SECTION LAN

LAN SYSTEM

CONTENTS

PRECAUTION

PRECAUTIONS

Precautions for Trouble Diagnosis

INFOID:0000000010715283

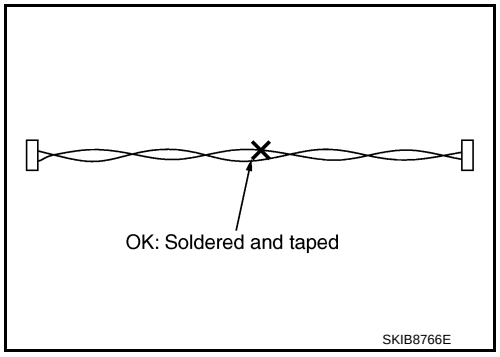
CAUTION:

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

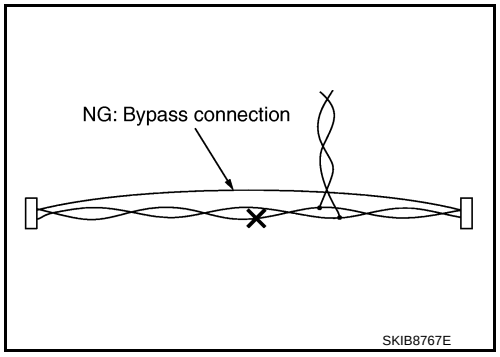
Precautions for Harness Repair

INFOID:0000000010715284

- 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.

SYSTEM DESCRIPTION

CAN COMMUNICATION SYSTEM

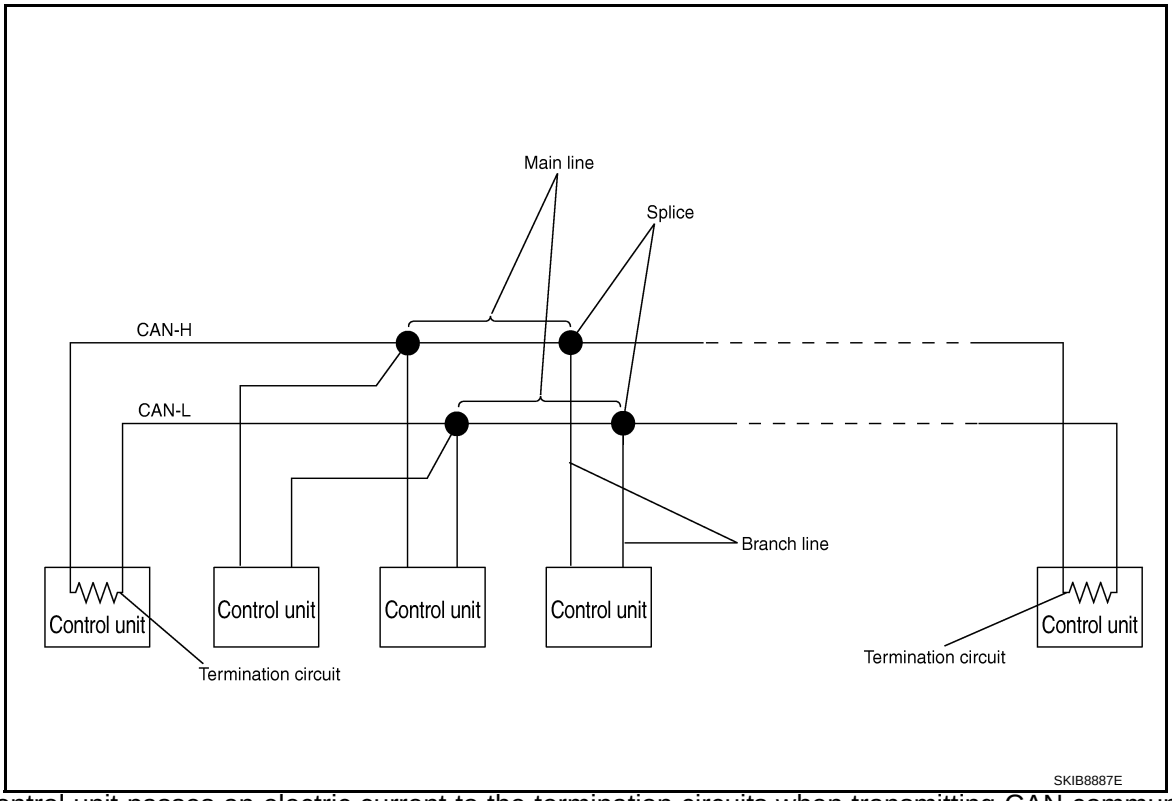
System Description

INFOID:0000000010715285

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

System Diagram

INFOID:0000000010715286



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

Component	Description
Main line	CAN communication line between splices
Branch line	CAN communication line between splice and a control unit
Splice	A point connecting a branch line with a main line
Termination circuit	Refer to LAN-9, "CAN Communication Control Circuit".

CAN Communication Control Circuit

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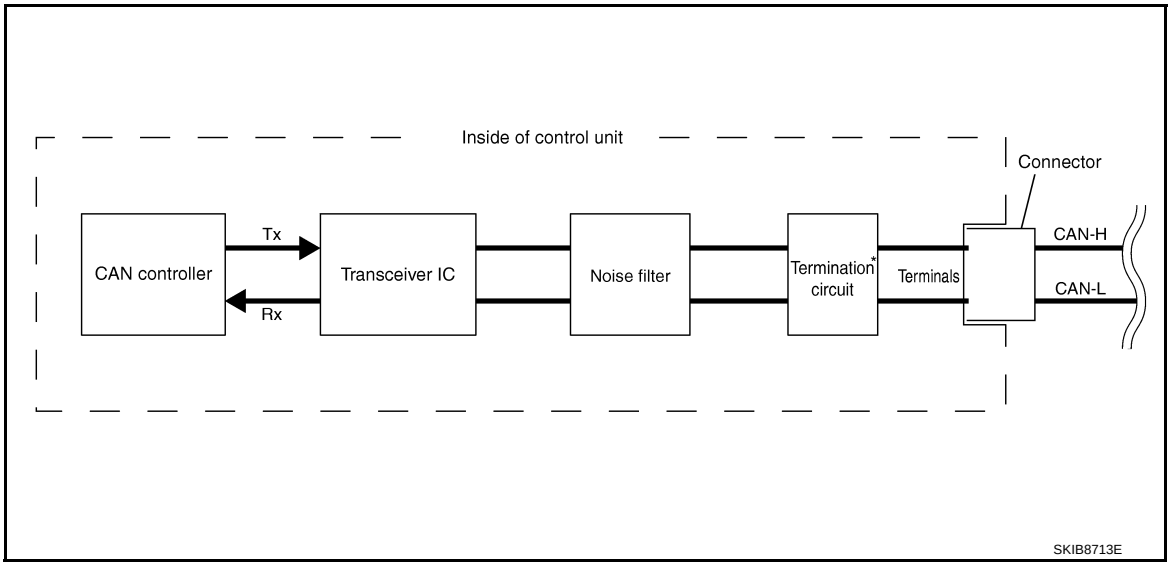

Component	System description
CAN controller	It controls CAN communication signal transmission and reception, error detection, etc.
Transceiver IC	It converts digital signal into CAN communication signal, and CAN communication signal into digital signal.
Noise filter	It eliminates noise of CAN communication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

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

DIAG ON CAN

Description

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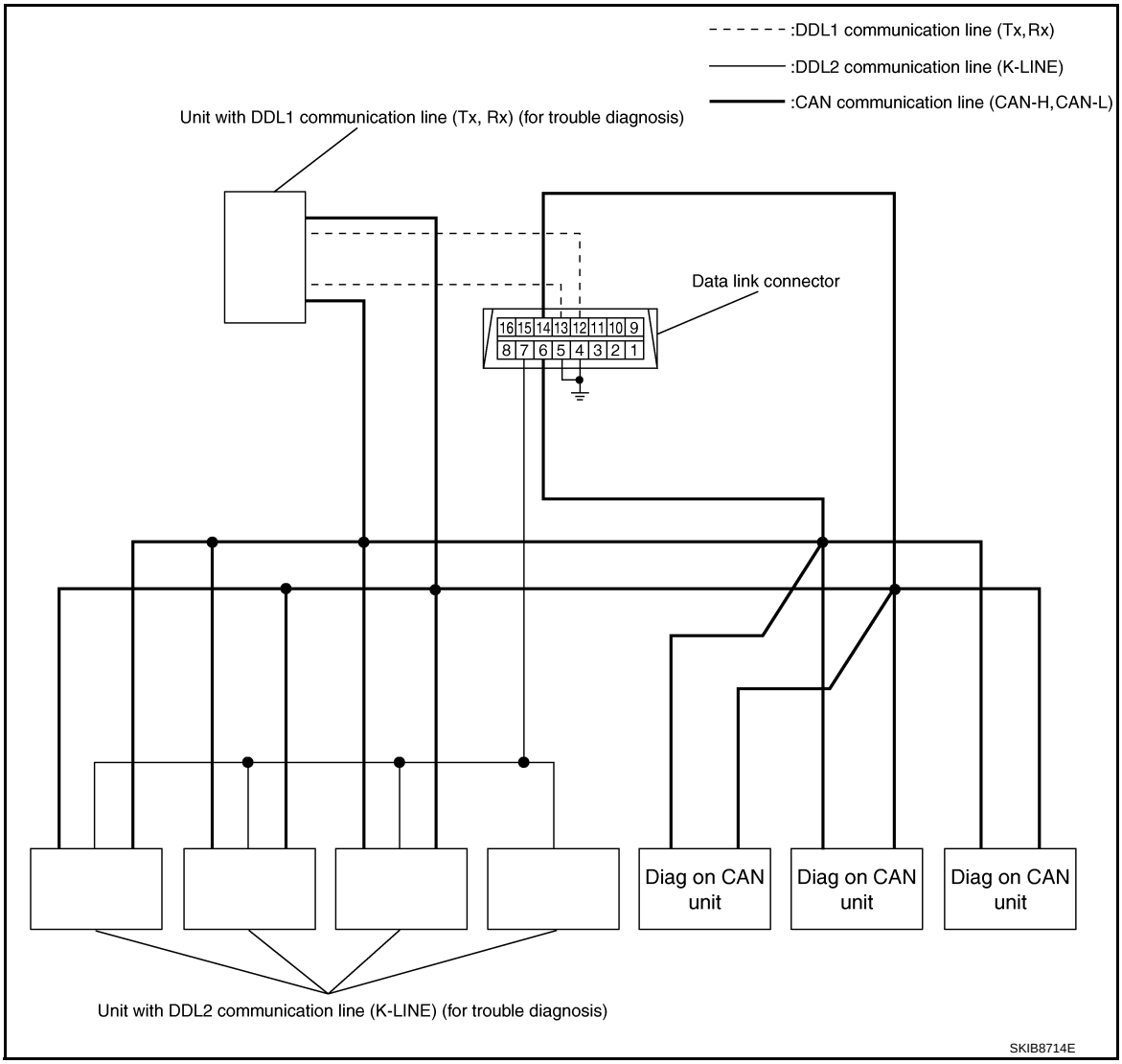
“Diag on CAN” is a diagnosis using CAN communication instead of previous DDL1 and DDL2 communication lines, between control units and diagnosis unit.

System Diagram

INFOID:0000000010715289



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

TROUBLE DIAGNOSIS

Condition of Error Detection

INFOID:0000000010715290

DTC (e.g. U1000 and U1001) of CAN communication is indicated on SELF-DIAG RESULTS on CONSULT if a 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 DTC OF CAN COMMUNICATION 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.

CAUTION:

CAN communication system is normal if DTC of CAN communication is indicated on SELF-DIAG RESULTS of CONSULT under the above conditions. Erase the memory of the self-diagnosis of each unit.

Symptom When Error Occurs in CAN Communication System

INFOID:0000000010715291

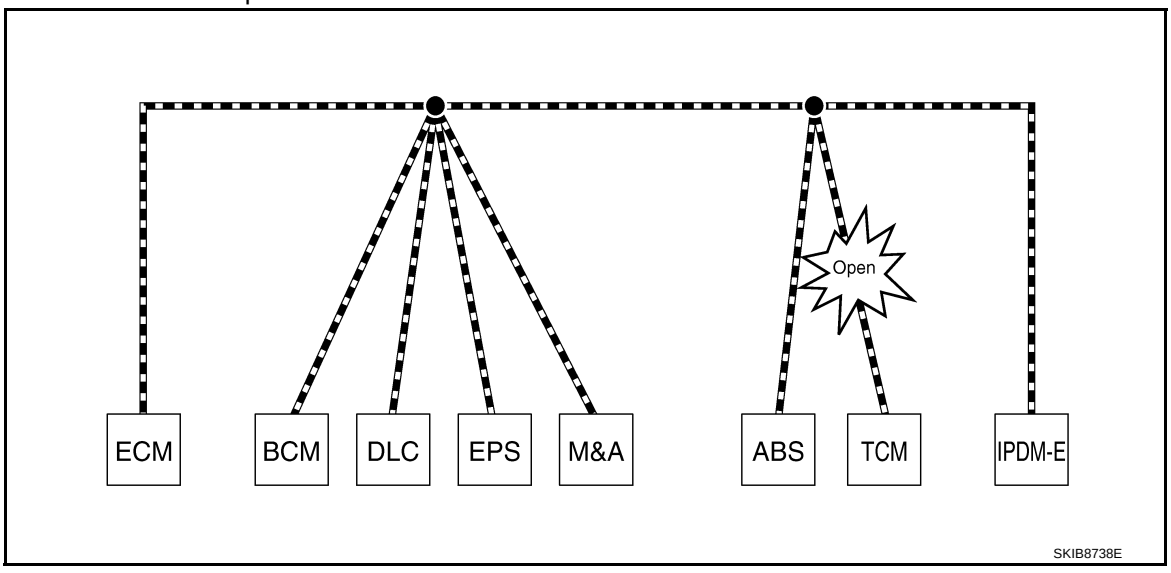
In CAN communication system, multiple units mutually transmit and receive signals. Each unit cannot transmit and receive signals if any error occurs on CAN communication line. Under this condition, multiple control units related to the root cause malfunction or go into fail-safe mode.

ERROR EXAMPLE

NOTE:

- Each vehicle differs in symptom of each unit under fail-safe mode and CAN communication line wiring.
- Refer to LAN-22, "Abbreviation List" for the unit abbreviation.

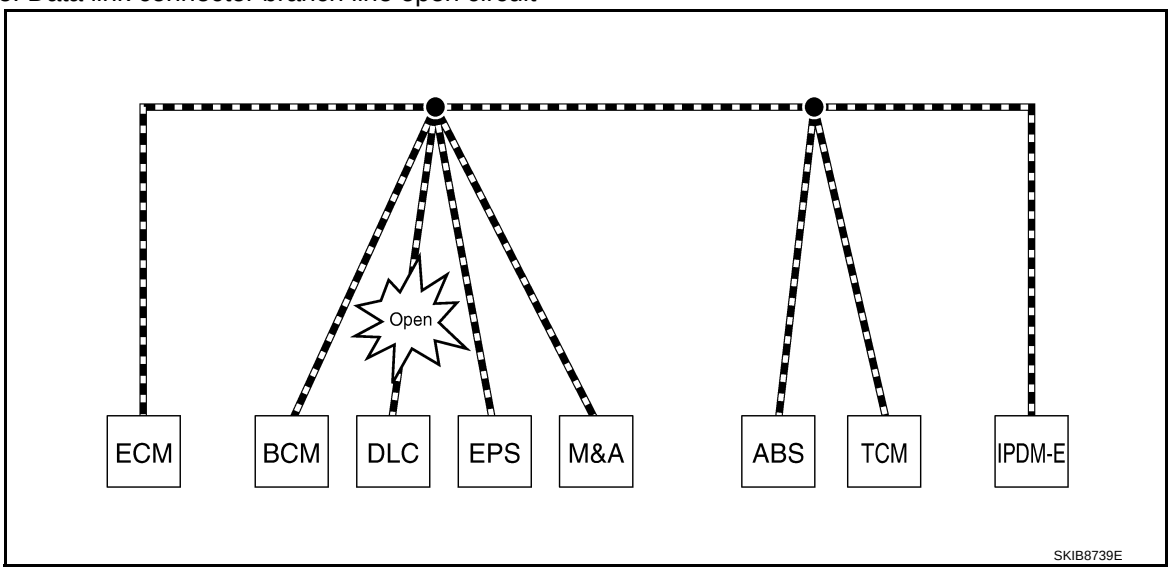
Example: TCM branch line open circuit



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

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

Example: Data link connector branch line open circuit

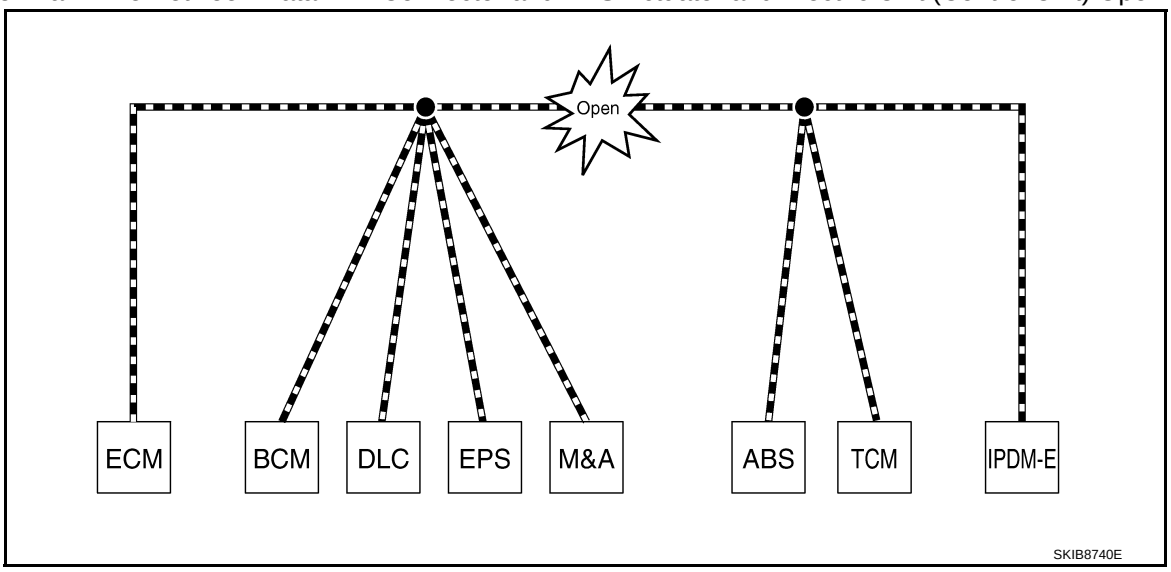


Unit name	Symptom
ECM	Normal operation.
BCM	
EPS control unit	
Combination meter	
ABS actuator and electric unit (control unit)	
TCM	
IPDM E/R	

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

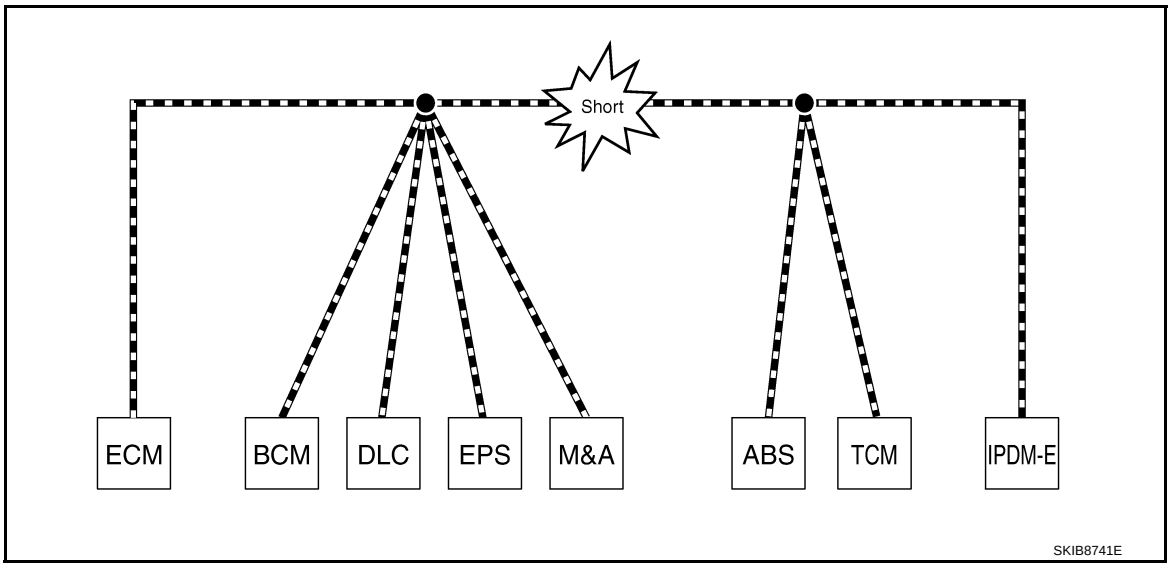
Error	Difference of symptom
Data link connector branch line open circuit	Normal operation.
CAN-H, CAN-L harness short-circuit	Most of the units which are connected to the CAN communication system enter fail-safe mode or are deactivated.

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.
TCM	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



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.
TCM	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

INFOID:0000000010715292

CAN diagnosis on CONSULT 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:0000000010715293

If communication signals cannot be transmitted or received among units communicating via CAN communication line, CAN communication-related DTC is displayed on the CONSULT “Self Diagnostic Result” screen.
NOTE:
The following table shows examples of CAN communication-related DTC. For other DTC, refer to the applicable sections.

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

CAN Diagnostic Support Monitor

INFOID:0000000010715294

MONITOR ITEM (CONSULT)

Example: CAN DIAG SUPPORT MNTR indication

Without PAST

BCM		
MONITOR ITEM	PRESENT	PAST
INITIAL DIAG	OK	-
TRANSMIT DIAG	OK	-
ECM	OK	-
METER/M&A	OK	-
TCM	OK	-
IPDM E/R	OK	-
I-KEY	OK	-

With PAST

ENGINE		
MONITOR ITEM	PRESENT	PAST
TRANSMIT DIAG	OK	OK
VDC/TCS/ABS	OK	5
METER/M&A	Not diagnosed	-
BCM/SEC	OK	OK
ICC	Not diagnosed	-
HVAC	Not diagnosed	-
TCM	OK	OK
EPS	OK	OK
IPDM E/R	OK	5
e4WD	Not diagnosed	-
AWD/4WD	Not diagnosed	-

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Without PAST

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

With PAST

Item	PRESENT	PAST	Description
Transmission diagnosis	OK	OK	Normal at present and in the past
		1 – 39	Normal at present, but unable to transmit signals for 2 seconds or more in the past. (The number indicates the number of ignition switch cycles from OFF to ON.)
	UNKWN	0	Unable to transmit signals for 2 seconds or more at present.
Control unit name (Reception diagnosis)	OK	OK	Normal at present and in the past
		1 – 39	Normal at present, but unable to receive signals for 2 seconds or more in the past. (The number indicates the number of ignition switch cycles from OFF to ON.)
	UNKWN	0	Unable to receive signals for 2 seconds or more at present.
	Not diagnosed	–	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.

Example: Vehicle Display

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

How to Use CAN Communication Signal Chart

INFOID:0000000010715295

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

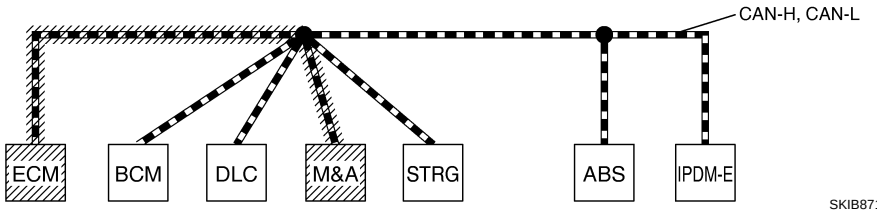
Example: Tachometer does not move even though the engine rotates.

T: Transmit R: Receive

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

No communication between ECM and M&A.

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



BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Trouble Diagnosis Flow Chart

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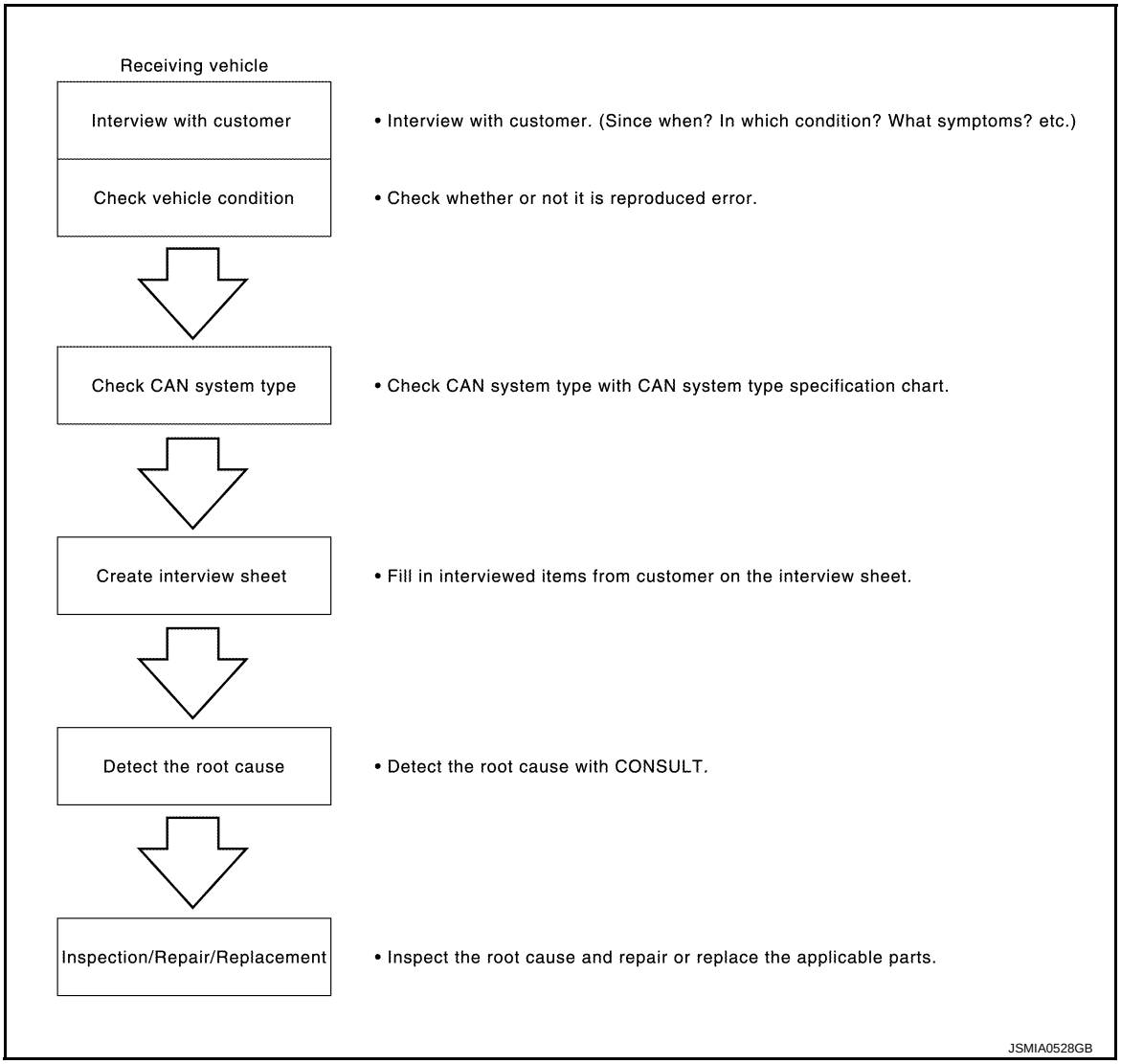

Trouble Diagnosis Procedure

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INTERVIEW WITH CUSTOMER

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

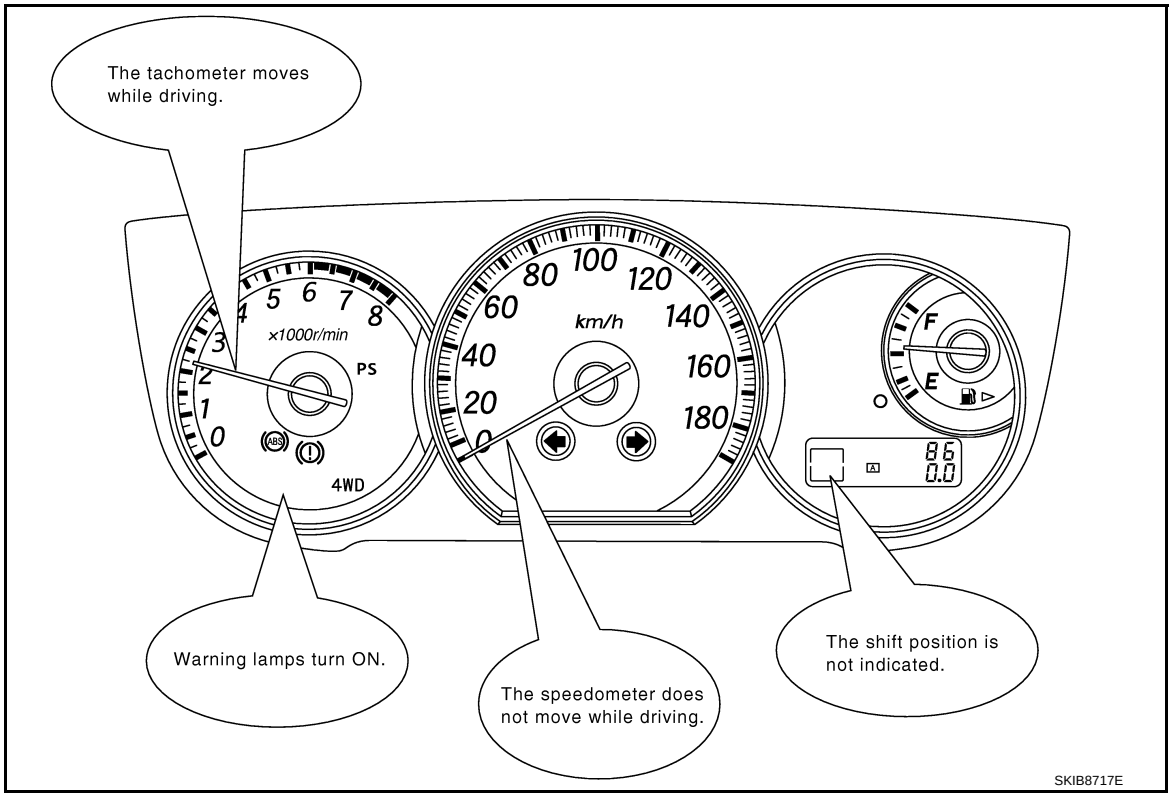
Points in interview

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

NOTE:

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

- 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 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 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:

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

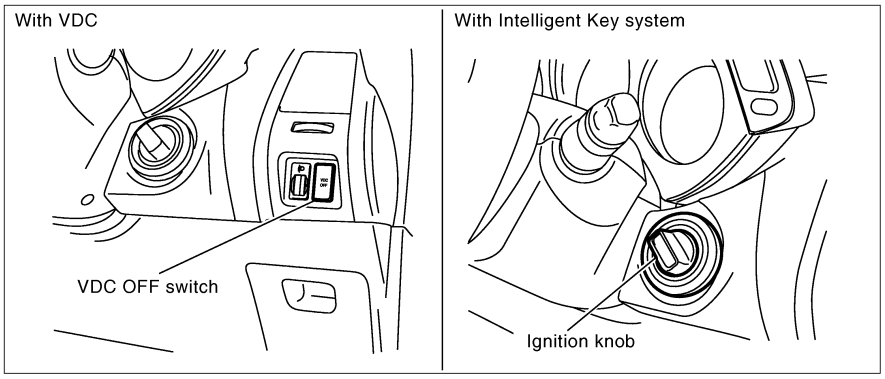
Example:
Vehicle is equipped as follows: Wagon, AWD, VQ35DE, CVT, VDC, and Intelligent Key system. ( ) shows an example of CAN system type.)

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

Body type	Wagon						Check the vehicle equipment with the vehicle identification number plate.
Axle	2WD				AWD		
Engine	QR25DE		VQ35DE				
Transmission	A/T		CVT				
Brake control	ABS				VDC		Check the vehicle equipment.
Intelligent Key system		×		×		×	
CAN system type	1	2	3	4	5	6	The number indicates the CAN system type of the vehicle.
CAN communication signal chart	XX-XX. "TYPE 1/TYPE 2"		XX-XX. "TYPE 3/TYPE 4"		XX-XX. "TYPE 5/TYPE 6"		

×: Applicable

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



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

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

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CAN System Type Specification Chart (Style B)
NOTE:

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

Example:
Vehicle is equipped as follows: Sedan, 2WD, MR20DE, CVT, ABS, Active AFS, Intelligent Key system, Navigation system and Automatic drive positioner. (⬭ shows an example of CAN system type.)

CAN System Specification Chart

Refer to the specification as shown in the chart.

Body type	Sedan		
Axle	2WD		AWD
Engine	HR15DE	MR20DE	HR15DE
Transmission	A/T	CVT	A/T
Brake control	ABS		
Specification chart	XX.XX "SPECIFICATION CHART A"	YY.YY "SPECIFICATION CHART B"	XX.XX "SPECIFICATION CHART C"

Check the vehicle equipment with the vehicle identification number plate.
Check the vehicle equipment.
Select the applicable vehicle equipment. Refer to the specification chart.

×: Applicable

SPECIFICATION CHART B

Determine CAN system type from the following specification chart.

Body type	Sedan										
Axle	2WD										
Engine	MR20DE										
Transmission	CVT										
Brake control	ABS										
Active AFS		×			×	×		×	×		×
Intelligent Key system			×		×		×	×	×	×	×
Navigation system				×		×	×		×		×
Automatic drive positioner								×		×	×	×
CAN system type	9	10	11	12	13	14	15	16	17	18	19	20
CAN communication signal chart	XX.XX "TYPE 9/TYPE 10/TYPE 11/TYPE 12/TYPE 13/TYPE 14/TYPE 15/TYPE 16/TYPE 17/TYPE 18/TYPE 19/TYPE 20"											

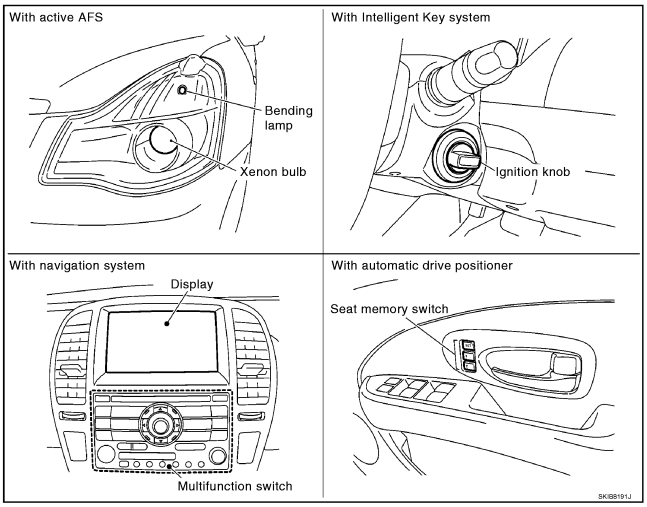
Check the vehicle equipment.
The number indicates the CAN system type of the vehicle.

×: Applicable

VEHICLE EQUIPMENT IDENTIFICATION INFORMATION

NOTE:

Check CAN system type from the vehicle shape and equipment.



In the above example,
- Checking Xenon bulb and bending lamp lead to judge whether or not Active AFS is equipped.
- Checking the ignition knob leads to judge whether or not Intelligent Key system is equipped.
- Checking display and multifunction switch lead to judge whether or not Navigation system is equipped.
- Checking seat memory switch leads to judge whether or not Automatic drive positioner is equipped.

For the above case, CAN system type is "20".

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CREATE INTERVIEW SHEET

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

Interview Sheet (Example)

CAN Communication System Diagnosis Interview Sheet

Date received: 3, Feb. 2006

Type: DBA-KG11

VIN No.: KG11-005040

Model: BDRARGZ397EDA-E-J-

First registration: 10, Jan. 2001

Mileage: 62,140

CAN system type: Type 19

Symptom (Results from interview with customer)

- Headlamps suddenly turn ON while driving the vehicle.
- The engine does not restart after stopping the vehicle and turning the ignition switch OFF.
- The cooling fan continues rotating while turning the ignition switch ON.

Condition at inspection

Error Symptom: (Present) / Past

The engine does not start.
While turning the ignition switch ON,
- The headlamps (Lo) turn ON, and the cooling fan continues rotating.
- The interior lamp does not turn ON.

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DETECT THE ROOT CAUSE

CAN diagnosis function of CONSULT detects the root cause.

HOW TO USE THIS MANUAL

HOW TO USE THIS SECTION

Caution

INFOID:0000000010715298

- This section describes information peculiar to a vehicle and inspection procedures.
- For trouble diagnosis procedure, refer to LAN-17, "Trouble Diagnosis Procedure".

Abbreviation List

INFOID:0000000010715299

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

Abbreviation	Unit name
4WD	4WD control unit
A-BAG	Air bag diagnosis sensor unit
ABS	ABS actuator and electric unit (control unit)
AV	NAVI control unit
AVM	Around view monitor control unit
BCM	BCM
CCM	Chassis control module
DLC	Data link connector
ECM	ECM
EHS/PKB	Electric parking brake control module
EPS/DAST3	EPS control unit
ESCL	Steering lock unit
HVAC	A/C auto amp. (with auto A/C)
	A/C amp. (with manual A/C)
ICC	Distance sensor unit
IPDM-E	IPDM E/R
LANE	Front camera unit
M&A	Combination meter
PWBD	Automatic back door control unit
SONAR	Sonar control unit
STRG	Steering angle sensor
TCM	TCM

PRECAUTION

PRECAUTIONS

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

INFOID:0000000010715300

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. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

WARNING:

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

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

- **When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery and wait at least three minutes before performing any service.**

Precautions for Trouble Diagnosis

INFOID:0000000010715301

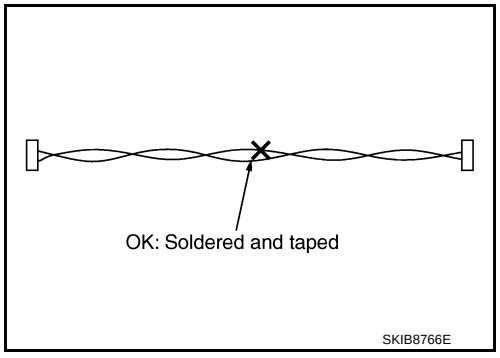
CAUTION:

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

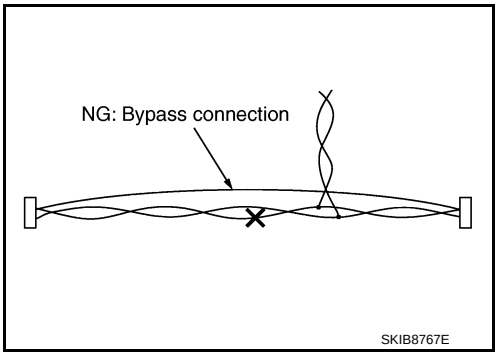
Precautions for Harness Repair

INFOID:0000000010715302

- 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.

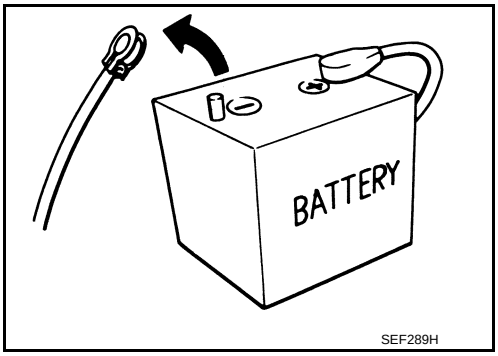


- Replace the applicable harness as an assembly if error is detected on the shield lines of CAN communication line.

Precautions for Removing Battery Terminal

INFOID:0000000011009303

- With the adoption of Auto ACC function, ACC power is automatically supplied by operating the intelligent key or remote keyless entry or by opening/closing the driver side door. In addition, ACC power is supplied even after the ignition switch is turned to the OFF position, i.e. ACC power is supplied for a certain fixed time.
- When disconnecting the 12V battery terminal, turn off the ACC power before disconnecting the 12V battery terminal, observing “How to disconnect 12V battery terminal” described below.
  NOTE:
  Some ECUs operate for a certain fixed time even after ignition switch is turned OFF and ignition power supply is stopped. If the battery terminal is disconnected before ECU stops, accidental DTC detection or ECU data damage may occur.
- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.
  NOTE:
  If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.
- After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.
  NOTE:
  The removal of 12V battery may cause a DTC detection error.



HOW TO DISCONNECT 12V BATTERY TERMINAL

Disconnect 12V battery terminal according to Instruction 1 or Instruction 2 described below.
For vehicles parked by ignition switch OFF, refer to Instruction 2.

INSTRUCTION 1

1. Open the hood.
2. Turn key switch to the OFF position with the driver side door opened.
3. Get out of the vehicle and close the driver side door.
4. Wait at least 3 minutes. For vehicle with the engine listed below, remove the battery terminal after a lapse of the specified time.

D4D engine	: 20 minutes
HRA2DDT	: 12 minutes
K9K engine	: 4 minutes
M9R engine	: 4 minutes
R9M engine	: 4 minutes
V9X engine	: 4 minutes

CAUTION:
While waiting, never operate the vehicle such as locking, opening, and closing doors. Violation of this caution results in the activation of ACC power supply according to the Auto ACC function.

5. Remove 12V battery terminal.
   CAUTION:

After installing 12V battery, always check self-diagnosis results of all ECUs and erase DTC.

INSTRUCTION 2 (FOR VEHICLES PARKED BY IGNITION SWITCH OFF)

1. Unlock the door with intelligent key or remote keyless entry.
   NOTE:
   At this moment, ACC power is supplied.
2. Open the driver side door.
3. Open the hood.
4. Close the driver side door.
5. Wait at least 3 minutes.
   CAUTION:
   While waiting, never operate the vehicle such as locking, opening, and closing doors. Violation of this caution results in the activation of ACC power supply according to the Auto ACC function.
6. Remove 12V battery terminal.
   CAUTION:
   After installing 12V battery, always check self-diagnosis results of all ECUs and erase DTC.

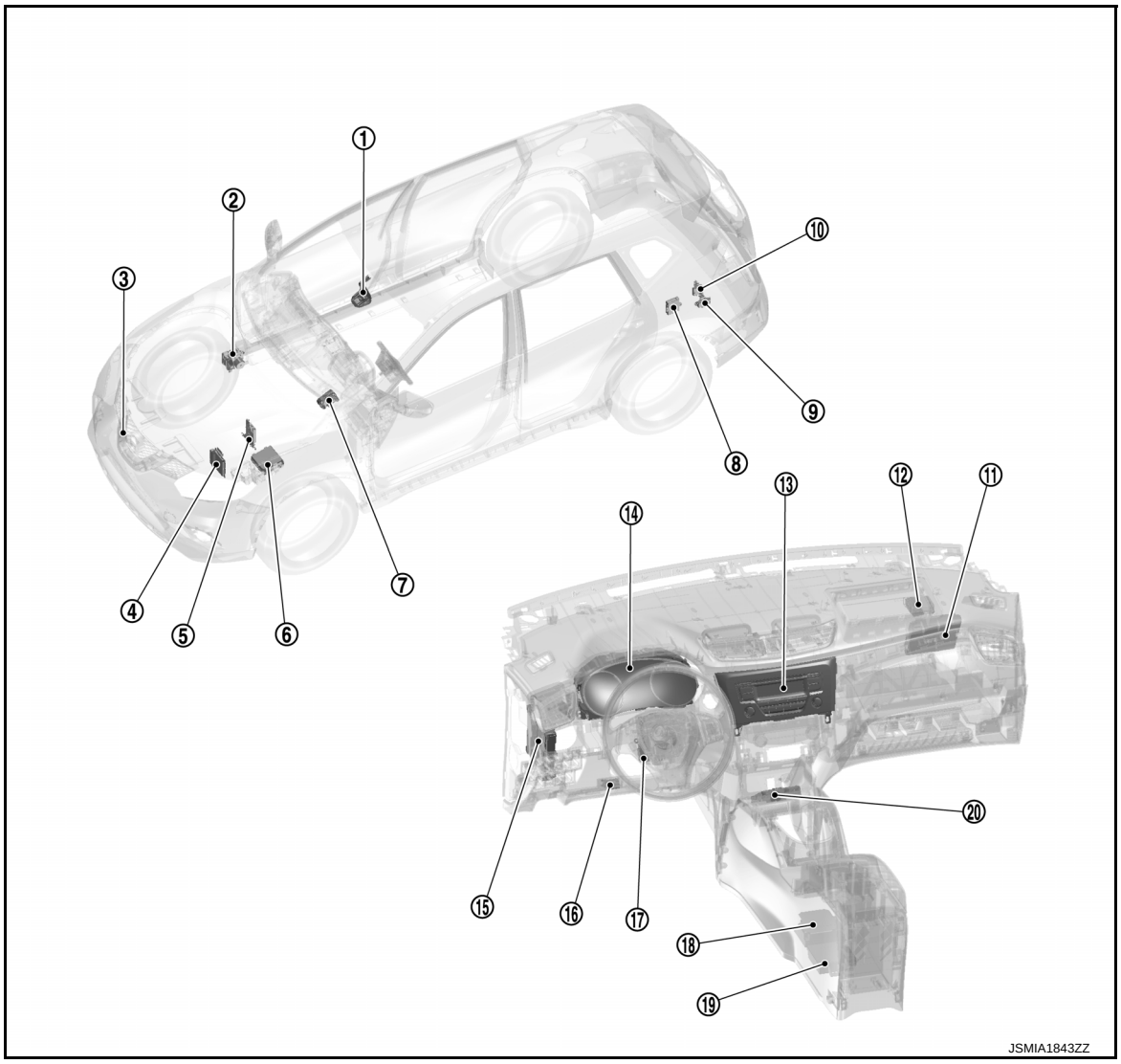
SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

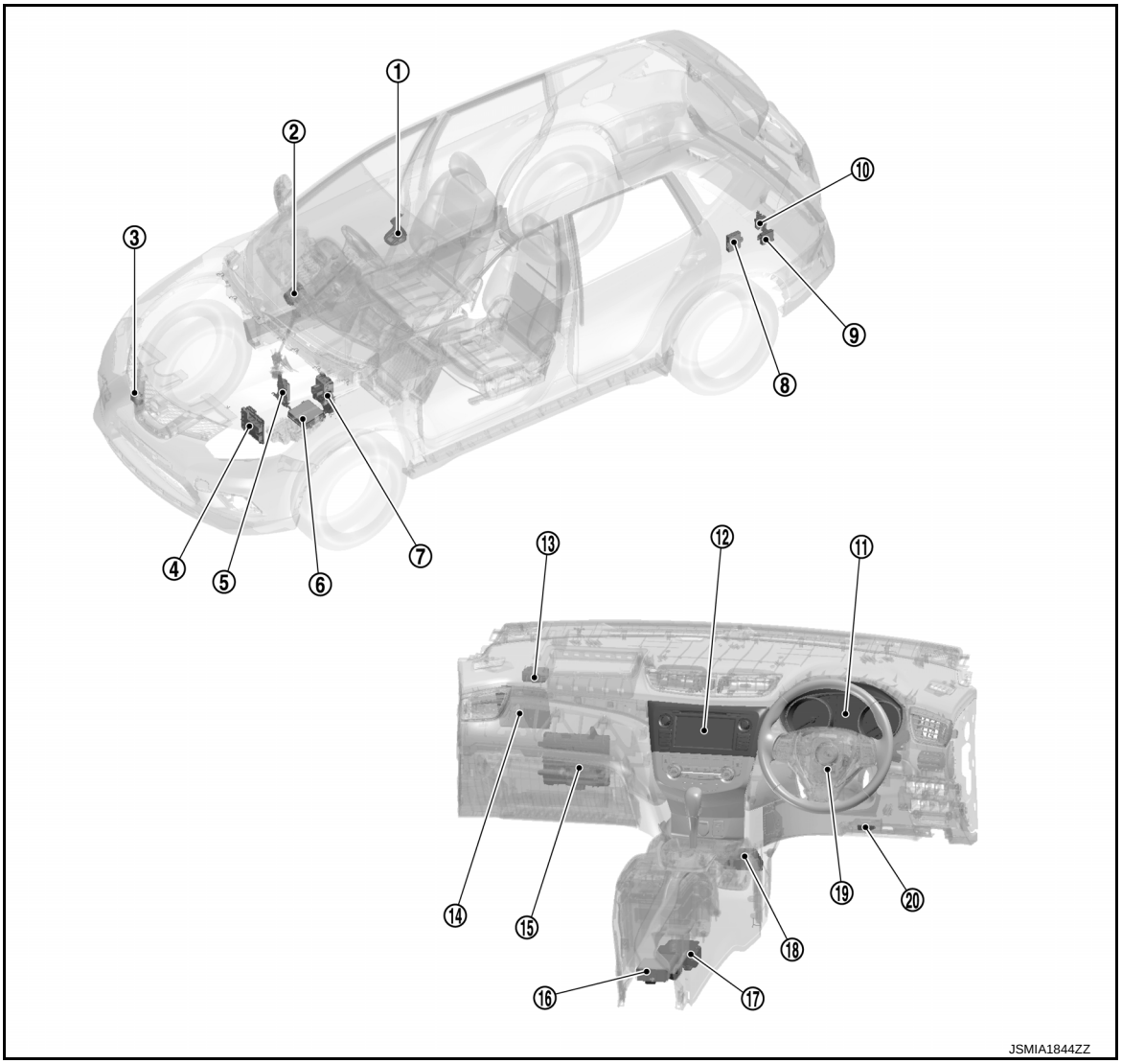
INFOID:0000000010715304

LHD models



① Front camera unit	② ABS actuator and electric unit (control unit)	③ Distance sensor
④ ECM	⑤ TCM	⑥ IPDM E/R
⑦ EPS control unit	⑧ Automatic back door control unit	⑨ Sonar control unit
⑩ 4WD control unit	⑪ Around view monitor control unit	⑫ Chassis control module
⑬ NAVI control unit	⑭ Combination meter	⑮ BCM
⑯ Data link connector	⑰ Steering angle sensor	⑱ Air bag diagnosis sensor unit
⑲ Electric parking brake control module	⑳ • A/C auto amp. (With auto A/C) • A/C amp. (With manual A/C)	

RHD models



① Front camera unit	② EPS control unit	③ Distance sensor
④ ECM	⑤ TCM	⑥ IPDM E/R
⑦ ABS actuator and electric unit (control unit)	⑧ Automatic back door control unit	⑨ Sonar control unit
⑩ 4WD control unit	⑪ Combination meter	⑫ NAVI control unit
⑬ Chassis control module	⑭ Around view monitor control unit	⑮ BCM
⑯ Electric parking brake control module	⑰ Air bag diagnosis sensor unit	⑱ • A/C auto amp. (With auto A/C) • A/C amp. (With manual A/C)
⑲ Steering angle sensor	⑳ Data link connector	

SYSTEM

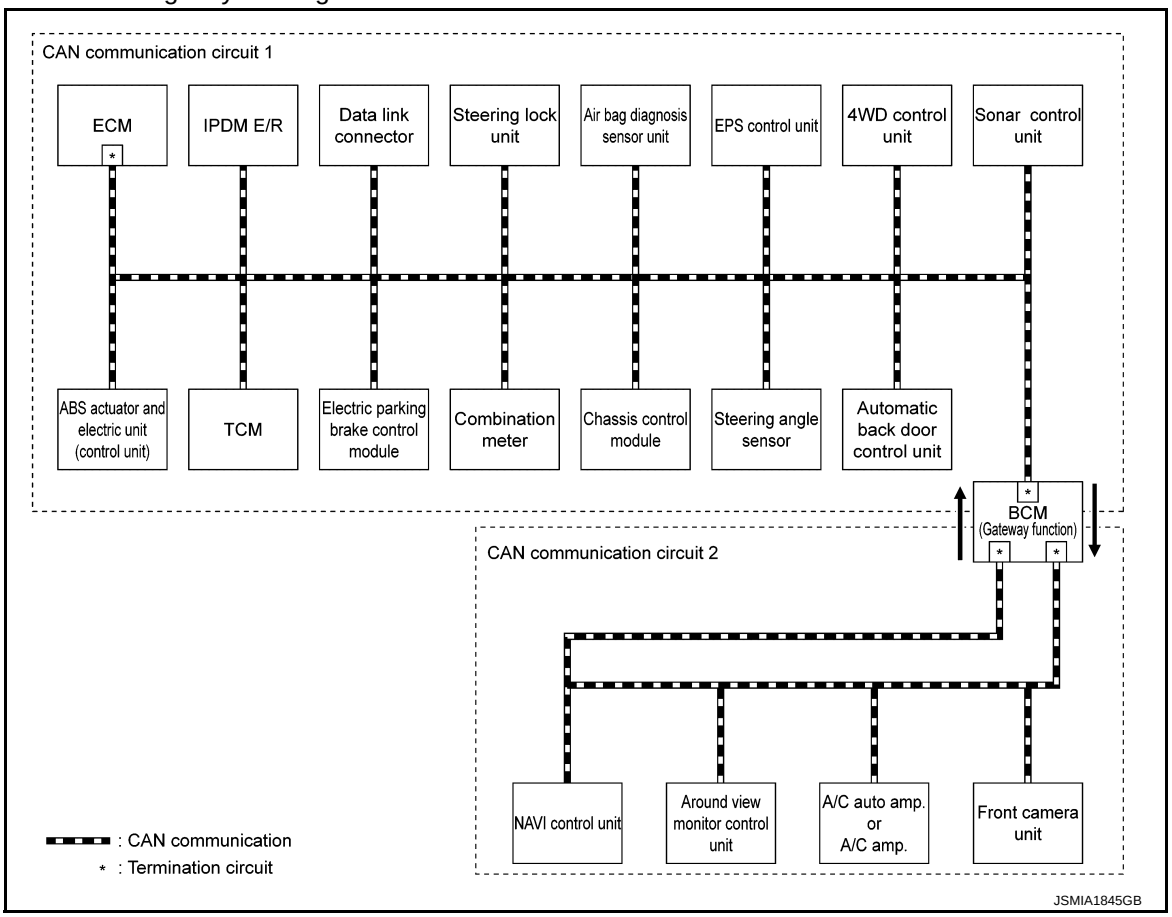
CAN COMMUNICATION SYSTEM

CAN COMMUNICATION SYSTEM : System Description

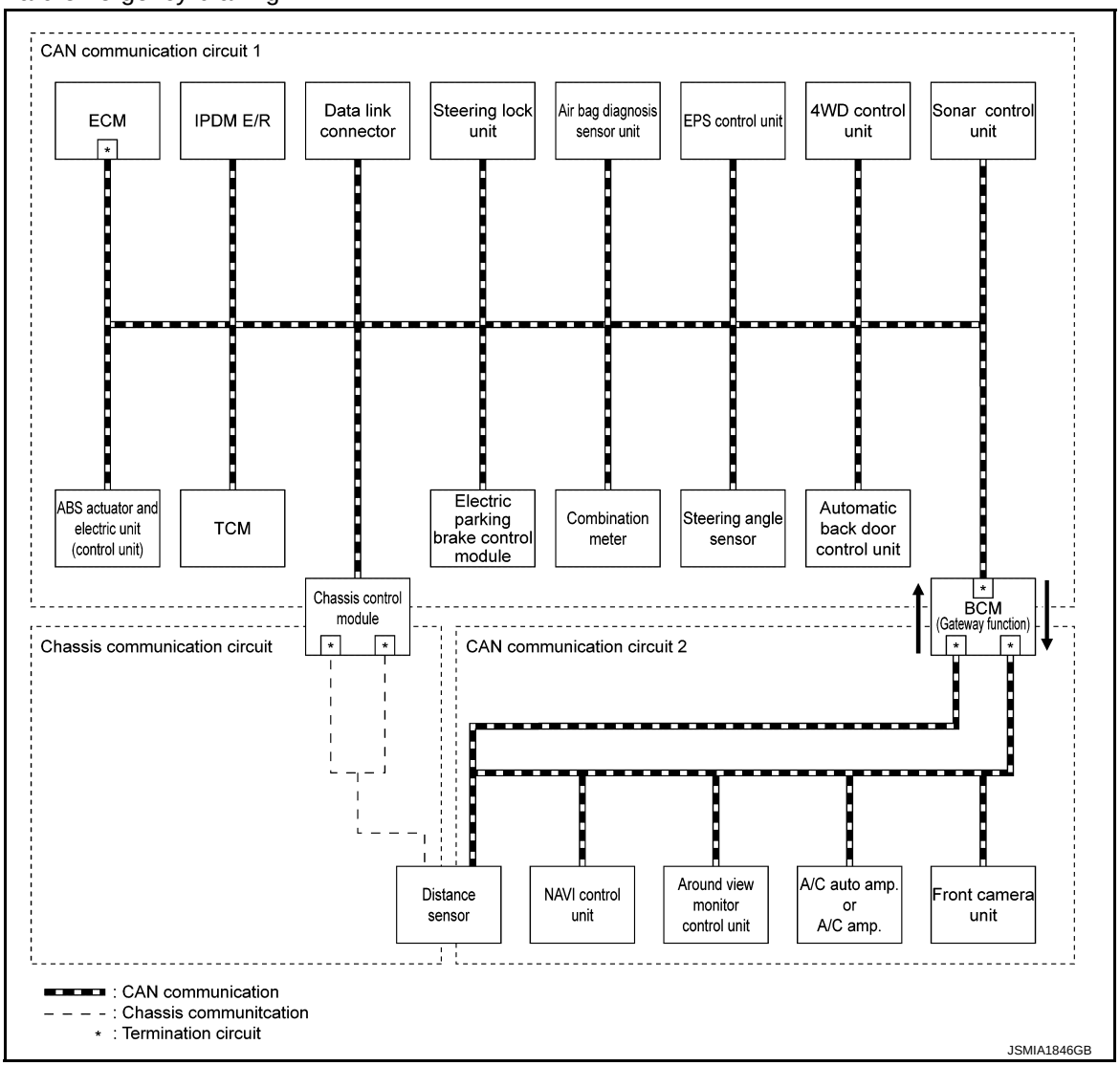
INFOID:0000000010715305

SYSTEM DIAGRAM

Without forward emergency braking



With forward emergency braking



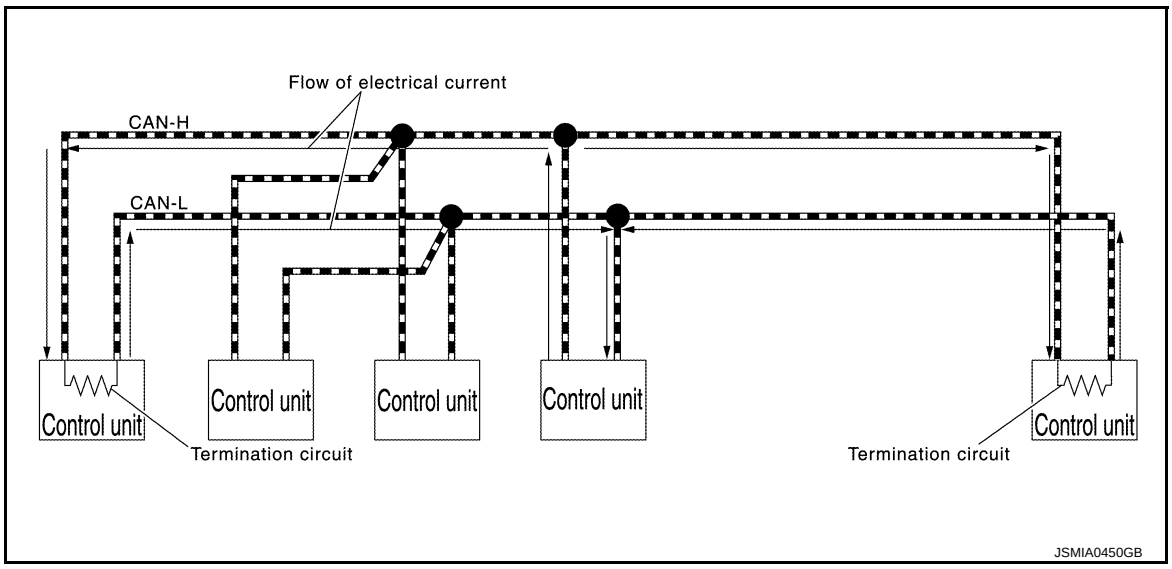
DESCRIPTION

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

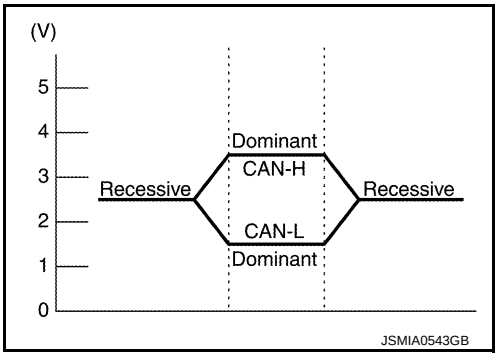
CAN communication circuit	Gateway control unit	Reference
CAN communication circuit 1 ⇔ CAN communication circuit 2	BCM	LAN-110, "System Description"

CAN Communication Signal Generation

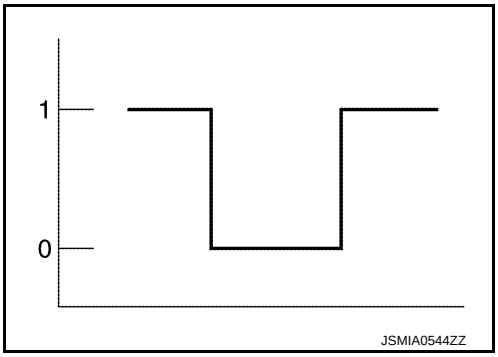
- Termination circuits (resistors) are connected across the CAN communication system. When transmitting a CAN communication signal, each control unit passes a current to the CAN-H line and the current returns to the CAN-L line.



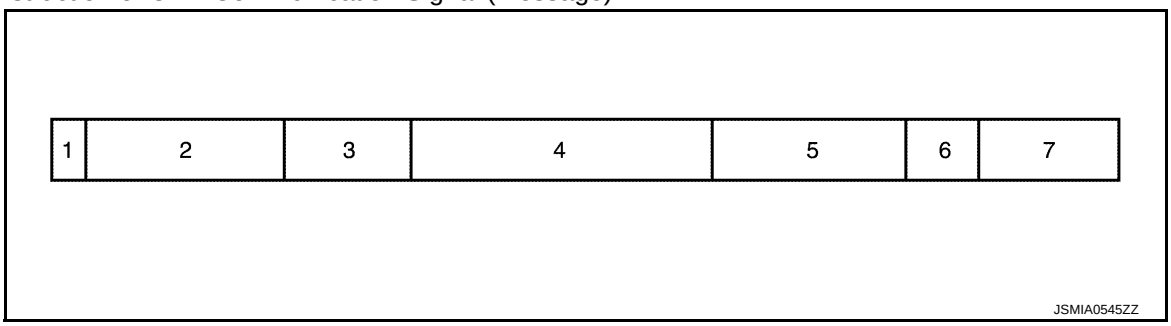
- The current flows separately into the termination circuits connected across the CAN communication system and the termination circuits drop voltage to generate a potential difference between the CAN-H line and the CAN-L line.
  NOTE:
  A signal with no current passage is called “Recessive” and one with current passage is called “Dominant”.



- The system produces digital signals for signal communications, by using the potential difference.



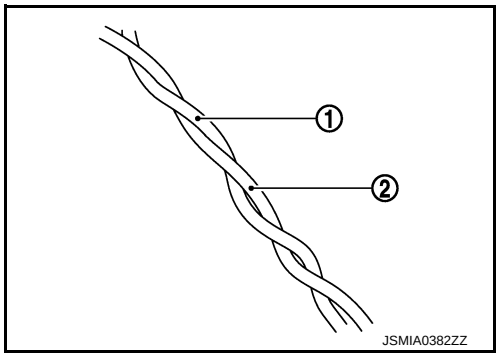
The Construction of CAN Communication Signal (Message)



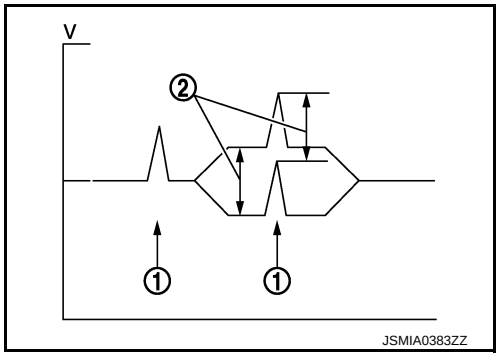
No.	Message name	Description
1	Start of frame (1 bit)	Start of message.
2	Arbitration of field (11 bit)	Priorities of message-sending are shown when there is a possibility that multiple messages are sent at the same time.
3	Control field (6 bit)	Signal quantity in data field is shown.
4	Data field (0-64 bit)	Actual signal is shown.
5	CRC field (16 bit)	• The transmitting control unit calculates sending data in advance and writes the calculated value in a message. • The receiving control unit calculates received data and judges that the data reception is normal when the calculated value is the same as the value written in the sent data.
6	ACK field (2 bit)	The completion of normal reception is sent to the transmitting unit.
7	End of frame (7 bit)	End of message.

CAN Communication Line

The CAN communication line is a twisted pair wire consisting of strands of CAN-H ① and CAN-L ② and has noise immunity.



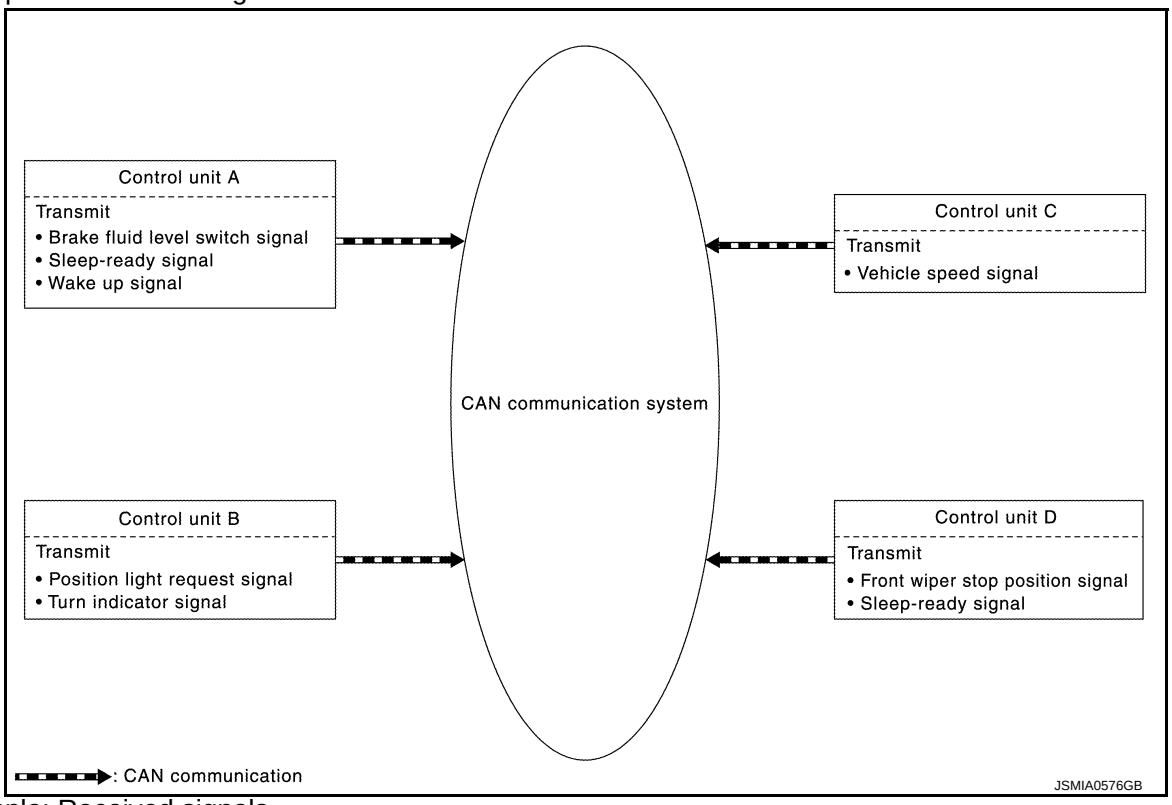
NOTE:
The CAN communication system has the characteristics of noise-resistant because this system produces digital signals by using the potential difference between the CAN-H line and the CAN-L line and has the twisted pair wire structure.
Since the CAN-H line and the CAN-L line are always adjacent to each other, the same degree of noise occurs, respectively, when a noise ① occurs. Although the noise changes the voltage, the potential difference ② between the CAN-H line and the CAN-L line is insensitive to noise. Therefore, noise-resistant signals can be obtained.



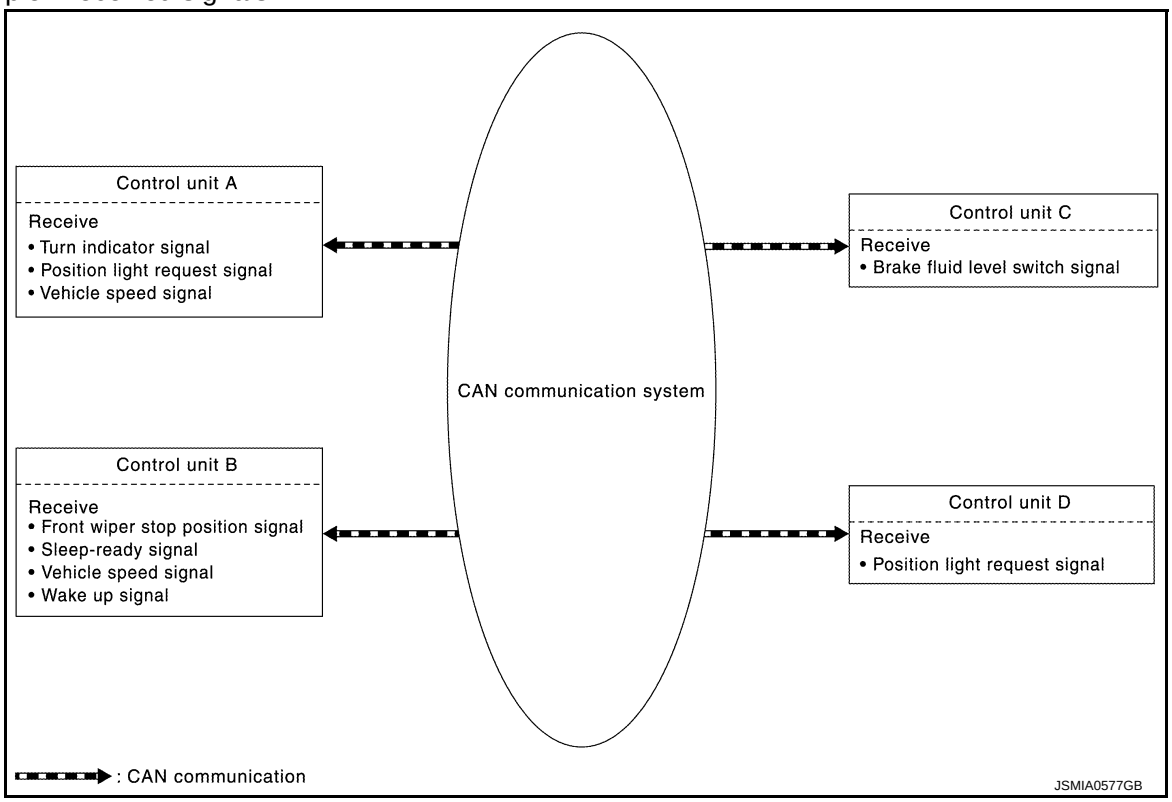
CAN Signal Communications

Each control unit of the CAN communication system transmits signals through the CAN communication control circuit included in the control unit and receives only necessary signals from each control unit to perform various kinds of control.

- Example: Transmitted signals



- Example: Received signals

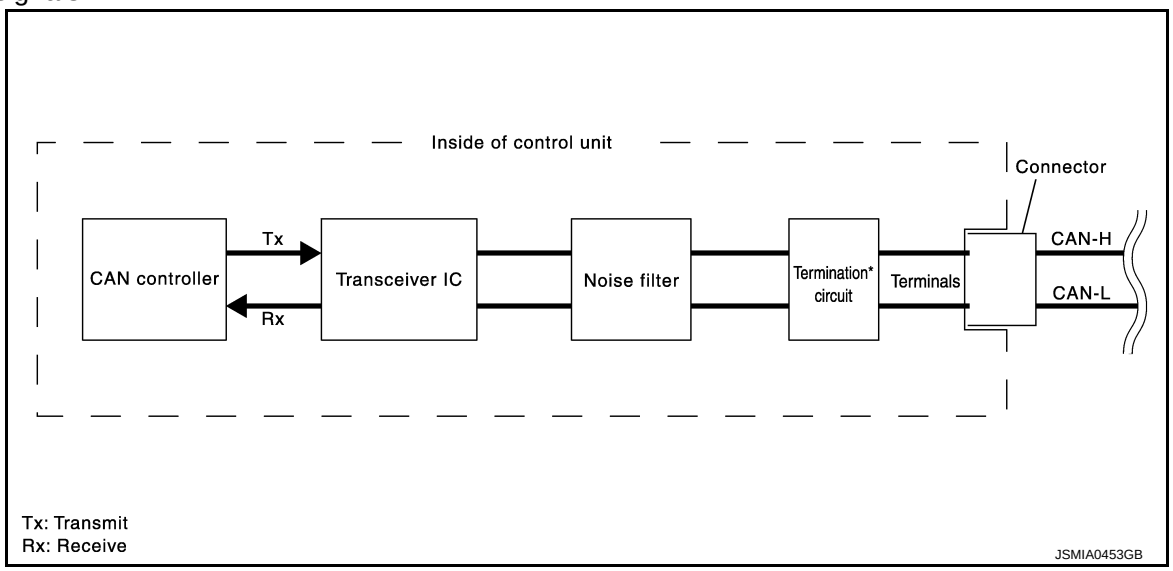


NOTE:
The above signal names and signal communications are provided for reference purposes. For CAN communications signals of this vehicle, refer to LAN-41, "CAN COMMUNICATION SYSTEM : CAN Communication Signal Chart".

CAN COMMUNICATION SYSTEM : CAN Communication Control Circuit

INFOID:0000000010715306

CAN communication control circuit is incorporated into the control unit and transmits/receives CAN communication signals.



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)	Generates a potential difference between CAN-H and CAN-L.

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

CAN COMMUNICATION SYSTEM : CAN System Specification Chart

INFOID:0000000010715307

Determine CAN system type from the following specification chart.

NOTE:

Refer to LAN-17, "Trouble Diagnosis Procedure" for how to use CAN system specification chart.

Refer to the specification as shown in the chart.

Body type	Wagon						
Axle	2WD				4WD		
Engine	MR20DD		R9M		MR20DD	QR25DE	R9M
Transmission	M/T	CVT	M/T	CVT	CVT	CVT	M/T
Brake control	VDC						
Specification chart	A	B	A	B	C	C	D

SPECIFICATION CHART A

Determine CAN system type from the following specification chart.

Body type	Wagon																
Axle	2WD																
Engine	MR 20 DD	R9M															
Transmission	M/T																
Brake control	VDC																
Navigation system					×			×	×			×	×		×	×	×
Sonar system				×			×	×			×		×	×	×		×
Intelligent key system			×				×		×	×			×	×		×	×
Front emergency braking system						×				×	×	×		×	×	×	×
LDW system						×				×	×	×		×	×	×	×
CAN system type	101	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
CAN communication unit																	
ECM	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
ABS actuator and electric unit (control unit)	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
IPDM E/R	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Data link connector	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Electric parking brake control module	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Steering lock unit			×				×		×	×			×	×		×	×
Combination meter	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Air bag diagnosis sensor unit	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Chassis control module	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
EPS control unit	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Steering angle sensor	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Automatic back door control unit			×				×		×	×			×	×		×	×
Sonar control unit				×			×	×			×		×	×	×		×
BCM	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
NAVI control unit					×			×	×			×	×		×	×	×
Around view monitor control unit					×			×	×			×	×		×	×	×
A/C auto amp.*1 or A/C amp.*2	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Front camera unit						×				×	×	×		×	×	×	×
Chassis communication unit																	
Chassis control module						×				×	×	×		×	×	×	×
Distance sensor						×				×	×	×		×	×	×	×

×: Applicable

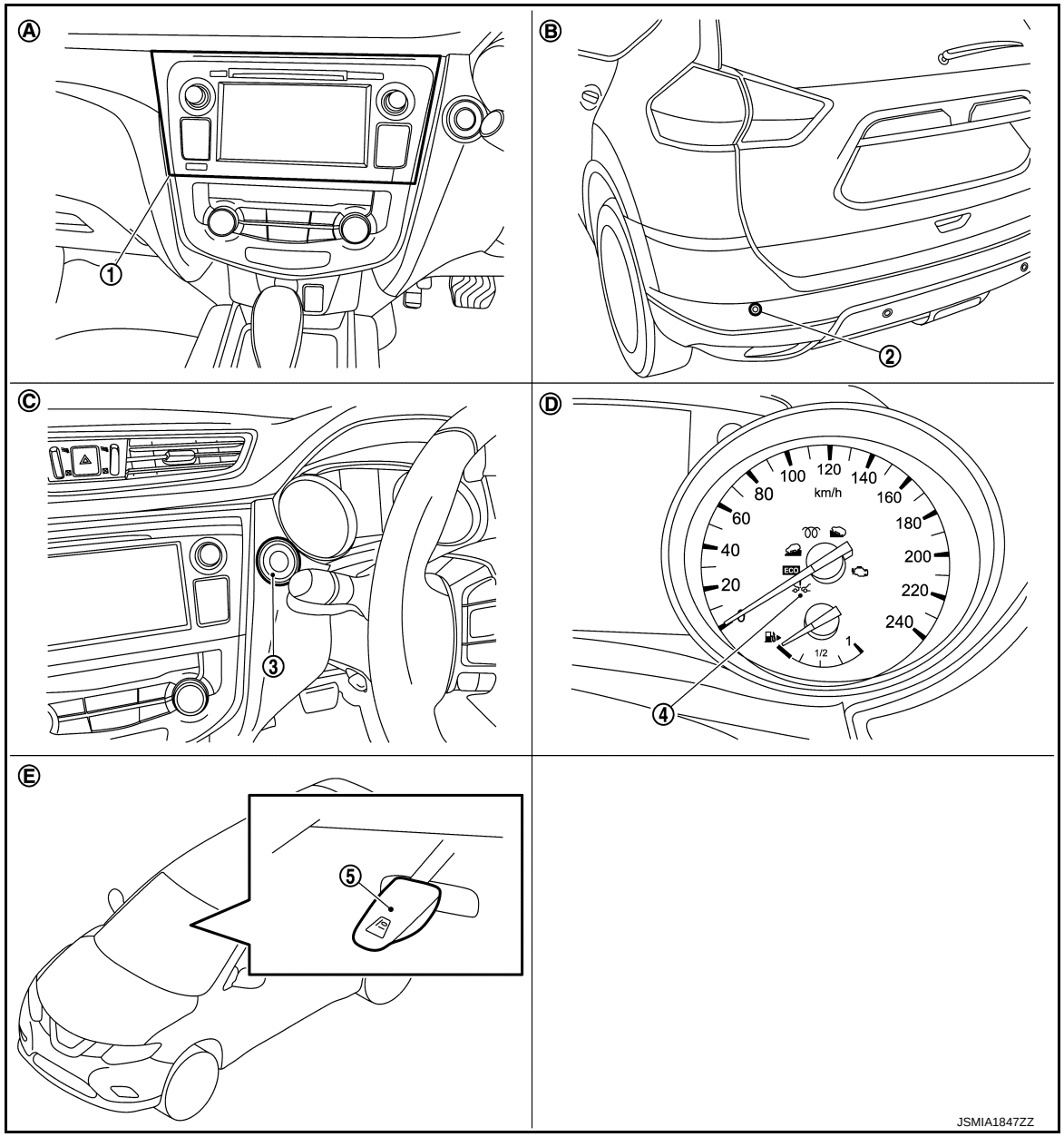
*1: With auto A/C

*2: With manual A/C

VEHICLE EQUIPMENT IDENTIFICATION INFORMATION

NOTE:

Check CAN system type from the vehicle shape and equipment.



① NAVI control unit
② Rear LH corner sonar sensor
③ Push-button ignition switch
④ FEB warning lamp
⑤ Front camera unit
Ⓐ With navigation system
Ⓑ With sonar system
Ⓒ With intelligent key system
Ⓓ With front emergency braking system
Ⓔ With LDW system

SPECIFICATION CHART B

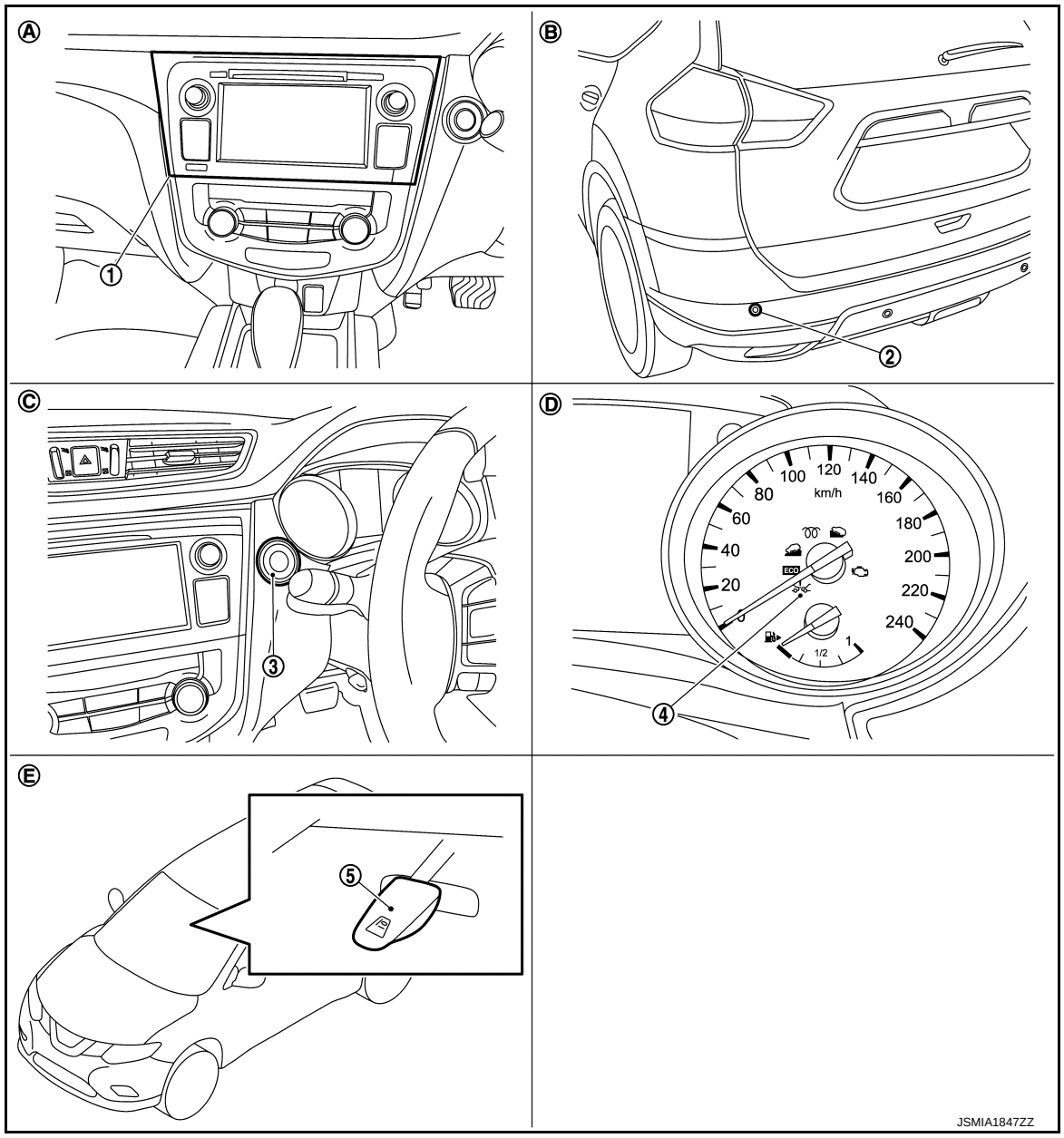
Determine CAN system type from the following specification chart.

Body type	Wagon																		
Axle	2WD																		
Engine	MR20DD			R9M															
Transmission	CVT																		
Brake control	VDC																		
Navigation system			×				×			×	×			×	×		×	×	×
Sonar system		×	×			×			×	×			×		×	×	×		×
Intelligent key system	×	×	×		×				×		×	×			×	×		×	×
Front emergency braking system								×				×	×	×		×	×	×	×
LDW system								×				×	×	×		×	×	×	×
CAN system type	102	103	104	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136
CAN communication unit																			
ECM	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
ABS actuator and electric unit (control unit)	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
IPDM E/R	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
TCM	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Data link connector	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Electric parking brake control module	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Steering lock unit	×	×	×		×				×		×	×			×	×		×	×
Combination meter	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Air bag diagnosis sensor unit	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Chassis control module	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
EPS control unit	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Steering angle sensor	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Automatic back door control unit	×	×	×		×				×		×	×			×	×		×	×
Sonar control unit		×	×			×			×	×			×		×	×	×		×
BCM	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
NAVI control unit			×				×			×	×			×	×		×	×	×
Around view monitor control unit			×				×			×	×			×	×		×	×	×
A/C auto amp.*1 or A/C amp.*2	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Front camera unit								×				×	×	×		×	×	×	×
Chassis communication unit																			
Chassis control module								×				×	×	×		×	×	×	×
Distance sensor								×				×	×	×		×	×	×	×

×: Applicable
*1: With auto A/C
*2: With manual A/C

VEHICLE EQUIPMENT IDENTIFICATION INFORMATION

NOTE:
Check CAN system type from the vehicle shape and equipment.



① NAVI control unit	② Rear LH corner sonar sensor	③ Push-button ignition switch
④ FEB warning lamp	⑤ Front camera unit	
Ⓐ With navigation system	Ⓑ With sonar system	Ⓒ With intelligent key system
Ⓓ With front emergency braking system	Ⓔ With LDW system	

SPECIFICATION CHART C

Determine CAN system type from the following specification chart.

Body type	Wagon										
Axle	4WD										
Engine	MR20DD						QR25DE				
Transmission	CVT										
Brake control	VDC										
Navigation system					×	×				×	×
Sonar system			×	×	×	×		×	×	×	×
Intelligent key system		×	×	×	×	×	×	×	×	×	×
LDW system				×		×			×		×
CAN system type	137	138	139	140	141	142	143	144	145	146	147
CAN communication unit											
ECM	×	×	×	×	×	×	×	×	×	×	×
ABS actuator and electric unit (control unit)	×	×	×	×	×	×	×	×	×	×	×
IPDM E/R	×	×	×	×	×	×	×	×	×	×	×
TCM	×	×	×	×	×	×	×	×	×	×	×
Data link connector	×	×	×	×	×	×	×	×	×	×	×
Electric parking brake control module	×	×	×	×	×	×	×	×	×	×	×
Steering lock unit		×	×	×	×	×	×	×	×	×	×
Combination meter	×	×	×	×	×	×	×	×	×	×	×
Air bag diagnosis sensor unit	×	×	×	×	×	×	×	×	×	×	×
Chassis control module	×	×	×	×	×	×	×	×	×	×	×
EPS control unit	×	×	×	×	×	×	×	×	×	×	×
Steering angle sensor	×	×	×	×	×	×	×	×	×	×	×
4WD control unit	×	×	×	×	×	×	×	×	×	×	×
Automatic back door control unit		×	×	×	×	×	×	×	×	×	×
Sonar control unit			×	×	×	×		×	×	×	×
BCM	×	×	×	×	×	×	×	×	×	×	×
NAVI control unit					×	×				×	×
Around view monitor control unit					×	×				×	×
A/C auto amp.*1 or A/C amp.*2	×	×	×	×	×	×	×	×	×	×	×
Front camera unit				×		×			×		×

×: Applicable

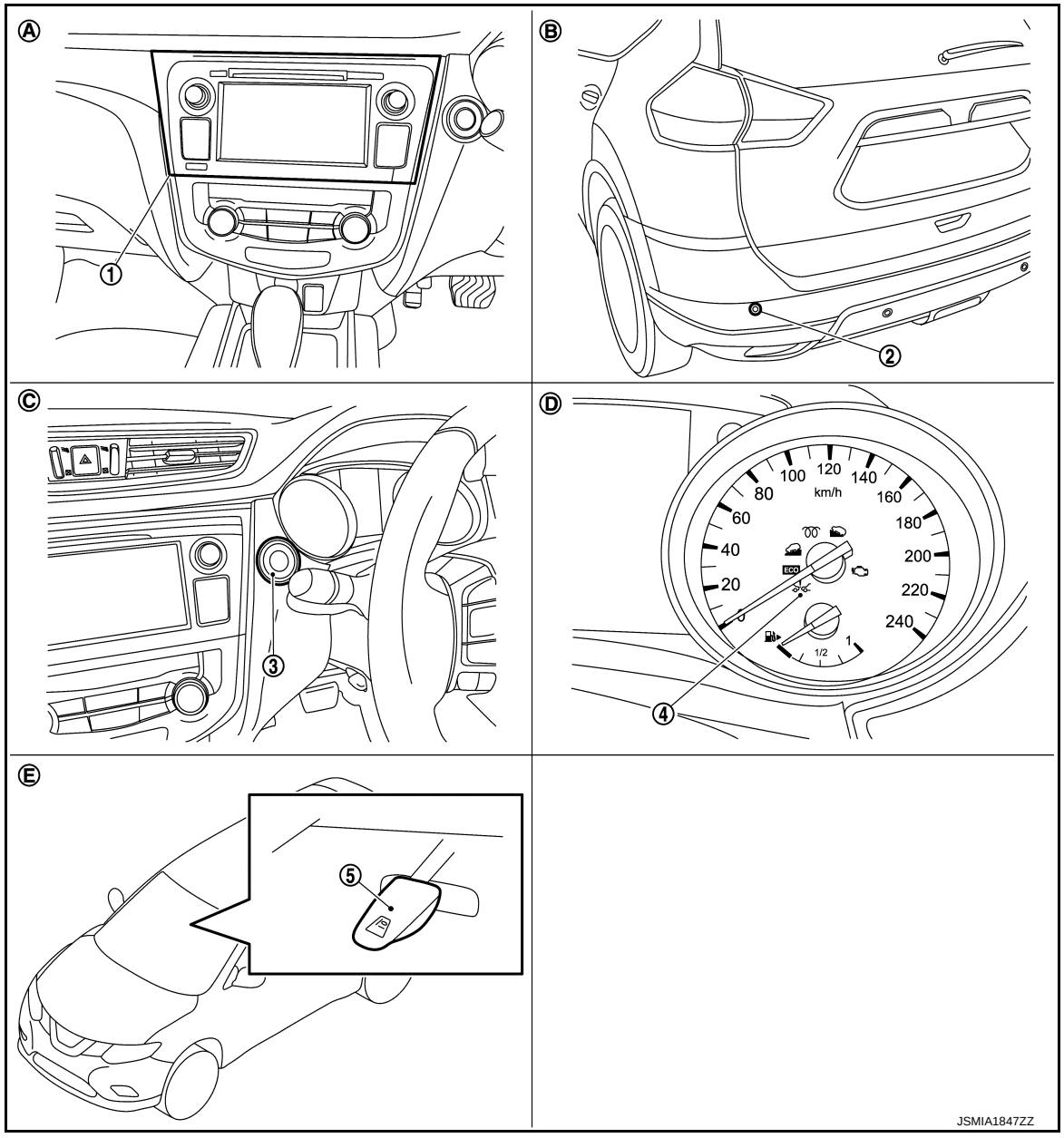
*1: With auto A/C

*2: With manual A/C

VEHICLE EQUIPMENT IDENTIFICATION INFORMATION

NOTE:

Check CAN system type from the vehicle shape and equipment.



① NAVI control unit
② Rear LH corner sonar sensor
③ Push-button ignition switch
④ FEB warning lamp
⑤ Front camera unit
Ⓐ With navigation system
Ⓑ With sonar system
Ⓒ With intelligent key system
Ⓓ With front emergency braking system
Ⓔ With LDW system

SPECIFICATION CHART D

Determine CAN system type from the following specification chart.

Body type	Wagon																	
Axle	4WD																	
Engine	R9M																	
Transmission	M/T																	
Brake control	VDC																	
Navigation system				×			×	×				×	×		×	×	×	×
Sonar system			×			×	×			×	×		×	×	×	×		×
Intelligent key system		×				×		×	×	×			×	×	×		×	×
Front emergency braking system					×				×		×	×		×		×	×	×
LDW system					×				×	×	×	×		×	×	×	×	×
CAN system type	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165
CAN communication unit																		
ECM	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
ABS actuator and electric unit (control unit)	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
IPDM E/R	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Data link connector	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Electric parking brake control module	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Steering lock unit		×				×		×	×	×			×	×	×		×	×
Combination meter	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Air bag diagnosis sensor unit	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Chassis control module	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
EPS control unit	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Steering angle sensor	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
4WD control unit	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Automatic back door control unit		×				×		×	×	×			×	×	×		×	×
Sonar control unit			×			×	×			×	×		×	×	×	×		×
BCM	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
NAVI control unit				×			×	×				×	×		×	×	×	×
Around view monitor control unit				×			×	×				×	×		×	×	×	×
A/C auto amp.*1 or A/C amp.*2	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Front camera unit					×				×	×	×	×		×	×	×	×	×
Chassis communication unit																		
Chassis control module					×				×		×	×		×		×	×	×
Distance sensor					×				×		×	×		×		×	×	×

×: Applicable

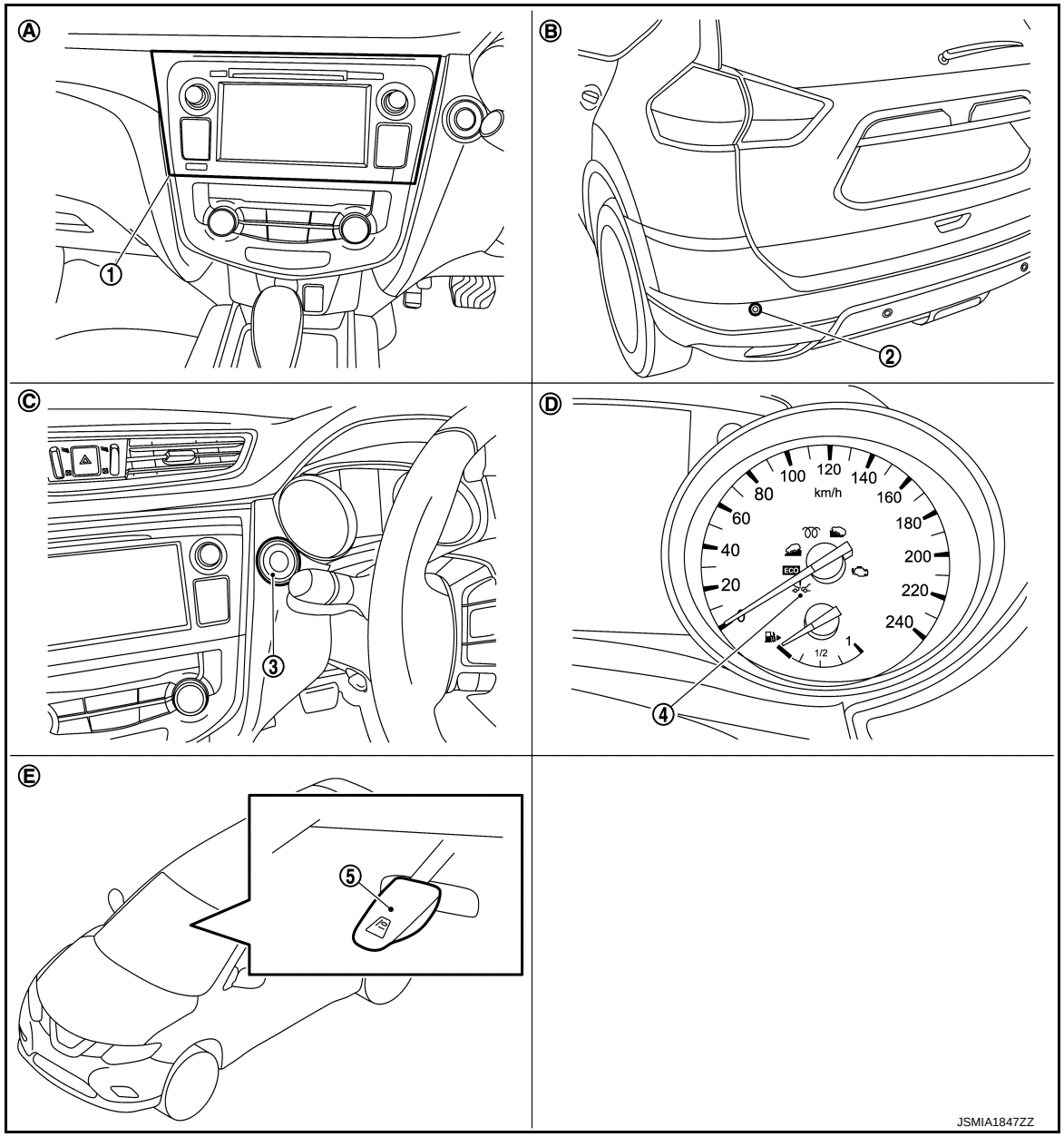
*1: With auto A/C

*2: With manual A/C

VEHICLE EQUIPMENT IDENTIFICATION INFORMATION

NOTE:

Check CAN system type from the vehicle shape and equipment.



① NAVI control unit	② Rear LH corner sonar sensor	③ Push-button ignition switch
④ FEB warning lamp	⑤ Front camera unit	
Ⓐ With navigation system	Ⓑ With sonar system	Ⓒ With intelligent key system
Ⓓ With front emergency braking system	Ⓔ With LDW system	

CAN COMMUNICATION SYSTEM : CAN Communication Signal Chart

INFOID:0000000010715308

Refer to LAN-16, "How to Use CAN Communication Signal Chart" for how to use CAN communication signal chart.

NOTE:

Refer to LAN-22, "Abbreviation List" for the abbreviations of the connecting units.

T: Transmit R: Receive

Signal name/Connecting unit	ECM	ABS	IPDM-E	TCM	EHS/PKB	ESCL	M&A	A-BAG	CCM	EPS/DAST3	STRG	4WD	PWBD	SONAR	BCM	AV	AVM	HVAC	ICC	LANE
A/C compressor request signal	T		R																	
Accelerator pedal position signal	T	R		R					R			R					R		R	
ASCD status signal	T						R													
Brake hold request signal*1	T	R																		
Battery warning request signal (ECM)	T						R													
Closed throttle position signal	T			R															R	
Cooling fan speed request signal	T		R												R			R		
ECM malfunction signal	T	R							R					R			R			
ECO mode indicator signal	T						R													
ECO pedal guide signal	T						R													
Electrical power cut freeze signal	T														R					
Engine and CVT integrated control signal	T			R																
	R			T																
Engine coolant temperature signal	T			R			R								R		R	R		
Engine oil pressure warning lamp signal	T						R													
Engine speed signal	T	R		R	R				R			R		R	R			R	R	
				T			R													
Engine status signal	T	R					R			R					R	R	R			
Engine torque signal	T				R															
EPS assist request signal*1	T									R										
Estimate drive torque signal	T								R											
Fuel consumption monitor signal	T						R									R				
Gear shift indicator signal	T						R													
Glow indicator lamp signal	T						R													
Malfunctioning indicator lamp signal	T						R													
	R			T																
Refrigerant pressure sensor	T																	R		
Request drive torque signal	T								R											
Request drive torque status signal	T								R											
Speed limiter operation signal	T						R													
Stop/start indicator lamp signal*1	T						R													
	R			T																
Stop/start readiness signal*1	T			R																
Stop/start status signal*1	T	R		R			R			R				R	R		R	R		
Water in fuel filter warning lamp signal	T						R													
ABS malfunction signal		T		R					R										R	
ABS operation signal	R	T		R	R				R										R	
ABS warning lamp signal		T					R												R	
Brake booster pressure sensor signal*1	R	T																		

Signal name/Connecting unit	ECM	ABS	IPDM-E	TCM	EHS/PKB	ESCL	M&A	A-BAG	CCM	EPS/DAST3	STRG	4WD	PWBD	SONAR	BCM	AV	AVM	HVAC	ICC	LANE
Brake fluid pressure signal	R *1	T			R				R											
Brake hold readiness signal*1	R	T																		
Brake warning lamp signal		T					R													
EBD malfunction signal		T							R											
EBD operation signal		T							R											
Decel G signal		T		R					R											
Front LH wheel speed signal		T			R				R											
Front RH wheel speed signal		T			R				R											
G sensor signal		T							R											
	R *2			T *2																
hill descent control display request signal							R		T											
		T							R											
hill descent control indicator lamp signal		T					R													
hill start assist indicator lamp signal		T					R													
hill start assist display request signal							R		T											
		T							R											
Rear LH wheel speed signal		T			R				R											
Rear RH wheel speed signal		T			R				R											
Side G signal		T							R											
Steering angle signal		T							R											
Stop lamp request signal		T													R					
TCS malfunction signal		T							R										R	
TCS operation signal		T		R					R										R	
Vehicle speed signal (ABS)		T												R			R		R	R
VDC accept permission signal		T							R											
VDC malfunction signal		T							R					R			R		R	
VDC operation signal		T		R	R				R					R			R		R	
VDC OFF indicator lamp signal		T					R													
VDC OFF switch signal		T							R										R	
VDC warning lamp signal		T					R													
Yaw rate signal		T							R										R	
A/C compressor feedback signal	R		T															R		
Alternator voltage signal	R		T																	
Battery current sensor malfunction signal*1	R		T																	
Battery current signal*1	R		T																	
Battery warning request signal (IPDM E/R)			T				R													
Front wiper status signal			T												R					
Front wiper stop position signal			T												R					
Headlamp warning signal			T				R													

Signal name/Connecting unit	ECM	ABS	IPDM-E	TCM	EHS/PKB	ESCL	M&A	A-BAG	CCM	EPS/DAST3	STRG	4WD	PWBD	SONAR	BCM	AV	AVM	HVAC	ICC	LANE
High beam status signal	R		T																	
Hood switch signal	R *1		T												R					
Ignition switch ON signal		R	T		R				R						R					
		R			R										T					
Ignition relay status signal			T												R					
Low beam status signal	R		T																	
Neutral position signal*3			T											R	R		R			
			R												T		R			
Push-button ignition switch status			T										R		R					
Reverse switch signal*3			T											R	R		R			
Starter relay status signal			T				R								R					
Stop/start permit signal*1	R		T																	
	R																	T		
Current gear position signal		R		T					R										R	
CVT accept permission signal				T					R											
CVT malfunction signal				T										R			R			
CVT target gear ratio signal				T					R											
ECO mode signal	R			T																
Input shaft revolution signal	R			T																
Input speed signal				T	R				R										R	
Manual mode shift refusal signal				T			R													
N range signal		R		T																
Output shaft revolution signal	R	R		T								R							R	
P range signal		R		T																
R range signal		R		T																
Shift position signal	R	R	R	T			R					R	R	R	R		R		R	
Target gear position signal		R		T																
TCM malfunction signal		R		T					R											
Brake system warning lamp signal					T		R													
Electric parking brake indicator lamp signal					T		R													
Electric parking brake operation signal		R			T															
Electric parking brake display request signal					T		R													
Master warning lamp signal					T		R													
Lock/unlock position signal						T									R					
Steering lock undefinde position signal						T									R					
Steering lock unit lock status signal						T									R					
Steering lock unit unlock status signal						T									R					
Steering lock wlong code signal						T									R					
Active engine brake setting change request signal							T		R											

Signal name/Connecting unit	ECM	ABS	IPDM-E	TCM	EHS/PKB	ESCL	M&A	A-BAG	CCM	EPS/DAST3	STRG	4WD	PWBD	SONAR	BCM	AV	AVM	HVAC	ICC	LANE
Active trace control setting change request signal							T		R											
Ambient temperature signal							T								R		R	R		
Brake fluid level switch signal		R					T													
Combination meter malfunction signal							T		R											
ECO mode switch signal				R			T													
Manual mode downshift signal				R			T													
Manual mode signal				R			T													
Manual mode upshift signal				R			T													
Non-manual mode signal				R			T													
Parking brake switch signal		R					T					R	R		R	R				
Seat belt buckle switch (driver side) signal					R		T													
Seat belt buckle switch signal	R *1						T								R					
Sleep-ready signal							T								R					
													T		R					
			T												R					
System selection signal							T										R		R	R
TPMS reset signal							T								R					
Vehicle speed signal	R		R				T	R		R			R		R	R		R		R
	R	T		R			R		R	R			R	R	R		R			
Car crash information signal								T							R					
Active engine brake control signal		R							T											
Active engine brake display request signal							R		T											
Active engine brake setting display request signal							R		T											
Active trace control display request signal							R		T											
Active trace control setting display request signal							R		T											
Active trace control signal		R							T											
Active ride control display request signal							R		T											
Active ride control signal		R							T											
Chassis control malfunction display request signal							R		T											
Chassis control module malfunction signal		R							T											
Curve display request signal							R		T											
hill descent control display signal							R		T											
hill start assist display signal							R		T											
Meter display signal							R		T											
							R								T					
							R										T			
							R												T	
							R													T

Signal name/Connecting unit	ECM	ABS	IPDM-E	TCM	EHS/PKB	ESCL	M&A	A-BAG	CCM	EPS/DAST3	STRG	4WD	PWBD	SONAR	BCM	AV	AVM	HVAC	ICC	LANE
Tire display request signal							R		T											
EPS torque signal*4										T							R			
EPS operation signal	R									T										
Electric power steering warning lamp signal							R			T										
Park Assist permit signal*4										T							R			
Stop/start inhibit signal*1	R									T										
Steering angle sensor signal		R							R		T			R		R	R		R	R
4WD malfunction signal		R										T								
4WD operation signal		R										T								
4WD warning lamp signal							R					T								
Mode lamp signal							R					T								
Park Assist switch display signal														T		R				
																R	T			
Parking sensor error signal							R							T						
Sonar indicator display signal							R							T			R			
Sound output signal														T		R				
																R	T			
Steering angle command signal*4										R				T						
										R							T			
A/C switch signal	R														T					
Back door lock status													R		T					
Back door open request signal													R		T					
BCM malfunction signal									R						T					
Blower fan motor switch signal	R														T					
Brake pedal position switch signal		R							R						T					
Buzzer output signal							R								T					
							R										T			
							R													T
Cranking signal		R													T					
Daytime running light request signal			R				R								T					
Door switch (driver side) signal					R										T					
Door switch signal	R *1						R								T		R			
Front fog light request signal			R				R								T					
Front wiper request signal			R												T		R			
Headlamp washer request signal			R												T					
High beam assist indicator lamp signal							R								T					
High beam assist request signal															T					R
High beam request signal			R				R								T					
Horn request signal			R												T					
Ignition switch signal			R												T					

Signal name/Connecting unit	ECM	ABS	IPDM-E	TCM	EHS/PKB	ESCL	M&A	A-BAG	CCM	EPS/DAST3	STRG	4WD	PWBD	SONAR	BCM	AV	AVM	HVAC	ICC	LANE
Ignition switch status signal*1	R														T					
Key warning signal							R								T					
Low beam request signal			R				R								T					
Low tire pressure warning lamp signal							R								T					
Low tire pressure wheel location signal							R								T					
Meter effect signal							R								T					
Position light request signal			R				R								T		R			
Rear fog lamp status signal							R								T					
Rear window defogger feedback signal															T			R		
Sleep wake up signal			R		R		R						R		T					
Steering lock code signal						R									T					
Steering lock status signal					R	R									T					
Steering lock unit lock request signal						R									T					
Steering lock unit unlock request signal						R									T					
Stop lamp switch signal		R		R	R				R						T				R	
Stop/start OFF switch signal*1	R														T					
TPMS malfunction warning lamp signal							R								T					
Turn indicator signal									R						T		R			R
Turn signal switch signal									R					R	T		R			
Wakeup sleep command signal					R										T					
Park Assist switch signal																T	R			
Speed limit information signal																T				R
Buzzer drive signal														R			T			
														R					T	
														R						T
Park Assist malfunction signal*4										R							T			
Park Assist status signal*4										R							T			
A/C ON signal	R																	T		
Ambient sensor signal																	R	T		
Blower fan ON signal	R																	T		
Blower motor operation state signal															R			T		
Cooling fan request signal	R																	T		
ECV control signal			R															T		
Rear window defogger control signal	R																	T		
Rear window defogger switch signal															R			T		
Brake fluid pressure control signal									R										T	
		R							T											
Engine torque down request signal	R																		T	
FEB warning lamp signal							R												T	
Stop lamp drive signal															R				T	

*1: With stop/start system

*2: With CVT and stop/start system
*3: For M/T
*4: Models around view monitor with Park Assist

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

WIRING DIAGRAM

CAN SYSTEM (WITHOUT FORWARD EMERGENCY BRAKING)

Wiring Diagram - CAN SYSTEM -

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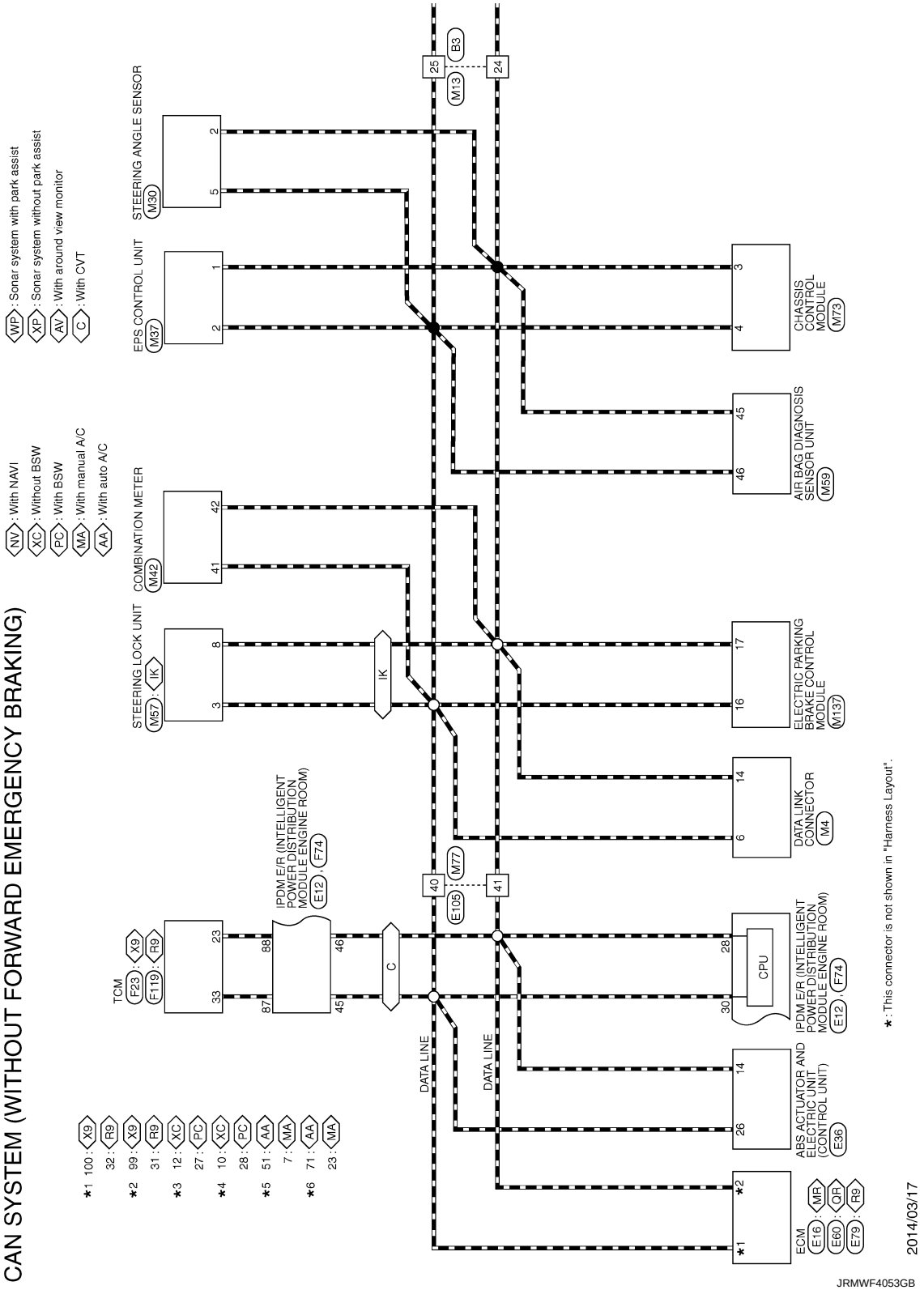
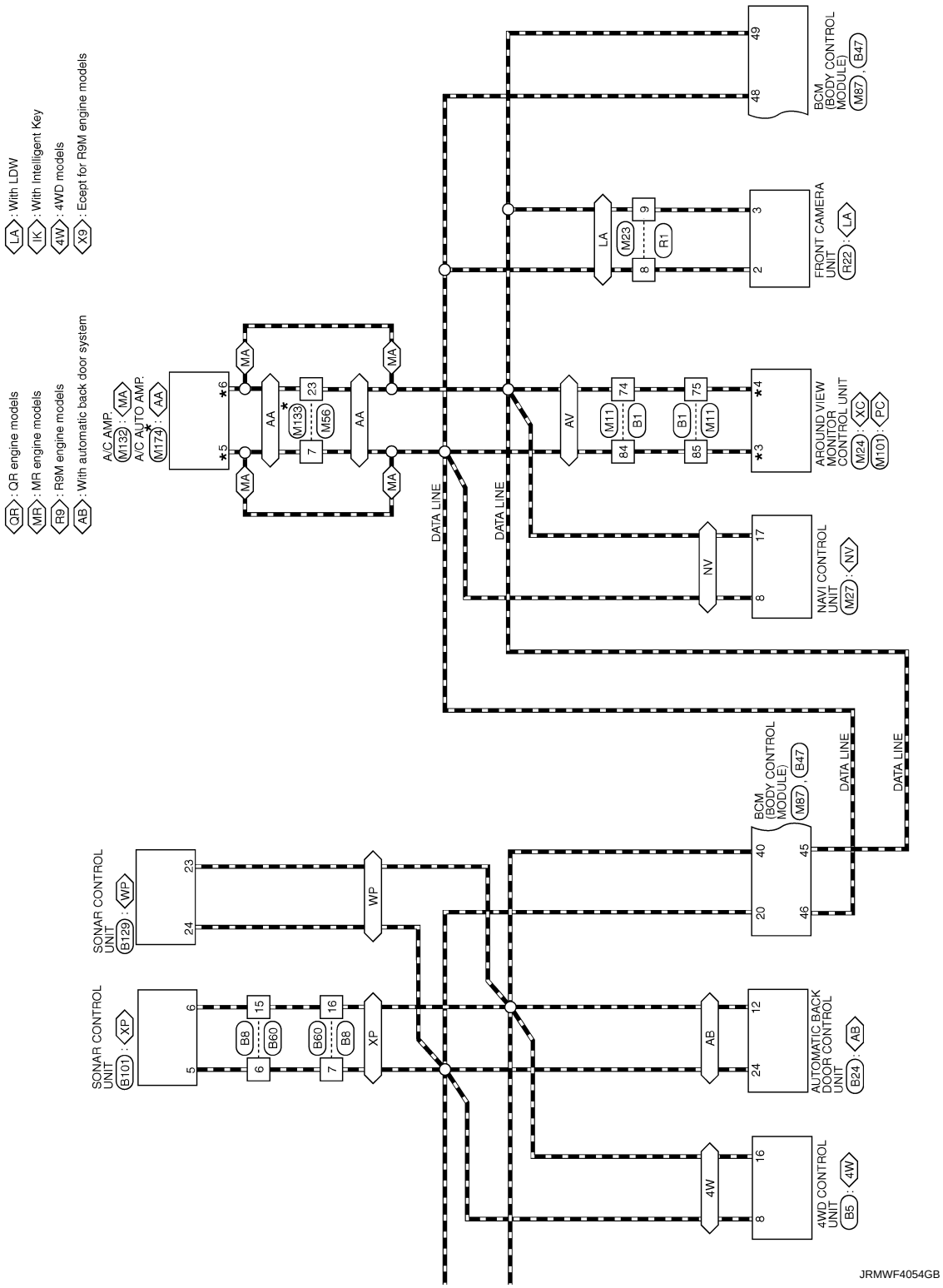
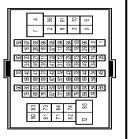



LA : With LDW
IK : With Intelligent Key
4W : 4WD models
X9 : Except for R9M engine models
QR : QR engine models
MR : MR engine models
R9 : R9M engine models
AB : With automatic back door system
A/C AMP.
M132 : MA
A/C AUTO AMP.
M174 : AA
BCM (BODY CONTROL MODULE)
M87 : B47
FRONT CAMERA UNIT
R22 : LA
AROUND VIEW MONITOR CONTROL UNIT
M24 : XC
M101 : PC
NAVI CONTROL UNIT
M27 : NV
SONAR CONTROL UNIT
B129 : WP
B101 : XP
AUTOMATIC BACK DOOR CONTROL UNIT
B24 : AB
4WD CONTROL UNIT
B5 : 4W
DATA LINE
JRMWF4054GB

CAN SYSTEM (WITHOUT FORWARD EMERGENCY BRAKING)

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

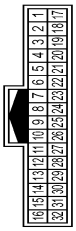
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	-
2	LA/Y	-
6	V	-
7	LA/V	-
20	L	- [With diesel engine]
20	LA/L	- [With gasoline engine]
21	B	- [With diesel engine]
21	LA/B	- [With gasoline engine]
24	G	-
25	BR	-
73	LA/Y	-
74	R	-
75	R	-
84	L	-
85	L	-
92	LA/R	-
93	LA/L	-
95	LA/BR	-
97	L	-
98	Y	-
99	LA/P	-
100	GR	- [With diesel engine]
100	LA/GR	- [With gasoline engine]

Connector No.	B3
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	SB	-
2	V	-
3	LA/R	-
4	V	-
5	GR	-
6	Y	-
7	LG	-
8	BG	-
9	W	-
10	LA/Y	-
11	BR	-
12	Y	-
13	W	-
14	V	-
15	L	-
16	BR	-
17	Y	-
18	LA/L	- [Without PSM]
18	SB	- [With PSM]
20	LG	-
21	G	-
22	V	-
23	BR	-
24	P	-
25	L	-
26	G	-
29	SHIELD	-
30	W	-
31	B	-
32	R	-

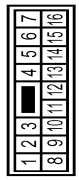
Connector No.	B5
Connector Name	4WD CONTROL UNIT
Connector Type	TH16FW-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	SB	4WD SOL (+)
2	Y	4WD SOL (-)
5	V	AUTO SW
7	LA/R	IGN
8	L	CAN-H
9	LA/G	4WD SOL BAT
10	B	GROUND
11	B	GROUND
12	GR	2WD SW
14	Y	LOCK SW
15	LA/L	BATTERY POWER SUPPLY
16	P	CAN-L

Connector No.	B8
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	-
2	G	-
3	P	-
6	L	-
7	L	-
8	SB	-
9	R	-
10	LA/W	-
11	LA/BR	-
12	W	-
13	P	-
14	R	-
15	P	-
16	P	-

Connector No.	B24
Connector Name	AUTOMATIC BACK DOOR CONTROL UNIT
Connector Type	AAC24FB

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	TOUCH_SENS_RH
2	G	TOUCH_SENS_LH
3	SB	HALF_LATCH_SW
5	BR	CLOSE_SW
6	W	A-SIGN_LH
7	L	B-SIGN_LH
8	R	A-SIGN_RH
9	SB	B-SIGN_RH
10	BG	MAIN_SW
11	V	OPEN_SW
12	P	CAN_LOW
13	GR	TOUCH_SENS_GND
16	B	GROUND
19	V	POWER_LH
20	P	POWER_RH
21	G	ENCODER GROUND
22	LG	DRIVER_SW
23	W	INSIDE_CLOSE_SW
24	L	CAN_HI

JRMWF4055GB

CAN SYSTEM (WITHOUT FORWARD EMERGENCY BRAKING)

Connector No.	B47
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH

Terminal No.	Color Of Wire	Signal Name [Specification]
6	R	BACK DOOR OPENER REQUEST SW
9	G	HANDS FREE SENSOR
10	W	REAR RH DOOR SW
11	LG	BACK DOOR SW
12	R	REAR LH DOOR SW
13	SB	PASSENGER DOOR SW
15	LA/G	REAR WIPER AUTO STOP
16	Y	BACK DOOR OPENER SW
17	SB	DRIVER DOOR SW
20	L	CAN-H
21	BR	BUMPER ANTENNA(-)
22	Y	REAR ANTENNA(-)
23	L	REAR ANTENNA(+)
24	G	BUMPER ANTENNA(+)
38	V	SIREN
39	LA/W	HIGH-MOUNTED STOP LAMP
40	P	CAN-L

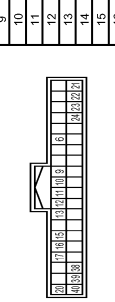
Connector No.	B60
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS

Terminal No.	Color Of Wire	Signal Name [Specification]
1	LA/LG	-
2	LA/GR	-
3	P	-
6	L	-
7	L	-
8	GR	- [For LHD models]
8	SB	- [For RHD models]
9	LA/R	-
10	LA/Y	-
11	LA/BR	-
12	W	-
13	LA/V	-
14	R	-
15	P	-
16	P	-

Connector No.	B101
Connector Name	SONAR CONTROL UNIT
Connector Type	TH24FW-NH

Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	CENTER SENSOR SIGNAL FRONT RH
2	G	CENTER SENSOR SIGNAL FRONT LH
3	W	CORNER SENSOR SIGNAL FRONT LH
4	V	CORNER SENSOR SIGNAL FRONT RH
5	L	CAN-H
6	P	CAN-L
9	V	CENTER SENSOR SIGNAL REAR RH
10	LG	CORNER SENSOR SIGNAL REAR RH
11	SB	FRONT SENSOR POWER SUPPLY
12	BR	IGNITION POWER SUPPLY
13	P	FRONT SENSOR GROUND
14	P	REAR SENSOR GROUND
15	B	GROUND
16	V	SONAR SYSTEM OFF SWITCH SIGNAL
17	SB	SONAR SYSTEM OFF SWITCH INDICATOR SIGNAL
18	LA/L	FRONT BUZZER DRIVE SIGNAL
19	Y	BUZZER POWER SUPPLY
20	LA/G	REAR BUZZER DRIVE SIGNAL
21	G	CENTER SENSOR SIGNAL REAR LH
22	R	CORNER SENSOR SIGNAL REAR LH
23	SB	REAR SENSOR POWER SUPPLY

Connector No.	B129
Connector Name	SONAR CONTROL UNIT
Connector Type	renault_8200176157

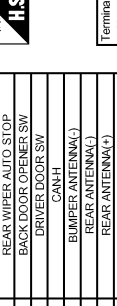


Terminal No.	Color Of Wire	Signal Name [Specification]
2	Y	FRONT BUZZER POWER SUPPLY
6	R	CORNER SENSOR SIGNAL REAR LH
7	V	CENTER SENSOR SIGNAL REAR RH
9	G	REAR BUZZER DRIVE SIGNAL
10	SB	FRONT BUZZER DRIVE SIGNAL
13	B	GROUND
14	BR	IGNITION POWER SUPPLY
15	Y	REAR BUZZER POWER SUPPLY
16	V	SONAR SYSTEM OFF SWITCH SIGNAL
17	SB	SONAR SYSTEM OFF SWITCH INDICATOR SIGNAL
18	SB	REAR SENSOR POWER SUPPLY
20	G	CENTER SENSOR SIGNAL REAR LH
21	LG	CORNER SENSOR SIGNAL REAR RH
22	P	REAR SENSOR GROUND
23	P	CAN-L
24	L	CAN-H

Connector No.	E12
Connector Name	PDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH24FGY-NH

Terminal No.	Color Of Wire	Signal Name [Specification]
25	LG	-
26	W	-
27	SB	-
28	P	-
30	L	-
31	G	-
32	B	-
33	BG	-
34	LG	-
35	V	-
36	Y	-
37	B	-
38	GR	-
39	BR	-
45	L	-
46	P	-
47	W	-
48	R	-

Connector No.	E16
Connector Name	ECM
Connector Type	RH24FB-RZ9-L-LH



Terminal No.	Color Of Wire	Signal Name [Specification]
97	W	BAROMETRIC PRESSURE SENSOR
99	P	CAN-L
100	L	CAN-H
101	Y	SENSOR POWER SUPPLY
108	R	CLUTCH PEDAL POSITION SWITCH
109	LG	IGNITION SWITCH
110	G	ASCD STEERING SWITCH
111	BR	SENSOR GROUND
115	V	STOP LAMP SWITCH
116	GR	BRAKE PEDAL POSITION SWITCH
118	SB	SENSOR POWER SUPPLY
119	Y	ACCELERATOR PEDAL POSITION SENSOR 2
120	LG	SENSOR GROUND
121	BR	POWER SUPPLY FOR ECM
122	V	SENSOR POWER SUPPLY
123	B	ECM GROUND
124	R	SENSOR GROUND
125	B	ECM GROUND
126	GR	ACCELERATOR PEDAL POSITION SENSOR 1
127	R	SENSOR GROUND

JRMWF4056GB

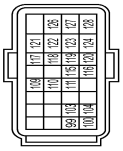
CAN SYSTEM (WITHOUT FORWARD EMERGENCY BRAKING)

128	B	ECM GROUND

Connector No.	E36
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Type	BEZ34FB-BHY2-BJZZ-RH

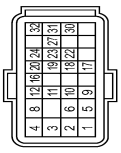
Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	MOTOR POWER SUPPLY
4	SB	FR RH WHEEL SENSOR SIGNAL
5	V	BRAKE VACUUM SENSOR POWER SUPPLY
8	P	FR LH WHEEL SENSOR SIGNAL
9	Y	hill decent control SWITCH SIGNAL
12	LG	BRAKE VACUUM SENSOR SIGNAL
13	B	GROUND (MOTOR)
14	P	CAN-L
15	BR	VDC OFF SWITCH SIGNAL
16	R	FR RH WHEEL SENSOR POWER SUPPLY
17	Y	RR RH WHEEL SENSOR POWER SUPPLY
18	G	RR LH WHEEL SENSOR SIGNAL
19	W	FR LH WHEEL SENSOR POWER SUPPLY
24	SHIELD	BRAKE VACUUM SENSOR GROUND
25	BR	VALVE POWER SUPPLY
26	L	CAN-H
28	GR	IGNITION POWER SUPPLY
29	LG	RR RH WHEEL SENSOR SIGNAL
31	BR	RR LH WHEEL SENSOR POWER SUPPLY
38	B	GROUND (VALVE)

Connector No.	E60
Connector Name	ECM
Connector Type	RH24FB-RZ8-L-LH



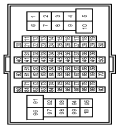
Terminal No.	Color Of Wire	Signal Name [Specification]
99	P	CAN COMMUNICATION LINE (CAN-L)
100	L	CAN COMMUNICATION LINE (CAN-H)
103	Y	REFRIGERANT PRESSURE SENSOR
104	R	SENSOR POWER SUPPLY
109	LG	IGNITION SWITCH
110	G	ASCD STEERING SWITCH
111	BR	SENSOR GROUND
115	V	STOP LAMP SWITCH
116	GR	BRAKE PEDAL POSITION SWITCH
117	W	PNP SIGNAL
118	SB	SENSOR POWER SUPPLY
119	Y	ACCELERATOR PEDAL POSITION SENSOR 2
120	LG	SENSOR GROUND
121	BR	POWER SUPPLY FOR ECM
122	V	SENSOR POWER SUPPLY
123	BR	ECM GROUND
124	W	SENSOR GROUND
126	GR	ACCELERATOR PEDAL POSITION SENSOR 1
127	R	SENSOR GROUND
128	BR	ECM GROUND

Connector No.	E79
Connector Name	ECM
Connector Type	RH24FB-RZ8-R-RH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	ECM GROUND
2	W	ACCELERATOR PEDAL POSITION SENSOR 1
3	Y	SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 1)
4	B	ECM GROUND
5	L	POWER SUPPLY FOR ECM
6	G	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 1)
8	B	ECM GROUND
9	L	FUEL HEATER AND WATER IN FUEL LEVEL SENSOR
10	L	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 2)
11	V	ACCELERATOR PEDAL POSITION SENSOR 2
12	P	SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 2)
16	BG	STOP LAMP SWITCH [With M/T]
16	R	BRAKE PEDAL POSITION SWITCH [With CVT]
17	LG	IGNITION SWITCH
18	G	ASCD STEERING SWITCH
19	BR	SENSOR GROUND (ASCD STEERING SWITCH)
20	BR	FUEL PUMP CONTROL MODULE (COMMAND)
22	G	FUEL PUMP CONTROL MODULE (DIAGNOSIS)
23	V	SPEED LIMITER MAIN SWITCH
24	R	CLUTCH PEDAL POSITION SWITCH
27	V	CLUTCH INTERLOCK SWITCH
30	BR	ASCD MAIN SWITCH
31	P	CAN-L
32	L	CAN-H

Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



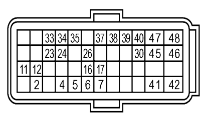
Terminal No.	Color Of Wire	Signal Name [Specification]
2	W	-
5	V	- [Without ISS]
5	W	- [With ISS]
8	L	-
9	LG	-
10	W	-
20	W	-
21	B	-
22	SHIELD	-
31	Y	-
32	W	-
33	SB	-
34	LG	-
35	BG	-
36	LG	-
37	V	-
38	G	-
39	BR	-
40	L	-
41	P	-
47	GR	-
48	SB	-
51	P	-
52	L	-
53	W	-
54	Y	-
55	BR	-
56	P	-
57	B	-
58	L	-
59	W	-
60	G	-
61	BR	-
62	V	-
63	BR	-
64	GR	-

JRMWF4057GB

CAN SYSTEM (WITHOUT FORWARD EMERGENCY BRAKING)

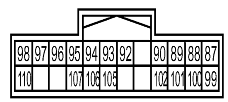
65	LG	-
66	BG	-
67	L	-
68	R	-
71	V	-
72	L	-
73	R	-
76	L	-
77	V	-
78	LG	-
79	SHIELD	-
80	GR	-
82	Y	-
83	SB	-
84	L	-
85	G	-
86	Y	-
87	B	-
88	B	-
91	R	-
92	BR	-
93	W	-
96	GR	-
97	R	-
98	V	-
99	Y	-

Connector No.	F23
Connector Name	TCM
Connector Type	RH40FB-RZ8-L-RH



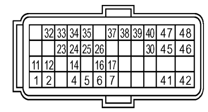
Terminal No.	Color Of Wire	Signal Name [Specification]
2	GR	-
4	Y	D RANGE SWITCH
5	BR	N RANGE SWITCH
6	G	R RANGE SWITCH
7	V	P RANGE SWITCH
11	LG	SENSOR GROUND
12	BR	CVT FLUID TEMPERATURE SENSOR
16	SB	SECONDARY PRESSURE SENSOR
17	R	PRIMARY PRESSURE SENSOR
23	P	CAN-L
24	LG	INPUT SPEED SENSOR
26	BG	SENSOR POWER SUPPLY
30	GR	LINE PRESSURE SOLENOID VALVE
33	L	CAN-H
34	W	OUTPUT SPEED SENSOR
35	GR	PRIMARY SPEED SENSOR
37	Y	SELECT SOLENOID VALVE
38	G	TORQUE CONVERTER CLUTCH SOLENOID VALVE
39	W	SECONDARY PRESSURE SOLENOID VALVE
40	V	PRIMARY PRESSURE SOLENOID VALVE
41	B	GROUND
42	B	GROUND
45	V	BATTERY POWER SUPPLY
46	V	BATTERY POWER SUPPLY
47	BG	IGNITION POWER SUPPLY
48	BG	IGNITION POWER SUPPLY

Connector No.	F74
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH24FB-NH



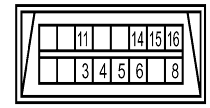
Terminal No.	Color Of Wire	Signal Name [Specification]
87	L	-
88	P	-
89	W	-
90	R	-
92	GR	-
93	G	- [With R9M Engine]
93	P	- [With MR20 or QR25 Engine]
94	SB	-
95	LG	-
96	W	-
97	P	-
98	Y	-
99	BG	-
100	LG	-
101	V	-
102	Y	-
105	W	-
106	BR	-
107	V	-
110	SB	-

Connector No.	F119
Connector Name	TCM
Connector Type	RH40FB-RZ8-L-LH



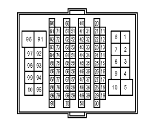
Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	ELECTRIC OIL PUMP RELAY
2	GR	-
4	Y	D RANGE SWITCH
5	BR	N RANGE SWITCH
6	G	R RANGE SWITCH
7	V	P RANGE SWITCH
11	LG	SENSOR GROUND
12	BR	CVT FLUID TEMPERATURE SENSOR
14	V	G SENSOR
16	SB	SECONDARY PRESSURE SENSOR
17	R	PRIMARY PRESSURE SENSOR
23	P	CAN-L
24	LG	INPUT SPEED SENSOR
25	R	ELECTRIC OIL PUMP COMMAND SIGNAL
26	BG	SENSOR POWER SUPPLY
30	GR	LINE PRESSURE SOLENOID VALVE
32	SB	ELECTRIC OIL PUMP STATUS SIGNAL
33	L	CAN-H
34	W	OUTPUT SPEED SENSOR
35	GR	PRIMARY SPEED SENSOR
37	Y	SELECT SOLENOID VALVE
38	G	TORQUE CONVERTER CLUTCH SOLENOID VALVE
39	W	SECONDARY PRESSURE SOLENOID VALVE
40	V	PRIMARY PRESSURE SOLENOID VALVE
41	B	GROUND
42	B	GROUND
45	V	BATTERY POWER SUPPLY
46	V	BATTERY POWER SUPPLY
47	BG	IGNITION POWER SUPPLY
48	BG	IGNITION POWER SUPPLY

Connector No.	M4
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW



Terminal No.	Color Of Wire	Signal Name [Specification]
3	LG	-
4	B	-
5	B	-
6	L	-
8	Y	-
11	SB	-
14	P	-
15	BR	-
16	W	-

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	-
2	Y	-
6	GR	-
7	LG	-
20	LA/L	-
21	LA/B	-
24	G	-
25	BR	-
73	Y	-
74	R	-
75	R	-

JRMWF4058GB

CAN SYSTEM (WITHOUT FORWARD EMERGENCY BRAKING)

84	L	-
85	L	-
92	LA/W	-
93	LA/Y	-
95	SB	-
97	BG	-
98	Y	-
99	W	-
100	LA/R	-

Connector No.	M13
Connector Name	WIRE TO WIRE
Connector Type	TH32FW-NH

H.S.

16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	

Terminal No.	Color Of Wire	Signal Name [Specification]
1	SB	-
2	V	-
3	SB	-
4	BR	-
5	L	-
6	Y	-
7	LG	-
8	BG	-
9	W	-
10	Y	-
11	R	-
12	SB	-
13	LG	-
14	V	-
15	SB	-
16	Y	-
17	LA/BR	-
18	LA/L	-
20	BG	-
21	BG	-
22	GR	-
23	GR	-
24	P	-
25	L	-
26	BR	-

29	SHIELD	-
30	W	-
31	B	-
32	R	-

Connector No.	M23
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-NH

H.S.

12	11	10	9	8	7	6	5	4	3	2	1	
24	23	22	21	20	19	18	17	16	15	14	13	

Terminal No.	Color Of Wire	Signal Name [Specification]
7	Y	-
8	L	-
9	R	-
13	SB	-
15	SB	-
16	GR	-
17	V	-
18	G	-
19	SB	-
20	R	-
21	B	-

Connector No.	M24
Connector Name	AROUND VIEW MONITOR CONTROL UNIT
Connector Type	TH40FW-NH

H.S.

2	4		10	12								24	26	28	30	32	34	36	38	40
1												23	25	27	29	31	33	35	37	39

Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GROUND
2	Y	BATTERY POWER SUPPLY
4	SB	IGNITION SIGNAL

10	R	CAN-L
12	L	CAN-H
23	SHIELD	CAMERA IMAGE SIGNAL GROUND
24	G	CAMERA IMAGE SIGNAL
25	B	REAR CAMERA GROUND
26	R	REAR CAMERA POWER SUPPLY
27	SHIELD	REAR CAMERA IMAGE SIGNAL (-)
28	W	REAR CAMERA IMAGE SIGNAL (+)
29	Y	SIDE CAMERA DRIVER SIDE GROUND
30	L	SIDE CAMERA DRIVER SIDE POWER SUPPLY
31	SHIELD	SIDE CAMERA DRIVER SIDE IMAGE SIGNAL (-)
32	G	SIDE CAMERA DRIVER SIDE IMAGE SIGNAL (+)
33	L	SIDE CAMERA PASSENGER SIDE CAMERA GROUND
34	B	SIDE CAMERA PASSENGER SIDE CAMERA POWER SUPPLY
35	SHIELD	SIDE CAMERA PASSENGER SIDE CAMERA IMAGE SIGNAL (-)
36	Y	SIDE CAMERA PASSENGER SIDE CAMERA IMAGE SIGNAL (+)
37	V	FRONT CAMERA GROUND
38	L	FRONT CAMERA POWER SUPPLY
39	SHIELD	FRONT CAMERA IMAGE SIGNAL (-)
40	LG	FRONT CAMERA IMAGE SIGNAL (+)

Connector No.	M27
Connector Name	NAVI CONTROL UNIT
Connector Type	NH18FW-CS2

H.S.

		2	3	4	5		7	8	9
19		11	12	13	14		17	18	20

Terminal No.	Color Of Wire	Signal Name [Specification]
2	W	SOUND SIGNAL FRONT SPEAKER LH + [With 6 Speaker]
2	Y	SOUND SIGNAL FRONT SPEAKER LH + [With 4 Speaker]
3	P	SOUND SIGNAL FRONT LH - [With 6 Speaker]
3	R	SOUND SIGNAL FRONT LH - [With 4 Speaker]
4	GR	SOUND SIGNAL REAR LH +
5	BR	AUTO ACC INPUT SIGNAL
7	W	CAN-H
8	L	ILLUMINATION SIGNAL
9	V	SOUND SIGNAL FRONT RH + [With 6 Speaker]
11	G	SOUND SIGNAL FRONT RH + [With 4 Speaker]
11	W	SOUND SIGNAL FRONT RH - [With 4 Speaker]
12	GR	SOUND SIGNAL FRONT RH - [With 6 Speaker]
12	V	SOUND SIGNAL REAR RH +
13	LG	SOUND SIGNAL REAR RH -
14	Y	CAN-L
17	R	CAN-L
18	G	VEHICLE SPEED SIGNAL (8 PULSE)
19	L	BATTERY POWER SUPPLY
20	B	GROUND

Connector No.	M30
Connector Name	STEERING ANGLE SENSOR
Connector Type	TH08FGY-NH

H.S.

	1	2	4
5			

Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	-
2	P	-
4	G	-
5	L	-

Connector No.	M37
Connector Name	EPS CONTROL UNIT
Connector Type	TH08FW-NH

H.S.

	4	2	1

Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	CAN-L
2	L	CAN-H
4	SB	IGNITION POWER SUPPLY

JRMWF4059GB

CAN SYSTEM (WITHOUT FORWARD EMERGENCY BRAKING)

Connector No.	M42
Connector Name	COMBINATION METER
Connector Type	TH12FW-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
41	L	CAN-H
42	P	CAN-L
43	W	ILLUMINATION CONTROL SIGNAL
44	LA/B	FUEL LEVEL SENSOR GROUND
45	LA/G	BATTERY POWER SUPPLY
46	LA/BR	IGNITION SIGNAL [Without ISS]
46	V	IGNITION SIGNAL [With ISS]
47	SB	AV COMMUNICATION SIGNAL (H)
48	LG	AV COMMUNICATION SIGNAL (L)
49	Y	OIL LEVEL SENSOR SIGNAL
50	BG	OIL LEVEL SENSOR GROUND
51	LA/L	FUEL LEVEL SENSOR SIGNAL
52	B	GROUND

Connector No.	M56
Connector Name	WIRE TO WIRE
Connector Type	TH32FW-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	SB	-
3	B	-
5	LG	-
7	L	-
8	W	-
9	BG	-
10	Y	-
11	V	-
12	GR	-
13	LG	-
14	SB	-
16	BR	-
18	BR	-
19	G	-
20	Y	-
21	BG	-
23	R	-
24	SB	-
25	GR	-
26	BR	-
27	LG	-
28	W	-
29	BG	-
30	G	-

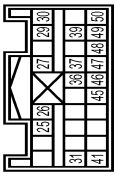
Connector No.	M57
Connector Name	STEERING LOCK UNIT
Connector Type	TH08FB-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	STEERING LOCK UNIT GND
2	V	STEERING LOCK UNIT PWR
3	L	STEERING LOCK UNIT CAN H
6	Y	STEERING LOCK UNIT SENSORLINE
7	GR	STEERING LOCK UNIT SAFETY LINE
8	P	STEERING LOCK UNIT CAN L

Connector No.	M59
Connector Name	AIR BAG DIAGNOSIS SENSOR UNIT
Connector Type	NH28FY-EX

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
25	LG	INFLATOR_AS-
26	SB	AS1(-)
27	B	AS1(+)
29	Y	DR1(-)
30	G	DR1(+)
31	B	EC2S(-)
36	BR	DEACTIVE
37	R	ACTIVE
39	SHIELD	GND
41	W	EC2S(+)
45	P	CAN-L
46	L	CAN-H
47	GR	A/B ON IND
48	W	A/B OFF IND
49	BG	K-LINE
50	R	IGN

Connector No.	M73
Connector Name	CHASSIS CONTROL MODULE
Connector Type	TH24FW-NH

H.S.

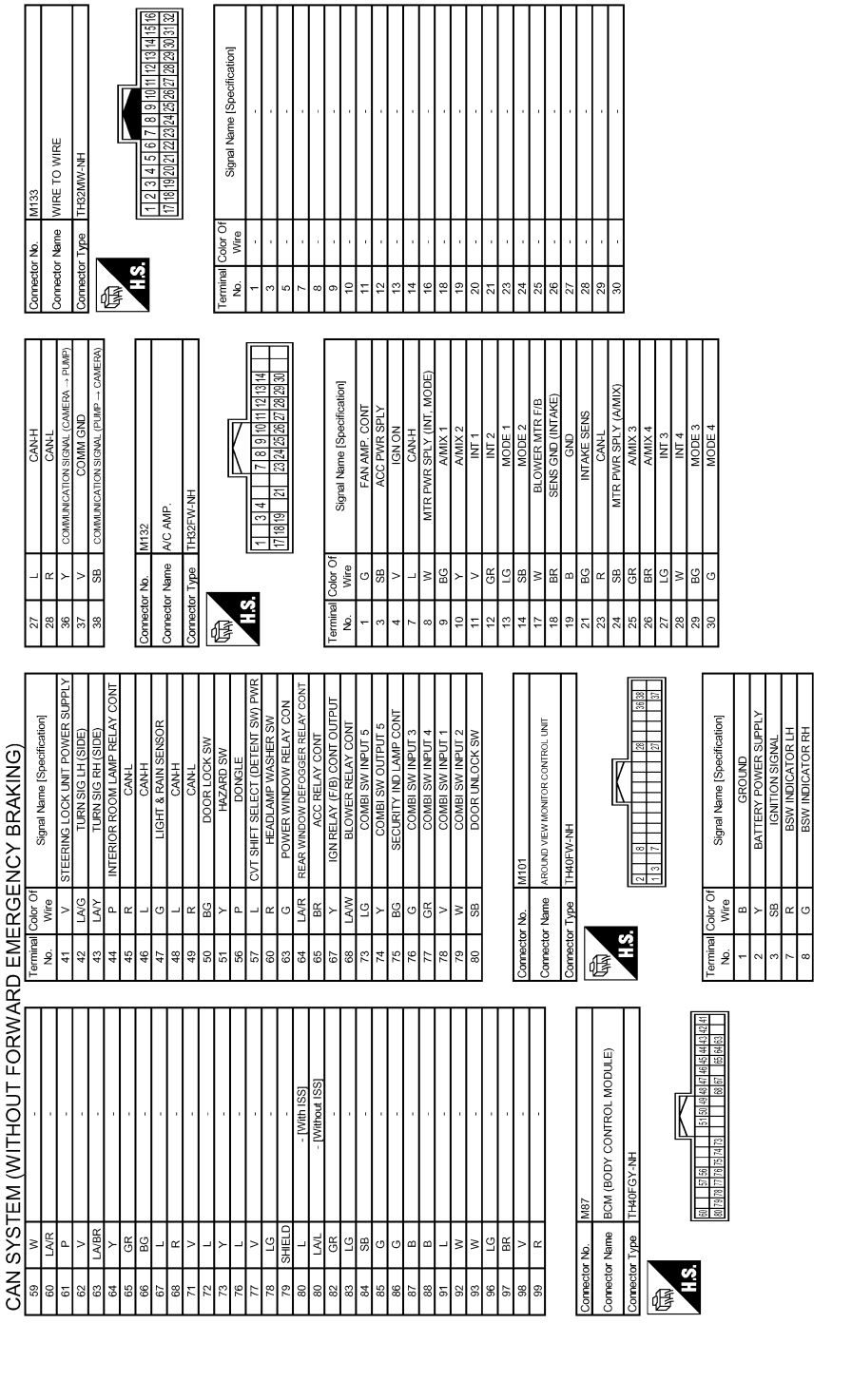
Terminal No.	Color Of Wire	Signal Name [Specification]
3	P	CAN-L
4	L	CAN-H
7	W	CHASSIS COMM-L
8	W	CHASSIS COMM-L
10	SB	IGN
11	L	CHASSIS COMM-H
12	B	GND
19	L	CHASSIS COMM-H

Connector No.	M77
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
2	LA/R	-
5	V	- [Without ISS]
5	W	- [With ISS]
8	G	-
9	Y	-
10	R	-
20	W	-
21	B	-
22	SHIELD	-
31	V	-
32	GR	-
33	G	-
34	LG	-
35	BG	-
36	LG	-
37	V	-
38	G	-
39	BR	-
40	L	-
41	P	-
47	Y	-
48	BG	-
51	GR	-
52	SB	-
53	R	-
54	LA/L	-
55	BR	-
56	P	-
57	B	-
58	L	-

JRMWF4060GB

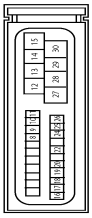


JRMWF4061GB

CAN SYSTEM (WITHOUT FORWARD EMERGENCY BRAKING)

Connector No.	M137
Connector Name	ELECTRIC PARKING BRAKE CONTROL MODULE
Connector Type	renault_8200668609

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
8	SB	PARKING BRAKE SW INDICATOR LAMP
9	BR	PARKING BRAKE SW RELEASE (NOR-OP)
10	BG	PARKING BRAKE SW RELEASE (NOR-CL)
11	V	PARKING BRAKE SW POWER SUPPLY (APPLY)
12	GR	MOTOR RH (+)
13	R	MOTOR POWER SUPPLY (RH)
14	W	MOTOR LH (+)
15	V	MOTOR POWER SUPPLY (LH)
16	L	CAN-H
17	P	CAN-L
18	BG	PARKING BRAKE SW APPLY (NOR-OP)
19	G	PARKING BRAKE SW APPLY (NOR-CL)
20	Y	PARKING BRAKE SW POWER SUPPLY (RELEASE)
22	GR	IGNITION POWER SUPPLY
24	LG	CLUTCH PEDAL STROKE SENSOR GROUND
25	G	CLUTCH PEDAL STROKE SENSOR SIGNAL
26	GR	CLUTCH PEDAL STROKE SENSOR POWER SUPPLY
27	G	MOTOR RH (-)
28	B	GROUND (MOTOR RH)
29	BR	MOTOR LH (-)
30	B	GROUND (MOTOR LH)

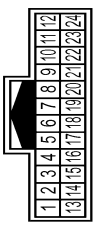
Connector No.	M174
Connector Name	A/C AUTO AMP.
Connector Type	TH40FB-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
41	BG	ACC PWR SPLY
43	R	GND
51	L	CAN-H
53	P	IN-VHCL SENS
54	V	SUNLOAD SENS
63	G	SENS GND (IN-VHCL, SUNLOAD)
71	W	CAN-L
73	Y	LIN

Connector No.	R1
Connector Name	WIRE TO WIRE
Connector Type	TH24MW-NH

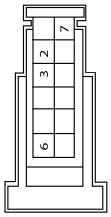
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
3	-	-
7	-	-
8	-	-
9	-	-
13	-	-
15	-	-
16	-	-
17	-	-
18	-	-
19	-	-
20	-	-
21	-	-

Connector No.	R22
Connector Name	FRONT CAMERA UNIT
Connector Type	renault_8200280781

H.S.



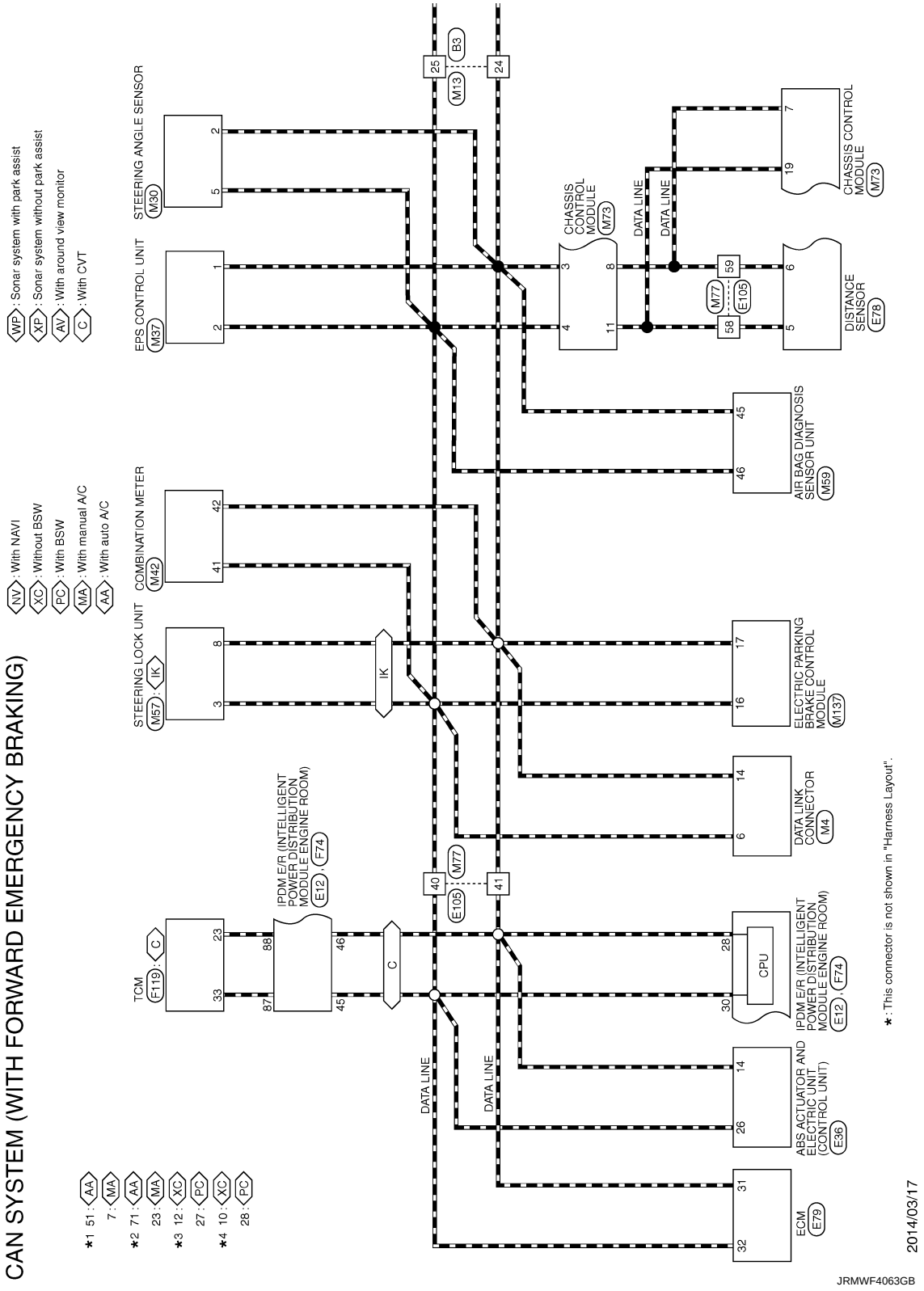
Terminal No.	Color Of Wire	Signal Name [Specification]
2	L	CAN-H
3	R	CAN-L
6	R	IGNITION POWER SUPPLY
7	B	GROUND

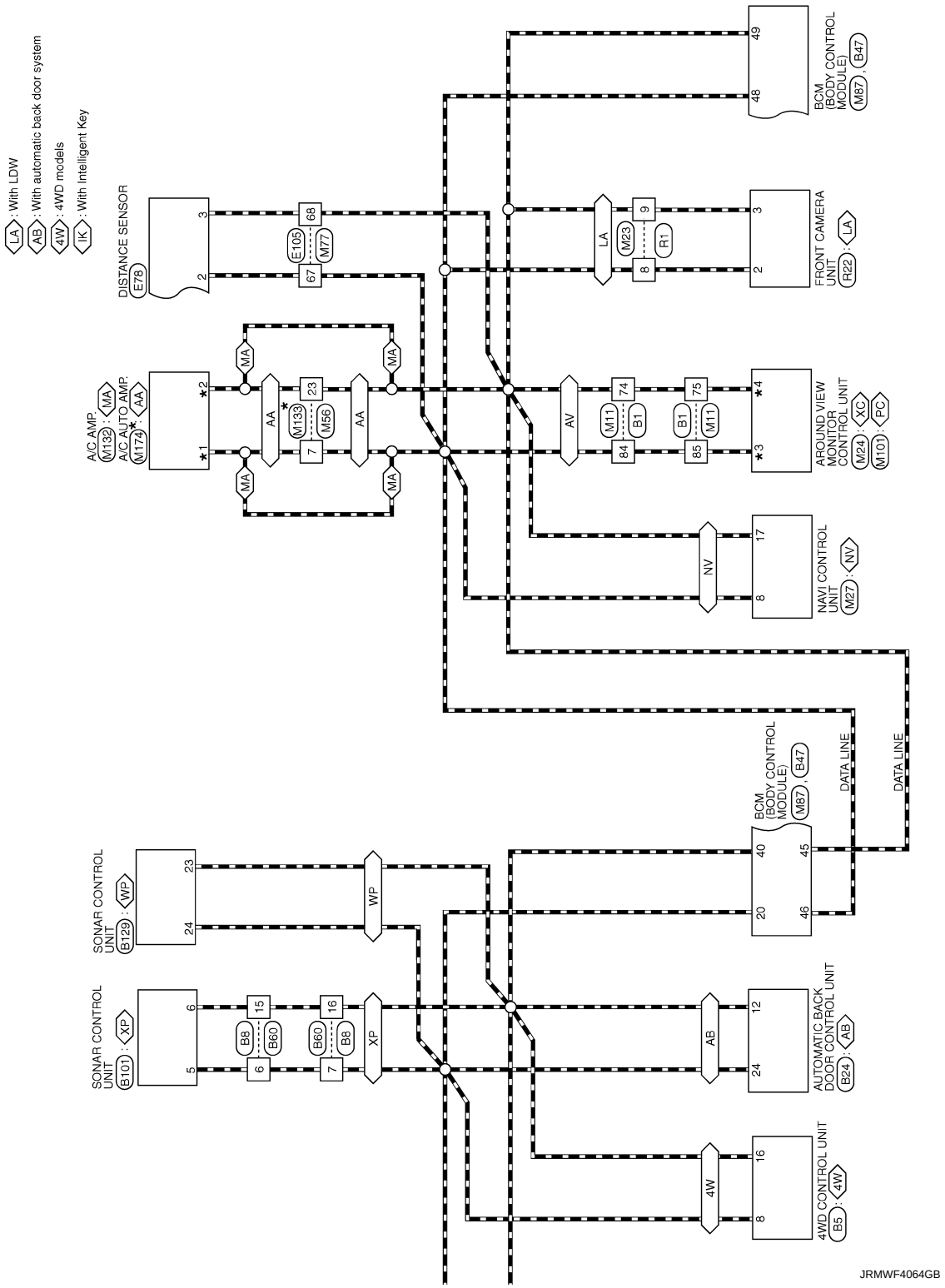
JRMWF4062GB

CAN SYSTEM (WITH FORWARD EMERGENCY BRAKING)

Wiring Diagram - CAN SYSTEM -

INFOID:0000000010715310

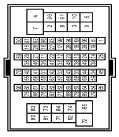



LA : With LDW
AB : With automatic back door system
4W : 4WD models
IK : With Intelligent Key
DISTANCE SENSOR E78
BCM (BODY CONTROL MODULE) M87, B47
FRONT CAMERA UNIT R22 : LA
A/C AMP M132 : MA
A/C AUTO AMP M174 : AA
AROUND VIEW MONITOR CONTROL UNIT M24 : XC, M101 : PC
NAVI CONTROL UNIT M27 : NV
SONAR CONTROL UNIT B129 : WP
SONAR CONTROL UNIT B101 : XP
AUTOMATIC BACK DOOR CONTROL UNIT B24 : AB
4WD CONTROL UNIT B5 : 4W
DATA LINE
DATA LINE
JRMWF4064GB

CAN SYSTEM (WITH FORWARD EMERGENCY BRAKING)

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

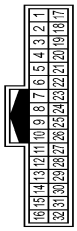
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	-
2	LA/Y	-
6	V	-
7	LA/V	-
20	L	- [With diesel engine]
20	LA/L	- [With gasoline engine]
21	B	- [With diesel engine]
21	LA/B	- [With gasoline engine]
24	G	-
25	BR	-
73	LA/Y	-
74	R	-
75	R	-
84	L	-
85	L	-
92	LA/R	-
93	LA/L	-
95	LA/BR	-
97	L	-
98	Y	-
99	LA/P	-
100	GR	- [With diesel engine]
100	LA/GR	- [With gasoline engine]

Connector No.	B3
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	SB	-
2	V	-
3	LA/R	-
4	V	-
5	GR	-
6	Y	-
7	LG	-
8	BG	-
9	W	-
10	LA/Y	-
11	BR	-
12	Y	-
13	W	-
14	V	-
15	L	-
16	BR	-
17	Y	-
18	LA/L	- [Without PSM]
18	SB	- [With PSM]
20	LG	-
21	G	-
22	V	-
23	BR	-
24	P	-
25	L	-
26	G	-
29	SHIELD	-
30	W	-
31	B	-
32	R	-

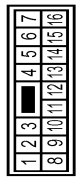
Connector No.	B5
Connector Name	4WD CONTROL UNIT
Connector Type	TH16FW-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	SB	4WD SOL (+)
2	Y	4WD SOL (-)
5	V	AUTO SW
7	LA/R	IGN
8	L	CAN-H
9	LA/G	4WD SOL BAT
10	B	GROUND
11	B	GROUND
12	GR	2WD SW
14	Y	LOCK SW
15	LA/L	BATTERY POWER SUPPLY
16	P	CAN-L

Connector No.	B8
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	-
2	G	-
3	P	-
6	L	-
7	L	-
8	SB	-
9	R	-
10	LA/W	-
11	LA/BR	-
12	W	-
13	P	-
14	R	-
15	P	-
16	P	-

Connector No.	B24
Connector Name	AUTOMATIC BACK DOOR CONTROL UNIT
Connector Type	AAC24FB

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	TOUCH_SENS_RH
2	G	TOUCH_SENS_LH
3	SB	HALF_LATCH_SW
5	BR	CLOSE_SW
6	W	A-SIGN_LH
7	L	B-SIGN_LH
8	R	A-SIGN_RH
9	SB	B-SIGN_RH
10	BG	MAIN_SW
11	V	OPEN_SW
12	P	CAN_LOW
13	GR	TOUCH_SENS_GND
16	B	GROUND
19	V	POWER_LH
20	P	POWER_RH
21	G	ENCODER GROUND
22	LG	DRIVER_SW
23	W	INSIDE_CLOSE_SW
24	L	CAN_HI

JRMWF4065GB

CAN SYSTEM (WITH FORWARD EMERGENCY BRAKING)

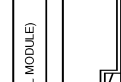
Connector No.	B47
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH

Terminal No.	Color Of Wire	Signal Name [Specification]
6	R	BACK DOOR OPENER REQUEST SW
9	G	HANDS FREE SENSOR
10	W	REAR RH DOOR SW
11	LG	BACK DOOR SW
12	R	REAR LH DOOR SW
13	SB	PASSENGER DOOR SW
15	LA/G	REAR WIPER AUTO STOP
16	Y	BACK DOOR OPENER SW
17	SB	DRIVER DOOR SW
20	L	CAN-H
21	BR	BUMPER ANTENNA(-)
22	Y	REAR ANTENNA(-)
23	L	REAR ANTENNA(+)
24	G	BUMPER ANTENNA(+)
38	V	SIREN
39	LA/W	HIGH-MOUNTED STOP LAMP
40	P	CAN-L

Connector No.	B60
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS

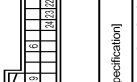
Terminal No.	Color Of Wire	Signal Name [Specification]
1	LA/LG	-
2	LA/GR	-
3	P	-
6	L	-
7	L	-
8	GR	- [For LHD models]
8	SB	- [For RHD models]
9	LA/R	-
10	LA/Y	-
11	LA/BR	-
12	W	-
13	LA/V	-
14	R	-
15	P	-
16	P	-

Connector No.	B101
Connector Name	SONAR CONTROL UNIT
Connector Type	TH24FW-NH



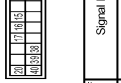
Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	CENTER SENSOR SIGNAL FRONT RH
2	G	CENTER SENSOR SIGNAL FRONT LH
3	W	CORNER SENSOR SIGNAL FRONT LH
4	V	CORNER SENSOR SIGNAL FRONT RH
5	L	CAN-H
6	P	CAN-L
9	V	CENTER SENSOR SIGNAL REAR RH
10	LG	CORNER SENSOR SIGNAL REAR RH
11	SB	FRONT SENSOR POWER SUPPLY
12	BR	IGNITION POWER SUPPLY
13	P	FRONT SENSOR GROUND
14	P	REAR SENSOR GROUND
15	B	GROUND
16	V	SONAR SYSTEM OFF SWITCH SIGNAL
17	SB	SONAR SYSTEM OFF SWITCH INDICATOR SIGNAL
18	LA/L	FRONT BUZZER DRIVE SIGNAL
19	Y	BUZZER POWER SUPPLY
20	LA/G	REAR BUZZER DRIVE SIGNAL
21	G	CENTER SENSOR SIGNAL REAR LH
22	R	CORNER SENSOR SIGNAL REAR LH
23	SB	REAR SENSOR POWER SUPPLY

Connector No.	B129
Connector Name	SONAR CONTROL UNIT
Connector Type	renault_8200176157



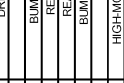
Terminal No.	Color Of Wire	Signal Name [Specification]
2	Y	FRONT BUZZER POWER SUPPLY
6	R	CORNER SENSOR SIGNAL REAR LH
7	V	CENTER SENSOR SIGNAL REAR RH
9	G	REAR BUZZER DRIVE SIGNAL
10	SB	FRONT BUZZER DRIVE SIGNAL
13	B	GROUND
14	BR	IGNITION POWER SUPPLY
15	Y	REAR BUZZER POWER SUPPLY
16	V	SONAR SYSTEM OFF SWITCH SIGNAL
17	SB	SONAR SYSTEM OFF SWITCH INDICATOR SIGNAL
18	SB	REAR SENSOR POWER SUPPLY
20	G	CENTER SENSOR SIGNAL REAR LH
21	LG	CORNER SENSOR SIGNAL REAR RH
22	P	REAR SENSOR GROUND
23	P	CAN-L
24	L	CAN-H

Connector No.	E12
Connector Name	PDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH24FGY-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
25	LG	-
26	W	-
27	SB	-
28	P	-
30	L	-
31	G	-
32	B	-
33	BG	-
34	LG	-
35	V	-
36	Y	-
37	B	-
38	GR	-
39	BR	-
45	L	-
46	P	-
47	W	-
48	R	-

Connector No.	E36
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Type	BEZ34FB-BHY2-BJZZ-RH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	MOTOR POWER SUPPLY
4	SB	FR RH WHEEL SENSOR SIGNAL
5	V	BRAKE VACUUM SENSOR POWER SUPPLY
8	P	FR LH WHEEL SENSOR SIGNAL
9	Y	hill decent control SWITCH SIGNAL
12	LG	BRAKE VACUUM SENSOR SIGNAL
13	B	GROUND (MOTOR)
14	P	CAN-L
15	BR	VDC OFF SWITCH SIGNAL
16	R	FR RH WHEEL SENSOR POWER SUPPLY
17	Y	RR RH WHEEL SENSOR POWER SUPPLY
18	G	RR LH WHEEL SENSOR SIGNAL
19	W	FR LH WHEEL SENSOR POWER SUPPLY
24	SHIELD	BRAKE VACUUM SENSOR GROUND
25	BR	VALVE POWER SUPPLY
26	L	CAN-H
28	GR	IGNITION POWER SUPPLY
29	LG	RR RH WHEEL SENSOR SIGNAL
31	BR	RR LH WHEEL SENSOR POWER SUPPLY
38	B	GROUND (VALVE)

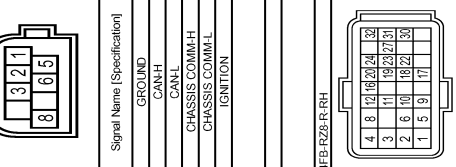
JRMWF4066GB

CAN SYSTEM (WITH FORWARD EMERGENCY BRAKING)

Connector No.	E78
Connector Name	DISTANCE SENSOR
Connector Type	AAZ08FB

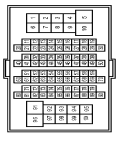
Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GROUND
2	L	CAN-H
3	R	CAN-L
5	L	CHASSIS COMM-H
6	W	CHASSIS COMM-L
8	P	IGNITION

Connector No.	E79
Connector Name	ECM
Connector Type	RH24FB-RZ8-R-RH



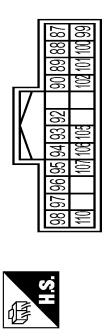
Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	ECM GROUND
2	W	ACCELERATOR PEDAL POSITION SENSOR 1
3	Y	SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 1)
4	B	ECM GROUND
5	L	POWER SUPPLY FOR ECM
6	G	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 1)
8	B	ECM GROUND
9	L	FUEL HEATER AND WATER IN FUEL LEVEL SENSOR
10	L	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 2)
11	V	ACCELERATOR PEDAL POSITION SENSOR 2
12	P	SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 2)
16	BG	STOP LAMP SWITCH [With M/T]
16	R	BRAKE PEDAL POSITION SWITCH [With CVT]
17	LG	IGNITION SWITCH
18	G	ASCD STEERING SWITCH
19	BR	SENSOR GROUND (ASCD STEERING SWITCH)
20	BR	FUEL PUMP CONTROL MODULE (COMMAND)
22	G	FUEL PUMP CONTROL MODULE (DIAGNOSIS)
23	V	SPEED LIMITER MAIN SWITCH
24	R	CLUTCH PEDAL POSITION SWITCH
27	V	CLUTCH INTERLOCK SWITCH
30	BR	ASCD MAIN SWITCH
31	P	CAN-L
32	L	CAN-H

Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
2	W	-
5	V	- [Without ISS]
5	W	- [With ISS]
8	L	-
9	LG	-
10	W	-
20	W	-
21	B	-
22	SHIELD	-
31	Y	-
32	W	-
33	SB	-
34	LG	-
35	BG	-
36	LG	-
37	V	-
38	G	-
39	BR	-
40	L	-
41	P	-
47	GR	-
48	SB	-
51	P	-
52	L	-
53	W	-
54	Y	-
55	BR	-
56	P	-
57	B	-
58	L	-
59	W	-
60	G	-
61	BR	-
62	V	-
63	BR	-
64	GR	-
65	LG	-
66	BG	-
67	L	-
68	R	-
71	V	-
72	L	-
73	R	-
76	L	-
77	V	-
78	LG	-
79	SHIELD	-
80	GR	-
82	Y	-
83	SB	-
84	L	-
85	G	-
86	Y	-
87	B	-
88	B	-
91	R	-
92	BR	-
93	W	-
96	GR	-
97	R	-
98	V	-
99	Y	-

Connector No.	F74
Connector Name	PDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH24FB-NH



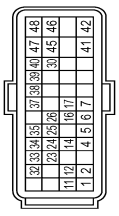
Terminal No.	Color Of Wire	Signal Name [Specification]
87	L	-
88	P	-
89	W	-
90	R	-
92	GR	-
93	G	- [With R9M Engine]
93	P	- [With MR20 or QR25 Engine]
94	SB	-
95	LG	-
96	W	-
97	P	-
98	Y	-
99	BG	-
100	LG	-
101	V	-
102	Y	-
105	W	-
106	BR	-
107	V	-
110	SB	-

JRMWF4067GB

CAN SYSTEM (WITH FORWARD EMERGENCY BRAKING)

Connector No.	F119
Connector Name	TCM
Connector Type	RH40FB-RZ8-L-LH

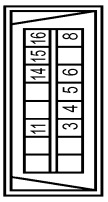
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	ELECTRIC OIL PUMP RELAY
2	GR	-
4	Y	D RANGE SWITCH
5	BR	N RANGE SWITCH
6	G	R RANGE SWITCH
7	V	P RANGE SWITCH
11	LG	SENSOR GROUND
12	BR	CVT FLUID TEMPERATURE SENSOR
14	V	G SENSOR
16	SB	SECONDARY PRESSURE SENSOR
17	R	PRIMARY PRESSURE SENSOR
23	P	CAN-L
24	LG	INPUT SPEED SENSOR
25	R	ELECTRIC OIL PUMP COMMAND SIGNAL
26	BG	SENSOR POWER SUPPLY
30	GR	LINE PRESSURE SOLENOID VALVE
32	SB	ELECTRIC OIL PUMP STATUS SIGNAL
33	L	CAN-H
34	W	OUTPUT SPEED SENSOR
35	GR	PRIMARY SPEED SENSOR
37	Y	SELECT SOLENOID VALVE
38	G	TORQUE CONVERTER CLUTCH SOLENOID VALVE
39	W	SECONDARY PRESSURE SOLENOID VALVE
40	V	PRIMARY PRESSURE SOLENOID VALVE
41	B	GROUND
42	B	GROUND
45	V	BATTERY POWER SUPPLY
46	V	BATTERY POWER SUPPLY
47	BG	IGNITION POWER SUPPLY
48	BG	IGNITION POWER SUPPLY

Connector No.	M4
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
3	LG	-
4	B	-
5	B	-
6	L	-
8	Y	-
11	SB	-
14	P	-
15	BR	-
16	W	-

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

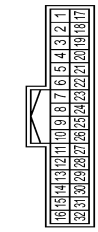
H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	-
2	Y	-
6	GR	-
7	LG	-
20	LA/L	-
21	LA/B	-
24	G	-
25	BR	-
73	Y	-
74	R	-
75	R	-

84	L	-
85	L	-
92	LA/W	-
93	LA/Y	-
95	SB	-
97	BG	-
98	Y	-
99	W	-
100	LA/R	-

Connector No.	M13
Connector Name	WIRE TO WIRE
Connector Type	TH32FW-NH

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	SB	-
2	V	-
3	SB	-
4	BR	-
5	L	-
6	Y	-
7	LG	-
8	BG	-
9	W	-
10	Y	-
11	R	-
12	SB	-
13	LG	-
14	V	-
15	SB	-
16	Y	-
17	LA/BR	-
18	LA/L	-
20	BG	-
21	BG	-
22	GR	-
23	GR	-
24	P	-
25	L	-
26	BR	-

29	SHIELD	-
30	W	-
31	B	-
32	R	-

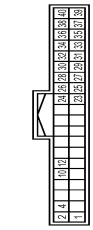
Connector No.	M23
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
7	Y	-
8	L	-
9	R	-
13	SB	-
15	SB	-
16	GR	-
17	V	-
18	G	-
19	SB	-
20	R	-
21	B	-

Connector No.	M24
Connector Name	AROUND VIEW MONITOR CONTROL UNIT
Connector Type	TH40FW-NH

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GROUND
2	Y	BATTERY POWER SUPPLY
4	SB	IGNITION SIGNAL

JRMWF4068GB

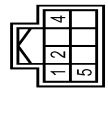
CAN SYSTEM (WITH FORWARD EMERGENCY BRAKING)

10	R	CAN-L
12	L	CAN-H
23	SHIELD	CAMERA IMAGE SIGNAL GROUND
24	G	CAMERA IMAGE SIGNAL
25	B	REAR CAMERA GROUND
26	R	REAR CAMERA POWER SUPPLY
27	SHIELD	REAR CAMERA IMAGE SIGNAL (-)
28	W	REAR CAMERA IMAGE SIGNAL (+)
29	Y	SIDE CAMERA DRIVER SIDE GROUND
30	L	SIDE CAMERA DRIVER SIDE POWER SUPPLY
31	SHIELD	SIDE CAMERA DRIVER SIDE IMAGE SIGNAL (-)
32	G	SIDE CAMERA DRIVER SIDE IMAGE SIGNAL (+)
33	L	SIDE CAMERA PASSENGER SIDE CAMERA GROUND
34	B	SIDE CAMERA PASSENGER SIDE CAMERA POWER SUPPLY
35	SHIELD	SIDE CAMERA PASSENGER SIDE CAMERA IMAGE SIGNAL (-)
36	Y	SIDE CAMERA PASSENGER SIDE CAMERA IMAGE SIGNAL (+)
37	V	FRONT CAMERA GROUND
38	L	FRONT CAMERA POWER SUPPLY
39	SHIELD	FRONT CAMERA IMAGE SIGNAL (-)
40	LG	FRONT CAMERA IMAGE SIGNAL (+)

Connector No.	M27
Connector Name	NAVI CONTROL UNIT
Connector Type	NH18FW-CS2

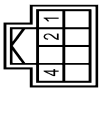
Terminal No.	Color Of Wire	Signal Name [Specification]
2	W	SOUND SIGNAL FRONT SPEAKER LH + [With 6 Speaker]
2	Y	SOUND SIGNAL FRONT SPEAKER LH + [With 4 Speaker]
3	P	SOUND SIGNAL FRONT LH - [With 6 Speaker]
3	R	SOUND SIGNAL FRONT LH - [With 4 Speaker]
4	GR	SOUND SIGNAL REAR LH +
5	BR	SOUND SIGNAL REAR LH -
7	W	AUTO ACC INPUT SIGNAL
8	L	CAN-H
9	V	ILLUMINATION SIGNAL
11	G	SOUND SIGNAL FRONT RH + [With 6 Speaker]
11	W	SOUND SIGNAL FRONT RH + [With 4 Speaker]
12	GR	SOUND SIGNAL FRONT RH - [With 4 Speaker]
12	V	SOUND SIGNAL FRONT RH - [With 6 Speaker]
13	LG	SOUND SIGNAL REAR RH +
14	Y	SOUND SIGNAL REAR RH -
17	R	CAN-L
18	G	VEHICLE SPEED SIGNAL (8 PULSE)
19	L	BATTERY POWER SUPPLY
20	B	GROUND

Connector No.	M30
Connector Name	STEERING ANGLE SENSOR
Connector Type	TH08FGY-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	-
2	P	-
4	G	-
5	L	-

Connector No.	M37
Connector Name	EPS CONTROL UNIT
Connector Type	TH08FW-NH

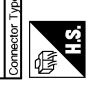


Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	CAN-L
2	L	CAN-H
4	SB	IGNITION POWER SUPPLY

Connector No.	M42
Connector Name	COMBINATION METER
Connector Type	TH12FW-NH

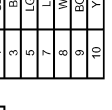
Terminal No.	Color Of Wire	Signal Name [Specification]
41	L	CAN-H
42	P	CAN-L
43	W	ILLUMINATION CONTROL SIGNAL
44	LA/B	FUEL LEVEL SENSOR GROUND
45	LA/G	BATTERY POWER SUPPLY
46	LA/BR	IGNITION SIGNAL [Without ISS]
46	V	IGNITION SIGNAL [With ISS]
47	SB	AV COMMUNICATION SIGNAL (H)
48	LG	AV COMMUNICATION SIGNAL (L)
49	Y	OIL LEVEL SENSOR SIGNAL
50	BG	OIL LEVEL SENSOR GROUND
51	LA/L	FUEL LEVEL SENSOR SIGNAL
52	B	GROUND

Connector No.	M56
Connector Name	WIRE TO WIRE
Connector Type	TH32FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	SB	-
3	B	-
5	LG	-
7	L	-
8	W	-
9	BG	-
10	Y	-
11	V	-
12	GR	-
13	LG	-
14	SB	-
16	BR	-
18	BR	-
19	G	-
20	Y	-
21	BG	-
23	R	-
24	SB	-
25	GR	-
26	BR	-
27	LG	-
28	W	-
29	BG	-
30	G	-

Connector No.	M57
Connector Name	STEERING LOCK UNIT
Connector Type	TH08FB-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	STEERING LOCK UNIT GND
2	V	STEERING LOCK UNIT PWR
3	L	STEERING LOCK UNIT CAN H
6	Y	STEERING LOCK UNIT SENSORLINE
7	GR	STEERING LOCK UNIT SAFETYLINE
8	P	STEERING LOCK UNIT CAN L

JRMWF4069GB

CAN SYSTEM (WITH FORWARD EMERGENCY BRAKING)

Connector No.	M59
Connector Name	AIR BAG DIAGNOSIS SENSOR UNIT
Connector Type	NH28FY-EX

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
25	LG	INFLATOR_AS-
26	SB	AS1(-)
27	B	AS1(+)
29	Y	DR1(-)
30	G	DR1(+)
31	B	ECZS(-)
36	BR	DEACTIVE
37	R	ACTIVE
39	SHIELD	GND
41	W	ECZS(+)
45	P	CAN-L
46	L	CAN-H
47	GR	A/B ON IND
48	W	A/B OFF IND
49	BG	K-LINE
50	R	IGN

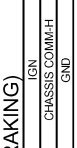
Connector No.	M73
Connector Name	CHASSIS CONTROL MODULE
Connector Type	TH24FW-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
3	P	CAN-L
4	L	CAN-H
7	W	CHASSIS COMM-L
8	W	CHASSIS COMM-L
10	SB	IGN
11	L	CHASSIS COMM-H
12	B	GND
19	L	CHASSIS COMM-H

Connector No.	M77
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

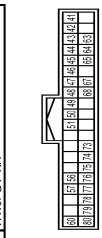
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
2	LA/R	-
5	V	- [Without ISS]
5	W	- [With ISS]
8	G	-
9	Y	-
10	R	-
20	W	-
21	B	-
22	SHIELD	-
31	V	-
32	GR	-
33	G	-
34	LG	-
35	BG	-
36	LG	-
37	V	-
38	G	-
39	BR	-
40	L	-
41	P	-
47	Y	-
48	BG	-
51	GR	-
52	SB	-
53	R	-
54	LA/L	-
55	BR	-
56	P	-
57	B	-
58	L	-
59	W	-
60	LA/R	-
61	P	-
62	V	-
63	LA/BR	-
64	Y	-
65	GR	-
66	BG	-
67	L	-
68	R	-
71	V	-
72	L	-
73	Y	-
76	L	-
77	V	-
78	LG	-
79	SHIELD	-
80	L	- [With ISS]
80	LA/L	- [Without ISS]
82	GR	-
83	LG	-
84	SB	-
85	G	-
86	G	-
87	B	-
88	B	-
91	L	-
92	W	-
93	W	-
96	LG	-
97	BR	-
98	V	-
99	R	-

Connector No.	M87
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FGY-NH

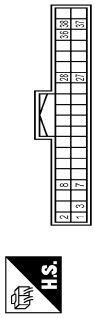
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
41	V	STEERING LOCK UNIT POWER SUPPLY
42	LA/G	TURN SIG LH (SIDE)
43	LA/Y	TURN SIG RH (SIDE)
44	P	INTERIOR ROOM LAMP RELAY CONT
45	R	CAN-L
46	L	CAN-H
47	G	LIGHT & RAIN SENSOR
48	L	CAN-H
49	R	CAN-L
50	BG	DOOR LOCK SW
51	Y	HAZARD SW
56	P	DONGLE
57	L	CVT SHIFT SELECT (DETENT SW) PWR
60	R	HEADLAMP WASHER SW
63	G	POWER WINDOW RELAY CON
64	LA/R	REAR WINDOW DEFOGGER RELAY CONT
65	BR	ACC RELAY CONT
67	Y	IGN RELAY (F/B) CONT OUTPUT
68	LA/W	BLOWER RELAY CONT
73	LG	COMBI SW INPUT 5
74	Y	COMBI SW OUTPUT 5
75	BG	SECURITY IND LAMP CONT
76	G	COMBI SW INPUT 3
77	GR	COMBI SW INPUT 4
78	V	COMBI SW INPUT 1
79	W	COMBI SW INPUT 2
80	SB	DOOR UNLOCK SW

Connector No.	M101
Connector Name	AROUND VIEW MONITOR CONTROL UNIT
Connector Type	TH40FW-NH

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GROUND
2	Y	BATTERY POWER SUPPLY
3	SB	IGNITION SIGNAL
7	R	BSW INDICATOR LH
8	G	BSW INDICATOR RH

JRMWF4070GB

CAN SYSTEM (WITH FORWARD EMERGENCY BRAKING)

27	L	CAN-H
28	R	CAN-L
36	Y	COMMUNICATION SIGNAL (CAMERA → PUMP)
37	V	COMM GND
38	SB	COMMUNICATION SIGNAL (PUMP → CAMERA)

Connector No.	M132
Connector Name	A/C AMP.
Connector Type	TH32FW-NH

H.S.

1	3	4		7	8	9	10	11	12	13	14	
17	18	19		21		23	24	25	26	27	28	29	30

Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	FAN AMP. CONT
3	SB	ACC PWR SPLY
4	V	IGN ON
7	L	CAN-H
8	W	MTR PWR SPLY (INT, MODE)
9	BG	A/MIX 1
10	Y	A/MIX 2
11	V	INT 1
12	GR	INT 2
13	LG	MODE 1
14	SB	MODE 2
17	W	BLOWER MTR F/B
18	BR	SENS GND (INTAKE)
19	B	GND
21	BG	INTAKE SENS
23	R	CAN-L
24	SB	MTR PWR SPLY (A/MIX)
25	GR	A/MIX 3
26	BR	A/MIX 4
27	LG	INT 3
28	W	INT 4
29	BG	MODE 3
30	G	MODE 4

Connector No.	M133
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

Terminal No.	Color Of Wire	Signal Name [Specification]
1	-	-
3	-	-
5	-	-
7	-	-
8	-	-
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	-	-
16	-	-
18	-	-
19	-	-
20	-	-
21	-	-
23	-	-
24	-	-
25	-	-
26	-	-
27	-	-
28	-	-
29	-	-
30	-	-

Connector No.	M137
Connector Name	ELECTRIC PARKING BRAKE CONTROL MODULE
Connector Type	Renault_8200668609

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

Terminal No.	Color Of Wire	Signal Name [Specification]
8	SB	PARKING BRAKE SW INDICATOR LAMP
9	BR	PARKING BRAKE SW RELEASE (NOR-OP)
10	BG	PARKING BRAKE SW RELEASE (NOR-CL)
11	V	PARKING BRAKE SW POWER SUPPLY (APPLY)
12	GR	MOTOR RH (+)
13	R	MOTOR POWER SUPPLY (RH)
14	W	MOTOR LH (+)
15	V	MOTOR POWER SUPPLY (LH)
16	L	CAN-H
17	P	CAN-L
18	BG	PARKING BRAKE SW APPLY (NOR-OP)
19	G	PARKING BRAKE SW APPLY (NOR-CL)
20	Y	PARKING BRAKE SW POWER SUPPLY (RELEASE)
22	GR	IGNITION POWER SUPPLY
24	LG	CLUTCH PEDAL STROKE SENSOR GROUND
25	G	CLUTCH PEDAL STROKE SENSOR SIGNAL
26	GR	CLUTCH PEDAL STROKE SENSOR POWER SUPPLY
27	G	MOTOR RH (-)
28	B	GROUND (MOTOR RH)
29	BR	MOTOR LH (-)
30	B	GROUND (MOTOR LH)

Connector No.	M174
Connector Name	A/C AUTO AMP.
Connector Type	TH40FB-NH

H.S.

41	43								61	63	64
63									71	73	

Terminal No.	Color Of Wire	Signal Name [Specification]
41	BG	ACC PWR SPLY
43	R	GND
51	L	CAN-H
53	P	IN-VHCL SENS
54	V	SUNLOAD SENS
63	G	SENS GND (IN-VHCL, SUNLOAD)
71	W	CAN-L
73	Y	LIN

Connector No.	R1
Connector Name	WIRE TO WIRE
Connector Type	TH24MW-NH

H.S.

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24

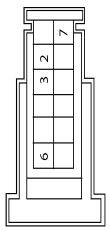
Terminal No.	Color Of Wire	Signal Name [Specification]
3	-	-
7	-	-
8	-	-
9	-	-
13	-	-
15	-	-
16	-	-
17	-	-
18	-	-
19	-	-
20	-	-
21	-	-

JRMWF4071GB

CAN SYSTEM (WITH FORWARD EMERGENCY BRAKING)

Connector No.	R22
Connector Name	FRONT CAMERA UNIT
Connector Type	Renault_8200280781

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
2	L	CAN-H
3	R	CAN-L
6	R	IGNITION POWER SUPPLY
7	B	GROUND

JRMWF4072GB

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Interview Sheet

INFOID:0000000010715311

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

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009327

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	LAN-74, "Diagnosis Procedure"
Main line between chassis control module and automatic back door control unit	LAN-75, "Diagnosis Procedure"
Main line between chassis control module and sonar control unit	LAN-76, "Diagnosis Procedure"
Main line between A/C auto amp. and front camera unit	LAN-77, "Diagnosis Procedure"
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	LAN-81, "Diagnosis Procedure"
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	LAN-91, "Diagnosis Procedure"
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	LAN-95, "Diagnosis Procedure"
Around view monitor control unit branch line circuit	LAN-96, "Diagnosis Procedure"
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	LAN-99, "Diagnosis Procedure"
Front camera unit	LAN-101, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

Chassis Communication Circuit

INFOID:0000000011009328

BRANCH LINE

Malfunction area	Reference
Distance sensor branch line circuit (Chassis communication circuit)	LAN-100, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
Chassis communication circuit	LAN-106, "Diagnosis Procedure"

MAIN LINE BETWEEN IPDM-E AND DLC CIRCUIT

Diagnosis Procedure

INFOID:0000000010715315

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 E105
- Harness connector M77

Is the inspection result normal?

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

2.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the following harness connectors.

- IPDM E/R
- Harness connectors E105 and M77

2. Check the continuity between the IPDM E/R harness connector and the harness connector.

IPDM E/R harness connector		Harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
E12	30	E105	40	Existed
	28		41	Existed

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair the main line between the IPDM E/R and the harness connector E105.

3.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

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

Harness connector		Data link connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
M77	40	M4	6	Existed
	41		14	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 IPDM E/R and the data link connector.
NO >> Repair the main line between the harness connector M77 and the data link connector.

MAIN LINE BETWEEN DLC AND CCM CIRCUIT

Diagnosis Procedure

INFOID:0000000010715316

1. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Disconnect the following harness connectors.
- ECM
- Chassis control module
4. Check the continuity between the data link connector and the chassis control module harness connector.

Data link connector		Chassis control module harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
M4	6	M73	4	Existed
	14		3	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 chassis control module.
NO >> Repair the main line between the data link connector and the chassis control module.

MAIN LINE BETWEEN CCM AND 4WD CIRCUIT

Diagnosis Procedure

INFOID:0000000010715317

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 M13
- Harness connector B3

Is the inspection result normal?

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

2.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the following harness connectors.

- Chassis control module
- Harness connectors M13 and B3

2. Check the continuity between the chassis control module harness connector and the harness connector.

Chassis control module harness connector		Harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
M73	4	M13	25	Existed
	3		24	Existed

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair the main line between the chassis control module and the harness connector M13.

3.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the connector of 4WD control unit.
2. Check the continuity between the harness connector and the 4WD control unit harness connector.

Harness connector		4WD control unit harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
B3	25	B5	8	Existed
	24		16	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 chassis control module and the 4WD control unit.
NO >> Repair the main line between the harness connector B3 and the 4WD control unit.

MAIN LINE BETWEEN CCM AND PWBD CIRCUIT

Diagnosis Procedure

INFOID:0000000011009329

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 M13
- Harness connector B3

Is the inspection result normal?

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

2.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the following harness connectors.

- Chassis control module
- Harness connectors M13 and B3

2. Check the continuity between the chassis control module harness connector and the harness connector.

Chassis control module harness connector		Harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
M73	4	M13	25	Existed
	3		24	Existed

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair the main line between the chassis control module and the harness connector M13.

3.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the connector of automatic back door control unit.
2. Check the continuity between the harness connector and the automatic back door control unit harness connector.

Harness connector		Automatic back door control unit harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
B3	25	B24	24	Existed
	24		12	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 chassis control module and the automatic back door control unit.
NO >> Repair the main line between the harness connector B3 and the automatic back door control unit.

MAIN LINE BETWEEN CCM AND SONAR CIRCUIT

Diagnosis Procedure

INFOID:0000000010715318

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 M13
- Harness connector B3

Is the inspection result normal?

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

2.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the following harness connectors.

- Chassis control module
- Harness connectors M13 and B3

2. Check the continuity between the chassis control module harness connector and the harness connector.

Chassis control module harness connector		Harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
M73	4	M13	25	Existed
	3		24	Existed

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair the main line between the chassis control module and the harness connector M13.

3.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the connectors B8 and B60 (without Park Assist) or sonar control unit (with Park Assist).
2. Check the continuity between the harness connector and the sonar control unit harness connector.

- Without Park Assist

Harness connector		Harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
B3	25	B8	7	Existed
	24		16	Existed

- With Park Assist

Harness connector		Harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
B3	25	B129	24	Existed
	24		23	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 chassis control module and the sonar control unit.
NO >> Repair the main line between the harness connector B3 and harness connector B8 (without Park Assist) or sonar control unit (with Park Assist).

MAIN LINE BETWEEN HVAC AND LANE CIRCUIT

Diagnosis Procedure

INFOID:0000000011009330

1.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Disconnect the following harness connectors.

- CAN gateway
- A/C amp. (with manual A/C)
- Harness connectors M133 and M56 (with auto A/C)
- Harness connectors M23 and R1

4. Check the continuity between the A/C amp. (with manual A/C) or harness connector (with auto A/C) and the harness connector.

- With manual A/C

A/C amp. connector		Harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
M132	7	M23	8	Existed
	23		9	Existed

- With auto A/C

Harness connector		Harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
M56	7	M23	8	Existed
	23		9	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 A/C amp. (with manual A/C) or A/C auto amp. (with auto A/C) and the front camera unit.
NO >> Repair the main line between the A/C amp. (with manual A/C) or harness connector M56 (with auto A/C) and the harness connector M23.

ECM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:0000000010715319

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

- MR20DD engine models

ECM harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E16	100	99	Approx. 108 – 132

- QR25DE engine models

ECM harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E60	100	99	Approx. 108 – 132

- R9M engine models

ECM harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E79	32	31	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 EC-162, "Diagnosis Procedure" (MR20DD engine models), EC-573, "Diagnosis Procedure" (QR25DE engine models) or EC-963, "ECM : Diagnosis Procedure" (R9M engine models).

Is the inspection result normal?

YES (Present error)>>Replace the ECM. Refer to EC-430, "Removal and Installation" (MR20DD engine models), EC-806, "Removal and Installation" (QR25DE engine models) or EC-1226, "Removal and Installation" (R9M engine models).
YES (Past error)>>Error was detected in the ECM branch line.
NO >> Repair the power supply and the ground circuit.

ABS BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:0000000010715320

1.CHECK CONNECTOR

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

Is the inspection result normal?

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

2.CHECK HARNESS FOR OPEN CIRCUIT

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

ABS actuator and electric unit (control unit) harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E36	26	14	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 BRC-188, "Diagnosis Procedure".

Is the inspection result normal?

YES (Present error)>>Replace the ABS actuator and electric unit (control unit). Refer to BRC-217, "LHD : Removal and Installation" (LHD models) or BRC-220, "RHD : Removal and Installation" (RHD models).
YES (Past error)>>Error was detected in the ABS actuator and electric unit (control unit) branch line.
NO >> Repair the power supply and the ground circuit.

IPDM-E BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:0000000010715321

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.		
E12	30	28	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.
NO >> Repair the IPDM E/R branch line.

3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the IPDM E/R. Refer to PCS-59, "Diagnosis Procedure".

Is the inspection result normal?

YES (Present error)>>Replace the IPDM E/R. Refer to PCS-60, "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.

TCM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:0000000010715322

1.CHECK CONNECTOR

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

- TCM
- IPDM E/R

Is the inspection result normal?

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

2.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the following harness connectors.

- TCM
- IPDM E/R

2. Check the continuity between the TCM harness connector and the IPDM E/R harness connector.

- Except for R9M engine models

TCM harness connector		IPDM E/R harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
F23	33	F74	87	Existed
	23		88	Existed

- R9M engine models

TCM harness connector		IPDM E/R harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
F119	33	F74	87	Existed
	23		88	Existed

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair the branch line between the TCM and IPDM E/R.

3.CHECK IPDM E/R (OPEN CIRCUIT)

Check the continuity between the IPDM E/R terminals.

IPDM E/R terminals		Continuity
Terminal No.	Terminal No.	
87	45	Existed
88	46	Existed

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace the IPDM E/R.

4.CHECK HARNESS FOR OPEN CIRCUIT

Check the resistance between the IPDM E/R harness connector terminals.

IPDM E/R harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E12	45	46	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 5.
NO >> Repair the IPDM E/R branch line.

5. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the TCM. Refer to TM-388, "Diagnosis Procedure" (RE0F10D models) or TM-652, "Diagnosis Procedure" (RE0F10G models).

Is the inspection result normal?

YES (Present error)>>Replace the TCM. Refer to TM-415, "Removal and Installation" (RE0F10D models) or TM-676, "Removal and Installation" (RE0F10G models).
YES (Past error)>>Error was detected in the TCM branch line.
NO >> Repair the power supply and the ground circuit.

DLC BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:0000000010715323

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.		
M4	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.

EHS/PKB BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:0000000010715324

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 electric parking brake control module 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 electric parking brake control module.
2. Check the resistance between the electric parking brake control module harness connector terminals.

Electric parking brake control module harness connector			Resistance (Ω)
Connector No.	Terminal No.		
M137	16	17	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.
NO >> Repair the electric parking brake control module branch line.

3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the electric parking brake control module. Refer to PB-145, "Diagnosis Procedure".

Is the inspection result normal?

YES (Present error)>>Replace the electric parking brake control module. Refer to PB-153, "Removal and Installation".
YES (Past error)>>Error was detected in the electric parking brake control module branch line.
NO >> Repair the power supply and the ground circuit.

ESCL BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:0000000010715325

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 lock 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 steering lock unit.
2. Check the resistance between the steering lock unit harness connector terminals (between CAN-H and CAN-L).

Resistance (Ω)
Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.
NO >> Repair the steering lock unit branch line.

3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the steering lock unit.

Is the inspection result normal?

YES (Present error)>>Replace the steering lock unit.
YES (Past error)>>Error was detected in the steering lock unit branch line.
NO >> Repair the power supply and the ground circuit.

M&A BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:0000000010715326

1.CHECK CONNECTOR

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

Is the inspection result normal?

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

2.CHECK HARNESS FOR OPEN CIRCUIT

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

Combination meter harness connector			Resistance (Ω)
Connector No.	Terminal No.		
M42	41	42	Approx. 54 – 66

Is the measurement value within the specification?

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

3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the combination meter. Refer to MWI-129, "COMBINATION METER : Diagnosis Procedure".

Is the inspection result normal?

YES (Present error)>>Replace the combination meter. Refer to MWI-151, "Removal and Installation".
YES (Past error)>>Error was detected in the combination meter branch line.
NO >> Repair the power supply and the ground circuit.

A-BAG BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:0000000010715327

WARNING:

- **Before servicing, turn ignition switch OFF, disconnect battery negative terminal, and wait 3 minutes or more. (To discharge backup capacitor.)**
- **Never use unspecified tester or other measuring device.**

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 air bag diagnosis sensor unit for damage, bend and loose connection (unit side and connector side).

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace the main harness.

2.CHECK AIR BAG DIAGNOSIS SENSOR UNIT

Check the air bag diagnosis sensor unit. Refer to SRC-28, "Work Flow".

Is the inspection result normal?

YES >> Replace the main harness.
NO >> Replace parts whose air bag system has a malfunction.

CCM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:0000000010715328

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 chassis control module connector 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 chassis control module.
2. Check the resistance between the chassis control module harness connector terminals.

Chassis control module harness connector			Resistance (Ω)
Connector No.	Terminal No.		
M73	4	3	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.
NO >> Repair the chassis control module branch line.

3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the chassis control module. Refer to DAS-277, "Diagnosis Procedure".

Is the inspection result normal?

YES (Present error)>>Replace the chassis control module. Refer to DAS-278, "Removal and Installation".
YES (Past error)>>Error was detected in the chassis control module branch line.
NG >> Repair the power supply and the ground circuit.

EPS BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:0000000010715329

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 EPS 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 EPS control unit.
2. Check the resistance between the EPS control unit harness connector terminals.

EPS control unit harness connector			Resistance (Ω)
Connector No.	Terminal No.		
M37	2	1	Approx. 54 – 66

Is the measurement value within the specification?

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

3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the EPS control unit. Refer to STC-40, "Diagnosis Procedure".

Is the inspection result normal?

YES (Present error)>>Replace the EPS control unit. Refer to STC-50, "Removal and Installation".
YES (Past error)>>Error was detected in the EPS control unit branch line.
NO >> Repair the power supply and the ground circuit.

STRG BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:0000000010715330

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.		
M30	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-86, "LHD : Wiring Diagram" (LHD models) or BRC-91, "RHD : Wiring Diagram" (RHD models).

Is the inspection result normal?

YES (Present error)>>Replace the steering angle sensor. Refer to BRC-222, "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.

4WD BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:0000000010715331

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 4WD 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 4WD control unit.
2. Check the resistance between the 4WD control unit harness connector terminals.

4WD control unit harness connector			Resistance (Ω)
Connector No.	Terminal No.		
B5	8	16	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.
NO >> Repair the 4WD control unit branch line.

3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the 4WD control unit. Refer to DLN-64, "Diagnosis Procedure" (TY21C models) or DLN-168, "Diagnosis Procedure" (TY30A models).

Is the inspection result normal?

YES (Present error)>>Replace the 4WD control unit. Refer to DLN-76, "Removal and Installation" (TY21C models) or DLN-179, "Removal and Installation" (TY30A models).
YES (Past error)>>Error was detected in the 4WD control unit branch line.
NG >> Repair the power supply and the ground circuit.

PWBD BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:0000000010715332

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 automatic back door 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 automatic back door control unit.
2. Check the resistance between the automatic back door control unit harness connector terminals.

Automatic back door control unit harness connector			Resistance (Ω)
Connector No.	Terminal No.		
B24	24	12	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.
NO >> Repair the automatic back door control unit branch line.

3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the automatic back door control unit. Refer to DLK-205, "AUTOMATIC BACK DOOR CONTROL UNIT : Diagnosis Procedure" (RHD models) or DLK-517, "AUTOMATIC BACK DOOR CONTROL UNIT : Diagnosis Procedure" (LHD models).

Is the inspection result normal?

YES (Present error)>>Replace the automatic back door control unit. Refer to DLK-327, "Removal and Installation" (RHD models) or DLK-633, "Removal and Installation" (LHD models).
YES (Past error)>>Error was detected in the automatic back door control unit branch line.
NG >> Repair the power supply and the ground circuit.

SONAR BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:0000000010715333

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).

- Sonar control unit
- Harness connector B8
- Harness connector B60

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 sonar control unit.
2. Check the resistance between the sonar control unit harness connector terminals.

- Without Park Assist

Sonar control unit harness connector			Resistance (Ω)
Connector No.	Terminal No.		
B101	5	6	Approx. 54 – 66

- With Park Assist

Sonar control unit harness connector			Resistance (Ω)
Connector No.	Terminal No.		
B129	24	23	Approx. 54 – 66

Is the measurement value within the specification?

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

3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the sonar control unit. Refer to SN-106, "SONAR CONTROL UNIT : Diagnosis Procedure" (without Park Assist) or SN-233, "SONAR CONTROL UNIT : Diagnosis Procedure" (with Park Assist).

Is the inspection result normal?

YES (Present error)>>Replace the sonar control unit. Refer to SN-111, "Removal and Installation" (without Park Assist) or SN-237, "Removal and Installation" (with Park Assist).
YES (Past error)>>Error was detected in the sonar control unit branch line.
NO >> Repair the power supply and the ground circuit.

BCM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:0000000010715334

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.		
B47	20	40	Approx. 108 – 132

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-114, "Diagnosis Procedure".

Is the inspection result normal?

YES (Present error)>>Replace the BCM. Refer to BCS-121, "Removal and Installation".
YES (Past error)>>Error was detected in the BCM branch line.
NO >> Repair the power supply and the ground circuit.

AV BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:0000000010715335

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).

- NAVI control unit
- BCM

Is the inspection result normal?

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

2.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

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

BCM harness connector			Continuity
Connector No.	Terminal No.		
M87	46	48	Existed
	45	49	Existed

Is the inspection result normal?

YES >> GO TO 3.
NO >> Check the harness and repair the root cause (CAN communication circuit 2 side). Refer to LAN-104, "Diagnosis Procedure".

3.CHECK HARNESS FOR OPEN CIRCUIT

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

NAVI control unit harness connector			Resistance (Ω)
Connector No.	Terminal No.		
M27	8	17	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 4.
NO >> Repair the AV control unit branch line.

4.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the NAVI control unit. Refer to AV-241, "NAVI CONTROL UNIT : Diagnosis Procedure".

Is the inspection result normal?

YES (Present error)>>Replace the NAVI control unit. Refer to AV-262, "Removal and Installation".
YES (Past error)>>Error was detected in the NAVI control unit branch line.
NO >> Repair the power supply and the ground circuit.

AVM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:0000000010715336

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).

- Around view monitor control unit
- BCM
- Harness connector M11
- Harness connector B1

Is the inspection result normal?

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

2.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

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

BCM harness connector			Continuity
Connector No.	Terminal No.		
B87	46	48	Existed
	45	49	Existed

Is the inspection result normal?

YES >> GO TO 3.
NO >> Check the harness and repair the root cause (CAN communication circuit 2 side). Refer to LAN-104, "Diagnosis Procedure".

3.CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of around view monitor control unit.
2. Check the resistance between the around view monitor control unit harness connector terminals.

- With LDW

Around view monitor control unit harness connector			Resistance (Ω)
Connector No.	Terminal No.		
M101	27	28	Approx. 54 – 66

- Without LDW

Around view monitor control unit harness connector			Resistance (Ω)
Connector No.	Terminal No.		
M24	12	10	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 4.
NO >> Repair the around view monitor control unit branch line.

4.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the around view monitor control unit. Refer to AV-241, "AROUND VIEW MONITOR CONTROL UNIT : Diagnosis Procedure".

Is the inspection result normal?

YES (Present error)>>Replace the around view monitor control unit. Refer to AV-268, "Removal and Installation".
YES (Past error)>>Error was detected in the around view monitor control unit branch line.
NO >> Repair the power supply and the ground circuit.

HVAC BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:0000000010715337

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).

- A/C auto amp. (With auto A/C)
- Harness connector M56 (With auto A/C)
- Harness connector M133 (With auto A/C)
- A/C amp. (With manual A/C)
- BCM

Is the inspection result normal?

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

2.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

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

BCM harness connector			Continuity
Connector No.	Terminal No.		
B87	46	48	Existed
	45	49	Existed

Is the inspection result normal?

YES >> GO TO 3.
NO >> Check the harness and repair the root cause (CAN communication circuit 2 side). Refer to LAN-104, "Diagnosis Procedure".

3.CHECK HARNESS FOR OPEN CIRCUIT

1. Connect the connector of BCM.
2. Disconnect the connector of A/C auto amp. (With auto A/C) or A/C amp. (With manual A/C).
3. Check the resistance between the A/C auto amp. (With auto A/C) or A/C amp. (With manual A/C) harness connector terminals.

- With auto A/C

A/C auto amp. harness connector			Resistance (Ω)
Connector No.	Terminal No.		
M174	51	71	Approx. 54 – 66

- With manual A/C

A/C amp. harness connector			Resistance (Ω)
Connector No.	Terminal No.		
M132	7	23	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 4.
NO >> Repair the A/C auto amp. (With auto A/C) or A/C amp. (With manual A/C) branch line.

4.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the A/C auto amp. (With auto A/C) or A/C amp. (With manual A/C). Refer to the following.

- Automatic air conditioning: HAC-105, "A/C AUTO AMP. : Diagnosis Procedure".
- Manual air conditioning: HAC-204, "A/C AMP. : Diagnosis Procedure".

Is the inspection result normal?

YES (Present error)>>Replace the A/C auto amp. (With auto A/C) or A/C amp. (With manual A/C). Refer to the following.
- Automatic air conditioning: HAC-126, "Removal and Installation".
- Manual air conditioning: HAC-222, "Removal and Installation".

YES (Past error)>>Error was detected in the A/C auto amp. (With auto A/C) or A/C amp. (With manual A/C) branch line.

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

ICC BRANCH LINE CIRCUIT (CAN COMMUNICATION CIRCUIT)

Diagnosis Procedure

INFOID:0000000010715338

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).

- Distance sensor
- Harness connector M77
- Harness connector E105
- BCM

Is the inspection result normal?

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

2.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

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

BCM harness connector			Continuity
Connector No.	Terminal No.		
B87	46	48	Existed
	45	49	Existed

Is the inspection result normal?

YES >> GO TO 3.
NO >> Check the harness and repair the root cause (CAN communication circuit 2 side). Refer to LAN-104, "Diagnosis Procedure".

3.CHECK HARNESS FOR OPEN CIRCUIT

1. Connect the connector of BCM.
2. Disconnect the connector of distance sensor.
3. Check the resistance between the distance sensor harness connector terminals.

Distance sensor harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E78	2	3	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 4.
NO >> Repair the distance sensor branch line.

4.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the distance sensor. Refer to BRC-300, "Diagnosis Procedure".

Is the inspection result normal?

YES (Present error)>>Replace the distance sensor. Refer to BRC-304, "Removal and Installation".
YES (Past error)>>Error was detected in the distance sensor branch line.
NO >> Repair the power supply and the ground circuit.

ICC BRANCH LINE CIRCUIT (CHASSIS COMMUNICATION CIRCUIT)

Diagnosis Procedure

INFOID:0000000011009331

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).

- Distance sensor
- Harness connector M77
- Harness connector e105
- Chassis control module

Is the inspection result normal?

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

2.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the connector of chassis control module.
2. Check the continuity between the chassis control module harness connector terminals.

Chassis control module harness connector			Continuity
Connector No.	Terminal No.		
M73	11	19	Existed
	8	7	Existed

Is the inspection result normal?

YES >> GO TO 3.
NO >> Check the harness and repair the root cause (chassis communication circuit side). Refer to LAN-106, "Diagnosis Procedure".

3.CHECK HARNESS FOR OPEN CIRCUIT

1. Connect the connector of chassis control module.
2. Disconnect the connector of distance sensor.
3. Check the resistance between the distance sensor harness connector terminals.

Distance sensor harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E78	5	6	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 4.
NO >> Repair the distance sensor branch line.

4.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the distance sensor. Refer to BRC-300, "Diagnosis Procedure".

Is the inspection result normal?

YES (Present error)>>Replace the distance sensor. Refer to BRC-304, "Removal and Installation".
YES (Past error)>>Error was detected in the distance sensor branch line.
NO >> Repair the power supply and the ground circuit.

LANE BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:0000000011009332

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).

- Front camera unit
- Harness connector M23
- Harness connector R1
- BCM

Is the inspection result normal?

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

2.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

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

BCM harness connector			Continuity
Connector No.	Terminal No.		
B87	46	48	Existed
	45	49	Existed

Is the inspection result normal?

YES >> GO TO 3.
NO >> Check the harness and repair the root cause (CAN communication circuit 2 side). Refer to LAN-104, "Diagnosis Procedure".

3.CHECK HARNESS FOR OPEN CIRCUIT

1. Connect the connector of BCM.
2. Disconnect the connector of front camera unit.
3. Check the resistance between the front camera unit harness connector terminals.

Front camera unit harness connector			Resistance (Ω)
Connector No.	Terminal No.		
R22	2	3	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 4.
NO >> Repair the front camera unit branch line.

4.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the front camera unit. Refer to DAS-131, "FRONT CAMERA UNIT : Diagnosis Procedure".

Is the inspection result normal?

YES (Present error)>>Replace the front camera unit. Refer to DAS-149, "Removal and Installation".
YES (Past error)>>Error was detected in the front camera unit branch line.
NO >> Repair the power supply and the ground circuit.

CAN COMMUNICATION CIRCUIT 1

Diagnosis Procedure

INFOID:0000000010715339

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 circuit 1.
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.		
M4	6	14	Not existed

Is the inspection result normal?

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

3.CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

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

Data link connector		Ground	Continuity
Connector No.	Terminal No.		
M4	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 BCM TERMINATION CIRCUIT

1. Remove the ECM and the BCM.
2. Check the resistance between the ECM terminals.

- Except for R9M engine models

ECM		Resistance (Ω)
Terminal No.		
100	99	Approx. 108 – 132

- R9M engine models

ECM		Resistance (Ω)
Terminal No.		
32	31	Approx. 108 – 132

3. Check the resistance between the BCM terminals.

BCM		Resistance (Ω)
Terminal No.		
20	40	Approx. 108 – 132

Is the measurement value within the specification?

YES >> GO TO 5.
NO >> Replace the ECM and/or the BCM.

5.CHECK SYMPTOM

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 circuit 1.
   NOTE:
   ECM and BCM have a termination circuit. Check other units first.
4. Connect the battery cable to the negative terminal. Check if the symptoms described in the “Symptom (Results from interview with customer)” are reproduced.
   NOTE:
   Although unit-related error symptoms occur, do not confuse them with other symptoms.

Inspection result

Reproduced>>Connect the connector. Check other units as per the above procedure.
Non-reproduced>>Replace the unit whose connector was disconnected.

CAN COMMUNICATION CIRCUIT 2

Diagnosis Procedure

INFOID:0000000010715340

1.CONNECTOR INSPECTION

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 CONTINUITY (OPEN CIRCUIT)

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

BCM harness connector			Continuity
Connector No.	Terminal No.		
B87	46	48	Existed
	45	49	Existed

Is the inspection result normal?

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

3.CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

1. Disconnect all the unit connectors on CAN communication circuit 2.
2. Check the continuity between the BCM harness connector terminals.

BCM harness connector			Continuity
Connector No.	Terminal No.		
B87	46	45	Not existed

Is the inspection result normal?

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

4.CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the BCM and the ground.

BCM harness connector		Ground	Continuity
Connector No.	Terminal No.		
B87	46		Not existed
	45		Not existed

Is the inspection result normal?

YES >> GO TO 5.
NO >> Check the harness and repair or replace (if shield line is short) the root cause.

5.CHECK BCM TERMINATION CIRCUIT

1. Remove the BCM.
2. Check the resistance between the BCM terminals.

BCM	Resistance (Ω)
Terminal No.	

46	45	Approx. 108 – 132
48	49	Approx. 108 – 132

Is the measurement value within the specification?

YES >> GO TO 6.
NO >> Replace the chassis control module.

6.CHECK SYMPTOM

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

Inspection result

Reproduced>>GO TO 7.
Non-reproduced>>Start the diagnosis again. Follow the trouble diagnosis procedure when past error is detected.

7.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 circuit 2.
   NOTE:
   BCM has two termination circuits. Check other units first.
4. Connect the battery cable to the negative terminal. Check if the symptoms described in the “Symptom (Results from interview with customer)” are reproduced.
   NOTE:
   Although unit-related error symptoms occur, do not confuse them with other symptoms.

Inspection result

Reproduced>>Connect the connector. Check other units as per the above procedure.
Non-reproduced>>Replace the unit whose connector was disconnected.

CHASSIS COMMUNICATION CIRCUIT

Diagnosis Procedure

INFOID:0000000011009333

1.CHECK CAN DIAGNOSIS

Check the CAN diagnosis results from CONSULT to see that the CAN communication circuit 1 and CAN communication circuit 2 have no malfunction.

Are the CAN communication 1 and CAN communication 2 circuits normal?

YES >> GO TO 2.
NO >> Check and repair CAN communication circuit 1 and/or CAN communication circuit 2.

2.CONNECTOR INSPECTION

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

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair the terminal and connector.

3.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the connector of chassis control module.
2. Check the continuity between the chassis control module harness connector terminals.

Chassis control module harness connector			Continuity
Connector No.	Terminal No.		
M73	11	19	Existed
	8	7	Existed

Is the inspection result normal?

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

4.CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

1. Disconnect all the unit connectors on chassis communication circuit.
2. Check the continuity between the chassis control module harness connector terminals.

Chassis control module harness connector			Continuity
Connector No.	Terminal No.		
M73	11	8	Not existed

Is the inspection result normal?

YES >> GO TO 5.
NO >> Check the harness and repair or replace the root cause.

5.CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the chassis control module and the ground.

Chassis control module harness connector		Ground	Continuity
Connector No.	Terminal No.		
M73	11		Not existed
	8		Not existed

Is the inspection result normal?

YES >> GO TO 6.
NO >> Check the harness and repair or replace (if shield line is short) the root cause.

6.CHECK CHASSIS CONTROL MODULE TERMINATION CIRCUIT

1. Remove the chassis control module.
2. Check the resistance between the chassis control module terminals.

Chassis control module		Resistance (Ω)
Terminal No.		
11	8	Approx. 108 – 132
19	7	Approx. 108 – 132

Is the measurement value within the specification?

YES >> GO TO 7.
NO >> Replace the chassis control module.

7.CHECK SYMPTOM

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

Inspection result

Reproduced>>GO TO 8.
Non-reproduced>>Start the diagnosis again. Follow the trouble diagnosis procedure when past error is detected.

8.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 chassis communication circuit.
   NOTE:
   Chassis control module has two termination circuits. Check other units first.
4. Connect the battery cable to the negative terminal. Check if the symptoms described in the “Symptom (Results from interview with customer)” are reproduced.
   NOTE:
   Although unit-related error symptoms occur, do not confuse them with other symptoms.

Inspection result

Reproduced>>Connect the connector. Check other units as per the above procedure.
Non-reproduced>>Replace the unit whose connector was disconnected.

PRECAUTION

PRECAUTIONS

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

INFOID:0000000010715341

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. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

WARNING:

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

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

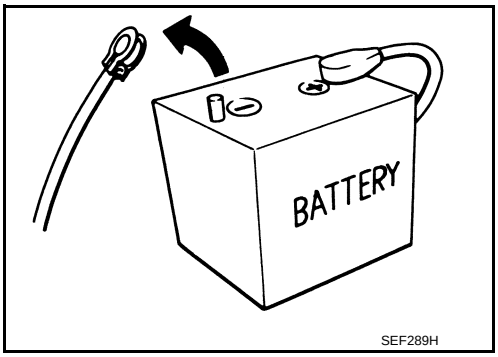
WARNING:

- **When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery and wait at least three minutes before performing any service.**

Precautions for Removing Battery Terminal

INFOID:0000000011010967

- With the adoption of Auto ACC function, ACC power is automatically supplied by operating the intelligent key or remote keyless entry or by opening/closing the driver side door. In addition, ACC power is supplied even after the ignition switch is turned to the OFF position, i.e. ACC power is supplied for a certain fixed time.
- When disconnecting the 12V battery terminal, turn off the ACC power before disconnecting the 12V battery terminal, observing “How to disconnect 12V battery terminal” described below.
  NOTE:
  Some ECUs operate for a certain fixed time even after ignition switch is turned OFF and ignition power supply is stopped. If the battery terminal is disconnected before ECU stops, accidental DTC detection or ECU data damage may occur.
- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.
  NOTE:
  If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.
- After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.
  NOTE:
  The removal of 12V battery may cause a DTC detection error.



SEF289H

HOW TO DISCONNECT 12V BATTERY TERMINAL

Disconnect 12V battery terminal according to Instruction 1 or Instruction 2 described below.
For vehicles parked by ignition switch OFF, refer to Instruction 2.

INSTRUCTION 1

1. Open the hood.
2. Turn key switch to the OFF position with the driver side door opened.
3. Get out of the vehicle and close the driver side door.

4. Wait at least 3 minutes. For vehicle with the engine listed below, remove the battery terminal after a lapse of the specified time.

D4D engine	: 20 minutes
HRA2DDT	: 12 minutes
K9K engine	: 4 minutes
M9R engine	: 4 minutes
R9M engine	: 4 minutes
V9X engine	: 4 minutes

CAUTION:
While waiting, never operate the vehicle such as locking, opening, and closing doors. Violation of this caution results in the activation of ACC power supply according to the Auto ACC function.

5. Remove 12V battery terminal.
CAUTION:
After installing 12V battery, always check self-diagnosis results of all ECUs and erase DTC.

INSTRUCTION 2 (FOR VEHICLES PARKED BY IGNITION SWITCH OFF)

1. Unlock the door with intelligent key or remote keyless entry.
NOTE:
At this moment, ACC power is supplied.
2. Open the driver side door.
3. Open the hood.
4. Close the driver side door.
5. Wait at least 3 minutes.
CAUTION:
While waiting, never operate the vehicle such as locking, opening, and closing doors. Violation of this caution results in the activation of ACC power supply according to the Auto ACC function.
6. Remove 12V battery terminal.
CAUTION:
After installing 12V battery, always check self-diagnosis results of all ECUs and erase DTC.

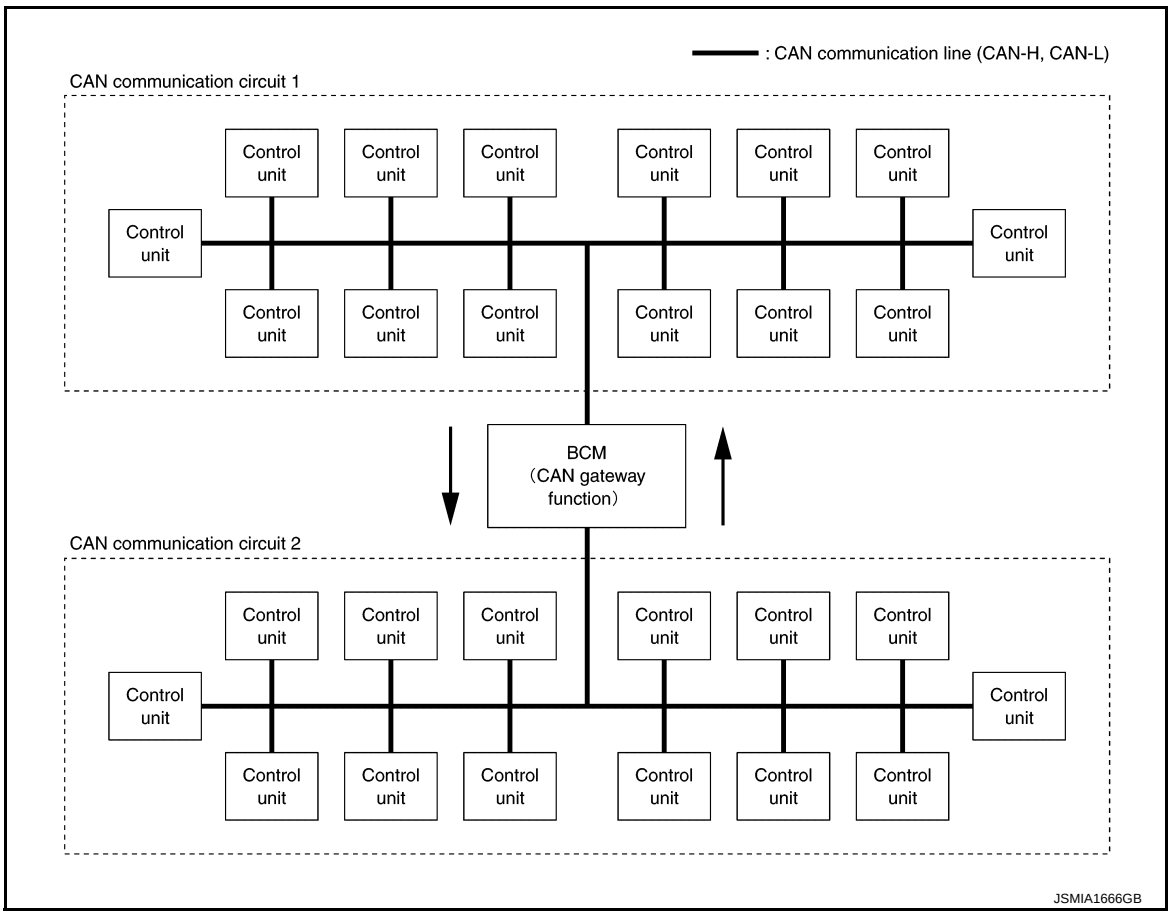
SYSTEM DESCRIPTION

SYSTEM

System Description

INFOID:0000000010715343

SYSTEM DIAGRAM



SYSTEM DESCRIPTION

- The BCM has a CAN gateway function.
- The BCM communicates between two CAN communication circuits.
- The BCM selects and transmits only necessary information.

DIAGNOSIS SYSTEM (CAN GATEWAY)

CONSULT Function

INFOID:0000000010715344

APPLICATION ITEM

CONSULT performs the following functions via CAN communication with CAN gateway.

Diagnosis mode	Function Description
Ecu Identification	The CAN gateway software number is displayed.
Self Diagnostic Result	Displays the diagnosis results of BCM CAN gateway function.
Data Monitor	Displays real-time input/output data of BCM CAN gateway function.
Configuration	• Read and save the vehicle specification. • Write the vehicle specification when replacing of BCM.

ECU IDENTIFICATION

The CAN gateway part number is displayed.

SELF DIAGNOSTIC RESULT

Refer to LAN-112, "DTC Index".

- When “CRNT” is displayed on self-diagnosis result
- The system is presently malfunctioning.
- When “PAST” is displayed on self-diagnosis result
- System malfunction in the past is detected, but the system is presently normal.

Freeze Frame Data (FFD)

When DTC is detected, a vehicle state shown below is recorded and displayed on CONSULT.

Item name	Display item
Milage (Kirometers)	Displays the total mileage when a DTC is detected.

DATA MONITOR

Monitor item	Description
CAN GW MODE (UNCONF/MALF/NORMAL)	Displays the status of BCM CAN gateway function.
IGN SIGNAL (Off/On)	Displays the status of ignition switch.

CONFIGURATION

Function		Description
Read / Write Configuration	Before Replace ECU	• Reads the vehicle configuration of current BCM. • Saves the read vehicle configuration.
	After Replace ECU	Writes the vehicle configuration with saved data.
Manual Configuration		Writes the vehicle configuration with manual selection.

CAUTION:

Follow the instructions listed below. Failure to do this may cause malfunctions to the BCM.:

- **When replacing BCM you must perform “Read / Write Configuration” or “Manual Configuration” with CONSULT.**
- **Complete the procedure of “Read / Write Configuration” or “Manual Configuration” in order.**
- **If you set incorrect “Read / Write Configuration” or “Manual Configuration”, incidents might occur.**
- **Configuration is different for each vehicle model. Confirm configuration of each vehicle model.**
- **Never perform “Read / Write Configuration” or “Manual Configuration” except for new BCM.**

ECU DIAGNOSIS INFORMATION

CAN GATEWAY

Reference Value

INFOID:0000000010715345

VALUES ON THE DIAGNOSIS TOOL

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item	Condition	Value/Status
CAN GW MODE	When the configuration of the BCM CAN gateway function is not written	UNCONF
	When the BCM CAN Gateway function is malfunction	MALF
	When BCM CAN Gateway function is normal.	NORMAL
IGN SIGNAL	Ignition switch in OFF or ACC position	Off
	Ignition switch in ON position	On

DTC Index

INFOID:0000000010715346

DTC	Reference
No DTC is detected. Further testing may be required.	—
B2600-46: CONFIG ERROR	LAN-114, "DTC Description"
B2600-55: CONFIG ERROR	LAN-115, "DTC Description"

BASIC INSPECTION

CONFIGURATION (CAN GATEWAY)

Work Procedure

INFOID:0000000010715347

1.WRITING MODE SELECTION

CONSULT Configuration
Select “Re/programming, Configuration” of CAN gateway.

When writing saved data>>GO TO 2.
When writing manually>>GO TO 3.

2.PERFORM “AFTER REPLACE ECU” OF “READ / WRITE CONFIGURATION”

CONSULT Configuration
Perform “After Replace ECU” of “Read / Write Configuration”.

>> GO TO 4.

3.PERFORM “MANUAL CONFIGURATION”

CONSULT Configuration
1. Select “Manual Configuration”.
2. Touch “Next”.
3. Touch “OK”.
4. Check that the configuration has been successfully written and touch “End”.

>> GO TO 4.

4.CHECK ALL ECU SELF-DIAGNOSIS RESULTS

1. Erase all ECU self-diagnosis results using CONSULT.
2. Turn the ignition switch OFF.
3. Turn the ignition switch ON and wait for 2 seconds or more.
4. Check that all ECU self-diagnosis results have no DTC (e.g. U1000 and U1001) of CAN communication.

>> WORK END

DTC/CIRCUIT DIAGNOSIS

B2600-46 CONFIG ERROR

DTC Description

INFOID:0000000010715349

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
B2600-46	CONFIG ERROR (Configuration error)	When errors are detected in the configuration data stored in the BCM (CAN gateway function).

POSSIBLE CAUSE

BCM

FAIL-SAFE

Transmission and reception of the signal between CAN communication circuit 1 and CAN communication circuit 2 are stopped

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Turn ignition switch ON and wait at least 2 seconds or more.
2. Select “Self Diagnostic Result” mode of “CAN GATEWAY” using CONSULT.
3. Check DTC.

Is DTC B2600-46 detected?

YES >> Proceed to LAN-114, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: GI-44, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010715350

1.PERFORM DTC CONFIRMATION PROCEDURE AGAIN

1. Turn ignition switch ON.
2. Erase DTC.
3. Perform DTC confirmation procedure again. Refer to LAN-114, "DTC Description".
4. Check DTC.

Is DTC B2600-46 detected again?

YES >> Replace BCM. Refer to BCS-121, "Removal and Installation".
NO >> INSPECTION END

B2600-55 CONFIG ERROR

DTC Description

INFOID:0000000010715351

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
B2600-55	CONFIG ERROR (Configuration error)	When no data are stored in the BCM (CAN gateway function).

POSSIBLE CAUSE

- Configuration is incomplete
- BCM

FAIL-SAFE

Transmission and reception of the signal between CAN communication circuit 1 and CAN communication circuit 2 are stopped

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Turn ignition switch ON and wait at least 2 seconds or more.
2. Select “Self Diagnostic Result” mode of “CAN GATEWAY” using CONSULT.
3. Check DTC.

Is DTC B2600-55 detected?

YES >> Proceed to LAN-115, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: GI-44, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010715352

1.PERFORM CONFIGURATION OF CAN GATEWAY

Perform CAN gateway configuration. Refer to LAN-113, "Work Procedure".

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE AGAIN

1. Turn ignition switch ON.
2. Perform DTC confirmation procedure again. Refer to LAN-115, "DTC Description".
3. Check DTC.

Is DTC B2600-55 detected again?

YES >> Replace BCM. Refer to BCS-121, "Removal and Installation".
NO >> INSPECTION END

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009749

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	—
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	—
Sonar control unit branch line circuit	—
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009789

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	LAN-75, "Diagnosis Procedure"
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	LAN-81, "Diagnosis Procedure"
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	—
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009792

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	LAN-75, "Diagnosis Procedure"
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	LAN-81, "Diagnosis Procedure"
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009804

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	LAN-75, "Diagnosis Procedure"
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	LAN-81, "Diagnosis Procedure"
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	LAN-95, "Diagnosis Procedure"
Around view monitor control unit branch line circuit	LAN-96, "Diagnosis Procedure"
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009807

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	—
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	—
Sonar control unit branch line circuit	—
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009810

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	LAN-75, "Diagnosis Procedure"
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	—
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009813

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	LAN-76, "Diagnosis Procedure"
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	—
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	—
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009816

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	—
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	—
Sonar control unit branch line circuit	—
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	LAN-95, "Diagnosis Procedure"
Around view monitor control unit branch line circuit	LAN-96, "Diagnosis Procedure"
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009819

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	LAN-77, "Diagnosis Procedure"
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	—
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	—
Sonar control unit branch line circuit	—
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	LAN-99, "Diagnosis Procedure"
Front camera unit	LAN-101, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

Chassis Communication Circuit

INFOID:0000000011009820

BRANCH LINE

Malfunction area	Reference
Distance sensor branch line circuit (Chassis communication circuit)	LAN-100, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
Chassis communication circuit	LAN-106, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009822

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	LAN-75, "Diagnosis Procedure"
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009825

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	LAN-76, "Diagnosis Procedure"
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	—
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	—
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	LAN-95, "Diagnosis Procedure"
Around view monitor control unit branch line circuit	LAN-96, "Diagnosis Procedure"
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009828

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	LAN-75, "Diagnosis Procedure"
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	—
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	LAN-95, "Diagnosis Procedure"
Around view monitor control unit branch line circuit	LAN-96, "Diagnosis Procedure"
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009831

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	LAN-75, "Diagnosis Procedure"
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	LAN-77, "Diagnosis Procedure"
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	—
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	LAN-99, "Diagnosis Procedure"
Front camera unit	LAN-101, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

Chassis Communication Circuit

INFOID:0000000011009832

BRANCH LINE

Malfunction area	Reference
Distance sensor branch line circuit (Chassis communication circuit)	LAN-100, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
Chassis communication circuit	LAN-106, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009834

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	LAN-76, "Diagnosis Procedure"
Main line between A/C auto amp. and front camera unit	LAN-77, "Diagnosis Procedure"
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	—
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	—
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	LAN-99, "Diagnosis Procedure"
Front camera unit	LAN-101, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

Chassis Communication Circuit

INFOID:0000000011009835

BRANCH LINE

Malfunction area	Reference
Distance sensor branch line circuit (Chassis communication circuit)	LAN-100, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
Chassis communication circuit	LAN-106, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009837

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	LAN-77, "Diagnosis Procedure"
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	—
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	—
Sonar control unit branch line circuit	—
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	LAN-95, "Diagnosis Procedure"
Around view monitor control unit branch line circuit	LAN-96, "Diagnosis Procedure"
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	LAN-99, "Diagnosis Procedure"
Front camera unit	LAN-101, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

Chassis Communication Circuit

INFOID:0000000011009838

BRANCH LINE

Malfunction area	Reference
Distance sensor branch line circuit (Chassis communication circuit)	LAN-100, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
Chassis communication circuit	LAN-106, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009840

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	LAN-75, "Diagnosis Procedure"
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	LAN-95, "Diagnosis Procedure"
Around view monitor control unit branch line circuit	LAN-96, "Diagnosis Procedure"
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009843

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	LAN-75, "Diagnosis Procedure"
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	LAN-77, "Diagnosis Procedure"
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	LAN-99, "Diagnosis Procedure"
Front camera unit	LAN-101, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

Chassis Communication Circuit

INFOID:0000000011009844

BRANCH LINE

Malfunction area	Reference
Distance sensor branch line circuit (Chassis communication circuit)	LAN-100, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
Chassis communication circuit	LAN-106, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009846

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	LAN-76, "Diagnosis Procedure"
Main line between A/C auto amp. and front camera unit	LAN-77, "Diagnosis Procedure"
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	—
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	—
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	LAN-95, "Diagnosis Procedure"
Around view monitor control unit branch line circuit	LAN-96, "Diagnosis Procedure"
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	LAN-99, "Diagnosis Procedure"
Front camera unit	LAN-101, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

Chassis Communication Circuit

INFOID:0000000011009847

BRANCH LINE

Malfunction area	Reference
Distance sensor branch line circuit (Chassis communication circuit)	LAN-100, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
Chassis communication circuit	LAN-106, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009849

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	LAN-75, "Diagnosis Procedure"
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	LAN-77, "Diagnosis Procedure"
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	—
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	LAN-95, "Diagnosis Procedure"
Around view monitor control unit branch line circuit	LAN-96, "Diagnosis Procedure"
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	LAN-99, "Diagnosis Procedure"
Front camera unit	LAN-101, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

Chassis Communication Circuit

INFOID:0000000011009850

BRANCH LINE

Malfunction area	Reference
Distance sensor branch line circuit (Chassis communication circuit)	LAN-100, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
Chassis communication circuit	LAN-106, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009852

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	LAN-75, "Diagnosis Procedure"
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	LAN-77, "Diagnosis Procedure"
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	LAN-95, "Diagnosis Procedure"
Around view monitor control unit branch line circuit	LAN-96, "Diagnosis Procedure"
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	LAN-99, "Diagnosis Procedure"
Front camera unit	LAN-101, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

Chassis Communication Circuit

INFOID:0000000011009853

BRANCH LINE

Malfunction area	Reference
Distance sensor branch line circuit (Chassis communication circuit)	LAN-100, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
Chassis communication circuit	LAN-106, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009857

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	LAN-81, "Diagnosis Procedure"
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	—
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	—
Sonar control unit branch line circuit	—
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009860

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	LAN-75, "Diagnosis Procedure"
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	LAN-81, "Diagnosis Procedure"
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	—
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	LAN-99, "Diagnosis Procedure"
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009863

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	LAN-76, "Diagnosis Procedure"
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	LAN-81, "Diagnosis Procedure"
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	—
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	—
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009866

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	LAN-81, "Diagnosis Procedure"
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	—
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	—
Sonar control unit branch line circuit	—
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	LAN-95, "Diagnosis Procedure"
Around view monitor control unit branch line circuit	LAN-96, "Diagnosis Procedure"
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	LAN-99, "Diagnosis Procedure"
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009869

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	LAN-77, "Diagnosis Procedure"
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	LAN-81, "Diagnosis Procedure"
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	—
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	—
Sonar control unit branch line circuit	—
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	LAN-99, "Diagnosis Procedure"
Front camera unit	LAN-101, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

Chassis Communication Circuit

INFOID:0000000011009870

BRANCH LINE

Malfunction area	Reference
Distance sensor branch line circuit (Chassis communication circuit)	LAN-100, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
Chassis communication circuit	LAN-106, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009872

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	LAN-75, "Diagnosis Procedure"
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	LAN-81, "Diagnosis Procedure"
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009875

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	LAN-76, "Diagnosis Procedure"
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	LAN-81, "Diagnosis Procedure"
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	—
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	—
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	LAN-95, "Diagnosis Procedure"
Around view monitor control unit branch line circuit	LAN-96, "Diagnosis Procedure"
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009878

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	LAN-75, "Diagnosis Procedure"
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	LAN-81, "Diagnosis Procedure"
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	—
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	LAN-95, "Diagnosis Procedure"
Around view monitor control unit branch line circuit	LAN-96, "Diagnosis Procedure"
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009881

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	LAN-75, "Diagnosis Procedure"
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	LAN-77, "Diagnosis Procedure"
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	LAN-81, "Diagnosis Procedure"
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	—
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	LAN-99, "Diagnosis Procedure"
Front camera unit	LAN-101, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

Chassis Communication Circuit

INFOID:0000000011009882

BRANCH LINE

Malfunction area	Reference
Distance sensor branch line circuit (Chassis communication circuit)	LAN-100, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
Chassis communication circuit	LAN-106, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009884

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	LAN-76, "Diagnosis Procedure"
Main line between A/C auto amp. and front camera unit	LAN-77, "Diagnosis Procedure"
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	LAN-81, "Diagnosis Procedure"
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	—
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	—
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	LAN-99, "Diagnosis Procedure"
Front camera unit	LAN-101, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

Chassis Communication Circuit

INFOID:0000000011009885

BRANCH LINE

Malfunction area	Reference
Distance sensor branch line circuit (Chassis communication circuit)	LAN-100, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
Chassis communication circuit	LAN-106, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009887

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	LAN-77, "Diagnosis Procedure"
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	LAN-81, "Diagnosis Procedure"
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	—
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	—
Sonar control unit branch line circuit	—
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	LAN-95, "Diagnosis Procedure"
Around view monitor control unit branch line circuit	LAN-96, "Diagnosis Procedure"
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	LAN-99, "Diagnosis Procedure"
Front camera unit	LAN-101, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

Chassis Communication Circuit

INFOID:0000000011009888

BRANCH LINE

Malfunction area	Reference
Distance sensor branch line circuit (Chassis communication circuit)	LAN-100, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
Chassis communication circuit	LAN-106, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009890

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	LAN-75, "Diagnosis Procedure"
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	LAN-81, "Diagnosis Procedure"
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	LAN-95, "Diagnosis Procedure"
Around view monitor control unit branch line circuit	LAN-96, "Diagnosis Procedure"
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009893

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	LAN-75, "Diagnosis Procedure"
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	LAN-77, "Diagnosis Procedure"
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	LAN-81, "Diagnosis Procedure"
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	LAN-99, "Diagnosis Procedure"
Front camera unit	LAN-101, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

Chassis Communication Circuit

INFOID:0000000011009894

BRANCH LINE

Malfunction area	Reference
Distance sensor branch line circuit (Chassis communication circuit)	LAN-100, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
Chassis communication circuit	LAN-106, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009896

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	LAN-76, "Diagnosis Procedure"
Main line between A/C auto amp. and front camera unit	LAN-77, "Diagnosis Procedure"
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	LAN-81, "Diagnosis Procedure"
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	—
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	—
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	LAN-95, "Diagnosis Procedure"
Around view monitor control unit branch line circuit	LAN-96, "Diagnosis Procedure"
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	LAN-99, "Diagnosis Procedure"
Front camera unit	LAN-101, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

Chassis Communication Circuit

INFOID:0000000011009897

BRANCH LINE

Malfunction area	Reference
Distance sensor branch line circuit (Chassis communication circuit)	LAN-100, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
Chassis communication circuit	LAN-106, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009899

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	LAN-75, "Diagnosis Procedure"
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	LAN-77, "Diagnosis Procedure"
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	LAN-81, "Diagnosis Procedure"
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	—
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	LAN-95, "Diagnosis Procedure"
Around view monitor control unit branch line circuit	LAN-96, "Diagnosis Procedure"
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	LAN-99, "Diagnosis Procedure"
Front camera unit	LAN-101, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

Chassis Communication Circuit

INFOID:0000000011009900

BRANCH LINE

Malfunction area	Reference
Distance sensor branch line circuit (Chassis communication circuit)	LAN-100, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
Chassis communication circuit	LAN-106, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009902

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	—
Main line between chassis control module and automatic back door control unit	LAN-75, "Diagnosis Procedure"
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	LAN-77, "Diagnosis Procedure"
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	LAN-81, "Diagnosis Procedure"
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	—
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	LAN-95, "Diagnosis Procedure"
Around view monitor control unit branch line circuit	LAN-96, "Diagnosis Procedure"
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	LAN-99, "Diagnosis Procedure"
Front camera unit	LAN-101, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

Chassis Communication Circuit

INFOID:0000000011009903

BRANCH LINE

Malfunction area	Reference
Distance sensor branch line circuit (Chassis communication circuit)	LAN-100, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
Chassis communication circuit	LAN-106, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009905

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	LAN-74, "Diagnosis Procedure"
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	LAN-81, "Diagnosis Procedure"
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	—
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	LAN-91, "Diagnosis Procedure"
Automatic back door control unit branch line circuit	—
Sonar control unit branch line circuit	—
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009908

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	LAN-74, "Diagnosis Procedure"
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	LAN-81, "Diagnosis Procedure"
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	LAN-91, "Diagnosis Procedure"
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	—
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009911

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	LAN-74, "Diagnosis Procedure"
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	LAN-81, "Diagnosis Procedure"
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	LAN-91, "Diagnosis Procedure"
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009914

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	LAN-74, "Diagnosis Procedure"
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	LAN-77, "Diagnosis Procedure"
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	LAN-81, "Diagnosis Procedure"
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	LAN-91, "Diagnosis Procedure"
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	LAN-101, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009917

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	LAN-74, "Diagnosis Procedure"
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	LAN-81, "Diagnosis Procedure"
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	LAN-91, "Diagnosis Procedure"
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	LAN-95, "Diagnosis Procedure"
Around view monitor control unit branch line circuit	LAN-96, "Diagnosis Procedure"
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009920

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	LAN-74, "Diagnosis Procedure"
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	LAN-77, "Diagnosis Procedure"
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	LAN-81, "Diagnosis Procedure"
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	LAN-91, "Diagnosis Procedure"
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	LAN-95, "Diagnosis Procedure"
Around view monitor control unit branch line circuit	LAN-96, "Diagnosis Procedure"
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	LAN-101, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009923

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	LAN-74, "Diagnosis Procedure"
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	LAN-81, "Diagnosis Procedure"
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	LAN-91, "Diagnosis Procedure"
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009926

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	LAN-74, "Diagnosis Procedure"
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	LAN-81, "Diagnosis Procedure"
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	LAN-91, "Diagnosis Procedure"
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009929

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	LAN-74, "Diagnosis Procedure"
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	LAN-77, "Diagnosis Procedure"
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	LAN-81, "Diagnosis Procedure"
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	LAN-91, "Diagnosis Procedure"
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	LAN-101, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009932

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	LAN-74, "Diagnosis Procedure"
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	LAN-81, "Diagnosis Procedure"
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	LAN-91, "Diagnosis Procedure"
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	LAN-95, "Diagnosis Procedure"
Around view monitor control unit branch line circuit	LAN-96, "Diagnosis Procedure"
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009935

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	LAN-74, "Diagnosis Procedure"
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	LAN-77, "Diagnosis Procedure"
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	LAN-81, "Diagnosis Procedure"
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	LAN-91, "Diagnosis Procedure"
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	LAN-95, "Diagnosis Procedure"
Around view monitor control unit branch line circuit	LAN-96, "Diagnosis Procedure"
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	LAN-101, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009938

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	LAN-74, "Diagnosis Procedure"
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	—
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	LAN-91, "Diagnosis Procedure"
Automatic back door control unit branch line circuit	—
Sonar control unit branch line circuit	—
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009941

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	LAN-74, "Diagnosis Procedure"
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	LAN-91, "Diagnosis Procedure"
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	—
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009944

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	LAN-74, "Diagnosis Procedure"
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	—
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	LAN-91, "Diagnosis Procedure"
Automatic back door control unit branch line circuit	—
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009947

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	LAN-74, "Diagnosis Procedure"
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	—
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	LAN-91, "Diagnosis Procedure"
Automatic back door control unit branch line circuit	—
Sonar control unit branch line circuit	—
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	LAN-95, "Diagnosis Procedure"
Around view monitor control unit branch line circuit	LAN-96, "Diagnosis Procedure"
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009950

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	LAN-74, "Diagnosis Procedure"
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	LAN-77, "Diagnosis Procedure"
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	—
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	LAN-91, "Diagnosis Procedure"
Automatic back door control unit branch line circuit	—
Sonar control unit branch line circuit	—
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	LAN-99, "Diagnosis Procedure"
Front camera unit	LAN-101, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

Chassis Communication Circuit

INFOID:0000000011009951

BRANCH LINE

Malfunction area	Reference
Distance sensor branch line circuit (Chassis communication circuit)	LAN-100, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
Chassis communication circuit	LAN-106, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009953

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	LAN-74, "Diagnosis Procedure"
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	LAN-91, "Diagnosis Procedure"
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009956

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	LAN-74, "Diagnosis Procedure"
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	—
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	LAN-91, "Diagnosis Procedure"
Automatic back door control unit branch line circuit	—
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	LAN-95, "Diagnosis Procedure"
Around view monitor control unit branch line circuit	LAN-96, "Diagnosis Procedure"
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009959

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	LAN-74, "Diagnosis Procedure"
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	LAN-91, "Diagnosis Procedure"
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	—
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	LAN-95, "Diagnosis Procedure"
Around view monitor control unit branch line circuit	LAN-96, "Diagnosis Procedure"
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009962

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	LAN-74, "Diagnosis Procedure"
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	LAN-77, "Diagnosis Procedure"
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	LAN-91, "Diagnosis Procedure"
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	—
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	LAN-99, "Diagnosis Procedure"
Front camera unit	LAN-101, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

Chassis Communication Circuit

INFOID:0000000011009963

BRANCH LINE

Malfunction area	Reference
Distance sensor branch line circuit (Chassis communication circuit)	LAN-100, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
Chassis communication circuit	LAN-106, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009965

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	LAN-74, "Diagnosis Procedure"
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	LAN-77, "Diagnosis Procedure"
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	LAN-91, "Diagnosis Procedure"
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	LAN-101, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009968

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	LAN-74, "Diagnosis Procedure"
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	LAN-77, "Diagnosis Procedure"
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	—
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	LAN-91, "Diagnosis Procedure"
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	LAN-99, "Diagnosis Procedure"
Front camera unit	LAN-101, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

Chassis Communication Circuit

INFOID:0000000011009969

BRANCH LINE

Malfunction area	Reference
Distance sensor branch line circuit (Chassis communication circuit)	LAN-100, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
Chassis communication circuit	LAN-106, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009971

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	LAN-74, "Diagnosis Procedure"
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	LAN-77, "Diagnosis Procedure"
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	—
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	LAN-91, "Diagnosis Procedure"
Automatic back door control unit branch line circuit	—
Sonar control unit branch line circuit	—
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	LAN-95, "Diagnosis Procedure"
Around view monitor control unit branch line circuit	LAN-96, "Diagnosis Procedure"
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	LAN-99, "Diagnosis Procedure"
Front camera unit	LAN-101, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

Chassis Communication Circuit

INFOID:0000000011009972

BRANCH LINE

Malfunction area	Reference
Distance sensor branch line circuit (Chassis communication circuit)	LAN-100, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
Chassis communication circuit	LAN-106, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009974

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	LAN-74, "Diagnosis Procedure"
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	—
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	LAN-91, "Diagnosis Procedure"
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	LAN-95, "Diagnosis Procedure"
Around view monitor control unit branch line circuit	LAN-96, "Diagnosis Procedure"
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	—

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009977

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	LAN-74, "Diagnosis Procedure"
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	LAN-77, "Diagnosis Procedure"
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	LAN-91, "Diagnosis Procedure"
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	—
Around view monitor control unit branch line circuit	—
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	LAN-99, "Diagnosis Procedure"
Front camera unit	LAN-101, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

Chassis Communication Circuit

INFOID:0000000011009978

BRANCH LINE

Malfunction area	Reference
Distance sensor branch line circuit (Chassis communication circuit)	LAN-100, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
Chassis communication circuit	LAN-106, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009980

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	LAN-74, "Diagnosis Procedure"
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	LAN-77, "Diagnosis Procedure"
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	LAN-91, "Diagnosis Procedure"
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	LAN-95, "Diagnosis Procedure"
Around view monitor control unit branch line circuit	LAN-96, "Diagnosis Procedure"
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	—
Front camera unit	LAN-101, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009983

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	LAN-74, "Diagnosis Procedure"
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	LAN-77, "Diagnosis Procedure"
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	—
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	LAN-91, "Diagnosis Procedure"
Automatic back door control unit branch line circuit	—
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	LAN-95, "Diagnosis Procedure"
Around view monitor control unit branch line circuit	LAN-96, "Diagnosis Procedure"
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	LAN-99, "Diagnosis Procedure"
Front camera unit	LAN-101, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

Chassis Communication Circuit

INFOID:0000000011009984

BRANCH LINE

Malfunction area	Reference
Distance sensor branch line circuit (Chassis communication circuit)	LAN-100, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
Chassis communication circuit	LAN-106, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009986

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	LAN-74, "Diagnosis Procedure"
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	LAN-77, "Diagnosis Procedure"
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	LAN-91, "Diagnosis Procedure"
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	—
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	LAN-95, "Diagnosis Procedure"
Around view monitor control unit branch line circuit	LAN-96, "Diagnosis Procedure"
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	LAN-99, "Diagnosis Procedure"
Front camera unit	LAN-101, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

Chassis Communication Circuit

INFOID:0000000011009987

BRANCH LINE

Malfunction area	Reference
Distance sensor branch line circuit (Chassis communication circuit)	LAN-100, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
Chassis communication circuit	LAN-106, "Diagnosis Procedure"

DTC/CIRCUIT DIAGNOSIS

MALFUNCTION AREA CHART

CAN Communication Circuit

INFOID:0000000011009989

MAIN LINE

Malfunction area	Reference
Main line between IPDM E/R and data link connector	LAN-72, "Diagnosis Procedure"
Main line between data link connector and chassis control module	LAN-73, "Diagnosis Procedure"
Main line between chassis control module and 4WD control unit	LAN-74, "Diagnosis Procedure"
Main line between chassis control module and automatic back door control unit	—
Main line between chassis control module and sonar control unit	—
Main line between A/C auto amp. and front camera unit	LAN-77, "Diagnosis Procedure"
Main line between A/C amp. and front camera unit	

BRANCH LINE

Malfunction area	Reference
ECM branch line circuit	LAN-78, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-79, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-80, "Diagnosis Procedure"
TCM branch line circuit	—
Data link connector branch line circuit	LAN-83, "Diagnosis Procedure"
Electric parking brake control module branch line circuit	LAN-84, "Diagnosis Procedure"
Steering lock unit branch line circuit	LAN-85, "Diagnosis Procedure"
Combination meter branch line circuit	LAN-86, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-87, "Diagnosis Procedure"
Chassis control module branch line circuit	LAN-88, "Diagnosis Procedure"
EPS control unit branch line circuit	LAN-89, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-90, "Diagnosis Procedure"
4WD control unit branch line circuit	LAN-91, "Diagnosis Procedure"
Automatic back door control unit branch line circuit	LAN-92, "Diagnosis Procedure"
Sonar control unit branch line circuit	LAN-93, "Diagnosis Procedure"
BCM branch line circuit	LAN-94, "Diagnosis Procedure"
NAVI control unit branch line circuit	LAN-95, "Diagnosis Procedure"
Around view monitor control unit branch line circuit	LAN-96, "Diagnosis Procedure"
A/C auto amp. branch line circuit	LAN-97, "Diagnosis Procedure"
A/C amp. branch line circuit	
Distance sensor branch line circuit (CAN communication circuit)	LAN-99, "Diagnosis Procedure"
Front camera unit	LAN-101, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
CAN communication circuit 1	LAN-102, "Diagnosis Procedure"
CAN communication circuit 2	LAN-104, "Diagnosis Procedure"

Chassis Communication Circuit

INFOID:0000000011009990

BRANCH LINE

Malfunction area	Reference
Distance sensor branch line circuit (Chassis communication circuit)	LAN-100, "Diagnosis Procedure"

SHORT CIRCUIT

Malfunction area	Reference
Chassis communication circuit	LAN-106, "Diagnosis Procedure"