LAN В SECTION LAN SYSTEM c

А

D

Ε

CONTENTS

CAN FUNDAMENTAL

PRECAUTION6
PRECAUTIONS 6 Precautions for Trouble Diagnosis 6 Precautions for Harness Repair 6
FUNCTION DIAGNOSIS7
CAN COMMUNICATION SYSTEM 7 System Description 7 System Diagram 7 CAN Communication Control Circuit 8
DIAG ON CAN
TROUBLE DIAGNOSIS 10Condition of Error Detection10Symptom When Error Occurs in CAN Communi- cation System10CAN Diagnosis with CONSULT-III13Self-Diagnosis13CAN Diagnostic Support Monitor13How to Use CAN Communication Signal Chart15
BASIC INSPECTION16
DIAGNOSIS AND REPAIR WORKFLOW16 Trouble Diagnosis Flow Chart
HOW TO USE THIS MANUAL21
HOW TO USE THIS SECTION21Caution
PRECAUTION22

PRECAUTIONS	F
SIONER"22 Precautions for Trouble Diagnosis22 Precautions for Harness Repair22	G
BASIC INSPECTION24	Н
DIAGNOSIS AND REPAIR WORKFLOW24 Interview Sheet	I
FUNCTION DIAGNOSIS25	
CAN COMMUNICATION SYSTEM25 CAN System Specification Chart25 CAN Communication Signal Chart25	J
COMPONENT DIAGNOSIS28	Κ
CAN COMMUNICATION SYSTEM	L
MALFUNCTION AREA CHART	LAN
MAIN LINE BETWEEN DLC AND ABS CIR- CUIT	N
ECM BRANCH LINE CIRCUIT	0
A-BAG BRANCH LINE CIRCUIT	Ρ
AV BRANCH LINE CIRCUIT	
BCM BRANCH LINE CIRCUIT	

Diagnosis Procedure 39
DLC BRANCH LINE CIRCUIT 40 Diagnosis Procedure
M&A BRANCH LINE CIRCUIT 41 Diagnosis Procedure
STRG BRANCH LINE CIRCUIT
ABS BRANCH LINE CIRCUIT
TCM BRANCH LINE CIRCUIT 44 Diagnosis Procedure 44
IPDM-E BRANCH LINE CIRCUIT
CAN COMMUNICATION CIRCUIT 46 Diagnosis Procedure
COMPONENT DIAGNOSIS 48
MAIN LINE BETWEEN DLC AND ABS CIR- CUIT
ECM BRANCH LINE CIRCUIT 49 Diagnosis Procedure
A-BAG BRANCH LINE CIRCUIT
BCM BRANCH LINE CIRCUIT 51 Diagnosis Procedure
DLC BRANCH LINE CIRCUIT 52 Diagnosis Procedure
M&A BRANCH LINE CIRCUIT 53 Diagnosis Procedure
ABS BRANCH LINE CIRCUIT
IPDM-E BRANCH LINE CIRCUIT
CAN COMMUNICATION CIRCUIT
COMPONENT DIAGNOSIS 58
MAIN LINE BETWEEN DLC AND ABS CIR- CUIT
ECM BRANCH LINE CIRCUIT

A-BAG BRANCH LINE CIRCUIT
AV BRANCH LINE CIRCUIT
BCM BRANCH LINE CIRCUIT
DLC BRANCH LINE CIRCUIT
M&A BRANCH LINE CIRCUIT
ABS BRANCH LINE CIRCUIT
IPDM-E BRANCH LINE CIRCUIT
CAN COMMUNICATION CIRCUIT
COMPONENT DIAGNOSIS
MAIN LINE BETWEEN DLC AND ABS CIR-
CUIT
ECM BRANCH LINE CIRCUIT
A-BAG BRANCH LINE CIRCUIT
BCM BRANCH LINE CIRCUIT
DLC BRANCH LINE CIRCUIT
M&A BRANCH LINE CIRCUIT
ABS BRANCH LINE CIRCUIT
TCM BRANCH LINE CIRCUIT
IPDM-E BRANCH LINE CIRCUIT
CAN COMMUNICATION CIRCUIT
COMPONENT DIAGNOSIS
MAIN LINE BETWEEN DLC AND ABS CIR-
CUIT

Diagnosis Procedure 80 ECM BRANCH LINE CIRCUIT 87 Diagnosis Procedure 87 A-BAG BRANCH LINE CIRCUIT 88 Diagnosis Procedure 82 AV BRANCH LINE CIRCUIT 88
Diagnosis Procedure
Diagnosis Procedure82
Diagnosis Procedure
BCM BRANCH LINE CIRCUIT
DLC BRANCH LINE CIRCUIT
M&A BRANCH LINE CIRCUIT
ABS BRANCH LINE CIRCUIT
TCM BRANCH LINE CIRCUIT
IPDM-E BRANCH LINE CIRCUIT
CAN COMMUNICATION CIRCUIT
COMPONENT DIAGNOSIS
MAIN LINE BETWEEN DLC AND ABS CIR-
CUIT
ECM BRANCH LINE CIRCUIT93 Diagnosis Procedure
A-BAG BRANCH LINE CIRCUIT
Diagnosis Procedure
Diagnosis Procedure
Diagnosis Procedure 94 BCM BRANCH LINE CIRCUIT 99 Diagnosis Procedure 99 DLC BRANCH LINE CIRCUIT 99 Diagnosis Procedure 96 M&A BRANCH LINE CIRCUIT 99
Diagnosis Procedure 94 BCM BRANCH LINE CIRCUIT 99 Diagnosis Procedure 99 DLC BRANCH LINE CIRCUIT 99 Diagnosis Procedure 96 M&A BRANCH LINE CIRCUIT 97 Diagnosis Procedure 97 ABS BRANCH LINE CIRCUIT 97

COMPONENT DIAGNOSIS 102	
MAIN LINE BETWEEN DLC AND ABS CIR- CUIT	А
Diagnosis Procedure	В
ECM BRANCH LINE CIRCUIT 103 Diagnosis Procedure 103	0
A-BAG BRANCH LINE CIRCUIT	С
AV BRANCH LINE CIRCUIT	D
BCM BRANCH LINE CIRCUIT	Е
DLC BRANCH LINE CIRCUIT	F
M&A BRANCH LINE CIRCUIT	G
ABS BRANCH LINE CIRCUIT	
IPDM-E BRANCH LINE CIRCUIT	Н
CAN COMMUNICATION CIRCUIT 111 Diagnosis Procedure	Ι
COMPONENT DIAGNOSIS 113	J
MAIN LINE BETWEEN DLC AND ABS CIR- CUIT	K
ECM BRANCH LINE CIRCUIT	L
A-BAG BRANCH LINE CIRCUIT	LAN
BCM BRANCH LINE CIRCUIT	Ν
DLC BRANCH LINE CIRCUIT	0
M&A BRANCH LINE CIRCUIT	0
ABS BRANCH LINE CIRCUIT 119 Diagnosis Procedure	Ρ
TCM BRANCH LINE CIRCUIT 120 Diagnosis Procedure 120	
IPDM-E BRANCH LINE CIRCUIT	

CAN COMMUNICATION CIRCUIT Diagnosis Procedure	
CAN SYSTEM (TYPE 8)	. 122
COMPONENT DIAGNOSIS	. 124
MAIN LINE BETWEEN DLC AND ABS CIR- CUIT	124
Diagnosis Procedure	
ECM BRANCH LINE CIRCUIT Diagnosis Procedure	
A-BAG BRANCH LINE CIRCUIT Diagnosis Procedure	
AV BRANCH LINE CIRCUIT Diagnosis Procedure	
BCM BRANCH LINE CIRCUIT Diagnosis Procedure	
DLC BRANCH LINE CIRCUIT Diagnosis Procedure	
M&A BRANCH LINE CIRCUIT Diagnosis Procedure	
ABS BRANCH LINE CIRCUIT Diagnosis Procedure	
TCM BRANCH LINE CIRCUIT Diagnosis Procedure	
IPDM-E BRANCH LINE CIRCUIT Diagnosis Procedure	
CAN COMMUNICATION CIRCUIT Diagnosis Procedure CAN SYSTEM (TYPE 9)	.134
COMPONENT DIAGNOSIS	. 136
MAIN LINE BETWEEN DLC AND ABS CIR-	400
CUIT Diagnosis Procedure	
ECM BRANCH LINE CIRCUIT Diagnosis Procedure	
A-BAG BRANCH LINE CIRCUIT Diagnosis Procedure	
BCM BRANCH LINE CIRCUIT Diagnosis Procedure	
DLC BRANCH LINE CIRCUIT Diagnosis Procedure	
M&A BRANCH LINE CIRCUIT Diagnosis Procedure	
STRG BRANCH LINE CIRCUIT	142

Diagnosis Procedure 142
ABS BRANCH LINE CIRCUIT
IPDM-E BRANCH LINE CIRCUIT
CAN COMMUNICATION CIRCUIT
COMPONENT DIAGNOSIS147
MAIN LINE BETWEEN DLC AND ABS CIR- CUIT147
Diagnosis Procedure
ECM BRANCH LINE CIRCUIT
A-BAG BRANCH LINE CIRCUIT
AV BRANCH LINE CIRCUIT
BCM BRANCH LINE CIRCUIT
DLC BRANCH LINE CIRCUIT
M&A BRANCH LINE CIRCUIT
STRG BRANCH LINE CIRCUIT
ABS BRANCH LINE CIRCUIT
IPDM-E BRANCH LINE CIRCUIT
CAN COMMUNICATION CIRCUIT
COMPONENT DIAGNOSIS159
MAIN LINE BETWEEN DLC AND ABS CIR- CUIT
ECM BRANCH LINE CIRCUIT
A-BAG BRANCH LINE CIRCUIT
BCM BRANCH LINE CIRCUIT

DLC BRANCH LINE CIRCUIT	
M&A BRANCH LINE CIRCUIT164 Diagnosis Procedure	
STRG BRANCH LINE CIRCUIT	
ABS BRANCH LINE CIRCUIT	
TCM BRANCH LINE CIRCUIT 167 Diagnosis Procedure 167	
IPDM-E BRANCH LINE CIRCUIT	
CAN COMMUNICATION CIRCUIT	
COMPONENT DIAGNOSIS 171	
MAIN LINE BETWEEN DLC AND ABS CIR- CUIT 171 Diagnosis Procedure 171	
ECM BRANCH LINE CIRCUIT	

A-BAG BRANCH LINE CIRCUIT	A
AV BRANCH LINE CIRCUIT	В
BCM BRANCH LINE CIRCUIT	_
DLC BRANCH LINE CIRCUIT	С
M&A BRANCH LINE CIRCUIT	D
STRG BRANCH LINE CIRCUIT	E
ABS BRANCH LINE CIRCUIT	F
TCM BRANCH LINE CIRCUIT 180 Diagnosis Procedure 180	G
IPDM-E BRANCH LINE CIRCUIT	
CAN COMMUNICATION CIRCUIT	H

LAN

J

Κ

L

Ν

0

Ρ

< PRECAUTION >

PRECAUTION PRECAUTIONS

Precautions for Trouble Diagnosis

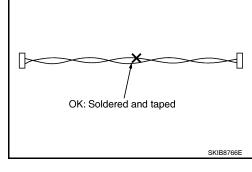
CAUTION:

- 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

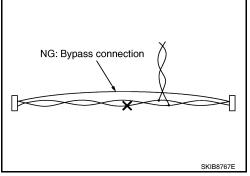
• Solder the repaired area and wrap tape around the soldered area. **NOTE:**

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.

INFOID:000000004203843

INFOID:000000004203842

FUNCTION DIAGNOSIS CAN COMMUNICATION SYSTEM

System Description

INFOID:000000004203844 В

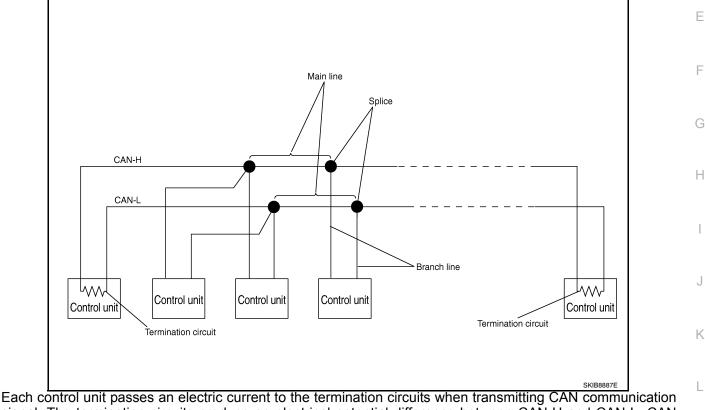
INFOID 000000004203845

А

D

- 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



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".	

L

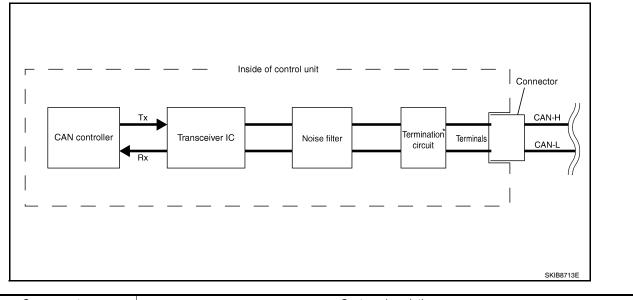
LAN

< FUNCTION DIAGNOSIS >

[CAN FUNDAMENTAL]

INFOID:000000004203846

CAN Communication Control Circuit



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.

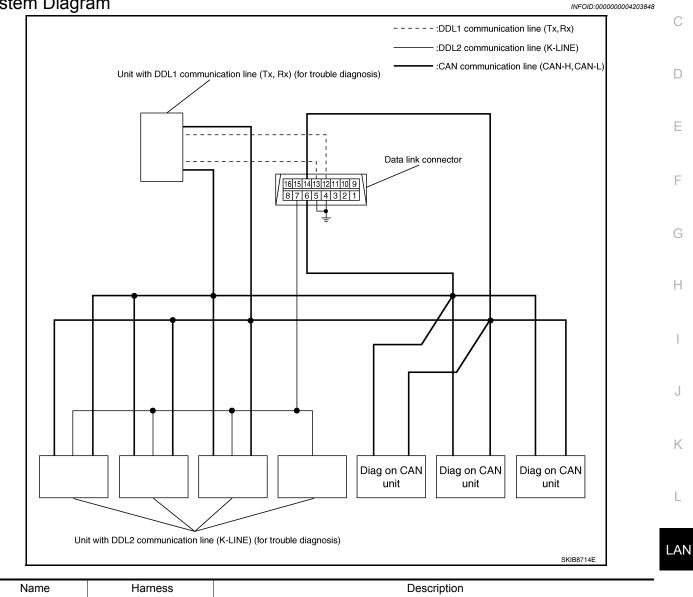
< FUNCTION DIAGNOSIS >

DIAG ON CAN

Description

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

System Diagram



Name	Harness	Description	
DDL1	Tx Rx	It is used for trouble diagnosis. (CAN-H and CAN-L are used for controlling)	N
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.	0

INFOID:000000004203847

А

Ρ

INFOID:000000004203849

TROUBLE DIAGNOSIS

Condition of Error Detection

"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 CON-SULT-III under the above conditions. Erase the memory of the self-diagnosis of each unit.

Symptom When Error Occurs in CAN Communication System

INFOID:000000004203850

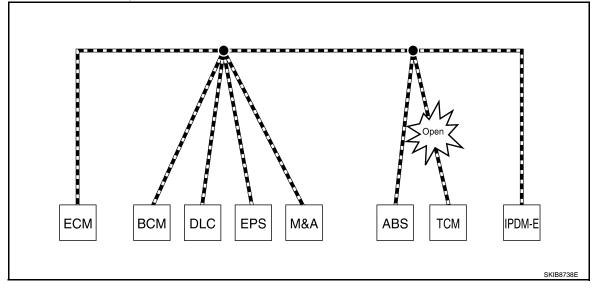
In CAN communication system, multiple units mutually transmit and receive signals. Each unit cannot transmit and receive signals if any error occurs on CAN communication line. Under this condition, multiple control units related to the root cause malfunction or go into fail-safe mode.

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



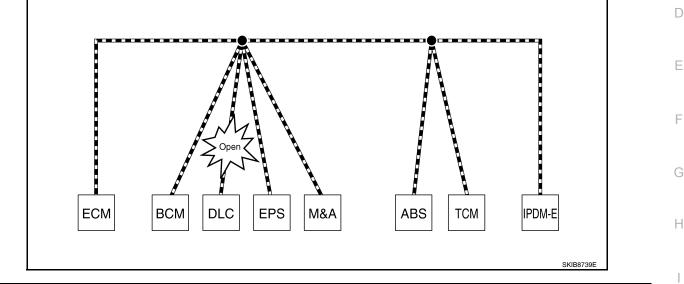
Unit name	Symptom
ECM	Engine torque limiting is affected, and shift harshness increases.
BCM	Reverse warning chime does not sound.

< FUNCTION DIAGNOSIS >

[CAN FUNDAMENTAL]

Unit name	Symptom	
EPS control unit	Normal operation.	A
Combination meter	 Shift position indicator and OD OFF indicator turn OFF. Warning lamps turn ON. 	R
ABS actuator and electric unit (control unit)	Normal operation.	D
ТСМ	No impact on operation.	
IPDM E/R	Normal operation.	С

Example: Data link connector branch line open circuit



Symptom	
	J
Normal operation.	K
1	L

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.

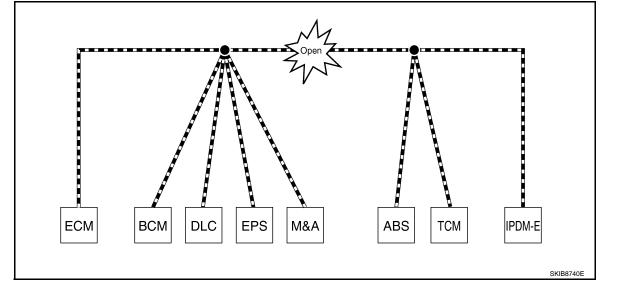
		N
Error	Difference of symptom	
Data link connector branch line open circuit	Normal operation.	
CAN-H, CAN-L harness short-circuit	Most of the units which are connected to the CAN communication system enter fail-safe mode or are deactivated.	0

Ρ

LAN

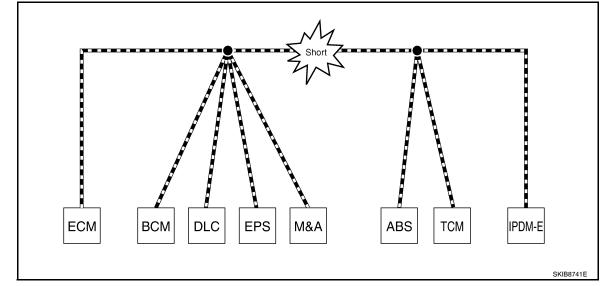
< FUNCTION DIAGNOSIS >

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	 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	 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.
ТСМ	No impact on operation.
IPDM E/R	When the ignition switch is ON,The headlamps (Lo) turn ON.The cooling fan continues to rotate.

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



< FUNCTION DIAGNOSIS >

[CAN FUNDAMENTAL]

Unit name	Symptom
ECM	Engine torque limiting is affected, and shift harshness increases.Engine speed drops.
BCM	 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	 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.
ТСМ	No impact on operation.
IPDM E/R	When the ignition switch is ON,The headlamps (Lo) turn ON.The cooling fan continues to rotate.

CAN Diagnosis with CONSULT-III

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:000000004203852

INFOID:000000004203851

J

Н

DTC	Self-diagnosis item (CONSULT-III indication)	DTC detection condition	Inspection/Action
U0101	LOST COMM (TCM)	When ECM is not transmitting or receiving CAN communication signal of OBD (emission-related diagnosis) from TCM for 2 seconds or more.	
U0140	LOST COMM (BCM)	When ECM is not transmitting or receiving CAN communication signal of OBD (emission-related diagnosis) from BCM for 2 seconds or more.	
U1000	CAN COMM CIRCUIT	When a control unit (except for ECM) is not transmitting or receiving CAN communication signal for 2 seconds or more.	Start the inspection. Re- fer to the applicable sec- tion of the indicated control unit.
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 receiv- ing CAN communication signal for 2 seconds or less.	
U1010	CONTROL UNIT(CAN)	When an error is detected during the initial diag- nosis for CAN controller of each control unit.	Replace the control unit indicating "U1010".

CAN Diagnostic Support Monitor

INFOID:000000004203853

MONITOR ITEM (CONSULT-III)

< FUNCTION DIAGNOSIS >

Example: CAN DIAG SUPPORT MNTR indication

Withou	I FAST		vviui	PAST	
EC	М		EC	СМ	
	PRSNT	PAST		PRSNT	PAS
INITIAL DIAG	OK		TRANSMIT DIAG	OK	OK
TRANSMIT DIAG	¦ OK		VDC/TCS/ABS	[-]-
ГСМ	OK		METER/M&A	OK	OK
/DC/TCS/ABS	UNKWN		BCM/SEC	OK	OK
METER/M&A	¦ OK		ICC		
CC	UNKWN		HVAC		
BCM/SEC	¦ OK		ТСМ	OK	OK
PDM E/R	OK	1	EPS]
			IPDM E/R	OK	OK
			e4WD	-]-
			AWD/4WD	OK	OK

Without PAST

Item	PRSNT	Description			
Initial diagnosis	OK	Normal at present			
Initial diagnosis	NG	Control unit error (Except for some control units)			
	OK	Normal at present			
Transmission diagnosis	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			
		No control unit for receiving signals. (No applicable optional parts)			

With PAST

Item	PRSNT	PAST	Description			
Transmission diagnosis		OK	Normal at present and in the past			
	ОК	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	Normal at present and in the past			
	ОК	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.

< FUNCTION DIAGNOSIS >

[CAN FUNDAMENTA	L]
-----------------	----

INFOID:000000004203854

Н

Κ

L

LAN

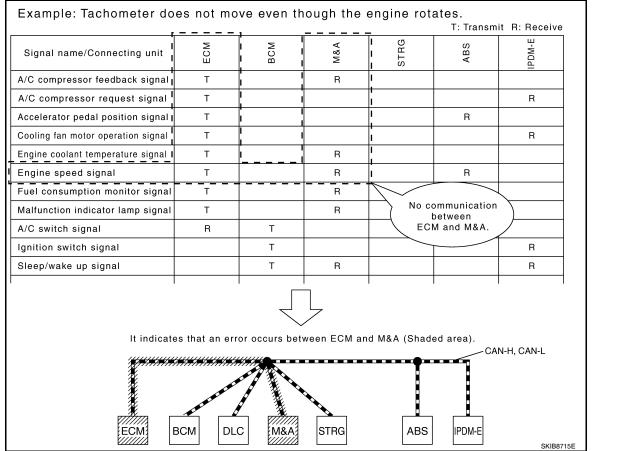
Ν

Ρ

Item	Result indi- cated Error counter		Description			
	OK	0	Normal at present			
CAN_COMM (Initial diagnosis)	NG	1 – 50	Control unit error (The number indicates how many times diagnosis has been run.)			
	OK	0	Normal at present			
CAN_CIRC_1 (Transmission diagnosis)	UNKWN	1 – 50	Unable to transmit for 2 seconds or more at present. (The number indicates how many times diagnosis has been run.)			
	OK	0	Normal at present			
CAN_CIRC_2 – 9 Reception diagnosis of each unit)		4 50	Unable to transmit for 2 seconds or more at present. (The number indicates how many times diagnosis has been run.)			
Ceception diagnosis of each diff()	UNKWN	1 – 50	Diagnosis not performed.			
			No control unit for receiving signals. (No applicable optional parts)			

How to Use CAN Communication Signal Chart

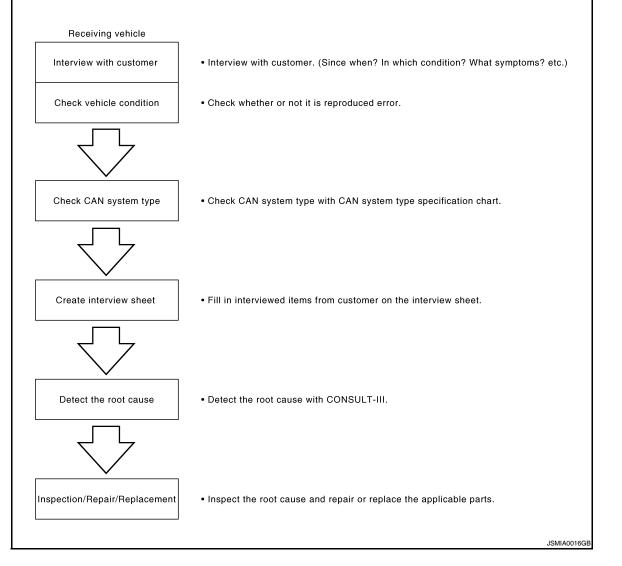
The CAN communication signal chart lists the signals needed for trouble diagnosis. It is useful for detecting the root cause by finding a signal related to the symptom, and by checking transmission and reception unit.



BASIC INSPECTION DIAGNOSIS AND REPAIR WORKFLOW

Trouble Diagnosis Flow Chart

INFOID:000000004203855



Trouble Diagnosis Procedure

INFOID:000000004203856

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:

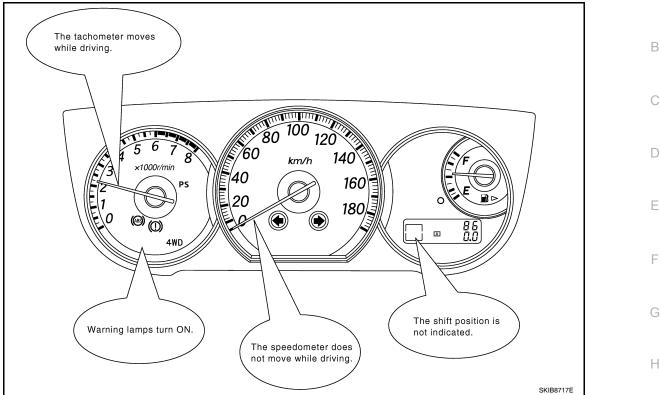
- · Check normal units as well as error symptoms.
- Example: Circuit between ECM and the combination meter is judged normal if the customer indicates tachometer functions normally.
- When a CAN communication system error is present, multiple control units may malfunction or go into failsafe mode.

< BASIC INSPECTION >

[CAN FUNDAMENTAL]

А

 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:**

J

Κ

L

0

< BASIC INSPECTION >

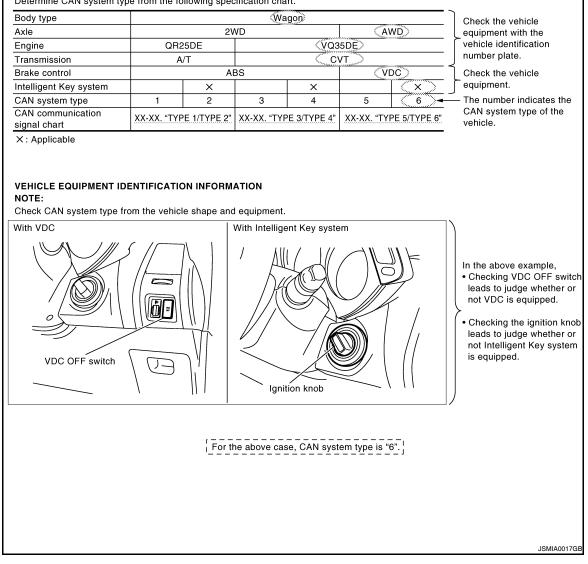
CAN system type is easily checked with the vehicle equipment identification information shown in the chart.

Example:

Vehicle is equipped as follows: Wagon, AWD, VQ35DE, CVT, VDC, and Intelligent Key system. (system type.)

CAN System Specification Chart

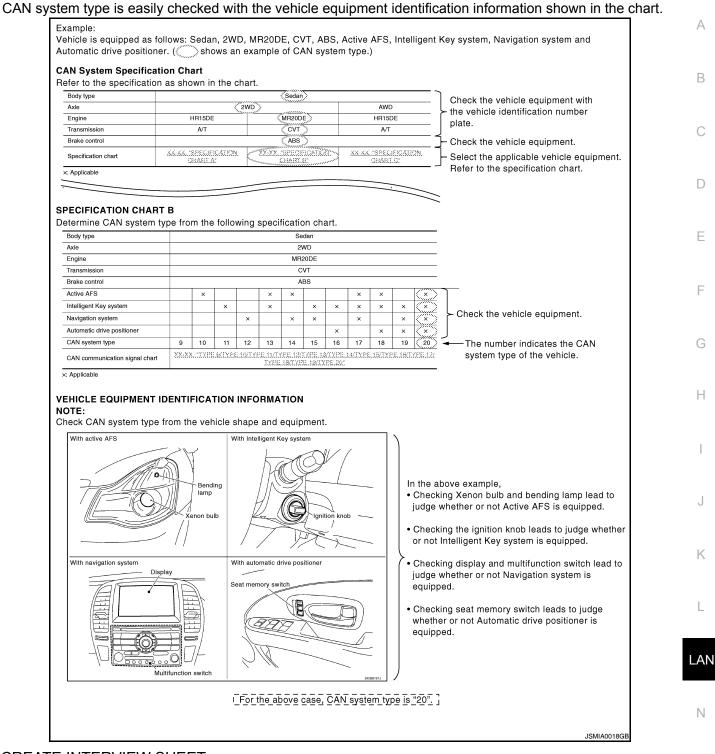
Determine CAN system type from the following specification chart.



CAN System Type Specification Chart (Style B) NOTE:

< BASIC INSPECTION >

[CAN FUNDAMENTAL]



CREATE INTERVIEW SHEET

Fill out the symptom described by the customer, vehicle condition, and CAN system type on the interview sheet.

Ρ

< BASIC INSPECTION >

[CAN FUNDAMENTAL]

Interview Sheet (Example)

CAN Communication System	n 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 custor	ner)
Headlamps suddenly turn ON while drivin The engine does not restart after stoppin switch OFF.	
The cooling fan continues rotating while t	urning the ignition switch ON.
Condition at inspection	
Error Symptom: Present / Past	
The engine does not start. While turning the ignition switch ON, • The headlamps (Lo) turn ON, and the co • The interior lamp does not turn ON.	oling fan continues rotating.

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

• This section describes information peculiar to a vehicle and inspection procedures.

• For trouble diagnosis procedure, refer to <u>LAN-16, "Trouble Diagnosis Procedure"</u>.

Abbreviation List

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	F
ABS	ABS actuator and electric unit (control unit)	
AV	AV control unit	
BCM	BCM	F
DLC	Data link connector	
ECM	ECM	
IPDM-E	IPDM E/R	G
M&A	Combination meter	
STRG	Steering angle sensor	Н
ТСМ	ТСМ	

LAN

J

Κ

L

Ν

0

Ρ

INFOID:000000004203857

INFOID:000000004203858

А

В

С

D

INFOID:000000004203860

INFOID:000000004203861

PRECAUTION PRECAUTIONS

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

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

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the "SRS AIRBAG".
- Never 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

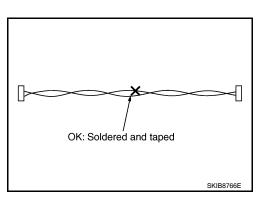
CAUTION:

- 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

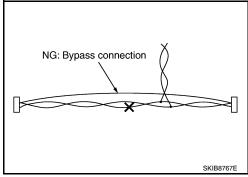
• Solder the repaired area and wrap tape around the soldered area. **NOTE:**

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 >

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

А

В

С

D

Е

F

G

Н

J

Κ

L

Ν

0

Ρ

< BASIC INSPECTION >

[CAN]

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Interview Sheet

iew Sneet	INFOID:00000000420386
CAN Communication System Diagnosis Interview Sheet	
Date received:	
Type: VIN No.:	
Model:	
First registration: Mileage:	
CAN system type:	
Symptom (Results from interview with customer)	
Condition at inspection	
Error symptom : Present / Past	
	SKIB8898E

FUNCTION DIAGNOSIS

CAN COMMUNICATION SYSTEM

CAN System Specification Chart

Determine CAN system type from the following specification chart.

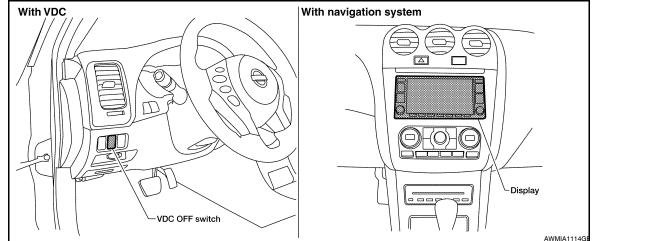
NOTE: Refer to <u>LAN-16, "Trouble Diagnosis Procedure"</u> for how to use CAN system specification chart.

Body type	Sedan/Coupe												
Axle		2WD											
Engine		QR25DE				VQ35DE							
Transmission	N	M/T CVT		N	1/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	

×: Applicable

VEHICLE EQUIPMENT IDENTIFICATION INFORMATION NOTE:

Check CAN system type from the vehicle shape and equipment.



CAN Communication Signal Chart

INFOID:000000004203864

LAN

Ν

Κ

L

Н

Refer to <u>LAN-15</u>, "How to Use CAN Communication Signal Chart" for how to use CAN communication signal chart. NOTE:

Refer to LAN-21, "Abbreviation List" for the abbreviations of the connecting units.

				-		T: 1	Fransmit	R: Receive	
Signal name/Connecting unit	ECM	AV	BCM	M&A	STRG*1	ABS	TCM	IPDM-E	C
A/C compressor request signal	Т							R	-
Accelerator pedal position signal	Т					R	R		F
ASCD operation signal	Т						R		
ASCD status signal	Т			R					
Closed throttle position signal	Т						R		
Cooling fan speed request signal	Т							R	
Engine coolant temperature signal	Т			R			R	-	

[CAN]

INFOID:000000004203863

A

В

< FUNCTION DIAGNOSIS >

Signal name/Connecting unit	ECM	AV	BCM	M&A	STRG*1	ABS	TCM	IPDM-E
Engine speed signal	т			R		R	R	
Engine status signal	Т	R	R					
Fuel consumption monitor signal	Т	R		R				
Malfunctioning indicator lamp signal	Т			R				
Power generation command value signal	Т							R
Wide open throttle position signal	Т						R	
A/C switch signal	R		Т					
AT device (detent switch) signal			R					Т
Blower fan motor switch signal	R		Т					
Buzzer output signal			Т	R				
Day time running light request signal			Т					R
Door switch signal		R	Т	R				R
Front fog light request signal			Т	R				R
Front wiper request signal			Т					R
High beam request signal			Т	R				R
Horn reminder signal			Т					R
Ignition switch ON signal			Т					R
			Т					R
Interlock/PNP switch signal			R					Т
Key warning signal			Т	R				
Low beam request signal			Т					R
Meter display signal			Т	R				
			Т	R				
Oil pressure switch signal			R					Т
Position light request signal			Т	R				R
Rear window defogger switch signal			Т					R
Sleep wake up signal			Т	R				R
Starter control relay signal			Т					R
Steering lock relay signal			Т					R
Sleening lock relay signal			R					Т
Steering lock unit status signal			R					Т
Theft warning horn request signal			Т					R
Tire pressure data signal			Т	R				
Trunk switch signal		R	Т					
Turn indicator signal			Т	R				
Distance to empty signal		R		Т				
Fuel level low warning signal		R		Т				
Fuel level sensor signal	R			Т				
Manual mode shift down signal				Т			R	
Manual mode shift up signal				Т			R	
Manual mode signal				Т			R	
Market information signal		R		Т				
Not manual mode signal				Т			R	

< FUNCTION DIAGNOSIS >

[CAN]

Signal name/Connecting unit	ECM	A	BCM	M&A	STRG*1	ABS	TCM	IPDM-E	
Parking brake switch signal			R	Т		R ^{*1}			-
Seat belt buckle switch signal			R	т					-
	R	R	R	Т			R		-
Vehicle speed signal	R		R	R		Т		R	-
Steering angle sensor signal ^{*1}					Т	R			-
A/T shift schedule change demand signal ^{*2}						Т	R		-
ABS operation signal						Т	R		-
ABS warning lamp signal				R		Т			-
Brake warning lamp signal				R		Т			-
SLIP indicator lamp signal ^{*3}				R		Т			-
VDC OFF indicator lamp signal ^{*1}				R		Т			-
Current gear position signal						R	Т		-
CVT CHECK indicator lamp signal				R			Т		-
CVT position indicator signal				R		R	Т		-
CVT self-diagnosis signal	R						Т		-
Input shaft revolution signal	R					R ^{*1}	Т		-
Manual mode indicator signal				R		R ^{*1}	Т		-
N range signal			R				Т		-
Output shaft revolution signal	R					R ^{*1}	Т		-
P range signal			R			R	Т		-
Front wiper stop position signal			R					Т	-
High beam status signal	R							Т	-
Hood switch signal			R					Т	-
Low beam status signal	R							Т	-
Push-button ignition switch status signal			R					Т	-
Rear window defogger control signal	R							Т	-
Starter relay status signal			R					Т	•

*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.

LAN

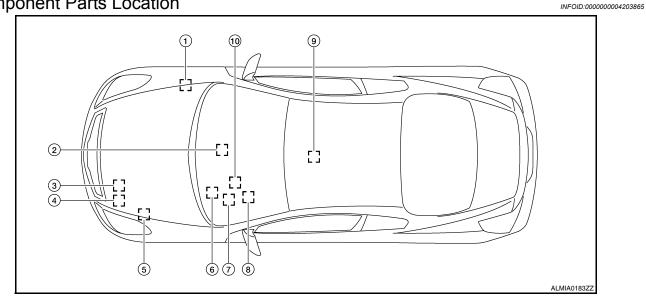
Ν

0

Ρ

COMPONENT DIAGNOSIS CAN COMMUNICATION SYSTEM

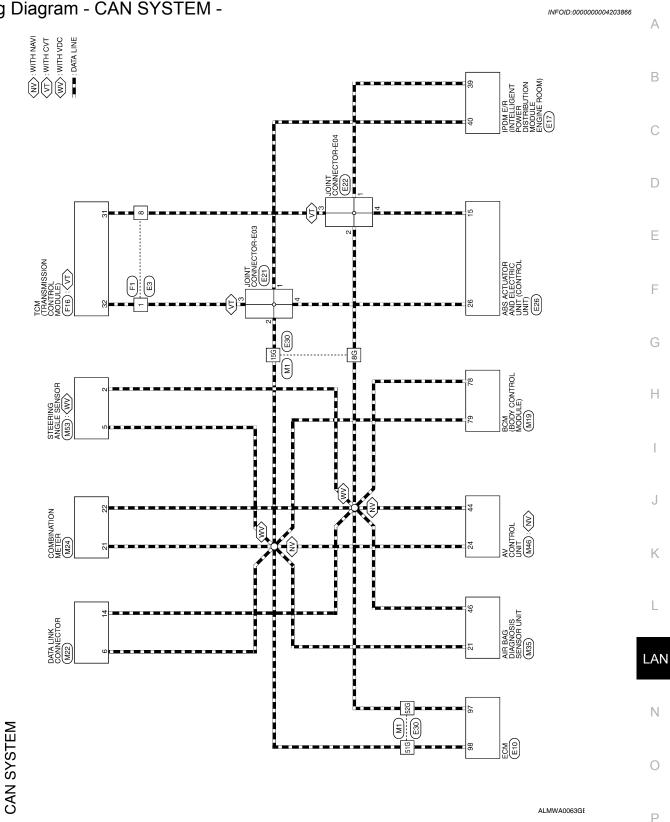
Component Parts Location

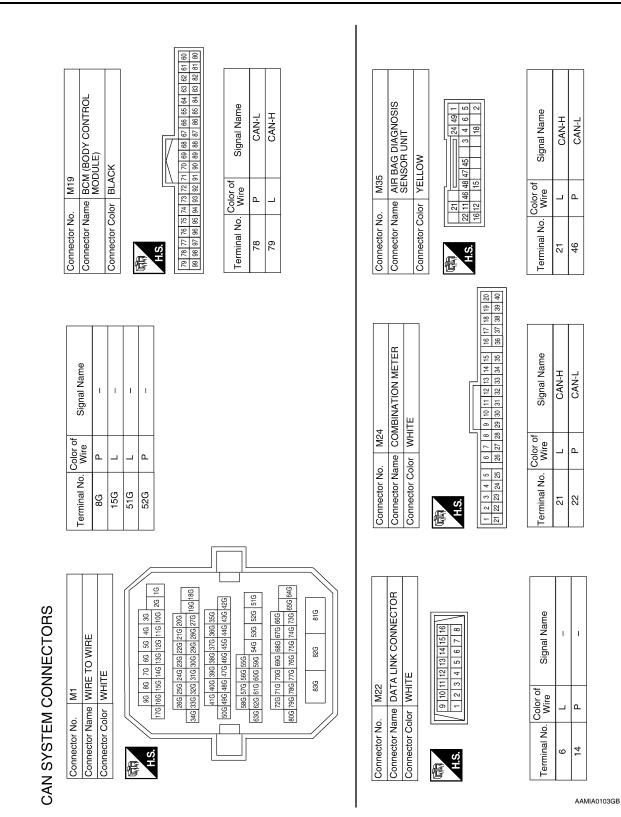


- ABS actuator and electric unit (con-1. trol unit) E26
- ECM E10 4.
- Combination meter M24 7.
- 10. Data link connector M22
- 2. AV control unit M46
- IPDM E/R E17 5.
- 8. Steering angle sensor M53
- TCM F16 3.
- 6. BCM M19
- 9. Air bag diagnosis sensor unit M35

< COMPONENT DIAGNOSIS >

Wiring Diagram - CAN SYSTEM -





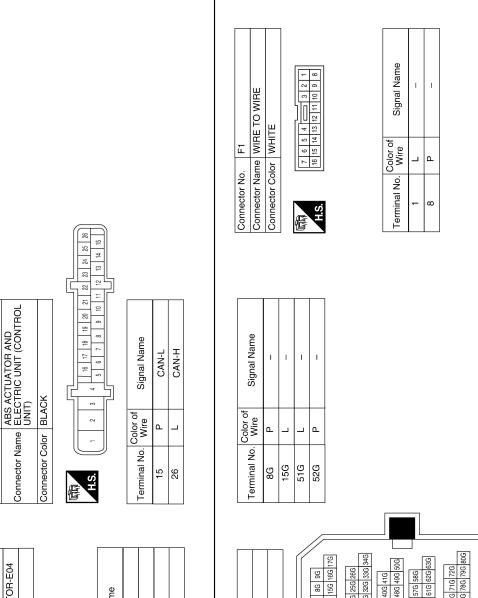
< COMPONENT DIAGNOSIS >

COMPONENT DIAGNOSIS >	[CAN]
	A
E3 e WIRE TO WIRE nr WIRE TO WIRE Nr WHITE Signal Name L L P Joint Connector-E03 or WHITE	Signal Name
No. E3 Image: Solor MHI	Color of wire of
Connector No. E3 Connector Name WIRE TO WIRE Connector Name WIRE TO WIRE Connector Color WHITE Terminal No. Color of Signal 1 Terminal No. Color of Signal - Connector Name Joint 11/12/13/14/15 Connector Name L Connector Name Joint 11/12/13/14/15 Connector Name Joint 11/12/13/14/15 Connector Name Joint 11/12/13/14/15 Connector Name Joint 11/12/13/14/15 MLX E21 Connector Name JOINT CONNE Connector Name JOINT CONNE	Terminal No.
	F
M53 STEERING ANGLE SENSOR WHITE Front Signal Name CAN-L CAN-L CAN-L CAN-L CAN-L CAN-L CAN-L CAN-L CAN-L CAN-L CAN-L CAN-L CAN-L CAN-L CAN-L CAN-L CAN-L CAN-L CAN-L CAN-L CAN-L CAN-L CAN-L CAN-L CAN-L CAN-L CAN-L	G CAN-H CAN-H H
ERING ANGLE S ETTE Signal Name CAN-L CAN-H CAN-H CAN-H CAN-H CAN-H CAN-H CAN-H CAN-H CAN-H CAN-H CAN-H CAN-H CAN-H CAN-H CAN-H CAN-H CAN-H CAN-H	46 40 30 46 44 43 9 CAN-L CAN-L
Connector No. Connector Name Connector Name Connector Color 5 1 Connector No. Color 5 1 Connector No.	Terminal No. 39 40
88 88 88 88 88 88	K
	Signal Name CAN-L CAN-L
M46 AV CONTROL UNIT AV CONTROL UNIT WHITE WHITE WILE WHITE Signal and signal	
Connector No. M46 Connector Name AV C Connector Color WHI Connector Color WHI Terminal No. Color of 41 a2 43 44 a5 46 a7 48 49 44 P Connector Name ECM Connector Name ECM Connector Name ECM	Terminal No. Color of B 97 P 98 L 0 N
Connector NC Connector NC Connector NC Connector NC 24 44 44 Connector NC Connector NC	Termine 98 98

< COMPONENT DIAGNOSIS >

Р

AAMIA0104GB



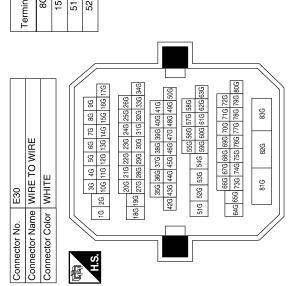


E26

Connector No.



Signal Name	I	I	-	I	
Color of wire	Ч	Ч	Р	Ч	
Terminal No.	1	2	3	4	



AAMIA0105GB

< COMPONENT DIAGNOSIS >	
-------------------------	--

		A
		В
		С
		D
		E
		F
		G
		Н
		I
		J
		K
No. F16 Name TCM (TRANSMISSION Color BLACK 0 Color 0 Color 0 Signal Name 0 Signal Name 0 Vire 1 2 1 2 1 2 1 2 1 1 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2		L
F16 TCM (TRANSMISSION CONTROL MODULE) BLACK BLACK CAN-H CAN-H CAN-H		LAN
		Ν
Connec Connec 31 31 31		0
	ABMIA0465GB	Ρ

MALFUNCTION AREA CHART

< COMPONENT DIAGNOSIS >

MALFUNCTION AREA CHART

Main Line

INFOID:000000004203867

Malfunction Area	Reference
Main line between data link connector and ABS actuator and electric unit (control unit)	LAN-35. "Diagnosis Procedure"

Branch Line

INFOID:000000004203868

Malfunction Area	Reference	
ECM branch line circuit	LAN-36, "Diagnosis Procedure"	
Air bag diagnosis sensor unit branch line circuit	LAN-37, "Diagnosis Procedure"	
AV control unit branch line circuit	LAN-38, "Diagnosis Procedure"	
BCM branch line circuit	LAN-39, "Diagnosis Procedure"	
Data link connector branch line circuit	LAN-40, "Diagnosis Procedure"	
Combination meter branch line circuit	LAN-41, "Diagnosis Procedure"	
Steering angle sensor branch line circuit	LAN-42, "Diagnosis Procedure"	
ABS actuator and electric unit (control unit) branch line circuit	LAN-43, "Diagnosis Procedure"	
TCM branch line circuit	LAN-44, "Diagnosis Procedure"	
IPDM E/R branch line circuit	LAN-45. "Diagnosis Procedure"	

Short Circuit

INFOID:000000004203869

Malfunction Area	Reference
CAN communication circuit	LAN-46, "Diagnosis Procedure"

URE OR witch OFF. ttery cable from the ne	nectors for damage, be tor. N CIRCUIT)		[CAN]
URE OR witch OFF. ttery cable from the ne og terminals and connect r M1 r E30 normal? terminal and connect CONTINUITY (OPEN	egative terminal. nectors for damage, be tor. N CIRCUIT)		
EDURE OR witch OFF. ttery cable from the ne og terminals and conr r M1 r E30 normal? terminal and connect CONTINUITY (OPEN	nectors for damage, be tor. N CIRCUIT)	end and loose conne	
OR witch OFF. Itery cable from the ne og terminals and conr r M1 r E30 normal? terminal and connect CONTINUITY (OPEN	nectors for damage, be tor. N CIRCUIT)	end and loose conne	ction (connector side
OR witch OFF. Itery cable from the ne og terminals and conr r M1 r E30 normal? terminal and connect CONTINUITY (OPEN	nectors for damage, be tor. N CIRCUIT)	end and loose conne	ction (connector side
witch OFF. ttery cable from the ne og terminals and conr r M1 r E30 <u>normal?</u> terminal and connect CONTINUITY (OPEN	nectors for damage, be tor. N CIRCUIT)	end and loose conne	ction (connector side
-	ink connector and the h		
			Continuity
6		15G	Existed
14	M1 —	8G	Existed
CONTINUITY (OPEN nnector of ABS actuat ity between the harne	N CIRCUIT) for and electric unit (co	ntrol unit).	
	ABS actuator and elec	tric unit (control unit)	
connector	harness connector		Continuity
Terminal No.	Connector No.	Terminal No.	
	E26		Existed
		15	Existed
Check CAN system ror was detected in th c unit (control unit). main line between th	e main line between th		
	14 normal? main line between th CONTINUITY (OPEN nnector of ABS actual ity between the harner connector Terminal No. 15G 8G normal? >Check CAN system ror was detected in th ic unit (control unit).	Terminal No. Connector No. 6 M1 14 M1 14 M1 emain line between the data link connector at CONTINUITY (OPEN CIRCUIT) nnector of ABS actuator and electric unit (co ity between the harness connector and the Arc. connector ABS actuator and electric unit (co harness connector No. 15G E26 8G E26 Inormal? Connector No. 15G E26 anormal? E26 inormal? Connector No. 15G E26 anormal? E26 anormal? E26	Terminal No.Connector No.Terminal No.6M115G148GInormal?e main line between the data link connector and the harness connector CONTINUITY (OPEN CIRCUIT)nnector of ABS actuator and electric unit (control unit). ity between the harness connector and the ABS actuator and electric.connectorABS actuator and electric unit (control unit). harness connectorto connectorABS actuator and electric unit (control unit) harness connectorTerminal No.Connector No.15GE268G15268G15150enormal?>Check CAN system type decision again. ror was detected in the main line between the data link connector ic unit (control unit). e main line between the harness connector E30 and the ABS actuator

ECM BRANCH LINE CIRCUIT

Diagnosis Procedure

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 expect for California: EC-673, "Diagnosis Procedure"
- VQ engine models: EC-1175, "Diagnosis Procedure"

Is the inspection result normal?

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

- QR engine models for California: <u>EC-27</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CON-</u> <u>TROL UNIT</u>: <u>Special Repair Requirement</u>"
- QR engine models except for California: <u>EC-563</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"
- VQ engine models: <u>EC-1051</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : <u>Special Repair Requirement</u>"

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

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

<u> ~ 1 11 T</u>

[CAN]
INFOID:000000004203872
_

AV BRANCH LINE CIRCUIT

Diagnosis Procedure

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		
Connector No.	Terminal No.		Resistance (Ω)
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.

 $\mathbf{3}$. Check power supply and ground circuit

Check the power supply and the ground circuit of the AV control unit. Refer to <u>AV-315, "AV CONTROL UNIT :</u> <u>Diagnosis Procedure"</u>.

Is the inspection result normal?

YES (Present error)>>Replace the AV control unit. Refer to AV-437, "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 DIAGNO	SIS >		[CAN]
BCM BRANCH LIN	E CIRCUIT		
Diagnosis Procedure			INFOID:00000004203874
INSPECTION PROCEDUF	RE		
1.CHECK CONNECTOR			
	cable from the negative terr	ninal. for damage, bend and loose	e connection (unit side and
Is the inspection result norm YES >> GO TO 2. NO >> Repair the term			
2.CHECK HARNESS FOR			
 Disconnect the connect Check the resistance be 	or of BCM. etween the BCM harness co	onnector terminals.	
	BCM harness connector		Resistance (Ω)
Connector No.	-	nal No.	
M19	79	78	Approx. 54 – 66
Is the measurement value w YES >> GO TO 3. NO >> Repair the BCM 3. CHECK POWER SUPPL	1 branch line.	r	
YES (Past error)>>Error w	nal?	S-96, "Removal and Installa	

LAN

Ν

0

DLC BRANCH LINE CIRCUIT

Diagnosis Procedure

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 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.

INFOID:000000004203875

[CAN]

M&A BRANCH LINE CIRCUIT

< COMPONENT DIAGNOS	SIS >		[CAN]
M&A BRANCH LINI	ECIRCUIT		
Diagnosis Procedure			INFOID:00000004203876
INSPECTION PROCEDUR	E		I
1.CHECK CONNECTOR			
 Check the terminals an (unit side and connector) <u>Is the inspection result norm</u> YES >> GO TO 2. 	cable from the negative tern d connectors of the combin ⁻ side). <u>al?</u>	ninal. nation meter for damage, b	end and loose connection
NO >> Repair the term			1
2.CHECK HARNESS FOR			
 Disconnect the connect Check the resistance be 		er harness connector termir	nals.
C	mbination meter harness connect	or	
Connector No.	Termin	-	Resistance (Ω)
M24	21	22	Approx. 54 – 66
Is the measurement value w	ithin the specification?		
YES >> GO TO 3. NO >> Repair the com	bination meter branch line.		ł
3.CHECK POWER SUPPL			
Check the power supply an METER : Diagnosis Procedu Is the inspection result norm YES (Present error)>>Rep YES (Past error)>>Error w	d the ground circuit of the c <u>ire"</u> . <u>al?</u>	Refer to <u>MWI-176, "Remov</u> ion meter branch line.	

LAN

Ν

0

STRG BRANCH LINE CIRCUIT

Diagnosis Procedure

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.

Ste	Steering angle sensor harness connector		
Connector No.	Terminal No.		Resistance (Ω)
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 <u>BRC-207, "Wiring Dia-</u> gram - Coupe" or <u>BRC-215, "Wiring Diagram - Sedan"</u>.

Is it normal?

YES (Present error)>>Replace the steering angle sensor. Refer to BRC-242, "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

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		ADS DRANCH		
Diagnosis Procedure INSPECTION PROCEDURE 1CHECK 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. 2CHECK HARNESS FOR OPEN CIRCUIT 1. Disconnect the battery cable from the ABS actuator and electric unit (control unit) harness connector terminals. ABS actuator and electric unit (control unit) harness connector terminals. ABS actuator and electric unit (control unit) harness connector terminals. Connector No. Terminal No. Resistance (Ω) Connector No. Terminal No. Resistance (Ω) 3. NO >> Repair the ABS actuator and electric unit (control unit) branch line. 3. NO >> Repair the ABS actuator and electric unit (control unit) branch line. 3. 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-10., "Wiring Diagram - Coupe" or BRC-46. "Wiring Diagram -	< COMPONENT DIAGNOS	SIS >		[CAN]
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) harness connector terminals. Check the resistance between the 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 terminals. ABS actuator and electric unit (control unit) harness connector terminals. 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: <u>BRC-41</u> , "Wiring Diagram - Coupe" or <u>BRC-46</u> , "Wiring Diagram - Sedan" Models with ABS: <u>BRC-41</u> , "Wiring Diagram - Coupe" or <u>BRC-45</u> , "Wiring Diagram - Sedan" Models with ABS: <u>BRC-41</u> , "Wiring Diagram - Coupe" or <u>BRC-45</u> , "Wiring Diagram - Sedan" Models with ABS: <u>BRC-41</u> , "Wiring Diagram - Coupe" or <u>BRC-45</u> , "Wiring Diagram - Sedan" Models with ABS: <u>BRC-41</u> , "Wiring Diagram - Coupe" or <u>BRC-45</u> , "Wiring Diagram - Sedan" Models with ABS: <u>BRC-41</u> , "Wiring Diagram - Coupe" or <u>BRC-45</u> , "Wiring Diagram - Sedan" Models with ABS: <u>BRC-41</u> , "Wiring Diagram - Coupe" or <u>BRC-45</u> , "Wiring Diagram - Sedan" Models with ABS: <u>BRC-41</u> , "Wiring Diagram - Coupe" or <u>BRC-45</u> , "Wiring Diagram - Sedan" Models with ABS: <u>BRC-40</u> , " <u>Wiring Diagram - Coupe"</u> or <u>BRC-415</u> , "Wiring Diagram - Sedan" Models with ABS: <u>BRC-40</u> , " <u>Wiring Diagram - Coupe"</u> or <u>BRC-415</u> , "Wiring Diagram - Sedan" Models with ABS: <u>BRC-40</u> , " <u>Wiring Diagram </u>	ABS BRANCH LINE			
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) harness connector terminals. ABS actuator and electric unit (control unit) harness connector Resistance (Ω) Connector No. Terminal No. E26 26 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: <u>BRC-109.</u> "Wiring Diagram - Coupe" or <u>BRC-46.</u> "Wiring Diagram - Sedan" • Models with TCS: <u>BRC-109.</u> "Wiring Diagram - Coupe" or <u>BRC-415.</u> "Wiring Diagram - Sedan" • Models with TOS: <u>BRC-107.</u> "Wiring Diagram - Coupe" or <u>BRC-215.</u> "Wiring Diagram - Sedan" <	Diagnosis Procedure			INFOID:000000004203878
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). 1s 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. <u>ABS actuator and electric unit (control unit) harness connector terminals. <u>ABS actuator and electric unit (control unit) harness connector terminals. <u>ABS actuator and electric unit (control unit) harness connector terminals. <u>ABS actuator and electric unit (control unit) harness connector terminals. <u>YES >> GO TO 3.</u> <u>NO >> Repair the ABS actuator and electric unit (control unit) branch line. <u>3.CHECK POWER SUPPLY AND GROUND CIRCUIT</u> Check the power supply and the ground circuit of the ABS actuator and electric unit (control unit). Refer to the following. Models with ABS: <u>BRC-109. "Wiring Diagram - Coupe" or BRC-115. "Wiring Diagram - Sedan"</u> </u></u></u></u></u>	INSPECTION PROCEDUR	RE		
 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). <u>Is the inspection result normal?</u> 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 terminals. ABS actuator and electric unit (control unit) harness connector terminals. ABS actuator and electric unit (control unit) harness connector Connector No. Terminal No. Resistance (Ω) Connector No. Terminal No. Resistance (Ω) Connector No. F26 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: <u>BRC-41.</u> "Wiring Diagram - Coupe" or <u>BRC-46.</u> "Wiring Diagram - Sedan" Models with VDC: <u>BRC-109.</u> "Wiring Diagram - Coupe" or <u>BRC-115.</u> "Wiring Diagram - Sedan" Models with ABS: <u>BRC-60.</u> "Exploded View" Models with ABS: <u>BRC-6137.</u> "Exploded View" Models with ABS: <u>BRC-66.</u> "Exploded View" Models with VDC: <u>BRC-137.</u> "Exploded View" Models with VDC: <u>BRC-239.</u> "Exploded View" YES (Past error)>>Error was detected in the ABS actuator and electric unit (control unit) branch line. 	1. CHECK CONNECTOR			
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) 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-215, "Wiring Diagram - Sedan" • Models with VDC: BRC-207, "Wiring Diagram - Coupe" or BRC-215, "Wiring Diagram - Sedan" • Models with TCS: BRC-137, "Exploded View" • Models with TCS: BRC-137, "Exploded View" • Models with ABS: BRC-66, "Exploded View" • Models with TCS: BRC-137, "Exploded View" • Models with TCS: BRC-239, "Exploded View" <	 Disconnect the battery of Check the terminals and 	cable from the negative tern d connectors of the ABS ac	tuator and electric unit (con	trol unit) for damage, bend
 Check the resistance between the ABS actuator and electric unit (control unit) harness connector terminals. ABS actuator and electric unit (control unit) harness connector Connector No. E26 E26 E26 E26 E26 E26 E26 E26 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. 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: <u>BRC-41</u>, "Wiring Diagram - Coupe" or <u>BRC-46</u>, "Wiring Diagram - Sedan" Models with VDC: <u>BRC-207</u>, "Wiring Diagram - Coupe" or <u>BRC-115</u>, "Wiring Diagram - Sedan" Models with VDC: <u>BRC-207</u>, "Wiring Diagram - Coupe" or <u>BRC-215</u>, "Wiring Diagram - Sedan" Models with ABS: <u>BRC-66</u>, "Exploded View" Models with ABS: <u>BRC-66</u>, "Exploded View" Models with ABS: <u>BRC-239</u>, "Exploded View" Models with VDC: <u>BRC-239, "Exploded View"</u> YES (Past error)>>Error was detected in the ABS actuator and electric unit (control unit) branch line. 	YES >> GO TO 2. NO >> Repair the termi 2. CHECK HARNESS FOR	inal and connector. OPEN CIRCUIT		
Connector No. Terminal No. Resistance (Ω) 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: <u>BRC-41</u> , "Wiring Diagram - Coupe" or <u>BRC-46</u> , "Wiring Diagram - Sedan" • Models with TCS: <u>BRC-109</u> , "Wiring Diagram - Coupe" or <u>BRC-115</u> , "Wiring Diagram - Sedan" • Models with VDC: <u>BRC-207</u> , "Wiring Diagram - Coupe" or <u>BRC-215</u> , "Wiring Diagram - Sedan" • Models with VDC: <u>BRC-207</u> , "Wiring Diagram - Coupe" or <u>BRC-215</u> , "Wiring Diagram - Sedan" • Models with VDC: <u>BRC-207</u> , "Wiring Diagram - Coupe" or <u>BRC-215</u> , "Wiring Diagram - Sedan" • Models with VDC: <u>BRC-207</u> , "Exploded View" • Models with ABS: <u>BRC-66</u> , "Exploded View" • Models with TCS: <u>BRC-137</u> , "Exploded View" • Models with VDC: <u>BRC-239</u> , "Exploded View" • Models with VDC: <u>BRC-239</u> , "Exploded View" • Models with VDC: <u>BRC-239</u> , "Exploded View" • Models with VDC: <u></u>	2. Check the resistance be) harness connector termi-
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-207, "Wiring Diagram - Coupe" or BRC-215, "Wiring Diagram - Sedan" • Models with VDC: BRC-207, "Wiring Diagram - Coupe" or BRC-215, "Wiring Diagram - Sedan" • Models with VDC: BRC-207, "Wiring Diagram - Coupe" or BRC-215, "Wiring Diagram - Sedan" • Models with VDC: BRC-207, "Wiring Diagram - Coupe" or BRC-215, "Wiring Diagram - Sedan" • Models with VDC: BRC-207, "Wiring Diagram - Coupe" or BRC-215, "Wiring Diagram - Sedan" • Models with ABS: BRC-66, "Exploded View" • Models with ABS: BRC-66, "Exploded View" • Models with VDC: BRC-239, "Exploded View"	ABS actuator a	and electric unit (control unit) harn	less connector	Resistance (O)
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: <u>BRC-41</u> , "Wiring Diagram - Coupe" or <u>BRC-46</u> , "Wiring Diagram - Sedan" • Models with TCS: <u>BRC-109</u> , "Wiring Diagram - Coupe" or <u>BRC-115</u> , "Wiring Diagram - Sedan" • Models with VDC: <u>BRC-207</u> , "Wiring Diagram - Coupe" or <u>BRC-215</u> , "Wiring Diagram - Sedan" • Models with VDC: <u>BRC-207</u> , "Wiring Diagram - Coupe" or <u>BRC-215</u> , "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: <u>BRC-66</u> , "Exploded View" • Models with VDC: <u>BRC-239</u> , "Exploded View" • Models with VDC: <u>BRC-239</u> , "Exploded View" • Models with VDC: <u>BRC-239</u> , "Exploded View"	Connector No.	Termin	al No.	
 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: <u>BRC-41</u>, "Wiring Diagram - Coupe" or <u>BRC-46</u>, "Wiring Diagram - Sedan" Models with TCS: <u>BRC-109</u>, "Wiring Diagram - Coupe" or <u>BRC-115</u>, "Wiring Diagram - Sedan" Models with VDC: <u>BRC-207</u>, "Wiring Diagram - Coupe" or <u>BRC-215</u>, "Wiring Diagram - Sedan" Models with VDC: <u>BRC-207</u>, "Wiring Diagram - Coupe" or <u>BRC-215</u>, "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: <u>BRC-66</u>, "Exploded View" Models with TCS: <u>BRC-137</u>, "Exploded View" Models with VDC: <u>BRC-239</u>, "Exploded View" YES (Past error)>>Error was detected in the ABS actuator and electric unit (control unit) branch line. 	E26	26	15	Approx. 54 – 66
 Models with ABS: <u>BRC-41</u>, "<u>Wiring Diagram - Coupe</u>" or <u>BRC-46</u>, "<u>Wiring Diagram - Sedan</u>" Models with TCS: <u>BRC-109</u>, "<u>Wiring Diagram - Coupe</u>" or <u>BRC-115</u>, "<u>Wiring Diagram - Sedan</u>" Models with VDC: <u>BRC-207</u>, "<u>Wiring Diagram - Coupe</u>" or <u>BRC-215</u>, "<u>Wiring Diagram - Sedan</u>" Is the inspection result normal? YES (Present error)>>Replace the ABS actuator and electric unit (control unit). Refer to the following. Models with ABS: <u>BRC-66</u>, "<u>Exploded View</u>" Models with TCS: <u>BRC-137</u>, "<u>Exploded View</u>" Models with VDC: <u>BRC-239</u>, "<u>Exploded View</u>" YES (Past error)>>Error was detected in the ABS actuator and electric unit (control unit) branch line. 	NO >> Repair the ABS 3.CHECK POWER SUPPL Check the power supply and	Y AND GROUND CIRCUIT	·	t (control unit). Refer to the
 YES (Present error)>>Replace the ABS actuator and electric unit (control unit). Refer to the following. Models with ABS: <u>BRC-66, "Exploded View"</u> Models with TCS: <u>BRC-137, "Exploded View"</u> Models with VDC: <u>BRC-239, "Exploded View"</u> YES (Past error)>>Error was detected in the ABS actuator and electric unit (control unit) branch line. 	 Models with ABS: <u>BRC-41</u> Models with TCS: <u>BRC-10</u> 	9, "Wiring Diagram - Coupe	e" or BRC-115, "Wiring Diag	<u>ıram - Sedan"</u>
 Models with ABS: <u>BRC-66, "Exploded View"</u> Models with TCS: <u>BRC-137, "Exploded View"</u> Models with VDC: <u>BRC-239, "Exploded View"</u> YES (Past error)>>Error was detected in the ABS actuator and electric unit (control unit) branch line. 				- fan te de e fellen ún e
	 Models with A Models with T Models with V 	BS: <u>BRC-66, "Exploded Vie</u> CS: <u>BRC-137, "Exploded V</u> DC: <u>BRC-239, "Exploded V</u>	<u>ew"</u> /iew" /iew"	
				or unit) branch line.

0

TCM BRANCH LINE CIRCUIT

Diagnosis Procedure

INSPECTION PROCEDURE

1.CHECK CONNECTOR

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

Check the resistance between the TCM harness connector terminals. 2.

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

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the TCM branch line.

 ${\it 3.}$ Check power supply and ground circuit

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

- QR25DE models: TM-380, "Wiring Diagram CVT CONTROL SYSTEM Coupe" or TM-389, "Wiring Diagram - CVT CONTROL SYSTEM - Sedan"
- VQ35DE models: TM-202, "Wiring Diagram-CVT CONTROL SYSTEM-Coupe" or TM-211, "Wiring Diagram—CVT CONTROL SYSTEM—Sedan"

Is the inspection result normal?

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

- QR25DE models: <u>TM-430, "Exploded View"</u>
 VQ35DE models: <u>TM-254, "Exploded View"</u>
- YES (Past error)>>Error was detected in the TCM branch line.

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

IPDM-E BRANCH LINE CIRCUIT

< COMPONENT DIAGNOS	SIS >		[CAN]
IPDM-E BRANCH L	INE CIRCUIT		
Diagnosis Procedure			INFOID:00000004203880
INSPECTION PROCEDUR	۶E		
1.CHECK CONNECTOR			
	cable from the negative tern d connectors of the IPDM E		loose connection (unit side
YES >> GO TO 2.	in all and a sum a star		
NO >> Repair the term 2.CHECK HARNESS FOR			
 Disconnect the connect Check the resistance be 	or of IPDM E/R. etween the IPDM E/R harne	ess connector terminals.	
	IPDM E/R harness connector		
Connector No.	Termin	al No.	Resistance (Ω)
E17	40	39	Approx. 108 – 132
Is the measurement value wYES>> GO TO 3.NO>> Repair the IPDM 3. CHECK POWER SUPPL	I E/R branch line.		
YES (Past error)>>Error w	-	9 <u>PCS-48, "Removal and In</u> R branch line.	

LAN

Ν

0

CAN COMMUNICATION CIRCUIT

Diagnosis Procedure

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		
Connector No.	Terminal No.		Continuity
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		Continuity
Connector No.	Terminal No.	Ground	Continuity
M22	6	Gibunu	Not existed
W122	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.

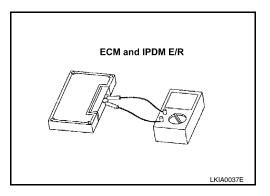
IPDN	II E/R	Resistance (Ω)		
Termi	Terminal No.			
40	39	Approx. 108 – 132		

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]

CAN COMMUNICATION CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN]

А

D

F

Connect all the connectors. Check if the symptoms described in the "Symptom (Results from interview with customer)" are reproduced. Inspection result Reproduced>>CO_TO_6

Reproduced>>GO TO 6.

Non-reproduced>>Start the	e diagnosis	again.	Follow	the	trouble	diagnosis	procedure	when	past	error	is	В
detected.												
\mathbf{S} . CHECK UNIT REPRODU	CTION											

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.
- Disconnect one of the unit connectors of CAN communication system.
 NOTE:

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

 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.

Н

LAN

Κ

L

0

COMPONENT DIAGNOSIS MAIN LINE BETWEEN DLC AND ABS CIRCUIT

Diagnosis Procedure

INFOID:000000004203882

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.	Continuity
M22	6	M1	15G	Existed
IVIZZ	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
E30	8G	E20	15	Existed

Is the inspection result normal?

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

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

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

ECM BRANCH LIN	E CIRCUIT		
Diagnosis Procedure			INFOID:000000004471803
NSPECTION PROCEDUR	RE		
1. CHECK CONNECTOR			
 Check the following terr nector side). ECM Harness connector E30 Harness connector M1 s the inspection result norm YES >> GO TO 2. NO >> Repair the term 	cable from the negative terr ninals and connectors for d nal? inal and connector.		nnection (unit side and con-
2.CHECK HARNESS FOR			
 Disconnect the connect Check the resistance be 	or of ECM. etween the ECM harness o	onnector terminals.	
	ECM harness connector		Resistance (Ω)
Connector No.		nal No.	
E10 s the measurement value w	98	97	Approx. 108 – 132
YES >> GO TO 3. NO >> Repair the ECM CHECK POWER SUPPL Check the power supply and QR engine models for Cal QR engine models expect	Y AND GROUND CIRCUIT I the ground circuit of the E ifornia: <u>EC-144, "Diagnosis</u> for California: <u>EC-673, "Dia</u>	CM. Refer to the following. Procedure	
VQ engine models: <u>EC-11</u> s the inspection result norm			
YES (Present error)>>Rep • QR engine m <u>TROL UNIT</u> • QR engine mo	lace the ECM. Refer to the odels for California: <u>EC-27</u> <u>Special Repair Requiremen</u> odels except for California:	<u>, "ADDITIONAL SERVICE</u> <u>ht"</u> EC-563, "ADDITIONAL SE	WHEN REPLACING CON- RVICE WHEN REPLACING
 VQ engine model 	<u>r Requirement"</u>	NAL SERVICE WHEN REF	PLACING CONTROL UNIT :
	er supply and the ground ci		

0

A-BAG BRANCH LINE CIRCUIT

Diagnosis Procedure

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.

INFOID:000000004203884

[CAN SYSTEM (TYPE 1)]

BCM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

BCM BRANCH LINE	ECIRCUIT		
Diagnosis Procedure			INFOID:00000004203885
INSPECTION PROCEDUR	E		
1.CHECK CONNECTOR			
	able from the negative tern		e connection (unit side and
Is the inspection result norm YES >> GO TO 2. NO >> Repair the termi 2. CHECK HARNESS FOR	nal and connector.		
1. Disconnect the connect		onnector terminals.	
	BCM harness connector		Resistance (Ω)
Connector No.	Termin		· · ·
M19	79	78	Approx. 54 – 66
Is the measurement value w	thin the specification?		
YES >> GO TO 3. NO >> Repair the BCM 3.CHECK POWER SUPPL			
NO >> Repair the BCM 3.CHECK POWER SUPPL Check the power supply and	Y AND GROUND CIRCUIT the ground circuit of the B		gnosis Procedure".
NO >> Repair the BCM 3.CHECK POWER SUPPL Check the power supply and Is the inspection result norm YES (Present error)>>Reply YES (Past error)>>Error wa	Y AND GROUND CIRCUIT the ground circuit of the Bo al? ace the BCM. Refer to <u>BCS</u>	CM. Refer to <u>BCS-42, "Dia</u> <u>S-96, "Removal and Installa</u> nch line.	-

LAN

Ν

0

DLC BRANCH LINE CIRCUIT

Diagnosis Procedure

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.	Termi		
M22	6	14	Approx. 54 – 66

Is the measurement value within the specification?

YES (Present error)>>Check 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:000000004471804
INSPECTION PROCEDURE			
1. CHECK CONNECTOR			
1. Turn the ignition switch OF			
Disconnect the battery cable	e from the negative terr onnectors of the combi		bend and loose connection
is the inspection result normal?	- /		
YES >> GO TO 2.			
NO >> Repair the terminal 2.CHECK HARNESS FOR OF			
 Disconnect the connector of Check the resistance between 		ter harness connector tern	ninals.
Combi	nation meter harness connec	tor	
Connector No.	Termir		- Resistance (Ω)
M24	21	22	Approx. 54 – 66
s the measurement value withi	n the specification?		<u>.</u>
YES >> GO TO 3.			
• ·	tion meter branch line.		
$3.$ CHECK POWER SUPPLY A			
Check the power supply and th METER : Diagnosis Procedure'		combination meter. Refer	to <u>MWI-43, "COMBINATION</u>
s the inspection result normal?			
YES (Present error)>>Replace	the combination meter	. Refer to MWI-176. "Rem	oval and Installation".
YES (Past error)>>Error was of	letected in the combinat	tion meter branch line.	<u>oranana motanation</u> .
NO >> Repair the power s	upply and the ground ci	rcuit.	

LAN

Ν

0

ABS BRANCH LINE CIRCUIT

[CAN SYSTEM (TYPE 1)]

INFOID:000000004203888

Diagnosis Procedure

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).
- 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.	Termi	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: <u>BRC-41, "Wiring Diagram - Coupe"</u> or <u>BRC-46, "Wiring Diagram - Sedan"</u>

- Models with TCS: <u>BRC-109</u>, "Wiring Diagram Coupe" or <u>BRC-115</u>, "Wiring Diagram Sedan"
- Models with VDC: <u>BRC-207</u>, "Wiring Diagram Coupe" or <u>BRC-215</u>, "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: <u>BRC-66</u>, "Exploded View"
- Models with TCS: BRC-137, "Exploded View"
- Models with VDC: <u>BRC-239</u>, "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.

Diagnosis Procedure	INE CIRCUIT		INFOID:000000004203889
NSPECTION PROCEDURI	E		
CHECK CONNECTOR	-		
. Turn the ignition switch C . Disconnect the battery ca	able from the negative termir		nd loose connection (unit side
the inspection result norma YES >> GO TO 2. NO >> Repair the termir			
CHECK HARNESS FOR			
Disconnect the connecto Check the resistance bet	tween the IPDM E/R harness	s connector terminals.	
	IPDM E/R harness connector		
Connector No.	IPDM E/R harness connector Terminal	No.	Resistance (Ω)
E17	Terminal 40	No. 39	Resistance (Ω) Approx. 108 – 132
E17 the measurement value wi YES >> GO TO 3. NO >> Repair the IPDM CHECK POWER SUPPLY	Terminal 40 thin the specification? E/R branch line. Y AND GROUND CIRCUIT	39	Approx. 108 – 132
E17 the measurement value wi YES >> GO TO 3. NO >> Repair the IPDM CHECK POWER SUPPLY heck the power supply and the inspection result normation YES (Present error)>>Replation YES (Past error)>>Error wat	Terminal 40 thin the specification? E/R branch line. Y AND GROUND CIRCUIT the ground circuit of the IPD	39 M E/R. Refer to <u>PCS-2</u> PCS-48, "Removal and branch line.	Approx. 108 – 132

LAN

Ν

0

CAN COMMUNICATION CIRCUIT

Diagnosis Procedure

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			
Connector No.	Termi	Continuity		
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	Data link connector		Continuity
Connector No.	Terminal No.	Cround	Continuity
M22	6 Ground	Giouna	Not existed
IVIZZ	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)
Termi	Terminal No.	
98	97	Approx. 108 – 132

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

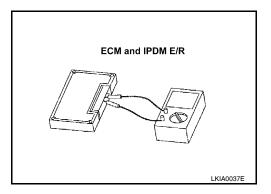
IPDN	II E/R	Resistance (Ω)
Termi	nal No.	
40	39	Approx. 108 – 132

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 1)]
Connect all the connectors. Check if the symptoms described in the "Symptom customer)" are reproduced.	(Results from interview with A
Inspection result Reproduced>>GO TO 6. Non-reproduced>>Start the diagnosis again. Follow the trouble diagnosis produced.	rocedure when past error is B
6. CHECK UNIT REPRODUCTION	
Perform the reproduction test as per the following procedure for each unit. 1. Turn the ignition switch OFF.	C
 Disconnect the battery cable from the negative terminal. Disconnect one of the unit connectors of CAN communication system. NOTE: 	D
 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 (Results from interview with customer)" are reproduced. NOTE: 	s described in the "Symptom $_{ ext{E}}$
Although unit-related error symptoms occur, do not confuse them with other Inspection result	symptoms.
Reproduced>>Connect the connector. Check other units as per the above proc Non-reproduced>>Replace the unit whose connector was disconnected.	edure. G

Н

J

Κ

L

LAN

Ν

0

COMPONENT DIAGNOSIS MAIN LINE BETWEEN DLC AND ABS CIRCUIT

Diagnosis Procedure

INFOID:000000004203891

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.		Continuity
M22	6	M1	15G	Existed
IVIZZ	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
E30	8G	E20	15	Existed

Is the inspection result normal?

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

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

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

ECM BRANCH LINI Diagnosis Procedure			
nagilosis Flocedule			INFOID:00000000447180
NSPECTION PROCEDUR	E		
.CHECK CONNECTOR			
	able from the negative tern ninals and connectors for da		nnection (unit side and con-
NO >> Repair the termi			
CHECK HARNESS FOR	OPEN CIRCUIT		
Disconnect the connector. Check the resistance be	or of ECM. tween the ECM harness co	nnector terminals.	
	ECM harness connector		Resistance (Ω)
Connector No.	Termin	al No.	
E10 the measurement value w	98	97	Approx. 108 – 132
heck the power supply and QR engine models for Cali QR engine models expect	Y AND GROUND CIRCUIT the ground circuit of the E fornia: <u>EC-144, "Diagnosis</u> for California: <u>EC-673, "Dia</u>	CM. Refer to the following. Procedure"	
VQ engine models: <u>EC-11</u> the inspection result norm			
YES (Present error)>>Repl • QR engine mo <u>TROL UNIT : 3</u> • QR engine mo <u>CONTROL UN</u>	ace the ECM. Refer to the odels for California: <u>EC-27,</u> Special Repair Requirement odels except for California: <u>E</u>	<u>"ADDITIONAL SERVICE</u> <u>t"</u> EC-563, "ADDITIONAL SE ement"	WHEN REPLACING CON- RVICE WHEN REPLACING PLACING CONTROL UNIT :
YES (Past error)>>Error wa	r <u>Requirement"</u> as detected in the ECM brai er supply and the ground cir		

0

A-BAG BRANCH LINE CIRCUIT

Diagnosis Procedure

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.

INFOID:000000004203893

[CAN SYSTEM (TYPE 2)]

AV BRANCH LINE (CIRCUIT		
Diagnosis Procedure			INFOID:000000004203894
NSPECTION PROCEDUR	E		
1.CHECK CONNECTOR			
 Turn the ignition switch (Disconnect the battery c Check the terminals and side and connector side) 	able from the negative terr	ninal. htrol unit for damage, bend	and loose connection (unit
s the inspection result norma			
YES >> GO TO 2. NO >> Repair the termin	al and connector		
CHECK HARNESS FOR			
. Disconnect the connecto			
	ween the AV control unit h	narness connector terminals	
	V control unit harness connecto		S. Resistance (Ω)
A Connector No. M46	V control unit harness connecto Termii 24	r	
Connector No. M46 the measurement value wi YES >> GO TO 3. NO >> Repair the AV co	V control unit harness connecto Termin 24 thin the specification? ontrol unit branch line.	r nal No. 44	Resistance (Ω)
Connector No. M46 the measurement value wi YES >> GO TO 3. NO >> Repair the AV co CHECK POWER SUPPLY heck the power supply and iagnosis Procedure".	V control unit harness connecto Termin 24 thin the specification? ontrol unit branch line. Y AND GROUND CIRCUIT the ground circuit of the A al?	r nal No. 44 F V control unit. Refer to <u>AV-</u>	Resistance (Ω) Approx. 54 – 66 315, "AV CONTROL UNIT :
Connector No. M46 S the measurement value wi YES >> GO TO 3. NO >> Repair the AV co CHECK POWER SUPPLY Check the power supply and Diagnosis Procedure". S the inspection result normation YES (Present error)>>Replation YES (Past error)>>Error wat	V control unit harness connecto Termin 24 thin the specification? ontrol unit branch line. Y AND GROUND CIRCUIT the ground circuit of the A al? ace the AV control unit. Re	r nal No. 44 V control unit. Refer to <u>AV-</u> efer to <u>AV-437, "Removal an</u> ol unit branch line.	Resistance (Ω) Approx. 54 – 66 315, "AV CONTROL UNIT :

LAN

Ν

0

BCM BRANCH LINE CIRCUIT

Diagnosis Procedure

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

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the BCM branch line.

 $\mathbf{3}$. Check power supply and ground circuit

Check the power supply and the ground circuit of the BCM. Refer to BCS-42, "Diagnosis Procedure".

Is the inspection result normal?

YES (Present error)>>Replace the BCM. Refer to BCS-96, "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 DIAGNOS		[CAN SYSTEM (TYPE 2)]
OLC BRANCH LINE	CIRCUIT	
iagnosis Procedure		INFOID:00000000420385
SPECTION PROCEDUR	E	
.CHECK CONNECTOR		
	able from the negative terminal. I connectors of the data link connector ness side).	for damage, bend and loose connection
NO >> Repair the termin	nal and connector.	
CHECK HARNESS FOR	OPEN CIRCUIT	
Check the resistance betwee	n the data link connector terminals.	
	Data link connector	Resistance (Ω)
Connector No.	Terminal No.	
YES (Present error)>>Chec YES (Past error)>>Error wa	-	14 Approx. 54 – 66 anch line circuit.
the measurement value wi YES (Present error)>>Cheo YES (Past error)>>Error wa	thin the specification? It CAN system type decision again. Its detected in the data link connector br	
<u>s the measurement value wi</u> YES (Present error)>>Cheo YES (Past error)>>Error wa	thin the specification? It CAN system type decision again. Its detected in the data link connector br	
the measurement value wi YES (Present error)>>Cheo YES (Past error)>>Error wa	thin the specification? It CAN system type decision again. Its detected in the data link connector br	
the measurement value wi YES (Present error)>>Cheo YES (Past error)>>Error wa	thin the specification? It CAN system type decision again. Its detected in the data link connector br	
the measurement value wi YES (Present error)>>Cheo YES (Past error)>>Error wa	thin the specification? It CAN system type decision again. Its detected in the data link connector br	
<u>s the measurement value wi</u> YES (Present error)>>Cheo YES (Past error)>>Error wa	thin the specification? It CAN system type decision again. Is detected in the data link connector br	

M&A BRANCH LINE CIRCUIT

Diagnosis Procedure

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.

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

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the combination meter branch line.

 $\mathbf{3}$. Check power supply and ground circuit

Check the power supply and the ground circuit of the combination meter. Refer to <u>MWI-43, "COMBINATION</u> <u>METER : Diagnosis Procedure"</u>.

Is the inspection result normal?

YES (Present error)>>Replace the combination meter. Refer to MWI-176, "Removal and Installation".

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

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

< COMPONENT DIAGNOS	ilS >		[CAN SYSTEM (TYPE 2)]
ABS BRANCH LINE	CIRCUIT		
Diagnosis Procedure			INFOID:00000004203898
INSPECTION PROCEDUR	E		
1.CHECK CONNECTOR			
 Check the terminals and and loose connection (un ls the inspection result normal YES >> GO TO 2. NO >> Repair the terminant 2.CHECK HARNESS FOR 1. Disconnect the connector 	able from the negative terr I connectors of the ABS ac nit side and connector side <u>al?</u> nal and connector. OPEN CIRCUIT or of ABS actuator and elec	ctuator and electric unit (co	ntrol unit) for damage, bend
	and electric unit (control unit) harr	ness connector	
Connector No.	· · · ·	nal No.	Resistance (Ω)
E26	26	15	Approx. 54 – 66
Is the measurement value wi YES >> GO TO 3. NO >> Repair the ABS a 3 .CHECK POWER SUPPLY Check the power supply and following. • Models with ABS: <u>BRC-41</u> , • Models with TCS: <u>BRC-109</u> • Models with VDC: <u>BRC-200</u> Is the inspection result normation YES (Present error)>>Replated	actuator and electric unit (Y AND GROUND CIRCUIT the ground circuit of the A , "Wiring Diagram - Coupe 9, "Wiring Diagram - Coupe 7, "Wiring Diagram - Coup al?	BS actuator and electric ur or <u>BRC-46, "Wiring Diagra</u> e" or <u>BRC-115, "Wiring Dia</u> e e" or <u>BRC-215, "Wiring Dia</u> e	<u>am - Sedan"</u> g <u>ram - Sedan"</u> agram - Sedan"
 Models with Al Models with TO Models with VI YES (Past error)>>Error was 	BS: <u>BRC-66, "Exploded Vi</u> CS: <u>BRC-137, "Exploded V</u> DC: <u>BRC-239, "Exploded V</u>	<u>ew"</u> / <u>iew"</u> /iew" uator and electric unit (cont	

IPDM-E BRANCH LINE CIRCUIT

Diagnosis Procedure

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		
Connector No.	Terminal No.		Resistance (Ω)
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.

 $\mathbf{3}$. Check power supply and ground circuit

Check the power supply and the ground circuit of the IPDM E/R. Refer to <u>PCS-23, "Diagnosis Procedure"</u>.

Is the inspection result normal?

YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "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 Diagnosis Procedure 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.
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.
 CONNECTOR INSPECTION Turn the ignition switch OFF. Disconnect the battery cable from the negative terminal. Disconnect all the unit connectors on CAN communication system. Check terminals and connectors for damage, bend and loose connection. Is the inspection result normal? YES >> GO TO 2.
 CONNECTOR INSPECTION Turn the ignition switch OFF. Disconnect the battery cable from the negative terminal. Disconnect all the unit connectors on CAN communication system. Check terminals and connectors for damage, bend and loose connection. s the inspection result normal? YES >> GO TO 2.
 Turn the ignition switch OFF. Disconnect the battery cable from the negative terminal. Disconnect all the unit connectors on CAN communication system. Check terminals and connectors for damage, bend and loose connection. <u>s the inspection result normal?</u> YES >> GO TO 2.
 Disconnect the battery cable from the negative terminal. Disconnect all the unit connectors on CAN communication system. Check terminals and connectors for damage, bend and loose connection. Is the inspection result normal? YES >> GO TO 2.
YES >> GO TO 2.
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
Check the continuity between the data link connector and the ground.
Connector No. Terminal No. Continuity
M22 6 Ground Not existed
M22 6 Not existed Not existed Not existed
6 Not existed 14 Not existed Is the inspection result normal? Not existed 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.
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
M22 6 Not existed 14 Not existed Not existed Is the inspection result normal? YES >> GO TO 4. Not existed 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. 6
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)
M22 6 Not existed 14 Not existed Not existed Not existed Is the inspection result normal? YES >> GO TO 4. YES >> GO TO 4. NO >> Check the harness and repair the root cause. 4.CHECK ECM AND IPDM E/R TERMINATION CIRCUIT 1. 1. Remove the ECM and the IPDM E/R. 2. 2. Check the resistance between the ECM terminals. ECM and IPDM E/R Image: Terminal No. Resistance (Ω) 98 97 Approx. 108 – 132 3. Check the resistance between the IPDM E/R terminals. Image: Comparison of the terminal of
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $
M22 6 Not existed Is the inspection result normal? Not existed 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) 98 97 Approx. 108 – 132 3. Check the resistance between the IPDM E/R terminals.

5. СНЕСК ЗУМРТОМ

CAN COMMUNICATION CIRCUIT

< 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.

 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.

COMPONENT DIAC	GNOSIS >) ABS CIRCUIT [CAN	SYSTEM (TYPE 3)]	
OMPONEN	IT DIAGNO	SIS			
AIN LINE BET	WEEN DLC A	ND ABS CIRCU	ИΤ		
iagnosis Proced	ure			INFOID:000000004203901	
SPECTION PROCE	DURE				
.CHECK CONNECT	OR				
Check the followin and harness side). Harness connector Harness connector the inspection result (ES >> GO TO 2. NO >> Repair the .CHECK HARNESS Disconnect the har	tery cable from the ne og terminals and conn r M1 r E30 <u>normal?</u> terminal and connect CONTINUITY (OPEN rness connectors M1	or. I CIRCUIT) and E30.		ection (connector side	
	-	nk connector and the	harness connector.		
Data link		Harness c		Continuity	
Connector No.	Terminal No.	Connector No.	Terminal No.		
M22	6	M1	15G 8G	Existed	
the inspection result				Exiotod	
CHECK HARNESS	CONTINUITY (OPEN nnector of ABS actuat ty between the harne	or and electric unit (co	ontrol unit).	ector M1.	
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	
L30	8G	L20	15	Existed	
	>Check CAN system		ne data link connector	and the ABS actuator	

LAN-69

ECM BRANCH LINE CIRCUIT

Diagnosis Procedure

INSPECTION PROCEDURE

1.CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 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 expect for California: EC-673, "Diagnosis Procedure"
- VQ engine models: EC-1175, "Diagnosis Procedure"

Is the inspection result normal?

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

- QR engine models for California: <u>EC-27</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CON-</u> <u>TROL UNIT</u>: <u>Special Repair Requirement</u>"
- QR engine models except for California: <u>EC-563</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"
- VQ engine models: <u>EC-1051</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : <u>Special Repair Requirement</u>"

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

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

COMPONENT DIAGNOSIS >	[CAN SYSTEM (TYPE 3)]
A-BAG BRANCH LINE CIRCUIT	
Diagnosis Procedure	INFOID:0000000420390
.CHECK AIR BAG DIAGNOSIS SENSOR UNIT	
Check the air bag diagnosis sensor unit. Refer to <u>SRC-3, "Work Flow"</u> .	
<u>s the inspection result normal?</u> YES >> Replace the main harness.	
NO >> Replace parts whose air bag system has a malfunction.	

BCM BRANCH LINE CIRCUIT

Diagnosis Procedure

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.		Resistance (52)
M19	79	78	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the BCM branch line.

 $\mathbf{3}$. Check power supply and ground circuit

Check the power supply and the ground circuit of the BCM. Refer to BCS-42, "Diagnosis Procedure".

Is the inspection result normal?

YES (Present error)>>Replace the BCM. Refer to BCS-96, "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 >

DLC BRANCH LINE	CIRCUIT		
)iagnosis Procedure			INFOID:00000000420390
-			
NSPECTION PROCEDURI	Ξ		
.CHECK CONNECTOR			
	able from the negative term connectors of the data lin		, bend and loose connection
s the inspection result norma			
YES >> GO TO 2.			
NO >> Repair the termir			
CHECK HARNESS FOR			
Check the resistance betwee	n the data link connector te	rminals.	
	Data link connector		Desistance (O)
Connector No.	Termina	al No.	Resistance (Ω)
M22	6	14	Approx. 54 – 66

M&A BRANCH LINE CIRCUIT

Diagnosis Procedure

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.

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

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the combination meter branch line.

 $\mathbf{3}$. Check power supply and ground circuit

Check the power supply and the ground circuit of the combination meter. Refer to <u>MWI-43, "COMBINATION</u> <u>METER : Diagnosis Procedure"</u>.

Is the inspection result normal?

YES (Present error)>>Replace the combination meter. Refer to MWI-176, "Removal and Installation".

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

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

< COMPONENT DIAGNOS	SIS >		[CAN SYSTEM (TYPE 3)]
ABS BRANCH LINE	ECIRCUIT		
Diagnosis Procedure			INFOID:00000004203907
INSPECTION PROCEDUR	RE		
1.CHECK CONNECTOR			
 Check the terminals and and loose connection (use the inspection result norm YES >> GO TO 2. NO >> Repair the term 2.CHECK HARNESS FOR Disconnect the connect the connect 	cable from the negative terr d connectors of the ABS ac unit side and connector side <u>nal?</u> inal and connector. OPEN CIRCUIT or of ABS actuator and elect	ctuator and electric unit (con	ntrol unit) for damage, bend
	and electric unit (control unit) harı	ness connector	
Connector No.	Termi	nal No.	Resistance (Ω)
E26	26	15	Approx. 54 – 66
YES >> GO TO 3. NO >> Repair the ABS 3. CHECK POWER SUPPL Check the power supply and following. • Models with ABS: <u>BRC-41</u> • Models with TCS: <u>BRC-10</u> • Models with VDC: <u>BRC-20</u> Is the inspection result norm	d the ground circuit of the A , "Wiring Diagram - Coupe 99, "Wiring Diagram - Coup 07, "Wiring Diagram - Coup	BS actuator and electric un BS actuator and electric un or <u>BRC-46, "Wiring Diagra</u> e" or <u>BRC-115, "Wiring Dia</u> g	a <u>m - Sedan"</u> gram - Sedan"
		electric unit (control unit). F	Pofor to the following
Models with A	BS: <u>BRC-66, "Exploded Vi</u>	<u>ew"</u>	terer to the following.
 Models with V YES (Past error)>>Error was 	CS: <u>BRC-137</u> , "Exploded \ /DC: <u>BRC-239, "Exploded \</u> as detected in the ABS act er supply and the ground ci	<u>√iew"</u> uator and electric unit (cont	rol unit) branch line.

TCM BRANCH LINE CIRCUIT

Diagnosis Procedure

INSPECTION PROCEDURE

1.CHECK CONNECTOR

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

 ${\it 3.}$ Check power supply and ground circuit

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

- QR25DE models: <u>TM-380</u>, "Wiring Diagram CVT CONTROL SYSTEM Coupe" or <u>TM-389</u>, "Wiring Diagram - CVT CONTROL SYSTEM - Sedan"
- VQ35DE models: <u>TM-202</u>, "Wiring Diagram—CVT CONTROL SYSTEM—Coupe" or <u>TM-211</u>, "Wiring Diagram—CVT CONTROL SYSTEM—Sedan"

Is the inspection result normal?

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

- QR25DE models: <u>TM-430</u>, "Exploded View"
- VQ35DE models: <u>TM-254</u>, "Exploded View"
- YES (Past error)>>Error was detected in the TCM branch line.

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

NSPECTION 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). s 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. Image: 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-23. "Diagnosis Procedure". s the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48. "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.	. CHECK CONNECTOR . Turn the ignition switch OFF. . Disconnect the battery cable from the negative terminal. . Check the terminals and connectors of the IPDM E/R for damage, bend and loose connection (unit side and connector side). s the inspection result normal? YES >> GO TO 2. NO >> Repair the terminal and connector. CHECK HARNESS FOR OPEN CIRCUIT . Disconnect the connector of IPDM E/R. Check the resistance between the IPDM E/R harness connector terminals. IPDM E/R harness connector Resistance (Ω) E17 40 39 Approx. 108 – 132 s the measurement value within the specification? YES >> GO TO 3. NO >> Repair the IPDM E/R branch line. CHECK POWER SUPPLY AND GROUND CIRCUIT Check the power supply and the ground circuit of the IPDM E/R. Refer to PCS-23, "Diagnosis Procedure" . s the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation". YES (Past error)>>Error was detected in the IPDM E/R branch line.	iagnosis Procedure			INFOID:000000004203909
 Turn the ignition switch OFF. Disconnect the battery cable from the negative terminal. Check the terminals and connectors of the IPDM E/R for damage, bend and loose connection (unit side and connector side). <u>s the inspection result normal?</u> YES >> GO TO 2. NO >> Repair the terminal and connector. CHECK HARNESS FOR OPEN CIRCUIT Disconnect the connector of IPDM E/R. Check the resistance between the IPDM E/R harness connector terminals. IPDM E/R harness connector Resistance (Ω) E17 40 39 Approx. 108 – 132 s the measurement value within the specification? YES >> GO TO 3. NO >> Repair the IPDM E/R branch line. CHECK POWER SUPPLY AND GROUND CIRCUIT Check the power supply and the ground circuit of the IPDM E/R. Refer to PCS-23. "Diagnosis Procedure". s the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48. "Removal and Installation". YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48. "Removal and Installation". YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48. "Removal and Installation".	Turn the ignition switch OFF. Disconnect the battery cable from the negative terminal. Check the terminals and connectors of the IPDM E/R for damage, bend and loose connection (unit side and connector side). as the inspection result normal? YES > GO TO 2. NO >> Repair the terminal and connector. 2.CHECK HARNESS FOR OPEN CIRCUIT Disconnect the connector of IPDM E/R. Check the resistance between the IPDM E/R harness connector terminals. IPDM E/R harness connector Connector No. IPDM E/R harness connector Resistance (Ω) Connector No. IPDM E/R harness connector Resistance (Ω) Connector No. Terminal No. E17 40 39 Approx. 108 – 132 s the measurement value within the specification? YES > GO TO 3. NO >> Repair the IPDM E/R branch line. CHECK POWER SUPPLY AND GROUND CIRCUIT Check the power supply and the ground circuit of the IPDM E/R. Refer to PCS-23, "Diagnosis Procedure" . s the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation". YES (Pr	NSPECTION PROCEDUR	E		
 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). as 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. IPDM E/R harness connector Resistance (Ω) Connector No. Terminal No. E17 40 39 Approx. 108 – 132 s 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-23. "Diagnosis Procedure". s the inspection result normal? YES (Present error)>> Replace the IPDM E/R. Refer to PCS-48. "Removal and Installation". YES (Present error)>> Error was detected in the IPDM E/R branch line. 	 Disconnect the battery cable from the negative terminal. Check the terminals and connectors of the IPDM E/R for damage, bend and loose connection (unit side and connector side). the inspection result normal? YES >> GO TO 2. NO >> Repair the terminal and connector. CHECK HARNESS FOR OPEN CIRCUIT Disconnect the connector of IPDM E/R. Check the resistance between the IPDM E/R harness connector terminals. 	.CHECK CONNECTOR			
a the inspection result normal? YES >> GO TO 2. NO >> Repair the terminal and connector. CHECK HARNESS FOR OPEN CIRCUIT . Disconnect the connector of IPDM E/R. . 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 Sthe measurement value within the specification? YES >> GO TO 3. NO >> Repair the IPDM E/R branch line. CHECK POWER SUPPLY AND GROUND CIRCUIT Check the power supply and the ground circuit of the IPDM E/R. Refer to PCS-23, "Diagnosis Procedure". Sthe inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation". YES (Past error)>>Error was detected in the IPDM E/R branch line.	a the inspection result normal? YES >> GO TO 2. NO >> Repair the terminal and connector. CHECK HARNESS FOR OPEN CIRCUIT . Disconnect the connector of IPDM E/R. . 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 Sthe measurement value within the specification? YES >> GO TO 3. NO >> Repair the IPDM E/R branch line. CHECK POWER SUPPLY AND GROUND CIRCUIT Check the power supply and the ground circuit of the IPDM E/R. Refer to PCS-23, "Diagnosis Procedure". Sthe inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation". YES (Past error)>>Error was detected in the IPDM E/R branch line.	 Disconnect the battery c Check the terminals and 	able from the negative ter	minal. E/R for damage, bend and	d loose connection (unit side
NO >> Repair the terminal and connector. CHECK HARNESS FOR OPEN CIRCUIT Disconnect the connector of IPDM E/R. Check the resistance between the IPDM E/R harness connector terminals. IPDM E/R harness connector Resistance (Ω) Connector No. E17 40 39 Approx. 108 – 132 a the measurement value within the specification? YES >> GO TO 3. NO >> Repair the IPDM E/R branch line. CHECK POWER SUPPLY AND GROUND CIRCUIT Sche inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation". YES (Past error)>>Error was detected in the IPDM E/R branch line.	NO >> Repair the terminal and connector. CHECK HARNESS FOR OPEN CIRCUIT Disconnect the connector of IPDM E/R. Check the resistance between the IPDM E/R harness connector terminals. IPDM E/R harness connector Resistance (Ω) Connector No. E17 40 39 Approx. 108 – 132 a the measurement value within the specification? YES >> GO TO 3. NO >> Repair the IPDM E/R branch line. CHECK POWER SUPPLY AND GROUND CIRCUIT Sche inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation". YES (Past error)>>Error was detected in the IPDM E/R branch line.	,	<u>al?</u>		
IPDM E/R harness connector terminals. IPDM E/R harness connector Resistance (Ω) Connector No. Terminal No. E17 40 39 Approx. 108 – 132 a the measurement value within the specification? YES >> GO TO 3. NO >> Repair the IPDM E/R branch line. . CHECK POWER SUPPLY AND GROUND CIRCUIT Check the power supply and the ground circuit of the IPDM E/R. Refer to PCS-23, "Diagnosis Procedure" . a the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation". YES (Past error)>>Error was detected in the IPDM E/R branch line. .	IPDM E/R harness connector terminals. IPDM E/R harness connector Resistance (Ω) Connector No. Terminal No. E17 40 39 Approx. 108 – 132 a the measurement value within the specification? YES >> GO TO 3. NO >> Repair the IPDM E/R branch line. . CHECK POWER SUPPLY AND GROUND CIRCUIT Check the power supply and the ground circuit of the IPDM E/R. Refer to PCS-23, "Diagnosis Procedure" . a the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation". YES (Past error)>>Error was detected in the IPDM E/R branch line. .	NO >> Repair the termin			
Connector No. Terminal No. Resistance (Ω) E17 40 39 Approx. 108 – 132 a the measurement value within the specification? YES >> GO TO 3. YES >> GO TO 3. NO >> Repair the IPDM E/R branch line. . .CHECK POWER SUPPLY AND GROUND CIRCUIT . heck the power supply and the ground circuit of the IPDM E/R. Refer to PCS-23, "Diagnosis Procedure" . . a the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation". YES (Past error)>>Error was detected in the IPDM E/R branch line. .	Connector No. Terminal No. Resistance (Ω) E17 40 39 Approx. 108 – 132 a the measurement value within the specification? YES >> GO TO 3. YES >> GO TO 3. NO >> Repair the IPDM E/R branch line. . .CHECK POWER SUPPLY AND GROUND CIRCUIT . heck the power supply and the ground circuit of the IPDM E/R. Refer to PCS-23, "Diagnosis Procedure" . . a the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation". YES (Past error)>>Error was detected in the IPDM E/R branch line. .		ween the IPDM E/R harn	ess connector terminals.	
E17 40 39 Approx. 108 – 132 a the measurement value within the specification? YES >> GO TO 3. YES >> Repair the IPDM E/R branch line. NO >> Repair the IPDM E/R branch line. . CHECK POWER SUPPLY AND GROUND CIRCUIT . heck the power supply and the ground circuit of the IPDM E/R. Refer to PCS-23, "Diagnosis Procedure" . a the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation". YES (Past error)>>Error was detected in the IPDM E/R branch line.	E17 40 39 Approx. 108 – 132 a the measurement value within the specification? YES >> GO TO 3. YES >> Repair the IPDM E/R branch line. NO >> Repair the IPDM E/R branch line. . CHECK POWER SUPPLY AND GROUND CIRCUIT . heck the power supply and the ground circuit of the IPDM E/R. Refer to PCS-23, "Diagnosis Procedure" . a the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation". YES (Past error)>>Error was detected in the IPDM E/R branch line.				Resistance (Ω)
a the measurement value within the specification? YES >> GO TO 3. NO >> Repair the IPDM E/R branch line. CHECK POWER SUPPLY AND GROUND CIRCUIT where supply and the ground circuit of the IPDM E/R. Refer to PCS-23, "Diagnosis Procedure" . a the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation". YES (Past error)>>Error was detected in the IPDM E/R branch line.	a the measurement value within the specification? YES >> GO TO 3. NO >> Repair the IPDM E/R branch line. CHECK POWER SUPPLY AND GROUND CIRCUIT where supply and the ground circuit of the IPDM E/R. Refer to PCS-23, "Diagnosis Procedure" . a the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation". YES (Past error)>>Error was detected in the IPDM E/R branch line.				Amprov 100 120
YES >> GO TO 3. NO >> Repair the IPDM E/R branch line. • CHECK POWER SUPPLY AND GROUND CIRCUIT heck the power supply and the ground circuit of the IPDM E/R. Refer to <u>PCS-23, "Diagnosis Procedure"</u> . the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to <u>PCS-48, "Removal and Installation"</u> . YES (Past error)>>Error was detected in the IPDM E/R branch line.	YES >> GO TO 3. NO >> Repair the IPDM E/R branch line. • CHECK POWER SUPPLY AND GROUND CIRCUIT heck the power supply and the ground circuit of the IPDM E/R. Refer to <u>PCS-23, "Diagnosis Procedure"</u> . the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to <u>PCS-48, "Removal and Installation"</u> . YES (Past error)>>Error was detected in the IPDM E/R branch line.		40		
theck the power supply and the ground circuit of the IPDM E/R. Refer to <u>PCS-23, "Diagnosis Procedure"</u> . the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to <u>PCS-48, "Removal and Installation"</u> . YES (Past error)>>Error was detected in the IPDM E/R branch line.	theck the power supply and the ground circuit of the IPDM E/R. Refer to <u>PCS-23, "Diagnosis Procedure"</u> . the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to <u>PCS-48, "Removal and Installation"</u> . YES (Past error)>>Error was detected in the IPDM E/R branch line.		thin the specification?	00	Approx. 106 – 152
<u>the inspection result normal?</u> YES (Present error)>>Replace the IPDM E/R. Refer to <u>PCS-48, "Removal and Installation"</u> . YES (Past error)>>Error was detected in the IPDM E/R branch line.	<u>the inspection result normal?</u> YES (Present error)>>Replace the IPDM E/R. Refer to <u>PCS-48, "Removal and Installation"</u> . YES (Past error)>>Error was detected in the IPDM E/R branch line.	the measurement value wi YES >> GO TO 3. NO >> Repair the IPDM	E/R branch line.		Αμμιόλ. 106 – 152
YES (Present error)>>Replace the IPDM E/R. Refer to <u>PCS-48, "Removal and Installation"</u> . YES (Past error)>>Error was detected in the IPDM E/R branch line.	YES (Present error)>>Replace the IPDM E/R. Refer to <u>PCS-48, "Removal and Installation"</u> . YES (Past error)>>Error was detected in the IPDM E/R branch line.	the measurement value withe measurement value withe YES >> GO TO 3. NO >> Repair the IPDM	E/R branch line. AND GROUND CIRCUI	T	
		the measurement value wi YES >> GO TO 3. NO >> Repair the IPDM CHECK POWER SUPPLY	E/R branch line. AND GROUND CIRCUIT	T	
		the measurement value wi YES >> GO TO 3. NO >> Repair the IPDM CHECK POWER SUPPLY heck the power supply and the inspection result normation YES (Present error)>>Replay YES (Past error)>>Error wat	E/R branch line. AND GROUND CIRCUI the ground circuit of the I al? ace the IPDM E/R. Refer t s detected in the IPDM E/	T PDM E/R. Refer to <u>PCS-23</u> to <u>PCS-48, "Removal and I</u> /R branch line.	3, "Diagnosis Procedure" .
		the measurement value wi YES >> GO TO 3. NO >> Repair the IPDM CHECK POWER SUPPL heck the power supply and the inspection result normation YES (Present error)>>Replay YES (Past error)>>Error wat	E/R branch line. AND GROUND CIRCUI the ground circuit of the I al? ace the IPDM E/R. Refer t s detected in the IPDM E/	T PDM E/R. Refer to <u>PCS-23</u> to <u>PCS-48, "Removal and I</u> /R branch line.	3, "Diagnosis Procedure" .

LAN

Ν

0

CAN COMMUNICATION CIRCUIT

Diagnosis Procedure

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.		Continuity
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 lin	Data link connector		Continuity	
Connector No.	Terminal No.	Ground	Continuity	
M22	6	Ground	Not existed	
10122	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.

E	Resistance (Ω)	
Termi	nal No.	
98	97	Approx. 108 – 132

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

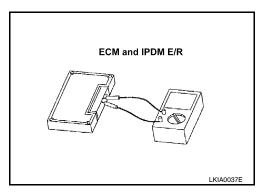
IPDI	II E/R	Resistance (Ω)
Termi	nal No.	
40	39	Approx. 108 – 132

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 customer)" are reproduced.	Results from interview with A
Inspection result	
Reproduced>>GO TO 6. Non-reproduced>>Start the diagnosis again. Follow the trouble diagnosis pr detected.	cedure when past error is B
6. CHECK UNIT REPRODUCTION	
Perform the reproduction test as per the following procedure for each unit.	С
 Turn the ignition switch OFF. Disconnect the battery cable from the negative terminal. Disconnect one of the unit connectors of CAN communication system. NOTE: 	D
 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 (Results from interview with customer)" are reproduced. NOTE: 	described in the "Symptom $_{oxedsymbol{arepsilon}}$
Although unit-related error symptoms occur, do not confuse them with other a Inspection result	/mptoms.
Reproduced>>Connect the connector. Check other units as per the above proce Non-reproduced>>Replace the unit whose connector was disconnected.	dure . G

⊢	Ł
	L

J

Κ

L

LAN

0

COMPONENT DIAGNOSIS MAIN LINE BETWEEN DLC AND ABS CIRCUIT

Diagnosis Procedure

INFOID:000000004203911

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.	Continuity
M22	6		15G	Existed
IVIZZ	14	M1	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			ectric unit (control unit) connector	Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
E30	15G	E26	26	Existed
E30	8G	E20	15	Existed

Is the inspection result normal?

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

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

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

ECM BRANCH LIN	E CIRCUIT		
Diagnosis Procedure			INFOID:000000004471809
NSPECTION PROCEDUR	RE		
1 .CHECK CONNECTOR			
	cable from the negative terr ninals and connectors for d <u>nal?</u> inal and connector.		onnection (unit side and con-
. Disconnect the connect		onnector terminals.	
	ECM harness connector		Posistance (O)
Connector No.	Terminal No.		Resistance (Ω)
E10	98	97	Approx. 108 – 132
Check the power supply and QR engine models for Cal QR engine models expect VQ engine models: <u>EC-11</u>	Y AND GROUND CIRCUIT d the ground circuit of the E ifornia: <u>EC-144, "Diagnosis</u> for California: <u>EC-673, "Diagnosis Procedure"</u>	CM. Refer to the following Procedure	
TROL UNIT : • QR engine mo <u>CONTROL UI</u> • VQ engine mo	lace the ECM. Refer to the odels for California: <u>EC-27</u> <u>Special Repair Requiremer</u> odels except for California: <u>NIT : Special Repair Requir</u> odels: <u>EC-1051, "ADDITIO</u>	, "ADDITIONAL SERVICE <u>)t"</u> EC-563, "ADDITIONAL SE <u>ement"</u>	WHEN REPLACING CON- RVICE WHEN REPLACING PLACING CONTROL UNIT :
YES (Past error)>>Error w	<u>r Requirement"</u> as detected in the ECM bra er supply and the ground ci		

0

A-BAG BRANCH LINE CIRCUIT

Diagnosis Procedure

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.

[CAN SYSTEM (TYPE 4)]

Diagnosis Procedure 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 (u 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 harness connector terminals. AV control unit harness connector Terminal No. AV control unit harness connector 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-315, "AV CONTROL UNIT Diagnosis Procedure". Is the inspection result normal? YES (Present error)>>Replace the AV control unit. Refer to AV-315, "AV CONTROL UNIT Diagnosis Procedure". YES (Present error)>>Replace the AV control unit Refer to AV-315, "AV CONTROL UNIT Diagnosis Procedure". NO >> Repair the power supply and the ground circuit.	AV BRANCH LINE (CIRCUIT		
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 (u 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 harness connector terminals. AV control unit harness connector Resistance (Ω) Connector No. Vest 44 AV control unit harness connector Resistance (Ω) 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 <u>AV-315, "AV CONTROL UNIT Diagnosis Procedure". Is the inspection result normal? YES (Present error)>>Replace the AV control unit. Refer to <u>AV-437, "Removal and Installation".</u> YES (Present error)>>Error was detected in the AV control unit branch line. </u>	Diagnosis Procedure			INFOID:000000004203914
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 (u 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.	INSPECTION PROCEDUR	E		
 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 (u 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 Av control unit harness connector terminals. Av control unit harness connector Resistance (Ω) Connector No. Av control unit harness connector Resistance (Ω) Connector No. Av control unit harness connector Resistance (Ω) Connector No. Terminal 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-315, "AV CONTROL UNI" Diagnosis Procedure". Is the inspection result normal? YES (Present error)>>Replace the AV control unit. Refer to AV-437, "Removal and Installation". YES (Past error)>>Error was detected in the AV control unit branch line.	1.CHECK CONNECTOR			
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 <u>AV-315, "AV CONTROL UNIT Diagnosis Procedure".</u> Is the inspection result normal? YES (Present error)>>Replace the AV control unit. Refer to <u>AV-437, "Removal and Installation".</u> YES (Past error)>>Error was detected in the AV control unit branch line.	 Disconnect the battery of Check the terminals and 	able from the negative terr d connectors of the AV cor		and loose connection (unit
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) 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-315, "AV CONTROL UNIT Diagnosis Procedure". Is the inspection result normal? YES (Present error)>>Replace the AV control unit. Refer to AV-437, "Removal and Installation". YES (Past error)>>Error was detected in the AV control unit branch line.	Is the inspection result norm	,		
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. M46 24 44 Approx. 54 - 66 Is the measurement value within the specification? YES YES S GO TO 3. NO S.CHECK POWER SUPPLY AND GROUND CIRCUIT Check the power supply and the ground circuit of the AV control unit. Refer to AV-315, "AV CONTROL UNIT Diagnosis Procedure". Is the inspection result normal? YES (Present error)>>Replace the AV control unit. Refer to AV-437, "Removal and Installation". YES (Past error)>>Error was detected in the AV control unit branch line.		nal and connector		
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-315, "AV CONTROL UNIT Diagnosis Procedure". Is the inspection result normal? YES (Present error)>>Replace the AV control unit. Refer to AV-437, "Removal and Installation". YES (Past error)>>Error was detected in the AV control unit branch line.	•			
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-315, "AV CONTROL UNI" Diagnosis Procedure". Is the inspection result normal? YES (Present error)>>Replace the AV control unit. Refer to AV-437, "Removal and Installation". YES (Past error)>>Error was detected in the AV control unit branch line.	2. Check the resistance be	tween the AV control unit h		
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 <u>AV-315</u> , " <u>AV CONTROL UNIT</u> Diagnosis Procedure". Is the inspection result normal? YES (Present error)>>Replace the AV control unit. Refer to <u>AV-437</u> , " <u>Removal and Installation</u> ". YES (Past error)>>Error was detected in the AV control unit branch line.	Connector No.			Resistance (Ω)
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 <u>AV-315</u> , " <u>AV CONTROL UNI</u> " Diagnosis Procedure". Is the inspection result normal? YES (Present error)>>Replace the AV control unit. Refer to <u>AV-437, "Removal and Installation"</u> . YES (Past error)>>Error was detected in the AV control unit branch line.	M46	24	44	Approx. 54 – 66
<u>Diagnosis Procedure</u> ". <u>Is the inspection result normal?</u> YES (Present error)>>Replace the AV control unit. Refer to <u>AV-437, "Removal and Installation"</u> . YES (Past error)>>Error was detected in the AV control unit branch line.	YES >> GO TO 3. NO >> Repair the AV co 3. CHECK POWER SUPPL	ontrol unit branch line. Y AND GROUND CIRCUIT		
	Diagnosis Procedure". Is the inspection result norm YES (Present error)>>Repl	al? ace the AV control unit. Re	fer to <u>AV-437, "Removal an</u>	

LAN

Ν

0

BCM BRANCH LINE CIRCUIT

Diagnosis Procedure

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

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the BCM branch line.

 $\mathbf{3}$. Check power supply and ground circuit

Check the power supply and the ground circuit of the BCM. Refer to BCS-42, "Diagnosis Procedure".

Is the inspection result normal?

YES (Present error)>>Replace the BCM. Refer to BCS-96, "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

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 (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	Procedure PROCEDURE	IRCUIT		[CAN SYSTEM (TYPE 4)
NSPECTION PROCEDURE .CHECK CONNECTOR . Turn the ignition switch OFF. . Disconnect the battery cable from the negative terminal. . Check the terminals and connectors of the data link connector for damage, bend and loose (connector side and harness side). .a the inspection result normal? YES >> GO TO 2. NO >> Repair the terminal and connector. CHECK HARNESS FOR OPEN CIRCUIT Check the resistance between the data link connector terminals. Data link connector Resistance M2 6 14 Approx. 54 Sthe measurement value within the specification? YES (Present error)>>Check CAN system type decision again. YES (Past error)>>Error was detected in the data link connector branch line circuit.	PROCEDURE			
.CHECK CONNECTOR Turn the ignition switch OFF. Disconnect the battery cable from the negative terminal. Check the terminals and connectors of the data link connector for damage, bend and loose (connector side and harness side). the inspection result normal? YES >> GO TO 2. NO >> Repair the terminal and connector. .CHECK HARNESS FOR OPEN CIRCUIT heck the resistance between the data link connector terminals. Data link connector M22 6 M2 14 Approx. 54 the measurement value within the specification? YES (Present error)>>Check CAN system type decision again. YES (Past error)>>Error was detected in the data link connector branch line circuit.				INFOID:0000000042039
Turn the ignition switch OFF. Disconnect the battery cable from the negative terminal. Check the terminals and connectors of the data link connector for damage, bend and loose (connector side and harness side). the inspection result normal? YES >> GO TO 2. NO >> Repair the terminal and connector. .CHECK HARNESS FOR OPEN CIRCUIT heck the resistance between the data link connector terminals. Data link connector M22 6 YES (Present error)>>Check CAN system type decision again. YES (Past error)>>Error was detected in the data link connector branch line circuit.				
 Disconnect the battery cable from the negative terminal. Check the terminals and connectors of the data link connector for damage, bend and loose (connector side and harness side). the inspection result normal? YES >> GO TO 2. NO >> Repair the terminal and connector. CHECK HARNESS FOR OPEN CIRCUIT heck the resistance between the data link connector terminals. Data link connector Connector No. Terminal No. M22 6 14 Approx. 54 the measurement value within the specification? YES (Present error)>>Check CAN system type decision again. YES (Past error)>>Error was detected in the data link connector branch line circuit.				
.CHECK HARNESS FOR OPEN CIRCUIT heck the resistance between the data link connector terminals. Data link connector Connector No. M22 6 M22 6 14 Approx. 54 the measurement value within the specification? YES (Present error)>>Check CAN system type decision again. YES (Past error)>>Error was detected in the data link connector branch line circuit.	t the battery cable terminals and co r side and harness on result normal? O TO 2.	e from the negative terr onnectors of the data lins side).	ninal. nk connector for damage	e, bend and loose connectio
Data link connector terminals. Data link connector Resistance Connector No. Terminal No. M22 6 14 Approx. 54 the measurement value within the specification? YES (Present error)>>Check CAN system type decision again. YES (Past error)>>Error was detected in the data link connector branch line circuit.	-			
Data link connector Resistance Connector No. Terminal No. Resistance M22 6 14 Approx. 54 the measurement value within the specification? YES (Present error)>>Check CAN system type decision again. YES (Past error)>>Error was detected in the data link connector branch line circuit.			orminala	
Connector No. Terminal No. Resistanc M22 6 14 Approx. 54 the measurement value within the specification? YES (Present error)>>Check CAN system type decision again. YES (Past error)>>Error was detected in the data link connector branch line circuit.	stance between ti		erminais.	
M22614Approx. 54the measurement value within the specification? YES (Present error)>>Check CAN system type decision again. YES (Past error)>>Error was detected in the data link connector branch line circuit.				Resistance (Ω)
the measurement value within the specification? YES (Present error)>>Check CAN system type decision again. YES (Past error)>>Error was detected in the data link connector branch line circuit.				
YES (Present error)>>Check CAN system type decision again. YES (Past error)>>Error was detected in the data link connector branch line circuit.	ment value withir	the specification?		

M&A BRANCH LINE CIRCUIT

Diagnosis Procedure

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.

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

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the combination meter branch line.

 $\mathbf{3}$. Check power supply and ground circuit

Check the power supply and the ground circuit of the combination meter. Refer to <u>MWI-43, "COMBINATION</u> <u>METER : Diagnosis Procedure"</u>.

Is the inspection result normal?

YES (Present error)>>Replace the combination meter. Refer to MWI-176, "Removal and Installation".

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

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

< COMPONENT DIAGNOS	SIS >	_	[CAN SYSTEM (TYPE 4)]
ABS BRANCH LINE	ECIRCUIT		
Diagnosis Procedure			INFOID:00000004203918
INSPECTION PROCEDUF	₹E		
1.CHECK CONNECTOR			
 Check the terminals and and loose connection (use the inspection result norm YES >> GO TO 2. NO >> Repair the term 2.CHECK HARNESS FOR Disconnect the connect 	cable from the negative terr d connectors of the ABS ac unit side and connector side <u>nal?</u> inal and connector. OPEN CIRCUIT or of ABS actuator and elect	etuator and electric unit (con e). Etric unit (control unit).	ntrol unit) for damage, bend
	and electric unit (control unit) harr	ness connector	
Connector No.	Terminal No.		Resistance (Ω)
E26	26	15	Approx. 54 – 66
 CHECK POWER SUPPL Check the power supply and following. Models with ABS: <u>BRC-41</u> Models with TCS: <u>BRC-10</u> 	d the ground circuit of the A I, "Wiring Diagram - Coupe")9, "Wiring Diagram - Coupe	- BS actuator and electric un or <u>BRC-46, "Wiring Diagra</u> e" or <u>BRC-115, "Wiring Dia</u> g	<u>gram - Sedan"</u>
Models with VDC: <u>BRC-20</u>		<u>e"</u> or <u>BRC-215, "Wiring Dia</u>	gram - Sedan"
Is the inspection result norm	nal?		
Is the inspection result norm YES (Present error)>>Rep • Models with A • Models with T • Models with V YES (Past error)>>Error w		electric unit (control unit). F <u>ew"</u> / <u>iew"</u> / <u>iew"</u> Jator and electric unit (cont	Refer to the following.

TCM BRANCH LINE CIRCUIT

Diagnosis Procedure

INSPECTION PROCEDURE

1.CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 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			
Connector No.	Terminal No.		Resistance (Ω)	
F16	32	31	Approx. 54 – 66	

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the TCM branch line.

 ${\it 3.}$ Check power supply and ground circuit

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

- QR25DE models: <u>TM-380</u>, "Wiring Diagram CVT CONTROL SYSTEM Coupe" or <u>TM-389</u>, "Wiring Diagram - CVT CONTROL SYSTEM - Sedan"
- VQ35DE models: <u>TM-202</u>, "Wiring Diagram—CVT CONTROL SYSTEM—Coupe" or <u>TM-211</u>, "Wiring Diagram—CVT CONTROL SYSTEM—Sedan"

Is the inspection result normal?

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

- QR25DE models: <u>TM-430</u>, "Exploded View"
- VQ35DE models: <u>TM-254, "Exploded View"</u>
- YES (Past error)>>Error was detected in the TCM branch line.

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

			INFOID:000000004203920
SPECTION PROCEDURE			
CHECK CONNECTOR			
Turn the ignition switch O Disconnect the battery ca Check the terminals and and connector side).	ble from the negative term		nd loose connection (unit side
the inspection result normal	<u>?</u>		
 'ES >> GO TO 2. IO >> Repair the termina CHECK HARNESS FOR C 			
Disconnect the connector Check the resistance betw		ss connector terminals.	
	PDM E/R harness connector		Resistance (Ω)
Connector No.	Termina		
E17	40	39	Approx. 108 – 132
the measurement value with ES >> GO TO 3. IO >> Repair the IPDM CHECK POWER SUPPLY	E/R branch line.		
neck the power supply and t the inspection result normal		DM E/R. Refer to PCS-2	23, "Diagnosis Procedure" .
ES (Present error)>>Repla	ce the IPDM E/R. Refer to detected in the IPDM E/R.	R branch line.	Installation".
	supply and the ground cir	Cuit.	

LAN

Ν

0

CAN COMMUNICATION CIRCUIT

Diagnosis Procedure

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				
Connector No.	Terminal No.		Continuity		
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		Continuity
Connector No.	Terminal No.	Ground	Continuity
M22	6	Giouna	Not existed
WIZZ	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.

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

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

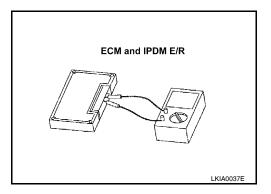
IPDM E/R		Resistance (Ω)
Termi	nal No.	
40	39	Approx. 108 – 132

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 4)]
Connect all the connectors. Check if the symptoms described in the "Symptocure customer)" are reproduced.	om (Results from interview with
Inspection result	
Reproduced>>GO TO 6. Non-reproduced>>Start the diagnosis again. Follow the trouble diagnosis detected.	s procedure when past error is
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.	
 Disconnect one of the unit connectors of CAN communication system. NOTE: 	
 ECM and IPDM E/R have a termination circuit. Check other units first. Connect the battery cable to the negative terminal. Check if the sympto (Results from interview with customer)" are reproduced. NOTE: 	oms described in the "Symptom
Although unit-related error symptoms occur, do not confuse them with oth	ner symptoms.
Inspection result	
Reproduced>>Connect the connector. Check other units as per the above p	rocedure.
Non-reproduced>>Replace the unit whose connector was disconnected.	

Н

J

Κ

_

L

LAN

Ν

0

COMPONENT DIAGNOSIS MAIN LINE BETWEEN DLC AND ABS CIRCUIT

Diagnosis Procedure

INFOID:000000004203922

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.	Continuity	
M22	6	N44	15G	Existed	
IVIZZ	14	M1	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
E30	8G	E20	15	Existed

Is the inspection result normal?

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

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

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

ECM BRANCH LINE CIRCUIT		
Diagnosis Procedure		INFOID:000000004471811
INSPECTION PROCEDURE		
1.CHECK CONNECTOR		
 Turn the ignition switch OFF. Disconnect the battery cable from the negative terminal. Check the following terminals and connectors for damage, be nector side). ECM Harness connector E30 Harness connector M1 Is the inspection result normal? YES >> GO TO 2. NO >> Repair the terminal and connector. 	nd and loose co	onnection (unit side and con-
CHECK HARNESS FOR OPEN CIRCUIT		
 Disconnect the connector of ECM. Check the resistance between the ECM harness connector te 	erminals.	
ECM harness connector		Resistance (Ω)
Connector No. Terminal No.		
E10 98 s the measurement value within the specification?	97	Approx. 108 – 132
YES >> GO TO 3. NO >> Repair the ECM branch line. CHECK POWER SUPPLY AND GROUND CIRCUIT check the power supply and the ground circuit of the ECM. Refer QR engine models for California: <u>EC-144</u> , " <u>Diagnosis Procedure</u> QR engine models expect for California: <u>EC-673</u> , " <u>Diagnosis Procedure</u> "	<u>e"</u>	
s the inspection result normal? YES (Present error)>>Replace the ECM. Refer to the following. • QR engine models for California: <u>EC-27</u> , "ADDITIC		WHEN REPLACING CON-
TROL UNIT : Special Repair Requirement" • QR engine models except for California: EC-563, "A <u>CONTROL UNIT : Special Repair Requirement"</u> • VQ engine models: EC-1051, "ADDITIONAL SERVI Special Repair Requirement" YES (Past error)>>Error was detected in the ECM branch line.		

0

A-BAG BRANCH LINE CIRCUIT

Diagnosis Procedure

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.

INFOID:000000004203924

[CAN SYSTEM (TYPE 5)]

BCM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

BCM BRANCH LINE	CIRCUIT		
Diagnosis Procedure			INFOID:00000004203925
INSPECTION PROCEDUR	F		
1.CHECK CONNECTOR	-		
	able from the negative term	ninal. or damage, bend and loose	e connection (unit side and
Is the inspection result norm YES >> GO TO 2. NO >> Repair the termin	nal and connector.		
2.CHECK HARNESS FOR	OPEN CIRCUIT		
 Disconnect the connector Check the resistance be 	r of BCM. tween the BCM harness co	onnector terminals.	
	BCM harness connector		Resistance (Ω)
Connector No.	Termir	nal No.	
M19	79	78	Approx. 54 – 66
Is the measurement value with YES >> GO TO 3. NO >> Repair the BCM			
3. CHECK POWER SUPPLY		г	
3.CHECK POWER SUPPLY Check the power supply and	AND GROUND CIRCUIT the ground circuit of the B		gnosis Procedure".
3.CHECK POWER SUPPLY Check the power supply and Is the inspection result normal YES (Present error)>>Reply YES (Past error)>>Error wa	AND GROUND CIRCUIT the ground circuit of the B al? ace the BCM. Refer to <u>BCS</u>	CM. Refer to <u>BCS-42, "Diagonal S-96, "Removal and Installan</u> Characteristics of the second state of the s	

LAN

Ν

0

DLC BRANCH LINE CIRCUIT

[CAN SYSTEM (TYPE 5)]

Diagnosis Procedure

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

Is the measurement value within the specification?

YES (Present error)>>Check 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.

iagnosis Procedure			INFOID:000000004471812
NSPECTION PROCEDURE			
.CHECK CONNECTOR			
 Turn the ignition switch OFF Disconnect the battery cable Check the terminals and connector side 	e from the negative term onnectors of the combin		bend and loose connection
s the inspection result normal?YES>> GO TO 2.NO>> Repair the terminal			
CHECK HARNESS FOR OP	EN CIRCUIT		
. Disconnect the connector of . Check the resistance betwee	en the combination meter		ninals.
Combination meter harness connector Resistance (Ω)		Posistance (O)	
O a remanda a Nia	Tenneter		
Connector No. M24	Termina 21		
M24	21	al No. 22	Approx. 54 – 66
M24 the measurement value within YES >> GO TO 3.	21 h the specification?		
M24 <u>S the measurement value within</u> YES >> GO TO 3. NO >> Repair the combina	21 <u>the specification?</u> tion meter branch line.		
M24 s the measurement value within YES >> GO TO 3. NO >> Repair the combina CHECK POWER SUPPLY A Check the power supply and the METER : Diagnosis Procedure"	21 <u>the specification?</u> tion meter branch line. ND GROUND CIRCUIT e ground circuit of the c	22	Approx. 54 – 66
M24 So the measurement value within YES >> GO TO 3. NO >> Repair the combina CHECK POWER SUPPLY A Check the power supply and the METER : Diagnosis Procedure'' So the inspection result normal? YES (Present error)>>Replace	21 tion meter branch line. ND GROUND CIRCUIT e ground circuit of the c the combination meter.	22 ombination meter. Refer Refer to <u>MWI-176, "Rem</u>	Approx. 54 – 66
M24 s the measurement value within YES >> GO TO 3. NO >> Repair the combina CHECK POWER SUPPLY A Check the power supply and the METER : Diagnosis Procedure'' s the inspection result normal? YES (Present error)>>Replace YES (Past error)>>Error was d	21 tion meter branch line. ND GROUND CIRCUIT e ground circuit of the c the combination meter.	22 ombination meter. Refer Refer to <u>MWI-176, "Rem</u> on meter branch line.	Approx. 54 – 66
M24 s the measurement value within YES >> GO TO 3. NO >> Repair the combina CHECK POWER SUPPLY A Check the power supply and the METER : Diagnosis Procedure'' s the inspection result normal? YES (Present error)>>Replace YES (Past error)>>Error was d	21 tion meter branch line. ND GROUND CIRCUIT e ground circuit of the c the combination meter. letected in the combinati	22 ombination meter. Refer Refer to <u>MWI-176, "Rem</u> on meter branch line.	Approx. 54 – 66

LAN

Ν

0

ABS BRANCH LINE CIRCUIT

[CAN SYSTEM (TYPE 5)]

INFOID:000000004203928

Diagnosis Procedure

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).
- 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.	Termi	nal 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: <u>BRC-41, "Wiring Diagram - Coupe"</u> or <u>BRC-46, "Wiring Diagram - Sedan"</u>

- Models with TCS: <u>BRC-109</u>, "Wiring Diagram Coupe" or <u>BRC-115</u>, "Wiring Diagram Sedan"
- Models with VDC: <u>BRC-207</u>, "Wiring Diagram Coupe" or <u>BRC-215</u>, "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: <u>BRC-66</u>, "Exploded View"
- Models with TCS: BRC-137, "Exploded View"
- Models with VDC: <u>BRC-239</u>, "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.

Diagnosis Procedure			INFOID:00000004203929
NSPECTION PROCEDUR	E		
.CHECK CONNECTOR			
 Turn the ignition switch 0 Disconnect the battery c Check the terminals and and connector side). 	able from the negative terr	ninal. E/R for damage, bend an	d loose connection (unit side
s the inspection result norma	al?		
YES >> GO TO 2. NO >> Repair the termin CHECK HARNESS FOR			
Disconnect the connector		ess connector terminals.	
. Check the resistance be			
	IPDM E/R harness connector		Resistance (Ω)
Connector No.	IPDM E/R harness connector Termir	nal No.	Resistance (Ω)
Connector No. E17	IPDM E/R harness connector Termir 40		- Resistance (Ω) Approx. 108 – 132
Connector No. E17 the measurement value wi YES >> GO TO 3. NO >> Repair the IPDM	IPDM E/R harness connector Termir 40 thin the specification? E/R branch line.	nal No. 39	
Connector No. E17 the measurement value wi YES >> GO TO 3. NO >> Repair the IPDM CHECK POWER SUPPLY	IPDM E/R harness connector Termir 40 thin the specification? E/R branch line. Y AND GROUND CIRCUIT	nal No. 39 -	Approx. 108 – 132
Connector No. E17 Sthe measurement value wi YES >> GO TO 3. NO >> Repair the IPDM CHECK POWER SUPPLY check the power supply and s the inspection result norma	IPDM E/R harness connector Termir 40 thin the specification? E/R branch line. Y AND GROUND CIRCUIT the ground circuit of the IF al?	nal No. 39 - PDM E/R. Refer to <u>PCS-2</u>	Approx. 108 – 132 3, "Diagnosis Procedure" .
Connector No. E17 the measurement value wi YES >> GO TO 3. NO >> Repair the IPDM CHECK POWER SUPPLY heck the power supply and the inspection result normation YES (Present error)>>Replay YES (Past error)>>Error wa	IPDM E/R harness connector Termir 40 thin the specification? E/R branch line. Y AND GROUND CIRCUIT the ground circuit of the IF al? ace the IPDM E/R. Refer to	nal No. 39 - PDM E/R. Refer to <u>PCS-2</u> o <u>PCS-48, "Removal and</u> R branch line.	Approx. 108 – 132 3, "Diagnosis Procedure" .
Connector No. E17 the measurement value wi YES >> GO TO 3. NO >> Repair the IPDM CHECK POWER SUPPLY heck the power supply and the inspection result normation YES (Present error)>>Replay YES (Past error)>>Error wa	IPDM E/R harness connector Termir 40 thin the specification? E/R branch line. Y AND GROUND CIRCUIT the ground circuit of the IF al? ace the IPDM E/R. Refer to s detected in the IPDM E/I	nal No. 39 - PDM E/R. Refer to <u>PCS-2</u> o <u>PCS-48, "Removal and</u> R branch line.	Approx. 108 – 132 3, "Diagnosis Procedure" .
Connector No. E17 Sthe measurement value wi YES >> GO TO 3. NO >> Repair the IPDM CHECK POWER SUPPLY Check the power supply and the inspection result normative YES (Present error)>>Replay YES (Past error)>>Error wa	IPDM E/R harness connector Termir 40 thin the specification? E/R branch line. Y AND GROUND CIRCUIT the ground circuit of the IF al? ace the IPDM E/R. Refer to s detected in the IPDM E/I	nal No. 39 - PDM E/R. Refer to <u>PCS-2</u> o <u>PCS-48, "Removal and</u> R branch line.	Approx. 108 – 132 3, "Diagnosis Procedure" .

LAN

Ν

0

CAN COMMUNICATION CIRCUIT

Diagnosis Procedure

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.	Termi	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 lin	Data link connector		Continuity
Connector No.	Terminal No.	Ground	Continuity
M22	6	Giouria	Not existed
10122	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.

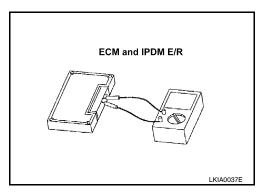
IPDM E/R		Resistance (Ω)	
Terminal No.			
40 39		Approx. 108 – 132	

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 5)]
Connect all the connectors. Check if the symptoms described in the "Symptocustomer)" are reproduced.	om (Results from interview with A
Inspection result	
Reproduced>>GO TO 6. Non-reproduced>>Start the diagnosis again. Follow the trouble diagnosis detected.	procedure when past error is B
6. CHECK UNIT REPRODUCTION	
Perform the reproduction test as per the following procedure for each unit.	C
 Turn the ignition switch OFF. Disconnect the battery cable from the negative terminal. Disconnect one of the unit connectors of CAN communication system. NOTE: 	D
 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 sympto (Results from interview with customer)" are reproduced. NOTE: 	ms described in the "Symptom $_{oxed{ imes}}$
Although unit-related error symptoms occur, do not confuse them with othe Inspection result	er symptoms.
Reproduced>>Connect the connector. Check other units as per the above pro Non-reproduced>>Replace the unit whose connector was disconnected.	ocedure. G

J

Κ

L

LAN

Ν

0

COMPONENT DIAGNOSIS MAIN LINE BETWEEN DLC AND ABS CIRCUIT

Diagnosis Procedure

INFOID:000000004203931

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.	Continuity
M22	6	M1	15G	Existed
IVIZZ	14	IVI I	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	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	
E30	8G	E20	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).

LAN-102

ECM BRANCH LINI			
Diagnosis Procedure			INFOID:000000004471813
	RE		
1.CHECK CONNECTOR			
	cable from the negative terr ninals and connectors for d		nnection (unit side and con-
YES >> GO TO 2.	inal and connector		
NO >> Repair the termi 2.CHECK HARNESS FOR			
Disconnect the connect Check the resistance be	ECM harness connector	onnector terminals.	
Connector No.	Terminal No.		Resistance (Ω)
E10	98	97	Approx. 108 – 132
	Y AND GROUND CIRCUIT		
Check the power supply and QR engine models for Cal QR engine models expect VQ engine models: <u>EC-11</u>	ifornia: <u>EC-144, "Diagnosis</u> for California: <u>EC-673, "Dia</u> 75, "Diagnosis Procedure"	Procedure"	
TROL UNIT :	lace the ECM. Refer to the odels for California: <u>EC-27</u> <u>Special Repair Requiremer</u>	, "ADDITIONAL SERVICE	WHEN REPLACING CON-
CONTROL UN • VQ engine mo <u>Special Repai</u>	<u>NIT : Special Repair Requir</u> odels: <u>EC-1051, "ADDITION</u> <u>r Requirement"</u>	<u>ement"</u> NAL SERVICE WHEN REF	PLACING CONTROL UNIT :
YES (Past error)>>Error wa NO >> Repair the powe	as detected in the ECM bra er supply and the ground ci		

0

A-BAG BRANCH LINE CIRCUIT

Diagnosis Procedure

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.

INFOID:000000004203933

[CAN SYSTEM (TYPE 6)]

	CIRCUIT		
Diagnosis Procedure			INFOID:000000004203934
INSPECTION PROCEDURI	E		
1.CHECK CONNECTOR	_		
	able from the negative tern		and loose connection (unit
Is the inspection result norma			
YES >> GO TO 2. NO >> Repair the termir			
2.CHECK HARNESS FOR			
	tween the AV control unit I	narness connector terminals	3.
AV control unit harness connector			
			Resistance (Ω)
Connector No.	Termin	nal No.	
Connector No. M46	Termin 24		Resistance (Ω) Approx. 54 – 66
Connector No. M46 s the measurement value wi YES >> GO TO 3. NO >> Repair the AV co	Termin 24 thin the specification? ontrol unit branch line.	nal No. 44	
Connector No. M46 s the measurement value wir YES >> GO TO 3. NO >> Repair the AV co 3.CHECK POWER SUPPLY Check the power supply and	Termin 24 thin the specification? ontrol unit branch line. Y AND GROUND CIRCUIT	nal No. 44	Approx. 54 – 66
Connector No. M46 s the measurement value wir YES >> GO TO 3. NO >> Repair the AV co 3.CHECK POWER SUPPLY Check the power supply and Diagnosis Procedure". s the inspection result normation YES (Present error)>>Replate	Termin 24 thin the specification? ontrol unit branch line. Y AND GROUND CIRCUIT the ground circuit of the A al? ace the AV control unit. Re	hal No. 44 Γ V control unit. Refer to <u>AV-</u> efer to <u>AV-437, "Removal an</u>	Approx. 54 – 66 315, "AV CONTROL UNIT :
Connector No. M46 Is the measurement value wir YES >> GO TO 3. NO >> Repair the AV co 3.CHECK POWER SUPPLY Check the power supply and Diagnosis Procedure". Is the inspection result normal YES (Present error)>>Replay YES (Past error)>>Error ward	Termin 24 thin the specification? ontrol unit branch line. Y AND GROUND CIRCUIT the ground circuit of the A al? ace the AV control unit. Re	AV control unit. Refer to <u>AV-</u>	Approx. 54 – 66 315, "AV CONTROL UNIT :

LAN

Ν

0

INFOID:000000004203935

BCM BRANCH LINE CIRCUIT

Diagnosis Procedure

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

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the BCM branch line.

 $\mathbf{3}$. Check power supply and ground circuit

Check the power supply and the ground circuit of the BCM. Refer to BCS-42, "Diagnosis Procedure".

Is the inspection result normal?

YES (Present error)>>Replace the BCM. Refer to BCS-96, "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 >

COMPONENT DIAGNOS	515 >		
LC BRANCH LINE	ECIRCUIT		
iagnosis Procedure			INFOID:0000000042035
-			
SPECTION PROCEDUF	KE		
	OEE		
Turn the ignition switch Disconnect the battery of Check the terminals an (connector side and har	cable from the negative d connectors of the dat		age, bend and loose connectio
the inspection result norm	,		
ES >> GO TO 2.	inal and connector		
IO >> Repair the term CHECK HARNESS FOR			
eck the resistance betwee		tor terminals	
	Data link connector		Resistance (Ω)
Connector No.	6	erminal No.	Approx. 54 – 66
M22			
the measurement value w ′ES (Present error)>>Che ′ES (Past error)>>Error w	ck CAN system type de	link connector branch line	circuit.
the measurement value w ′ES (Present error)>>Che ′ES (Past error)>>Error w	ck CAN system type de as detected in the data l	link connector branch line	circuit.
the measurement value w ES (Present error)>>Che ES (Past error)>>Error w	ck CAN system type de as detected in the data l	link connector branch line	circuit.
the measurement value w ES (Present error)>>Che ES (Past error)>>Error w	ck CAN system type de as detected in the data l	link connector branch line	circuit.
the measurement value w ES (Present error)>>Che ES (Past error)>>Error w	ck CAN system type de as detected in the data l	link connector branch line	circuit.
the measurement value w ES (Present error)>>Che ES (Past error)>>Error w	ck CAN system type de as detected in the data l	link connector branch line	circuit.

INFOID:000000004471814

M&A BRANCH LINE CIRCUIT

Diagnosis Procedure

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.

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

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the combination meter branch line.

 $\mathbf{3}$. Check power supply and ground circuit

Check the power supply and the ground circuit of the combination meter. Refer to <u>MWI-43, "COMBINATION</u> <u>METER : Diagnosis Procedure"</u>.

Is the inspection result normal?

YES (Present error)>>Replace the combination meter. Refer to MWI-176, "Removal and Installation".

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

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

DS DRANCH LINE	ECIRCUIT		
iagnosis Procedure			INFOID:000000004203938
ISPECTION PROCEDUR	۲		
.CHECK CONNECTOR	.⊏		
. Turn the ignition switch			
. Disconnect the battery of . Check the terminals and	able from the negative terr	ctuator and electric unit (cor	trol unit) for damage, bend
s the inspection result norm			
YES >> GO TO 2.			
NO >> Repair the termi			
CHECK HARNESS FOR	OPEN CIRCUIT		
	or of ABS actuator and elected etween the ABS actuator a	ctric unit (control unit). and electric unit (control unit) harness connector termi-
ABS actuator	and electric unit (control unit) harr	ness connector	Resistance (Ω)
Connector No.	Termir	nal No.	Resistance (52)
E26	26	15	Approx. 54 – 66
s the measurement value w	ithin the specification?		
NO >> Repair the ABS	actuator and electric unit (,	
NO >> Repair the ABS CHECK POWER SUPPL	Y AND GROUND CIRCUIT	<u>́</u>	
NO >> Repair the ABS CHECK POWER SUPPL Check the power supply and	Y AND GROUND CIRCUIT	,	t (control unit). Refer to the
NO >> Repair the ABS CHECK POWER SUPPL Check the power supply and pollowing.	Y AND GROUND CIRCUIT	BS actuator and electric uni	
NO >> Repair the ABS CHECK POWER SUPPL Check the power supply and blowing. Models with ABS: <u>BRC-41</u> Models with TCS: <u>BRC-10</u>	Y AND GROUND CIRCUIT I the ground circuit of the A , "Wiring Diagram - Coupe 9, "Wiring Diagram - Coupe	BS actuator and electric uni " or <u>BRC-46, "Wiring Diagra</u> e" or <u>BRC-115, "Wiring Diag</u>	<u>m - Sedan"</u> <u>Iram - Sedan"</u>
NO >> Repair the ABS CHECK POWER SUPPL check the power supply and blowing. Models with ABS: <u>BRC-10</u> Models with TCS: <u>BRC-10</u> Models with VDC: <u>BRC-20</u>	Y AND GROUND CIRCUIT I the ground circuit of the A , "Wiring Diagram - Coupe 9, "Wiring Diagram - Coup 17, "Wiring Diagram - Coup	BS actuator and electric uni " or <u>BRC-46, "Wiring Diagra</u>	<u>m - Sedan"</u> <u>Iram - Sedan"</u>
NO >> Repair the ABS CHECK POWER SUPPL Check the power supply and blowing. Models with ABS: <u>BRC-41</u> Models with TCS: <u>BRC-10</u> Models with VDC: <u>BRC-20</u> s the inspection result norm	Y AND GROUND CIRCUIT I the ground circuit of the A , "Wiring Diagram - Coupe 9, "Wiring Diagram - Coupe 97, "Wiring Diagram - Coup al?	BS actuator and electric uni " or <u>BRC-46, "Wiring Diagra</u> e" or <u>BRC-115, "Wiring Diag</u> e" or <u>BRC-215, "Wiring Diag</u>	<u>m - Sedan"</u> <u>Iram - Sedan"</u> gram - Sedan"
NO >> Repair the ABS CHECK POWER SUPPL Check the power supply and blowing. Models with ABS: <u>BRC-41</u> Models with TCS: <u>BRC-10</u> Models with VDC: <u>BRC-20</u> <u>s the inspection result norm</u> YES (Present error)>>Repl	Y AND GROUND CIRCUIT I the ground circuit of the A , "Wiring Diagram - Coupe" 9, "Wiring Diagram - Coup 17, "Wiring Diagram - Coup 17, "Wiring Diagram - Coup 18 19 10 10 10 10 10 10 10 10 10 10 10 10 10	BS actuator and electric uni " or <u>BRC-46, "Wiring Diagra</u> e" or <u>BRC-115, "Wiring Diag</u> e" or <u>BRC-215, "Wiring Diag</u> electric unit (control unit). R	<u>m - Sedan"</u> <u>Iram - Sedan"</u> gram - Sedan"
NO >> Repair the ABS CHECK POWER SUPPL Check the power supply and bollowing. Models with ABS: <u>BRC-41</u> Models with TCS: <u>BRC-10</u> Models with VDC: <u>BRC-20</u> s the inspection result norm YES (Present error)>>Repl • Models with A • Models with T	Y AND GROUND CIRCUIT I the ground circuit of the A , "Wiring Diagram - Coupe 9, "Wiring Diagram - Coup 17, "Wiring Diagram - Coup 17, "Wiring Diagram - Coup 17, "Wiring Diagram - Coup 18, "Wiring Diagram - Coup 19, "Wiring Diagram - Coup 19, "Wiring Diagram - Coup 10, "Wiring Diagram - Coup	BS actuator and electric uni "or <u>BRC-46, "Wiring Diagra</u> e" or <u>BRC-115, "Wiring Diag</u> e" or <u>BRC-215, "Wiring Diag</u> electric unit (control unit). R <u>ew"</u> /iew"	<u>m - Sedan"</u> <u>Iram - Sedan"</u> gram - Sedan"
NO >> Repair the ABS CHECK POWER SUPPL Check the power supply and ollowing. Models with ABS: <u>BRC-41</u> Models with TCS: <u>BRC-10</u> Models with VDC: <u>BRC-20</u> s the inspection result norm YES (Present error)>>Repl • Models with A • Models with T • Models with V	Y AND GROUND CIRCUIT I the ground circuit of the A , "Wiring Diagram - Coupe" 9, "Wiring Diagram - Coup 17, "Wiring Diagram - Coup 10, "Wiring Diagram - Coupe 10, "Wiring Diagram - Coupe	BS actuator and electric uni "or <u>BRC-46, "Wiring Diagra</u> e" or <u>BRC-115, "Wiring Diag</u> e" or <u>BRC-215, "Wiring Diag</u> electric unit (control unit). R <u>ew"</u> <u>/iew"</u>	<u>m - Sedan" ram - Sedan"</u> gram - Sedan" efer to the following.
NO >> Repair the ABS CHECK POWER SUPPL Check the power supply and bollowing. Models with ABS: <u>BRC-41</u> Models with TCS: <u>BRC-10</u> Models with VDC: <u>BRC-20</u> s the inspection result norm YES (Present error)>>Repl • Models with A • Models with T • Models with V YES (Past error)>>Error was	Y AND GROUND CIRCUIT I the ground circuit of the A , "Wiring Diagram - Coupe" 9, "Wiring Diagram - Coup 17, "Wiring Diagram - Coup 10, "Wiring Diagram - Coupe 10, "Wiring Diagram - Cou	BS actuator and electric uni "or <u>BRC-46, "Wiring Diagra</u> e" or <u>BRC-115, "Wiring Diag</u> e" or <u>BRC-215, "Wiring Diag</u> electric unit (control unit). R <u>ew"</u> <u>/iew"</u> uator and electric unit (contr	<u>m - Sedan" ram - Sedan"</u> gram - Sedan" efer to the following.
NO >> Repair the ABS CHECK POWER SUPPL Check the power supply and ollowing. Models with ABS: <u>BRC-41</u> Models with TCS: <u>BRC-10</u> Models with VDC: <u>BRC-20</u> s the inspection result norm YES (Present error)>>Repl • Models with A • Models with T • Models with T • Models with V YES (Past error)>>Error was	Y AND GROUND CIRCUIT I the ground circuit of the A , "Wiring Diagram - Coupe" 9, "Wiring Diagram - Coup 17, "Wiring Diagram - Coup 10, "Wiring Diagram - Coupe 10, "Wiring Diagram - Coupe	BS actuator and electric uni "or <u>BRC-46, "Wiring Diagra</u> e" or <u>BRC-115, "Wiring Diag</u> e" or <u>BRC-215, "Wiring Diag</u> electric unit (control unit). R <u>ew"</u> <u>/iew"</u> uator and electric unit (contr	<u>m - Sedan" ram - Sedan"</u> gram - Sedan" efer to the following.
NO >> Repair the ABS CHECK POWER SUPPL Check the power supply and bollowing. Models with ABS: <u>BRC-41</u> Models with TCS: <u>BRC-10</u> Models with VDC: <u>BRC-20</u> s the inspection result norm YES (Present error)>>Repl • Models with A • Models with T • Models with V YES (Past error)>>Error was	Y AND GROUND CIRCUIT I the ground circuit of the A , "Wiring Diagram - Coupe" 9, "Wiring Diagram - Coup 17, "Wiring Diagram - Coup 10, "Wiring Diagram - Coupe 10, "Wiring Diagram - Cou	BS actuator and electric uni "or <u>BRC-46, "Wiring Diagra</u> e" or <u>BRC-115, "Wiring Diag</u> e" or <u>BRC-215, "Wiring Diag</u> electric unit (control unit). R <u>ew"</u> <u>/iew"</u> uator and electric unit (contr	<u>m - Sedan" ram - Sedan"</u> gram - Sedan" efer to the following.
NO >> Repair the ABS CHECK POWER SUPPL Check the power supply and ollowing. Models with ABS: <u>BRC-41</u> Models with TCS: <u>BRC-10</u> Models with VDC: <u>BRC-20</u> s the inspection result norm YES (Present error)>>Repl • Models with A • Models with T • Models with T • Models with V YES (Past error)>>Error was	Y AND GROUND CIRCUIT I the ground circuit of the A , "Wiring Diagram - Coupe" 9, "Wiring Diagram - Coup 17, "Wiring Diagram - Coup 10, "Wiring Diagram - Coupe 10, "Wiring Diagram - Cou	BS actuator and electric uni "or <u>BRC-46, "Wiring Diagra</u> e" or <u>BRC-115, "Wiring Diag</u> e" or <u>BRC-215, "Wiring Diag</u> electric unit (control unit). R <u>ew"</u> <u>/iew"</u> uator and electric unit (contr	<u>m - Sedan" ram - Sedan"</u> gram - Sedan" efer to the following.

0

IPDM-E BRANCH LINE CIRCUIT

Diagnosis Procedure

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		
Connector No.	Terminal No.		Resistance (Ω)
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.

 $\mathbf{3}$. Check power supply and ground circuit

Check the power supply and the ground circuit of the IPDM E/R. Refer to PCS-23, "Diagnosis Procedure".

Is the inspection result normal?

YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "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.

LAN-110

5. СНЕСК ЗУМРТОМ

iagnosis Procedure	9		INFOID:0000000420394
SPECTION PROCEDU			
Turn the ignition switc Disconnect the battery	y cable from the negative term	ninal.	
	t connectors on CAN commur connectors for damage, bend		
the inspection result noi	-		
/ES >> GO TO 2.			
•	minal and connector.	-,	
	NTINUITY (SHORT CIRCUIT		
heck the continuity betwo	een the data link connector te	rminals.	
	Data link connector		Continuity
Connector No.	Termina	al No.	Continuity
M22	6	14	Not existed
the inspection result nor	<u>rmal?</u>		
<pre>/ES >> GO TO 3. NO >> Check the har</pre>	ness and repair the root caus	e.	
	NTINUITY (SHORT CIRCUIT		
heck the continuity betwo	een the data link connector ar	nd the around.	
heck the continuity betwo		nd the ground.	1
Data lir	nk connector	nd the ground.	Continuity
_		nd the ground. Ground	
Data lir	nk connector Terminal No.		Continuity Not existed Not existed
Data lir Connector No.	nk connector Terminal No. 6 14		Not existed
Data lir Connector No. M22 the inspection result nor (ES >> GO TO 4.	nk connector Terminal No. 6 14 Tmal?	Ground	Not existed
Data lir Connector No. M22 the inspection result nor (ES >> GO TO 4. NO >> Check the har	nk connector Terminal No. 6 14 mal? rness and repair the root caus	Ground	Not existed
Data lir Connector No. M22 the inspection result nor (ES >> GO TO 4. NO >> Check the har CHECK ECM AND IPD	Terminal No. 6 14 Terminal No. 6 14 Tmal? Tmal? Thess and repair the root caus M E/R TERMINATION CIRCU	Ground	Not existed
Data lin Connector No. M22 the inspection result non (ES >> GO TO 4. NO >> Check the har .CHECK ECM AND IPD Remove the ECM and	Terminal No. 6 14 7 mal? Thess and repair the root caus M E/R TERMINATION CIRCU	Ground	Not existed
Data lin Connector No. M22 the inspection result non (ES >> GO TO 4. NO >> Check the har .CHECK ECM AND IPD Remove the ECM and	Terminal No. 6 14 Terminal No. 6 14 Tmal? Tmal? Thess and repair the root caus M E/R TERMINATION CIRCU	Ground	Not existed
Data lin Connector No. M22 the inspection result non (ES >> GO TO 4. NO >> Check the har .CHECK ECM AND IPD Remove the ECM and	Terminal No. 6 14 Termal? Thess and repair the root caus M E/R TERMINATION CIRCU the IPDM E/R. between the ECM terminals.	Ground e. JIT	Not existed
Data lir Connector No. M22 the inspection result nor (ES >> GO TO 4. NO >> Check the har .CHECK ECM AND IPD Remove the ECM and Check the resistance ECM Terminal No.	Terminal No. 6 14 'mal? mess and repair the root caus M E/R TERMINATION CIRCU I the IPDM E/R. between the ECM terminals. Resistance (Ω)	Ground e. JIT	Not existed Not existed
Data lir Connector No. M22 the inspection result nor (ES >> GO TO 4. NO >> Check the har CHECK ECM AND IPD Remove the ECM and Check the resistance ECM Terminal No. 98	Terminal No. 6 14 Termal? Tress and repair the root caus M E/R TERMINATION CIRCU I the IPDM E/R. between the ECM terminals. Resistance (Ω) 97 Approx. 108 – 13	Ground e. JIT	Not existed Not existed
Data lir Connector No. M22 the inspection result nor (ES >> GO TO 4. NO >> Check the har CHECK ECM AND IPD Remove the ECM and Check the resistance ECM Terminal No. 98	Terminal No. 6 14 'mal? mess and repair the root caus M E/R TERMINATION CIRCU I the IPDM E/R. between the ECM terminals. Resistance (Ω)	Ground e. JIT	Not existed Not existed
Data lin Connector No. M22 the inspection result nor (ES >> GO TO 4. NO >> Check the har CHECK ECM AND IPD Remove the ECM and Check the resistance ECM Terminal No. 98 Check the resistance	Terminal No. 6 14 mal? mess and repair the root caus M E/R TERMINATION CIRCU the IPDM E/R. between the ECM terminals. 97 Approx. 108 – 13 between the IPDM E/R termin	Ground e. JIT	Not existed Not existed
Data lir Connector No. M22 the inspection result nor (ES >> GO TO 4. NO >> Check the har CHECK ECM AND IPD Remove the ECM and Check the resistance ECM Terminal No. 98	Terminal No. 6 14 Termal? Tress and repair the root caus M E/R TERMINATION CIRCU I the IPDM E/R. between the ECM terminals. Resistance (Ω) 97 Approx. 108 – 13	Ground e. JIT	Not existed Not existed
Data lin Connector No. M22 the inspection result nor (ES >> GO TO 4. NO >> Check the har CHECK ECM AND IPD Remove the ECM and Check the resistance ECM Terminal No. 98 Check the resistance	Terminal No. 6 14 mal? mess and repair the root caus M E/R TERMINATION CIRCU the IPDM E/R. between the ECM terminals. 97 Approx. 108 – 13 between the IPDM E/R termin	Ground e. JIT) 32 hals.	Not existed Not existed

CAN COMMUNICATION CIRCUIT

< 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.

 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.

COMPONEN	IT DIAGNO	SIS		
		ND ABS CIRCU	ШТ	
iagnosis Proced	_			INFOID:000000004203941
-				NW 012.00000000000000000000000000000000000
ISPECTION PROCE CHECK CONNECT				
Check the followir and harness side). Harness connecto Harness connecto the inspection result YES >> GO TO 2. NO >> Repair the CHECK HARNESS Disconnect the har	ttery cable from the ne ng terminals and conr r M1 r E30 <u>normal?</u> terminal and connect CONTINUITY (OPEN rness connectors M1	nectors for damage, b or. I CIRCUIT)		ection (connector side
Data link	connector	Harness c	connector	
Connector No.	Terminal No.	Connector No.	Terminal No.	Continuity
	6	N4	15G	Existed
M22	14	M1	8G	Existed
CHECK HARNESS	CONTINUITY (OPEN nnector of ABS actuat ity between the harne	or and electric unit (co ss connector and the	ontrol unit). ABS actuator and ele	ector M1.
		ABS actuator and elec	onnector	Continuity
Check the continu harness connector	connector	namess c		
Check the continu harness connector	Terminal No.	Connector No.	Terminal No.	
Check the continu harness connector Harness	Terminal No. 15G		26	Existed
Check the continu harness connector Harness Connector No.	Terminal No. 15G 8G	Connector No.		Existed Existed

ECM BRANCH LINE CIRCUIT

Diagnosis Procedure

INSPECTION PROCEDURE

1.CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 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 expect for California: EC-673, "Diagnosis Procedure"
- VQ engine models: EC-1175, "Diagnosis Procedure"

Is the inspection result normal?

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

- QR engine models for California: <u>EC-27</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CON-</u> <u>TROL UNIT</u>: <u>Special Repair Requirement</u>"
- QR engine models except for California: <u>EC-563</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"
- VQ engine models: <u>EC-1051</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : <u>Special Repair Requirement</u>"

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

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

< COMPONENT DIAGNOSIS > A-BAG BRANCH LINE CIRCUIT А **Diagnosis** Procedure INFOID:000000004203943 1. CHECK AIR BAG DIAGNOSIS SENSOR UNIT В Check the air bag diagnosis sensor unit. Refer to SRC-3, "Work Flow". Is the inspection result normal? С YES >> Replace the main harness. NO >> Replace parts whose air bag system has a malfunction. D Е F G Н J Κ L LAN Ν Ο Ρ

INFOID:000000004203944

BCM BRANCH LINE CIRCUIT

Diagnosis Procedure

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

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the BCM branch line.

 $\mathbf{3}$. Check power supply and ground circuit

Check the power supply and the ground circuit of the BCM. Refer to BCS-42, "Diagnosis Procedure".

Is the inspection result normal?

YES (Present error)>>Replace the BCM. Refer to BCS-96, "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 >

COMPONENT DIAGNOSI			
DLC BRANCH LINE	CIRCUIT		
Diagnosis Procedure			INFOID:00000004203945
SPECTION PROCEDURE			
CHECK CONNECTOR			
. Disconnect the battery ca	ble from the negative terr		bend and loose connection
(connector side and harne		ink connector for damage,	
s the inspection result normal	?		
YES >> GO TO 2. NO >> Repair the termina	al and connector.		
CHECK HARNESS FOR C			
Check the resistance between	the data link connector t	terminals.	
	Deta l'al secondos		
Connector No.	Data link connector	nal No.	Resistance (Ω)
M22	6	14	Approx. 54 – 66

M&A BRANCH LINE CIRCUIT

Diagnosis Procedure

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.

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

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the combination meter branch line.

 $\mathbf{3}$. Check power supply and ground circuit

Check the power supply and the ground circuit of the combination meter. Refer to <u>MWI-43, "COMBINATION</u> <u>METER : Diagnosis Procedure"</u>.

Is the inspection result normal?

YES (Present error)>>Replace the combination meter. Refer to MWI-176, "Removal and Installation".

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

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

OMPONENT DIAGNOSIS >	[CAN SYSTEM (TYPE 7)]	
S BRANCH LINE CIRCUIT		
gnosis Procedure	INFOID:000000004203947	
PECTION PROCEDURE		
CHECK CONNECTOR		
Turn the ignition switch OFF. Disconnect the battery cable from the negative terminal. Check the terminals and connectors of the ABS actuator and electric unit (c and loose connection (unit side and connector side). <u>e inspection result normal?</u> S >> GO TO 2. >> Repair the terminal and connector. CHECK HARNESS FOR OPEN CIRCUIT Disconnect the connector of ABS actuator and electric unit (control unit). Check the resistance between the ABS actuator and electric unit (control unit). Check the resistance between the ABS actuator and electric unit (control unit).		
ABS actuator and electric unit (control unit) harness connector		
Connector No. Terminal No.	Resistance (Ω)	
E26 26 15	Approx. 54 – 66	
E262615e measurement value within the specification?SSSPRepair the ABS actuator and electric unit (control unit) branch line.CHECK POWER SUPPLY AND GROUND CIRCUITck the power supply and the ground circuit of the ABS actuator and electric unit.ck the power supply and the ground circuit of the ABS actuator and electric unit.ck the power supply and the ground circuit of the ABS actuator and electric unit.cdels with ABS:BRC-41, "Wiring Diagram - Coupe" or BRC-46, "Wiring Diagram - Coupe" or BRC-115, "Wiring Diagram - Coupe" or BRC-215, "Wiring D	nit (control unit). Refer to the ram - Sedan" agram - Sedan"	
E262615e measurement value within the specification?SSSPRepair the ABS actuator and electric unit (control unit) branch line.CHECK POWER SUPPLY AND GROUND CIRCUITck the power supply and the ground circuit of the ABS actuator and electric unit, wing.DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD	nit (control unit). Refer to the r <u>am - Sedan"</u> agram - Sedan" agram - Sedan"	

TCM BRANCH LINE CIRCUIT

Diagnosis Procedure

INSPECTION PROCEDURE

1.CHECK CONNECTOR

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

Check the resistance between the TCM harness connector terminals. 2.

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

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the TCM branch line.

 ${\it 3.}$ Check power supply and ground circuit

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

- QR25DE models: TM-380, "Wiring Diagram CVT CONTROL SYSTEM Coupe" or TM-389, "Wiring Diagram - CVT CONTROL SYSTEM - Sedan"
- VQ35DE models: TM-202, "Wiring Diagram-CVT CONTROL SYSTEM-Coupe" or TM-211, "Wiring Diagram—CVT CONTROL SYSTEM—Sedan"

Is the inspection result normal?

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

- QR25DE models: <u>TM-430, "Exploded View"</u>
 VQ35DE models: <u>TM-254, "Exploded View"</u>
- YES (Past error)>>Error was detected in the TCM branch line.

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

Diagnosis Procedure			INFOID:00000004203949
INSPECTION PROCEDURE			
1.CHECK CONNECTOR			
 Turn the ignition switch OF Disconnect the battery cab Check the terminals and cand connector side). 	le from the negative tern		loose connection (unit side
is the inspection result normal?			
YES >> GO TO 2. NO >> Repair the terminal 2.CHECK HARNESS FOR OF			
 Disconnect the connector of Check the resistance between 		ess connector terminals.	
IF	DM E/R harness connector		Resistance (Q)
Connector No.	Termin		Resistance (Ω)
Connector No. E17	Termin 40	al No. 39	Resistance (Ω) Approx. 108 – 132
Connector No. E17 Is the measurement value withi YES >> GO TO 3. NO >> Repair the IPDM E	Termin 40 n the specification? /R branch line.	39	
Connector No. E17 Is the measurement value withi YES >> GO TO 3. NO >> Repair the IPDM E 3.CHECK POWER SUPPLY A Check the power supply and th	Termin 40 <u>n the specification?</u> /R branch line. ND GROUND CIRCUIT e ground circuit of the IP	39	Approx. 108 – 132
Connector No. E17 Is the measurement value within YES >> GO TO 3. NO >> Repair the IPDM E 3. CHECK POWER SUPPLY A Check the power supply and the Is the inspection result normal? YES (Present error)>>Replace YES (Past error)>>Error was of	Termin 40 n the specification? /R branch line. ND GROUND CIRCUIT e ground circuit of the IP e the IPDM E/R. Refer to detected in the IPDM E/F	39 PDM E/R. Refer to <u>PCS-23</u> P <u>PCS-48, "Removal and Ir</u> R branch line.	Approx. 108 – 132
Connector No. E17 Is the measurement value within YES >> GO TO 3. NO >> Repair the IPDM E 3. CHECK POWER SUPPLY A Check the power supply and the Is the inspection result normal? YES (Present error)>>Replace YES (Past error)>>Error was of	Termin 40 n the specification? /R branch line. ND GROUND CIRCUIT e ground circuit of the IP : e the IPDM E/R. Refer to	39 PDM E/R. Refer to <u>PCS-23</u> P <u>PCS-48, "Removal and Ir</u> R branch line.	Approx. 108 – 132
Connector No. E17 Is the measurement value within YES >> GO TO 3. NO >> Repair the IPDM E 3. CHECK POWER SUPPLY A Check the power supply and the Is the inspection result normal? YES (Present error)>>Replace YES (Past error)>>Error was of	Termin 40 n the specification? /R branch line. ND GROUND CIRCUIT e ground circuit of the IP e the IPDM E/R. Refer to detected in the IPDM E/F	39 PDM E/R. Refer to <u>PCS-23</u> P <u>PCS-48, "Removal and Ir</u> R branch line.	Approx. 108 – 132

LAN

Ν

0

CAN COMMUNICATION CIRCUIT

Diagnosis Procedure

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.		Continuity	
M22	6	6 14		

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 lin	Data link connector		Continuity
Connector No.	Terminal No.	Ground	Continuity
M22	6	Giouria	Not existed
10122	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)	
Termi	nal No.		
98	97	Approx. 108 – 132	

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

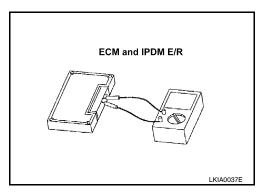
IPDM E/R		Resistance (Ω)
Termi	nal No.	
40	39	Approx. 108 – 132

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 "Sympton customer)" are reproduced.	(Results from interview with A
Inspection result	
Reproduced>>GO TO 6. Non-reproduced>>Start the diagnosis again. Follow the trouble diagnosis p detected.	ocedure when past error is B
6. CHECK UNIT REPRODUCTION	
Perform the reproduction test as per the following procedure for each unit. 1. Turn the ignition switch OFF.	C
 Disconnect the battery cable from the negative terminal. Disconnect one of the unit connectors of CAN communication system. NOTE: 	D
 ECM and IPDM E/R have a termination circuit. Check other units first. Connect the battery cable to the negative terminal. Check if the symptom (Results from interview with customer)" are reproduced. NOTE: 	described in the "Symptom $_{ extsf{E}}$
Although unit-related error symptoms occur, do not confuse them with other Inspection result	symptoms.
Reproduced>>Connect the connector. Check other units as per the above produced>>Replace the unit whose connector was disconnected.	edure. G

Н

J

Κ

L

LAN

Ν

0

COMPONENT DIAGNOSIS MAIN LINE BETWEEN DLC AND ABS CIRCUIT

Diagnosis Procedure

INFOID:000000004203951

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.	Continuity
M22	6	M1	15G	Existed
IVIZZ	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
E30	8G	E20	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).

iagnosis Procedure	INFOID:000000004471831
SPECTION PROCEDURE	
CHECK CONNECTOR	
Turn the ignition switch OFF. Disconnect the battery cable from the negative terminal. Check the following terminals and connectors for damage, bend and loose conector side). ECM Harness connector E30 Harness connector M1 the inspection result normal? (ES >> GO TO 2.	nnection (unit side and con-
 NO >> Repair the terminal and connector. CHECK HARNESS FOR OPEN CIRCUIT 	
Check the resistance between the ECM harness connector terminals.	Resistance (Ω)
Connector No. Terminal No.	
E10 98 97	Approx. 108 – 132
 YES >> GO TO 3. NO >> Repair the ECM branch line. CHECK POWER SUPPLY AND GROUND CIRCUIT Theck 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 expect for California: EC-673, "Diagnosis Procedure" VQ engine models: EC-1175, "Diagnosis Procedure" 	
 the inspection result normal? 'ES (Present error)>>Replace the ECM. Refer to the following. QR engine models for California: <u>EC-27, "ADDITIONAL SERVICE</u> <u>TROL UNIT : Special Repair Requirement"</u> QR engine models except for California: <u>EC-563, "ADDITIONAL SE</u> 	
 OR engine models except for canorna. <u>EC-305, ADDITIONAL SE</u> <u>CONTROL UNIT : Special Repair Requirement"</u> VQ engine models: <u>EC-1051, "ADDITIONAL SERVICE WHEN REF</u> <u>Special Repair Requirement"</u> YES (Past error)>>Error was detected in the ECM branch line. 	

0

A-BAG BRANCH LINE CIRCUIT

Diagnosis Procedure

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.

INFOID:000000004203953

[CAN SYSTEM (TYPE 8)]

AV BRANCH LINE C	CIRCUIT		
Diagnosis Procedure			INFOID:000000004203954
INSPECTION PROCEDUR	Ξ		
1.CHECK CONNECTOR			
	able from the negative term connectors of the AV con		and loose connection (unit
Is the inspection result normal YES >> GO TO 2. NO >> Repair the termin	al and connector.		
2.CHECK HARNESS FOR	r of AV control unit.		
2. Check the resistance bet	ween the AV control unit I	narness connector terminals	S
A	V control unit harness connecto	r	Resistance (Ω)
Connector No.	Termi	nal No.	· ·
M46	24	44	Approx. 54 – 66
3.CHECK POWER SUPPLY	ntrol unit branch line. AND GROUND CIRCUI		
Check the power supply and Diagnosis Procedure". Is the inspection result norma YES (Present error)>>Repla	al? ace the AV control unit. Re	efer to <u>AV-437, "Removal an</u>	
YES (Past error)>>Error wa NO >> Repair the powe	s detected in the AV contr supply and the ground ci		

LAN

Ν

0

INFOID:000000004203955

BCM BRANCH LINE CIRCUIT

Diagnosis Procedure

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

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the BCM branch line.

 $\mathbf{3}$. Check power supply and ground circuit

Check the power supply and the ground circuit of the BCM. Refer to BCS-42, "Diagnosis Procedure".

Is the inspection result normal?

YES (Present error)>>Replace the BCM. Refer to BCS-96, "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 >

LC BRANCH LINE			
agnosis Procedure			INFOID:00000000420395
-			
ISPECTION PROCEDURE			
.CHECK CONNECTOR			
 Turn the ignition switch OI Disconnect the battery cal Check the terminals and (connector side and harne) 	ble from the negative term connectors of the data lin		e, bend and loose connectior
s the inspection result normal	<u>?</u>		
YES >> GO TO 2. NO >> Repair the termina	al and connector		
CHECK HARNESS FOR O			
Check the resistance between		erminals	
Quere de Nie	Data link connector	-1.51.	Resistance (Ω)
Connector No. M22	Termina 6	ai no. 14	Approx. 54 – 66
the measurement value with			
YES (Present error)>>Check YES (Past error)>>Error was			rcuit.
YES (Present error)>>Check YES (Past error)>>Error was	CAN system type decisio detected in the data link of		rcuit.
YES (Present error)>>Check YES (Past error)>>Error was	CAN system type decisio detected in the data link of		rcuit.
YES (Present error)>>Check YES (Past error)>>Error was	CAN system type decisio detected in the data link of		rcuit.
YES (Present error)>>Check YES (Past error)>>Error was	CAN system type decisio detected in the data link of		rcuit.
YES (Present error)>>Check YES (Past error)>>Error was	CAN system type decisio detected in the data link of		rcuit.
YES (Present error)>>Check YES (Past error)>>Error was	CAN system type decisio detected in the data link of		rcuit.
YES (Present error)>>Check YES (Past error)>>Error was	CAN system type decisio detected in the data link of		rcuit.

M&A BRANCH LINE CIRCUIT

Diagnosis Procedure

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.

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

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the combination meter branch line.

 $\mathbf{3}$. Check power supply and ground circuit

Check the power supply and the ground circuit of the combination meter. Refer to <u>MWI-43, "COMBINATION</u> <u>METER : Diagnosis Procedure"</u>.

Is the inspection result normal?

YES (Present error)>>Replace the combination meter. Refer to MWI-176, "Removal and Installation".

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

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

< COMPONENT DIAGNOS	SIS >		[CAN SYSTEM (TYPE 8)]
ABS BRANCH LINE	ECIRCUIT		
Diagnosis Procedure			INFOID:00000004203958
INSPECTION PROCEDUR	۶E		
1.CHECK CONNECTOR			
 Check the terminals and and loose connection (use the inspection result norm YES >> GO TO 2. NO >> Repair the term CHECK HARNESS FOR Disconnect the connect 	cable from the negative term d connectors of the ABS ac unit side and connector side <u>nal?</u> inal and connector. COPEN CIRCUIT	etuator and electric unit (control unit).	ntrol unit) for damage, bend
ABS actuator	and electric unit (control unit) harr	ness connector	
Connector No.	· · · ·	nal No.	Resistance (Ω)
E26	26	15	Approx. 54 – 66
Is the measurement value wYES>> GO TO 3.NO>> Repair the ABS 3. CHECK POWER SUPPLCheck the power supply and	actuator and electric unit (Y AND GROUND CIRCUIT	-	nit (control unit) Refer to the
following. • Models with ABS: <u>BRC-41</u> • Models with TCS: <u>BRC-10</u> • Models with VDC: <u>BRC-20</u>	I, "Wiring Diagram - Coupe" 09, "Wiring Diagram - Coupe 07, "Wiring Diagram - Coupe	<u>or BRC-46, "Wiring Diagrae</u> " or <u>BRC-115, "Wiring Dia</u> e	<u>am - Sedan"</u> gram - Sedan"
Is the inspection result norm	ial?		
YES (Present error)>>Ren		electric unit (control unit)	Refer to the following
 Models with A Models with T Models with V 	lace the ABS actuator and on ABS: <u>BRC-66, "Exploded Vie</u> CS: <u>BRC-137, "Exploded V</u> /DC: <u>BRC-239, "Exploded V</u> ras detected in the ABS actu	<u>ew"</u> /iew" /iew"	

TCM BRANCH LINE CIRCUIT

Diagnosis Procedure

INSPECTION PROCEDURE

1.CHECK CONNECTOR

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

Check the resistance between the TCM harness connector terminals. 2.

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

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the TCM branch line.

 ${\it 3.}$ Check power supply and ground circuit

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

- QR25DE models: TM-380, "Wiring Diagram CVT CONTROL SYSTEM Coupe" or TM-389, "Wiring Diagram - CVT CONTROL SYSTEM - Sedan"
- VQ35DE models: TM-202, "Wiring Diagram-CVT CONTROL SYSTEM-Coupe" or TM-211, "Wiring Diagram—CVT CONTROL SYSTEM—Sedan"

Is the inspection result normal?

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

- QR25DE models: <u>TM-430, "Exploded View"</u>
 VQ35DE models: <u>TM-254, "Exploded View"</u>
- YES (Past error)>>Error was detected in the TCM branch line.

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

SPECTION PROCEDURE .CHECK CONNECTOR .Turn the ignition switch OFF. Disconnect the battery cable from the negative terminal. Check the terminals and connectors of the IPDM E/R for damage, bend and loose connection (unit side and connector side). at the inspection result normal? YES >> GO TO 2. NO >> Repair the terminal and connector. .CHECK HARNESS FOR OPEN CIRCUIT Disconnect the connector of IPDM E/R. Check the resistance between the IPDM E/R harness connector terminals. IPDM E/R harness connector Resistance (Ω) Connector No. IPDM E/R harness connector Resistance (Ω) Connector No. Terminal No. Resistance (Ω) Connector No. Terminal No. Resistance (Ω) Approx. 108 – 132 Sthe measurement value within the specification? YES YES CHECK POWER SUPPLY AND GROUND CIRCUIT Sthe inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48. "Removal and Installation". YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48. "Removal and Installation". <	PDM-E BRANCH LII			INFOID:000000004203960
. CHECK CONNECTOR . Turn the ignition switch OFF. . Disconnect the battery cable from the negative terminal. . Check the terminals and connectors of the IPDM E/R for damage, bend and loose connection (unit side and connector side). . Ethe inspection result normal? YES >> GO TO 2. NO >> Repair the terminal and connector. . CHECK HARNESS FOR OPEN CIRCUIT . Disconnect the connector of IPDM E/R. . Check the resistance between the IPDM E/R harness connector terminals. IPDM E/R harness connector Resistance (Ω) Connector No. E17 40 39 Approx. 108 – 132 8 the measurement value within the specification? YES >> GO TO 3. NO >> Repair the IPDM E/R branch line. . CHECK POWER SUPPLY AND GROUND CIRCUIT Sheek the power supply and the ground circuit of the IPDM E/R. Refer to PCS-23, "Diagnosis Procedure" . athe inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation". YES (Present error)>>Error was detected in the IPDM E/R branch line.	C C			
Turn the ignition switch OFF. Disconnect the battery cable from the negative terminal. Check the terminals and connectors of the IPDM E/R for damage, bend and loose connection (unit side and connector side). at the inspection result normal? YES >> GO TO 2. NO >> Repair the terminal and connector. CHECK HARNESS FOR OPEN CIRCUIT Disconnect the connector of IPDM E/R. Check the resistance between the IPDM E/R harness connector terminals. IPDM E/R harness connector Connector No. E17 40 39 Approx. 108 – 132 a the measurement value within the specification? YES >> GO TO 3. NO >> Repair the IPDM E/R branch line. CHECK POWER SUPPLY AND GROUND CIRCUIT Check the power supply and the ground circuit of the IPDM E/R. Refer to PCS-23, "Diagnosis Procedure" . a the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation". YES (Present error)>>Error was detected in the IPDM E/R branch line.				
 Disconne^T the battery cable from the negative terminal. Check the terminals and connectors of the IPDM E/R for damage, bend and loose connection (unit side and connector side). a the inspection result normal? YES >> GO TO 2. NO >> Repair the terminal and connector. CHECK HARNESS FOR OPEN CIRCUIT Disconnect the connector of IPDM E/R. Check the resistance between the IPDM E/R harness connector terminals. IPDM E/R harness connector Resistance (Ω) Connector No. E17 40 39 Approx. 108 – 132 the measurement value within the specification? YES >> GO TO 3. NO >> Repair the IPDM E/R branch line. CHECK POWER SUPPLY AND GROUND CIRCUIT Check the power supply and the ground circuit of the IPDM E/R. Refer to PCS-23, "Diagnosis Procedure" . A the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation". YES (Past error)>>Error was detected in the IPDM E/R branch line.				
and connector side). at the inspection result normal? YES >> GO TO 2. NO >> Repair the terminal and connector. CHECK HARNESS FOR OPEN CIRCUIT Disconnect the connector of IPDM E/R. Check the resistance between the IPDM E/R harness connector terminals. IPDM E/R harness connector Resistance (Ω) Connector No. E17 40 39 Approx. 108 – 132 at the measurement value within the specification? YES >> GO TO 3. NO >> Repair the IPDM E/R branch line. CHECK POWER SUPPLY AND GROUND CIRCUIT theck the power supply and the ground circuit of the IPDM E/R. Refer to PCS-23, "Diagnosis Procedure" . at the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation". YES (Past error)>>Error was detected in the IPDM E/R branch line.	Disconnect the battery ca	ole from the negative tern	ninal.	
a the inspection result normal? YES >> GO TO 2. NO >> Repair the terminal and connector. CHECK HARNESS FOR OPEN CIRCUIT . Disconnect the connector of IPDM E/R. . 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 Approx. 108 – 132 a the measurement value within the specification? YES YES >> GO TO 3. NO >> Repair the IPDM E/R branch line. CHECK POWER SUPPLY AND GROUND CIRCUIT check the power supply and the ground circuit of the IPDM E/R. Refer to PCS-23, "Diagnosis Procedure". a the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation". YES (Past error)>>Error was detected in the IPDM E/R branch line.		connectors of the IPDM E	E/R for damage, bend an	d loose connection (unit side
NO >> Repair the terminal and connector. CHECK HARNESS FOR OPEN CIRCUIT Disconnect the connector of IPDM E/R. Check the resistance between the IPDM E/R harness connector terminals. IPDM E/R harness connector Resistance (Ω) Connector No. E17 40 39 Approx. 108 – 132 a the measurement value within the specification? YES >> GO TO 3. NO >> Repair the IPDM E/R branch line. CHECK POWER SUPPLY AND GROUND CIRCUIT Check the power supply and the ground circuit of the IPDM E/R. Refer to PCS-23, "Diagnosis Procedure" . a the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation". YES (Past error)>>Error was detected in the IPDM E/R branch line.	,	<u>?</u>		
CHECK HARNESS FOR OPEN CIRCUIT Disconnect the connector of IPDM E/R. Check the resistance between the IPDM E/R harness connector terminals. IPDM E/R harness connector Connector No. E17 40 39 Approx. 108 – 132 the measurement value within the specification? YES >> GO TO 3. NO >> Repair the IPDM E/R branch line. CHECK POWER SUPPLY AND GROUND CIRCUIT theck the power supply and the ground circuit of the IPDM E/R. Refer to PCS-23, "Diagnosis Procedure" . the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation". YES (Past error)>>Error was detected in the IPDM E/R branch line.		-		
. Disconnect the connector of IPDM E/R. . 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 a the measurement value within the specification? YES >> GO TO 3. NO >> Repair the IPDM E/R branch line. CHECK POWER SUPPLY AND GROUND CIRCUIT the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation". YES (Past error)>>Error was detected in the IPDM E/R branch line. YES (Past error)>>Error was detected in the IPDM E/R branch line.				
IPDM E/R harness connector Resistance (Ω) Connector No. Terminal No. E17 40 39 Approx. 108 – 132 Approx. 108 – 132 a the measurement value within the specification? YES YES >> GO TO 3. NO >> Repair the IPDM E/R branch line. CHECK POWER SUPPLY AND GROUND CIRCUIT where inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation". YES (Past error)>>Error was detected in the IPDM E/R branch line.				
IPDM E/R harness connector Resistance (Ω) Connector No. Terminal No. E17 40 39 Approx. 108 – 132 the measurement value within the specification? YES >> GO TO 3. YES >> Repair the IPDM E/R branch line. •.CHECK POWER SUPPLY AND GROUND CIRCUIT CHECK POWER SUPPLY AND GROUND CIRCUIT He inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation". YES (Past error)>>Error was detected in the IPDM E/R branch line.	Disconnect the connector	of IPDM E/R		
Connector No. Terminal No. Resistance (Ω) E17 40 39 Approx. 108 – 132 a the measurement value within the specification? YES >> GO TO 3. NO >> Repair the IPDM E/R branch line. NO >> Repair the IPDM E/R branch line. . . .CHECK POWER SUPPLY AND GROUND CIRCUIT . the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation". YES (Past error)>>Error was detected in the IPDM E/R branch line. .			ss connector terminals	
Connector No. Terminal No. E17 40 39 Approx. 108 – 132 the measurement value within the specification? YES >> GO TO 3. NO >> Repair the IPDM E/R branch line. •.CHECK POWER SUPPLY AND GROUND CIRCUIT heck the power supply and the ground circuit of the IPDM E/R. Refer to PCS-23, "Diagnosis Procedure" . •.the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation". YES (Past error)>>Error was detected in the IPDM E/R branch line.			ss connector terminals.	
 <u>a the measurement value within the specification?</u> YES >> GO TO 3. NO >> Repair the IPDM E/R branch line. CHECK POWER SUPPLY AND GROUND CIRCUIT Check the power supply and the ground circuit of the IPDM E/R. Refer to <u>PCS-23</u>, "Diagnosis Procedure". <u>a the inspection result normal?</u> YES (Present error)>>Replace the IPDM E/R. Refer to <u>PCS-48</u>, "Removal and Installation". YES (Past error)>>Error was detected in the IPDM E/R branch line. 	Check the resistance betw	veen the IPDM E/R harne		Resistance (Ω)
<pre>/ES >> GO TO 3. NO >> Repair the IPDM E/R branch line. .CHECK POWER SUPPLY AND GROUND CIRCUIT heck the power supply and the ground circuit of the IPDM E/R. Refer to <u>PCS-23, "Diagnosis Procedure"</u>. the inspection result normal? /ES (Present error)>>Replace the IPDM E/R. Refer to <u>PCS-48, "Removal and Installation"</u>. /ES (Past error)>>Error was detected in the IPDM E/R branch line.</pre>	Check the resistance betw Connector No.	veen the IPDM E/R harne PDM E/R harness connector Termin	al No.	
NO >> Repair the IPDM E/R branch line. • CHECK POWER SUPPLY AND GROUND CIRCUIT heck the power supply and the ground circuit of the IPDM E/R. Refer to <u>PCS-23, "Diagnosis Procedure"</u> . • the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to <u>PCS-48, "Removal and Installation"</u> . YES (Past error)>>Error was detected in the IPDM E/R branch line.	Check the resistance betw Connector No. E17	PDM E/R harness connector Termin 40	al No.	
CHECK POWER SUPPLY AND GROUND CIRCUIT heck the power supply and the ground circuit of the IPDM E/R. Refer to <u>PCS-23, "Diagnosis Procedure"</u> . the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to <u>PCS-48, "Removal and Installation"</u> . YES (Past error)>>Error was detected in the IPDM E/R branch line.	Check the resistance betw Connector No. E17 the measurement value with	PDM E/R harness connector Termin 40	al No.	
heck the power supply and the ground circuit of the IPDM E/R. Refer to <u>PCS-23, "Diagnosis Procedure"</u> . the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to <u>PCS-48, "Removal and Installation"</u> . YES (Past error)>>Error was detected in the IPDM E/R branch line.	Check the resistance betw Connector No. E17 the measurement value with YES >> GO TO 3.	veen the IPDM E/R harne PDM E/R harness connector Termin 40 hin the specification?	al No.	
<u>the inspection result normal?</u> YES (Present error)>>Replace the IPDM E/R. Refer to <u>PCS-48, "Removal and Installation"</u> . YES (Past error)>>Error was detected in the IPDM E/R branch line.	Check the resistance betw Connector No. E17 the measurement value with YES >> GO TO 3. NO >> Repair the IPDM I	veen the IPDM E/R harne PDM E/R harness connector Termin 40 hin the specification? E/R branch line.	al No. 39	
YES (Past error)>>Error was detected in the IPDM E/R branch line.	Check the resistance betw Connector No. E17 the measurement value with YES >> GO TO 3. NO >> Repair the IPDM I CHECK POWER SUPPLY	veen the IPDM E/R harne PDM E/R harness connector Termin 40 hin the specification? E/R branch line. AND GROUND CIRCUIT	al No. 39	Approx. 108 – 132
	Check the resistance betw Connector No. E17 the measurement value with YES >> GO TO 3. NO >> Repair the IPDM I CHECK POWER SUPPLY heck the power supply and t	veen the IPDM E/R harne PDM E/R harness connector Termin 40 hin the specification? E/R branch line. AND GROUND CIRCUIT he ground circuit of the IP	al No. 39	Approx. 108 – 132
	Connector No. E17 the measurement value with YES >> GO TO 3. NO >> Repair the IPDM I CHECK POWER SUPPLY heck the power supply and t the inspection result normal YES (Present error)>>Replace	veen the IPDM E/R harne PDM E/R harness connector Termin 40 hin the specification? E/R branch line. AND GROUND CIRCUIT he ground circuit of the IP 2 ce the IPDM E/R. Refer to	al No. 39 2DM E/R. Refer to <u>PCS-2</u> 2 <u>PCS-48, "Removal and</u>	Approx. 108 – 132 3, "Diagnosis Procedure" .
	Connector No. E17 the measurement value with YES >> GO TO 3. NO >> Repair the IPDM I CHECK POWER SUPPLY heck the power supply and t the inspection result normal YES (Present error)>>Replace YES (Past error)>>Error was	veen the IPDM E/R harne PDM E/R harness connector Termin 40 hin the specification? E/R branch line. AND GROUND CIRCUIT he ground circuit of the IP 2 ce the IPDM E/R. Refer to detected in the IPDM E/F	al No. 39 PDM E/R. Refer to <u>PCS-2</u> 9 <u>PCS-48, "Removal and</u> R branch line.	Approx. 108 – 132 3, "Diagnosis Procedure" .
	Connector No. E17 the measurement value with YES >> GO TO 3. NO >> Repair the IPDM I CHECK POWER SUPPLY heck the power supply and t the inspection result normal YES (Present error)>>Replace YES (Past error)>>Error was	veen the IPDM E/R harne PDM E/R harness connector Termin 40 hin the specification? E/R branch line. AND GROUND CIRCUIT he ground circuit of the IP 2 ce the IPDM E/R. Refer to detected in the IPDM E/F	al No. 39 PDM E/R. Refer to <u>PCS-2</u> 9 <u>PCS-48, "Removal and</u> R branch line.	Approx. 108 – 132 3, "Diagnosis Procedure" .
	Connector No. E17 the measurement value with YES >> GO TO 3. NO >> Repair the IPDM I CHECK POWER SUPPLY heck the power supply and t the inspection result normal YES (Present error)>>Replace YES (Past error)>>Error was	veen the IPDM E/R harne PDM E/R harness connector Termin 40 hin the specification? E/R branch line. AND GROUND CIRCUIT he ground circuit of the IP 2 ce the IPDM E/R. Refer to detected in the IPDM E/F	al No. 39 PDM E/R. Refer to <u>PCS-2</u> 9 <u>PCS-48, "Removal and</u> R branch line.	Approx. 108 – 132 3, "Diagnosis Procedure" .

LAN

Ν

0

CAN COMMUNICATION CIRCUIT

Diagnosis Procedure

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.

	Continuity		
Connector No.	Termi	Continuity	
M22	6	6 14	

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 lin	Data link connector		Continuity
Connector No.	Terminal No.	Ground	Continuity
M22	6	Giouria	Not existed
10122	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)	
Termi	Terminal No.		
98	97	Approx. 108 – 132	

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

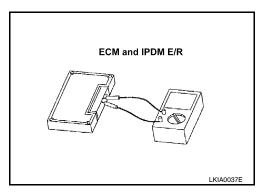
IPDM E/R		Resistance (Ω)	
Termi	Terminal No.		
40	39	Approx. 108 – 132	

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 8)]
Connect all the connectors. Check if the symptoms described in the "Sy customer)" are reproduced.	mptom (Results from interview with
Inspection result	
Reproduced>>GO TO 6. Non-reproduced>>Start the diagnosis again. Follow the trouble diagr detected.	osis procedure when past error is B
6.CHECK UNIT REPRODUCTION	
Perform the reproduction test as per the following procedure for each unit	C
 Turn the ignition switch OFF. Disconnect the battery cable from the negative terminal. Disconnect one of the unit connectors of CAN communication system NOTE: 	n. D
 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 sy (Results from interview with customer)" are reproduced. NOTE: 	-
Although unit-related error symptoms occur, do not confuse them with Inspection result	n other symptoms.
Reproduced>>Connect the connector. Check other units as per the abor Non-reproduced>>Replace the unit whose connector was disconnected	

Н

J

Κ

L

LAN

Ν

0

COMPONENT DIAGNOSIS MAIN LINE BETWEEN DLC AND ABS CIRCUIT

Diagnosis Procedure

INFOID:000000004203962

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.		Continuity	
M22	6	M1	15G	Existed	
IVIZZ	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		ectric unit (control unit) connector	Continuity	
Connector No.	Terminal No.	Connector No. Terminal No.			
E30	15G	E26	26	Existed	
E30	8G	E20	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 LIN	E CIRCUIT		
Diagnosis Procedure			INFOID:000000004471818
NSPECTION PROCEDUR	RE		
1. CHECK CONNECTOR			
	cable from the negative terr ninals and connectors for d nal?		nnection (unit side and con-
2.CHECK HARNESS FOR			
 Disconnect the connect Check the resistance be 	or of ECM. Stween the ECM harness co	onnector terminals.	
	ECM harness connector		Resistance (Ω)
Connector No.		nal No.	
E10 s the measurement value w	98	97	Approx. 108 – 132
YES >> GO TO 3. NO >> Repair the ECM CHECK POWER SUPPL Check the power supply and QR engine models for Cal QR engine models expect	Y AND GROUND CIRCUIT I the ground circuit of the E ifornia: <u>EC-144, "Diagnosis</u>	CM. Refer to the following. Procedure	
VQ engine models: <u>EC-11</u>		agnosis Procedure	
TROL UNIT : • QR engine mo <u>CONTROL UI</u> • VQ engine mo	lace the ECM. Refer to the odels for California: <u>EC-27</u> <u>Special Repair Requiremer</u> odels except for California: NIT : Special Repair Requir	, <u>"ADDITIONAL SERVICE</u> 1 <u>t"</u> EC-563, "ADDITIONAL SE ement <u>"</u>	WHEN REPLACING CON- RVICE WHEN REPLACING PLACING CONTROL UNIT :
YES (Past error)>>Error w			

0

A-BAG BRANCH LINE CIRCUIT

Diagnosis Procedure

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 >

BCM BRANCH LINE	ECIRCUIT		
Diagnosis Procedure			INFOID:00000004203965
INSPECTION PROCEDUR	E		
1.CHECK CONNECTOR			
	able from the negative terr	ninal. or damage, bend and loose	e connection (unit side and
Is the inspection result norm YES >> GO TO 2. NO >> Repair the termi	nal and connector.		
2.CHECK HARNESS FOR 1. Disconnect the connector			
	tween the BCM harness co	onnector terminals.	
	BCM harness connector		Resistance (O)
Connector No.		nal No.	Resistance (Ω)
M19	Termir 79	nal No. 78	Resistance (Ω) Approx. 54 – 66
	Termir 79 ithin the specification? branch line.	78	
M19 <u>Is the measurement value w</u> YES >> GO TO 3. NO >> Repair the BCM 3. CHECK POWER SUPPLY Check the power supply and	Termir 79 ithin the specification? branch line. Y AND GROUND CIRCUIT the ground circuit of the B	78	Approx. 54 – 66
M19 Is the measurement value w YES >> GO TO 3. NO >> Repair the BCM 3.CHECK POWER SUPPL Check the power supply and Is the inspection result norm YES (Present error)>>Repl YES (Past error)>>Error wa	Termir 79 ithin the specification? branch line. Y AND GROUND CIRCUIT the ground circuit of the B al? ace the BCM. Refer to BCS	78 CM. Refer to <u>BCS-42, "Diac S-96, "Removal and Installa</u> inch line.	Approx. 54 – 66

LAN

Ν

0

DLC BRANCH LINE CIRCUIT

Diagnosis Procedure

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.

	Resistance (Ω)		
Connector No.	Termi		
M22	6 14		Approx. 54 – 66

Is the measurement value within the specification?

YES (Present error)>>Check 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.

1&A BRANCH LINE (CIRCUIT			
Diagnosis Procedure			INFOID:000000004471820	
SPECTION PROCEDURE				
.CHECK CONNECTOR				
 Turn the ignition switch OFI Disconnect the battery cabl Check the terminals and c (unit side and connector side) 	e from the negative termin onnectors of the combinat		, bend and loose connection	
the inspection result normal? YES >> GO TO 2. NO >> Repair the terminal CHECK HARNESS FOR OP	and connector.			
Disconnect the connector o Check the resistance betwe		harness connector ter	minals.	
	nbination meter harness connector		Resistance (Ω)	
Connector No. M24	Terminal N 21	NO. 22	Approx. 54 – 66	
the measurement value within				
YES >> GO TO 3. NO >> Repair the combina CHECK POWER SUPPLY A	tion meter branch line.			
IETER : Diagnosis Procedure" the inspection result normal? YES (Present error)>>Replace	the combination meter. R	efer to <u>MWI-176, "Ren</u>	to <u>MWI-43, "COMBINATION</u>	
IETER : Diagnosis Procedure" the inspection result normal? YES (Present error)>>Replace YES (Past error)>>Error was c	the combination meter. R	efer to <u>MWI-176, "Ren</u> n meter branch line.		

LAN

Ν

0

STRG BRANCH LINE CIRCUIT

Diagnosis Procedure

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 <u>BRC-207, "Wiring Dia-gram - Coupe"</u> or <u>BRC-215, "Wiring Diagram - Sedan"</u>.

Is it normal?

YES (Present error)>>Replace the steering angle sensor. Refer to BRC-242, "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.

INFOID:000000004203968

[CAN SYSTEM (TYPE 9)]

	[CAN SYSTEM (TYPE 9)]
S BRANCH LINE CIRCUIT	
gnosis Procedure	INFOID:00000004203969
PECTION PROCEDURE	
HECK CONNECTOR	
Turn the ignition switch OFF. Disconnect the battery cable from the negative terminal. Check the terminals and connectors of the ABS actuator and electric unit and loose connection (unit side and connector side). <u>e inspection result normal?</u> S >> GO TO 2. >> Repair the terminal and connector. CHECK HARNESS FOR OPEN CIRCUIT Disconnect the connector of ABS actuator and electric unit (control unit). Check the resistance between the ABS actuator and electric unit (control unit). Check the resistance between the ABS actuator and electric unit (control unit).	
ABS actuator and electric unit (control unit) harness connector	
Connector No. Terminal No.	Resistance (Ω)
E26 26 15	Approx. 54 – 66
S >> GO TO 3. >> Repair the ABS actuator and electric unit (control unit) branch line HECK POWER SUPPLY AND GROUND CIRCUIT	
ck the power supply and the ground circuit of the ABS actuator and electric wing. odels with ABS: <u>BRC-41, "Wiring Diagram - Coupe"</u> or <u>BRC-46, "Wiring Di</u> odels with TCS: <u>BRC-109, "Wiring Diagram - Coupe"</u> or <u>BRC-115, "Wiring</u> odels with VDC: <u>BRC-207, "Wiring Diagram - Coupe"</u> or <u>BRC-215, "Wiring</u> e inspection result normal?	<u>agram - Sedan"</u> Diagram - Sedan"
wing. odels with ABS: <u>BRC-41, "Wiring Diagram - Coupe"</u> or <u>BRC-46, "Wiring Di</u> odels with TCS: <u>BRC-109, "Wiring Diagram - Coupe"</u> or <u>BRC-115, "Wiring</u>	<u>agram - Sedan"</u> <u>Diagram - Sedan"</u> Diagram - Sedan"

IPDM-E BRANCH LINE CIRCUIT

Diagnosis Procedure

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.

 $\mathbf{3}$. Check power supply and ground circuit

Check the power supply and the ground circuit of the IPDM E/R. Refer to <u>PCS-23, "Diagnosis Procedure"</u>.

Is the inspection result normal?

YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "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.

LAN-144

COMPONENT DIAGNO	SIS >		[CAN SYSTEM (TYPE 9
CAN COMMUNICA	TION CIRCUIT		
Diagnosis Procedure			INFOID:000000004203
SPECTION PROCEDU	RF		
CONNECTOR INSPEC			
. Turn the ignition switch			
Disconnect all the unit	cable from the negative ter connectors on CAN commu	inication system.	
 Check terminals and cost s the inspection result norr 	onnectors for damage, benc nal?		
YES >> GO TO 2.			
	ninal and connector.		
	NTINUITY (SHORT CIRCU		
Check the continuity betwe	en the data link connector t	erminals.	
	Data link connector		Continuity
Connector No.		nal No.	
M22 s the inspection result norr	6	14	Not existed
•	NESS and repair the root cau		
CHECK HARNESS CON Check the continuity betwe	NTINUITY (SHORT CIRCUI en the data link connector a	IT)	
CHECK HARNESS CON Check the continuity betwe	NTINUITY (SHORT CIRCUI en the data link connector a	IT)	Continuity
CHECK HARNESS CON Check the continuity betwe Data link Connector No.	NTINUITY (SHORT CIRCUI en the data link connector a	IT)	Continuity Not existed
CHECK HARNESS CON Check the continuity betwe Data link Connector No. M22	NTINUITY (SHORT CIRCUI en the data link connector a connector Terminal No. 6 14	IT) and the ground.	
CHECK HARNESS CON Check the continuity betwe Data link Connector No. M22 Sthe inspection result norr YES >> GO TO 4. NO >> Check the harr CHECK ECM AND IPDM . Remove the ECM and	NTINUITY (SHORT CIRCU en the data link connector a connector Terminal No. 6 14 nal? ness and repair the root cau M E/R TERMINATION CIRC	IT) and the ground. Ground Ise. CUIT	Not existed
CHECK HARNESS CON Check the continuity betwe Data link Connector No. M22 So the inspection result norr YES >> GO TO 4. NO >> Check the harr CHECK ECM AND IPDM CHECK ECM AND IPDM CHECK the resistance b ECM	NTINUITY (SHORT CIRCUI en the data link connector a connector Terminal No. 6 14 nal? ness and repair the root cau M E/R TERMINATION CIRC the IPDM E/R.	IT) and the ground. Ground ISE. CUIT	Not existed
CHECK HARNESS CON Check the continuity betwe Data link Connector No. M22 Sthe inspection result norr YES >> GO TO 4. NO >> Check the harr CHECK ECM AND IPDM CHECK ECM AND IPDM CHECK the resistance b ECM Terminal No.	NTINUITY (SHORT CIRCUI en the data link connector a connector Terminal No. 6 14 nal? ness and repair the root cau M E/R TERMINATION CIRC the IPDM E/R. etween the ECM terminals.	IT) and the ground. Ground Ise. CUIT	Not existed Not existed
CHECK HARNESS CON Check the continuity betwe Data link Connector No. M22 So the inspection result norre YES >> GO TO 4. NO >> Check the harre CHECK ECM AND IPDM CHECK ECM AND IPDM CHECK the resistance b ECM Terminal No. 98	NTINUITY (SHORT CIRCUI en the data link connector a connector Terminal No. 6 14 nal? ness and repair the root cau M E/R TERMINATION CIRC the IPDM E/R. etween the ECM terminals.	IT) and the ground. Ground se. CUIT	Not existed Not existed
CHECK HARNESS CON Check the continuity betwe Data link Connector No. M22 So the inspection result norre YES >> GO TO 4. NO >> Check the harre CHECK ECM AND IPDM CHECK ECM AND IPDM CHECK the resistance b ECM Terminal No. 98	NTINUITY (SHORT CIRCUI en the data link connector a connector Terminal No. 6 14 nal? ness and repair the root cau M E/R TERMINATION CIRC the IPDM E/R. etween the ECM terminals. Resistance (97 Approx. 108 – etween the IPDM E/R termi	IT) and the ground. Ground Ise. CUIT	Not existed Not existed
CHECK HARNESS CON Check the continuity betwe Data link Connector No. M22 Sthe inspection result norr YES >> GO TO 4. NO >> Check the harr CHECK ECM AND IPDM CHECK ECM AND IPDM CHECK ECM AND IPDM CHECK the resistance b ECM Terminal No. 98 Check the resistance b	NTINUITY (SHORT CIRCUI en the data link connector a connector Terminal No. 6 14 nal? ness and repair the root cau M E/R TERMINATION CIRC the IPDM E/R. etween the ECM terminals. Resistance (s 97 Approx. 108 –	IT) and the ground. Ground Ise. CUIT I32 inals.	Not existed Not existed

5. СНЕСК ЗУМРТОМ

CAN COMMUNICATION CIRCUIT

< 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.

 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.

	NT DIAGNO			
1AIN LINE BE	TWEEN DLC A	ND ABS CIRCU	JIT	
iagnosis Proced	dure			INFOID:000000004203972
SPECTION PROC	EDURE			
.CHECK CONNEC	TOR			
Check the following and harness side Harness connected Harness connected the inspection result of the inspection res	attery cable from the nang terminals and com). or M1 or E30 <u>t normal?</u>	nectors for damage, k tor. N CIRCUIT) and E30.		ection (connector side
Data lini	connector	Harness	connector	
Data link Connector No.	c connector Terminal No.	Harness of Connector No.	connector Terminal No.	Continuity
Connector No.		Connector No.		Continuity
Connector No. M22 the inspection resul YES >> GO TO 3	Terminal No. 6 14 t normal?	Connector No. M1	Terminal No. 15G 8G	Existed
Connector No. M22 the inspection result YES >> GO TO 3 NO >> Repair the CHECK HARNESS Disconnect the co. Check the continu- harness connector	Terminal No. 6 14 t normal? e main line between the S CONTINUITY (OPEN onnector of ABS actuation wity between the harned or.	Connector No. M1 e data link connector a N CIRCUIT) tor and electric unit (co ess connector and the	Terminal No. 15G 8G and the harness conno ontrol unit).	Existed
Connector No. M22 the inspection result YES >> GO TO 3 NO >> Repair the CHECK HARNESS Disconnect the co Check the continu- harness connector Harness	Terminal No. 6 14 t normal? e main line between th S CONTINUITY (OPEN onnector of ABS actuation wity between the harned or.	Connector No. M1 e data link connector a N CIRCUIT) tor and electric unit (co ess connector and the ABS actuator and ele harness co	Terminal No. 15G 8G and the harness conn- ontrol unit). ABS actuator and ele ctric unit (control unit) connector	Existed Existed ector M1.
Connector No. M22 the inspection result YES >> GO TO 3 NO >> Repair the CHECK HARNESS Disconnect the co. Check the continu- harness connector	Terminal No. 6 14 t normal? e main line between the S CONTINUITY (OPEN onnector of ABS actuation wity between the harned or.	Connector No. M1 e data link connector a N CIRCUIT) tor and electric unit (co ess connector and the ABS actuator and ele	Terminal No. 15G 8G and the harness conn- ontrol unit). ABS actuator and ele	Existed Existed ector M1.

INFOID:000000004471821

ECM BRANCH LINE CIRCUIT

Diagnosis Procedure

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		
Connector No.	Terminal No.		Resistance (Ω)
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 expect for California: EC-673, "Diagnosis Procedure"
- VQ engine models: EC-1175, "Diagnosis Procedure"

Is the inspection result normal?

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

- QR engine models for California: <u>EC-27</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CON-</u> <u>TROL UNIT</u>: <u>Special Repair Requirement</u>"
- QR engine models except for California: <u>EC-563</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"
- VQ engine models: <u>EC-1051</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : <u>Special Repair Requirement</u>"

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

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

< COMPONENT DIAGNOSIS > A-BAG BRANCH LINE CIRCUIT А **Diagnosis** Procedure INFOID:000000004203974 1. CHECK AIR BAG DIAGNOSIS SENSOR UNIT В Check the air bag diagnosis sensor unit. Refer to SRC-3, "Work Flow". Is the inspection result normal? С YES >> Replace the main harness. NO >> Replace parts whose air bag system has a malfunction. D Е F G Н J Κ L LAN Ν Ο Ρ

AV BRANCH LINE CIRCUIT

Diagnosis Procedure

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		
Connector No.	Terminal No.		Resistance (Ω)
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.

 $\mathbf{3}$. Check power supply and ground circuit

Check the power supply and the ground circuit of the AV control unit. Refer to <u>AV-315, "AV CONTROL UNIT :</u> <u>Diagnosis Procedure"</u>.

Is the inspection result normal?

YES (Present error)>>Replace the AV control unit. Refer to AV-437, "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 >

BCM BRANCH LINI	E CIRCUIT		
Diagnosis Procedure			INFCID:00000004203976
INSPECTION PROCEDUR	E		
1.CHECK CONNECTOR			
	able from the negative term		e connection (unit side and
Is the inspection result norm YES >> GO TO 2. NO >> Repair the termin	nal and connector.		
2.CHECK HARNESS FOR 1. Disconnect the connect	or of BCM.		
2. Check the resistance be	tween the BCM harness co	nnector terminals.	
	BCM harness connector		Resistance (Ω)
Connector No.	Termina	al No.	
M19	79	78	Approx. 54 – 66
Is the measurement value w YES >> GO TO 3.			
NO >> Repair the BCM 3.CHECK POWER SUPPL			
3.CHECK POWER SUPPL	Y AND GROUND CIRCUIT	CM. Refer to <u>BCS-42, "Dia</u>	gnosis Procedure".
3.CHECK POWER SUPPL Check the power supply and Is the inspection result norm YES (Present error)>>Rep YES (Past error)>>Error wa	Y AND GROUND CIRCUIT	<u>-96, "Removal and Install</u>	

LAN

Ν

0

5>

DLC BRANCH LINE CIRCUIT

Diagnosis Procedure

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 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.

/I&A BRANCH LINE			<u> </u>
Diagnosis Procedure			INFOID:000000004471822
•	-		
SPECTION PROCEDUR	E		
.CHECK CONNECTOR			
	able from the negative terr d connectors of the combi		, bend and loose connection
the inspection result norm	,		
YES >> GO TO 2.			
NO >> Repair the termi			
CHECK HARNESS FOR			
Disconnect the connectCheck the resistance be	or of combination meter. tween the combination me	ter harness connector ter	minals.
Co	mbination meter harness connect	tor	Resistance (Ω)
Connector No.	Termir	nal No.	
M24	21	22	Approx. 54 – 66
the measurement value w YES >> GO TO 3. NO >> Repair the comb CHECK POWER SUPPL	bination meter branch line.	r	
heck the power supply and IETER : Diagnosis Procedu the inspection result norm	<u>ire"</u> .	combination meter. Refer	to <u>MWI-43, "COMBINATION</u>
•			
YES (Past error)>>Error wa	as detected in the combina	tion meter branch line.	noval and Installation".
YES (Present error)>>Rep YES (Past error)>>Error wa NO >> Repair the powe		tion meter branch line.	noval and Installation".

LAN

Ν

0

Ρ

STRG BRANCH LINE CIRCUIT

Diagnosis Procedure

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.

Ste	Steering angle sensor harness connector		
Connector No.	Terminal No.		Resistance (Ω)
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 <u>BRC-207, "Wiring Dia-gram - Coupe"</u> or <u>BRC-215, "Wiring Diagram - Sedan"</u>.

Is it normal?

YES (Present error)>>Replace the steering angle sensor. Refer to BRC-242, "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.

LAN-154

< COMPONENT DIAGNOS	sis >	[CAN SYSTEM (TYPE 10)]
ABS BRANCH LINE	CIRCUIT		
Diagnosis Procedure			INFOID:000000004203980
INSPECTION PROCEDUR	E		
1.CHECK CONNECTOR			
 Check the terminals and and loose connection (units the inspection result normal YES >> GO TO 2. NO >> Repair the termination of term	able from the negative terr l connectors of the ABS ac nit side and connector side <u>al?</u> nal and connector. OPEN CIRCUIT or of ABS actuator and elec	etuator and electric unit (co	ontrol unit) for damage, bend
	nd electric unit (control unit) harr	ness connector	
Connector No.	Termir		Resistance (Ω)
E26	26	15	Approx. 54 – 66
3.CHECK POWER SUPPLY Check the power supply and following. • Models with ABS: <u>BRC-41</u> . • Models with TCS: <u>BRC-109</u> . • Models with VDC: <u>BRC-200</u> Is the inspection result normative YES (Present error)>>Repl. • Models with A	actuator and electric unit (Y AND GROUND CIRCUIT the ground circuit of the A "Wiring Diagram - Coupe" 9, "Wiring Diagram - Coupe 7, "Wiring Diagram - Coupe 7, "Wiring Diagram - Coupe 8, "Wiring Diagram - Coupe 8, "Wiring Diagram - Coupe 8, "Wiring Diagram - Coupe 8, "Wiring Diagram - Coupe 1, "Wiring Diagram - Coupe 1, "Wiring Diagram - Coupe 2, "Wiring Diagram - Coupe 2, "Wiring Diagram - Coupe 3, "Wiring Diagram - Coupe 2, "Wiring Diagram - Coupe 3, "Wiring Diagram - Coupe 3, "Wiring Diagram - Coupe 3, "Wiring Diagram - Coupe 4, "Wiring Diagram - Coupe 4, "Wiring Diagram - Coupe 4, "Wiring Diagram - Coupe 5, "Wiring Diagram - Coupe 5, "Wiring Diagram - Coupe 6, "Wiring Diagram - Coupe 7, "Wiring Diagram - Coupe	BS actuator and electric u or <u>BRC-46, "Wiring Diagr</u> or <u>BRC-115, "Wiring Dia</u> e" or <u>BRC-215, "Wiring Dia</u> electric unit (control unit).	r <u>am - Sedan"</u> agram - Sedan" agram - Sedan"
 Models with VI YES (Past error)>>Error wat 	CS: <u>BRC-137, "Exploded V</u> DC: <u>BRC-239, "Exploded V</u> as detected in the ABS actu r supply and the ground cir	/iew" Jator and electric unit (con	trol unit) branch line.

Ο

Ρ

IPDM-E BRANCH LINE CIRCUIT

Diagnosis Procedure

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		
Connector No.	Terminal No.		Resistance (Ω)
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.

 $\mathbf{3}$. Check power supply and ground circuit

Check the power supply and the ground circuit of the IPDM E/R. Refer to PCS-23, "Diagnosis Procedure".

Is the inspection result normal?

YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "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.

LAN-156

	313 -		· · · · · · · · · · · · · · · · · · ·
AN COMMUNICA	TION CIRCUIT		
agnosis Procedure			INFOID:0000000042
.CONNECTOR INSPECT			
 Disconnect all the unit of 	cable from the negative term connectors on CAN commun onnectors for damage, bend	nication system.	
	ninal and connector.		
· ·	NTINUITY (SHORT CIRCUIT	-)	
	en the data link connector te		
	Data link connector		Continuity
Connector No.	Termina	al No.	Continuity
M22 s the inspection result norm	6	14	Not existed
	ess and repair the root caus NTINUITY (SHORT CIRCUIT		
CHECK HARNESS CON	NTINUITY (SHORT CIRCUIT en the data link connector ar	-)	
CHECK HARNESS CON	NTINUITY (SHORT CIRCUIT en the data link connector ar	-)	Continuity
CHECK HARNESS CON heck the continuity betwee Data link Connector No.	NTINUITY (SHORT CIRCUIT en the data link connector ar	-)	Continuity
CHECK HARNESS CON heck the continuity betwee	NTINUITY (SHORT CIRCUIT en the data link connector ar connector Terminal No.) nd the ground.	
CHECK HARNESS CON heck the continuity between Data link Connector No. M22 the inspection result norm	NTINUITY (SHORT CIRCUIT en the data link connector ar connector Terminal No. 6 14) nd the ground.	Not existed
CHECK HARNESS CON heck the continuity between Data link Connector No. M22 the inspection result norm YES >> GO TO 4. NO >> Check the harn	NTINUITY (SHORT CIRCUIT en the data link connector an connector Terminal No. 6 14 nal?	-) nd the ground. Ground e.	Not existed
CHECK HARNESS CON heck the continuity between Data link Connector No. M22 the inspection result norm YES >> GO TO 4. NO >> Check the harn CHECK ECM AND IPDN Remove the ECM and the total sectors.	NTINUITY (SHORT CIRCUIT en the data link connector ar connector Terminal No. 6 14 nal? ness and repair the root caus A E/R TERMINATION CIRCU	-) nd the ground. Ground e.	Not existed
CHECK HARNESS CON Check the continuity between Data link Connector No. M22 So the inspection result norm YES >> GO TO 4. NO >> Check the harm CHECK ECM AND IPDM CHECK ECM AND IPDM CHECK the resistance be ECM	NTINUITY (SHORT CIRCUIT en the data link connector ar connector Terminal No. 6 14 nal? Ness and repair the root caus A E/R TERMINATION CIRCU the IPDM E/R.	T) Ind the ground. Ground e. JIT	Not existed
CHECK HARNESS CON check the continuity between Data link Connector No. M22 Sthe inspection result norm YES >> GO TO 4. NO >> Check the harm CHECK ECM AND IPDM CHECK ECM AND IPDM CHECK the resistance be ECM Terminal No.	NTINUITY (SHORT CIRCUIT en the data link connector ar connector Terminal No. 6 14 nal? ess and repair the root caus A E/R TERMINATION CIRCU the IPDM E/R. etween the ECM terminals. Resistance (Ω)	-) nd the ground. Ground e. JIT	Not existed Not existed
CHECK HARNESS CON heck the continuity between Data link Connector No. M22 the inspection result norm YES >> GO TO 4. NO >> Check the harm CHECK ECM AND IPDM Remove the ECM and the Check the resistance between ECM Terminal No. 98	NTINUITY (SHORT CIRCUIT en the data link connector ar a connector Terminal No. 6 14 nal? ress and repair the root caus // E/R TERMINATION CIRCU the IPDM E/R. etween the ECM terminals. Resistance (Ω) 97 Approx. 108 – 13	T) Ind the ground. Ground e. JIT 32	Not existed Not existed
CHECK HARNESS CON Check the continuity between Data link Connector No. M22 Sthe inspection result norm YES >> GO TO 4. NO >> Check the harm CHECK ECM AND IPDM CHECK ECM AND IPDM CHECK the resistance be ECM Terminal No. 98	NTINUITY (SHORT CIRCUIT en the data link connector ar connector Terminal No. 6 14 nal? ess and repair the root caus A E/R TERMINATION CIRCU the IPDM E/R. etween the ECM terminals. Resistance (Ω)	T) Ind the ground. Ground e. JIT 32	Not existed Not existed
CHECK HARNESS CON Check the continuity between Data link Connector No. M22 So the inspection result norm YES >> GO TO 4. NO >> Check the harm CHECK ECM AND IPDM CHECK ECM AND IPDM CHECK the resistance between ECM Terminal No. 98	NTINUITY (SHORT CIRCUIT en the data link connector and connector acconnector Terminal No. 6 14 nal? bess and repair the root caus A E/R TERMINATION CIRCU the IPDM E/R. etween the ECM terminals. 97 Approx. 108 – 13 etween the IPDM E/R termin	C) nd the ground. Ground e. JIT 0 32 nals.	Not existed Not existed
CHECK HARNESS CON Check the continuity between Data link Connector No. M22 S the inspection result norm YES >> GO TO 4. NO >> Check the harm CHECK ECM AND IPDM CHECK ECM AND IPDM CHECK the resistance be ECM Terminal No. 98 Check the resistance be IPDM E/R Terminal No.	NTINUITY (SHORT CIRCUIT en the data link connector ar a connector Terminal No. 6 14 nal? ress and repair the root caus // E/R TERMINATION CIRCU the IPDM E/R. etween the ECM terminals. Resistance (Ω) 97 Approx. 108 – 13	Ground Ground e. JIT	Not existed Not existed

5. CHECK SYMPTOM

< COMPONENT DIAGNOSIS >

LAN-157

CAN COMMUNICATION CIRCUIT

< 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.

 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.

	SNOSIS > NT DIAGNO	SIS	-	
		ND ABS CIRCU	ит	
	_		11	
iagnosis Proced	ure			INFOID:000000004203983
ISPECTION PROCE				
.CHECK CONNECT	OR			
Check the followir and harness side) Harness connecto Harness connecto the inspection result YES >> GO TO 2. NO >> Repair the CHECK HARNESS Disconnect the ha	ttery cable from the ne ng terminals and conr r M1 r E30 <u>normal?</u> terminal and connect CONTINUITY (OPEN rness connectors M1	nectors for damage, b or. I CIRCUIT)		ection (connector side
	-			
Connector No.	connector Terminal No.	Harness c Connector No.	Terminal No.	Continuity
Connector No.	6	Connector No.	15G	Existed
M22	14	M1	8G	Existed
CHECK HARNESS	CONTINUITY (OPEN nnector of ABS actuat ity between the harne	or and electric unit (co	ontrol unit).	ector M1.
	connector	ABS actuator and elect harness c		Continuity
		Connector No.	Terminal No.	
	Terminal No.		26	Existed
Harness Connector No.	Terminal No. 15G	E26	20	
Harness	15G 8G	E26 -	15	Existed

INFOID:000000004471823

ECM BRANCH LINE CIRCUIT

Diagnosis Procedure

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			
Connector No.	Termir	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 expect for California: EC-673, "Diagnosis Procedure"
- VQ engine models: EC-1175, "Diagnosis Procedure"

Is the inspection result normal?

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

- QR engine models for California: <u>EC-27</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CON-</u> <u>TROL UNIT</u>: <u>Special Repair Requirement</u>"
- QR engine models except for California: <u>EC-563</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"
- VQ engine models: <u>EC-1051</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : <u>Special Repair Requirement</u>"

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

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

< COMPONENT DIAGNOSIS > A-BAG BRANCH LINE CIRCUIT А **Diagnosis** Procedure INFOID:000000004203985 1. CHECK AIR BAG DIAGNOSIS SENSOR UNIT В Check the air bag diagnosis sensor unit. Refer to SRC-3, "Work Flow". Is the inspection result normal? С YES >> Replace the main harness. NO >> Replace parts whose air bag system has a malfunction. D Е F G Н J Κ L LAN Ν Ο Ρ

INFOID:000000004203986

BCM BRANCH LINE CIRCUIT

Diagnosis Procedure

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		
Connector No.	Termi	Resistance (Ω)	
M19	79	78	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the BCM branch line.

 $\mathbf{3}$. Check power supply and ground circuit

Check the power supply and the ground circuit of the BCM. Refer to BCS-42, "Diagnosis Procedure".

Is the inspection result normal?

YES (Present error)>>Replace the BCM. Refer to BCS-96, "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 DIAGNOS	SIS >	[CAN SYSTEM (TYPE 11)
LC BRANCH LINE	ECIRCUIT		
agnosis Procedure			INFOID:0000000042039
SPECTION PROCEDUR	RE		
CHECK CONNECTOR			
Check the terminals an (connector side and har the inspection result norm (ES >> GO TO 2. IO >> Repair the term CHECK HARNESS FOR	cable from the negative ter d connectors of the data ness side). <u>nal?</u> inal and connector.	ink connector for damage,	bend and loose connection
	Data link connector		1
Connector No.		inal No.	Resistance (Ω)
M22 the measurement value w 'ES (Present error)>>Che	6 <u>/ithin the specification?</u> ck CAN system type decis	14 ion again.	Approx. 54 – 66
M22 the measurement value w 'ES (Present error)>>Che 'ES (Past error)>>Error w	6 <u>/ithin the specification?</u> ck CAN system type decis	14 ion again. c connector branch line circu	

M&A BRANCH LINE CIRCUIT

Diagnosis Procedure

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.

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

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the combination meter branch line.

 $\mathbf{3}$. Check power supply and ground circuit

Check the power supply and the ground circuit of the combination meter. Refer to <u>MWI-43, "COMBINATION</u> <u>METER : Diagnosis Procedure"</u>.

Is the inspection result normal?

YES (Present error)>>Replace the combination meter. Refer to MWI-176, "Removal and Installation".

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

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

iagnosis Procedure	_		INFOID:00000000420398
SPECTION PROCEDURE .CHECK CONNECTOR	=		
Turn the ignition switch C Disconnect the battery ca Check the terminals and (unit side and connectors)	able from the negative terr connectors of the steering		bend and loose connection
the inspection result norma (ES >> GO TO 2. NO >> Repair the termin			
.CHECK HARNESS FOR (
Check the resistance bet		ensor harness connector te	uluu.
	ing angle sensor harness conne		Resistance (Ω)
Connector No. M53	Termin 5	ector nal No. 2	Resistance (Ω) Approx. 54 – 66
Connector No. M53 the measurement value wit YES >> GO TO 3.	Termin 5 hin the specification? ng angle sensor branch lir	nal No. 2 ne.	

LAN

Ν

0

ABS BRANCH LINE CIRCUIT

[CAN SYSTEM (TYPE 11)]

INFOID:000000004203990

Diagnosis Procedure

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).
- 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.	Termi	nal 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: <u>BRC-41</u>, "Wiring Diagram - Coupe" or <u>BRC-46</u>, "Wiring Diagram - Sedan"

- Models with TCS: <u>BRC-109</u>, "Wiring Diagram Coupe" or <u>BRC-115</u>, "Wiring Diagram Sedan"
- Models with VDC: <u>BRC-207, "Wiring Diagram Coupe"</u> or <u>BRC-215, "Wiring Diagram Sedan"</u>

Is the inspection result normal?

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

- Models with ABS: <u>BRC-66</u>, "Exploded View"
- Models with TCS: <u>BRC-137</u>, "Exploded View"
- Models with VDC: <u>BRC-239</u>, "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.

 Turn the ignition switch OFF. Disconnect the battery cable from the negative terminal. Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side). TCM Harness connector F1 Harness connector E3 <u>s the inspection result normal?</u> YES >> GO TO 2. NO >> Repair the terminal and connector. 2.CHECK HARNESS FOR OPEN CIRCUIT Disconnect the connector of TCM. 	Diagnosis Procedure			INFOID:00000004203991
Turn the ignition switch OFF. Disconnect the battery cable from the negative terminal. Ocheck the following terminals and connectors for damage, bend and loose connection (unit side and connector side). TCM Harness connector F1 Harness connector E3 s the inspection result normal? YES >> GO TO 2. NO >> Repair the terminal and connector. 2.CHECK HARNESS FOR OPEN CIRCUIT I. 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 s the measurement value within the specification? YES >> GO TO 3. Resistance (Ω) QR25DE models: TM-380. "Wiring Diagram - CVT CONTROL SYSTEM - Coupe" or TM-389. "Wiring Diagram - CVT CONTROL SYSTEM - Sedan" YWiring Diagram - CVT CONTROL SYSTEM - Sedan" YQ35DE models: TM-380. "Exploded View" YWiring Diagram - CVT CONTROL SYSTEM - Sedan" YWiring Diagram - CVT CONTROL SYSTEM - Sedan" YES (Present error)>>Replace the TCM. Refer to the following. • QR25DE models: TM-320. "Exploded View" • QR35DE models: TM-320. "Exploded View" YES (Present error)>>Replace the TCM. Refer to th	INSPECTION PROCEDUF	RE		
2. Disconne ^T 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 F3 s 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 s the measurement value within the specification? YES >> GO TO 3. NO >> Repair the TCM branch line. 2. CHECK POWER SUPPLY AND GROUND CIRCUIT Check the power supply and the ground circuit of the TCM. Refer to the following. QR25DE models: TM-380. "Wiring Diagram – CVT CONTROL SYSTEM - Coupe" or TM-389. "Wiring Diagram – CVT CONTROL SYSTEM – Sedan" Y035DE models: TM-202. "Wiring Diagram – CVT CONTROL SYSTEM – Coupe" or TM-211, "Wiring Diagram – CVT CONTROL SYSTEM – Sedan" Y035DE models: TM-430, "Exploded View" YES (Present error)>>Replace the TCM. Refer to the following. • QR25DE models: TM-430, "Exploded View" YES (Present error	1.CHECK CONNECTOR			
YES >> GO TO 2. NO >> Repair the terminal and connector. 2.CHECK HARNESS FOR OPEN CIRCUIT I. Disconnect the connector of TCM. 2. Check the resistance between the TCM harness connector terminals. Image: Connector No. F16 32 31 Approx. 54 - 66 s 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-380. "Wiring Diagram - CVT CONTROL SYSTEM - Coupe" or TM-389. "Wiring DiagramCVT CONTROL SYSTEM - Sedan" VQ35DE models: TM-202, "Wiring DiagramCVT CONTROL SYSTEM - Coupe" or TM-211. "Wiring DiagramCVT CONTROL SYSTEMSedan" YES (Present error)>>Replace the TCM. Refer to the following. • QR25DE models: TM-430. "Exploded View" • VQ35DE models: TM-430. "Exploded View" • VQ35	 Disconnect the battery of 3. Check the following term nector side). TCM Harness connector F1 Harness connector E3 	cable from the negative ter ninals and connectors for o		nnection (unit side and con-
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. Image: Connector No. Terminal No. F16 32 31 Approx. 54 - 66 s 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-380. "Wiring Diagram - CVT CONTROL SYSTEM - Coupe" or TM-389. "Wiring Diagram - CVT CONTROL SYSTEM - Sedan" VQ35DE models: TM-202. "Wiring Diagram—CVT CONTROL SYSTEM—Coupe" or TM-211. "Wiring Diagram—CVT CONTROL SYSTEM—Sedan" s the inspection result normal? YES (Present error)>>Replace the TCM. Refer to the following. • QR25DE models: TM-420. "Exploded View" • VQ35DE models: TM-430. "Exploded View" YES (Past error)>>Error was detected in the TCM branch line.		al?		
1. Disconnect the connector of TCM. 2. Check the resistance between the TCM harness connector terminals. Image: Connector No. Terminal No. F16 32 31 Approx. 54 – 66 s 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: IM-380. "Wiring Diagram - CVT CONTROL SYSTEM - Coupe" or IM-389. "Wiring Diagram - CVT CONTROL SYSTEM - Sedan" YQ35DE models: IM-202. "Wiring Diagram—CVT CONTROL SYSTEM—Coupe" or TM-211. "Wiring Diagram—CVT CONTROL SYSTEM—Sedan" YES (Present error)>>Replace the TCM. Refer to the following. • QR25DE models: IM-430. "Exploded View" YES (Past error)>>Replace the TCM. Refer to the following. • QR25DE models: IM-430. "Exploded View" * VQ35DE models: IM-430. "Exploded View" • VQ35DE models: IM-430. "Exploded View"	NO >> Repair the termi			
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 s the measurement value within the specification? YES >> GO TO 3. NO >> Repair the TCM branch line. S.CHECK POWER SUPPLY AND GROUND CIRCUIT Check the power supply and the ground circuit of the TCM. Refer to the following. QR25DE models: TM-380, "Wiring Diagram - CVT CONTROL SYSTEM - Coupe" or TM-389, "Wiring Diagram - CVT CONTROL SYSTEM - Coupe" or TM-389, "Wiring Diagram - CVT CONTROL SYSTEM - Coupe" or TM-211, "Wiring Diagram - CVT CONTROL SYSTEM - Coupe" or TM-211, "Wiring Diagram - CVT CONTROL SYSTEM - Coupe" or TM-211, "Wiring Diagram - CVT CONTROL SYSTEM - Sedan" VQ35DE models: TM-202, "Wiring Diagram - CVT CONTROL SYSTEM - Coupe" or TM-211, "Wiring Diagram - CVT CONTROL SYSTEM - Sedan" YES (Present error)>>Replace the TCM. Refer to the following. • QR25DE models: TM-430, "Exploded View" • VQ35DE models: TM-430, "Exploded View" • VQ35DE models: TM-254, "Exploded View"				
Connector No. Terminal No. Resistance (Ω) F16 32 31 Approx. 54 – 66 s the measurement value within the specification? YES >> GO TO 3. NO >> Repair the TCM branch line. S.CHECK POWER SUPPLY AND GROUND CIRCUIT Check the power supply and the ground circuit of the TCM. Refer to the following. • QR25DE models: <u>TM-380</u> . "Wiring Diagram - CVT CONTROL SYSTEM - Coupe" or <u>TM-389</u> . "Wiring Diagram - CVT CONTROL SYSTEM - Coupe" or <u>TM-211</u> . "Wiring Diagram - CVT CONTROL SYSTEM - Sedan" VQ35DE models: <u>TM-202</u> , "Wiring Diagram—CVT CONTROL SYSTEM—Coupe" or <u>TM-211</u> . "Wiring Diagram—CVT CONTROL SYSTEM—Sedan" s the inspection result normal? YES (Present error)>>Replace the TCM. Refer to the following. • QR25DE models: <u>TM-430</u> . "Exploded View" VQ35DE models: <u>TM-254</u> , "Exploded View" • VQ35DE models: <u>TM-254</u> , "Exploded View" YES (Past error)>>Error was detected in the TCM branch line. YES (Past error)>>Error was detected in the TCM branch line.			onnector terminals.	
Connector No. Terminal No. F16 32 31 Approx. 54 – 66 s the measurement value within the specification? YES >> GO TO 3. NO >> Repair the TCM branch line. J.CHECK POWER SUPPLY AND GROUND CIRCUIT Check the power supply and the ground circuit of the TCM. Refer to the following. QR25DE models: TM-380, "Wiring Diagram - CVT CONTROL SYSTEM - Coupe" or TM-389, "Wiring Diagram - CVT CONTROL SYSTEM - Sedan" VQ35DE models: TM-202, "Wiring Diagram—CVT CONTROL SYSTEM—Coupe" or TM-211, "Wiring Diagram—CVT CONTROL SYSTEM—Sedan" s the inspection result normal? YES (Present error)>>Replace the TCM. Refer to the following. • QR25DE models: TM-430, "Exploded View" • VQ35DE models: TM-430, "Exploded View" • VQ35DE models: YES (Past error)>>Error was detected in the TCM branch line.		TCM harness connector		
s the measurement value within the specification? YES >> GO TO 3. NO >> Repair the TCM branch line. CHECK POWER SUPPLY AND GROUND CIRCUIT Check the power supply and the ground circuit of the TCM. Refer to the following. QR25DE models: <u>TM-380</u> , "Wiring Diagram - CVT CONTROL SYSTEM - Coupe" or <u>TM-389</u> , "Wiring Dia- gram - CVT CONTROL SYSTEM - Sedan" VQ35DE models: <u>TM-202</u> , "Wiring Diagram—CVT CONTROL SYSTEM—Coupe" or <u>TM-211</u> , "Wiring Dia- gram—CVT CONTROL SYSTEM—Sedan" S the inspection result normal? YES (Present error)>>Replace the TCM. Refer to the following. • QR25DE models: <u>TM-430</u> , "Exploded View" • VQ35DE models: <u>TM-254</u> , "Exploded View" YES (Past error)>>Error was detected in the TCM branch line.				Perintance (O)
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: <u>IM-380</u> , "Wiring Diagram - CVT CONTROL SYSTEM - Coupe" or <u>IM-389</u> , "Wiring Diagram - CVT CONTROL SYSTEM - Sedan" VQ35DE models: <u>IM-202</u> , "Wiring Diagram—CVT CONTROL SYSTEM—Coupe" or <u>IM-211</u> , "Wiring Diagram—CVT CONTROL SYSTEM—Sedan" s the inspection result normal? YES (Present error)>>Replace the TCM. Refer to the following. • QR25DE models: <u>IM-430</u> , "Exploded View" • VQ35DE models: <u>IM-254</u> , "Exploded View" • YES (Past error)>>Error was detected in the TCM branch line.	Connector No.	Termi	nal No.	Resistance (Ω)
Check the power supply and the ground circuit of the TCM. Refer to the following. QR25DE models: <u>TM-380</u> , "Wiring Diagram - CVT CONTROL SYSTEM - Coupe" or <u>TM-389</u> , "Wiring Dia- <u>gram - CVT CONTROL SYSTEM - Sedan</u> " VQ35DE models: <u>TM-202</u> , "Wiring Diagram—CVT CONTROL SYSTEM—Coupe" or <u>TM-211</u> , "Wiring Dia- <u>gram—CVT CONTROL SYSTEM—Sedan</u> " s the inspection result normal? YES (Present error)>>Replace the TCM. Refer to the following. • QR25DE models: <u>TM-430</u> , "Exploded View" • VQ35DE models: <u>TM-254</u> , "Exploded View" YES (Past error)>>Error was detected in the TCM branch line.	F16	32		
QR25DE models: <u>TM-380</u> , <u>"Wiring Diagram - CVT CONTROL SYSTEM - Coupe"</u> or <u>TM-389</u> , <u>"Wiring Dia- gram - CVT CONTROL SYSTEM - Sedan"</u> VQ35DE models: <u>TM-202</u> , <u>"Wiring Diagram—CVT CONTROL SYSTEM—Coupe"</u> or <u>TM-211</u> , <u>"Wiring Dia- gram—CVT CONTROL SYSTEM—Sedan"</u> s the inspection result normal? YES (Present error)>>Replace the TCM. Refer to the following. • QR25DE models: <u>TM-430</u> , <u>"Exploded View"</u> • VQ35DE models: <u>TM-254</u> , <u>"Exploded View"</u> YES (Past error)>>Error was detected in the TCM branch line.	F16 <u>s the measurement value w</u> YES >> GO TO 3. NO >> Repair the TCM	32 <u>ithin the specification?</u> branch line.	31	
 YES (Present error)>>Replace the TCM. Refer to the following. QR25DE models: <u>TM-430, "Exploded View"</u> VQ35DE models: <u>TM-254, "Exploded View"</u> YES (Past error)>>Error was detected in the TCM branch line. 	F16 s the measurement value w YES >> GO TO 3. NO >> Repair the TCM CHECK POWER SUPPL	32 <u>ithin the specification?</u> branch line. Y AND GROUND CIRCUI	31	Approx. 54 – 66
 VQ35DE models: <u>TM-254, "Exploded View"</u> YES (Past error)>>Error was detected in the TCM branch line. 	F16 <u>s the measurement value w</u> YES >> GO TO 3. NO >> Repair the TCM CHECK POWER SUPPL Check the power supply and QR25DE models: <u>TM-380</u> gram - CVT CONTROL SY VQ35DE models: <u>TM-202</u>	32 <u>ithin the specification?</u> branch line. Y AND GROUND CIRCUI the ground circuit of the T <u>, "Wiring Diagram - CVT (</u> <u>/STEM - Sedan"</u> <u>, "Wiring Diagram—CVT (</u>	31 T CM. Refer to the following. CONTROL SYSTEM - Cou	Approx. 54 – 66
	F16 s the measurement value w YES >> GO TO 3. NO >> Repair the TCM CHECK POWER SUPPL Check the power supply and QR25DE models: <u>TM-380</u> gram - CVT CONTROL SY VQ35DE models: <u>TM-202</u> gram—CVT CONTROL SY s the inspection result norm YES (Present error)>>Rep	32 ithin the specification? branch line. Y AND GROUND CIRCUT the ground circuit of the T , "Wiring Diagram - CVT (<u>(STEM - Sedan"</u> , "Wiring Diagram—CVT (<u>STEM—Sedan"</u> <u>Ial?</u> lace the TCM. Refer to the	31 T CM. Refer to the following. CONTROL SYSTEM - Cou CONTROL SYSTEM—Cou following.	Approx. 54 – 66
	F16 s the measurement value w YES >> GO TO 3. NO >> Repair the TCM CHECK POWER SUPPL Check the power supply and QR25DE models: <u>TM-380</u> gram - CVT CONTROL SY VQ35DE models: <u>TM-202</u> gram—CVT CONTROL SY s the inspection result norm YES (Present error)>>Repl • QR25DE mod • VQ35DE mod YES (Past error)>>Error was	32 <u>ithin the specification?</u> branch line. Y AND GROUND CIRCUI the ground circuit of the T , "Wiring Diagram - CVT (<u>STEM - Sedan"</u> , "Wiring Diagram—CVT (<u>STEM—Sedan"</u> <u>al?</u> lace the TCM. Refer to the els: <u>TM-430</u> , "Exploded Vir els: <u>TM-254</u> , "Exploded Vir as detected in the TCM bra	31 T TCM. Refer to the following. CONTROL SYSTEM - Cou CONTROL SYSTEM—Cou following. ew" anch line.	Approx. 54 – 66
	F16 s the measurement value w YES >> GO TO 3. NO >> Repair the TCM CHECK POWER SUPPL Check the power supply and QR25DE models: <u>TM-380</u> gram - CVT CONTROL SY VQ35DE models: <u>TM-202</u> gram—CVT CONTROL SY s the inspection result norm YES (Present error)>>Repl • QR25DE mod • VQ35DE mod YES (Past error)>>Error was	32 <u>ithin the specification?</u> branch line. Y AND GROUND CIRCUI the ground circuit of the T , "Wiring Diagram - CVT (<u>STEM - Sedan"</u> , "Wiring Diagram—CVT (<u>STEM—Sedan"</u> <u>al?</u> lace the TCM. Refer to the els: <u>TM-430</u> , "Exploded Vir els: <u>TM-254</u> , "Exploded Vir as detected in the TCM bra	31 T TCM. Refer to the following. CONTROL SYSTEM - Cou CONTROL SYSTEM—Cou following. ew" anch line.	Approx. 54 – 66

IPDM-E BRANCH LINE CIRCUIT

Diagnosis Procedure

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			
Connector No.	Termi	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.

 $\mathbf{3}$. Check power supply and ground circuit

Check the power supply and the ground circuit of the IPDM E/R. Refer to PCS-23, "Diagnosis Procedure".

Is the inspection result normal?

YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "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.

LAN-168

5. СНЕСК ЗУМРТОМ

AN COMMUNICA			
iagnosis Procedure			INFOID:00000004203993
NSPECTION PROCEDUR	RE		
.CONNECTOR INSPECT			
. Turn the ignition switch			
	cable from the negative termi connectors on CAN communi		
	nnectors for damage, bend a		
s the inspection result norm	nal?		
YES >> GO TO 2. NO >> Repair the term	inal and connector		
	ITINUITY (SHORT CIRCUIT))	
	en the data link connector ter		
	Data link connector		Continuity
Connector No.	Termina		
M22	6	14	Not existed
Is the inspection result norm			
	ess and repair the root cause		
NO >> Check the harned 3.CHECK HARNESS CON	ess and repair the root cause ITINUITY (SHORT CIRCUIT) en the data link connector and		
NO >> Check the harm 3. CHECK HARNESS CON Check the continuity between	ITINUITY (SHORT CIRCUIT)		
NO >> Check the harm 3.CHECK HARNESS CON Check the continuity between	ITINUITY (SHORT CIRCUIT) on the data link connector and) d the ground.	Continuity
NO >> Check the harm 3.CHECK HARNESS CON Check the continuity between Data link Connector No.	ITINUITY (SHORT CIRCUIT) on the data link connector and connector		Continuity Not existed
NO >> Check the harm 3.CHECK HARNESS CON Check the continuity between Data link Connector No. M22	ITINUITY (SHORT CIRCUIT) en the data link connector and connector Terminal No. 6 14) d the ground.	-
NO >> Check the harm 3.CHECK HARNESS CON Check the continuity betwee Data link Connector No. M22 Is the inspection result norm YES >> GO TO 4. NO >> Check the harm 4.CHECK ECM AND IPDW 1. Remove the ECM and t	ITINUITY (SHORT CIRCUIT) en the data link connector and connector Terminal No. 6 14 14 mal? ess and repair the root cause 1 E/R TERMINATION CIRCU) d the ground. Ground	Not existed
NO >> Check the harm 3.CHECK HARNESS CON Check the continuity betwee Data link Connector No. M22 Is the inspection result norm YES >> GO TO 4. NO >> Check the harm 4.CHECK ECM AND IPDW 1. Remove the ECM and t	ITINUITY (SHORT CIRCUIT) en the data link connector and connector Terminal No. 6 14 14 14 14 14 14 14 14 14 14 14 14 14) d the ground. Ground	Not existed
NO >> Check the harm 3.CHECK HARNESS CON Check the continuity between Data link Connector No. M22 Is the inspection result norm YES >> GO TO 4. NO >> Check the harm 4.CHECK ECM AND IPDW 1. Remove the ECM and t 2. Check the resistance be	ITINUITY (SHORT CIRCUIT) en the data link connector and connector Terminal No. 6 14 14 mal? ess and repair the root cause 1 E/R TERMINATION CIRCU the IPDM E/R.) d the ground. Ground	Not existed Not existed
NO >> Check the harm 3.CHECK HARNESS CON Check the continuity betweet Data link Connector No. M22 Is the inspection result norm YES YES S CHECK ECM AND IPDN 1. Remove the ECM and t 2. Check the resistance be ECM YES YES <td>ITINUITY (SHORT CIRCUIT) en the data link connector and connector Terminal No. 6 14 nal? ess and repair the root cause 1 E/R TERMINATION CIRCU the IPDM E/R. etween the ECM terminals. Resistance (Ω) 97 Approx. 108 – 133</td> <td>) d the ground. Ground e. IT</td> <td>Not existed Not existed</td>	ITINUITY (SHORT CIRCUIT) en the data link connector and connector Terminal No. 6 14 nal? ess and repair the root cause 1 E/R TERMINATION CIRCU the IPDM E/R. etween the ECM terminals. Resistance (Ω) 97 Approx. 108 – 133) d the ground. Ground e. IT	Not existed Not existed
NO >> Check the harm 3.CHECK HARNESS CON Check the continuity betweet Data link Connector No. M22 s the inspection result norm YES YES S Check the harm 4.CHECK ECM AND IPDN 1. Remove the ECM and t 2. Check the resistance be ECM YES YES<	ITINUITY (SHORT CIRCUIT) en the data link connector and connector Terminal No. 6 14 14 nal? ess and repair the root cause 1 E/R TERMINATION CIRCU the IPDM E/R. etween the ECM terminals.) d the ground. Ground e. IT	Not existed Not existed
NO >> Check the harm 3. CHECK HARNESS CON Check the continuity betweet Data link Connector No. M22 Is the inspection result norm YES YES S GO TO 4. NO YES YES YES YES YES S GO TO 4. NO YES YES <t< td=""><td>ITINUITY (SHORT CIRCUIT) en the data link connector and connector Terminal No. 6 14 hal? ess and repair the root cause 14 hal? ess and repair the root cause 14 he IPDM E/R. etween the ECM terminals. Particular (Ω) Particular (Ω)<!--</td--><td>) d the ground. Ground e. IT</td><td>Not existed Not existed</td></td></t<>	ITINUITY (SHORT CIRCUIT) en the data link connector and connector Terminal No. 6 14 hal? ess and repair the root cause 14 hal? ess and repair the root cause 14 he IPDM E/R. etween the ECM terminals. Particular (Ω) Particular (Ω) </td <td>) d the ground. Ground e. IT</td> <td>Not existed Not existed</td>) d the ground. Ground e. IT	Not existed Not existed
NO >> Check the harm 3. CHECK HARNESS CON Check the continuity betweed Data link Connector No. M22 Is the inspection result norm YES YES S Check the harm 4. CHECK ECM AND IPDN 1. Remove the ECM and t 2. Check the resistance be ECM 3. Check the resistance be	ITINUITY (SHORT CIRCUIT) en the data link connector and connector Terminal No. 6 14 nal? ess and repair the root cause 1 E/R TERMINATION CIRCU the IPDM E/R. etween the ECM terminals. Resistance (Ω) 97 Approx. 108 – 133) d the ground. Ground 9. IT 2 als.	Not existed Not existed

CAN COMMUNICATION CIRCUIT

< 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.

 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.

NADONEN	NOSIS > NT DIAGNO		[0,	SYSTEM (TYPE 12)]
IAIN LINE BEI	WEEN DLC A	ND ABS CIRCU	11	
iagnosis Proced	ure			INFOID:000000004203994
ISPECTION PROCE	DURE			
.CHECK CONNECT	OR			
Check the followin and harness side). Harness connector Harness connector the inspection result YES >> GO TO 2. NO >> Repair the .CHECK HARNESS Disconnect the har	ttery cable from the ne og terminals and conr r M1 r E30 <u>normal?</u> terminal and connect CONTINUITY (OPEN rness connectors M1	nectors for damage, bu tor. N CIRCUIT)		ection (connector side
Data link	-	Harness co		
Connector No.	Terminal No.	Connector No.	Terminal No.	Continuity
	6		15G	Existed
M22	14	M1	8G	Existed
CHECK HARNESS	CONTINUITY (OPEN nnector of ABS actuat ity between the harne	tor and electric unit (co ess connector and the <i>i</i>	ntrol unit). ABS actuator and ele	
	connector	ABS actuator and elec harness co	,	Continuity
Harness	Terminal No.	Connector No.	Terminal No.	
Harness Connector No.	1		26	Existed
	15G	E26	4 -	
Connector No.	8G	E26	15	Existed

ECM BRANCH LINE CIRCUIT

Diagnosis Procedure

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			
Connector No.	Termir	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 expect for California: EC-673, "Diagnosis Procedure"
- VQ engine models: EC-1175, "Diagnosis Procedure"

Is the inspection result normal?

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

- QR engine models for California: <u>EC-27</u>, "ADDITIONAL SERVICE WHEN REPLACING CON-TROL UNIT : Special Repair Requirement"
- QR engine models except for California: <u>EC-563</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"
- VQ engine models: <u>EC-1051</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : <u>Special Repair Requirement</u>"

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

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

< COMPONENT DIAGNOSIS > A-BAG BRANCH LINE CIRCUIT А **Diagnosis** Procedure INFOID:000000004203996 1. CHECK AIR BAG DIAGNOSIS SENSOR UNIT В Check the air bag diagnosis sensor unit. Refer to SRC-3, "Work Flow". Is the inspection result normal? С YES >> Replace the main harness. NO >> Replace parts whose air bag system has a malfunction. D Е F G Н J Κ L LAN Ν Ο Ρ

AV BRANCH LINE CIRCUIT

Diagnosis Procedure

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			
Connector No.	Termi	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.

 $\mathbf{3}$. Check power supply and ground circuit

Check the power supply and the ground circuit of the AV control unit. Refer to <u>AV-315, "AV CONTROL UNIT :</u> <u>Diagnosis Procedure"</u>.

Is the inspection result normal?

YES (Present error)>>Replace the AV control unit. Refer to AV-437, "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 >

Diagnosis Procedure 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. Image: Source of the connector of BCM. 2. Check the resistance between the BCM harness connector terminals. Image: Source of the connector of BCM. 2. Check the resistance between the BCM harness connector terminals. Image: Source of the connector No. Image: Source of the BCM harness connector Kes 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 <u>BCS-42. "Diagnosis Procedure". Is the inspection result normal? YES (Past error)>>Repair the BCM. Refer to <u>BCS-95. "Removal and Installation".</u> YES (</u>	BCM BRANCH LINE	CIRCUIT		
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. 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-42, "Diagnosis Procedure". Is the inspection result normal? YES (Present error)>>Replace the BCM. Refer to BCS-96, "Removal and Installation". YES (Present error)>>Replace the BCM. Refer to BCS-96, "Removal and Installation". YES (Present error)>>Replace the BCM. Refer to BCS-96, "Removal and Installation". YES (Past error)>>Replace the BCM branch line.	Diagnosis Procedure			INFOID:00000004203998
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. 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-42, "Diagnosis Procedure". Is the inspection result normal? YES (Present error)>> Replace the BCM. Refer to BCS-96, "Removal and Installation". YES (Past error)>> Error was detected in the BCM branch line.	INSPECTION PROCEDURE	Ξ		
 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 terminal No. Resistance (Ω) 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-42, "Diagnosis Procedure". Is the inspection result normal? YES (Present error)>>Replace the BCM. Refer to BCS-96, "Removal and Installation". YES (Past error)>>Error was detected in the BCM branch line.	1.CHECK CONNECTOR			
$\begin{array}{llllllllllllllllllllllllllllllllllll$	 Disconnect the battery ca Check the terminals and 	able from the negative terr		e connection (unit side and
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. Image: Second structure BCM harness connector Connector No. Terminal No. M19 79 78 Approx. 54 – 66 Is the measurement value within the specification? YES YES So O TO 3. NO S.CHECK POWER SUPPLY AND GROUND CIRCUIT Check the power supply and the ground circuit of the BCM. Refer to BCS-42, "Diagnosis Procedure". Is the inspection result normal? YES (Present error)>>Replace the BCM. Refer to BCS-96, "Removal and Installation". YES (Past error)>>Error was detected in the BCM branch line.	-	<u>ll?</u>		
2.CHECK HARNESS FOR OPEN CIRCUIT 1. Disconnect the connector of BCM. 2. Check the resistance between the BCM harness connector terminals. Image: Second Sec		al and connector.		
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-42, "Diagnosis Procedure". Is the inspection result normal? YES (Present error)>>Replace the BCM. Refer to BCS-96, "Removal and Installation". YES (Past error)>>Error was detected in the BCM branch line.	^			
Connector No. Terminal No. Resistance (Ω) M19 79 78 Approx. 54 – 66 Is the measurement value within the specification? YES >> GO TO 3. NO >> Repair the BCM branch line. NO >> Repair the BCM branch line. S.CHECK POWER SUPPLY AND GROUND CIRCUIT Check the power supply and the ground circuit of the BCM. Refer to BCS-42, "Diagnosis Procedure". Is the inspection result normal? YES (Present error)>>Replace the BCM. Refer to BCS-96, "Removal and Installation". YES (Past error)>>Error was detected in the BCM branch line.			onnector terminals.	
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-42, "Diagnosis Procedure". Is the inspection result normal? YES (Present error)>>Replace the BCM. Refer to BCS-96, "Removal and Installation". YES (Past error)>>Error was detected in the BCM branch line.		BCM harness connector		Resistance (O)
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-42, "Diagnosis Procedure". Is the inspection result normal? YES (Present error)>>Replace the BCM. Refer to BCS-96, "Removal and Installation". YES (Past error)>>Error was detected in the BCM branch line.				· ·
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-42, "Diagnosis Procedure". Is the inspection result normal? YES (Present error)>>Replace the BCM. Refer to BCS-96, "Removal and Installation". YES (Past error)>>Error was detected in the BCM branch line.		-	78	Approx. 54 – 66
<u>Is the inspection result normal?</u> YES (Present error)>>Replace the BCM. Refer to <u>BCS-96, "Removal and Installation"</u> . YES (Past error)>>Error was detected in the BCM branch line.	YES >> GO TO 3. NO >> Repair the BCM	branch line.	г	
YES (Present error)>>Replace the BCM. Refer to <u>BCS-96, "Removal and Installation"</u> . YES (Past error)>>Error was detected in the BCM branch line.			CM. Refer to <u>BCS-42, "Dia</u>	gnosis Procedure".
	YES (Present error)>>Repla YES (Past error)>>Error wa	nce the BCM. Refer to <u>BC</u> s detected in the BCM bra	inch line.	ation".

LAN

Ν

0

>

DLC BRANCH LINE CIRCUIT

Diagnosis Procedure

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 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:000000004471826
NSPECTION PROCEDUR	:		
1. CHECK CONNECTOR	-		
	ble from the negative tern connectors of the combi		bend and loose connection
s the inspection result norma	<u>l?</u>		
YES >> GO TO 2. NO >> Repair the termin	al and connector		
NO >> Repair the termin 2.CHECK HARNESS FOR (
 Disconnect the connecto Check the resistance bet 		ter harness connector tern	ninals
Con	bination meter harness connec	tor	Resistance (Ω)
Connector No.	Termin	al No.	
M24	21	22	Approx. 54 – 66
s the measurement value wit	hin the specification?		
YES >> GO TO 3.	C		
	nation meter branch line.		
CHECK POWER SUPPLY	AND GROUND CIRCUIT	-	
		combination meter. Refer	to <u>MWI-43, "COMBINATION</u>
<u>IETER : Diagnosis Procedur</u> s the inspection result norma			
YES (Present error)>>Repla		Pofor to MM/ 176 "Pom	oval and Installation"
YES (Past error)>>Error wa			ovar and mistaliation.
	supply and the ground cir		

LAN

Ν

0

STRG BRANCH LINE CIRCUIT

Diagnosis Procedure

INSPECTION PROCEDURE

1.CHECK CONNECTOR

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

Ste	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-207, "Wiring Diagram - Coupe" or BRC-215, "Wiring Diagram - Sedan".

Is it normal?

YES (Present error)>>Replace the steering angle sensor. Refer to BRC-242, "Removal and Installation".

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

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

[CAN SYSTEM (TYPE 12)]

COMPONENT DIAGNOS	513 -	L	5/ 41 8 1 8 1 8 1 E
ABS BRANCH LINE	ECIRCUIT		
Diagnosis Procedure			INFOID:00000004204002
SPECTION PROCEDUR	RE		
CHECK CONNECTOR			
Check the terminals and	cable from the negative terr	tuator and electric unit (co	ntrol unit) for damage, bend
s the inspection result norm YES >> GO TO 2. NO >> Repair the term	inal and connector.		
2. CHECK HARNESS FOR	OPEN CIRCUIT		
	or of ABS actuator and elected etween the ABS actuator a		it) harness connector termi-
ABS actuator	and electric unit (control unit) harr	ness connector	Resistance (Ω)
Connector No.	Termir	nal No.	
E26	26	15	Approx. 54 – 66
CHECK POWER SUPPL check the power supply and ollowing. Models with ABS: <u>BRC-41</u> Models with TCS: <u>BRC-10</u> Models with VDC: <u>BRC-20</u> s the inspection result norm YES (Present error)>>Rep • Models with A	<u>, "Wiring Diagram - Coupe" 9, "Wiring Diagram - Coupe 07, "Wiring Diagram - Coup nal?</u> lace the ABS actuator and BS: <u>BRC-66, "Exploded Vi</u> e	BS actuator and electric ur or <u>BRC-46, "Wiring Diagra</u> " or <u>BRC-115, "Wiring Dia</u> e" or <u>BRC-115, "Wiring Dia</u> e" or <u>BRC-215, "Wiring Dia</u> electric unit (control unit). F	<u>igram - Sedan"</u> agram - Sedan"
Models with V YES (Past error)>>Error w	CS: <u>BRC-137, "Exploded V</u> DC: <u>BRC-239, "Exploded N</u> as detected in the ABS actu er supply and the ground ci	<u>/iew"</u> uator and electric unit (cont	rol unit) branch line.

- 0
- Ρ

TCM BRANCH LINE CIRCUIT

Diagnosis Procedure

INSPECTION PROCEDURE

1.CHECK CONNECTOR

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

Check the resistance between the TCM harness connector terminals. 2.

	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.

 ${\it 3.}$ Check power supply and ground circuit

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

- QR25DE models: TM-380, "Wiring Diagram CVT CONTROL SYSTEM Coupe" or TM-389, "Wiring Diagram - CVT CONTROL SYSTEM - Sedan"
- VQ35DE models: TM-202, "Wiring Diagram-CVT CONTROL SYSTEM-Coupe" or TM-211, "Wiring Diagram—CVT CONTROL SYSTEM—Sedan"

Is the inspection result normal?

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

- QR25DE models: <u>TM-430, "Exploded View"</u>
 VQ35DE models: <u>TM-254, "Exploded View"</u>
- YES (Past error)>>Error was detected in the TCM branch line.

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

NSPECTION PROCEDURE 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). s 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. Impose the resistance between the IPDM E/R harness connector terminals. Impose 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-23. "Diagnosis Procedure" . s the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48. "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.	Diagnosis Procedure			INFOID:000000004204004
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). s 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 s 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-23. "Diagnosis Procedure" . s the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48. "Removal and Installation". YES (Past error)>>Error was detected in the IPDM E/R branch line.	NSPECTION PROCEDUR	E		
 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). 3. 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. IPDM E/R harness connector Resistance (Ω) Connector No. Terminal No. E17 40 39 Approx. 108 – 132 s 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-23, "Diagnosis Procedure". s the inspection result normal? YES (Present error)>> Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation". YES (Past error)>> Error was detected in the IPDM E/R branch line. 	1.CHECK CONNECTOR			
$\frac{s \text{ the inspection result normal?}}{\text{YES} >> \text{GO TO 2.}}$ 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. $\frac{ \text{PDM E/R harness connector}}{ \text{Connector No.} } \qquad \text{Resistance } (\Omega)$ $\frac{\text{Connector No.}}{ \text{E17} } \qquad 40 \qquad 39 \qquad \text{Approx. 108 - 132}$ $\frac{\text{s the measurement value within the specification?}}{\text{YES}} >> \text{GO TO 3.}$ 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 <u>PCS-23. "Diagnosis Procedure"</u> . $\frac{\text{s the inspection result normal?}}{\text{YES}} (Present error) >> Replace the IPDM E/R. Refer to PCS-48. "Removal and Installation". YES (Past error) >> Error was detected in the IPDM E/R branch line.$	 Disconnect the battery c Check the terminals and 	able from the negative terr		oose connection (unit side
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. E17 40 39 Approx. 108 – 132 s 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-23, "Diagnosis Procedure" . s the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation". YES (Past error)>>Error was detected in the IPDM E/R branch line.	,	<u>al?</u>		
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 s the measurement value within the specification? YES >> GO TO 3. NO >> Repair the IPDM E/R branch line. CHECK POWER SUPPLY AND GROUND CIRCUIT Check the power supply and the ground circuit of the IPDM E/R. Refer to PCS-23, "Diagnosis Procedure" . s the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation". YES (Past error)>>Error was detected in the IPDM E/R branch line.	NO >> Repair the termin			
Connector No. Terminal No. Resistance (Ω) E17 40 39 Approx. 108 – 132 s the measurement value within the specification? YES >> GO TO 3. YES >> GO TO 3. Sthe measurement value within the ground circuit of the IPDM E/R. Refer to PCS-23, "Diagnosis Procedure". Check the power supply and the ground circuit of the IPDM E/R. Refer to PCS-23, "Diagnosis Procedure". s the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation". YES (Past error)>>Error was detected in the IPDM E/R branch line.	. Disconnect the connector	r of IPDM E/R.		
E17 40 39 Approx. 108 – 132 s the measurement value within the specification? YES >> GO TO 3. NO >> Repair the IPDM E/R branch line. NO >> Repair the IPDM E/R branch line. S.CHECK POWER SUPPLY AND GROUND CIRCUIT Check the power supply and the ground circuit of the IPDM E/R. Refer to PCS-23, "Diagnosis Procedure" . S the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation". YES (Past error)>>Error was detected in the IPDM E/R branch line.	2. Check the resistance be	tween the IPDM E/R harne	ess connector terminals.	
s 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-23, "Diagnosis Procedure" . s the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation". YES (Past error)>>Error was detected in the IPDM E/R branch line.		IPDM E/R harness connector		Resistance (Ω)
 YES >> GO TO 3. NO >> Repair the IPDM E/R branch line. CHECK POWER SUPPLY AND GROUND CIRCUIT Check the power supply and the ground circuit of the IPDM E/R. Refer to PCS-23, "Diagnosis Procedure". as the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation". YES (Past error)>>Error was detected in the IPDM E/R branch line. 	Connector No.	IPDM E/R harness connector Termin	nal No.	. ,
s the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to <u>PCS-48, "Removal and Installation"</u> . YES (Past error)>>Error was detected in the IPDM E/R branch line.	Connector No. E17	IPDM E/R harness connector Termin 40	nal No.	. ,
s the inspection result normal? YES (Present error)>>Replace the IPDM E/R. Refer to <u>PCS-48, "Removal and Installation"</u> . YES (Past error)>>Error was detected in the IPDM E/R branch line.	Connector No. E17 <u>S the measurement value wi</u> YES >> GO TO 3. NO >> Repair the IPDM	IPDM E/R harness connector Termin 40 thin the specification? E/R branch line.	nal No. 39	. ,
YES (Past error)>>Error was detected in the IPDM E/R branch line.	Connector No. E17 Sthe measurement value wi YES >> GO TO 3. NO >> Repair the IPDM CHECK POWER SUPPLY	IPDM E/R harness connector Termin 40 thin the specification? E/R branch line. Y AND GROUND CIRCUIT	nal No. 39	Approx. 108 – 132
	Connector No. E17 S the measurement value wi YES >> GO TO 3. NO >> Repair the IPDM CHECK POWER SUPPLY Check the power supply and	IPDM E/R harness connector Termin 40 thin the specification? E/R branch line. Y AND GROUND CIRCUIT the ground circuit of the IF	nal No. 39	Approx. 108 – 132
	Connector No. E17 Sthe measurement value wi YES >> GO TO 3. NO >> Repair the IPDM CHECK POWER SUPPLY Check the power supply and the inspection result normation YES (Present error)>>Replay YES (Past error)>>Error wa	IPDM E/R harness connector Termin 40 thin the specification? E/R branch line. AND GROUND CIRCUIT the ground circuit of the IF al? ace the IPDM E/R. Refer to s detected in the IPDM E/	nal No. 39 F PDM E/R. Refer to <u>PCS-23,</u> o <u>PCS-48, "Removal and Ins</u> R branch line.	Approx. 108 – 132 "Diagnosis Procedure" .
	Connector No. E17 s the measurement value wi YES >> GO TO 3. NO >> Repair the IPDM CHECK POWER SUPPL Check the power supply and the inspection result normation YES (Present error)>>Replay YES (Past error)>>Error wa	IPDM E/R harness connector Termin 40 thin the specification? E/R branch line. AND GROUND CIRCUIT the ground circuit of the IF al? ace the IPDM E/R. Refer to s detected in the IPDM E/	nal No. 39 F PDM E/R. Refer to <u>PCS-23,</u> o <u>PCS-48, "Removal and Ins</u> R branch line.	Approx. 108 – 132 "Diagnosis Procedure" .

LAN

Ν

0

CAN COMMUNICATION CIRCUIT

Diagnosis Procedure

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.		Continuity
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 lin	Data link connector		Continuity
Connector No.	Terminal No.	Ground	Continuity
M22	6	Giouria	Not existed
10122	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)
Termi	Terminal No.	
98	97	Approx. 108 – 132

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

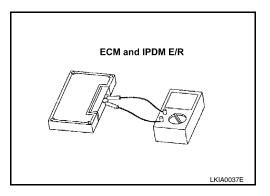
IPDM E/R		Resistance (Ω)
Termi	Terminal No.	
40	39	Approx. 108 – 132

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 12)]
Connect all the connectors. Check if the symptoms described in the "Sympto customer)" are reproduced.	m (Results from interview with
Inspection result	
Reproduced>>GO TO 6. Non-reproduced>>Start the diagnosis again. Follow the trouble diagnosis detected.	procedure when past error is B
6. CHECK UNIT REPRODUCTION	
Perform the reproduction test as per the following procedure for each unit. 1. Turn the ignition switch OFF.	C
2. Disconnect the battery cable from the negative terminal.	
 Disconnect one of the unit connectors of CAN communication system. NOTE: 	D
ECM and IPDM E/R have a termination circuit. Check other units first.	
 Connect the battery cable to the negative terminal. Check if the sympton (Results from interview with customer)" are reproduced. NOTE: 	ms described in the "Symptom $_{oxed{ imes}}$
Although unit-related error symptoms occur, do not confuse them with other	er symptoms.

Inspection result

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

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

L

F

G

Н

J

Κ

LAN

Ν

0

Ρ