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LAN SYSTEM

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PRECAUTION

PRECAUTIONS

Precautions for Trouble Diagnosis

INFOID:000000001342245

CAUTION:

- Never apply 7.0 V or more to the measurement terminal.
- Use a tester with open terminal voltage of 7.0 V or less.
- Turn the ignition switch OFF and disconnect the battery cable from the negative terminal when checking the harness.

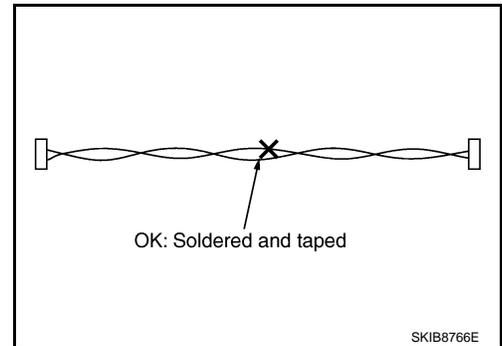
Precautions for Harness Repair

INFOID:000000001342246

- Solder the repaired area and wrap tape around the soldered area.

NOTE:

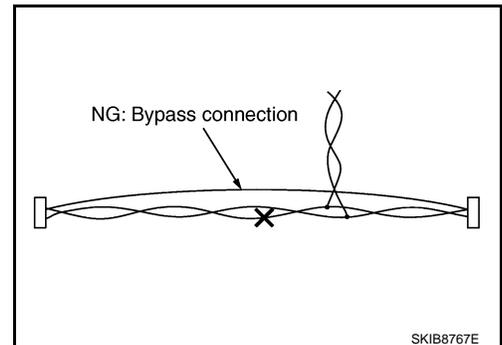
A fray of twisted lines must be within 110 mm (4.33 in).



- Bypass connection is never allowed at the repaired area.

NOTE:

Bypass connection may cause CAN communication error. The spliced wire becomes separated and the characteristics of twisted line are lost.



- Replace the applicable harness as an assembly if error is detected on the shield lines of CAN communication line.

FUNCTION DIAGNOSIS

CAN COMMUNICATION SYSTEM

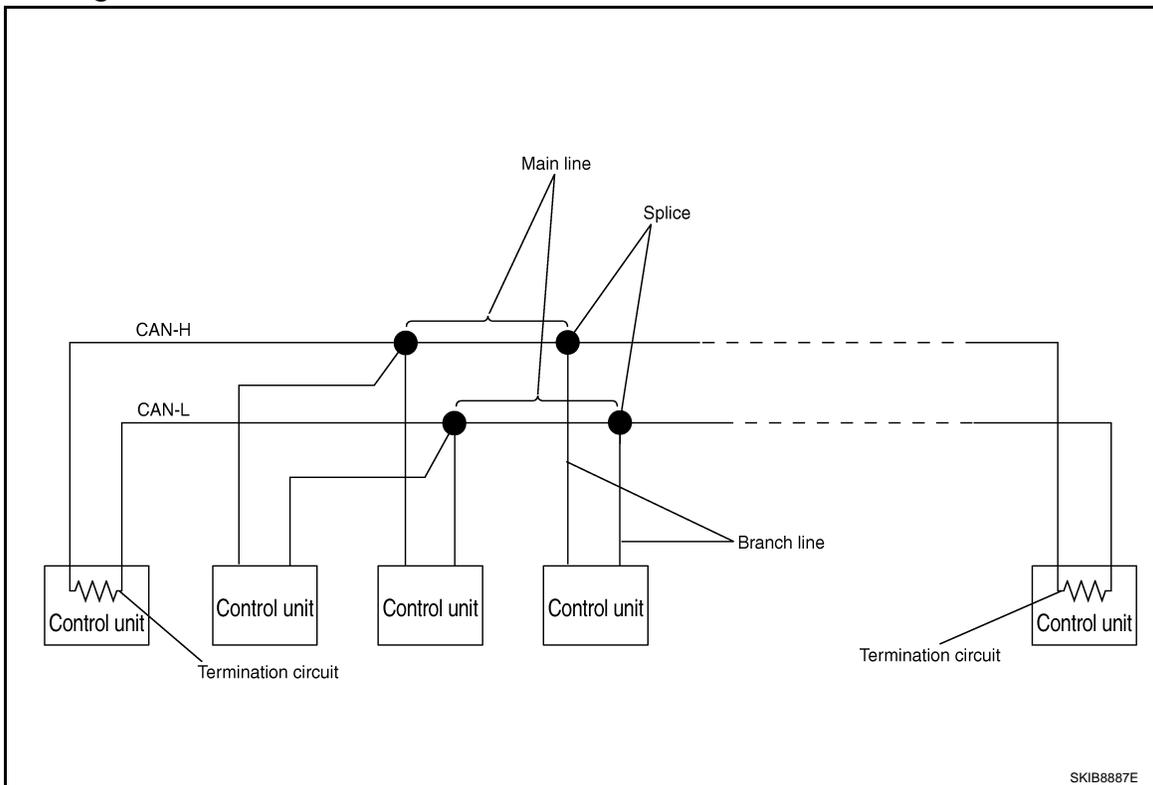
System Description

INFOID:000000001342247

- CAN communication is a multiplex communication system. This enables the system to transmit and receive large quantities of data at high speed by connecting control units with two communication lines (CAN-H and CAN-L).
- Control units on the CAN network transmit signals using the CAN communication control circuit. They receive only necessary signals from other control units to operate various functions.
- CAN communication lines adopt twisted-pair line style (two lines twisted) for noise immunity.

System Diagram

INFOID:000000001342248



Each control unit passes an electric current to the termination circuits when transmitting CAN communication signal. The termination circuits produce an electrical potential difference between CAN-H and CAN-L. CAN communication system transmits and receives CAN communication signals by the potential difference.

Component	Description
Main line	CAN communication line between splices
Branch line	CAN communication line between splice and a control unit
Splice	A point connecting a branch line with a main line
Termination circuit	Refer to LAN-8. "CAN Communication Control Circuit" .

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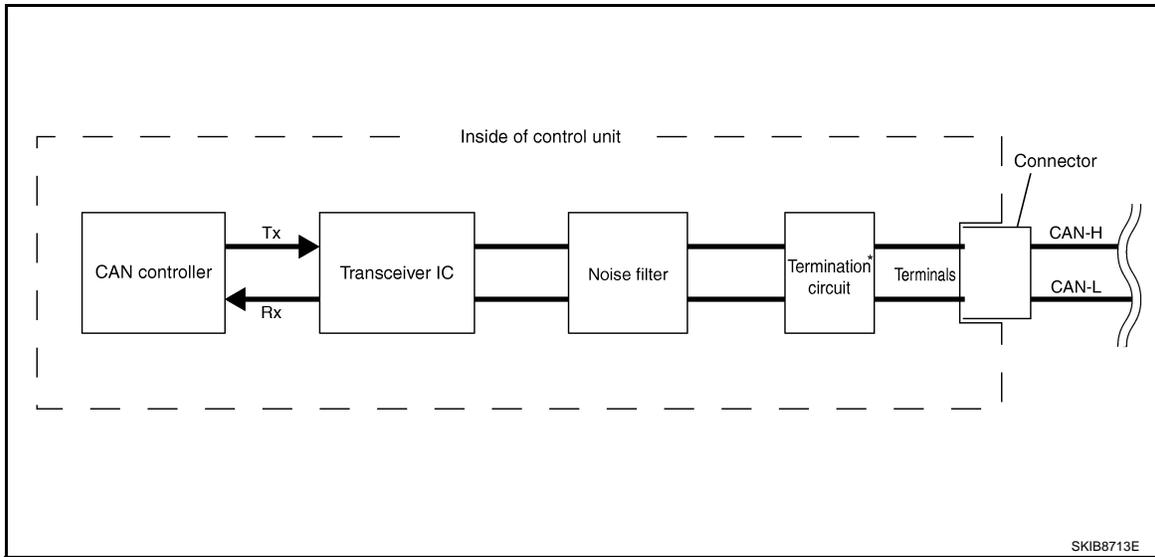
CAN COMMUNICATION SYSTEM

< FUNCTION DIAGNOSIS >

[CAN FUNDAMENTAL]

CAN Communication Control Circuit

INFOID:000000001342249



Component	System description
CAN controller	It controls CAN communication signal transmission and reception, error detection, etc.
Transceiver IC	It converts digital signal into CAN communication signal, and CAN communication signal into digital signal.
Noise filter	It eliminates noise of CAN communication signal.
Termination circuit* (Resistance of approx. 120 Ω)	It produces potential difference.

*: These are the only control units wired with both ends of CAN communication system.

DIAG ON CAN

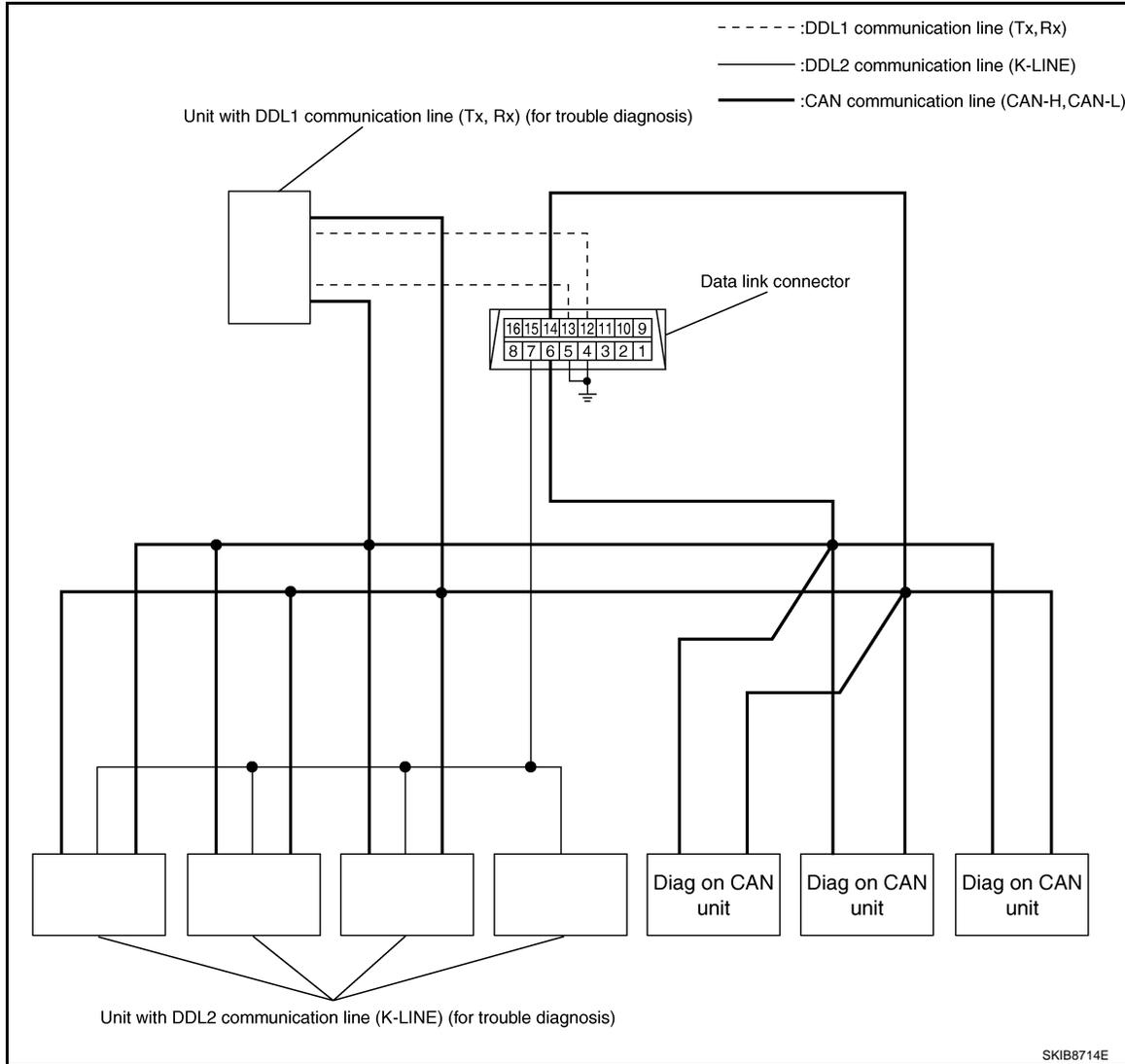
Description

INFOID:000000001342250

“Diag on CAN” is a diagnosis using CAN communication instead of previous DDL1 and DDL2 communication lines, between control units and diagnosis unit.

System Diagram

INFOID:000000001342251



Name	Harness	Description
DDL1	Tx Rx	It is used for trouble diagnosis. (CAN-H and CAN-L are used for controlling)
DDL2	K-LINE	It is used for trouble diagnosis. (CAN-H and CAN-L are used for controlling)
Diag on CAN	CAN-H CAN-L	It is used for trouble diagnosis and control.

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TROUBLE DIAGNOSIS

Condition of Error Detection

INFOID:000000001342252

“U1000” or “U1001” is indicated on SELF-DIAG RESULTS on CONSULT-III if CAN communication signal is not transmitted or received between units for 2 seconds or more.

CAN COMMUNICATION SYSTEM ERROR

- CAN communication line open (CAN-H, CAN-L, or both)
- CAN communication line short (ground, between CAN communication lines, other harnesses)
- Error of CAN communication control circuit of the unit connected to CAN communication line

WHEN “U1000” OR “U1001” IS INDICATED EVEN THOUGH CAN COMMUNICATION SYSTEM IS NORMAL

- Removal/installation of parts: Error may be detected when removing and installing CAN communication unit and related parts while turning the ignition switch ON. (A DTC except for CAN communication may be detected.)
- Fuse blown out (removed): CAN communication of the unit may cease.
- Voltage drop: Error may be detected if voltage drops due to discharged battery when turning the ignition switch ON (Depending on the control unit which carries out CAN communication).
- Error may be detected if the power supply circuit of the control unit, which carries out CAN communication, malfunctions (Depending on the control unit which carries out CAN communication).
- Error may be detected if reprogramming is not completed normally.

NOTE:

CAN communication system is normal if “U1000” or “U1001” is indicated on SELF-DIAG RESULTS of CONSULT-III under the above conditions. Erase the memory of the self-diagnosis of each unit.

Symptom When Error Occurs in CAN Communication System

INFOID:000000001342253

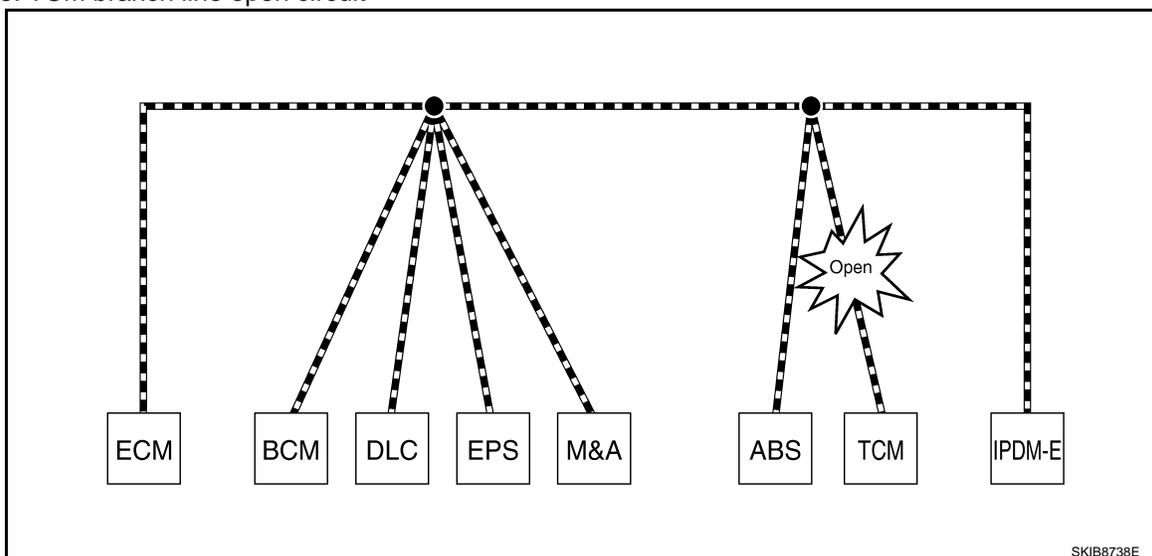
In CAN communication system, multiple units mutually transmit and receive signals. Each unit cannot transmit and receive signals if any error occurs on CAN communication line. Under this condition, multiple control units related to the root cause malfunction or go into fail-safe mode.

ERROR EXAMPLE

NOTE:

- Each vehicle differs in symptom of each unit under fail-safe mode and CAN communication line wiring.
- Refer to [LAN-21. "Abbreviation List"](#) for the unit abbreviation.

Example: TCM branch line open circuit



Unit name	Symptom
ECM	Engine torque limiting is affected, and shift harshness increases.
BCM	Reverse warning chime does not sound.

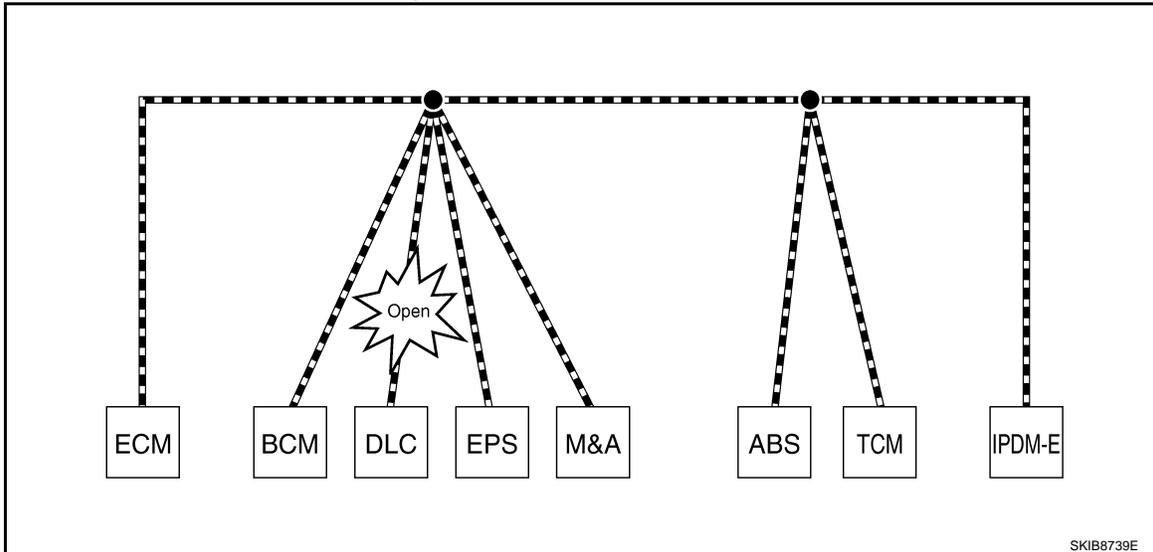
TROUBLE DIAGNOSIS

< FUNCTION DIAGNOSIS >

[CAN FUNDAMENTAL]

Unit name	Symptom
EPS control unit	Normal operation.
Combination meter	<ul style="list-style-type: none"> Shift position indicator and OD OFF indicator turn OFF. Warning lamps turn ON.
ABS actuator and electric unit (control unit)	Normal operation.
TCM	No impact on operation.
IPDM E/R	Normal operation.

Example: Data link connector branch line open circuit



Unit name	Symptom
ECM	Normal operation.
BCM	
EPS control unit	
Combination meter	
ABS actuator and electric unit (control unit)	
TCM	
IPDM E/R	

NOTE:

- When data link connector branch line is open, transmission and reception of CAN communication signals are not affected. Therefore, no symptoms occur. However, be sure to repair malfunctioning circuit.
- The model (all units on CAN communication system are Diag on CAN) cannot perform CAN diagnosis with CONSULT-III if the following error occurs. The error is judged by the symptom.

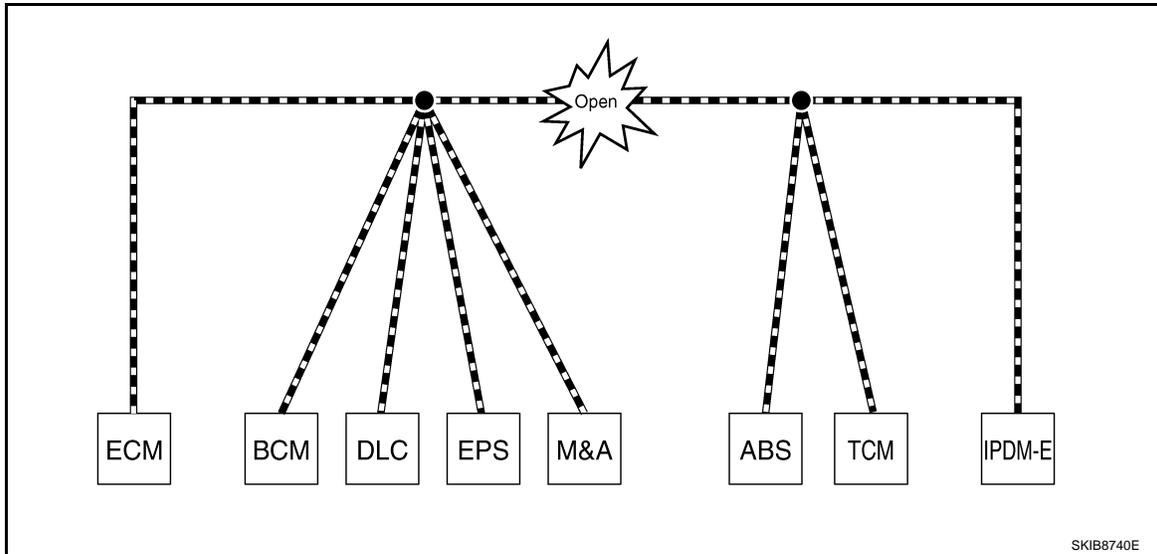
Error	Difference of symptom
Data link connector branch line open circuit	Normal operation.
CAN-H, CAN-L harness short-circuit	Most of the units which are connected to the CAN communication system enter fail-safe mode or are deactivated.

TROUBLE DIAGNOSIS

< FUNCTION DIAGNOSIS >

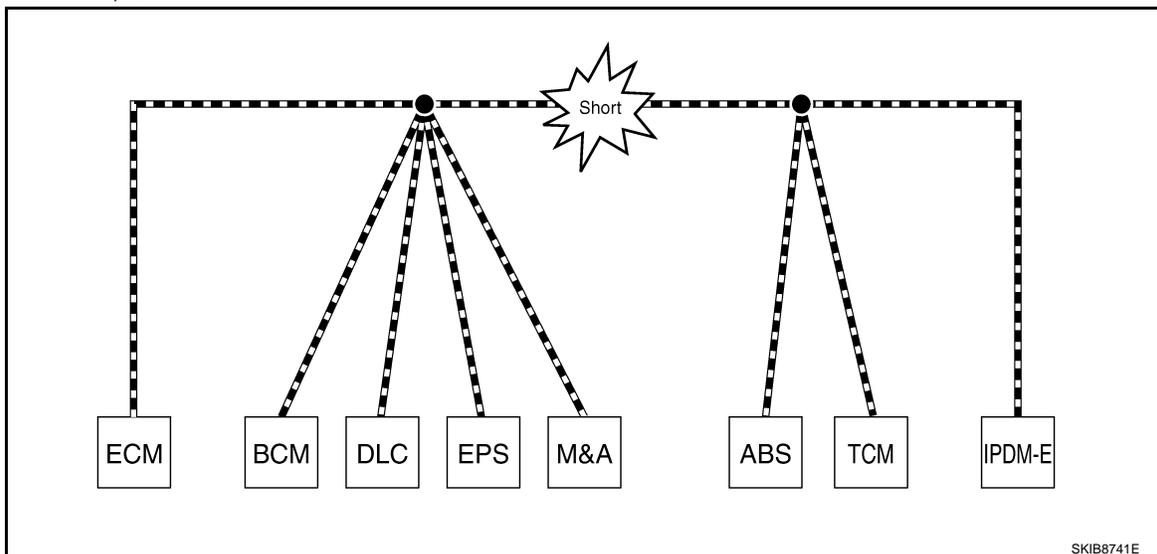
[CAN FUNDAMENTAL]

Example: Main Line Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit) Open Circuit



Unit name	Symptom
ECM	Engine torque limiting is affected, and shift harshness increases.
BCM	<ul style="list-style-type: none"> • Reverse warning chime does not sound. • The front wiper moves under continuous operation mode even though the front wiper switch being in the intermittent position.
EPS control unit	The steering effort increases.
Combination meter	<ul style="list-style-type: none"> • The shift position indicator and OD OFF indicator turn OFF. • The speedometer is inoperative. • The odo/trip meter stops.
ABS actuator and electric unit (control unit)	Normal operation.
TCM	No impact on operation.
IPDM E/R	When the ignition switch is ON, <ul style="list-style-type: none"> • The headlamps (Lo) turn ON. • The cooling fan continues to rotate.

Example: CAN-H, CAN-L Harness Short Circuit



TROUBLE DIAGNOSIS

< FUNCTION DIAGNOSIS >

[CAN FUNDAMENTAL]

Unit name	Symptom
ECM	<ul style="list-style-type: none"> Engine torque limiting is affected, and shift harshness increases. Engine speed drops.
BCM	<ul style="list-style-type: none"> Reverse warning chime does not sound. The front wiper moves under continuous operation mode even though the front wiper switch being in the intermittent position. The room lamp does not turn ON. The engine does not start (if an error or malfunction occurs while turning the ignition switch OFF.) The steering lock does not release (if an error or malfunction occurs while turning the ignition switch OFF.)
EPS control unit	The steering effort increases.
Combination meter	<ul style="list-style-type: none"> The tachometer and the speedometer do not move. Warning lamps turn ON. Indicator lamps do not turn ON.
ABS actuator and electric unit (control unit)	Normal operation.
TCM	No impact on operation.
IPDM E/R	When the ignition switch is ON, <ul style="list-style-type: none"> The headlamps (Lo) turn ON. The cooling fan continues to rotate.

CAN Diagnosis with CONSULT-III

INFOID:000000001342254

CAN diagnosis on CONSULT-III extracts the root cause by receiving the following information.

- Response to the system call
- Control unit diagnosis information
- Self-diagnosis
- CAN diagnostic support monitor

Self-Diagnosis

INFOID:000000001342255

DTC	Self-diagnosis item (CONSULT-III indication)	DTC detection condition	Inspection/Action
U1000	CAN COMM CIRCUIT	When ECM is not transmitting or receiving CAN communication signal of OBD (emission-related diagnosis) for 2 seconds or more.	Start the inspection. Refer to the applicable section of the indicated control unit.
		When a control unit (except for ECM) is not transmitting or receiving CAN communication signal for 2 seconds or more.	
U1001	CAN COMM CIRCUIT	When ECM is not transmitting or receiving CAN communication signal other than OBD (emission-related diagnosis) for 2 seconds or more.	
U1002	SYSTEM COMM	When a control unit is not transmitting or receiving CAN communication signal for 2 seconds or less.	
U1010	CONTROL UNIT [CAN]	When an error is detected during the initial diagnosis for CAN controller of each control unit.	

CAN Diagnostic Support Monitor

INFOID:000000001342256

MONITOR ITEM (CONSULT-III)

TROUBLE DIAGNOSIS

< FUNCTION DIAGNOSIS >

[CAN FUNDAMENTAL]

Example: CAN DIAG SUPPORT MNTR indication

Without PAST			With PAST		
ECM			ECM		
	PRSENT	PAST		PRSENT	PAST
INITIAL DIAG	OK		TRANSMIT DIAG	OK	OK
TRANSMIT DIAG	OK		VDC/TCS/ABS	-	-
TCM	OK		METER/M&A	OK	OK
VDC/TCS/ABS	UNKWN		BCM/SEC	OK	OK
METER/M&A	OK		ICC	-	-
ICC	UNKWN		HVAC	-	-
BCM/SEC	OK		TCM	OK	OK
IPDM E/R	OK		EPS	-	-
			IPDM E/R	OK	OK
			e4WD	-	-
			AWD/4WD	OK	OK

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Without PAST

Item	PRSENT	Description
Initial diagnosis	OK	Normal at present
	NG	Control unit error (Except for some control units)
Transmission diagnosis	OK	Normal at present
	UNKWN	Unable to transmit signals for 2 seconds or more. Diagnosis not performed
Control unit name (Reception diagnosis)	OK	Normal at present
	UNKWN	Unable to receive signals for 2 seconds or more. Diagnosis not performed
	UNKWN	No control unit for receiving signals. (No applicable optional parts)

With PAST

Item	PRSENT	PAST	Description
Transmission diagnosis	OK	OK	Normal at present and in the past
		1 – 39	Normal at present, but unable to transmit signals for 2 seconds or more in the past. (The number indicates the number of ignition switch cycles from OFF to ON.)
	UNKWN	0	Unable to transmit signals for 2 seconds or more at present.
Control unit name (Reception diagnosis)	OK	OK	Normal at present and in the past
		1 – 39	Normal at present, but unable to receive signals for 2 seconds or more in the past. (The number indicates the number of ignition switch cycles from OFF to ON.)
	UNKWN	0	Unable to receive signals for 2 seconds or more at present.
	-	-	Diagnosis not performed. No control unit for receiving signals. (No applicable optional parts)

MONITOR ITEM (ON-BOARD DIAGNOSIS)

NOTE:

For some models, CAN communication diagnosis result is received from the vehicle monitor.

TROUBLE DIAGNOSIS

< FUNCTION DIAGNOSIS >

[CAN FUNDAMENTAL]

Example: Vehicle Display

Item	Result indicated	Error counter	Description
CAN_COMM (Initial diagnosis)	OK	0	Normal at present
	NG	1 – 50	Control unit error (The number indicates how many times diagnosis has been run.)
CAN_CIRC_1 (Transmission diagnosis)	OK	0	Normal at present
	UNKWN	1 – 50	Unable to transmit for 2 seconds or more at present. (The number indicates how many times diagnosis has been run.)
CAN_CIRC_2 – 9 (Reception diagnosis of each unit)	OK	0	Normal at present
	UNKWN	1 – 50	Unable to transmit for 2 seconds or more at present. (The number indicates how many times diagnosis has been run.)
			Diagnosis not performed.
			No control unit for receiving signals. (No applicable optional parts)

How to Use CAN Communication Signal Chart

INFOID:000000001342257

The CAN communication signal chart lists the signals needed for trouble diagnosis. It is useful for detecting the root cause by finding a signal related to the symptom, and by checking transmission and reception unit.

Example: Tachometer does not move even though the engine rotates.

T: Transmit R: Receive

Signal name/Connecting unit	ECM	BCM	M&A	STRG	ABS	IPDM-E
A/C compressor feedback signal	T		R			
A/C compressor request signal	T					R
Accelerator pedal position signal	T				R	
Cooling fan motor operation signal	T					R
Engine coolant temperature signal	T		R			
Engine speed signal	T		R		R	
Fuel consumption monitor signal	T		R			
Malfunction indicator lamp signal	T		R			
A/C switch signal	R	T				
Ignition switch signal		T				R
Sleep/wake up signal		T	R			R

No communication between ECM and M&A.

It indicates that an error occurs between ECM and M&A (Shaded area).

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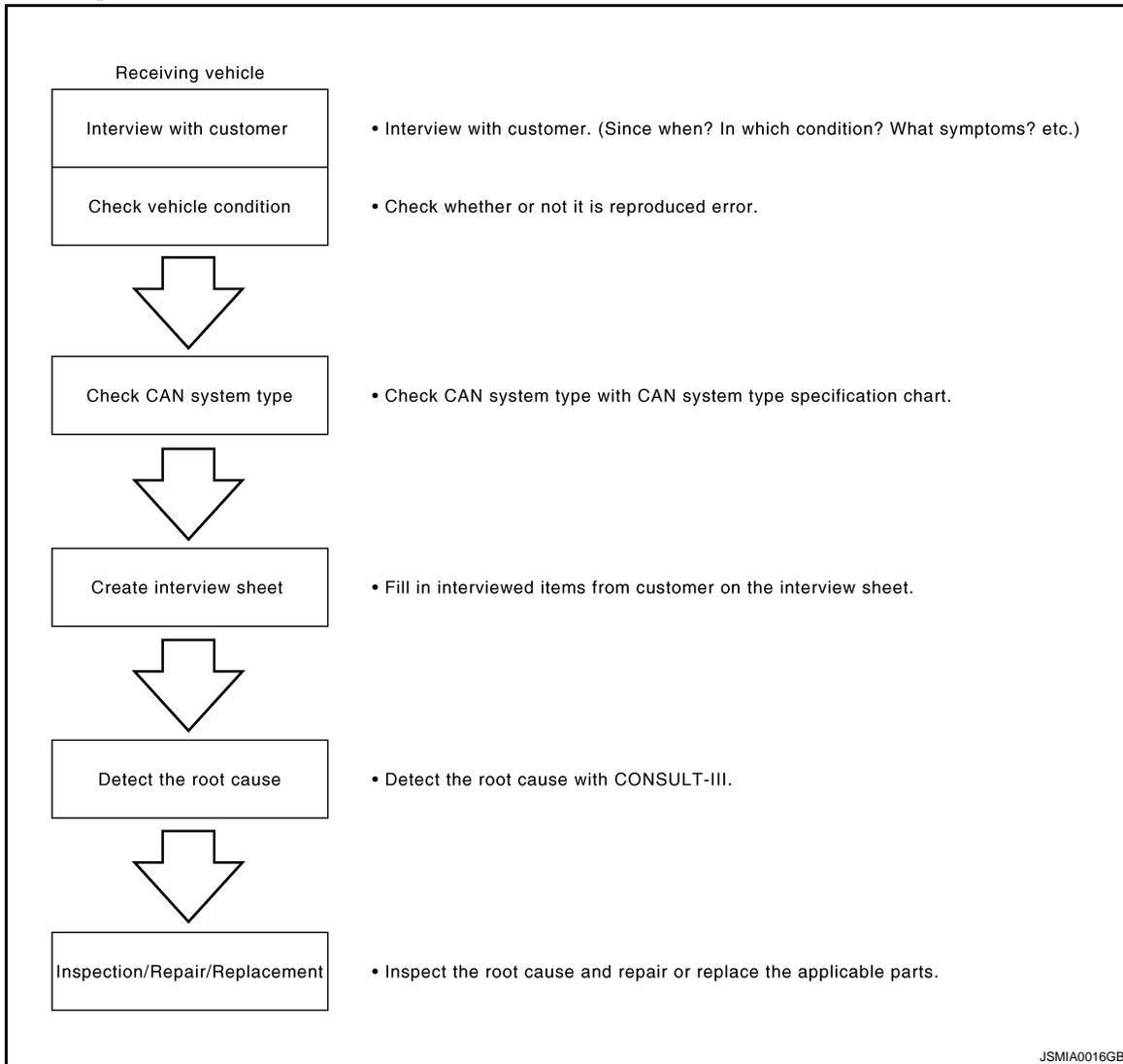
LAN

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Trouble Diagnosis Flow Chart

INFOID:000000001342258



Trouble Diagnosis Procedure

INFOID:000000001342259

INTERVIEW WITH CUSTOMER

Interview with the customer is important to detect the root cause of CAN communication system errors and to understand vehicle condition and symptoms for proper trouble diagnosis.

Points in interview

- What: Parts name, system name
- When: Date, Frequency
- Where: Road condition, Place
- In what condition: Driving condition/environment
- Result: Symptom

NOTE:

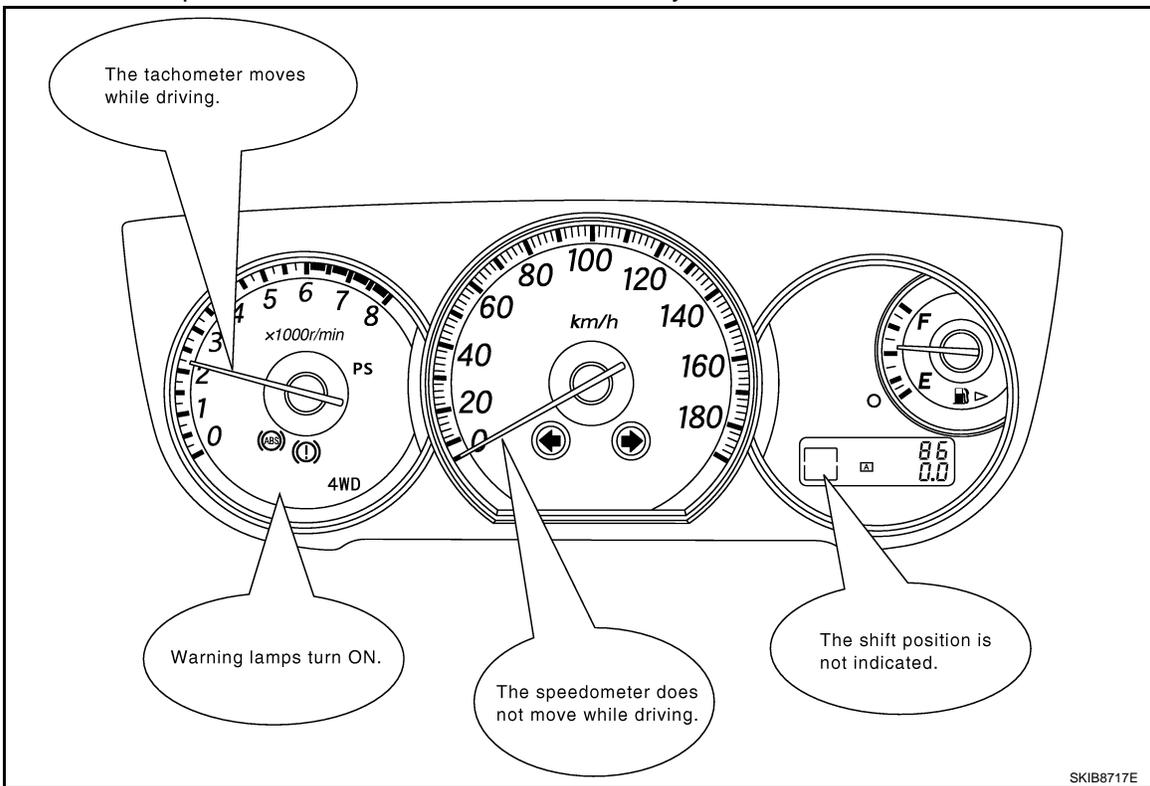
- Check normal units as well as error symptoms.
- Example: Circuit between ECM and the combination meter is judged normal if the customer indicates tachometer functions normally.
- When a CAN communication system error is present, multiple control units may malfunction or go into fail-safe mode.

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[CAN FUNDAMENTAL]

- Indication of the combination meter is important to detect the root cause because it is the most obvious to the customer, and it performs CAN communication with many units.



INSPECTION OF VEHICLE CONDITION

Check whether the symptom is reproduced or not.

NOTE:

Do not turn the ignition switch OFF or disconnect the battery cable while the reproducing the error. The error may temporarily correct itself, making it difficult to determine the root cause.

CHECK OF CAN SYSTEM TYPE (HOW TO USE CAN SYSTEM TYPE SPECIFICATION CHART)

Determine CAN system type based on vehicle equipment.

NOTE:

- This chart is used if CONSULT-III does not automatically recognize CAN system type.
- There are two styles for CAN system type specification charts. Depending on the number of available system types, either style A or style B may be used.

CAN System Type Specification Chart (Style A)

NOTE:

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[CAN FUNDAMENTAL]

CAN system type is easily checked with the vehicle equipment identification information shown in the chart.

Example:
Vehicle is equipped as follows: Wagon, AWD, VQ35DE, CVT, VDC, and Intelligent Key system. (○ shows an example of CAN system type.)

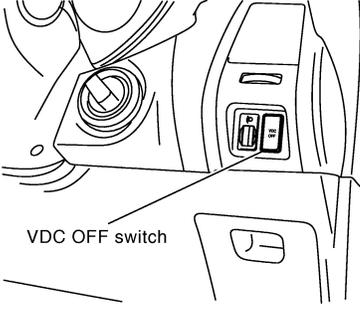
CAN System Specification Chart
Determine CAN system type from the following specification chart.

Body type	Wagon					
Axle	2WD			AWD		
Engine	QR25DE		VQ35DE			
Transmission	A/T		CVT			
Brake control	ABS			VDC		
Intelligent Key system		X		X		X
CAN system type	1	2	3	4	5	6
CAN communication signal chart	XX-XX. "TYPE 1/TYPE 2"		XX-XX. "TYPE 3/TYPE 4"		XX-XX. "TYPE 5/TYPE 6"	

X : Applicable

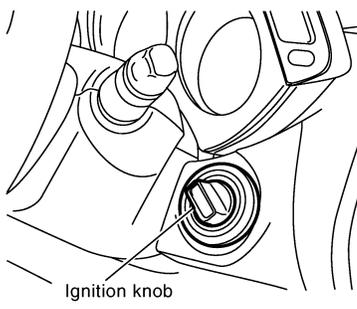
VEHICLE EQUIPMENT IDENTIFICATION INFORMATION
NOTE:
Check CAN system type from the vehicle shape and equipment.

With VDC



VDC OFF switch

With Intelligent Key system



Ignition knob

In the above example,
• Checking VDC OFF switch leads to judge whether or not VDC is equipped.
• Checking the ignition knob leads to judge whether or not Intelligent Key system is equipped.

[For the above case, CAN system type is "6".]

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CAN System Type Specification Chart (Style B)

NOTE:

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[CAN FUNDAMENTAL]

Interview Sheet (Example)

CAN Communication System Diagnosis Interview Sheet	
Date received:	3, Feb. 2006
Type: DBA-KG11	VIN No.: KG11-005040
Model: BDRARGZ397EDA-E-J-	
First registration: 10, Jan. 2001	Mileage: 62,140
CAN system type: Type 19	
Symptom (Results from interview with customer)	
<ul style="list-style-type: none">•Headlamps suddenly turn ON while driving the vehicle.•The engine does not restart after stopping the vehicle and turning the ignition switch OFF.•The cooling fan continues rotating while turning the ignition switch ON.	
Condition at inspection	
Error Symptom: Present / Past	
The engine does not start. While turning the ignition switch ON, <ul style="list-style-type: none">•The headlamps (Lo) turn ON, and the cooling fan continues rotating.•The interior lamp does not turn ON.	

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DETECT THE ROOT CAUSE

CAN diagnosis function of CONSULT-III detects the root cause.

HOW TO USE THIS MANUAL

HOW TO USE THIS SECTION

Caution

INFOID:000000001342260

- This section describes information peculiar to a vehicle and inspection procedures.
- For trouble diagnosis procedure, refer to [LAN-16, "Trouble Diagnosis Procedure"](#).

Abbreviation List

INFOID:000000001342261

Unit name abbreviations in CONSULT-III CAN diagnosis and in this section are as per the following list.

Abbreviation	Unit name
A-BAG	Air bag diagnosis sensor unit
ABS	ABS actuator and electric unit (control unit)
AV	AV control unit
BCM	BCM
DLC	Data link connector
ECM	ECM
IPDM-E	IPDM E/R
M&A	Combination meter
STRG	Steering angle sensor
TCM	TCM

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< PRECAUTION >

PRECAUTION

PRECAUTIONS

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

INFOID:000000001342262

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 SRC 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 SRC 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 Trouble Diagnosis

INFOID:000000001342263

CAUTION:

- Never apply 7.0 V or more to the measurement terminal.
- Use a tester with open terminal voltage of 7.0 V or less.
- Turn the ignition switch OFF and disconnect the battery cable from the negative terminal when checking the harness.

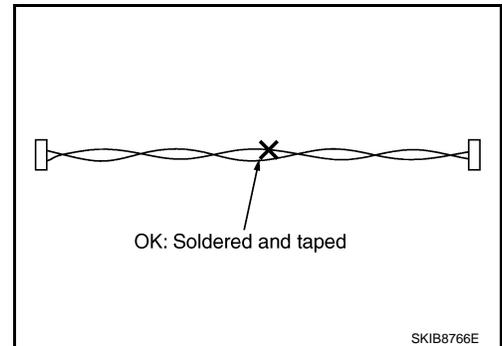
Precautions for Harness Repair

INFOID:000000001342264

- Solder the repaired area and wrap tape around the soldered area.

NOTE:

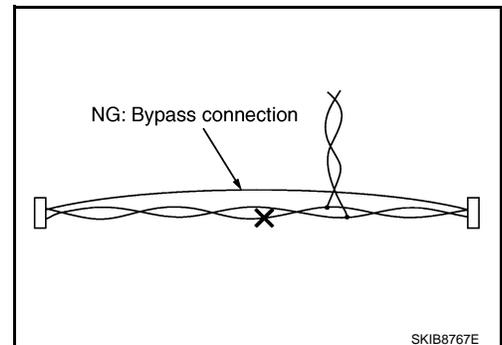
A fray of twisted lines must be within 110 mm (4.33 in).



- Bypass connection is never allowed at the repaired area.

NOTE:

Bypass connection may cause CAN communication error. The spliced wire becomes separated and the characteristics of twisted line are lost.



PRECAUTIONS

< PRECAUTION >

[CAN]

- Replace the applicable harness as an assembly if error is detected on the shield lines of CAN communication line.

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CAN COMMUNICATION SYSTEM

< FUNCTION DIAGNOSIS >

[CAN]

FUNCTION DIAGNOSIS

CAN COMMUNICATION SYSTEM

CAN System Specification Chart

INFOID:000000001342266

Determine CAN system type from the following specification chart.

NOTE:

Refer to [LAN-16. "Trouble Diagnosis Procedure"](#) for how to use CAN system specification chart.

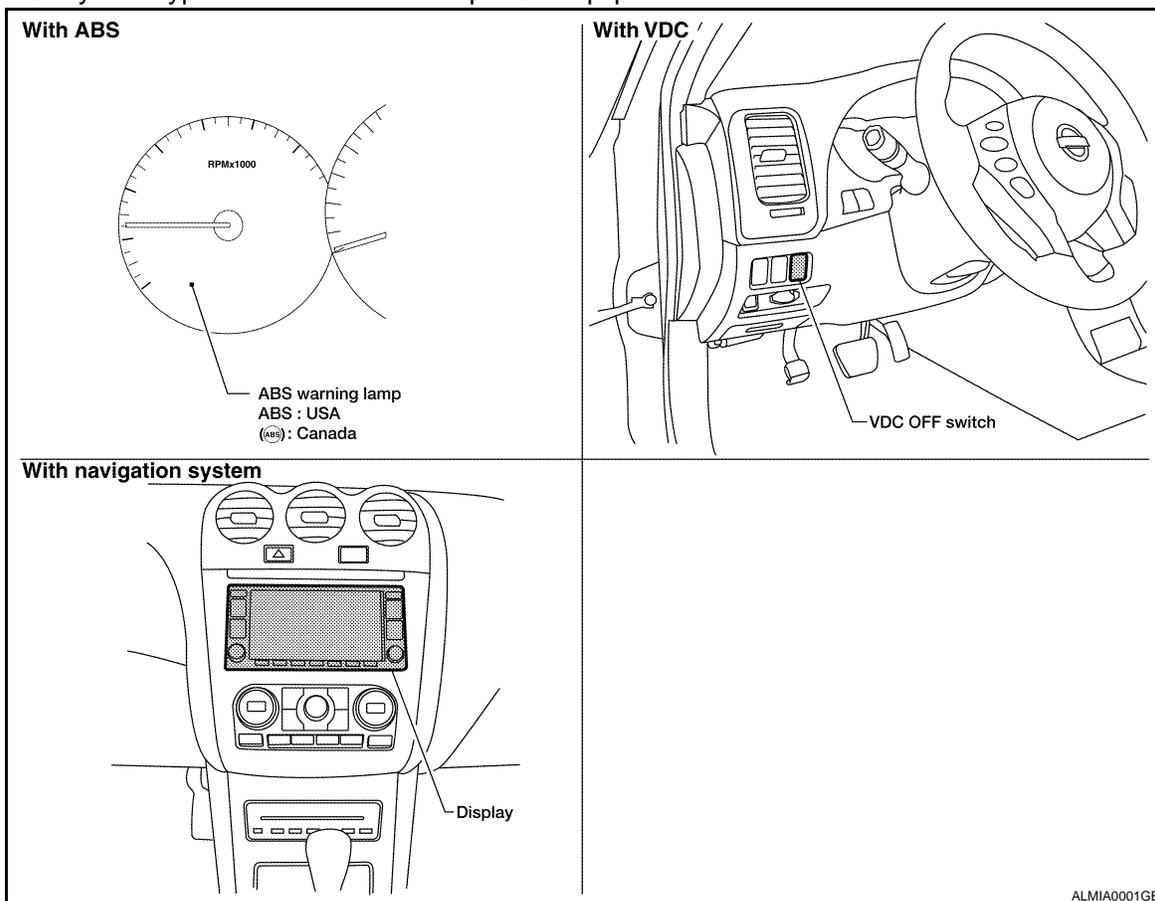
Body type	Sedan/Coupe											
Axle	2WD											
Engine	QR25DE				VQ35DE							
Transmission	M/T	CVT		M/T	CVT		M/T	CVT				
Brake control	ABS				TCS				VDC			
Navigation system		×		×		×		×		×		×
CAN system type	1	2	3	4	5	6	7	8	9	10	11	12
Start CAN Diagnosis (CONSULT-III)	1	2	3	4	5	6	7	8	9	10	11	12

×: Applicable

VEHICLE EQUIPMENT IDENTIFICATION INFORMATION

NOTE:

Check CAN system type from the vehicle shape and equipment.



CAN Communication Signal Chart

INFOID:000000001342267

Refer to [LAN-15. "How to Use CAN Communication Signal Chart"](#) for how to use CAN communication signal chart.

NOTE:

CAN COMMUNICATION SYSTEM

< FUNCTION DIAGNOSIS >

[CAN]

Refer to [LAN-21. "Abbreviation List"](#) for the abbreviations of the connecting units.

T: Transmit R: Receive

Signal name/Connecting unit	ECM	AV	BCM	M&A	STRG ^{*1}	ABS	TCM	IPDM-E
A/C compressor request signal	T							R
Accelerator pedal position signal	T					R	R	
ASCD operation signal	T						R	
ASCD status signal	T			R				
Closed throttle position signal	T						R	
Cooling fan speed request signal	T							R
Engine coolant temperature signal	T			R			R	
Engine speed signal	T			R		R	R	
Engine status signal	T	R	R					
Fuel consumption monitor signal	T	R		R				
Malfunctioning indicator lamp signal	T			R				
Power generation command value signal	T							R
Wide open throttle position signal	T						R	
A/C switch signal	R		T					
AT device (detent switch) signal			R					T
Blower fan motor switch signal	R		T					
Buzzer output signal			T	R				
Day time running light request signal			T					R
Door switch signal		R	T	R				R
Front fog light request signal			T	R				R
Front wiper request signal			T					R
High beam request signal			T	R				R
Horn reminder signal			T					R
Ignition switch ON signal			T					R
Interlock/PNP switch signal			T					R
			R					T
Key warning signal			T	R				
Low beam request signal			T					R
Meter display signal			T	R				
Oil pressure switch signal			T	R				
			R					T
Position light request signal			T	R				R
Rear window defogger switch signal			T					R
Sleep wake up signal			T	R				R
Starter control relay signal			T					R
Steering lock relay signal			T					R
			R					T
Steering lock unit status signal			R					T
Theft warning horn request signal			T					R
Tire pressure data signal			T	R				
Trunk switch signal		R	T					

CAN COMMUNICATION SYSTEM

< FUNCTION DIAGNOSIS >

[CAN]

Signal name/Connecting unit	ECM	AV	BCM	M&A	STRG ^{*1}	ABS	TCM	IPDM-E
Turn indicator signal			T	R				
Distance to empty signal		R		T				
Fuel level low warning signal		R		T				
Fuel level sensor signal	R			T				
Manual mode shift down signal				T			R	
Manual mode shift up signal				T			R	
Manual mode signal				T			R	
Market information signal		R		T				
Not manual mode signal				T			R	
Parking brake switch signal			R	T		R ^{*1}		
Seat belt buckle switch signal			R	T				
Vehicle speed signal	R	R	R	T			R	
			R	R		T		R
Steering angle sensor signal ^{*1}					T	R		
A/T shift schedule change demand signal ^{*2}						T	R	
ABS operation signal						T	R	
ABS warning lamp signal				R		T		
Brake warning lamp signal				R		T		
SLIP indicator lamp signal ^{*3}				R		T		
VDC OFF indicator lamp signal ^{*1}				R		T		
Current gear position signal						R	T	
CVT CHECK indicator lamp signal				R			T	
CVT position indicator signal				R		R	T	
CVT self-diagnosis signal	R						T	
Input shaft revolution signal	R					R ^{*1}	T	
Manual mode indicator signal				R		R ^{*1}	T	
N range signal			R				T	
Output shaft revolution signal	R					R ^{*1}	T	
P range signal			R			R	T	
Front wiper stop position signal			R					T
High beam status signal	R							T
Hood switch signal			R					T
Low beam status signal	R							T
Push-button ignition switch status signal			R					T
Rear window defogger control signal	R							T
Starter relay status signal			R					T

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*1: Models with VDC

*2: QR25DE models

*3: Models with VDC/TCS

NOTE:

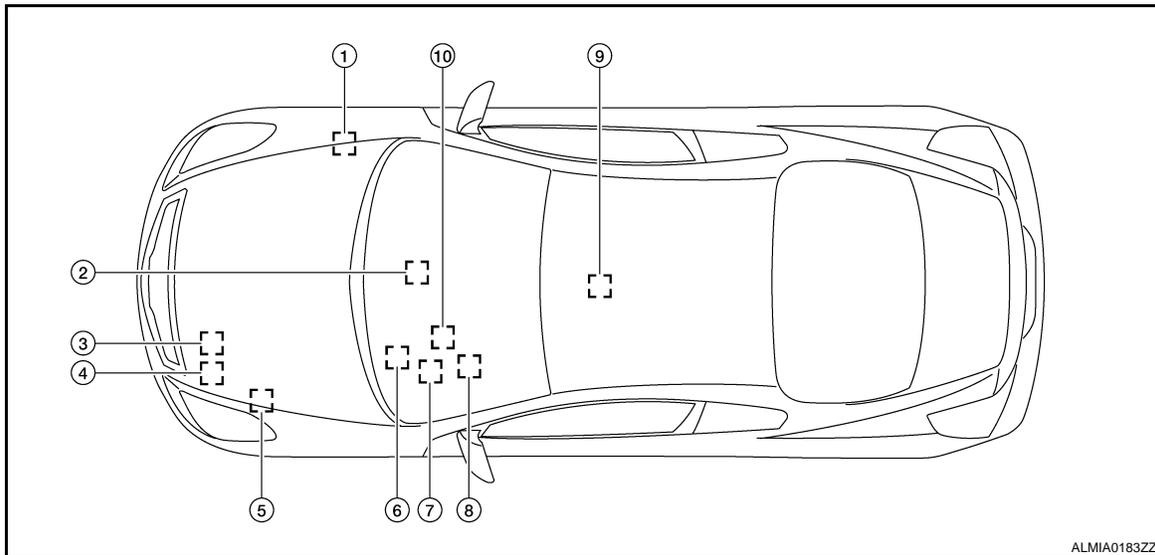
CAN data of the air bag diagnosis sensor unit is not used by usual service work, thus it is omitted.

COMPONENT DIAGNOSIS

CAN COMMUNICATION SYSTEM

Component Parts Location

INFOID:000000001342268



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- | | | |
|--|------------------------------|--------------------------------------|
| 1. ABS actuator and electric unit (control unit) E26 | 2. AV control unit M46 | 3. TCM F16 |
| 4. ECM E10 | 5. IPDM E/R E17 | 6. BCM M19 |
| 7. Combination meter M24 | 8. Steering angle sensor M53 | 9. Air bag diagnosis sensor unit M35 |
| 10. Data link connector M22 | | |

CAN COMMUNICATION SYSTEM

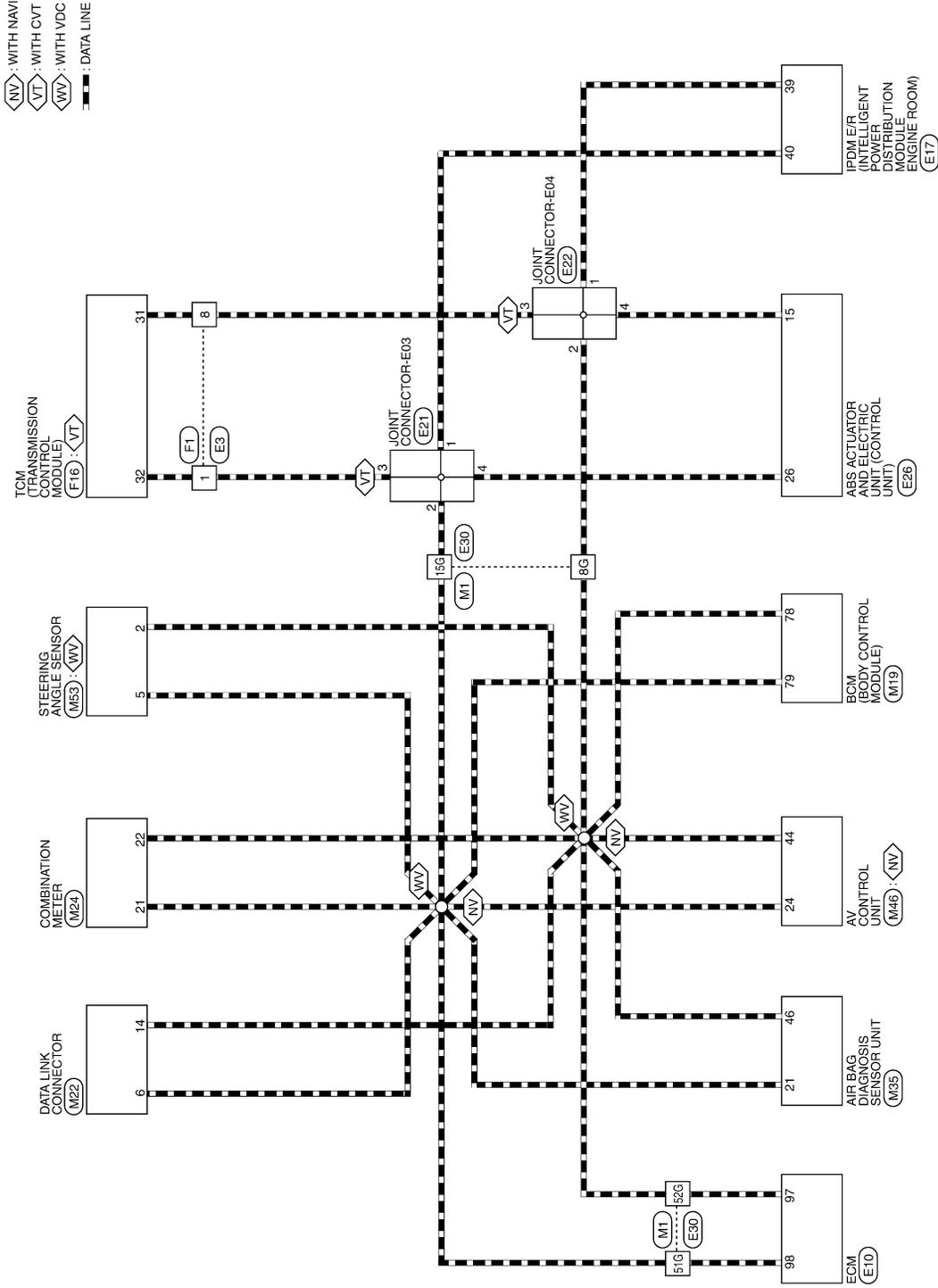
< COMPONENT DIAGNOSIS >

[CAN]

Wiring Diagram - CAN SYSTEM -

INFOID:000000001342269

CAN SYSTEM



(NV) : WITH NAVI
 (VT) : WITH CVT
 (WV) : WITH VDC
 () : DATA LINE

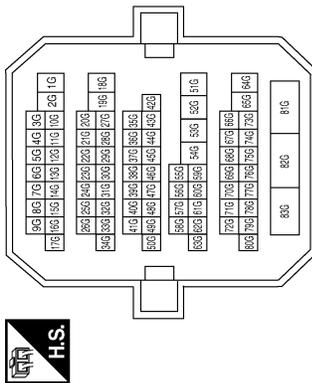
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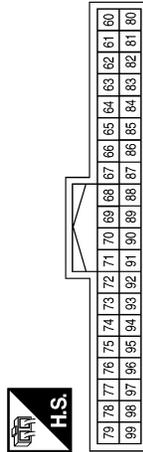
CAN SYSTEM CONNECTORS

Connector No.	M1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



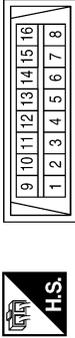
Terminal No.	Color of Wire	Signal Name
8G	P	-
15G	L	-
51G	L	-
52G	P	-

Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK



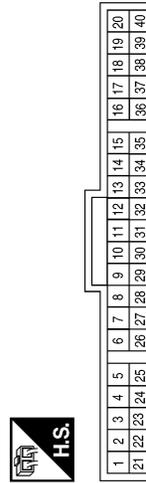
Terminal No.	Color of Wire	Signal Name
78	P	CAN-L
79	L	CAN-H

Connector No.	M22
Connector Name	DATA LINK CONNECTOR
Connector Color	WHITE



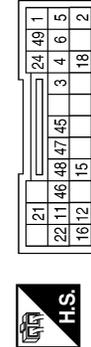
Terminal No.	Color of Wire	Signal Name
6	L	CAN-H
14	P	CAN-L

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



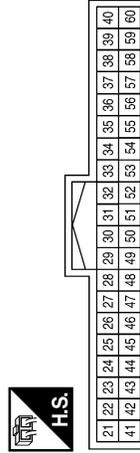
Terminal No.	Color of Wire	Signal Name
21	L	CAN-H
22	P	CAN-L

Connector No.	M35
Connector Name	AIR BAG DIAGNOSIS SENSOR UNIT
Connector Color	YELLOW



Terminal No.	Color of Wire	Signal Name
21	L	CAN-H
46	P	CAN-L

Connector No.	M46
Connector Name	AV CONTROL UNIT
Connector Color	WHITE



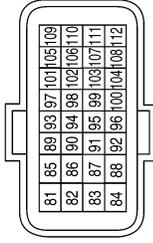
Terminal No.	Color of Wire	Signal Name
24	L	CAN-H
44	P	CAN-L

CAN COMMUNICATION SYSTEM

< COMPONENT DIAGNOSIS >

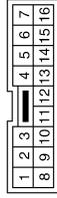
[CAN]

Connector No.	E10
Connector Name	ECM
Connector Color	BLACK



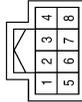
Terminal No.	Color of wire	Signal Name
97	P	CAN-L
98	L	CAN-H

Connector No.	E3
Connector Name	WIRE TO WIRE
Connector Color	WHITE



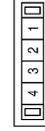
Terminal No.	Color of wire	Signal Name
1	L	-
8	P	-

Connector No.	M53
Connector Name	STEERING ANGLE SENSOR
Connector Color	WHITE



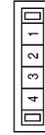
Terminal No.	Color of wire	Signal Name
2	P	CAN-L
5	L	CAN-H

Connector No.	E22
Connector Name	JOINT CONNECTOR-E04
Connector Color	WHITE



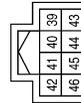
Terminal No.	Color of wire	Signal Name
1	P	-
2	P	-
3	P	-
4	P	-

Connector No.	E21
Connector Name	JOINT CONNECTOR-E03
Connector Color	WHITE



Terminal No.	Color of wire	Signal Name
1	L	-
2	L	-
3	L	-
4	L	-

Connector No.	E17
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



Terminal No.	Color of wire	Signal Name
39	P	CAN-L
40	L	CAN-H

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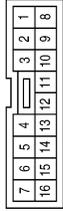
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CAN COMMUNICATION SYSTEM

< COMPONENT DIAGNOSIS >

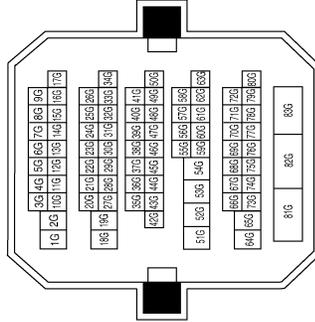
[CAN]

Connector No.	F1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



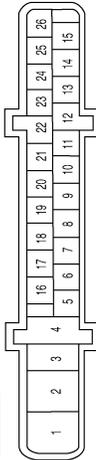
Terminal No.	Color of Wire	Signal Name
1	L	-
8	P	-

Connector No.	E30
Connector Name	WIRE TO WIRE
Connector Color	WHITE



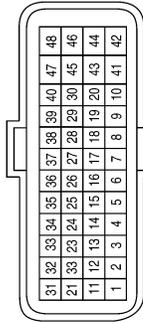
Terminal No.	Color of Wire	Signal Name
8G	P	-
15G	L	-
51G	L	-
52G	P	-

Connector No.	E26
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
15	P	CAN-L
26	L	CAN-H

Connector No.	F16
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
31	P	CAN-L
32	L	CAN-H

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MALFUNCTION AREA CHART

< COMPONENT DIAGNOSIS >

[CAN]

MALFUNCTION AREA CHART

Main Line

INFOID:000000001342270

Malfunction Area	Reference
Main line between data link connector and ABS actuator and electric unit (control unit)	LAN-34. "Diagnosis Procedure"

Branch Line

INFOID:000000001342271

Malfunction Area	Reference
ECM branch line circuit	LAN-35. "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-36. "Diagnosis Procedure"
AV control unit branch line circuit	LAN-37. "Diagnosis Procedure"
BCM branch line circuit	LAN-38. "Diagnosis Procedure"
Data link connector branch line circuit	LAN-39. "Diagnosis Procedure"
Combination meter branch line circuit	LAN-40. "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-41. "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-42. "Diagnosis Procedure"
TCM branch line circuit	LAN-43. "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-44. "Diagnosis Procedure"

Short Circuit

INFOID:000000001342272

Malfunction Area	Reference
CAN communication circuit	LAN-45. "Diagnosis Procedure"

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MAIN LINE BETWEEN DLC AND ABS CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN]

MAIN LINE BETWEEN DLC AND ABS CIRCUIT

Diagnosis Procedure

INFOID:000000001342273

INSPECTION PROCEDURE

1. CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M1
 - Harness connector E30

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the harness connectors M1 and E30.
2. Check the continuity between the data link connector and the harness connector.

Data link connector		Harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
M22	6	M1	15G	Existed
	14		8G	Existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the main line between the data link connector and the harness connector M1.

3. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the connector of ABS actuator and electric unit (control unit).
2. Check the continuity between the harness connector and the ABS actuator and electric unit (control unit) harness connector.

Harness connector		ABS actuator and electric unit (control unit) harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
E30	15G	E26	26	Existed
	8G		15	Existed

Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the data link connector and the ABS actuator and electric unit (control unit).

NO >> Repair the main line between the harness connector E30 and the ABS actuator and electric unit (control unit).

ECM BRANCH LINE CIRCUIT

[CAN]

< COMPONENT DIAGNOSIS >

ECM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001342275

INSPECTION PROCEDURE

1. CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
 - ECM
 - Harness connector E30
 - Harness connector M1

Is the inspection result normal?

- YES >> GO TO 2.
NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of ECM.
2. Check the resistance between the ECM harness connector terminals.

ECM harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E10	98	97	Approx. 108 – 132

Is the measurement value within the specification?

- YES >> GO TO 3.
NO >> Repair the ECM branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ECM. Refer to the following.

- QR engine models for California: [EC-144, "Diagnosis Procedure"](#)
- QR engine models except for California: [EC-657, "Diagnosis Procedure"](#)
- VQ engine models: [EC-1143, "Diagnosis Procedure"](#)

Is the inspection result normal?

- YES (Present error)>>Replace the ECM. Refer to the following.
- QR engine models for California: [EC-27, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)
 - QR engine models except for California: [EC-546, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)
 - VQ engine models: [EC-1019, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)

- YES (Past error)>>Error was detected in the ECM branch line.
NO >> Repair the power supply and the ground circuit.

A-BAG BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN]

A-BAG BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001342276

1. CHECK AIR BAG DIAGNOSIS SENSOR UNIT

Check the air bag diagnosis sensor unit. Refer to [SRC-3, "Work Flow"](#).

Is the inspection result normal?

YES >> Replace the main harness.

NO >> Replace parts whose air bag system has a malfunction.

AV BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN]

AV BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001342277

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of AV control unit.
2. Check the resistance between the AV control unit harness connector terminals.

AV control unit harness connector			Resistance (Ω)
Connector No.	Terminal No.		
M46	24	44	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the AV control unit branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the AV control unit. Refer to [AV-307, "AV CONTROL UNIT : Diagnosis Procedure"](#).

Is the inspection result normal?

YES (Present error)>>Replace the AV control unit. Refer to [AV-422, "Removal and Installation"](#).

YES (Past error)>>Error was detected in the AV control unit branch line.

NO >> Repair the power supply and the ground circuit.

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BCM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN]

BCM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001342278

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

- YES >> GO TO 2.
NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of BCM.
2. Check the resistance between the BCM harness connector terminals.

BCM harness connector		Resistance (Ω)
Connector No.	Terminal No.	
M19	79	78
		Approx. 54 – 66

Is the measurement value within the specification?

- YES >> GO TO 3.
NO >> Repair the BCM branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the BCM. Refer to [BCS-36, "Diagnosis Procedure"](#).

Is the inspection result normal?

- YES (Present error)>>Replace the BCM. Refer to [BCS-88, "Removal and Installation"](#).
YES (Past error)>>Error was detected in the BCM branch line.
NO >> Repair the power supply and the ground circuit.

DLC BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN]

DLC BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001342279

INSPECTION PROCEDURE

1.CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2.CHECK HARNESS FOR OPEN CIRCUIT

Check the resistance between the data link connector terminals.

Data link connector		Resistance (Ω)
Connector No.	Terminal No.	
M22	6 14	Approx. 54 – 66

Is the measurement value within the specification?

YES (Present error)>>Check the CAN system type decision again.

YES (Past error)>>Error was detected in the data link connector branch line circuit.

NO >> Repair the data link connector branch line.

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M&A BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN]

M&A BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001342280

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of combination meter.
2. Check the resistance between the combination meter harness connector terminals.

Combination meter harness connector			Resistance (Ω)
Connector No.	Terminal No.		
M24	21	22	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the combination meter branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the combination meter. Refer to [MWI-43, "COMBINATION METER : Diagnosis Procedure"](#).

Is it normal?

YES (Present error)>>Replace the combination meter. Refer to [MWI-172, "Removal and Installation"](#).

YES (Past error)>>Error was detected in the combination meter branch line.

NO >> Repair the power supply and the ground circuit.

STRG BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN]

STRG BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001342281

INSPECTION PROCEDURE

1.CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2.CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of steering angle sensor.
2. Check the resistance between the steering angle sensor harness connector terminals.

Steering angle sensor harness connector			Resistance (Ω)
Connector No.	Terminal No.		
M53	5	2	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the steering angle sensor branch line.

3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the steering angle sensor. Refer to [BRC-206, "Wiring Diagram - Coupe"](#) or [BRC-214, "Wiring Diagram - Sedan"](#).

Is it normal?

YES (Present error)>>Replace the steering angle sensor. Refer to [BRC-241, "Removal and Installation"](#) .

YES (Past error)>>Error was detected in the steering angle sensor branch line.

NO >> Repair the power supply and the ground circuit.

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ABS BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN]

ABS BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001342282

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of ABS actuator and electric unit (control unit).
2. Check the resistance between the ABS actuator and electric unit (control unit) harness connector terminals.

ABS actuator and electric unit (control unit) harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E26	26	15	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ABS actuator and electric unit (control unit) branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ABS actuator and electric unit (control unit). Refer to the following.

- Models with ABS: [BRC-41, "Wiring Diagram - Coupe"](#) or [BRC-46, "Wiring Diagram - Sedan"](#)
- Models with TCS: [BRC-109, "Wiring Diagram - Coupe"](#) or [BRC-115, "Wiring Diagram - Sedan"](#)
- Models with VDC: [BRC-206, "Wiring Diagram - Coupe"](#) or [BRC-214, "Wiring Diagram - Sedan"](#)

Is the inspection result normal?

YES (Present error)>>Replace the ABS actuator and electric unit (control unit). Refer to the following.

- Models with ABS: [BRC-66, "Exploded View"](#)
- Models with TCS: [BRC-136, "Exploded View"](#)
- Models with VDC: [BRC-238, "Exploded View"](#)

YES (Past error)>>Error was detected in the ABS actuator and electric unit (control unit) branch line.

NO >> Repair the power supply and the ground circuit.

TCM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN]

TCM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001342283

INSPECTION PROCEDURE

1. CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
 - TCM
 - Harness connector F1
 - Harness connector E3

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of TCM.
2. Check the resistance between the TCM harness connector terminals.

TCM harness connector			Resistance (Ω)
Connector No.	Terminal No.		
F16	32	31	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the TCM branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the TCM. Refer to the following.

- QR25DE models: [TM-375. "Wiring Diagram - CVT CONTROL SYSTEM - Coupe"](#) or [TM-384. "Wiring Diagram - CVT CONTROL SYSTEM - Sedan"](#)
- VQ35DE models: [TM-199. "Wiring Diagram—CVT CONTROL SYSTEM—Coupe"](#) or [TM-207. "Wiring Diagram—CVT CONTROL SYSTEM—Sedan"](#)

Is the inspection result normal?

YES (Present error)>>Replace the TCM. Refer to the following.

- QR25DE models: [TM-425. "Exploded View"](#)
- VQ35DE models: [TM-249. "Exploded View"](#)

YES (Past error)>>Error was detected in the TCM branch line.

NO >> Repair the power supply and the ground circuit.

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IPDM-E BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN]

IPDM-E BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001342284

INSPECTION PROCEDURE

1.CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2.CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of IPDM E/R.
2. Check the resistance between the IPDM E/R harness connector terminals.

IPDM E/R harness connector		Resistance (Ω)
Connector No.	Terminal No.	
E17	40 39	Approx. 108 – 132

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the IPDM E/R branch line.

3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the IPDM E/R. Refer to [PCS-19, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES (Present error)>>Replace the IPDM E/R. Refer to [PCS-43, "Removal and Installation"](#).

YES (Past error)>>Error was detected in the IPDM E/R branch line.

NO >> Repair the power supply and the ground circuit.

CAN COMMUNICATION CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN]

CAN COMMUNICATION CIRCUIT

Diagnosis Procedure

INFOID:000000001342285

INSPECTION PROCEDURE

1. CONNECTOR INSPECTION

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Disconnect all the unit connectors on CAN communication system.
4. Check terminals and connectors for damage, bend and loose connection.

Is the inspection result normal?

- YES >> GO TO 2.
NO >> Repair the terminal and connector.

2. CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector terminals.

Data link connector		Continuity
Connector No.	Terminal No.	
M22	6 14	Not existed

Is the inspection result normal?

- YES >> GO TO 3.
NO >> Check the harness and repair the root cause.

3. CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector and the ground.

Data link connector		Ground	Continuity
Connector No.	Terminal No.		
M22	6		Not existed
	14		Not existed

Is the inspection result normal?

- YES >> GO TO 4.
NO >> Check the harness and repair the root cause.

4. CHECK ECM AND IPDM E/R TERMINATION CIRCUIT

1. Remove the ECM and the IPDM E/R.
2. Check the resistance between the ECM terminals.

ECM		Resistance (Ω)
Terminal No.		
98	97	Approx. 108 – 132

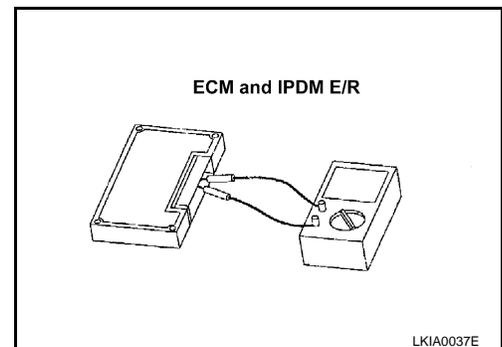
3. Check the resistance between the IPDM E/R terminals.

IPDM E/R		Resistance (Ω)
Terminal No.		
40	39	Approx. 108 – 132

Is the measurement value within the specification?

- YES >> GO TO 5.
NO >> Replace the ECM and/or the IPDM E/R.

5. CHECK SYMPTOM



CAN COMMUNICATION CIRCUIT

[CAN]

< COMPONENT DIAGNOSIS >

Connect all the connectors. Check if the symptoms described in the “Symptom (Results from interview with customer)” are reproduced.

Inspection result

Reproduced>>GO TO 6.

Non-reproduced>>Start the diagnosis again. Follow the trouble diagnosis procedure when past error is detected.

6.CHECK UNIT REPRODUCTION

Perform the reproduction test as per the following procedure for each unit.

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Disconnect one of the unit connectors of CAN communication system.

NOTE:

ECM and IPDM E/R have a termination circuit. Check other units first.

4. Connect the battery cable to the negative terminal. Check if the symptoms described in the “Symptom (Results from interview with customer)” are reproduced.

NOTE:

Although unit-related error symptoms occur, do not confuse them with other symptoms.

Inspection result

Reproduced>>Connect the connector. Check other units as per the above procedure.

Non-reproduced>>Replace the unit whose connector was disconnected.

MAIN LINE BETWEEN DLC AND ABS CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 1)]

COMPONENT DIAGNOSIS

MAIN LINE BETWEEN DLC AND ABS CIRCUIT

Diagnosis Procedure

INFOID:000000001569487

INSPECTION PROCEDURE

1. CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M1
 - Harness connector E30

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the harness connectors M1 and E30.
2. Check the continuity between the data link connector and the harness connector.

Data link connector		Harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
M22	6	M1	15G	Existed
	14		8G	Existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the main line between the data link connector and the harness connector M1.

3. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the connector of ABS actuator and electric unit (control unit).
2. Check the continuity between the harness connector and the ABS actuator and electric unit (control unit) harness connector.

Harness connector		ABS actuator and electric unit (control unit) harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
E30	15G	E26	26	Existed
	8G		15	Existed

Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the data link connector and the ABS actuator and electric unit (control unit).

NO >> Repair the main line between the harness connector E30 and the ABS actuator and electric unit (control unit).

ECM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 1)]

ECM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569488

INSPECTION PROCEDURE

1. CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
 - ECM
 - Harness connector E30
 - Harness connector M1

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of ECM.
2. Check the resistance between the ECM harness connector terminals.

ECM harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E10	98	97	Approx. 108 – 132

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ECM branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ECM. Refer to the following.

- QR engine models for California: [EC-144, "Diagnosis Procedure"](#)
- QR engine models except for California: [EC-657, "Diagnosis Procedure"](#)
- VQ engine models: [EC-1143, "Diagnosis Procedure"](#)

Is the inspection result normal?

YES (Present error)>>Replace the ECM. Refer to the following.

- QR engine models for California: [EC-27, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)
- QR engine models except for California: [EC-546, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)
- VQ engine models: [EC-1019, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)

YES (Past error)>>Error was detected in the ECM branch line.

NO >> Repair the power supply and the ground circuit.

A-BAG BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 1)]

A-BAG BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569489

1. CHECK AIR BAG DIAGNOSIS SENSOR UNIT

Check the air bag diagnosis sensor unit. Refer to [SRC-3, "Work Flow"](#).

Is the inspection result normal?

YES >> Replace the main harness.

NO >> Replace parts whose air bag system has a malfunction.

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BCM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 1)]

BCM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569491

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of BCM.
2. Check the resistance between the BCM harness connector terminals.

BCM harness connector		Resistance (Ω)
Connector No.	Terminal No.	
M19	79	78
		Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the BCM branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the BCM. Refer to [BCS-36, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES (Present error)>>Replace the BCM. Refer to [BCS-88, "Removal and Installation"](#).

YES (Past error)>>Error was detected in the BCM branch line.

NO >> Repair the power supply and the ground circuit.

DLC BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 1)]

DLC BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569492

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

Check the resistance between the data link connector terminals.

Data link connector		Resistance (Ω)
Connector No.	Terminal No.	
M22	6 14	Approx. 54 – 66

Is the measurement value within the specification?

YES (Present error)>>Check the CAN system type decision again.

YES (Past error)>>Error was detected in the data link connector branch line circuit.

NO >> Repair the data link connector branch line.

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M&A BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569493

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

- YES >> GO TO 2.
 NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of combination meter.
2. Check the resistance between the combination meter harness connector terminals.

Combination meter harness connector			Resistance (Ω)
Connector No.	Terminal No.		
M24	21	22	Approx. 54 – 66

Is the measurement value within the specification?

- YES >> GO TO 3.
 NO >> Repair the combination meter branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the combination meter. Refer to [MWI-43, "COMBINATION METER : Diagnosis Procedure"](#) .

Is it normal?

- YES (Present error)>>Replace the combination meter. Refer to [MWI-172, "Removal and Installation"](#) .
 YES (Past error)>>Error was detected in the combination meter branch line.
 NO >> Repair the power supply and the ground circuit.

ABS BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 1)]

ABS BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569633

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of ABS actuator and electric unit (control unit).
2. Check the resistance between the ABS actuator and electric unit (control unit) harness connector terminals.

ABS actuator and electric unit (control unit) harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E26	26	15	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ABS actuator and electric unit (control unit) branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ABS actuator and electric unit (control unit). Refer to the following.

- Models with ABS: [BRC-41, "Wiring Diagram - Coupe"](#) or [BRC-46, "Wiring Diagram - Sedan"](#)
- Models with TCS: [BRC-109, "Wiring Diagram - Coupe"](#) or [BRC-115, "Wiring Diagram - Sedan"](#)
- Models with VDC: [BRC-206, "Wiring Diagram - Coupe"](#) or [BRC-214, "Wiring Diagram - Sedan"](#)

Is the inspection result normal?

YES (Present error)>>Replace the ABS actuator and electric unit (control unit). Refer to the following.

- Models with ABS: [BRC-66, "Exploded View"](#)
- Models with TCS: [BRC-136, "Exploded View"](#)
- Models with VDC: [BRC-238, "Exploded View"](#)

YES (Past error)>>Error was detected in the ABS actuator and electric unit (control unit) branch line.

NO >> Repair the power supply and the ground circuit.

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IPDM-E BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 1)]

IPDM-E BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569497

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of IPDM E/R.
2. Check the resistance between the IPDM E/R harness connector terminals.

IPDM E/R harness connector		Resistance (Ω)
Connector No.	Terminal No.	
E17	40 39	Approx. 108 – 132

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the IPDM E/R branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the IPDM E/R. Refer to [PCS-19, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES (Present error)>>Replace the IPDM E/R. Refer to [PCS-43, "Removal and Installation"](#).

YES (Past error)>>Error was detected in the IPDM E/R branch line.

NO >> Repair the power supply and the ground circuit.

CAN COMMUNICATION CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 1)]

CAN COMMUNICATION CIRCUIT

Diagnosis Procedure

INFOID:000000001569498

INSPECTION PROCEDURE

1. CONNECTOR INSPECTION

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Disconnect all the unit connectors on CAN communication system.
4. Check terminals and connectors for damage, bend and loose connection.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector terminals.

Data link connector		Continuity
Connector No.	Terminal No.	
M22	6 14	Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Check the harness and repair the root cause.

3. CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector and the ground.

Data link connector		Ground	Continuity
Connector No.	Terminal No.		
M22	6	Ground	Not existed
	14		Not existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Check the harness and repair the root cause.

4. CHECK ECM AND IPDM E/R TERMINATION CIRCUIT

1. Remove the ECM and the IPDM E/R.
2. Check the resistance between the ECM terminals.

ECM		Resistance (Ω)
Terminal No.		
98	97	Approx. 108 – 132

3. Check the resistance between the IPDM E/R terminals.

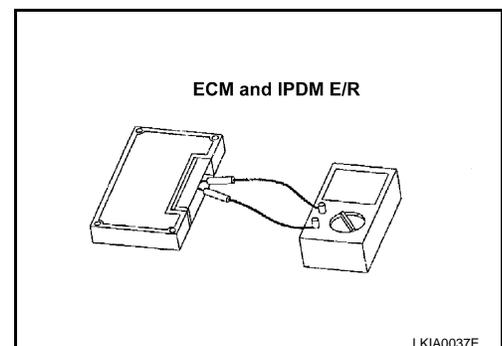
IPDM E/R		Resistance (Ω)
Terminal No.		
40	39	Approx. 108 – 132

Is the measurement value within the specification?

YES >> GO TO 5.

NO >> Replace the ECM and/or the IPDM E/R.

5. CHECK SYMPTOM



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CAN COMMUNICATION CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 1)]

Connect all the connectors. Check if the symptoms described in the “Symptom (Results from interview with customer)” are reproduced.

Inspection result

Reproduced>>GO TO 6.

Non-reproduced>>Start the diagnosis again. Follow the trouble diagnosis procedure when past error is detected.

6.CHECK UNIT REPRODUCTION

Perform the reproduction test as per the following procedure for each unit.

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Disconnect one of the unit connectors of CAN communication system.

NOTE:

ECM and IPDM E/R have a termination circuit. Check other units first.

4. Connect the battery cable to the negative terminal. Check if the symptoms described in the “Symptom (Results from interview with customer)” are reproduced.

NOTE:

Although unit-related error symptoms occur, do not confuse them with other symptoms.

Inspection result

Reproduced>>Connect the connector. Check other units as per the above procedure.

Non-reproduced>>Replace the unit whose connector was disconnected.

MAIN LINE BETWEEN DLC AND ABS CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 2)]

COMPONENT DIAGNOSIS

MAIN LINE BETWEEN DLC AND ABS CIRCUIT

Diagnosis Procedure

INFOID:000000001569499

INSPECTION PROCEDURE

1. CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M1
 - Harness connector E30

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the harness connectors M1 and E30.
2. Check the continuity between the data link connector and the harness connector.

Data link connector		Harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
M22	6	M1	15G	Existed
	14		8G	Existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the main line between the data link connector and the harness connector M1.

3. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the connector of ABS actuator and electric unit (control unit).
2. Check the continuity between the harness connector and the ABS actuator and electric unit (control unit) harness connector.

Harness connector		ABS actuator and electric unit (control unit) harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
E30	15G	E26	26	Existed
	8G		15	Existed

Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the data link connector and the ABS actuator and electric unit (control unit).

NO >> Repair the main line between the harness connector E30 and the ABS actuator and electric unit (control unit).

ECM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 2)]

ECM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569500

INSPECTION PROCEDURE

1. CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
 - ECM
 - Harness connector E30
 - Harness connector M1

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of ECM.
2. Check the resistance between the ECM harness connector terminals.

ECM harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E10	98	97	Approx. 108 – 132

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ECM branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ECM. Refer to the following.

- QR engine models for California: [EC-144, "Diagnosis Procedure"](#)
- QR engine models except for California: [EC-657, "Diagnosis Procedure"](#)
- VQ engine models: [EC-1143, "Diagnosis Procedure"](#)

Is the inspection result normal?

YES (Present error)>>Replace the ECM. Refer to the following.

- QR engine models for California: [EC-27, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)
- QR engine models except for California: [EC-546, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)
- VQ engine models: [EC-1019, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)

YES (Past error)>>Error was detected in the ECM branch line.

NO >> Repair the power supply and the ground circuit.

A-BAG BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 2)]

A-BAG BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569501

1. CHECK AIR BAG DIAGNOSIS SENSOR UNIT

Check the air bag diagnosis sensor unit. Refer to [SRC-3, "Work Flow"](#).

Is the inspection result normal?

YES >> Replace the main harness.

NO >> Replace parts whose air bag system has a malfunction.

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AV BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 2)]

AV BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569502

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of AV control unit.
2. Check the resistance between the AV control unit harness connector terminals.

AV control unit harness connector		Resistance (Ω)
Connector No.	Terminal No.	
M46	24 44	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the AV control unit branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the AV control unit. Refer to [AV-307, "AV CONTROL UNIT : Diagnosis Procedure"](#).

Is the inspection result normal?

YES (Present error)>>Replace the AV control unit. Refer to [AV-422, "Removal and Installation"](#).

YES (Past error)>>Error was detected in the AV control unit branch line.

NO >> Repair the power supply and the ground circuit.

BCM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 2)]

BCM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569503

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of BCM.
2. Check the resistance between the BCM harness connector terminals.

BCM harness connector			Resistance (Ω)
Connector No.	Terminal No.		
M19	79	78	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the BCM branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the BCM. Refer to [BCS-36, "Diagnosis Procedure"](#) .

Is the inspection result normal?

YES (Present error)>>Replace the BCM. Refer to [BCS-88, "Removal and Installation"](#).

YES (Past error)>>Error was detected in the BCM branch line.

NO >> Repair the power supply and the ground circuit.

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DLC BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 2)]

DLC BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569504

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

Check the resistance between the data link connector terminals.

Data link connector		Resistance (Ω)
Connector No.	Terminal No.	
M22	6 14	Approx. 54 – 66

Is the measurement value within the specification?

YES (Present error)>>Check the CAN system type decision again.

YES (Past error)>>Error was detected in the data link connector branch line circuit.

NO >> Repair the data link connector branch line.

M&A BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 2)]

M&A BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569505

INSPECTION PROCEDURE

1.CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2.CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of combination meter.
2. Check the resistance between the combination meter harness connector terminals.

Combination meter harness connector		Resistance (Ω)
Connector No.	Terminal No.	
M24	21	Approx. 54 – 66
	22	

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the combination meter branch line.

3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the combination meter. Refer to [MWI-43, "COMBINATION METER : Diagnosis Procedure"](#) .

Is it normal?

YES (Present error)>>Replace the combination meter. Refer to [MWI-172, "Removal and Installation"](#) .

YES (Past error)>>Error was detected in the combination meter branch line.

NO >> Repair the power supply and the ground circuit.

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ABS BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 2)]

ABS BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569634

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of ABS actuator and electric unit (control unit).
2. Check the resistance between the ABS actuator and electric unit (control unit) harness connector terminals.

ABS actuator and electric unit (control unit) harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E26	26	15	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ABS actuator and electric unit (control unit) branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ABS actuator and electric unit (control unit). Refer to the following.

- Models with ABS: [BRC-41, "Wiring Diagram - Coupe"](#) or [BRC-46, "Wiring Diagram - Sedan"](#)
- Models with TCS: [BRC-109, "Wiring Diagram - Coupe"](#) or [BRC-115, "Wiring Diagram - Sedan"](#)
- Models with VDC: [BRC-206, "Wiring Diagram - Coupe"](#) or [BRC-214, "Wiring Diagram - Sedan"](#)

Is the inspection result normal?

YES (Present error)>>Replace the ABS actuator and electric unit (control unit). Refer to the following.

- Models with ABS: [BRC-66, "Exploded View"](#)
- Models with TCS: [BRC-136, "Exploded View"](#)
- Models with VDC: [BRC-238, "Exploded View"](#)

YES (Past error)>>Error was detected in the ABS actuator and electric unit (control unit) branch line.

NO >> Repair the power supply and the ground circuit.

IPDM-E BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 2)]

IPDM-E BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569509

INSPECTION PROCEDURE

1.CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2.CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of IPDM E/R.
2. Check the resistance between the IPDM E/R harness connector terminals.

IPDM E/R harness connector		Resistance (Ω)
Connector No.	Terminal No.	
E17	40 39	Approx. 108 – 132

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the IPDM E/R branch line.

3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the IPDM E/R. Refer to [PCS-19, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES (Present error)>>Replace the IPDM E/R. Refer to [PCS-43, "Removal and Installation"](#).

YES (Past error)>>Error was detected in the IPDM E/R branch line.

NO >> Repair the power supply and the ground circuit.

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CAN COMMUNICATION CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 2)]

CAN COMMUNICATION CIRCUIT

Diagnosis Procedure

INFOID:000000001569510

INSPECTION PROCEDURE

1. CONNECTOR INSPECTION

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Disconnect all the unit connectors on CAN communication system.
4. Check terminals and connectors for damage, bend and loose connection.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector terminals.

Data link connector		Continuity
Connector No.	Terminal No.	
M22	6 14	Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Check the harness and repair the root cause.

3. CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector and the ground.

Data link connector		Ground	Continuity
Connector No.	Terminal No.		
M22	6		Not existed
	14		Not existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Check the harness and repair the root cause.

4. CHECK ECM AND IPDM E/R TERMINATION CIRCUIT

1. Remove the ECM and the IPDM E/R.
2. Check the resistance between the ECM terminals.

ECM		Resistance (Ω)
Terminal No.		
98	97	Approx. 108 – 132

3. Check the resistance between the IPDM E/R terminals.

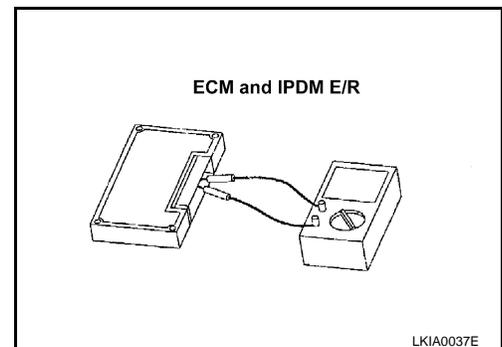
IPDM E/R		Resistance (Ω)
Terminal No.		
40	39	Approx. 108 – 132

Is the measurement value within the specification?

YES >> GO TO 5.

NO >> Replace the ECM and/or the IPDM E/R.

5. CHECK SYMPTOM



CAN COMMUNICATION CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 2)]

Connect all the connectors. Check if the symptoms described in the “Symptom (Results from interview with customer)” are reproduced.

Inspection result

Reproduced>>GO TO 6.

Non-reproduced>>Start the diagnosis again. Follow the trouble diagnosis procedure when past error is detected.

6.CHECK UNIT REPRODUCTION

Perform the reproduction test as per the following procedure for each unit.

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Disconnect one of the unit connectors of CAN communication system.

NOTE:

ECM and IPDM E/R have a termination circuit. Check other units first.

4. Connect the battery cable to the negative terminal. Check if the symptoms described in the “Symptom (Results from interview with customer)” are reproduced.

NOTE:

Although unit-related error symptoms occur, do not confuse them with other symptoms.

Inspection result

Reproduced>>Connect the connector. Check other units as per the above procedure.

Non-reproduced>>Replace the unit whose connector was disconnected.

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MAIN LINE BETWEEN DLC AND ABS CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 3)]

COMPONENT DIAGNOSIS

MAIN LINE BETWEEN DLC AND ABS CIRCUIT

Diagnosis Procedure

INFOID:000000001569511

INSPECTION PROCEDURE

1. CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M1
 - Harness connector E30

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the harness connectors M1 and E30.
2. Check the continuity between the data link connector and the harness connector.

Data link connector		Harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
M22	6	M1	15G	Existed
	14		8G	Existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the main line between the data link connector and the harness connector M1.

3. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the connector of ABS actuator and electric unit (control unit).
2. Check the continuity between the harness connector and the ABS actuator and electric unit (control unit) harness connector.

Harness connector		ABS actuator and electric unit (control unit) harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
E30	15G	E26	26	Existed
	8G		15	Existed

Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the data link connector and the ABS actuator and electric unit (control unit).

NO >> Repair the main line between the harness connector E30 and the ABS actuator and electric unit (control unit).

ECM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 3)]

ECM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569512

INSPECTION PROCEDURE

1. CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
 - ECM
 - Harness connector E30
 - Harness connector M1

Is the inspection result normal?

- YES >> GO TO 2.
NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of ECM.
2. Check the resistance between the ECM harness connector terminals.

ECM harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E10	98	97	Approx. 108 – 132

Is the measurement value within the specification?

- YES >> GO TO 3.
NO >> Repair the ECM branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ECM. Refer to the following.

- QR engine models for California: [EC-144, "Diagnosis Procedure"](#)
- QR engine models except for California: [EC-657, "Diagnosis Procedure"](#)
- VQ engine models: [EC-1143, "Diagnosis Procedure"](#)

Is the inspection result normal?

- YES (Present error)>>Replace the ECM. Refer to the following.
- QR engine models for California: [EC-27, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)
 - QR engine models except for California: [EC-546, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)
 - VQ engine models: [EC-1019, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)

YES (Past error)>>Error was detected in the ECM branch line.

- NO >> Repair the power supply and the ground circuit.

A-BAG BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 3)]

A-BAG BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569513

1. CHECK AIR BAG DIAGNOSIS SENSOR UNIT

Check the air bag diagnosis sensor unit. Refer to [SRC-3, "Work Flow"](#).

Is the inspection result normal?

YES >> Replace the main harness.

NO >> Replace parts whose air bag system has a malfunction.

BCM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 3)]

BCM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569515

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of BCM.
2. Check the resistance between the BCM harness connector terminals.

BCM harness connector			Resistance (Ω)
Connector No.	Terminal No.		
M19	79	78	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the BCM branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the BCM. Refer to [BCS-36, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES (Present error)>>Replace the BCM. Refer to [BCS-88, "Removal and Installation"](#).

YES (Past error)>>Error was detected in the BCM branch line.

NO >> Repair the power supply and the ground circuit.

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DLC BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 3)]

DLC BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569516

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

Check the resistance between the data link connector terminals.

Data link connector		Resistance (Ω)
Connector No.	Terminal No.	
M22	6 14	Approx. 54 – 66

Is the measurement value within the specification?

YES (Present error)>>Check the CAN system type decision again.

YES (Past error)>>Error was detected in the data link connector branch line circuit.

NO >> Repair the data link connector branch line.

M&A BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 3)]

M&A BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569517

INSPECTION PROCEDURE

1.CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2.CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of combination meter.
2. Check the resistance between the combination meter harness connector terminals.

Combination meter harness connector		Resistance (Ω)
Connector No.	Terminal No.	
M24	21	Approx. 54 – 66
	22	

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the combination meter branch line.

3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the combination meter. Refer to [MWI-43, "COMBINATION METER : Diagnosis Procedure"](#) .

Is it normal?

YES (Present error)>>Replace the combination meter. Refer to [MWI-172, "Removal and Installation"](#) .

YES (Past error)>>Error was detected in the combination meter branch line.

NO >> Repair the power supply and the ground circuit.

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ABS BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 3)]

ABS BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569635

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of ABS actuator and electric unit (control unit).
2. Check the resistance between the ABS actuator and electric unit (control unit) harness connector terminals.

ABS actuator and electric unit (control unit) harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E26	26	15	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ABS actuator and electric unit (control unit) branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ABS actuator and electric unit (control unit). Refer to the following.

- Models with ABS: [BRC-41, "Wiring Diagram - Coupe"](#) or [BRC-46, "Wiring Diagram - Sedan"](#)
- Models with TCS: [BRC-109, "Wiring Diagram - Coupe"](#) or [BRC-115, "Wiring Diagram - Sedan"](#)
- Models with VDC: [BRC-206, "Wiring Diagram - Coupe"](#) or [BRC-214, "Wiring Diagram - Sedan"](#)

Is the inspection result normal?

YES (Present error)>>Replace the ABS actuator and electric unit (control unit). Refer to the following.

- Models with ABS: [BRC-66, "Exploded View"](#)
- Models with TCS: [BRC-136, "Exploded View"](#)
- Models with VDC: [BRC-238, "Exploded View"](#)

YES (Past error)>>Error was detected in the ABS actuator and electric unit (control unit) branch line.

NO >> Repair the power supply and the ground circuit.

TCM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 3)]

TCM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569520

INSPECTION PROCEDURE

1. CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
 - TCM
 - Harness connector F1
 - Harness connector E3

Is the inspection result normal?

- YES >> GO TO 2.
NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of TCM.
2. Check the resistance between the TCM harness connector terminals.

TCM harness connector			Resistance (Ω)
Connector No.	Terminal No.		
F16	32	31	Approx. 54 – 66

Is the measurement value within the specification?

- YES >> GO TO 3.
NO >> Repair the TCM branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the TCM. Refer to the following.

- QR25DE models: [TM-375. "Wiring Diagram - CVT CONTROL SYSTEM - Coupe"](#) or [TM-384. "Wiring Diagram - CVT CONTROL SYSTEM - Sedan"](#)
- VQ35DE models: [TM-199. "Wiring Diagram—CVT CONTROL SYSTEM—Coupe"](#) or [TM-207. "Wiring Diagram—CVT CONTROL SYSTEM—Sedan"](#)

Is the inspection result normal?

YES (Present error)>>Replace the TCM. Refer to the following.

- QR25DE models: [TM-425. "Exploded View"](#)
- VQ35DE models: [TM-249. "Exploded View"](#)

YES (Past error)>>Error was detected in the TCM branch line.

NO >> Repair the power supply and the ground circuit.

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IPDM-E BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 3)]

IPDM-E BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569521

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of IPDM E/R.
2. Check the resistance between the IPDM E/R harness connector terminals.

IPDM E/R harness connector		Resistance (Ω)
Connector No.	Terminal No.	
E17	40 39	Approx. 108 – 132

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the IPDM E/R branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the IPDM E/R. Refer to [PCS-19, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES (Present error)>>Replace the IPDM E/R. Refer to [PCS-43, "Removal and Installation"](#).

YES (Past error)>>Error was detected in the IPDM E/R branch line.

NO >> Repair the power supply and the ground circuit.

CAN COMMUNICATION CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 3)]

CAN COMMUNICATION CIRCUIT

Diagnosis Procedure

INFOID:000000001569522

INSPECTION PROCEDURE

1. CONNECTOR INSPECTION

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Disconnect all the unit connectors on CAN communication system.
4. Check terminals and connectors for damage, bend and loose connection.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector terminals.

Data link connector		Continuity
Connector No.	Terminal No.	
M22	6 14	Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Check the harness and repair the root cause.

3. CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector and the ground.

Data link connector		Ground	Continuity
Connector No.	Terminal No.		
M22	6		Not existed
	14		Not existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Check the harness and repair the root cause.

4. CHECK ECM AND IPDM E/R TERMINATION CIRCUIT

1. Remove the ECM and the IPDM E/R.
2. Check the resistance between the ECM terminals.

ECM		Resistance (Ω)
Terminal No.		
98	97	Approx. 108 – 132

3. Check the resistance between the IPDM E/R terminals.

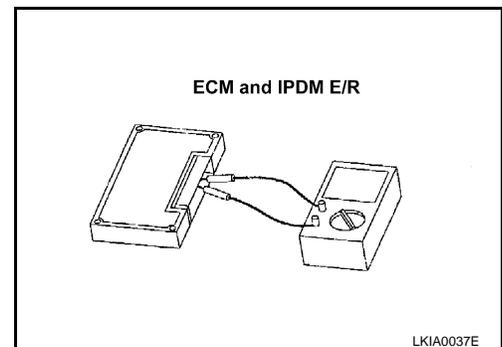
IPDM E/R		Resistance (Ω)
Terminal No.		
40	39	Approx. 108 – 132

Is the measurement value within the specification?

YES >> GO TO 5.

NO >> Replace the ECM and/or the IPDM E/R.

5. CHECK SYMPTOM



CAN COMMUNICATION CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 3)]

Connect all the connectors. Check if the symptoms described in the “Symptom (Results from interview with customer)” are reproduced.

Inspection result

Reproduced>>GO TO 6.

Non-reproduced>>Start the diagnosis again. Follow the trouble diagnosis procedure when past error is detected.

6.CHECK UNIT REPRODUCTION

Perform the reproduction test as per the following procedure for each unit.

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Disconnect one of the unit connectors of CAN communication system.

NOTE:

ECM and IPDM E/R have a termination circuit. Check other units first.

4. Connect the battery cable to the negative terminal. Check if the symptoms described in the “Symptom (Results from interview with customer)” are reproduced.

NOTE:

Although unit-related error symptoms occur, do not confuse them with other symptoms.

Inspection result

Reproduced>>Connect the connector. Check other units as per the above procedure.

Non-reproduced>>Replace the unit whose connector was disconnected.

MAIN LINE BETWEEN DLC AND ABS CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 4)]

COMPONENT DIAGNOSIS

MAIN LINE BETWEEN DLC AND ABS CIRCUIT

Diagnosis Procedure

INFOID:000000001569524

INSPECTION PROCEDURE

1. CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M1
 - Harness connector E30

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the harness connectors M1 and E30.
2. Check the continuity between the data link connector and the harness connector.

Data link connector		Harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
M22	6	M1	15G	Existed
	14		8G	Existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the main line between the data link connector and the harness connector M1.

3. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the connector of ABS actuator and electric unit (control unit).
2. Check the continuity between the harness connector and the ABS actuator and electric unit (control unit) harness connector.

Harness connector		ABS actuator and electric unit (control unit) harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
E30	15G	E26	26	Existed
	8G		15	Existed

Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the data link connector and the ABS actuator and electric unit (control unit).

NO >> Repair the main line between the harness connector E30 and the ABS actuator and electric unit (control unit).

ECM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 4)]

ECM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569525

INSPECTION PROCEDURE

1. CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
 - ECM
 - Harness connector E30
 - Harness connector M1

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of ECM.
2. Check the resistance between the ECM harness connector terminals.

ECM harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E10	98	97	Approx. 108 – 132

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ECM branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ECM. Refer to the following.

- QR engine models for California: [EC-144, "Diagnosis Procedure"](#)
- QR engine models except for California: [EC-657, "Diagnosis Procedure"](#)
- VQ engine models: [EC-1143, "Diagnosis Procedure"](#)

Is the inspection result normal?

YES (Present error)>>Replace the ECM. Refer to the following.

- QR engine models for California: [EC-27, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)
- QR engine models except for California: [EC-546, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)
- VQ engine models: [EC-1019, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)

YES (Past error)>>Error was detected in the ECM branch line.

NO >> Repair the power supply and the ground circuit.

A-BAG BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 4)]

A-BAG BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569526

1. CHECK AIR BAG DIAGNOSIS SENSOR UNIT

Check the air bag diagnosis sensor unit. Refer to [SRC-3, "Work Flow"](#).

Is the inspection result normal?

YES >> Replace the main harness.

NO >> Replace parts whose air bag system has a malfunction.

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AV BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569527

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

- YES >> GO TO 2.
 NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of AV control unit.
2. Check the resistance between the AV control unit harness connector terminals.

AV control unit harness connector			Resistance (Ω)
Connector No.	Terminal No.		
M46	24	44	Approx. 54 – 66

Is the measurement value within the specification?

- YES >> GO TO 3.
 NO >> Repair the AV control unit branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the AV control unit. Refer to [AV-307, "AV CONTROL UNIT : Diagnosis Procedure"](#).

Is the inspection result normal?

- YES (Present error)>>Replace the AV control unit. Refer to [AV-422, "Removal and Installation"](#).
 YES (Past error)>>Error was detected in the AV control unit branch line.
 NO >> Repair the power supply and the ground circuit.

BCM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 4)]

BCM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569528

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

- YES >> GO TO 2.
NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of BCM.
2. Check the resistance between the BCM harness connector terminals.

BCM harness connector		Resistance (Ω)
Connector No.	Terminal No.	
M19	79	Approx. 54 – 66
	78	

Is the measurement value within the specification?

- YES >> GO TO 3.
NO >> Repair the BCM branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the BCM. Refer to [BCS-36, "Diagnosis Procedure"](#) .

Is the inspection result normal?

- YES (Present error)>>Replace the BCM. Refer to [BCS-88, "Removal and Installation"](#).
YES (Past error)>>Error was detected in the BCM branch line.
NO >> Repair the power supply and the ground circuit.

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DLC BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 4)]

DLC BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569529

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

Check the resistance between the data link connector terminals.

Data link connector			Resistance (Ω)
Connector No.	Terminal No.		
M22	6	14	Approx. 54 – 66

Is the measurement value within the specification?

YES (Present error)>>Check the CAN system type decision again.

YES (Past error)>>Error was detected in the data link connector branch line circuit.

NO >> Repair the data link connector branch line.

M&A BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 4)]

M&A BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569530

INSPECTION PROCEDURE

1.CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2.CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of combination meter.
2. Check the resistance between the combination meter harness connector terminals.

Combination meter harness connector		Resistance (Ω)
Connector No.	Terminal No.	
M24	21	Approx. 54 – 66
	22	

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the combination meter branch line.

3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the combination meter. Refer to [MWI-43, "COMBINATION METER : Diagnosis Procedure"](#) .

Is it normal?

YES (Present error)>>Replace the combination meter. Refer to [MWI-172, "Removal and Installation"](#) .

YES (Past error)>>Error was detected in the combination meter branch line.

NO >> Repair the power supply and the ground circuit.

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ABS BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 4)]

ABS BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569636

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of ABS actuator and electric unit (control unit).
2. Check the resistance between the ABS actuator and electric unit (control unit) harness connector terminals.

ABS actuator and electric unit (control unit) harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E26	26	15	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ABS actuator and electric unit (control unit) branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ABS actuator and electric unit (control unit). Refer to the following.

- Models with ABS: [BRC-41, "Wiring Diagram - Coupe"](#) or [BRC-46, "Wiring Diagram - Sedan"](#)
- Models with TCS: [BRC-109, "Wiring Diagram - Coupe"](#) or [BRC-115, "Wiring Diagram - Sedan"](#)
- Models with VDC: [BRC-206, "Wiring Diagram - Coupe"](#) or [BRC-214, "Wiring Diagram - Sedan"](#)

Is the inspection result normal?

YES (Present error)>>Replace the ABS actuator and electric unit (control unit). Refer to the following.

- Models with ABS: [BRC-66, "Exploded View"](#)
- Models with TCS: [BRC-136, "Exploded View"](#)
- Models with VDC: [BRC-238, "Exploded View"](#)

YES (Past error)>>Error was detected in the ABS actuator and electric unit (control unit) branch line.

NO >> Repair the power supply and the ground circuit.

TCM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 4)]

TCM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569533

INSPECTION PROCEDURE

1.CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
 - TCM
 - Harness connector F1
 - Harness connector E3

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2.CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of TCM.
2. Check the resistance between the TCM harness connector terminals.

TCM harness connector			Resistance (Ω)
Connector No.	Terminal No.		
F16	32	31	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the TCM branch line.

3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the TCM. Refer to the following.

- QR25DE models: [TM-375. "Wiring Diagram - CVT CONTROL SYSTEM - Coupe"](#) or [TM-384. "Wiring Diagram - CVT CONTROL SYSTEM - Sedan"](#)
- VQ35DE models: [TM-199. "Wiring Diagram—CVT CONTROL SYSTEM—Coupe"](#) or [TM-207. "Wiring Diagram—CVT CONTROL SYSTEM—Sedan"](#)

Is the inspection result normal?

YES (Present error)>>Replace the TCM. Refer to the following.

- QR25DE models: [TM-425. "Exploded View"](#)

- VQ35DE models: [TM-249. "Exploded View"](#)

YES (Past error)>>Error was detected in the TCM branch line.

NO >> Repair the power supply and the ground circuit.

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IPDM-E BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 4)]

IPDM-E BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569534

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of IPDM E/R.
2. Check the resistance between the IPDM E/R harness connector terminals.

IPDM E/R harness connector		Resistance (Ω)
Connector No.	Terminal No.	
E17	40 39	Approx. 108 – 132

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the IPDM E/R branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the IPDM E/R. Refer to [PCS-19, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES (Present error)>>Replace the IPDM E/R. Refer to [PCS-43, "Removal and Installation"](#).

YES (Past error)>>Error was detected in the IPDM E/R branch line.

NO >> Repair the power supply and the ground circuit.

CAN COMMUNICATION CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 4)]

CAN COMMUNICATION CIRCUIT

Diagnosis Procedure

INFOID:000000001569535

INSPECTION PROCEDURE

1. CONNECTOR INSPECTION

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Disconnect all the unit connectors on CAN communication system.
4. Check terminals and connectors for damage, bend and loose connection.

Is the inspection result normal?

- YES >> GO TO 2.
 NO >> Repair the terminal and connector.

2. CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector terminals.

Data link connector		Continuity
Connector No.	Terminal No.	
M22	6 14	Not existed

Is the inspection result normal?

- YES >> GO TO 3.
 NO >> Check the harness and repair the root cause.

3. CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector and the ground.

Data link connector		Ground	Continuity
Connector No.	Terminal No.		
M22	6		Not existed
	14		Not existed

Is the inspection result normal?

- YES >> GO TO 4.
 NO >> Check the harness and repair the root cause.

4. CHECK ECM AND IPDM E/R TERMINATION CIRCUIT

1. Remove the ECM and the IPDM E/R.
2. Check the resistance between the ECM terminals.

ECM		Resistance (Ω)
Terminal No.		
98	97	Approx. 108 – 132

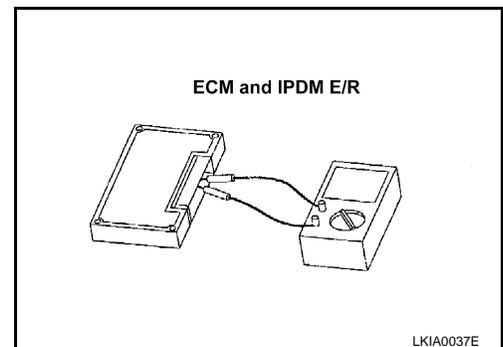
3. Check the resistance between the IPDM E/R terminals.

IPDM E/R		Resistance (Ω)
Terminal No.		
40	39	Approx. 108 – 132

Is the measurement value within the specification?

- YES >> GO TO 5.
 NO >> Replace the ECM and/or the IPDM E/R.

5. CHECK SYMPTOM



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CAN COMMUNICATION CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 4)]

Connect all the connectors. Check if the symptoms described in the “Symptom (Results from interview with customer)” are reproduced.

Inspection result

Reproduced>>GO TO 6.

Non-reproduced>>Start the diagnosis again. Follow the trouble diagnosis procedure when past error is detected.

6.CHECK UNIT REPRODUCTION

Perform the reproduction test as per the following procedure for each unit.

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Disconnect one of the unit connectors of CAN communication system.

NOTE:

ECM and IPDM E/R have a termination circuit. Check other units first.

4. Connect the battery cable to the negative terminal. Check if the symptoms described in the “Symptom (Results from interview with customer)” are reproduced.

NOTE:

Although unit-related error symptoms occur, do not confuse them with other symptoms.

Inspection result

Reproduced>>Connect the connector. Check other units as per the above procedure.

Non-reproduced>>Replace the unit whose connector was disconnected.

MAIN LINE BETWEEN DLC AND ABS CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 5)]

COMPONENT DIAGNOSIS

MAIN LINE BETWEEN DLC AND ABS CIRCUIT

Diagnosis Procedure

INFOID:000000001569536

INSPECTION PROCEDURE

1. CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M1
 - Harness connector E30

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the harness connectors M1 and E30.
2. Check the continuity between the data link connector and the harness connector.

Data link connector		Harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
M22	6	M1	15G	Existed
	14		8G	Existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the main line between the data link connector and the harness connector M1.

3. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the connector of ABS actuator and electric unit (control unit).
2. Check the continuity between the harness connector and the ABS actuator and electric unit (control unit) harness connector.

Harness connector		ABS actuator and electric unit (control unit) harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
E30	15G	E26	26	Existed
	8G		15	Existed

Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the data link connector and the ABS actuator and electric unit (control unit).

NO >> Repair the main line between the harness connector E30 and the ABS actuator and electric unit (control unit).

ECM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 5)]

ECM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569537

INSPECTION PROCEDURE

1. CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
 - ECM
 - Harness connector E30
 - Harness connector M1

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of ECM.
2. Check the resistance between the ECM harness connector terminals.

ECM harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E10	98	97	Approx. 108 – 132

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ECM branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ECM. Refer to the following.

- QR engine models for California: [EC-144, "Diagnosis Procedure"](#)
- QR engine models except for California: [EC-657, "Diagnosis Procedure"](#)
- VQ engine models: [EC-1143, "Diagnosis Procedure"](#)

Is the inspection result normal?

YES (Present error)>>Replace the ECM. Refer to the following.

- QR engine models for California: [EC-27, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)
- QR engine models except for California: [EC-546, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)
- VQ engine models: [EC-1019, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)

YES (Past error)>>Error was detected in the ECM branch line.

NO >> Repair the power supply and the ground circuit.

A-BAG BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 5)]

A-BAG BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569538

1. CHECK AIR BAG DIAGNOSIS SENSOR UNIT

Check the air bag diagnosis sensor unit. Refer to [SRC-3, "Work Flow"](#).

Is the inspection result normal?

YES >> Replace the main harness.

NO >> Replace parts whose air bag system has a malfunction.

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BCM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 5)]

BCM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569540

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of BCM.
2. Check the resistance between the BCM harness connector terminals.

BCM harness connector		Resistance (Ω)	
Connector No.	Terminal No.		
M19	79	78	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the BCM branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the BCM. Refer to [BCS-36, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES (Present error)>>Replace the BCM. Refer to [BCS-88, "Removal and Installation"](#).

YES (Past error)>>Error was detected in the BCM branch line.

NO >> Repair the power supply and the ground circuit.

DLC BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 5)]

DLC BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569541

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

Check the resistance between the data link connector terminals.

Data link connector		Resistance (Ω)
Connector No.	Terminal No.	
M22	6 14	Approx. 54 – 66

Is the measurement value within the specification?

YES (Present error)>>Check the CAN system type decision again.

YES (Past error)>>Error was detected in the data link connector branch line circuit.

NO >> Repair the data link connector branch line.

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M&A BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569542

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

- YES >> GO TO 2.
 NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of combination meter.
2. Check the resistance between the combination meter harness connector terminals.

Combination meter harness connector			Resistance (Ω)
Connector No.	Terminal No.		
M24	21	22	Approx. 54 – 66

Is the measurement value within the specification?

- YES >> GO TO 3.
 NO >> Repair the combination meter branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the combination meter. Refer to [MWI-43, "COMBINATION METER : Diagnosis Procedure"](#) .

Is it normal?

- YES (Present error)>>Replace the combination meter. Refer to [MWI-172, "Removal and Installation"](#) .
 YES (Past error)>>Error was detected in the combination meter branch line.
 NO >> Repair the power supply and the ground circuit.

ABS BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 5)]

ABS BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569637

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of ABS actuator and electric unit (control unit).
2. Check the resistance between the ABS actuator and electric unit (control unit) harness connector terminals.

ABS actuator and electric unit (control unit) harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E26	26	15	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ABS actuator and electric unit (control unit) branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ABS actuator and electric unit (control unit). Refer to the following.

- Models with ABS: [BRC-41, "Wiring Diagram - Coupe"](#) or [BRC-46, "Wiring Diagram - Sedan"](#)
- Models with TCS: [BRC-109, "Wiring Diagram - Coupe"](#) or [BRC-115, "Wiring Diagram - Sedan"](#)
- Models with VDC: [BRC-206, "Wiring Diagram - Coupe"](#) or [BRC-214, "Wiring Diagram - Sedan"](#)

Is the inspection result normal?

YES (Present error)>>Replace the ABS actuator and electric unit (control unit). Refer to the following.

- Models with ABS: [BRC-66, "Exploded View"](#)
- Models with TCS: [BRC-136, "Exploded View"](#)
- Models with VDC: [BRC-238, "Exploded View"](#)

YES (Past error)>>Error was detected in the ABS actuator and electric unit (control unit) branch line.

NO >> Repair the power supply and the ground circuit.

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IPDM-E BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 5)]

IPDM-E BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569546

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of IPDM E/R.
2. Check the resistance between the IPDM E/R harness connector terminals.

IPDM E/R harness connector		Resistance (Ω)
Connector No.	Terminal No.	
E17	40 39	Approx. 108 – 132

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the IPDM E/R branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the IPDM E/R. Refer to [PCS-19, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES (Present error)>>Replace the IPDM E/R. Refer to [PCS-43, "Removal and Installation"](#).

YES (Past error)>>Error was detected in the IPDM E/R branch line.

NO >> Repair the power supply and the ground circuit.

CAN COMMUNICATION CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 5)]

CAN COMMUNICATION CIRCUIT

Diagnosis Procedure

INFOID:000000001569547

INSPECTION PROCEDURE

1. CONNECTOR INSPECTION

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Disconnect all the unit connectors on CAN communication system.
4. Check terminals and connectors for damage, bend and loose connection.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector terminals.

Data link connector		Continuity
Connector No.	Terminal No.	
M22	6 14	Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Check the harness and repair the root cause.

3. CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector and the ground.

Data link connector		Ground	Continuity
Connector No.	Terminal No.		
M22	6		Not existed
	14		Not existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Check the harness and repair the root cause.

4. CHECK ECM AND IPDM E/R TERMINATION CIRCUIT

1. Remove the ECM and the IPDM E/R.
2. Check the resistance between the ECM terminals.

ECM		Resistance (Ω)
Terminal No.		
98	97	Approx. 108 – 132

3. Check the resistance between the IPDM E/R terminals.

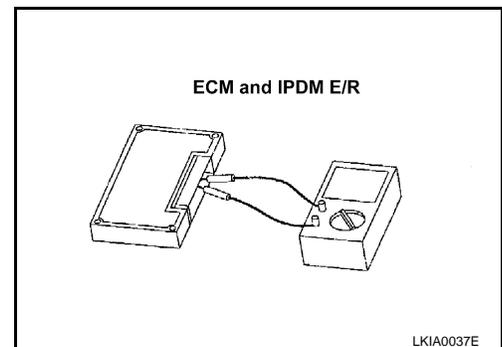
IPDM E/R		Resistance (Ω)
Terminal No.		
40	39	Approx. 108 – 132

Is the measurement value within the specification?

YES >> GO TO 5.

NO >> Replace the ECM and/or the IPDM E/R.

5. CHECK SYMPTOM



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CAN COMMUNICATION CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 5)]

Connect all the connectors. Check if the symptoms described in the “Symptom (Results from interview with customer)” are reproduced.

Inspection result

Reproduced>>GO TO 6.

Non-reproduced>>Start the diagnosis again. Follow the trouble diagnosis procedure when past error is detected.

6.CHECK UNIT REPRODUCTION

Perform the reproduction test as per the following procedure for each unit.

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Disconnect one of the unit connectors of CAN communication system.

NOTE:

ECM and IPDM E/R have a termination circuit. Check other units first.

4. Connect the battery cable to the negative terminal. Check if the symptoms described in the “Symptom (Results from interview with customer)” are reproduced.

NOTE:

Although unit-related error symptoms occur, do not confuse them with other symptoms.

Inspection result

Reproduced>>Connect the connector. Check other units as per the above procedure.

Non-reproduced>>Replace the unit whose connector was disconnected.

MAIN LINE BETWEEN DLC AND ABS CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 6)]

COMPONENT DIAGNOSIS

MAIN LINE BETWEEN DLC AND ABS CIRCUIT

Diagnosis Procedure

INFOID:000000001569549

INSPECTION PROCEDURE

1. CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M1
 - Harness connector E30

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the harness connectors M1 and E30.
2. Check the continuity between the data link connector and the harness connector.

Data link connector		Harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
M22	6	M1	15G	Existed
	14		8G	Existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the main line between the data link connector and the harness connector M1.

3. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the connector of ABS actuator and electric unit (control unit).
2. Check the continuity between the harness connector and the ABS actuator and electric unit (control unit) harness connector.

Harness connector		ABS actuator and electric unit (control unit) harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
E30	15G	E26	26	Existed
	8G		15	Existed

Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the data link connector and the ABS actuator and electric unit (control unit).

NO >> Repair the main line between the harness connector E30 and the ABS actuator and electric unit (control unit).

ECM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 6)]

ECM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569550

INSPECTION PROCEDURE

1. CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
 - ECM
 - Harness connector E30
 - Harness connector M1

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of ECM.
2. Check the resistance between the ECM harness connector terminals.

ECM harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E10	98	97	Approx. 108 – 132

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ECM branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ECM. Refer to the following.

- QR engine models for California: [EC-144, "Diagnosis Procedure"](#)
- QR engine models except for California: [EC-657, "Diagnosis Procedure"](#)
- VQ engine models: [EC-1143, "Diagnosis Procedure"](#)

Is the inspection result normal?

YES (Present error)>>Replace the ECM. Refer to the following.

- QR engine models for California: [EC-27, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)
- QR engine models except for California: [EC-546, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)
- VQ engine models: [EC-1019, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)

YES (Past error)>>Error was detected in the ECM branch line.

NO >> Repair the power supply and the ground circuit.

A-BAG BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 6)]

A-BAG BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569551

1. CHECK AIR BAG DIAGNOSIS SENSOR UNIT

Check the air bag diagnosis sensor unit. Refer to [SRC-3, "Work Flow"](#).

Is the inspection result normal?

YES >> Replace the main harness.

NO >> Replace parts whose air bag system has a malfunction.

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AV BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569552

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

- YES >> GO TO 2.
 NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of AV control unit.
2. Check the resistance between the AV control unit harness connector terminals.

AV control unit harness connector		Resistance (Ω)
Connector No.	Terminal No.	
M46	24 44	Approx. 54 – 66

Is the measurement value within the specification?

- YES >> GO TO 3.
 NO >> Repair the AV control unit branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the AV control unit. Refer to [AV-307, "AV CONTROL UNIT : Diagnosis Procedure"](#).

Is the inspection result normal?

- YES (Present error)>>Replace the AV control unit. Refer to [AV-422, "Removal and Installation"](#).
 YES (Past error)>>Error was detected in the AV control unit branch line.
 NO >> Repair the power supply and the ground circuit.

BCM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 6)]

BCM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569553

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of BCM.
2. Check the resistance between the BCM harness connector terminals.

BCM harness connector		Resistance (Ω)
Connector No.	Terminal No.	
M19	79	Approx. 54 – 66
	78	

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the BCM branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the BCM. Refer to [BCS-36, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES (Present error)>>Replace the BCM. Refer to [BCS-88, "Removal and Installation"](#).

YES (Past error)>>Error was detected in the BCM branch line.

NO >> Repair the power supply and the ground circuit.

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DLC BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 6)]

DLC BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569554

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

Check the resistance between the data link connector terminals.

Data link connector		Resistance (Ω)
Connector No.	Terminal No.	
M22	6 14	Approx. 54 – 66

Is the measurement value within the specification?

YES (Present error)>>Check the CAN system type decision again.

YES (Past error)>>Error was detected in the data link connector branch line circuit.

NO >> Repair the data link connector branch line.

M&A BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 6)]

M&A BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569555

INSPECTION PROCEDURE

1.CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2.CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of combination meter.
2. Check the resistance between the combination meter harness connector terminals.

Combination meter harness connector		Resistance (Ω)
Connector No.	Terminal No.	
M24	21	Approx. 54 – 66
	22	

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the combination meter branch line.

3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the combination meter. Refer to [MWI-43, "COMBINATION METER : Diagnosis Procedure"](#) .

Is it normal?

YES (Present error)>>Replace the combination meter. Refer to [MWI-172, "Removal and Installation"](#) .

YES (Past error)>>Error was detected in the combination meter branch line.

NO >> Repair the power supply and the ground circuit.

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ABS BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 6)]

ABS BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569638

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of ABS actuator and electric unit (control unit).
2. Check the resistance between the ABS actuator and electric unit (control unit) harness connector terminals.

ABS actuator and electric unit (control unit) harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E26	26	15	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ABS actuator and electric unit (control unit) branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ABS actuator and electric unit (control unit). Refer to the following.

- Models with ABS: [BRC-41, "Wiring Diagram - Coupe"](#) or [BRC-46, "Wiring Diagram - Sedan"](#)
- Models with TCS: [BRC-109, "Wiring Diagram - Coupe"](#) or [BRC-115, "Wiring Diagram - Sedan"](#)
- Models with VDC: [BRC-206, "Wiring Diagram - Coupe"](#) or [BRC-214, "Wiring Diagram - Sedan"](#)

Is the inspection result normal?

YES (Present error)>>Replace the ABS actuator and electric unit (control unit). Refer to the following.

- Models with ABS: [BRC-66, "Exploded View"](#)
- Models with TCS: [BRC-136, "Exploded View"](#)
- Models with VDC: [BRC-238, "Exploded View"](#)

YES (Past error)>>Error was detected in the ABS actuator and electric unit (control unit) branch line.

NO >> Repair the power supply and the ground circuit.

IPDM-E BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 6)]

IPDM-E BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569559

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of IPDM E/R.
2. Check the resistance between the IPDM E/R harness connector terminals.

IPDM E/R harness connector		Resistance (Ω)
Connector No.	Terminal No.	
E17	40 39	Approx. 108 – 132

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the IPDM E/R branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the IPDM E/R. Refer to [PCS-19, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES (Present error)>>Replace the IPDM E/R. Refer to [PCS-43, "Removal and Installation"](#).

YES (Past error)>>Error was detected in the IPDM E/R branch line.

NO >> Repair the power supply and the ground circuit.

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CAN COMMUNICATION CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 6)]

CAN COMMUNICATION CIRCUIT

Diagnosis Procedure

INFOID:000000001569560

INSPECTION PROCEDURE

1. CONNECTOR INSPECTION

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Disconnect all the unit connectors on CAN communication system.
4. Check terminals and connectors for damage, bend and loose connection.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector terminals.

Data link connector		Continuity
Connector No.	Terminal No.	
M22	6 14	Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Check the harness and repair the root cause.

3. CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector and the ground.

Data link connector		Ground	Continuity
Connector No.	Terminal No.		
M22	6		Not existed
	14		Not existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Check the harness and repair the root cause.

4. CHECK ECM AND IPDM E/R TERMINATION CIRCUIT

1. Remove the ECM and the IPDM E/R.
2. Check the resistance between the ECM terminals.

ECM		Resistance (Ω)
Terminal No.		
98	97	Approx. 108 – 132

3. Check the resistance between the IPDM E/R terminals.

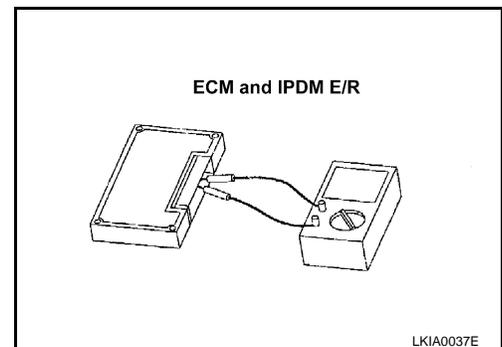
IPDM E/R		Resistance (Ω)
Terminal No.		
40	39	Approx. 108 – 132

Is the measurement value within the specification?

YES >> GO TO 5.

NO >> Replace the ECM and/or the IPDM E/R.

5. CHECK SYMPTOM



CAN COMMUNICATION CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 6)]

Connect all the connectors. Check if the symptoms described in the “Symptom (Results from interview with customer)” are reproduced.

Inspection result

Reproduced>>GO TO 6.

Non-reproduced>>Start the diagnosis again. Follow the trouble diagnosis procedure when past error is detected.

6.CHECK UNIT REPRODUCTION

Perform the reproduction test as per the following procedure for each unit.

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Disconnect one of the unit connectors of CAN communication system.

NOTE:

ECM and IPDM E/R have a termination circuit. Check other units first.

4. Connect the battery cable to the negative terminal. Check if the symptoms described in the “Symptom (Results from interview with customer)” are reproduced.

NOTE:

Although unit-related error symptoms occur, do not confuse them with other symptoms.

Inspection result

Reproduced>>Connect the connector. Check other units as per the above procedure.

Non-reproduced>>Replace the unit whose connector was disconnected.

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MAIN LINE BETWEEN DLC AND ABS CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 7)]

COMPONENT DIAGNOSIS

MAIN LINE BETWEEN DLC AND ABS CIRCUIT

Diagnosis Procedure

INFOID:000000001569561

INSPECTION PROCEDURE

1. CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M1
 - Harness connector E30

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the harness connectors M1 and E30.
2. Check the continuity between the data link connector and the harness connector.

Data link connector		Harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
M22	6	M1	15G	Existed
	14		8G	Existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the main line between the data link connector and the harness connector M1.

3. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the connector of ABS actuator and electric unit (control unit).
2. Check the continuity between the harness connector and the ABS actuator and electric unit (control unit) harness connector.

Harness connector		ABS actuator and electric unit (control unit) harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
E30	15G	E26	26	Existed
	8G		15	Existed

Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the data link connector and the ABS actuator and electric unit (control unit).

NO >> Repair the main line between the harness connector E30 and the ABS actuator and electric unit (control unit).

ECM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 7)]

ECM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569562

INSPECTION PROCEDURE

1. CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
 - ECM
 - Harness connector E30
 - Harness connector M1

Is the inspection result normal?

- YES >> GO TO 2.
NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of ECM.
2. Check the resistance between the ECM harness connector terminals.

ECM harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E10	98	97	Approx. 108 – 132

Is the measurement value within the specification?

- YES >> GO TO 3.
NO >> Repair the ECM branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ECM. Refer to the following.

- QR engine models for California: [EC-144, "Diagnosis Procedure"](#)
- QR engine models except for California: [EC-657, "Diagnosis Procedure"](#)
- VQ engine models: [EC-1143, "Diagnosis Procedure"](#)

Is the inspection result normal?

- YES (Present error)>>Replace the ECM. Refer to the following.
- QR engine models for California: [EC-27, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)
 - QR engine models except for California: [EC-546, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)
 - VQ engine models: [EC-1019, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)

YES (Past error)>>Error was detected in the ECM branch line.

- NO >> Repair the power supply and the ground circuit.

A-BAG BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 7)]

A-BAG BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569563

1. CHECK AIR BAG DIAGNOSIS SENSOR UNIT

Check the air bag diagnosis sensor unit. Refer to [SRC-3, "Work Flow"](#).

Is the inspection result normal?

YES >> Replace the main harness.

NO >> Replace parts whose air bag system has a malfunction.

BCM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 7)]

BCM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569565

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of BCM.
2. Check the resistance between the BCM harness connector terminals.

BCM harness connector			Resistance (Ω)
Connector No.	Terminal No.		
M19	79	78	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the BCM branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the BCM. Refer to [BCS-36, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES (Present error)>>Replace the BCM. Refer to [BCS-88, "Removal and Installation"](#).

YES (Past error)>>Error was detected in the BCM branch line.

NO >> Repair the power supply and the ground circuit.

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DLC BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 7)]

DLC BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569566

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

Check the resistance between the data link connector terminals.

Data link connector		Resistance (Ω)
Connector No.	Terminal No.	
M22	6 14	Approx. 54 – 66

Is the measurement value within the specification?

YES (Present error)>>Check the CAN system type decision again.

YES (Past error)>>Error was detected in the data link connector branch line circuit.

NO >> Repair the data link connector branch line.

M&A BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 7)]

M&A BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569567

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of combination meter.
2. Check the resistance between the combination meter harness connector terminals.

Combination meter harness connector		Resistance (Ω)
Connector No.	Terminal No.	
M24	21	Approx. 54 – 66
	22	

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the combination meter branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the combination meter. Refer to [MWI-43, "COMBINATION METER : Diagnosis Procedure"](#) .

Is it normal?

YES (Present error)>>Replace the combination meter. Refer to [MWI-172, "Removal and Installation"](#) .

YES (Past error)>>Error was detected in the combination meter branch line.

NO >> Repair the power supply and the ground circuit.

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ABS BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 7)]

ABS BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569640

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of ABS actuator and electric unit (control unit).
2. Check the resistance between the ABS actuator and electric unit (control unit) harness connector terminals.

ABS actuator and electric unit (control unit) harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E26	26	15	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ABS actuator and electric unit (control unit) branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ABS actuator and electric unit (control unit). Refer to the following.

- Models with ABS: [BRC-41, "Wiring Diagram - Coupe"](#) or [BRC-46, "Wiring Diagram - Sedan"](#)
- Models with TCS: [BRC-109, "Wiring Diagram - Coupe"](#) or [BRC-115, "Wiring Diagram - Sedan"](#)
- Models with VDC: [BRC-206, "Wiring Diagram - Coupe"](#) or [BRC-214, "Wiring Diagram - Sedan"](#)

Is the inspection result normal?

YES (Present error)>>Replace the ABS actuator and electric unit (control unit). Refer to the following.

- Models with ABS: [BRC-66, "Exploded View"](#)
- Models with TCS: [BRC-136, "Exploded View"](#)
- Models with VDC: [BRC-238, "Exploded View"](#)

YES (Past error)>>Error was detected in the ABS actuator and electric unit (control unit) branch line.

NO >> Repair the power supply and the ground circuit.

TCM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 7)]

TCM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569570

INSPECTION PROCEDURE

1.CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
 - TCM
 - Harness connector F1
 - Harness connector E3

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2.CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of TCM.
2. Check the resistance between the TCM harness connector terminals.

TCM harness connector			Resistance (Ω)
Connector No.	Terminal No.		
F16	32	31	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the TCM branch line.

3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the TCM. Refer to the following.

- QR25DE models: [TM-375. "Wiring Diagram - CVT CONTROL SYSTEM - Coupe"](#) or [TM-384. "Wiring Diagram - CVT CONTROL SYSTEM - Sedan"](#)
- VQ35DE models: [TM-199. "Wiring Diagram—CVT CONTROL SYSTEM—Coupe"](#) or [TM-207. "Wiring Diagram—CVT CONTROL SYSTEM—Sedan"](#)

Is the inspection result normal?

YES (Present error)>>Replace the TCM. Refer to the following.

- QR25DE models: [TM-425. "Exploded View"](#)
- VQ35DE models: [TM-249. "Exploded View"](#)

YES (Past error)>>Error was detected in the TCM branch line.

NO >> Repair the power supply and the ground circuit.

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IPDM-E BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 7)]

IPDM-E BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569571

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of IPDM E/R.
2. Check the resistance between the IPDM E/R harness connector terminals.

IPDM E/R harness connector		Resistance (Ω)
Connector No.	Terminal No.	
E17	40 39	Approx. 108 – 132

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the IPDM E/R branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the IPDM E/R. Refer to [PCS-19, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES (Present error)>>Replace the IPDM E/R. Refer to [PCS-43, "Removal and Installation"](#).

YES (Past error)>>Error was detected in the IPDM E/R branch line.

NO >> Repair the power supply and the ground circuit.

CAN COMMUNICATION CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 7)]

CAN COMMUNICATION CIRCUIT

Diagnosis Procedure

INFOID:000000001569572

INSPECTION PROCEDURE

1. CONNECTOR INSPECTION

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Disconnect all the unit connectors on CAN communication system.
4. Check terminals and connectors for damage, bend and loose connection.

Is the inspection result normal?

- YES >> GO TO 2.
 NO >> Repair the terminal and connector.

2. CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector terminals.

Data link connector		Continuity
Connector No.	Terminal No.	
M22	6 14	Not existed

Is the inspection result normal?

- YES >> GO TO 3.
 NO >> Check the harness and repair the root cause.

3. CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector and the ground.

Data link connector		Ground	Continuity
Connector No.	Terminal No.		
M22	6		Not existed
	14		Not existed

Is the inspection result normal?

- YES >> GO TO 4.
 NO >> Check the harness and repair the root cause.

4. CHECK ECM AND IPDM E/R TERMINATION CIRCUIT

1. Remove the ECM and the IPDM E/R.
2. Check the resistance between the ECM terminals.

ECM		Resistance (Ω)
Terminal No.		
98	97	Approx. 108 – 132

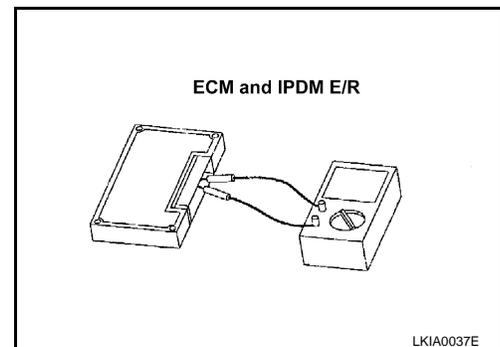
3. Check the resistance between the IPDM E/R terminals.

IPDM E/R		Resistance (Ω)
Terminal No.		
40	39	Approx. 108 – 132

Is the measurement value within the specification?

- YES >> GO TO 5.
 NO >> Replace the ECM and/or the IPDM E/R.

5. CHECK SYMPTOM



CAN COMMUNICATION CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 7)]

Connect all the connectors. Check if the symptoms described in the “Symptom (Results from interview with customer)” are reproduced.

Inspection result

Reproduced>>GO TO 6.

Non-reproduced>>Start the diagnosis again. Follow the trouble diagnosis procedure when past error is detected.

6.CHECK UNIT REPRODUCTION

Perform the reproduction test as per the following procedure for each unit.

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Disconnect one of the unit connectors of CAN communication system.

NOTE:

ECM and IPDM E/R have a termination circuit. Check other units first.

4. Connect the battery cable to the negative terminal. Check if the symptoms described in the “Symptom (Results from interview with customer)” are reproduced.

NOTE:

Although unit-related error symptoms occur, do not confuse them with other symptoms.

Inspection result

Reproduced>>Connect the connector. Check other units as per the above procedure.

Non-reproduced>>Replace the unit whose connector was disconnected.

MAIN LINE BETWEEN DLC AND ABS CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 8)]

COMPONENT DIAGNOSIS

MAIN LINE BETWEEN DLC AND ABS CIRCUIT

Diagnosis Procedure

INFOID:000000001569573

INSPECTION PROCEDURE

1. CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M1
 - Harness connector E30

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the harness connectors M1 and E30.
2. Check the continuity between the data link connector and the harness connector.

Data link connector		Harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
M22	6	M1	15G	Existed
	14		8G	Existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the main line between the data link connector and the harness connector M1.

3. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the connector of ABS actuator and electric unit (control unit).
2. Check the continuity between the harness connector and the ABS actuator and electric unit (control unit) harness connector.

Harness connector		ABS actuator and electric unit (control unit) harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
E30	15G	E26	26	Existed
	8G		15	Existed

Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the data link connector and the ABS actuator and electric unit (control unit).

NO >> Repair the main line between the harness connector E30 and the ABS actuator and electric unit (control unit).

ECM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 8)]

ECM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569574

INSPECTION PROCEDURE

1. CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
 - ECM
 - Harness connector E30
 - Harness connector M1

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of ECM.
2. Check the resistance between the ECM harness connector terminals.

ECM harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E10	98	97	Approx. 108 – 132

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ECM branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ECM. Refer to the following.

- QR engine models for California: [EC-144, "Diagnosis Procedure"](#)
- QR engine models except for California: [EC-657, "Diagnosis Procedure"](#)
- VQ engine models: [EC-1143, "Diagnosis Procedure"](#)

Is the inspection result normal?

YES (Present error)>>Replace the ECM. Refer to the following.

- QR engine models for California: [EC-27, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)
- QR engine models except for California: [EC-546, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)
- VQ engine models: [EC-1019, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)

YES (Past error)>>Error was detected in the ECM branch line.

NO >> Repair the power supply and the ground circuit.

A-BAG BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 8)]

A-BAG BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569575

1. CHECK AIR BAG DIAGNOSIS SENSOR UNIT

Check the air bag diagnosis sensor unit. Refer to [SRC-3, "Work Flow"](#).

Is the inspection result normal?

YES >> Replace the main harness.

NO >> Replace parts whose air bag system has a malfunction.

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AV BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569576

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

- YES >> GO TO 2.
 NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of AV control unit.
2. Check the resistance between the AV control unit harness connector terminals.

AV control unit harness connector			Resistance (Ω)
Connector No.	Terminal No.		
M46	24	44	Approx. 54 – 66

Is the measurement value within the specification?

- YES >> GO TO 3.
 NO >> Repair the AV control unit branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the AV control unit. Refer to [AV-307, "AV CONTROL UNIT : Diagnosis Procedure"](#).

Is the inspection result normal?

- YES (Present error)>>Replace the AV control unit. Refer to [AV-422, "Removal and Installation"](#).
 YES (Past error)>>Error was detected in the AV control unit branch line.
 NO >> Repair the power supply and the ground circuit.

BCM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 8)]

BCM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569577

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

- YES >> GO TO 2.
NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of BCM.
2. Check the resistance between the BCM harness connector terminals.

BCM harness connector		Resistance (Ω)
Connector No.	Terminal No.	
M19	79	Approx. 54 – 66
	78	

Is the measurement value within the specification?

- YES >> GO TO 3.
NO >> Repair the BCM branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the BCM. Refer to [BCS-36, "Diagnosis Procedure"](#) .

Is the inspection result normal?

- YES (Present error)>>Replace the BCM. Refer to [BCS-88, "Removal and Installation"](#).
YES (Past error)>>Error was detected in the BCM branch line.
NO >> Repair the power supply and the ground circuit.

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DLC BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 8)]

DLC BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569578

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

Check the resistance between the data link connector terminals.

Data link connector		Resistance (Ω)
Connector No.	Terminal No.	
M22	6 14	Approx. 54 – 66

Is the measurement value within the specification?

YES (Present error)>>Check the CAN system type decision again.

YES (Past error)>>Error was detected in the data link connector branch line circuit.

NO >> Repair the data link connector branch line.

M&A BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 8)]

M&A BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569579

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of combination meter.
2. Check the resistance between the combination meter harness connector terminals.

Combination meter harness connector		Resistance (Ω)
Connector No.	Terminal No.	
M24	21	Approx. 54 – 66
	22	

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the combination meter branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the combination meter. Refer to [MWI-43, "COMBINATION METER : Diagnosis Procedure"](#) .

Is it normal?

YES (Present error)>>Replace the combination meter. Refer to [MWI-172, "Removal and Installation"](#) .

YES (Past error)>>Error was detected in the combination meter branch line.

NO >> Repair the power supply and the ground circuit.

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ABS BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 8)]

ABS BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569641

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of ABS actuator and electric unit (control unit).
2. Check the resistance between the ABS actuator and electric unit (control unit) harness connector terminals.

ABS actuator and electric unit (control unit) harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E26	26	15	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ABS actuator and electric unit (control unit) branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ABS actuator and electric unit (control unit). Refer to the following.

- Models with ABS: [BRC-41, "Wiring Diagram - Coupe"](#) or [BRC-46, "Wiring Diagram - Sedan"](#)
- Models with TCS: [BRC-109, "Wiring Diagram - Coupe"](#) or [BRC-115, "Wiring Diagram - Sedan"](#)
- Models with VDC: [BRC-206, "Wiring Diagram - Coupe"](#) or [BRC-214, "Wiring Diagram - Sedan"](#)

Is the inspection result normal?

YES (Present error)>>Replace the ABS actuator and electric unit (control unit). Refer to the following.

- Models with ABS: [BRC-66, "Exploded View"](#)
- Models with TCS: [BRC-136, "Exploded View"](#)
- Models with VDC: [BRC-238, "Exploded View"](#)

YES (Past error)>>Error was detected in the ABS actuator and electric unit (control unit) branch line.

NO >> Repair the power supply and the ground circuit.

TCM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 8)]

TCM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569582

INSPECTION PROCEDURE

1. CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
 - TCM
 - Harness connector F1
 - Harness connector E3

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of TCM.
2. Check the resistance between the TCM harness connector terminals.

TCM harness connector			Resistance (Ω)
Connector No.	Terminal No.		
F16	32	31	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the TCM branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the TCM. Refer to the following.

- QR25DE models: [TM-375. "Wiring Diagram - CVT CONTROL SYSTEM - Coupe"](#) or [TM-384. "Wiring Diagram - CVT CONTROL SYSTEM - Sedan"](#)
- VQ35DE models: [TM-199. "Wiring Diagram—CVT CONTROL SYSTEM—Coupe"](#) or [TM-207. "Wiring Diagram—CVT CONTROL SYSTEM—Sedan"](#)

Is the inspection result normal?

YES (Present error)>>Replace the TCM. Refer to the following.

- QR25DE models: [TM-425. "Exploded View"](#)

- VQ35DE models: [TM-249. "Exploded View"](#)

YES (Past error)>>Error was detected in the TCM branch line.

NO >> Repair the power supply and the ground circuit.

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IPDM-E BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 8)]

IPDM-E BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569583

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of IPDM E/R.
2. Check the resistance between the IPDM E/R harness connector terminals.

IPDM E/R harness connector		Resistance (Ω)
Connector No.	Terminal No.	
E17	40 39	Approx. 108 – 132

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the IPDM E/R branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the IPDM E/R. Refer to [PCS-19, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES (Present error)>>Replace the IPDM E/R. Refer to [PCS-43, "Removal and Installation"](#).

YES (Past error)>>Error was detected in the IPDM E/R branch line.

NO >> Repair the power supply and the ground circuit.

CAN COMMUNICATION CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 8)]

CAN COMMUNICATION CIRCUIT

Diagnosis Procedure

INFOID:000000001569584

INSPECTION PROCEDURE

1. CONNECTOR INSPECTION

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Disconnect all the unit connectors on CAN communication system.
4. Check terminals and connectors for damage, bend and loose connection.

Is the inspection result normal?

- YES >> GO TO 2.
 NO >> Repair the terminal and connector.

2. CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector terminals.

Data link connector		Continuity
Connector No.	Terminal No.	
M22	6 14	Not existed

Is the inspection result normal?

- YES >> GO TO 3.
 NO >> Check the harness and repair the root cause.

3. CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector and the ground.

Data link connector		Ground	Continuity
Connector No.	Terminal No.		
M22	6		Not existed
	14		Not existed

Is the inspection result normal?

- YES >> GO TO 4.
 NO >> Check the harness and repair the root cause.

4. CHECK ECM AND IPDM E/R TERMINATION CIRCUIT

1. Remove the ECM and the IPDM E/R.
2. Check the resistance between the ECM terminals.

ECM		Resistance (Ω)
Terminal No.		
98	97	Approx. 108 – 132

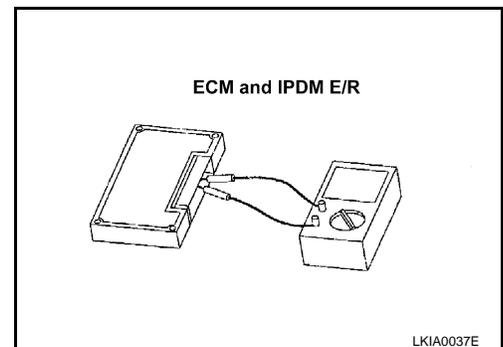
3. Check the resistance between the IPDM E/R terminals.

IPDM E/R		Resistance (Ω)
Terminal No.		
40	39	Approx. 108 – 132

Is the measurement value within the specification?

- YES >> GO TO 5.
 NO >> Replace the ECM and/or the IPDM E/R.

5. CHECK SYMPTOM



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CAN COMMUNICATION CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 8)]

Connect all the connectors. Check if the symptoms described in the “Symptom (Results from interview with customer)” are reproduced.

Inspection result

Reproduced>>GO TO 6.

Non-reproduced>>Start the diagnosis again. Follow the trouble diagnosis procedure when past error is detected.

6.CHECK UNIT REPRODUCTION

Perform the reproduction test as per the following procedure for each unit.

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Disconnect one of the unit connectors of CAN communication system.

NOTE:

ECM and IPDM E/R have a termination circuit. Check other units first.

4. Connect the battery cable to the negative terminal. Check if the symptoms described in the “Symptom (Results from interview with customer)” are reproduced.

NOTE:

Although unit-related error symptoms occur, do not confuse them with other symptoms.

Inspection result

Reproduced>>Connect the connector. Check other units as per the above procedure.

Non-reproduced>>Replace the unit whose connector was disconnected.

MAIN LINE BETWEEN DLC AND ABS CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 9)]

COMPONENT DIAGNOSIS

MAIN LINE BETWEEN DLC AND ABS CIRCUIT

Diagnosis Procedure

INFOID:000000001569585

INSPECTION PROCEDURE

1.CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M1
 - Harness connector E30

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the harness connectors M1 and E30.
2. Check the continuity between the data link connector and the harness connector.

Data link connector		Harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
M22	6	M1	15G	Existed
	14		8G	Existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the main line between the data link connector and the harness connector M1.

3.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the connector of ABS actuator and electric unit (control unit).
2. Check the continuity between the harness connector and the ABS actuator and electric unit (control unit) harness connector.

Harness connector		ABS actuator and electric unit (control unit) harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
E30	15G	E26	26	Existed
	8G		15	Existed

Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the data link connector and the ABS actuator and electric unit (control unit).

NO >> Repair the main line between the harness connector E30 and the ABS actuator and electric unit (control unit).

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ECM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 9)]

ECM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569586

INSPECTION PROCEDURE

1. CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
 - ECM
 - Harness connector E30
 - Harness connector M1

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of ECM.
2. Check the resistance between the ECM harness connector terminals.

ECM harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E10	98	97	Approx. 108 – 132

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ECM branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ECM. Refer to the following.

- QR engine models for California: [EC-144, "Diagnosis Procedure"](#)
- QR engine models except for California: [EC-657, "Diagnosis Procedure"](#)
- VQ engine models: [EC-1143, "Diagnosis Procedure"](#)

Is the inspection result normal?

YES (Present error)>>Replace the ECM. Refer to the following.

- QR engine models for California: [EC-27, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)
- QR engine models except for California: [EC-546, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)
- VQ engine models: [EC-1019, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)

YES (Past error)>>Error was detected in the ECM branch line.

NO >> Repair the power supply and the ground circuit.

A-BAG BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 9)]

A-BAG BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569587

1. CHECK AIR BAG DIAGNOSIS SENSOR UNIT

Check the air bag diagnosis sensor unit. Refer to [SRC-3, "Work Flow"](#).

Is the inspection result normal?

YES >> Replace the main harness.

NO >> Replace parts whose air bag system has a malfunction.

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BCM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 9)]

BCM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569589

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

- YES >> GO TO 2.
NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of BCM.
2. Check the resistance between the BCM harness connector terminals.

BCM harness connector		Resistance (Ω)	
Connector No.	Terminal No.		
M19	79	78	Approx. 54 – 66

Is the measurement value within the specification?

- YES >> GO TO 3.
NO >> Repair the BCM branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the BCM. Refer to [BCS-36, "Diagnosis Procedure"](#).

Is the inspection result normal?

- YES (Present error)>>Replace the BCM. Refer to [BCS-88, "Removal and Installation"](#).
YES (Past error)>>Error was detected in the BCM branch line.
NO >> Repair the power supply and the ground circuit.

DLC BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 9)]

DLC BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569590

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

Check the resistance between the data link connector terminals.

Data link connector		Resistance (Ω)
Connector No.	Terminal No.	
M22	6 14	Approx. 54 – 66

Is the measurement value within the specification?

YES (Present error)>>Check the CAN system type decision again.

YES (Past error)>>Error was detected in the data link connector branch line circuit.

NO >> Repair the data link connector branch line.

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M&A BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569591

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

- YES >> GO TO 2.
 NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of combination meter.
2. Check the resistance between the combination meter harness connector terminals.

Combination meter harness connector			Resistance (Ω)
Connector No.	Terminal No.		
M24	21	22	Approx. 54 – 66

Is the measurement value within the specification?

- YES >> GO TO 3.
 NO >> Repair the combination meter branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the combination meter. Refer to [MWI-43, "COMBINATION METER : Diagnosis Procedure"](#) .

Is it normal?

- YES (Present error)>>Replace the combination meter. Refer to [MWI-172, "Removal and Installation"](#) .
 YES (Past error)>>Error was detected in the combination meter branch line.
 NO >> Repair the power supply and the ground circuit.

STRG BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 9)]

STRG BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000003247353

INSPECTION PROCEDURE

1.CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2.CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of steering angle sensor.
2. Check the resistance between the steering angle sensor harness connector terminals.

Steering angle sensor harness connector			Resistance (Ω)
Connector No.	Terminal No.		
M53	5	2	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the steering angle sensor branch line.

3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the steering angle sensor. Refer to [BRC-206, "Wiring Diagram - Coupe"](#) or [BRC-214, "Wiring Diagram - Sedan"](#).

Is it normal?

YES (Present error)>>Replace the steering angle sensor. Refer to [BRC-241, "Removal and Installation"](#) .

YES (Past error)>>Error was detected in the steering angle sensor branch line.

NO >> Repair the power supply and the ground circuit.

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ABS BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 9)]

ABS BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569642

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of ABS actuator and electric unit (control unit).
2. Check the resistance between the ABS actuator and electric unit (control unit) harness connector terminals.

ABS actuator and electric unit (control unit) harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E26	26	15	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ABS actuator and electric unit (control unit) branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ABS actuator and electric unit (control unit). Refer to the following.

- Models with ABS: [BRC-41, "Wiring Diagram - Coupe"](#) or [BRC-46, "Wiring Diagram - Sedan"](#)
- Models with TCS: [BRC-109, "Wiring Diagram - Coupe"](#) or [BRC-115, "Wiring Diagram - Sedan"](#)
- Models with VDC: [BRC-206, "Wiring Diagram - Coupe"](#) or [BRC-214, "Wiring Diagram - Sedan"](#)

Is the inspection result normal?

YES (Present error)>>Replace the ABS actuator and electric unit (control unit). Refer to the following.

- Models with ABS: [BRC-66, "Exploded View"](#)
- Models with TCS: [BRC-136, "Exploded View"](#)
- Models with VDC: [BRC-238, "Exploded View"](#)

YES (Past error)>>Error was detected in the ABS actuator and electric unit (control unit) branch line.

NO >> Repair the power supply and the ground circuit.

IPDM-E BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 9)]

IPDM-E BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569595

INSPECTION PROCEDURE

1.CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2.CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of IPDM E/R.
2. Check the resistance between the IPDM E/R harness connector terminals.

IPDM E/R harness connector		Resistance (Ω)
Connector No.	Terminal No.	
E17	40 39	Approx. 108 – 132

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the IPDM E/R branch line.

3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the IPDM E/R. Refer to [PCS-19, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES (Present error)>>Replace the IPDM E/R. Refer to [PCS-43, "Removal and Installation"](#).

YES (Past error)>>Error was detected in the IPDM E/R branch line.

NO >> Repair the power supply and the ground circuit.

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CAN COMMUNICATION CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 9)]

CAN COMMUNICATION CIRCUIT

Diagnosis Procedure

INFOID:000000001569596

INSPECTION PROCEDURE

1. CONNECTOR INSPECTION

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Disconnect all the unit connectors on CAN communication system.
4. Check terminals and connectors for damage, bend and loose connection.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector terminals.

Data link connector		Continuity
Connector No.	Terminal No.	
M22	6 14	Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Check the harness and repair the root cause.

3. CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector and the ground.

Data link connector		Ground	Continuity
Connector No.	Terminal No.		
M22	6		Not existed
	14		Not existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Check the harness and repair the root cause.

4. CHECK ECM AND IPDM E/R TERMINATION CIRCUIT

1. Remove the ECM and the IPDM E/R.
2. Check the resistance between the ECM terminals.

ECM		Resistance (Ω)
Terminal No.		
98	97	Approx. 108 – 132

3. Check the resistance between the IPDM E/R terminals.

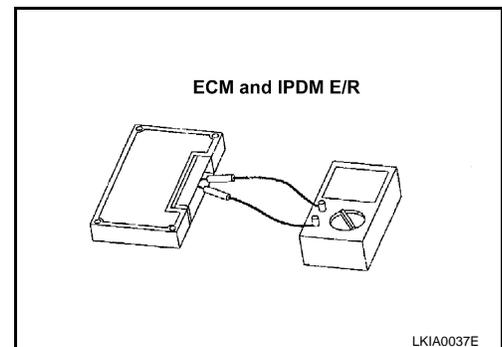
IPDM E/R		Resistance (Ω)
Terminal No.		
40	39	Approx. 108 – 132

Is the measurement value within the specification?

YES >> GO TO 5.

NO >> Replace the ECM and/or the IPDM E/R.

5. CHECK SYMPTOM



CAN COMMUNICATION CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 9)]

Connect all the connectors. Check if the symptoms described in the “Symptom (Results from interview with customer)” are reproduced.

Inspection result

Reproduced>>GO TO 6.

Non-reproduced>>Start the diagnosis again. Follow the trouble diagnosis procedure when past error is detected.

6.CHECK UNIT REPRODUCTION

Perform the reproduction test as per the following procedure for each unit.

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Disconnect one of the unit connectors of CAN communication system.

NOTE:

ECM and IPDM E/R have a termination circuit. Check other units first.

4. Connect the battery cable to the negative terminal. Check if the symptoms described in the “Symptom (Results from interview with customer)” are reproduced.

NOTE:

Although unit-related error symptoms occur, do not confuse them with other symptoms.

Inspection result

Reproduced>>Connect the connector. Check other units as per the above procedure.

Non-reproduced>>Replace the unit whose connector was disconnected.

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MAIN LINE BETWEEN DLC AND ABS CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 10)]

COMPONENT DIAGNOSIS

MAIN LINE BETWEEN DLC AND ABS CIRCUIT

Diagnosis Procedure

INFOID:000000001569597

INSPECTION PROCEDURE

1. CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M1
 - Harness connector E30

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the harness connectors M1 and E30.
2. Check the continuity between the data link connector and the harness connector.

Data link connector		Harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
M22	6	M1	15G	Existed
	14		8G	Existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the main line between the data link connector and the harness connector M1.

3. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the connector of ABS actuator and electric unit (control unit).
2. Check the continuity between the harness connector and the ABS actuator and electric unit (control unit) harness connector.

Harness connector		ABS actuator and electric unit (control unit) harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
E30	15G	E26	26	Existed
	8G		15	Existed

Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the data link connector and the ABS actuator and electric unit (control unit).

NO >> Repair the main line between the harness connector E30 and the ABS actuator and electric unit (control unit).

ECM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 10)]

ECM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569598

INSPECTION PROCEDURE

1. CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
 - ECM
 - Harness connector E30
 - Harness connector M1

Is the inspection result normal?

- YES >> GO TO 2.
NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of ECM.
2. Check the resistance between the ECM harness connector terminals.

ECM harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E10	98	97	Approx. 108 – 132

Is the measurement value within the specification?

- YES >> GO TO 3.
NO >> Repair the ECM branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ECM. Refer to the following.

- QR engine models for California: [EC-144, "Diagnosis Procedure"](#)
- QR engine models except for California: [EC-657, "Diagnosis Procedure"](#)
- VQ engine models: [EC-1143, "Diagnosis Procedure"](#)

Is the inspection result normal?

- YES (Present error)>>Replace the ECM. Refer to the following.
- QR engine models for California: [EC-27, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)
 - QR engine models except for California: [EC-546, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)
 - VQ engine models: [EC-1019, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)

YES (Past error)>>Error was detected in the ECM branch line.

NO >> Repair the power supply and the ground circuit.

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A-BAG BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 10)]

A-BAG BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569599

1. CHECK AIR BAG DIAGNOSIS SENSOR UNIT

Check the air bag diagnosis sensor unit. Refer to [SRC-3, "Work Flow"](#).

Is the inspection result normal?

YES >> Replace the main harness.

NO >> Replace parts whose air bag system has a malfunction.

AV BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 10)]

AV BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569600

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of AV control unit.
2. Check the resistance between the AV control unit harness connector terminals.

AV control unit harness connector		Resistance (Ω)
Connector No.	Terminal No.	
M46	24 44	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the AV control unit branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the AV control unit. Refer to [AV-307, "AV CONTROL UNIT : Diagnosis Procedure"](#).

Is the inspection result normal?

YES (Present error)>>Replace the AV control unit. Refer to [AV-422, "Removal and Installation"](#).

YES (Past error)>>Error was detected in the AV control unit branch line.

NO >> Repair the power supply and the ground circuit.

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BCM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 10)]

BCM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569601

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

- YES >> GO TO 2.
NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of BCM.
2. Check the resistance between the BCM harness connector terminals.

BCM harness connector			Resistance (Ω)
Connector No.	Terminal No.		
M19	79	78	Approx. 54 – 66

Is the measurement value within the specification?

- YES >> GO TO 3.
NO >> Repair the BCM branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the BCM. Refer to [BCS-36, "Diagnosis Procedure"](#).

Is the inspection result normal?

- YES (Present error)>>Replace the BCM. Refer to [BCS-88, "Removal and Installation"](#).
YES (Past error)>>Error was detected in the BCM branch line.
NO >> Repair the power supply and the ground circuit.

DLC BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 10)]

DLC BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569602

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

Check the resistance between the data link connector terminals.

Data link connector		Resistance (Ω)
Connector No.	Terminal No.	
M22	6 14	Approx. 54 – 66

Is the measurement value within the specification?

YES (Present error)>>Check the CAN system type decision again.

YES (Past error)>>Error was detected in the data link connector branch line circuit.

NO >> Repair the data link connector branch line.

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M&A BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569603

INSPECTION PROCEDURE

1.CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2.CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of combination meter.
2. Check the resistance between the combination meter harness connector terminals.

Combination meter harness connector			Resistance (Ω)
Connector No.	Terminal No.		
M24	21	22	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the combination meter branch line.

3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the combination meter. Refer to [MWI-43, "COMBINATION METER : Diagnosis Procedure"](#) .

Is it normal?

YES (Present error)>>Replace the combination meter. Refer to [MWI-172, "Removal and Installation"](#) .

YES (Past error)>>Error was detected in the combination meter branch line.

NO >> Repair the power supply and the ground circuit.

STRG BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 10)]

STRG BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000003247356

INSPECTION PROCEDURE

1.CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2.CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of steering angle sensor.
2. Check the resistance between the steering angle sensor harness connector terminals.

Steering angle sensor harness connector			Resistance (Ω)
Connector No.	Terminal No.		
M53	5	2	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the steering angle sensor branch line.

3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the steering angle sensor. Refer to [BRC-206, "Wiring Diagram - Coupe"](#) or [BRC-214, "Wiring Diagram - Sedan"](#).

Is it normal?

YES (Present error)>>Replace the steering angle sensor. Refer to [BRC-241, "Removal and Installation"](#) .

YES (Past error)>>Error was detected in the steering angle sensor branch line.

NO >> Repair the power supply and the ground circuit.

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ABS BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 10)]

ABS BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569643

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of ABS actuator and electric unit (control unit).
2. Check the resistance between the ABS actuator and electric unit (control unit) harness connector terminals.

ABS actuator and electric unit (control unit) harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E26	26	15	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ABS actuator and electric unit (control unit) branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ABS actuator and electric unit (control unit). Refer to the following.

- Models with ABS: [BRC-41, "Wiring Diagram - Coupe"](#) or [BRC-46, "Wiring Diagram - Sedan"](#)
- Models with TCS: [BRC-109, "Wiring Diagram - Coupe"](#) or [BRC-115, "Wiring Diagram - Sedan"](#)
- Models with VDC: [BRC-206, "Wiring Diagram - Coupe"](#) or [BRC-214, "Wiring Diagram - Sedan"](#)

Is the inspection result normal?

YES (Present error)>>Replace the ABS actuator and electric unit (control unit). Refer to the following.

- Models with ABS: [BRC-66, "Exploded View"](#)
- Models with TCS: [BRC-136, "Exploded View"](#)
- Models with VDC: [BRC-238, "Exploded View"](#)

YES (Past error)>>Error was detected in the ABS actuator and electric unit (control unit) branch line.

NO >> Repair the power supply and the ground circuit.

IPDM-E BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 10)]

IPDM-E BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569607

INSPECTION PROCEDURE

1.CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2.CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of IPDM E/R.
2. Check the resistance between the IPDM E/R harness connector terminals.

IPDM E/R harness connector		Resistance (Ω)
Connector No.	Terminal No.	
E17	40 39	Approx. 108 – 132

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the IPDM E/R branch line.

3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the IPDM E/R. Refer to [PCS-19, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES (Present error)>>Replace the IPDM E/R. Refer to [PCS-43, "Removal and Installation"](#).

YES (Past error)>>Error was detected in the IPDM E/R branch line.

NO >> Repair the power supply and the ground circuit.

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CAN COMMUNICATION CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 10)]

CAN COMMUNICATION CIRCUIT

Diagnosis Procedure

INFOID:000000001569608

INSPECTION PROCEDURE

1. CONNECTOR INSPECTION

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Disconnect all the unit connectors on CAN communication system.
4. Check terminals and connectors for damage, bend and loose connection.

Is the inspection result normal?

- YES >> GO TO 2.
 NO >> Repair the terminal and connector.

2. CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector terminals.

Data link connector		Continuity
Connector No.	Terminal No.	
M22	6 14	Not existed

Is the inspection result normal?

- YES >> GO TO 3.
 NO >> Check the harness and repair the root cause.

3. CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector and the ground.

Data link connector		Ground	Continuity
Connector No.	Terminal No.		
M22	6		Not existed
	14		Not existed

Is the inspection result normal?

- YES >> GO TO 4.
 NO >> Check the harness and repair the root cause.

4. CHECK ECM AND IPDM E/R TERMINATION CIRCUIT

1. Remove the ECM and the IPDM E/R.
2. Check the resistance between the ECM terminals.

ECM		Resistance (Ω)
Terminal No.		
98	97	Approx. 108 – 132

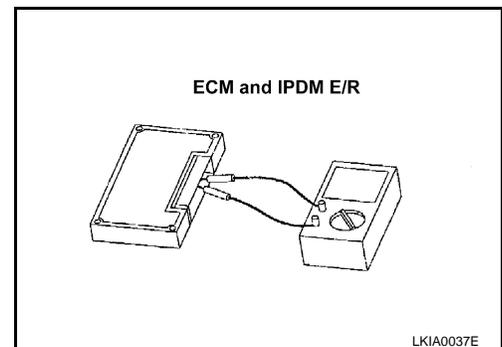
3. Check the resistance between the IPDM E/R terminals.

IPDM E/R		Resistance (Ω)
Terminal No.		
40	39	Approx. 108 – 132

Is the measurement value within the specification?

- YES >> GO TO 5.
 NO >> Replace the ECM and/or the IPDM E/R.

5. CHECK SYMPTOM



CAN COMMUNICATION CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 10)]

Connect all the connectors. Check if the symptoms described in the “Symptom (Results from interview with customer)” are reproduced.

Inspection result

Reproduced>>GO TO 6.

Non-reproduced>>Start the diagnosis again. Follow the trouble diagnosis procedure when past error is detected.

6.CHECK UNIT REPRODUCTION

Perform the reproduction test as per the following procedure for each unit.

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Disconnect one of the unit connectors of CAN communication system.

NOTE:

ECM and IPDM E/R have a termination circuit. Check other units first.

4. Connect the battery cable to the negative terminal. Check if the symptoms described in the “Symptom (Results from interview with customer)” are reproduced.

NOTE:

Although unit-related error symptoms occur, do not confuse them with other symptoms.

Inspection result

Reproduced>>Connect the connector. Check other units as per the above procedure.

Non-reproduced>>Replace the unit whose connector was disconnected.

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MAIN LINE BETWEEN DLC AND ABS CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 11)]

COMPONENT DIAGNOSIS

MAIN LINE BETWEEN DLC AND ABS CIRCUIT

Diagnosis Procedure

INFOID:000000001569609

INSPECTION PROCEDURE

1. CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M1
 - Harness connector E30

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the harness connectors M1 and E30.
2. Check the continuity between the data link connector and the harness connector.

Data link connector		Harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
M22	6	M1	15G	Existed
	14		8G	Existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the main line between the data link connector and the harness connector M1.

3. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the connector of ABS actuator and electric unit (control unit).
2. Check the continuity between the harness connector and the ABS actuator and electric unit (control unit) harness connector.

Harness connector		ABS actuator and electric unit (control unit) harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
E30	15G	E26	26	Existed
	8G		15	Existed

Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the data link connector and the ABS actuator and electric unit (control unit).

NO >> Repair the main line between the harness connector E30 and the ABS actuator and electric unit (control unit).

ECM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 11)]

ECM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569610

INSPECTION PROCEDURE

1. CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
 - ECM
 - Harness connector E30
 - Harness connector M1

Is the inspection result normal?

- YES >> GO TO 2.
NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of ECM.
2. Check the resistance between the ECM harness connector terminals.

ECM harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E10	98	97	Approx. 108 – 132

Is the measurement value within the specification?

- YES >> GO TO 3.
NO >> Repair the ECM branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ECM. Refer to the following.

- QR engine models for California: [EC-144, "Diagnosis Procedure"](#)
- QR engine models except for California: [EC-657, "Diagnosis Procedure"](#)
- VQ engine models: [EC-1143, "Diagnosis Procedure"](#)

Is the inspection result normal?

- YES (Present error)>>Replace the ECM. Refer to the following.
- QR engine models for California: [EC-27, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)
 - QR engine models except for California: [EC-546, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)
 - VQ engine models: [EC-1019, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)

- YES (Past error)>>Error was detected in the ECM branch line.
NO >> Repair the power supply and the ground circuit.

A-BAG BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 11)]

A-BAG BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569611

1. CHECK AIR BAG DIAGNOSIS SENSOR UNIT

Check the air bag diagnosis sensor unit. Refer to [SRC-3, "Work Flow"](#).

Is the inspection result normal?

YES >> Replace the main harness.

NO >> Replace parts whose air bag system has a malfunction.

BCM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 11)]

BCM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569613

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

- YES >> GO TO 2.
NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of BCM.
2. Check the resistance between the BCM harness connector terminals.

BCM harness connector		Resistance (Ω)
Connector No.	Terminal No.	
M19	79	Approx. 54 – 66
	78	

Is the measurement value within the specification?

- YES >> GO TO 3.
NO >> Repair the BCM branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the BCM. Refer to [BCS-36, "Diagnosis Procedure"](#).

Is the inspection result normal?

- YES (Present error)>>Replace the BCM. Refer to [BCS-88, "Removal and Installation"](#).
YES (Past error)>>Error was detected in the BCM branch line.
NO >> Repair the power supply and the ground circuit.

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DLC BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 11)]

DLC BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569614

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

Check the resistance between the data link connector terminals.

Data link connector		Resistance (Ω)
Connector No.	Terminal No.	
M22	6 14	Approx. 54 – 66

Is the measurement value within the specification?

YES (Present error)>>Check the CAN system type decision again.

YES (Past error)>>Error was detected in the data link connector branch line circuit.

NO >> Repair the data link connector branch line.

M&A BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569615

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of combination meter.
2. Check the resistance between the combination meter harness connector terminals.

Combination meter harness connector		Resistance (Ω)
Connector No.	Terminal No.	
M24	21 22	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the combination meter branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the combination meter. Refer to [MWI-43, "COMBINATION METER : Diagnosis Procedure"](#) .

Is it normal?

YES (Present error)>>Replace the combination meter. Refer to [MWI-172, "Removal and Installation"](#) .

YES (Past error)>>Error was detected in the combination meter branch line.

NO >> Repair the power supply and the ground circuit.

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STRG BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 11)]

STRG BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000003247358

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of steering angle sensor.
2. Check the resistance between the steering angle sensor harness connector terminals.

Steering angle sensor harness connector		Resistance (Ω)
Connector No.	Terminal No.	
M53	5	Approx. 54 – 66
	2	

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the steering angle sensor branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the steering angle sensor. Refer to [BRC-206, "Wiring Diagram - Coupe"](#) or [BRC-214, "Wiring Diagram - Sedan"](#).

Is it normal?

YES (Present error)>>Replace the steering angle sensor. Refer to [BRC-241, "Removal and Installation"](#) .

YES (Past error)>>Error was detected in the steering angle sensor branch line.

NO >> Repair the power supply and the ground circuit.

ABS BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 11)]

ABS BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569644

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of ABS actuator and electric unit (control unit).
2. Check the resistance between the ABS actuator and electric unit (control unit) harness connector terminals.

ABS actuator and electric unit (control unit) harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E26	26	15	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ABS actuator and electric unit (control unit) branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ABS actuator and electric unit (control unit). Refer to the following.

- Models with ABS: [BRC-41, "Wiring Diagram - Coupe"](#) or [BRC-46, "Wiring Diagram - Sedan"](#)
- Models with TCS: [BRC-109, "Wiring Diagram - Coupe"](#) or [BRC-115, "Wiring Diagram - Sedan"](#)
- Models with VDC: [BRC-206, "Wiring Diagram - Coupe"](#) or [BRC-214, "Wiring Diagram - Sedan"](#)

Is the inspection result normal?

YES (Present error)>>Replace the ABS actuator and electric unit (control unit). Refer to the following.

- Models with ABS: [BRC-66, "Exploded View"](#)
- Models with TCS: [BRC-136, "Exploded View"](#)
- Models with VDC: [BRC-238, "Exploded View"](#)

YES (Past error)>>Error was detected in the ABS actuator and electric unit (control unit) branch line.

NO >> Repair the power supply and the ground circuit.

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TCM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 11)]

TCM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569618

INSPECTION PROCEDURE

1. CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
 - TCM
 - Harness connector F1
 - Harness connector E3

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of TCM.
2. Check the resistance between the TCM harness connector terminals.

TCM harness connector			Resistance (Ω)
Connector No.	Terminal No.		
F16	32	31	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the TCM branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the TCM. Refer to the following.

- QR25DE models: [TM-375, "Wiring Diagram - CVT CONTROL SYSTEM - Coupe"](#) or [TM-384, "Wiring Diagram - CVT CONTROL SYSTEM - Sedan"](#)
- VQ35DE models: [TM-199, "Wiring Diagram—CVT CONTROL SYSTEM—Coupe"](#) or [TM-207, "Wiring Diagram—CVT CONTROL SYSTEM—Sedan"](#)

Is the inspection result normal?

YES (Present error)>>Replace the TCM. Refer to the following.

- QR25DE models: [TM-425, "Exploded View"](#)

- VQ35DE models: [TM-249, "Exploded View"](#)

YES (Past error)>>Error was detected in the TCM branch line.

NO >> Repair the power supply and the ground circuit.

IPDM-E BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 11)]

IPDM-E BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569619

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of IPDM E/R.
2. Check the resistance between the IPDM E/R harness connector terminals.

IPDM E/R harness connector		Resistance (Ω)
Connector No.	Terminal No.	
E17	40 39	Approx. 108 – 132

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the IPDM E/R branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the IPDM E/R. Refer to [PCS-19, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES (Present error)>>Replace the IPDM E/R. Refer to [PCS-43, "Removal and Installation"](#).

YES (Past error)>>Error was detected in the IPDM E/R branch line.

NO >> Repair the power supply and the ground circuit.

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CAN COMMUNICATION CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 11)]

CAN COMMUNICATION CIRCUIT

Diagnosis Procedure

INFOID:000000001569620

INSPECTION PROCEDURE

1. CONNECTOR INSPECTION

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Disconnect all the unit connectors on CAN communication system.
4. Check terminals and connectors for damage, bend and loose connection.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector terminals.

Data link connector		Continuity
Connector No.	Terminal No.	
M22	6 14	Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Check the harness and repair the root cause.

3. CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector and the ground.

Data link connector		Ground	Continuity
Connector No.	Terminal No.		
M22	6		Not existed
	14		Not existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Check the harness and repair the root cause.

4. CHECK ECM AND IPDM E/R TERMINATION CIRCUIT

1. Remove the ECM and the IPDM E/R.
2. Check the resistance between the ECM terminals.

ECM		Resistance (Ω)
Terminal No.		
98	97	Approx. 108 – 132

3. Check the resistance between the IPDM E/R terminals.

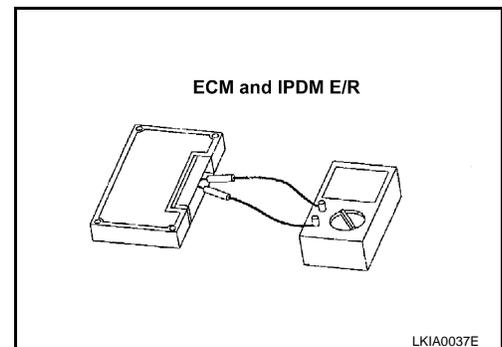
IPDM E/R		Resistance (Ω)
Terminal No.		
40	39	Approx. 108 – 132

Is the measurement value within the specification?

YES >> GO TO 5.

NO >> Replace the ECM and/or the IPDM E/R.

5. CHECK SYMPTOM



CAN COMMUNICATION CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 11)]

Connect all the connectors. Check if the symptoms described in the “Symptom (Results from interview with customer)” are reproduced.

Inspection result

Reproduced>>GO TO 6.

Non-reproduced>>Start the diagnosis again. Follow the trouble diagnosis procedure when past error is detected.

6.CHECK UNIT REPRODUCTION

Perform the reproduction test as per the following procedure for each unit.

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Disconnect one of the unit connectors of CAN communication system.

NOTE:

ECM and IPDM E/R have a termination circuit. Check other units first.

4. Connect the battery cable to the negative terminal. Check if the symptoms described in the “Symptom (Results from interview with customer)” are reproduced.

NOTE:

Although unit-related error symptoms occur, do not confuse them with other symptoms.

Inspection result

Reproduced>>Connect the connector. Check other units as per the above procedure.

Non-reproduced>>Replace the unit whose connector was disconnected.

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MAIN LINE BETWEEN DLC AND ABS CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 12)]

COMPONENT DIAGNOSIS

MAIN LINE BETWEEN DLC AND ABS CIRCUIT

Diagnosis Procedure

INFOID:000000001569621

INSPECTION PROCEDURE

1. CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M1
 - Harness connector E30

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the harness connectors M1 and E30.
2. Check the continuity between the data link connector and the harness connector.

Data link connector		Harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
M22	6	M1	15G	Existed
	14		8G	Existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the main line between the data link connector and the harness connector M1.

3. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the connector of ABS actuator and electric unit (control unit).
2. Check the continuity between the harness connector and the ABS actuator and electric unit (control unit) harness connector.

Harness connector		ABS actuator and electric unit (control unit) harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
E30	15G	E26	26	Existed
	8G		15	Existed

Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the data link connector and the ABS actuator and electric unit (control unit).

NO >> Repair the main line between the harness connector E30 and the ABS actuator and electric unit (control unit).

ECM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 12)]

ECM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569622

INSPECTION PROCEDURE

1. CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
 - ECM
 - Harness connector E30
 - Harness connector M1

Is the inspection result normal?

- YES >> GO TO 2.
NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of ECM.
2. Check the resistance between the ECM harness connector terminals.

ECM harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E10	98	97	Approx. 108 – 132

Is the measurement value within the specification?

- YES >> GO TO 3.
NO >> Repair the ECM branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ECM. Refer to the following.

- QR engine models for California: [EC-144, "Diagnosis Procedure"](#)
- QR engine models except for California: [EC-657, "Diagnosis Procedure"](#)
- VQ engine models: [EC-1143, "Diagnosis Procedure"](#)

Is the inspection result normal?

- YES (Present error)>>Replace the ECM. Refer to the following.
- QR engine models for California: [EC-27, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)
 - QR engine models except for California: [EC-546, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)
 - VQ engine models: [EC-1019, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)

YES (Past error)>>Error was detected in the ECM branch line.

- NO >> Repair the power supply and the ground circuit.

A-BAG BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 12)]

A-BAG BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569623

1. CHECK AIR BAG DIAGNOSIS SENSOR UNIT

Check the air bag diagnosis sensor unit. Refer to [SRC-3, "Work Flow"](#).

Is the inspection result normal?

YES >> Replace the main harness.

NO >> Replace parts whose air bag system has a malfunction.

AV BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 12)]

AV BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569624

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of AV control unit.
2. Check the resistance between the AV control unit harness connector terminals.

AV control unit harness connector		Resistance (Ω)
Connector No.	Terminal No.	
M46	24 44	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the AV control unit branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the AV control unit. Refer to [AV-307, "AV CONTROL UNIT : Diagnosis Procedure"](#).

Is the inspection result normal?

YES (Present error)>>Replace the AV control unit. Refer to [AV-422, "Removal and Installation"](#).

YES (Past error)>>Error was detected in the AV control unit branch line.

NO >> Repair the power supply and the ground circuit.

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BCM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 12)]

BCM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569625

INSPECTION PROCEDURE

1.CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2.CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of BCM.
2. Check the resistance between the BCM harness connector terminals.

BCM harness connector			Resistance (Ω)
Connector No.	Terminal No.		
M19	79	78	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the BCM branch line.

3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the BCM. Refer to [BCS-36, "Diagnosis Procedure"](#) .

Is the inspection result normal?

YES (Present error)>>Replace the BCM. Refer to [BCS-88, "Removal and Installation"](#).

YES (Past error)>>Error was detected in the BCM branch line.

NO >> Repair the power supply and the ground circuit.

DLC BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 12)]

DLC BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569626

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

Check the resistance between the data link connector terminals.

Data link connector		Resistance (Ω)
Connector No.	Terminal No.	
M22	6 14	Approx. 54 – 66

Is the measurement value within the specification?

YES (Present error)>>Check the CAN system type decision again.

YES (Past error)>>Error was detected in the data link connector branch line circuit.

NO >> Repair the data link connector branch line.

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M&A BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569627

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

- YES >> GO TO 2.
 NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of combination meter.
2. Check the resistance between the combination meter harness connector terminals.

Combination meter harness connector			Resistance (Ω)
Connector No.	Terminal No.		
M24	21	22	Approx. 54 – 66

Is the measurement value within the specification?

- YES >> GO TO 3.
 NO >> Repair the combination meter branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the combination meter. Refer to [MWI-43, "COMBINATION METER : Diagnosis Procedure"](#) .

Is it normal?

- YES (Present error)>>Replace the combination meter. Refer to [MWI-172, "Removal and Installation"](#) .
 YES (Past error)>>Error was detected in the combination meter branch line.
 NO >> Repair the power supply and the ground circuit.

STRG BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 12)]

STRG BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000003247359

INSPECTION PROCEDURE

1.CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2.CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of steering angle sensor.
2. Check the resistance between the steering angle sensor harness connector terminals.

Steering angle sensor harness connector			Resistance (Ω)
Connector No.	Terminal No.		
M53	5	2	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the steering angle sensor branch line.

3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the steering angle sensor. Refer to [BRC-206, "Wiring Diagram - Coupe"](#) or [BRC-214, "Wiring Diagram - Sedan"](#).

Is it normal?

YES (Present error)>>Replace the steering angle sensor. Refer to [BRC-241, "Removal and Installation"](#) .

YES (Past error)>>Error was detected in the steering angle sensor branch line.

NO >> Repair the power supply and the ground circuit.

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ABS BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 12)]

ABS BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569645

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of ABS actuator and electric unit (control unit).
2. Check the resistance between the ABS actuator and electric unit (control unit) harness connector terminals.

ABS actuator and electric unit (control unit) harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E26	26	15	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ABS actuator and electric unit (control unit) branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ABS actuator and electric unit (control unit). Refer to the following.

- Models with ABS: [BRC-41, "Wiring Diagram - Coupe"](#) or [BRC-46, "Wiring Diagram - Sedan"](#)
- Models with TCS: [BRC-109, "Wiring Diagram - Coupe"](#) or [BRC-115, "Wiring Diagram - Sedan"](#)
- Models with VDC: [BRC-206, "Wiring Diagram - Coupe"](#) or [BRC-214, "Wiring Diagram - Sedan"](#)

Is the inspection result normal?

YES (Present error)>>Replace the ABS actuator and electric unit (control unit). Refer to the following.

- Models with ABS: [BRC-66, "Exploded View"](#)
- Models with TCS: [BRC-136, "Exploded View"](#)
- Models with VDC: [BRC-238, "Exploded View"](#)

YES (Past error)>>Error was detected in the ABS actuator and electric unit (control unit) branch line.

NO >> Repair the power supply and the ground circuit.

TCM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 12)]

TCM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569630

INSPECTION PROCEDURE

1.CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
 - TCM
 - Harness connector F1
 - Harness connector E3

Is the inspection result normal?

- YES >> GO TO 2.
NO >> Repair the terminal and connector.

2.CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of TCM.
2. Check the resistance between the TCM harness connector terminals.

TCM harness connector			Resistance (Ω)
Connector No.	Terminal No.		
F16	32	31	Approx. 54 – 66

Is the measurement value within the specification?

- YES >> GO TO 3.
NO >> Repair the TCM branch line.

3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the TCM. Refer to the following.

- QR25DE models: [TM-375. "Wiring Diagram - CVT CONTROL SYSTEM - Coupe"](#) or [TM-384. "Wiring Diagram - CVT CONTROL SYSTEM - Sedan"](#)
- VQ35DE models: [TM-199. "Wiring Diagram—CVT CONTROL SYSTEM—Coupe"](#) or [TM-207. "Wiring Diagram—CVT CONTROL SYSTEM—Sedan"](#)

Is the inspection result normal?

- YES (Present error)>>Replace the TCM. Refer to the following.
- QR25DE models: [TM-425. "Exploded View"](#)
 - VQ35DE models: [TM-249. "Exploded View"](#)
- YES (Past error)>>Error was detected in the TCM branch line.
NO >> Repair the power supply and the ground circuit.

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IPDM-E BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 12)]

IPDM-E BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:000000001569631

INSPECTION PROCEDURE

1. CHECK CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of IPDM E/R.
2. Check the resistance between the IPDM E/R harness connector terminals.

IPDM E/R harness connector		Resistance (Ω)
Connector No.	Terminal No.	
E17	40 39	Approx. 108 – 132

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the IPDM E/R branch line.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the IPDM E/R. Refer to [PCS-19, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES (Present error)>>Replace the IPDM E/R. Refer to [PCS-43, "Removal and Installation"](#).

YES (Past error)>>Error was detected in the IPDM E/R branch line.

NO >> Repair the power supply and the ground circuit.

CAN COMMUNICATION CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 12)]

CAN COMMUNICATION CIRCUIT

Diagnosis Procedure

INFOID:000000001569632

INSPECTION PROCEDURE

1. CONNECTOR INSPECTION

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Disconnect all the unit connectors on CAN communication system.
4. Check terminals and connectors for damage, bend and loose connection.

Is the inspection result normal?

- YES >> GO TO 2.
 NO >> Repair the terminal and connector.

2. CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector terminals.

Data link connector		Continuity
Connector No.	Terminal No.	
M22	6 14	Not existed

Is the inspection result normal?

- YES >> GO TO 3.
 NO >> Check the harness and repair the root cause.

3. CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector and the ground.

Data link connector		Ground	Continuity
Connector No.	Terminal No.		
M22	6		Not existed
	14		Not existed

Is the inspection result normal?

- YES >> GO TO 4.
 NO >> Check the harness and repair the root cause.

4. CHECK ECM AND IPDM E/R TERMINATION CIRCUIT

1. Remove the ECM and the IPDM E/R.
2. Check the resistance between the ECM terminals.

ECM		Resistance (Ω)
Terminal No.		
98	97	Approx. 108 – 132

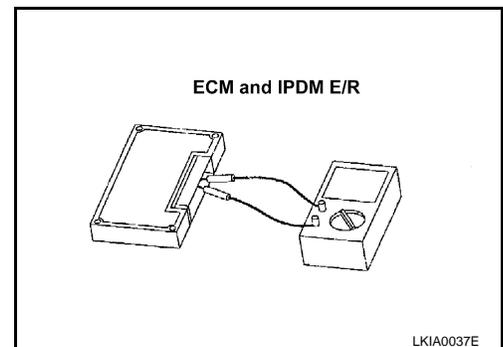
3. Check the resistance between the IPDM E/R terminals.

IPDM E/R		Resistance (Ω)
Terminal No.		
40	39	Approx. 108 – 132

Is the measurement value within the specification?

- YES >> GO TO 5.
 NO >> Replace the ECM and/or the IPDM E/R.

5. CHECK SYMPTOM



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CAN COMMUNICATION CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 12)]

Connect all the connectors. Check if the symptoms described in the “Symptom (Results from interview with customer)” are reproduced.

Inspection result

Reproduced>>GO TO 6.

Non-reproduced>>Start the diagnosis again. Follow the trouble diagnosis procedure when past error is detected.

6.CHECK UNIT REPRODUCTION

Perform the reproduction test as per the following procedure for each unit.

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Disconnect one of the unit connectors of CAN communication system.

NOTE:

ECM and IPDM E/R have a termination circuit. Check other units first.

4. Connect the battery cable to the negative terminal. Check if the symptoms described in the “Symptom (Results from interview with customer)” are reproduced.

NOTE:

Although unit-related error symptoms occur, do not confuse them with other symptoms.

Inspection result

Reproduced>>Connect the connector. Check other units as per the above procedure.

Non-reproduced>>Replace the unit whose connector was disconnected.