

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 harnesses or harness connectors.

### Precautions for Battery Service

AKS003TZ

Before disconnecting the battery, lower both the driver and passenger windows. This will prevent any interference between the window edge and the vehicle when the door is opened/closed. During normal operation, the window slightly raises and lowers automatically to prevent any window to vehicle interference. The automatic window function will not work with the battery disconnected.

### 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-4, "CAN Communication Unit"](#) .

## Precautions For Trouble Diagnosis CAN SYSTEM

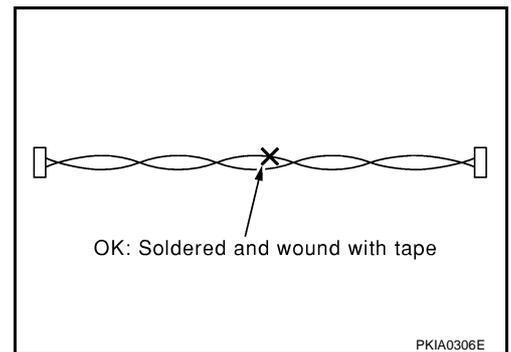
AKS000ZD

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

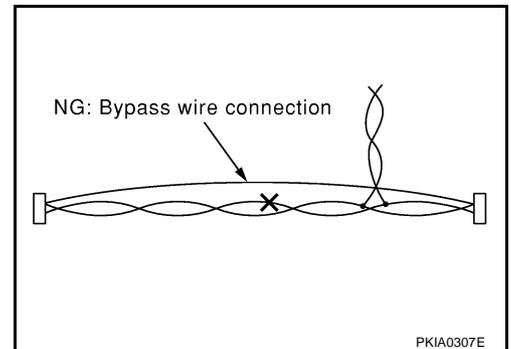
## Precautions For Harness Repair CAN SYSTEM

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

PFP:23710

### 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

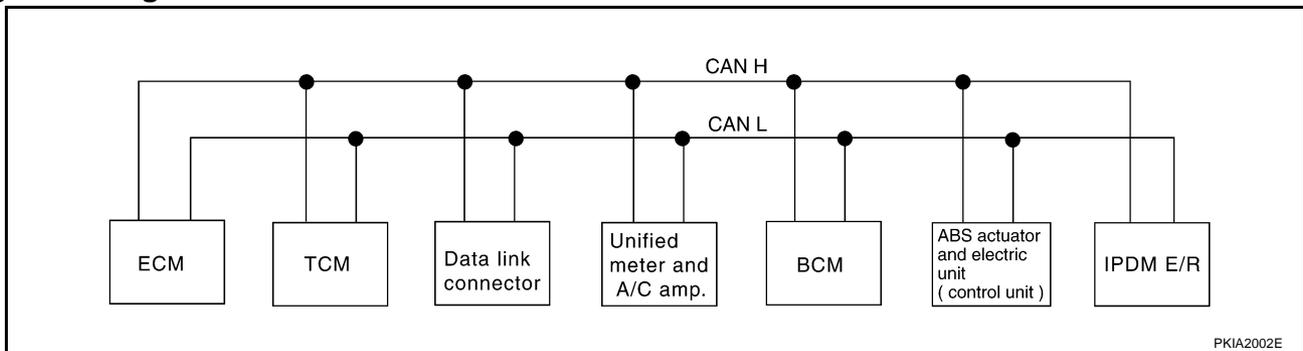
AKS000ZG

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

Body type	Roadster	
Axle	2WD	
Engine	VQ35DE	
Transmission	A/T	M/T
Brake control	TCS	
CAN system type	1	2
CAN system trouble diagnosis	<a href="#">LAN-8. "CAN SYSTEM (TYPE 1)"</a>	<a href="#">LAN-35. "CAN SYSTEM (TYPE 2)"</a>

### TYPE 1

#### System Diagram



#### 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			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	
Manual mode gear position signal		T	R			

# CAN COMMUNICATION

[CAN]

Signals	ECM	TCM	Unified meter and A/C amp.	BCM	ABS actua- tor and elec- tric unit (control unit)	IPDM E/R	A
ABS operation signal		R			T		B
A/T shift schedule change demand signal		R			T		C
A/C switch signal	R			T			D
A/C compressor request signal	T					R	E
A/C compressor feedback signal	T		R				F
Blower fan motor switch signal	R			T			G
Cooling fan speed request signal	T					R	H
Position lights request signal			R	T		R	I
Low beam request signal				T		R	J
Low beam status signal	R					T	K
High beam request signal			R	T		R	L
High beam status signal	R					T	M
Vehicle speed signal			R		T		N
	R	R	T	R			O
Sleep request 1 signal			R	T			P
Sleep request 2 signal				T		R	Q
Wake up request 1 signal			R	T			R
Door switch signal			R	T		R	S
Turn indicator signal			R	T			T
Seat belt buckle switch signal			T	R			U
Buzzer output signal			R	T			V
Fuel level sensor signal	R		T				W
Malfunction indicator lamp signal	T		R				X
ASCD SET lamp signal	T		R				Y
ASCD operation signal	T	R					Z
ASCD CRUISE lamp signal	T		R				AA
ASCD OD cancel request signal	T	R					AB
Output shaft revolution signal	R	T					AC
Turbine revolution signal	R	T					AD
Front wiper request signal				T		R	AE
Front wiper stop position signal				R		T	AF
Rear window defogger switch signal				T		R	AG
Rear window defogger control signal	R					T	AH
Manual mode signal		R	T				AI
Not manual mode signal		R	T				AJ
Manual mode shift up signal		R	T				AK
Manual mode shift down signal		R	T				AL
Manual mode indicator signal		T	R				AM
Hood switch signal				R		T	AN
Theft warning horn request signal				T		R	AO
Horn chirp signal				T		R	AP
ABS warning lamp signal			R		T		AQ

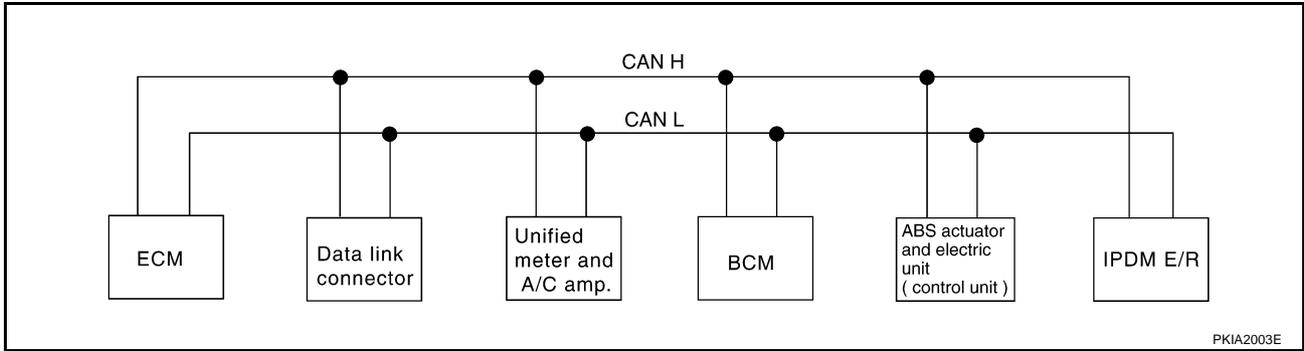
LAN

# CAN COMMUNICATION

[CAN]

Signals	ECM	TCM	Unified meter and A/C amp.	BCM	ABS actuator and electric unit (control unit)	IPDM E/R
TCS OFF indicator lamp signal			R		T	
SLIP indicator lamp signal			R		T	
Brake warning lamp signal			R		T	

## TYPE 2 System Diagram



## Input/ Output Signal Chart

T: Transmit R: Receive

Signals	ECM	Unified meter and A/C amp.	BCM	ABS actuator and electric unit (control unit)	IPDM E/R
Engine speed signal	T	R		R	
Engine torque signal	T			R	
Engine coolant temperature signal	T	R			
Accelerator pedal position signal	T			R	
Fuel consumption monitor signal	T	R			
A/C 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	R		T	
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		

# CAN COMMUNICATION

[CAN]

Signals	ECM	Unified meter and A/C amp.	BCM	ABS actuator and electric unit (control unit)	IPDM E/R
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
ABS warning lamp signal		R		T	
TCS OFF indicator lamp signal		R		T	
SLIP indicator lamp signal		R		T	
Brake warning lamp signal		R		T	

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LAN

## CAN SYSTEM (TYPE 1)

PFP:23710

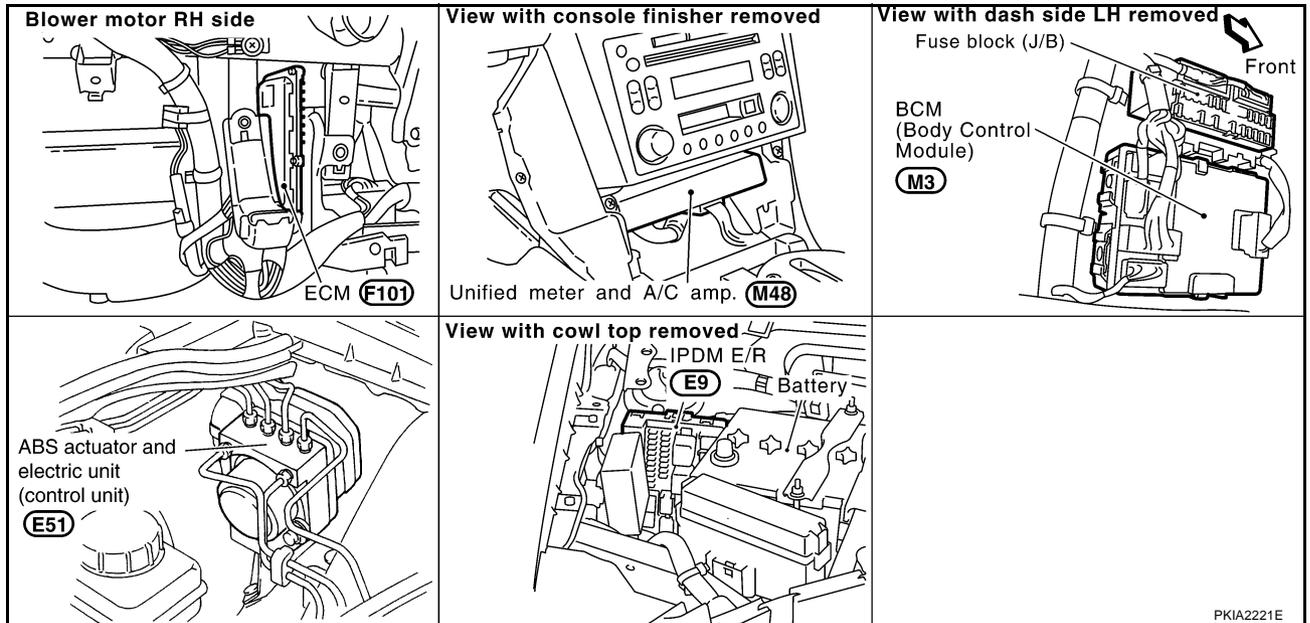
### System Description

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]

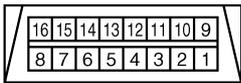
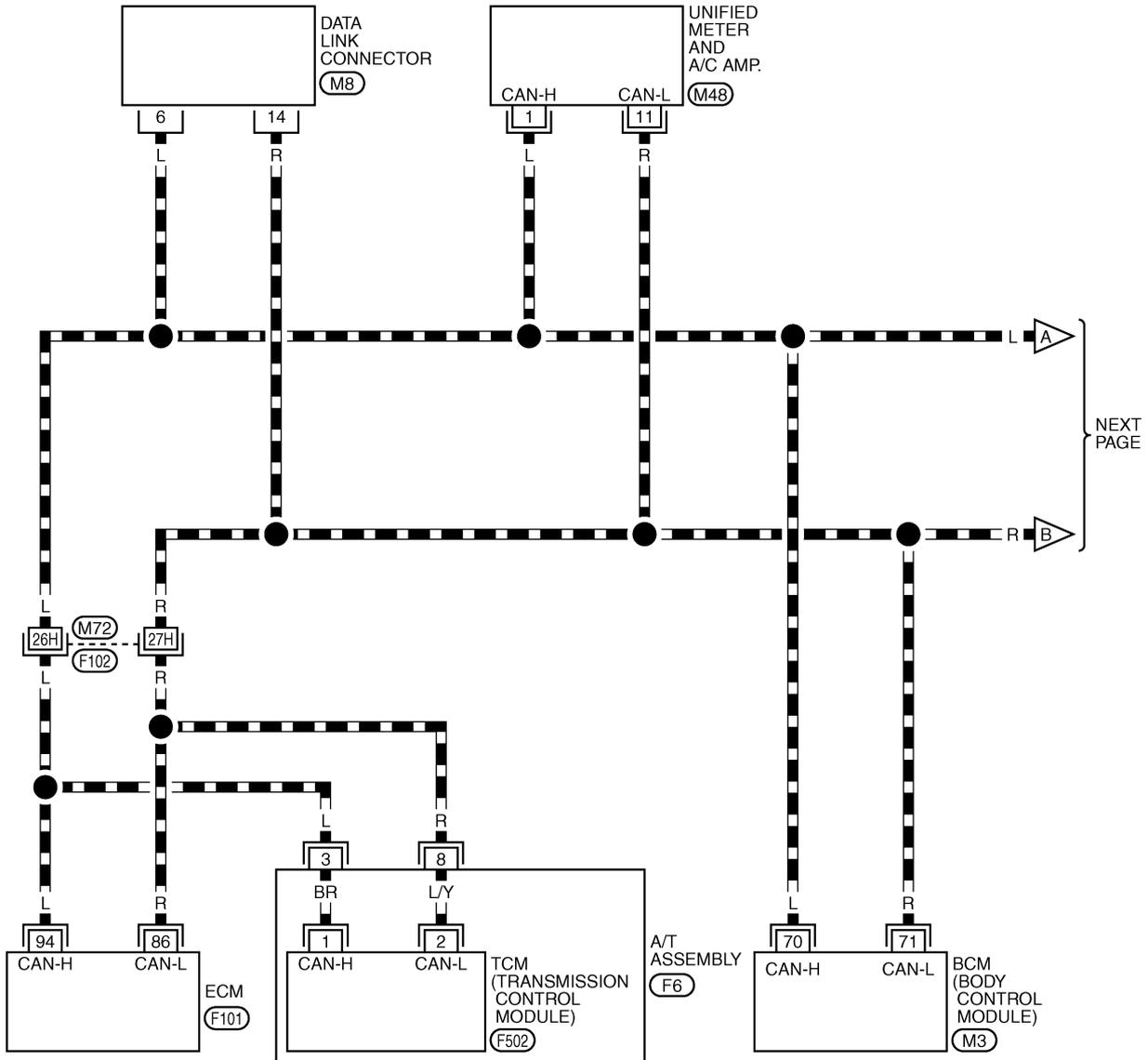
## Wiring Diagram — CAN —

AKS0035N

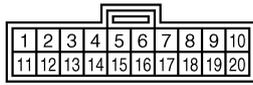
### LAN-CAN-01

▬ : DATA LINE

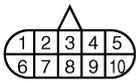
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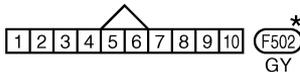
(M8)  
W



(M48)  
GY



(F6)  
GY



(F502)  
GY

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

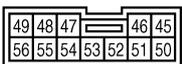
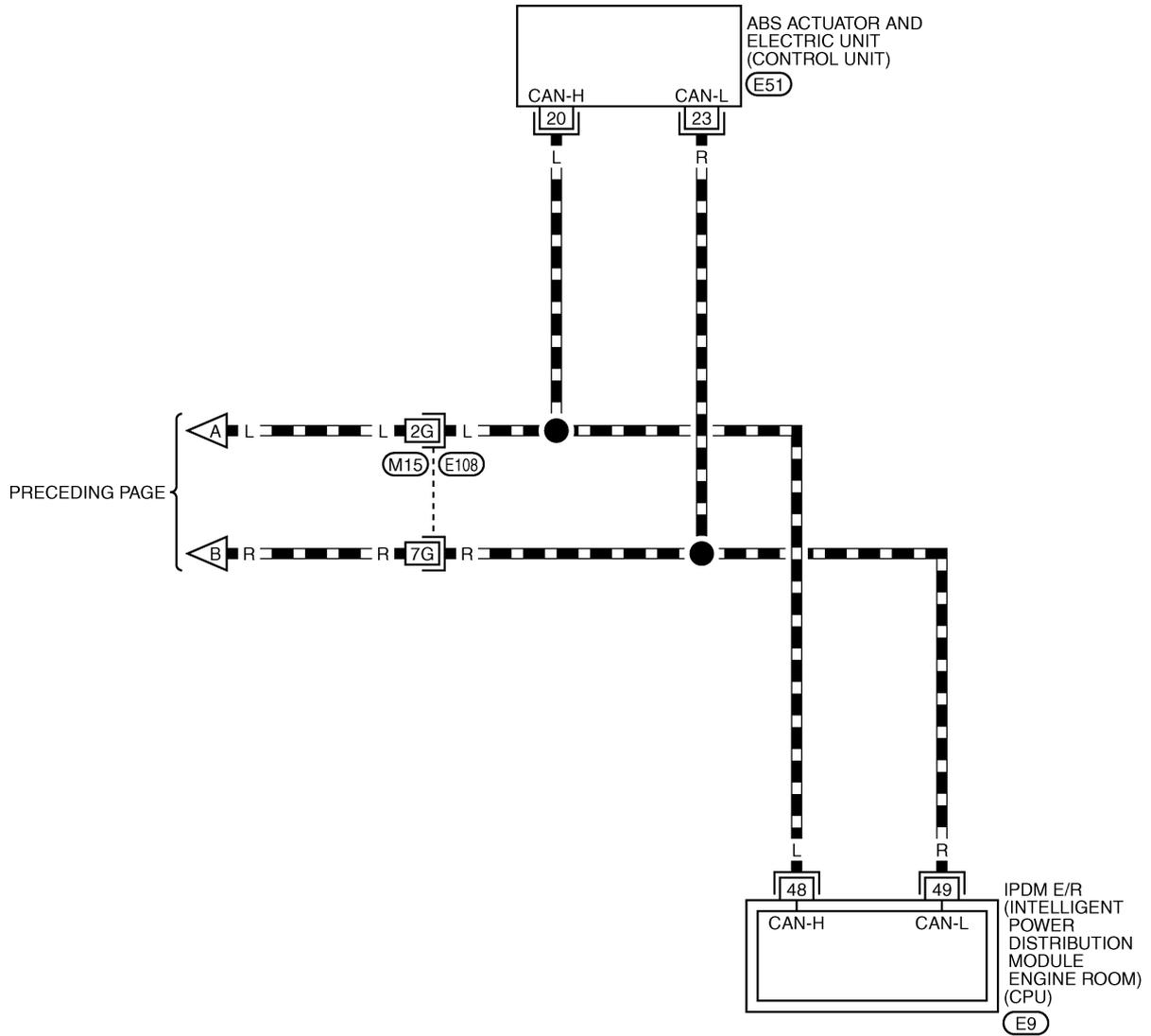
REFER TO THE FOLLOWING.

(F102) -SUPER MULTIPLE JUNCTION (SMJ)

(M3), (F101) -ELECTRICAL UNITS

## LAN-CAN-02

▬ : DATA LINE



REFER TO THE FOLLOWING.

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

# CAN SYSTEM (TYPE 1)

[CAN]

AKS00350

## Work Flow

- 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)				
CAN DIAG SUPPORT MNTR				
ACTIVE TEST				
Scroll Down				
		BACK	LIGHT	COPY

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

PKIA8260E

- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "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)				
CAN DIAG SUPPORT MNTR				
ACTIVE TEST				
Scroll Down				
		BACK	LIGHT	COPY

CAN DIAG SUPPORT MNTR			
ENGINE			
		PRSNTR	
INITIAL DIAG		OK	
TRANSMIT DIAG		OK	
TCM		OK	
VDC/TCS/ABS		OK	
METER/M&A		OK	
ICC		UNKWN	
BCM/SEC		OK	
IPDM E/R		OK	
AWD/4WD/e4WD		UNKWN	
PRINT		Scroll Down	
MODE	BACK	LIGHT	COPY

PKIA8343E

- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-12, "CHECK SHEET"](#) .
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "v" onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-12, "CHECK SHEET"](#) .

### NOTE:

- If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.
  - The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual. So it is not necessary to check the status of the "CAN DIAG SUPPORT MNTR" items not in check sheet table.
- According to the check sheet results (example), start inspection. Refer to [LAN-14, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

# CAN SYSTEM (TYPE 1)

[CAN]

## CHECK SHEET

### NOTE:

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

Check sheet table

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	—
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
BCM	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

# CAN SYSTEM (TYPE 1)

[CAN]

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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  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
A/T  
CAN DIAG SUPPORT  
MNTR

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

Attach copy of  
BCM  
CAN DIAG SUPPORT  
MNTR

Attach copy of  
ABS  
CAN DIAG SUPPORT  
MNTR

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## CHECK SHEET RESULTS (EXAMPLE)

### NOTE:

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

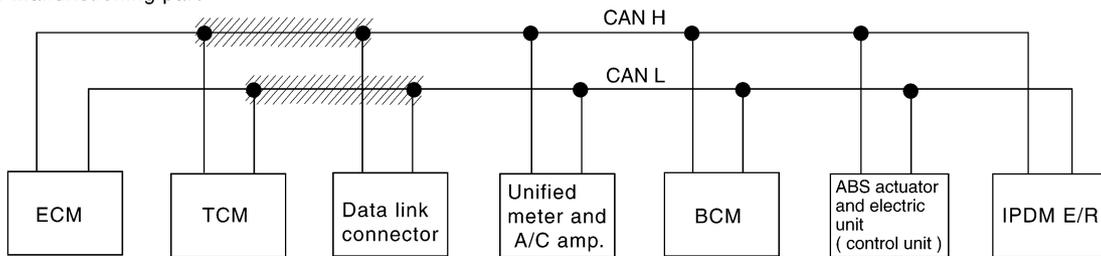
### Case 1

Check harness between TCM and data link connector. Refer to [LAN-25. "Circuit Check Between TCM and Data Link Connector"](#)

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UN <del>KN</del> WN	UN <del>KN</del> WN	UN <del>KN</del> WN	UN <del>KN</del> WN
A/T	—	NG	UNKWN	UNKWN	—	UN <del>KN</del> WN	—	UN <del>KN</del> WN	—
METER A/C AMP	No indication	—	UNKWN	UN <del>KN</del> WN	UN <del>KN</del> WN	—	UNKWN	UNKWN	—
BCM	—	NG	UNKWN	UN <del>KN</del> WN	—	UNKWN	—	—	UNKWN
ABS	—	NG	UNKWN	UN <del>KN</del> WN	UN <del>KN</del> WN	—	—	—	—

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/// : Malfunctioning part



PKIA2007E

# CAN SYSTEM (TYPE 1)

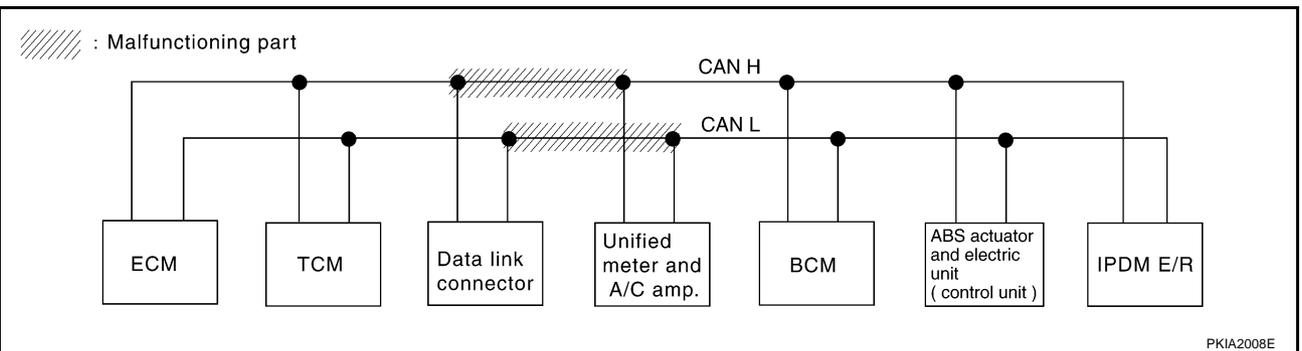
[CAN]

## Case 2

Check harness between data link connector and unified meter and A/C amp. Refer to [LAN-26, "Circuit Check Between Data Link Connector and Unified Meter and A/C Amp."](#)

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN ✓	UNKWN ✓	UNKWN ✓	UNKWN ✓
A/T	—	NG	UNKWN	UNKWN	—	UNKWN ✓	—	UNKWN ✓	—
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
BCM	—	NG	UNKWN	UNKWN ✓	—	UNKWN	—	—	UNKWN
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN ✓	—	—	—	—

PKIA8680E



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LAN

# CAN SYSTEM (TYPE 1)

[CAN]

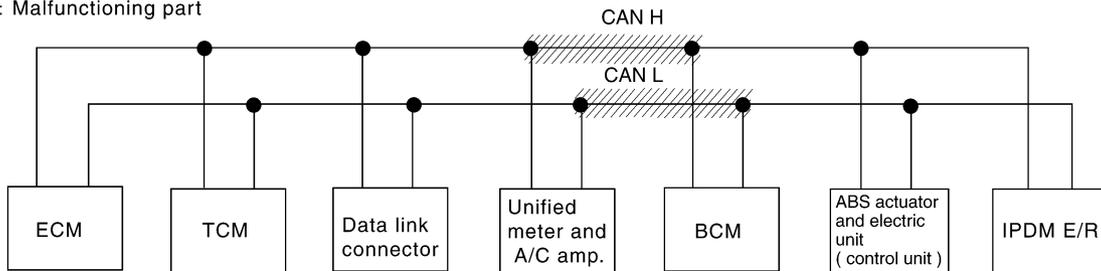
## Case 3

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"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	—
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
BCM	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—

PKIA8681E

//// : Malfunctioning part



PKIA2009E

# CAN SYSTEM (TYPE 1)

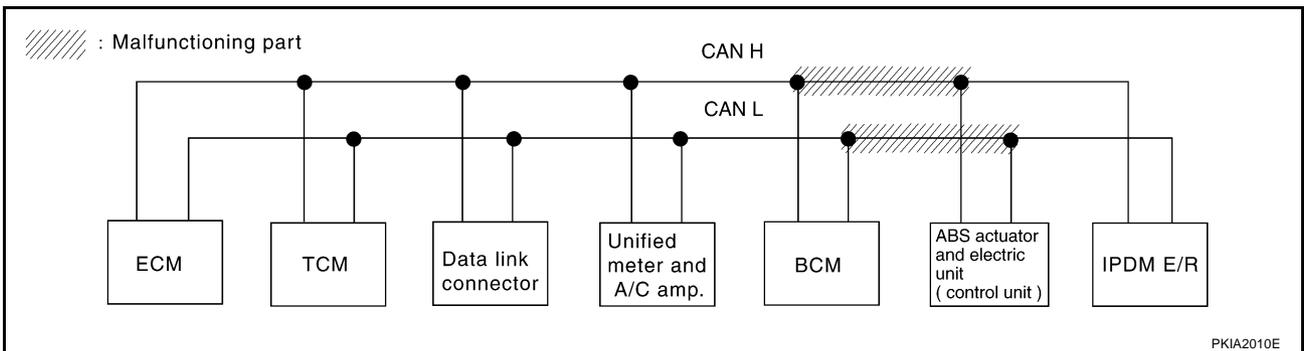
[CAN]

## Case 4

Check harness between BCM and ABS actuator and electric unit (control unit). Refer to [LAN-27, "Circuit Check Between BCM and ABS Actuator and Electric Unit \(Control Unit\)"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN ✓
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN ✓	—
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN ✓	—
BCM	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN ✓
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN ✓	—	—	—	—

PKIA662E



PKIA2010E

LAN

# CAN SYSTEM (TYPE 1)

[CAN]

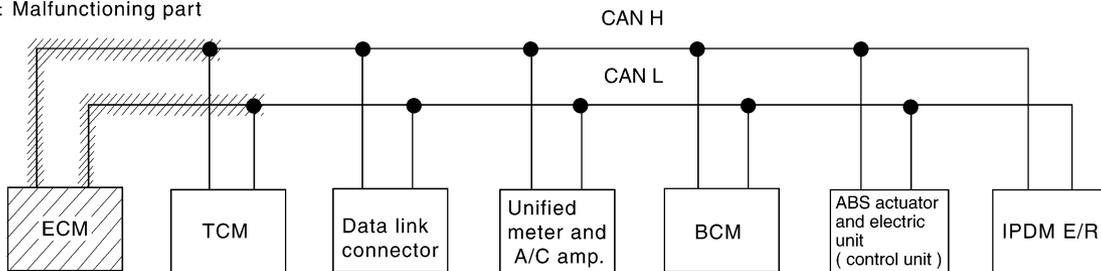
## Case 5

Check ECM circuit. Refer to [LAN-28, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW <sup>N</sup>	—	UNKW <sup>N</sup>				
A/T	—	NG	UNKW <sup>N</sup>	UNKW <sup>N</sup>	—	UNKW <sup>N</sup>	—	UNKW <sup>N</sup>	—
METER A/C AMP	No indication	—	UNKW <sup>N</sup>	UNKW <sup>N</sup>	UNKW <sup>N</sup>	—	UNKW <sup>N</sup>	UNKW <sup>N</sup>	—
BCM	—	NG	UNKW <sup>N</sup>	UNKW <sup>N</sup>	—	UNKW <sup>N</sup>	—	—	UNKW <sup>N</sup>
ABS	—	NG	UNKW <sup>N</sup>	UNKW <sup>N</sup>	UNKW <sup>N</sup>	—	—	—	—

PKIA8683E

▨ : Malfunctioning part



PKIA2011E

# CAN SYSTEM (TYPE 1)

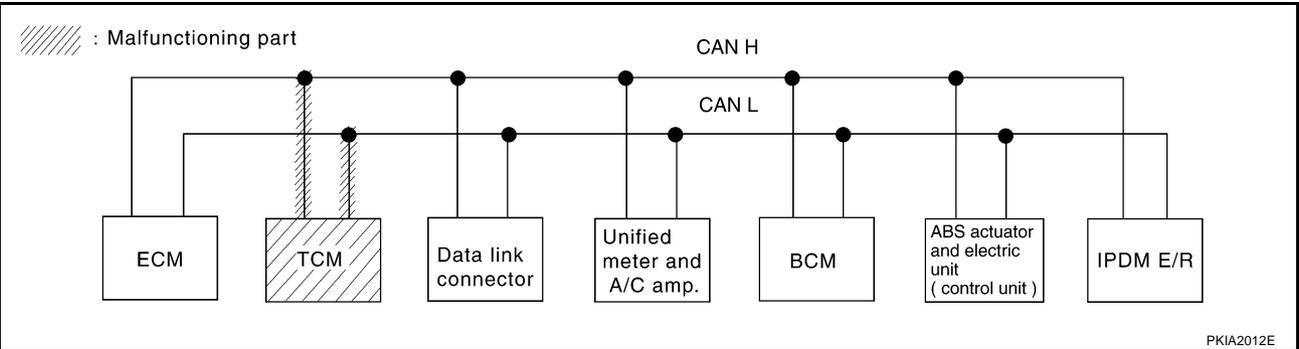
[CAN]

## Case 6

Check TCM circuit. Refer to [LAN-28, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	—
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
BCM	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—

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# CAN SYSTEM (TYPE 1)

[CAN]

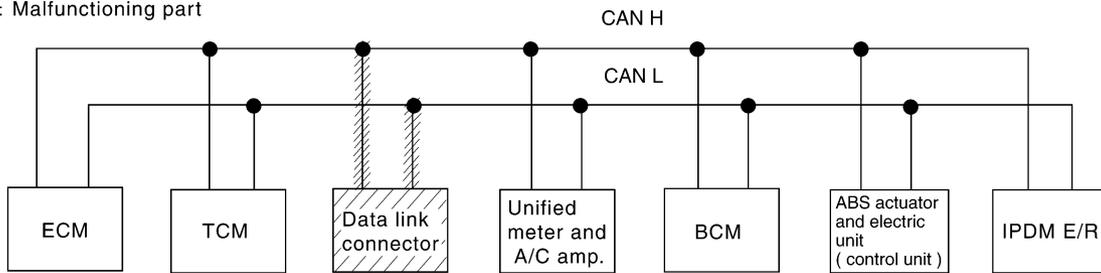
## Case 7

Check data link connector circuit. Refer to [LAN-29, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	—
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
BCM	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—

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//// : Malfunctioning part



PKIA2013E

# CAN SYSTEM (TYPE 1)

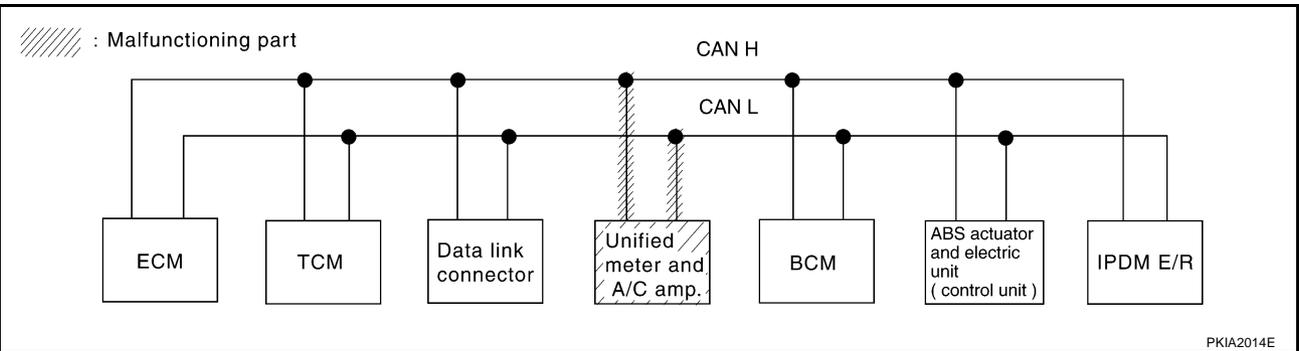
[CAN]

## Case 8

Check unified meter and A/C amp. circuit. Refer to [LAN-29, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN ✓	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN ✓	—	UNKWN	—
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	—
BCM	—	NG	UNKWN	UNKWN	—	UNKWN ✓	—	—	UNKWN
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—

PKIA8686E



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# CAN SYSTEM (TYPE 1)

[CAN]

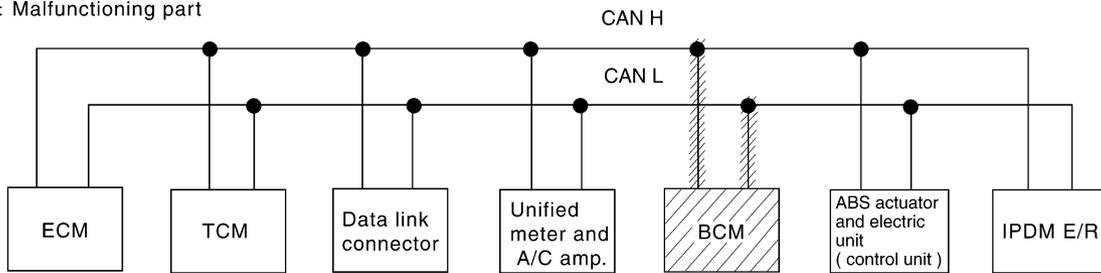
## Case 9

Check BCM circuit. Refer to [LAN-30, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN ✓	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	—
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	—	UNKWN ✓	UNKWN	—
BCM	—	NG	UNKWN ✓	UNKWN ✓	—	UNKWN ✓	—	—	UNKWN ✓
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—

PKIA8687E

//// : Malfunctioning part



PKIA2015E

# CAN SYSTEM (TYPE 1)

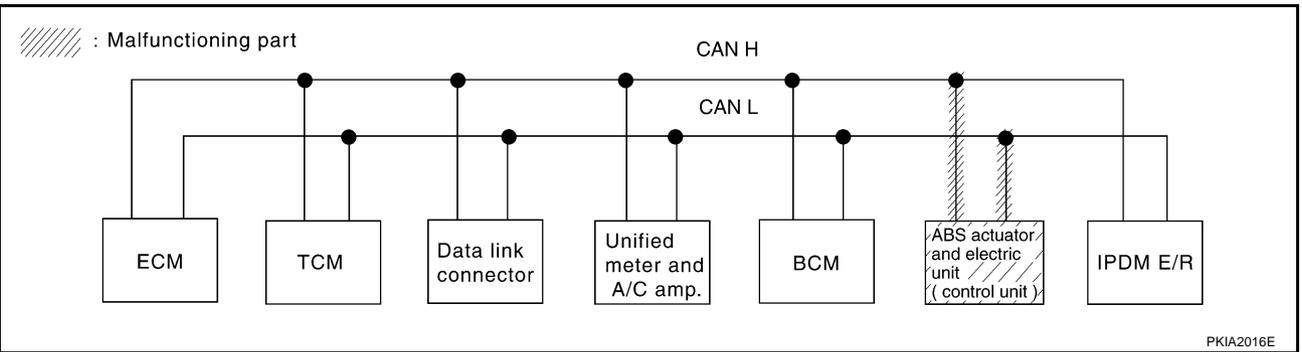
[CAN]

## Case 10

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-30, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN ✓	—
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN ✓	—
BCM	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN
ABS	—	NG	UNKWN ✓	UNKWN	UNKWN	—	—	—	—

PKIA8688E



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LAN

# CAN SYSTEM (TYPE 1)

[CAN]

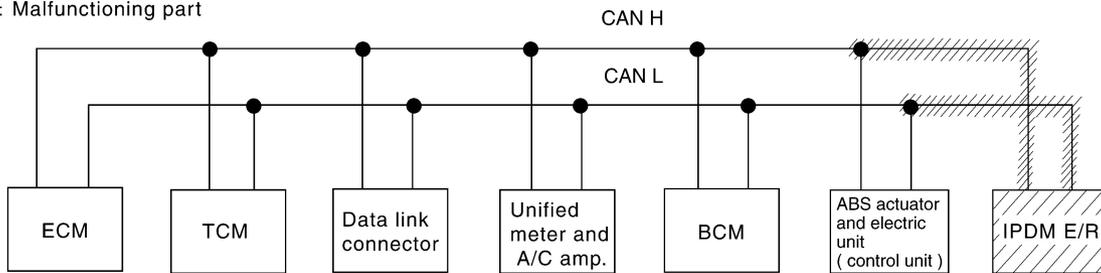
## Case 11

Check IPDM E/R circuit. Refer to [LAN-31, "IPDM E/R Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW <del>N</del>	—	UNKW <del>N</del> ✓				
A/T	—	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	UNKW <del>N</del>	—	UNKW <del>N</del>	—
METER A/C AMP	No indication	—	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	—	UNKW <del>N</del>	UNKW <del>N</del>	—
BCM	—	NG	UNKW <del>N</del>	UNKW <del>N</del>	—	UNKW <del>N</del>	—	—	UNKW <del>N</del> ✓
ABS	—	NG	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	—	—	—	—

PKIA8689E

▨ : Malfunctioning part



PKIA2017E

## Case 12

Check CAN communication circuit. Refer to [LAN-32, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW <del>N</del> ✓	—	UNKW <del>N</del> ✓				
A/T	—	NG	UNKW <del>N</del> ✓	UNKW <del>N</del> ✓	—	UNKW <del>N</del> ✓	—	UNKW <del>N</del> ✓	—
METER A/C AMP	No indication ✓	—	UNKW <del>N</del>	UNKW <del>N</del>	UNKW <del>N</del>	—	UNKW <del>N</del>	UNKW <del>N</del>	—
BCM	—	NG	UNKW <del>N</del> ✓	UNKW <del>N</del> ✓	—	UNKW <del>N</del> ✓	—	—	UNKW <del>N</del> ✓
ABS	—	NG	UNKW <del>N</del> ✓	UNKW <del>N</del> ✓	UNKW <del>N</del> ✓	—	—	—	—

PKIA8690E

## Case 13

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-34, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	-	NG	UNKWN	-	✓	UNKWN	UNKWN	✓	UNKWN
A/T	-	NG	UNKWN	UNKWN	-	UNKWN	-	UNKWN	-
METER A/C AMP	No indication	-	UNKWN	UNKWN	✓	-	UNKWN	✓	-
BCM	-	NG	UNKWN	UNKWN	-	UNKWN	-	-	UNKWN
ABS	-	NG	UNKWN	UNKWN	UNKWN	-	-	-	-

PKIA8692E

## Case 14

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-34, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	-	NG	UNKWN	-	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	-	NG	UNKWN	✓	-	✓	-	UNKWN	-
METER A/C AMP	No indication	-	UNKWN	UNKWN	UNKWN	-	UNKWN	UNKWN	-
BCM	-	NG	UNKWN	UNKWN	-	UNKWN	-	-	UNKWN
ABS	-	NG	UNKWN	✓	UNKWN	-	-	-	-

PKIA8691E

## 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.

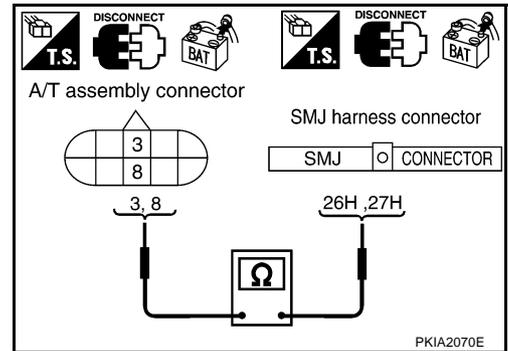
## 2. CHECK HARNESS FOR OPEN CIRCUIT

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.



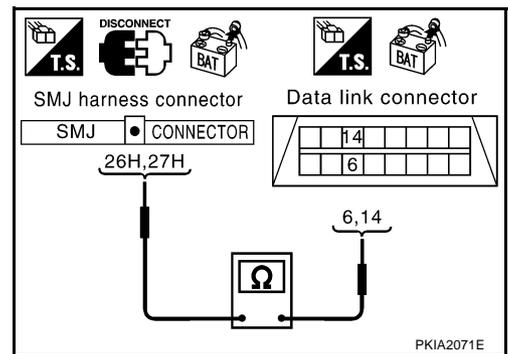
## 3. CHECK HARNESS FOR OPEN CIRCUIT

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 >> Connect all the connectors and diagnose again. Refer to [LAN-11, "Work Flow"](#).  
 NG >> Repair harness.



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

AKS0035Q

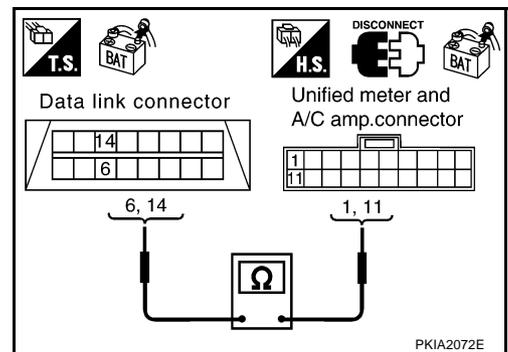
### 1. CHECK HARNESS FOR OPEN CIRCUIT

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 >> Connect all the connectors and diagnose again. Refer to [LAN-11, "Work Flow"](#).  
 NG >> Repair harness.



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

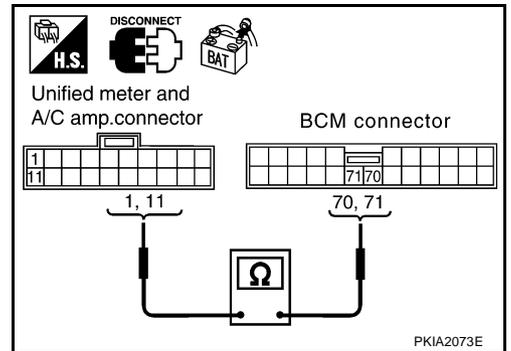
### 1. CHECK HARNESS FOR OPEN CIRCUIT

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     >> Connect all the connectors and diagnose again. Refer to [LAN-11, "Work Flow"](#) .
- NG     >> Repair harness.



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

### 1. CHECK CONNECTOR

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

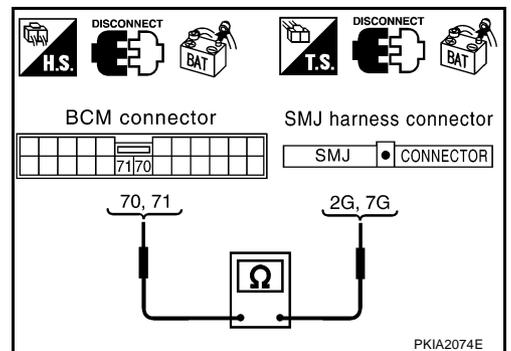
### 2. CHECK HARNESS FOR OPEN CIRCUIT

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

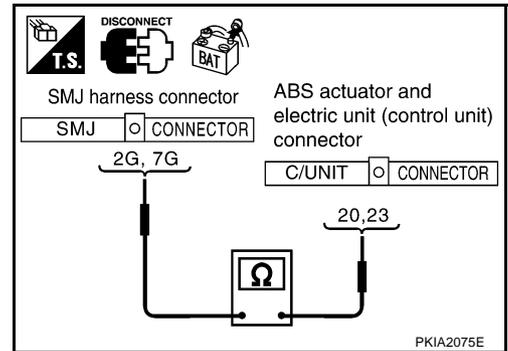
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check continuity between harness connector E108 terminals 2G (L), 7G (R) and ABS actuator and electric unit (control unit) harness connector E51 terminals 20 (L), 23 (R).

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

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

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-11, "Work Flow"](#).
- NG >> Repair harness.



AKS0035T

## ECM 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 and harness side).
  - ECM connector
  - Harness connector F102
  - Harness connector M72

OK or NG

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

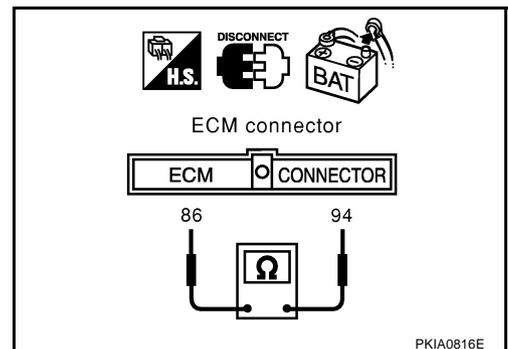
### 2. CHECK HARNESS FOR OPEN CIRCUIT

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.



AKS0035U

## TCM Circuit Check

### 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.

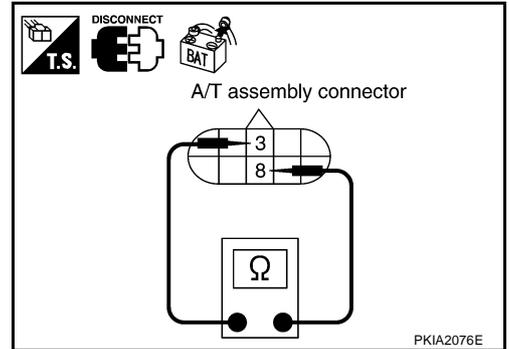
## 2. CHECK HARNESS FOR OPEN CIRCUIT

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 control valve with TCM.  
 NG >> Repair harness between A/T assembly and harness connector F102.



AKS0035V

## Data Link Connector Circuit Check

### 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.

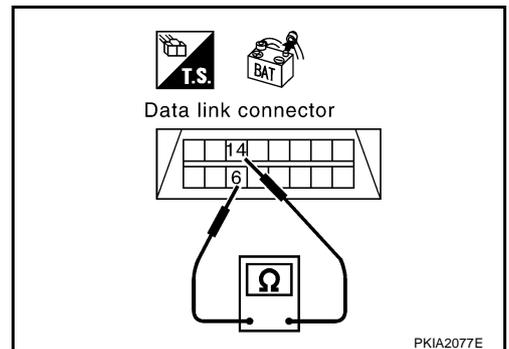
## 2. CHECK HARNESS FOR OPEN CIRCUIT

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

**6 (L) – 14 (R) : Approx. 54 – 66Ω**

### OK or NG

- OK >> Diagnose again. Refer to [LAN-11, "Work Flow"](#) .  
 NG >> Repair harness between data link connector and unified meter and A/C amp.



AKS0035W

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

### 1. CHECK CONNECTOR

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

### OK or NG

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

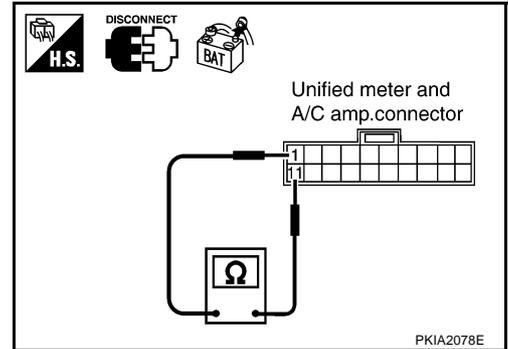
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector 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.



AKS0035X

## BCM Circuit Check

### 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.

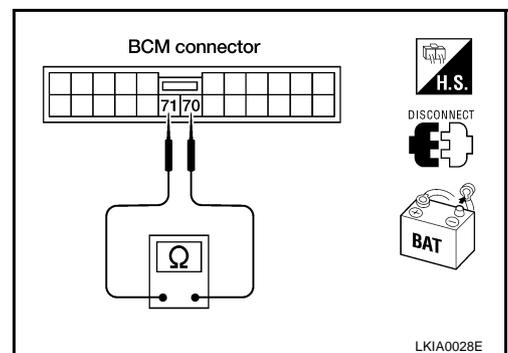
## 2. CHECK HARNESS FOR OPEN CIRCUIT

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.



LKIA0028E

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

## 2. CHECK HARNESS FOR OPEN CIRCUIT

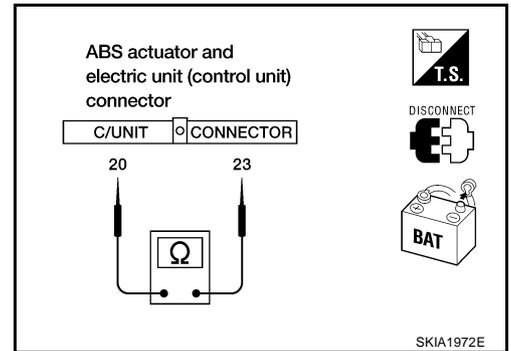
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E51 terminals 20 (L) and 23 (R).

**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.



AKS0035Z

## IPDM E/R Circuit Check

### 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

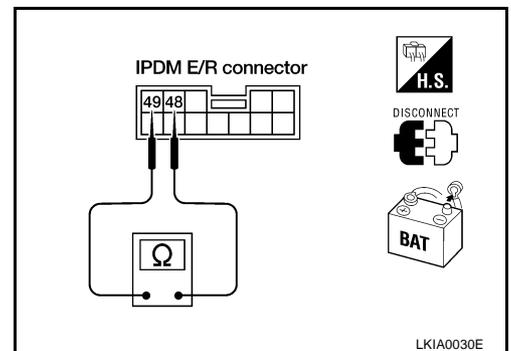
1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (R).

**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).



LKIA0030E

## 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.

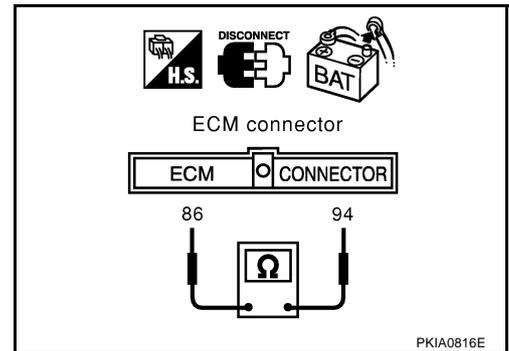
### 2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect following connectors.
  - ECM connector
  - A/T assembly connector
  - 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 >> 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

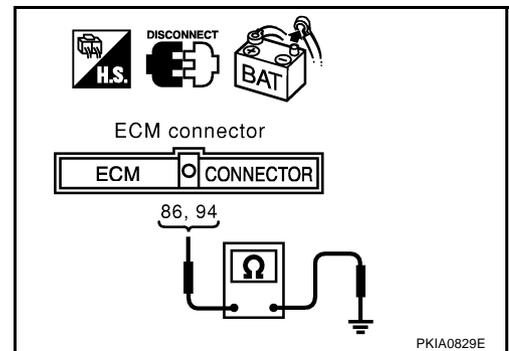
Check continuity between ECM harness connector F101 terminals 94 (L), 86 (R) and ground.

**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

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

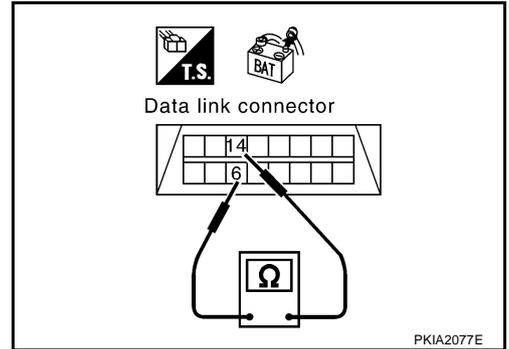
**6 (L) – 14 (R) : Continuity should not exist.**

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 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.**

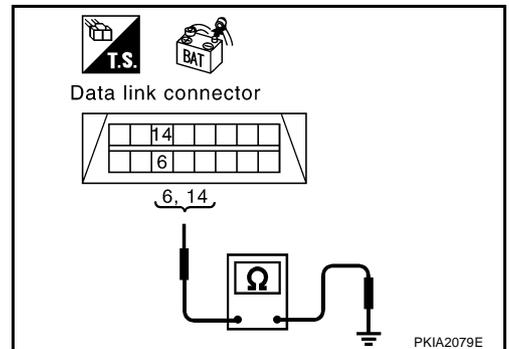
**14 (R) – ground : Continuity should not exist.**

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).

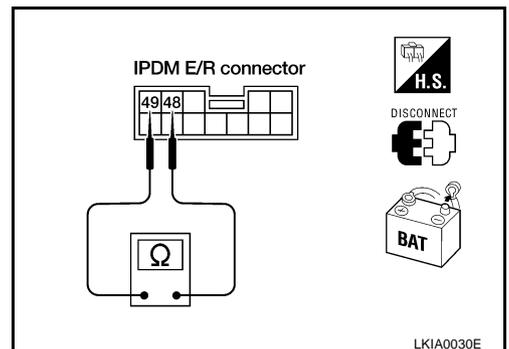
**48 (L) – 49 (R) : Continuity should not exist.**

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.

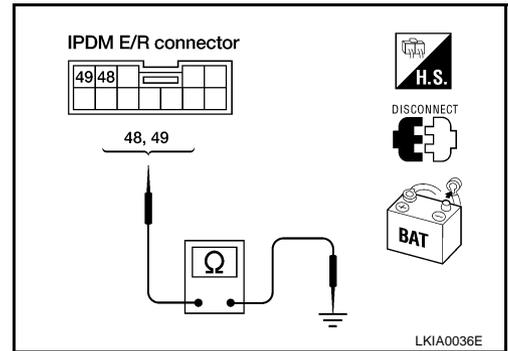
- 48 (L) – ground : Continuity should not exist.**
- 49 (R) – ground : Continuity should not exist.**

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-34, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-11, "Work Flow"](#).

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

### IPDM E/R Ignition Relay Circuit Check

AKS00362

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

- IPDM E/R power supply circuit. Refer to [PG-24, "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" "](#).

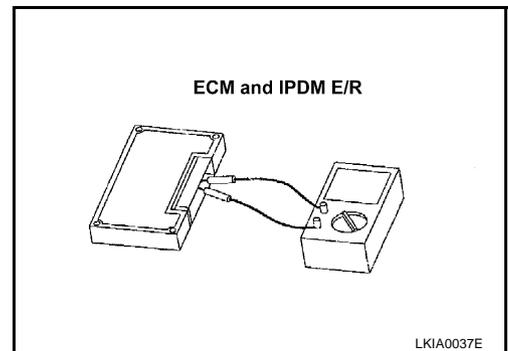
### Component Inspection

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

AKS00363

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

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



## CAN SYSTEM (TYPE 2)

PFP:23710

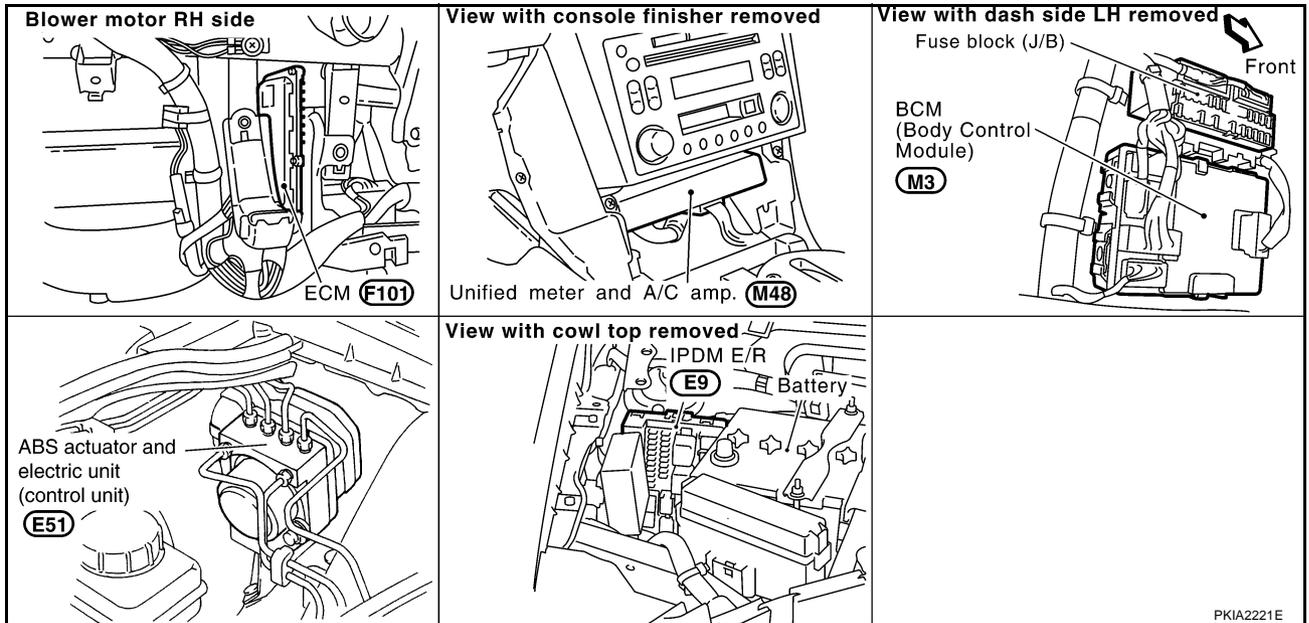
### System Description

AKS0092Z

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

AKS00930



PKIA2221E

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# CAN SYSTEM (TYPE 2)

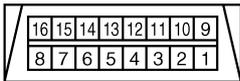
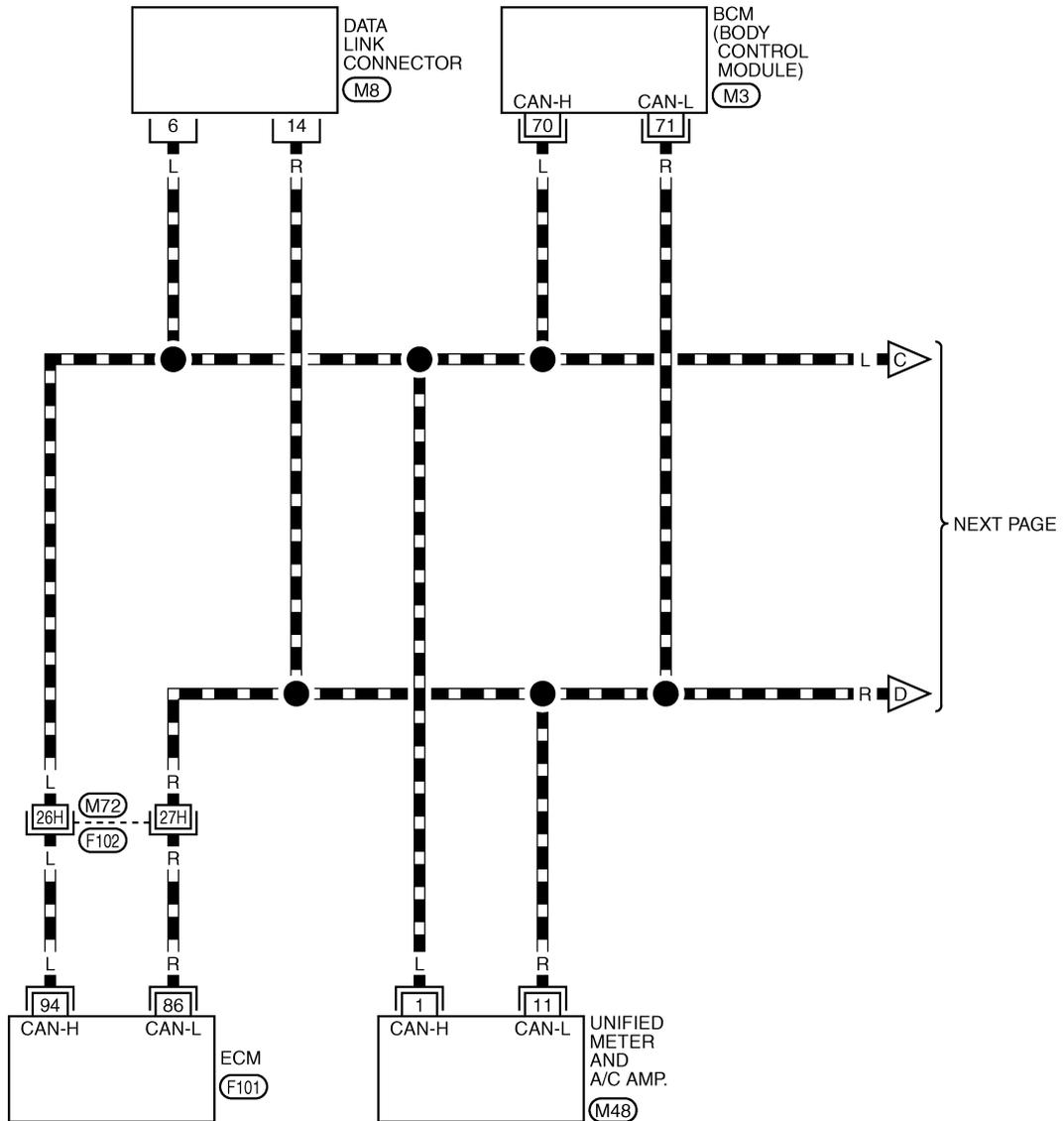
[CAN]

AKS00931

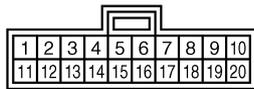
## Wiring Diagram — CAN —

LAN-CAN-03

▬ : DATA LINE



(M8)  
W



(M48)  
GY



REFER TO THE FOLLOWING.

(F102) -SUPER MULTIPLE JUNCTION (SMJ)

(M3), (F101) -ELECTRICAL UNITS

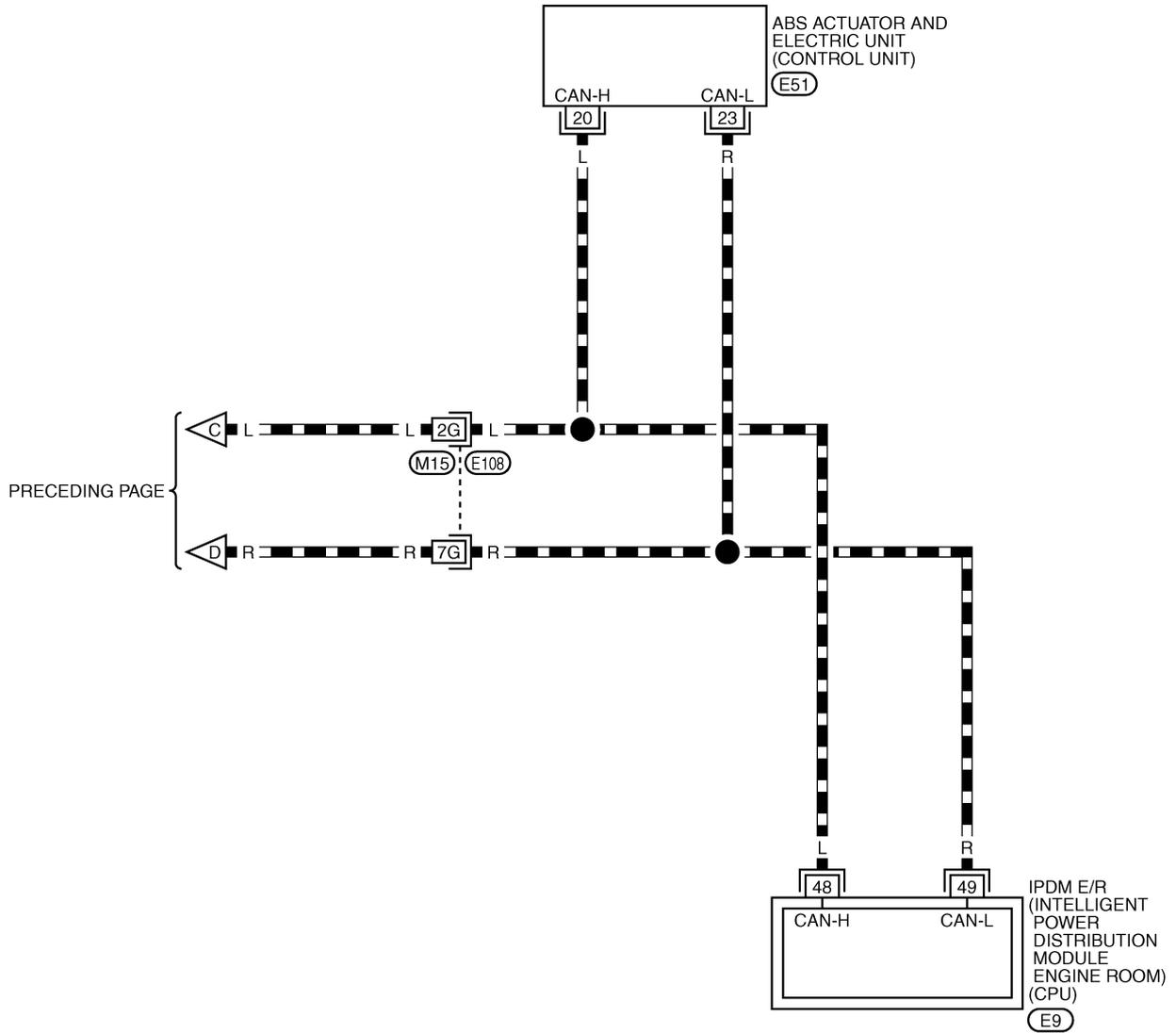
TKWT0408E

# CAN SYSTEM (TYPE 2)

[CAN]

## LAN-CAN-04

▬ : DATA LINE



REFER TO THE FOLLOWING.

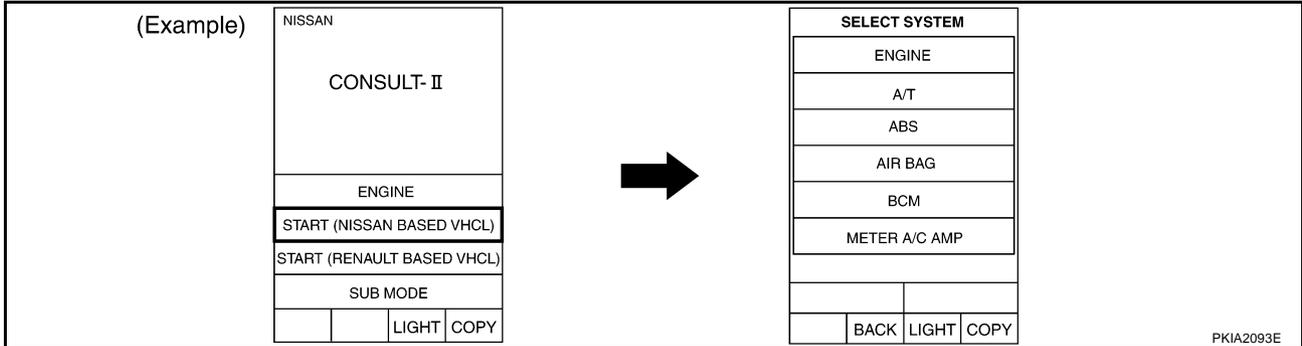
(E108) -SUPER MULTIPLE JUNCTION (SMJ)

(E51) -ELECTRICAL UNITS

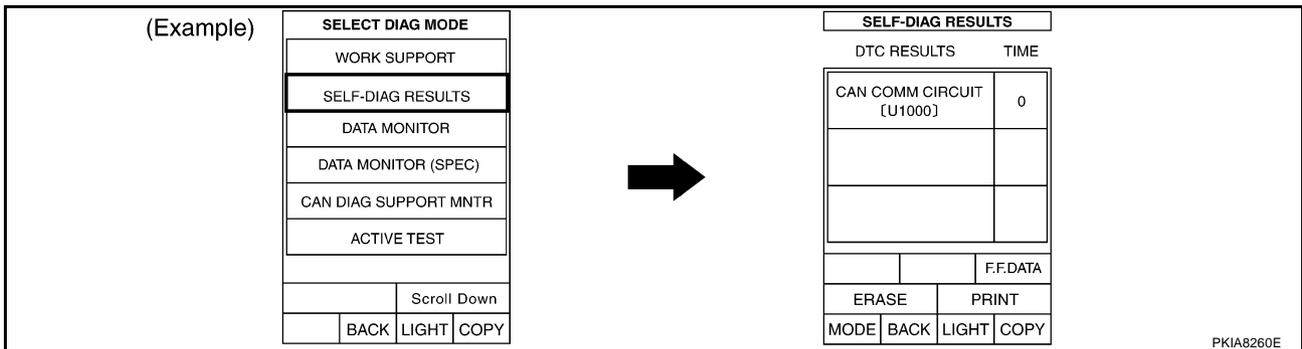
TKWT0409E

## Work Flow

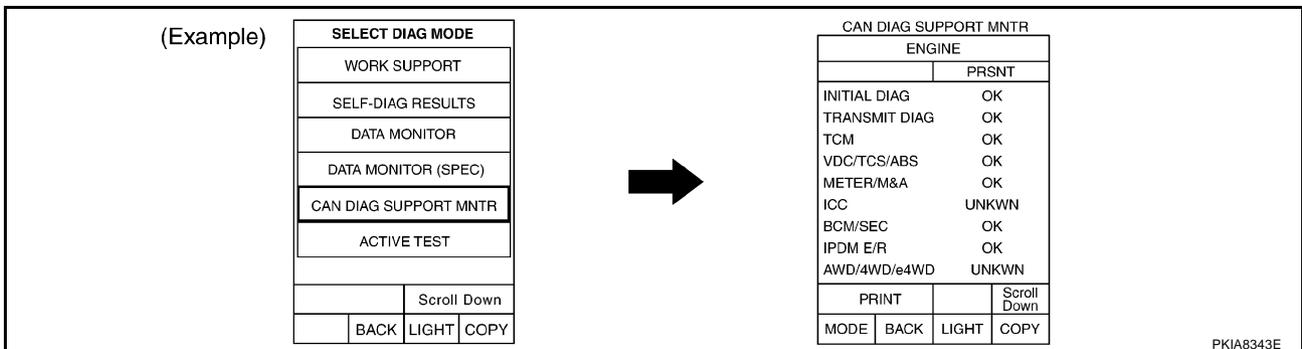
- When there are no indications of "METER A/C AMP" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



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



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



- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-39, "CHECK SHEET"](#) .
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", put marks "v" onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-39, "CHECK SHEET"](#) .

**NOTE:**

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

- According to the check sheet results (example), start inspection. Refer to [LAN-41, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

# CAN SYSTEM (TYPE 2)

[CAN]

## CHECK SHEET

**NOTE:**

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

Check sheet table

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR						
		Initial diagnosis	Transmit diagnosis	Receive diagnosis				
				ECM	METER/M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	—	UNKWN	UNKWN	—
BCM	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN
ABS	—	NG	UNKWN	UNKWN	—	—	—	—

Symptoms :

Attach copy of  
SELECT SYSTEM

Attach copy of  
SELECT SYSTEM

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# CAN SYSTEM (TYPE 2)

[CAN]

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

Attach copy of  
ENGINE  
CAN DIAG SUPPORT  
MNTR

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

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BCM  
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MNTR

Attach copy of  
ABS  
CAN DIAG SUPPORT  
MNTR

PKIA8694E

# CAN SYSTEM (TYPE 2)

[CAN]

## CHECK SHEET RESULTS (EXAMPLE)

### NOTE:

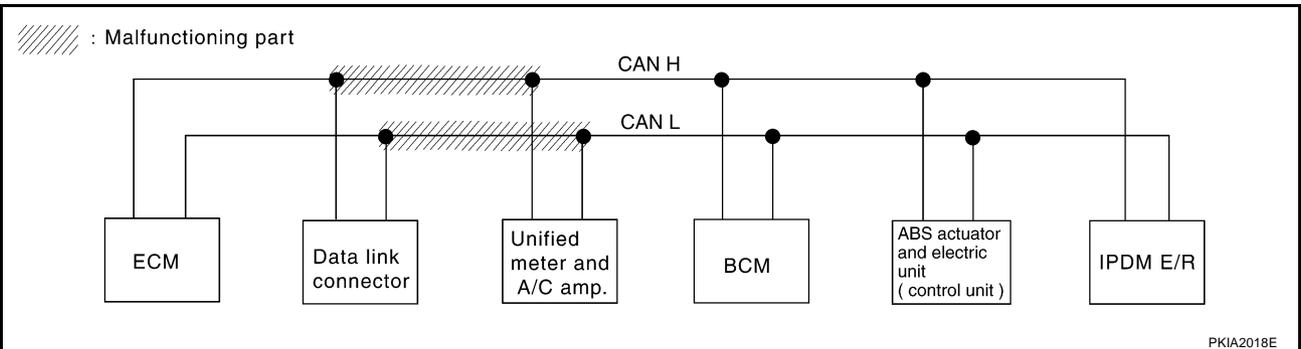
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" as "CAN DIAG SUPPORT MNTR" for the diagnosed control unit, replace the control unit.

### Case 1

Check harness between data link connector and unified meter and A/C amp. Refer to [LAN-51, "Circuit Check Between Data Link Connector and Unified Meter and A/C Amp."](#)

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR						
		Initial diagnosis	Transmit diagnosis	Receive diagnosis				
				ECM	METER/M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN ✓	UNKWN ✓	UNKWN ✓	UNKWN ✓
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	—	UNKWN	UNKWN	—
BCM	—	NG	UNKWN	UNKWN ✓	UNKWN	—	—	UNKWN
ABS	—	NG	UNKWN	UNKWN ✓	—	—	—	—

PKIA8695E



LAN

# CAN SYSTEM (TYPE 2)

[CAN]

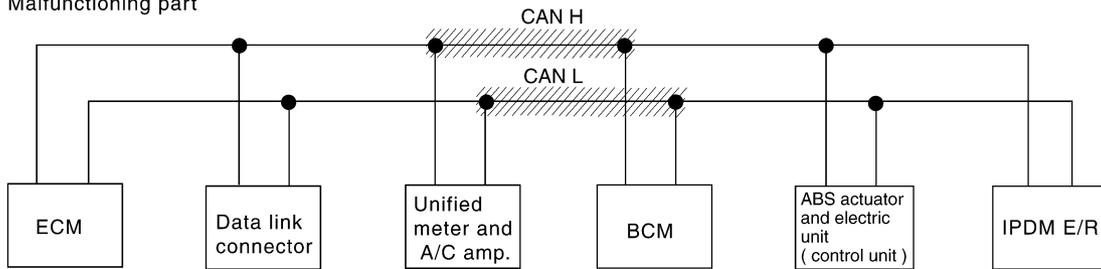
## Case 2

Check harness between unified meter and A/C amp. and BCM. Refer to [LAN-51, "Circuit Check Between Unified Meter and A/C Amp. and BCM"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR						
		Initial diagnosis	Transmit diagnosis	Receive diagnosis				
				ECM	METER/M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	—	UNKWN	UNKWN	—
BCM	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN
ABS	—	NG	UNKWN	UNKWN	—	—	—	—

PKIA8696E

//// : Malfunctioning part



PKIA2019E

# CAN SYSTEM (TYPE 2)

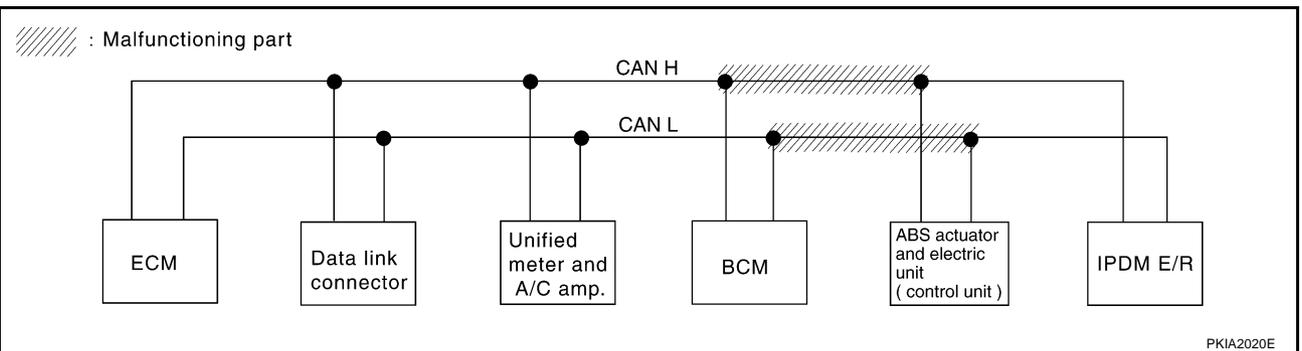
[CAN]

## Case 3

Check harness between BCM and ABS actuator and electric unit (control unit). Refer to [LAN-51, "Circuit Check Between BCM and ABS Actuator and Electric Unit \(Control Unit\)"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR						
		Initial diagnosis	Transmit diagnosis	Receive diagnosis				
				ECM	METER/M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN ✓	UNKWN ✓
METER A/C AMP	No indication	—	UNKWN	UNKWN	—	UNKWN	UNKWN ✓	—
BCM	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN ✓
ABS	—	NG	UNKWN	UNKWN ✓	—	—	—	—

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PKIA2020E

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# CAN SYSTEM (TYPE 2)

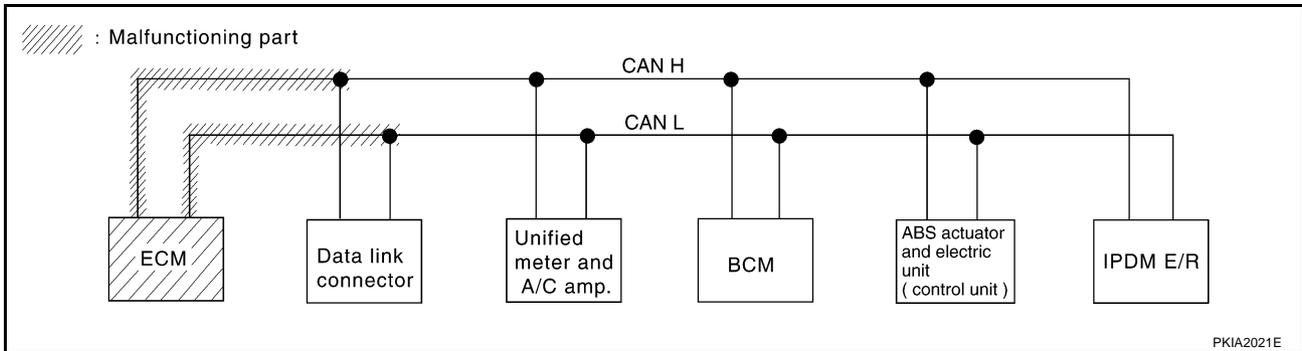
[CAN]

## Case 4

Check ECM circuit. Refer to [LAN-52, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR						
		Initial diagnosis	Transmit diagnosis	Receive diagnosis				
				ECM	METER/M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	UNKWN ✓	UNKWN ✓
METER A/C AMP	No indication	—	UNKWN	UNKWN ✓	—	UNKWN	UNKWN	—
BCM	—	NG	UNKWN	UNKWN ✓	UNKWN	—	—	UNKWN
ABS	—	NG	UNKWN	UNKWN ✓	—	—	—	—

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PKIA2021E

# CAN SYSTEM (TYPE 2)

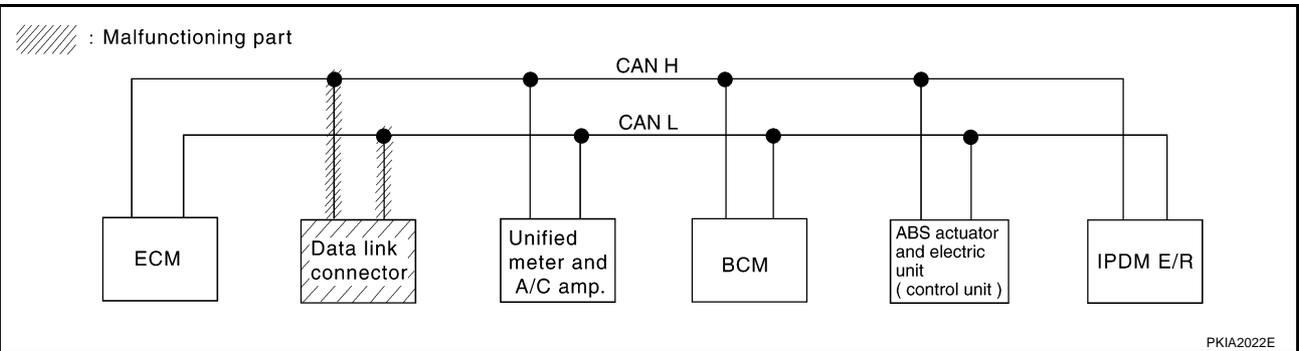
[CAN]

## Case 5

Check data link connector circuit. Refer to [LAN-53, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR						
		Initial diagnosis	Transmit diagnosis	Receive diagnosis				
				ECM	METER/M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	—	UNKWN	UNKWN	—
BCM	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN
ABS	—	NG	UNKWN	UNKWN	—	—	—	—

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# CAN SYSTEM (TYPE 2)

[CAN]

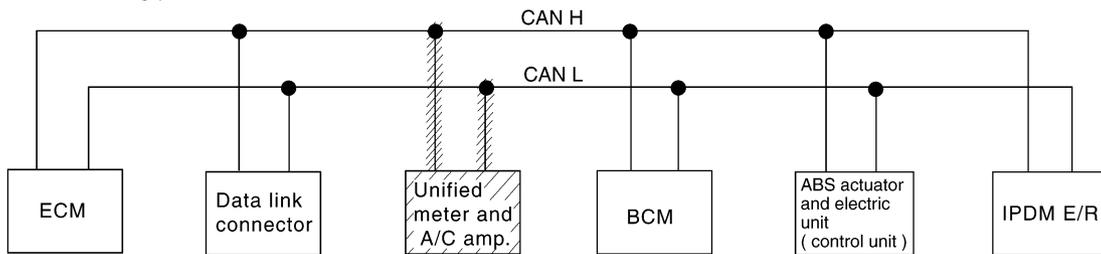
## Case 6

Check unified meter and A/C amp. circuit. Refer to [LAN-53, "Unified Meter and A/C Amp. Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR						
		Initial diagnosis	Transmit diagnosis	Receive diagnosis				
				ECM	METER/M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN ✓	UNKWN	UNKWN	UNKWN
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	—	UNKWN	UNKWN	—
BCM	—	NG	UNKWN	UNKWN	UNKWN ✓	—	—	UNKWN
ABS	—	NG	UNKWN	UNKWN	—	—	—	—

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//// : Malfunctioning part



PKIA2023E

# CAN SYSTEM (TYPE 2)

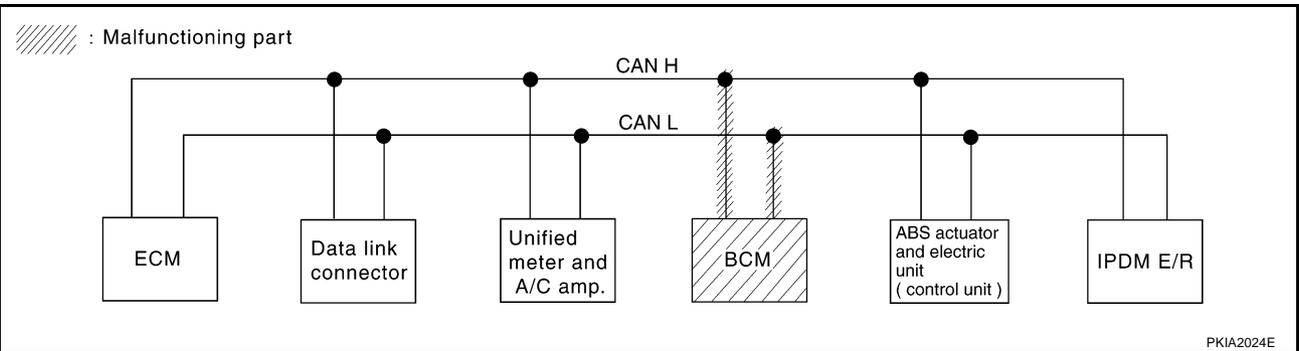
[CAN]

## Case 7

Check BCM circuit. Refer to [LAN-54, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR						
		Initial diagnosis	Transmit diagnosis	Receive diagnosis				
				ECM	METER/M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	—	UNKWN	UNKWN	—
BCM	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN
ABS	—	NG	UNKWN	UNKWN	—	—	—	—

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# CAN SYSTEM (TYPE 2)

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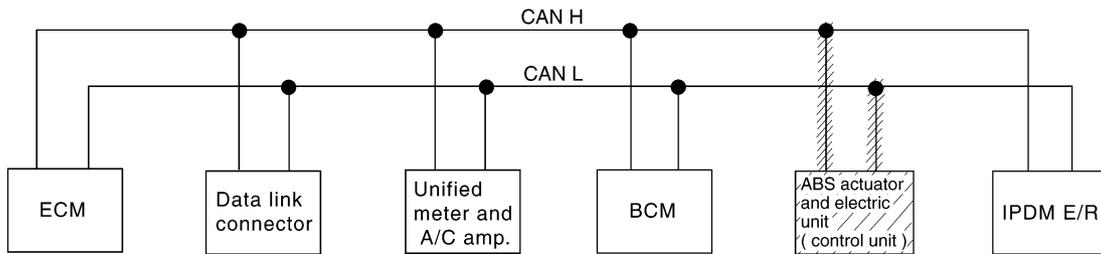
## Case 8

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-54, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR						
		Initial diagnosis	Transmit diagnosis	Receive diagnosis				
				ECM	METER/M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	—	UNKWN	UNKWN	—
BCM	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN
ABS	—	NG	UNKWN	UNKWN	—	—	—	—

PKIA8702E

//// : Malfunctioning part



PKIA2025E

# CAN SYSTEM (TYPE 2)

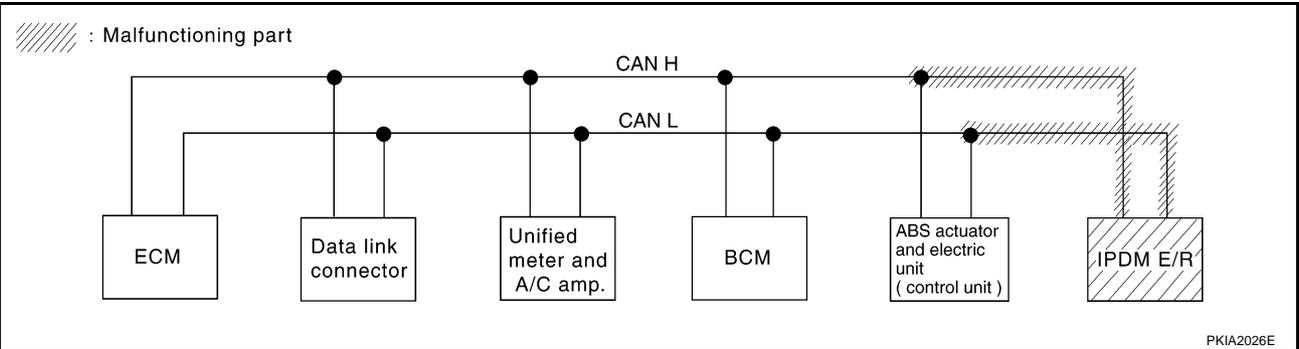
[CAN]

## Case 9

Check IPDM E/R circuit. Refer to [LAN-55. "IPDM E/R Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR						
		Initial diagnosis	Transmit diagnosis	Receive diagnosis				
				ECM	METER/M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN ✓
METER A/C AMP	No indication	—	UNKWN	UNKWN	—	UNKWN	UNKWN	—
BCM	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN ✓
ABS	—	NG	UNKWN	UNKWN	—	—	—	—

PKIA8703E



## Case 10

Check CAN communication circuit. Refer to [LAN-56. "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR						
		Initial diagnosis	Transmit diagnosis	Receive diagnosis				
				ECM	METER/M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	UNKWN ✓	UNKWN ✓
METER A/C AMP	No indication ✓	—	UNKWN	UNKWN	—	UNKWN	UNKWN	—
BCM	—	NG	UNKWN ✓	UNKWN ✓	UNKWN ✓	—	—	UNKWN ✓
ABS	—	NG	UNKWN ✓	UNKWN ✓	—	—	—	—

PKIA8704E

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# CAN SYSTEM (TYPE 2)

[CAN]

## Case 11

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-58, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR						
		Initial diagnosis	Transmit diagnosis	Receive diagnosis				
				ECM	METER/M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN ✓	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	—	UNKWN	UNKWN ✓	—
BCM	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN
ABS	—	NG	UNKWN	UNKWN	—	—	—	—

PKIA8706E

## Case 12

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-58, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR						
		Initial diagnosis	Transmit diagnosis	Receive diagnosis				
				ECM	METER/M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN
METER A/C AMP	No indication	—	UNKWN	UNKWN	—	UNKWN	UNKWN	—
BCM	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN
ABS	—	NG	UNKWN	UNKWN ✓	—	—	—	—

PKIA8705E

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

AKS00933

**1. CHECK HARNESS FOR OPEN CIRCUIT**

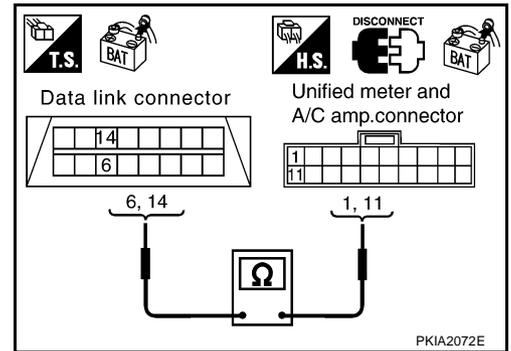
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect ECM connector and unified meter and A/C amp. connector.
4. Check continuity between data link connector M8 terminals 6 (L), 14 (R) and unified meter and A/C amp. harness connector M48 terminals 1 (L), 11 (R).

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

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

**OK or NG**

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-38, "Work Flow"](#).
- NG >> Repair harness.

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

AKS00934

**1. CHECK HARNESS FOR OPEN CIRCUIT**

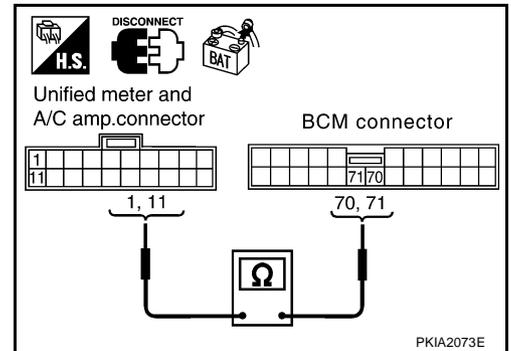
1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect the following connectors.
  - ECM connector
  - Unified meter and A/C amp. connector
  - BCM connector
4. Check continuity between unified meter and A/C amp. harness connector M48 terminals 1 (L), 11 (R) and BCM harness 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 >> Connect all the connectors and diagnose again. Refer to [LAN-38, "Work Flow"](#).
- NG >> Repair harness.

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

AKS00935

**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.

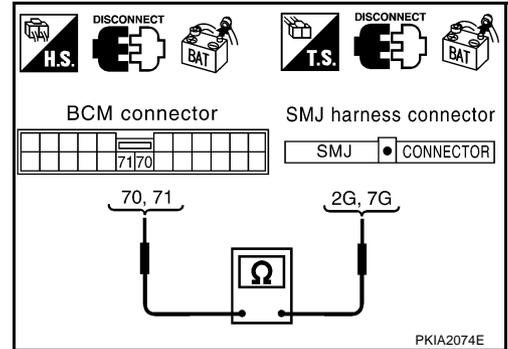
## 2. CHECK HARNESS FOR OPEN CIRCUIT

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.



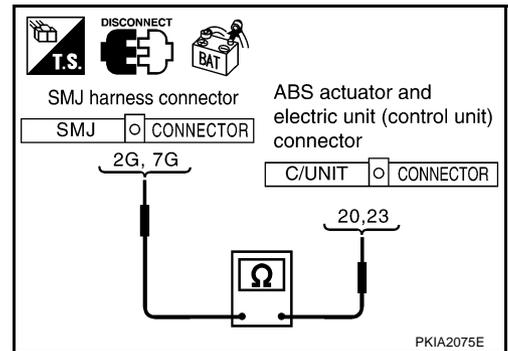
## 3. CHECK HARNESS FOR OPEN CIRCUIT

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 >> Connect all the connectors and diagnose again. Refer to [LAN-38, "Work Flow"](#) .  
 NG >> Repair harness.



## ECM 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 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

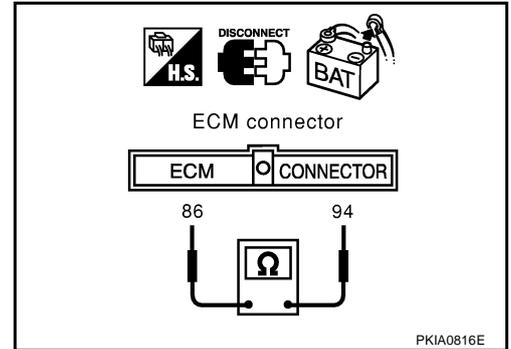
1. Disconnect ECM connector.
2. Check resistance between ECM harness connector F101 terminals 94 (L) and 86 (R).

**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

### 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

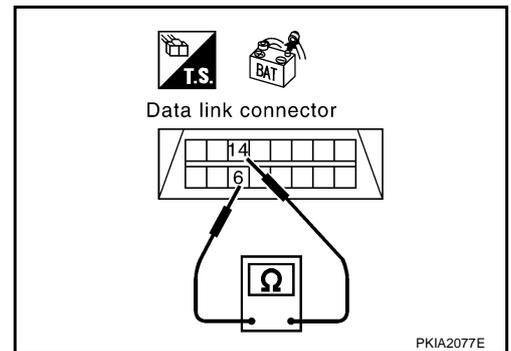
Check resistance between data link connector M8 terminals 6 (L) and 14 (R).

**6 (L) – 14 (R)**

**: Approx. 54 – 66Ω**

### OK or NG

- OK >> Diagnose again. Refer to [LAN-38, "Work Flow"](#) .  
 NG >> Repair harness between data link connector and unified meter and A/C amp.



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

### 1. CHECK CONNECTOR

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

### OK or NG

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

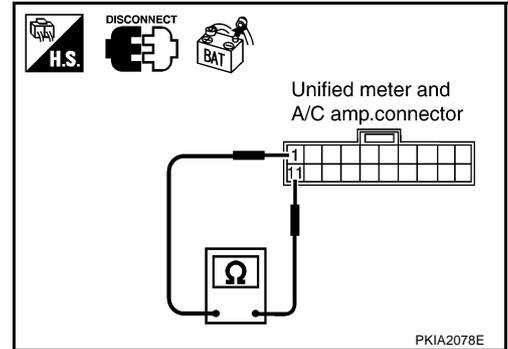
## 2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect unified meter and A/C amp. connector.
2. Check resistance between unified meter and A/C amp. harness connector 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.



AKS00939

## BCM Circuit Check

### 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.

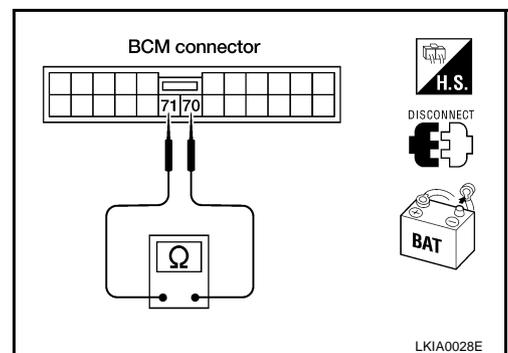
## 2. CHECK HARNESS FOR OPEN CIRCUIT

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.



AKS0093A

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

### 1. CHECK CONNECTOR

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

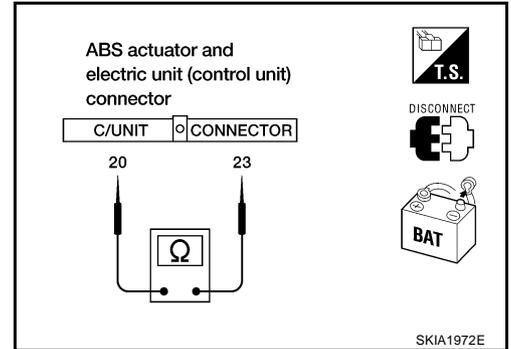
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E51 terminals 20 (L) and 23 (R).

**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.



AKS0093B

## IPDM E/R Circuit Check

### 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

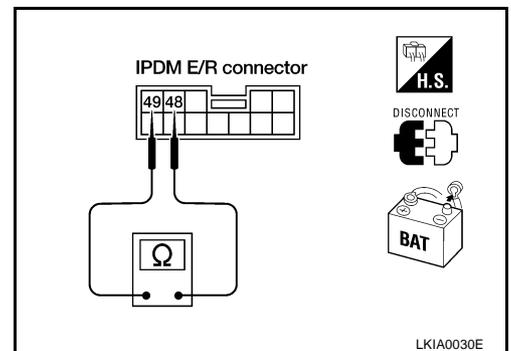
1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (R).

**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).



LKIA0030E

## 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.

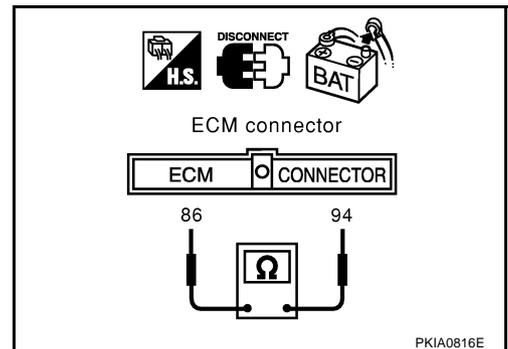
### 2. CHECK HARNESS FOR SHORT CIRCUIT

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

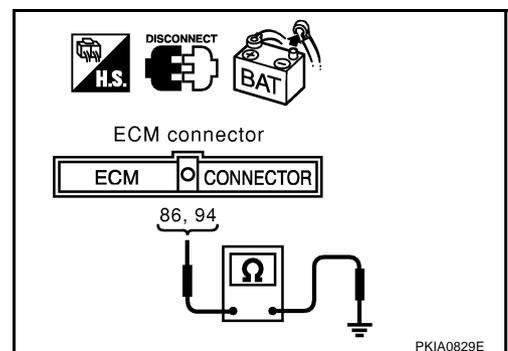
Check continuity between ECM harness connector F101 terminals 94 (L), 86 (R) and ground.

**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

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

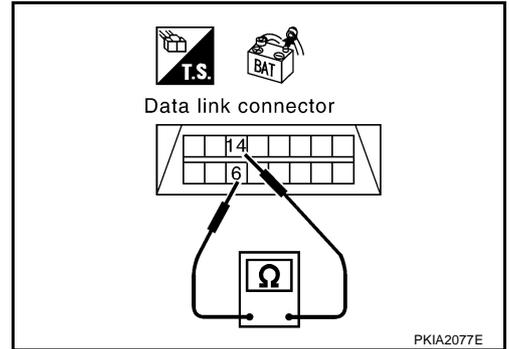
**6 (L) – 14 (R) : Continuity should not exist.**

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 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.**

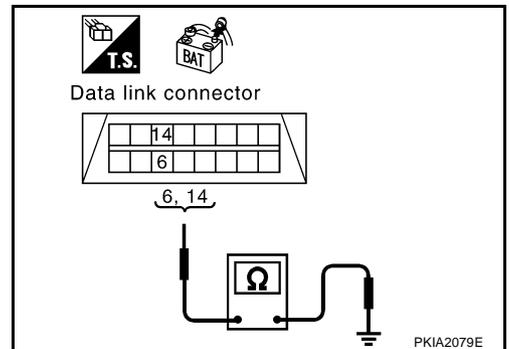
**14 (R) – ground : Continuity should not exist.**

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).

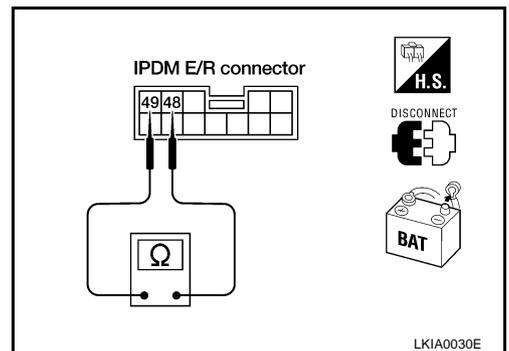
**48 (L) – 49 (R) : Continuity should not exist.**

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.

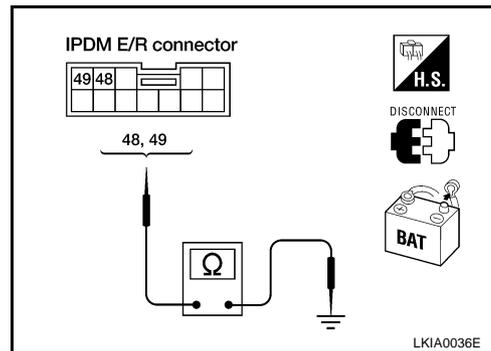
- 48 (L) – ground : Continuity should not exist.**
- 49 (R) – ground : Continuity should not exist.**

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-58, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-38, "Work Flow"](#).

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

### IPDM E/R Check

AKS0093D

#### 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

AKS0093E

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

- IPDM E/R power supply circuit. Refer to [PG-24, "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

AKS0093F

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

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

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

