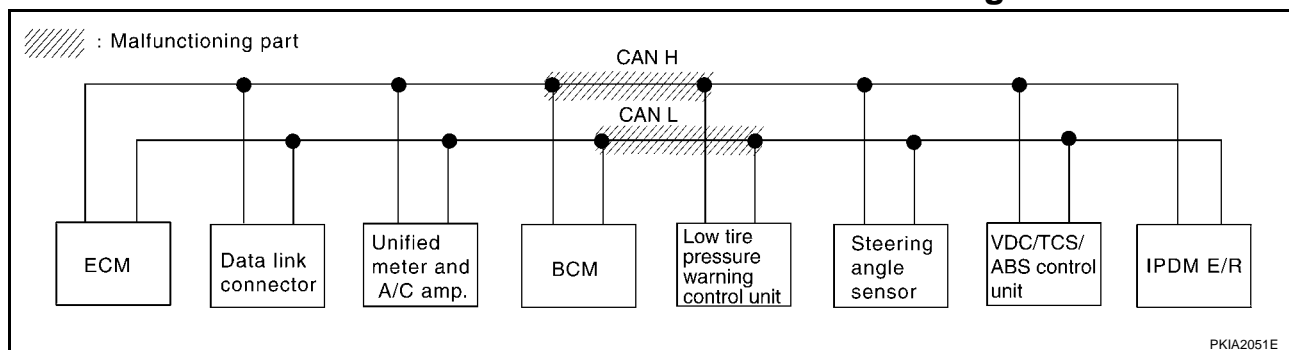
OK >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-147, "Work Flow"](#).

NG >> Repair harness.



## Circuit Check Between BCM and Low Tire Pressure Warning Control Unit

AKS00356



## 1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect the following connectors.
  - ECM connector
  - BCM connector
  - Low tire pressure warning control unit connector
4. Check continuity between BCM harness connector M3 terminals 70 (L), 71 (R) and low tire pressure warning control unit harness connector M77 terminals 9 (L), 21 (R).

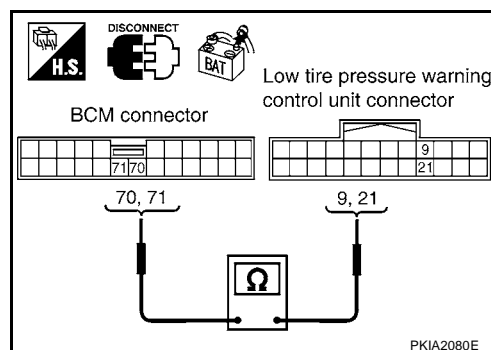
**70 (L) – 9 (L) : Continuity should exist.**

**71 (R) – 21 (R) : Continuity should exist.**

### OK or NG

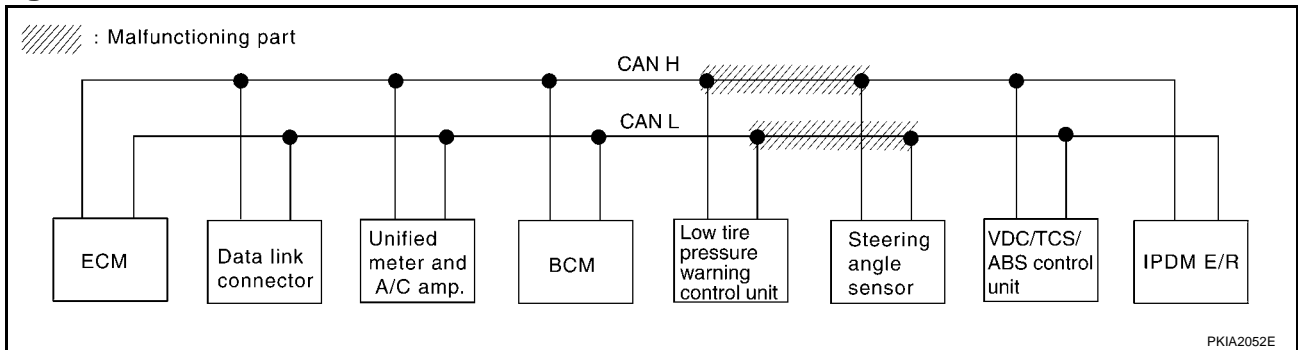
OK >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-147, "Work Flow"](#).

NG >> Repair harness.



## Circuit Check Between Low Tire Pressure Warning Control Unit and Steering Angle Sensor

AKS00357



### 1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect the following connectors.
  - ECM connector
  - Low tire pressure warning control unit connector
  - Steering angle sensor connector
4. Check continuity between Low tire pressure warning control unit harness connector M77 terminals 9 (L), 21 (R) and steering angle sensor harness connector M22 terminals 4 (L), 5 (R).

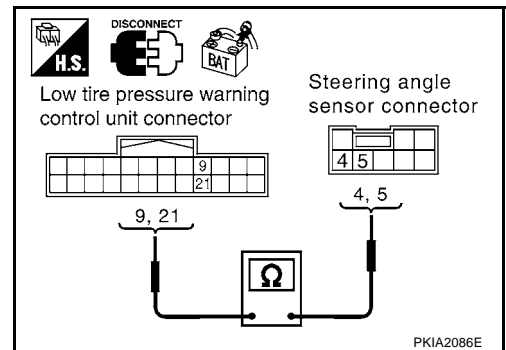
**9 (L) – 4 (L) : Continuity should exist.**

**21 (R) – 5 (R) : Continuity should exist.**

#### OK or NG

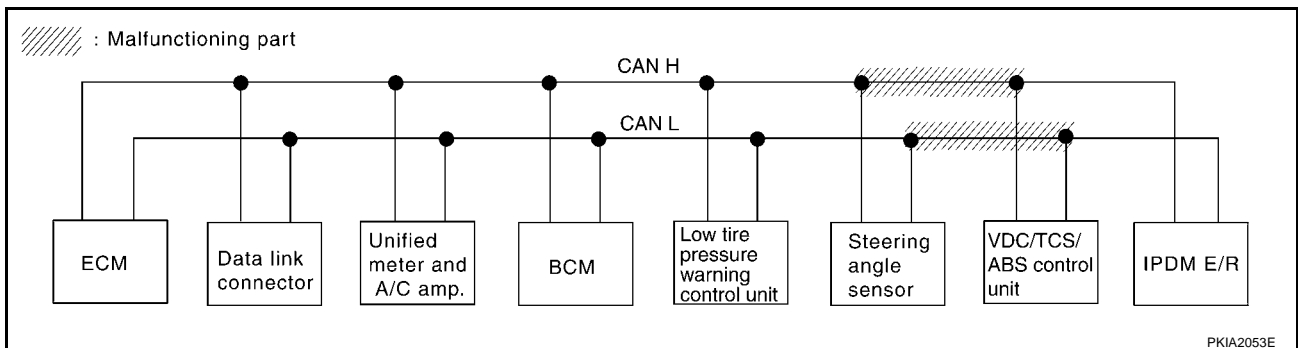
OK >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-147, "Work Flow"](#).

NG >> Repair harness.



## Circuit Check Between Steering Angle Sensor and VDC/TCS/ABS Control Unit

AKS00358



## 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connector for damage, bend and loose connection (connector-side and harness-side).
  - Harness connector M15
  - Harness connector E108

### OK or NG

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

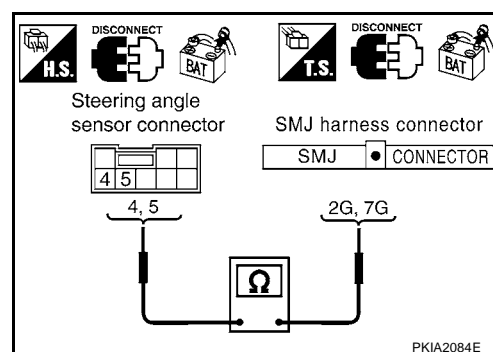
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect steering angle sensor connector and harness connector M15.
2. Check continuity between steering angle sensor harness connector M22 terminals 4 (L), 5 (R) and harness connector M15 terminals 2G (L), 7G (R).

**4 (L) – 2G (L) : Continuity should exist.**  
**5 (R) – 7G (R) : Continuity should exist.**

### OK or NG

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



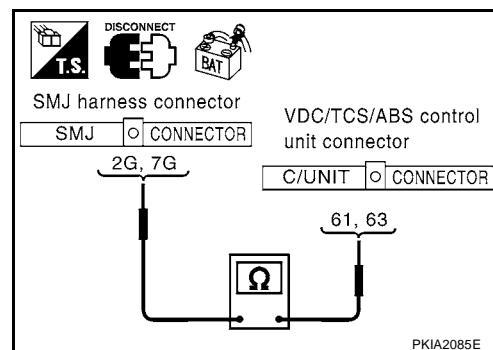
## 3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect VDC/TCS/ABS control unit connector.
2. Check continuity between harness connector E108 terminals 2G (L), 7G (R) and VDC/TCS/ABS control unit harness connector E118 terminals 61 (L), 63 (R).

**2G (L) – 61 (L) : Continuity should exist.**  
**7G (R) – 63 (R) : Continuity should exist.**

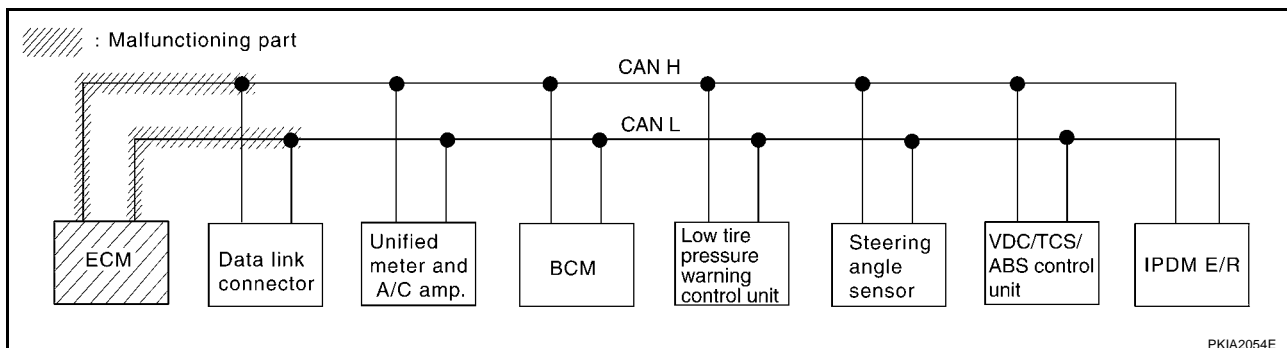
### OK or NG

- OK >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-147, "Work Flow"](#).  
 NG >> Repair harness.



## ECM Circuit Check

AKS00359



## 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connector for damage, bend and loose connection (control module-side and harness-side).
  - ECM connector
  - Harness connector F102
  - Harness connector M72

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 F101 terminals 94 (L) and 86 (R).

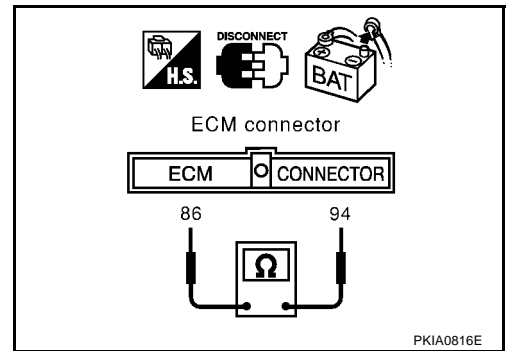
94 (L) – 86 (R)

: Approx. 108 – 132Ω

OK or NG

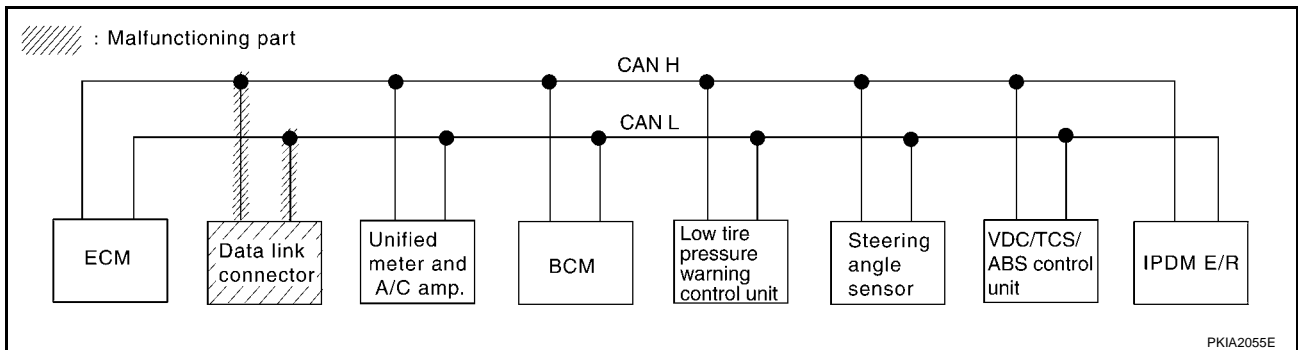
OK >> Replace ECM.

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



## Data Link Connector Circuit Check

AKS0035A



## 1. CHECK CONNECTOR

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

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.



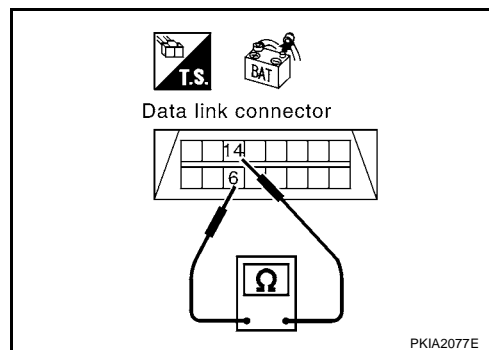
## 2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M8 terminals 6 (L) and 14 (R).

**6 (L) – 14 (R) : Approx. 54 – 66Ω**

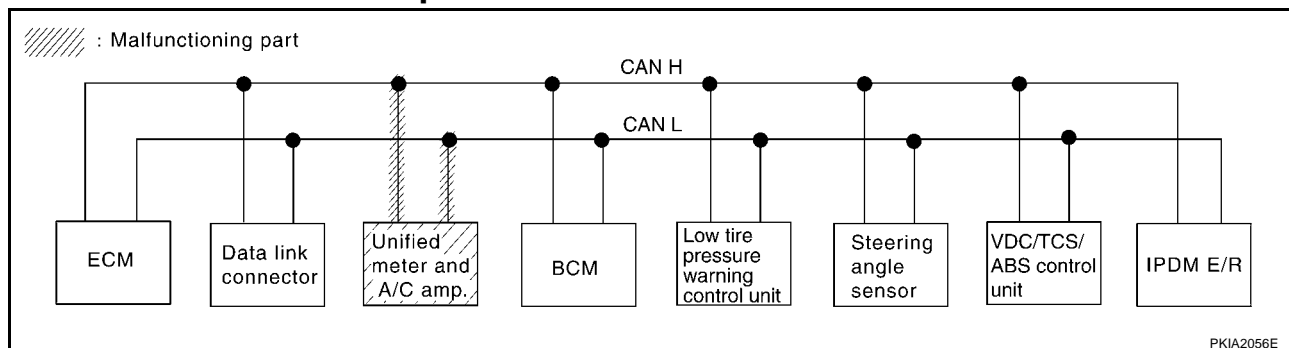
OK or NG

- OK >> Perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-147, "Work Flow"](#).
- NG >> Repair harness between data link connector and unified meter and A/C amp.



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

AKS0035B



## 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.

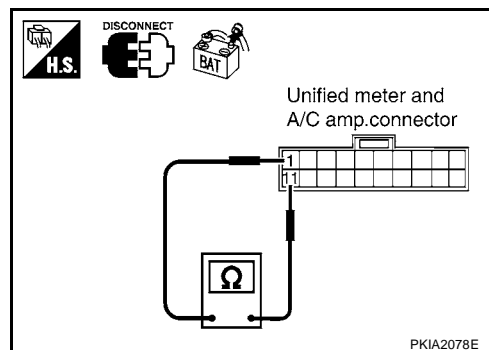
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector M48 terminals 1 (L) and 11 (R).

**1 (L) – 11 (R) : Approx. 54 – 66Ω**

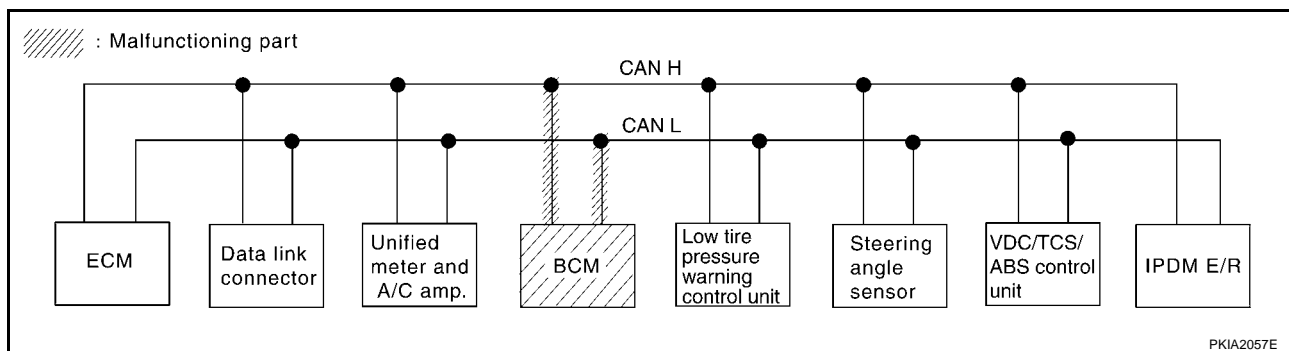
OK or NG

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



## BCM Circuit Check

AKS0035C



## 1. CHECK CONNECTOR

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

OK or NG

OK &gt;&gt; GO TO 2.

NG &gt;&gt; Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M3 terminals 70 (L) and 71 (R).

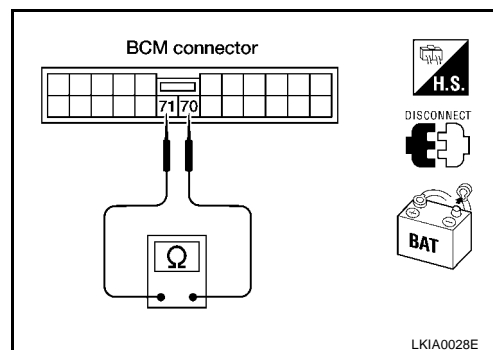
70 (L) – 71 (R)

: Approx. 54 – 66Ω

OK or NG

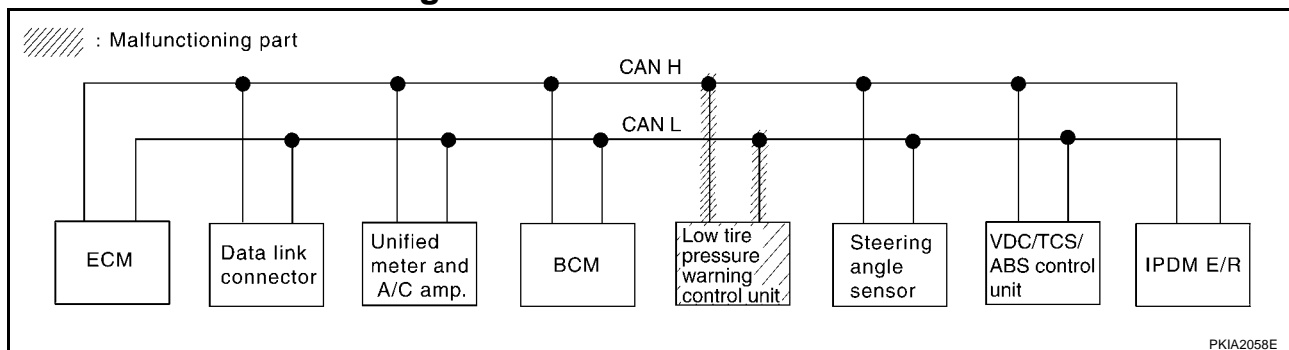
OK &gt;&gt; Replace BCM.

NG &gt;&gt; Repair harness between BCM and low tire pressure warning control unit.



## Low Tire Pressure Warning Control Unit Circuit Check

AKS0035D



## 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.

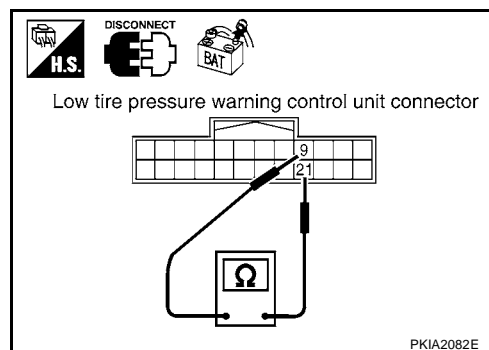
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect low tire pressure warning control unit connector.
2. Check resistance between low tire pressure warning control unit harness connector M77 terminals 9 (L) and 21 (R).

**9 (L) – 21 (R) : Approx. 54 – 66Ω**

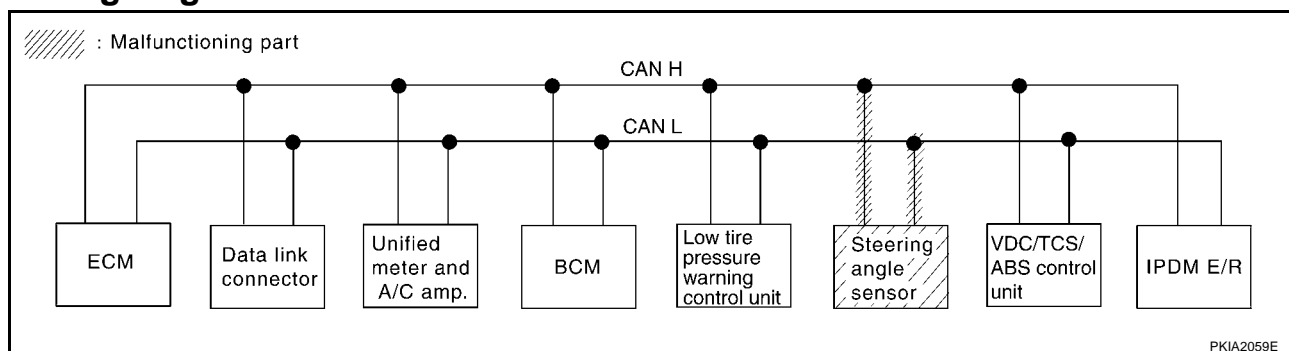
OK or NG

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



## Steering Angle Sensor Circuit Check

AKS0035E



## 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

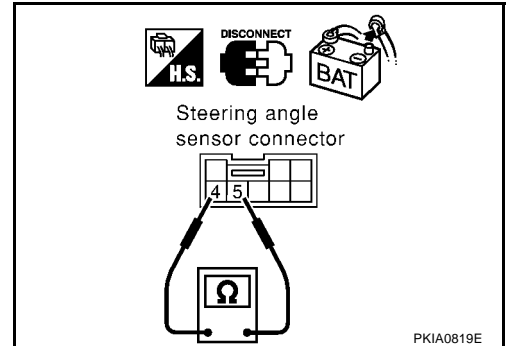
1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M22 terminals 4 (L) and 5 (R).

**4 (L) – 5 (R)**

**: Approx. 54 – 66Ω**

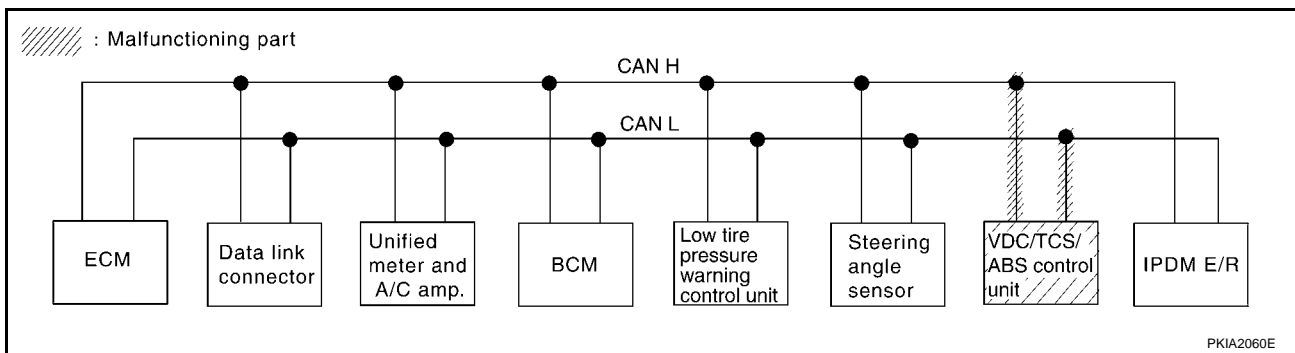
OK or NG

- OK >> Replace steering angle sensor.  
 NG >> Repair harness between steering angle sensor and harness connector M15.



## VDC/TCS/ABS Control Unit Circuit Check

AKS0035F



### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check the terminals and connector of VDC/TCS/ABS 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

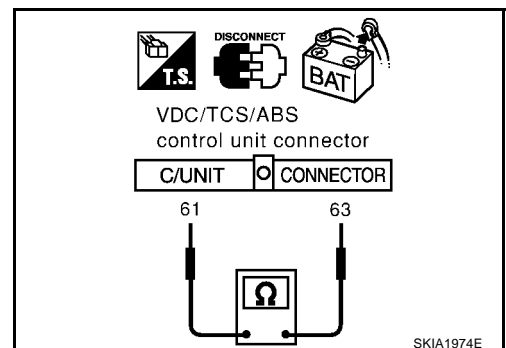
1. Disconnect VDC/TCS/ABS control unit connector.
2. Check resistance between VDC/TCS/ABS control unit harness connector E118 terminals 61 (L) and 63 (R).

**61 (L) – 63 (R)**

**: Approx. 54 – 66Ω**

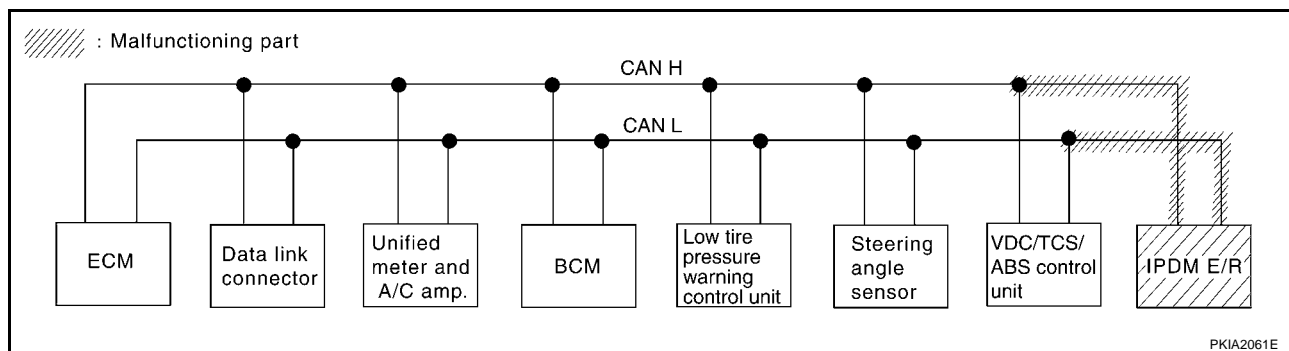
OK or NG

- OK >> Replace VDC/TCS/ABS control unit.  
 NG >> Repair harness between VDC/TCS/ABS control unit and IPDM E/R.



## IPDM E/R Circuit Check

AKS0035G



## 1. CHECK CONNECTOR

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

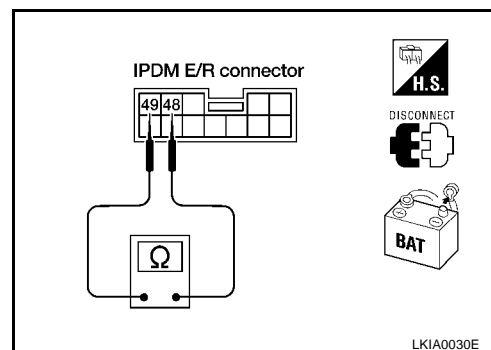
1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (R).

48 (L) – 49 (R)

: Approx. 108 – 132Ω

## OK or NG

- OK >> Replace IPDM E/R.  
NG >> Repair harness between IPDM E/R and VDC/TCS/ABS control unit.



## CAN Communication Circuit Check

AKS0035H

## 1. CHECK CONNECTOR

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

- ECM
- Unified meter and A/C amp.
- BCM
- Low tire pressure warning control unit
- Steering angle sensor
- VDC/TCS/ABS control unit
- IPDM E/R
- Between ECM and IPDM E/R

## OK or NG

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

## 2. CHECK HARNESS FOR SHORT CIRCUIT

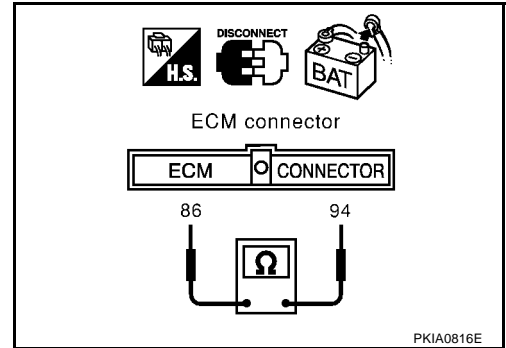
1. Disconnect ECM connector and harness connector F102.
2. Check continuity between ECM harness connector F101 terminals 94 (L) and 86 (R).

**94 (L) – 86 (R) : Continuity should not exist.**

OK or NG

OK >> GO TO 3.

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



## 3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between ECM harness connector F101 terminals 94 (L), 86 (R) and ground.

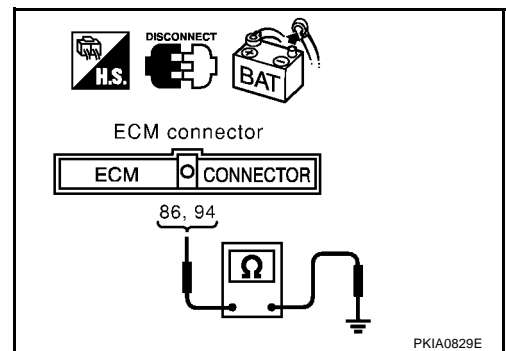
**94 (L) – ground : Continuity should not exist.**

**86 (R) – ground : Continuity should not exist.**

OK or NG

OK >> GO TO 4.

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



## 4. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
  - Unified meter and A/C amp. connector
  - BCM connector
  - Low tire pressure warning control unit connector
  - Steering angle sensor connector
  - Harness connector M15
2. Check continuity between data link connector M8 terminals 6 (L) and 14 (R).

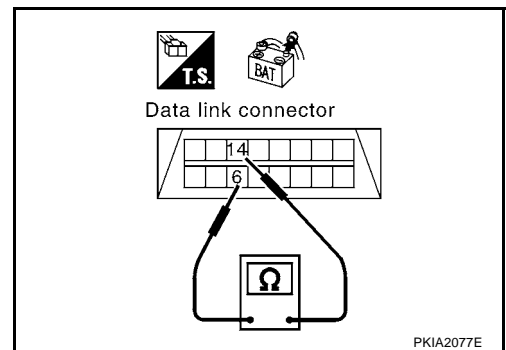
**6 (L) – 14 (R) : Continuity should not exist.**

OK or NG

OK >> GO TO 5.

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

- Harness between data link connector and harness connector M72.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and BCM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M15.



## 5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M8 terminals 6 (L), 14 (R) and ground.

**6 (L) – ground : Continuity should not exist.**

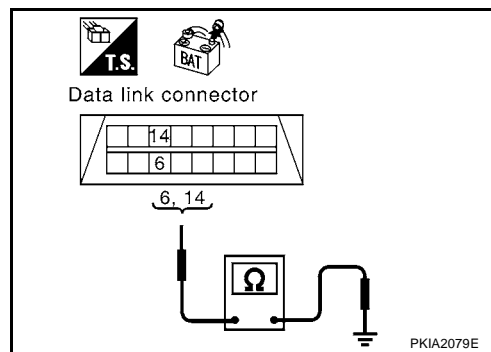
**14 (R) – ground : Continuity should not exist.**

OK or NG

OK >> GO TO 6.

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

- Harness between data link connector and harness connector M72.
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and BCM.
- Harness between data link connector and low tire pressure warning control unit.
- Harness between data link connector and steering angle sensor.
- Harness between data link connector and harness connector M15.



## 6. CHECK HARNESS FOR SHORT CIRCUIT

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

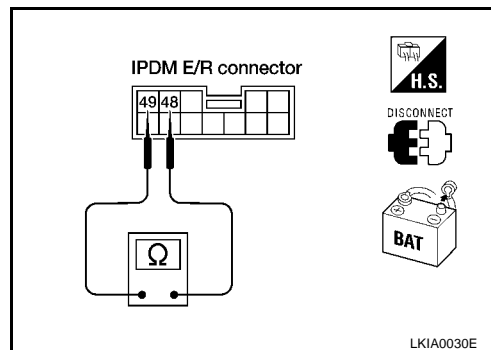
**48 (L) – 49 (R) : Continuity should not exist.**

OK or NG

OK >> GO TO 7.

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

- Harness between IPDM E/R and VDC/TCS/ABS control unit.
- Harness between IPDM E/R and harness connector E108.



## 7. CHECK HARNESS FOR SHORT CIRCUIT

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

**48 (L) – ground : Continuity should not exist.**

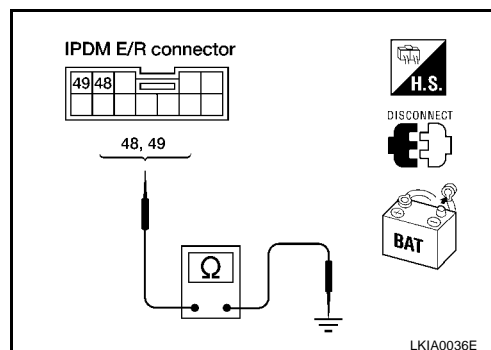
**49 (R) – ground : Continuity should not exist.**

OK or NG

OK >> GO TO 8.

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

- Harness between IPDM E/R and VDC/TCS/ABS control unit.
- Harness between IPDM E/R and harness connector E108.



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

Check components inspection. Refer to [LAN-168, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

OK or NG

- OK >> Reconnect all connectors to perform "SELECT SYSTEM", "SELF-DIAG RESULTS" and "DATA MONITOR (CAN DIAG SUPPORT MNTR)" displayed on CONSULT-II. Refer to [LAN-147, "Work Flow"](#).
- NG >> Replace ECM and/or IPDM E/R.

### IPDM E/R Check

AKS0035I

#### 1. CHECK IPDM E/R

- Turn ignition switch ON and then OFF.
- Check for illuminated parking lamps and tail lamps.

**Parking lamps and tail lamps should not illuminate.**

OK or NG

- OK >> Replace VDC/TCS/ABS control unit.
- NG >> Replace IPDM E/R.

### IPDM E/R Ignition Relay Circuit Check

AKS0035J

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

- IPDM E/R power supply circuit. Refer to [PG-29, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-11, "IGNITION POWER SUPPLY — IGNITION SW. IN "ON" AND/OR "START""](#).

### Component Inspection

AKS0035K

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

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

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

