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INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[WITH INTELLIGENT KEY SYSTEM]

BASIC INSPECTION

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM)

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM): Description

INFOID:0000000005490374

BEFORE REPLACEMENT

When replacing BCM, save or print current vehicle specification with CONSULT-III configuration before replacement.

NOTE:

If "READ CONFIGURATION" can not be used, use the "WRITE CONFIGURATION - Manual selection" after replacing BCM.

AFTER REPLACEMENT

CAUTION:

- When replacing BCM, you must perform "WRITE CONFIGURATION" with CONSULT-III.
- Complete the procedure of "WRITE CONFIGURATION" in order.
- If you set incorrect "WRITE CONFIGURATION", incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.
- When replacing BCM, perform the system initialization (NATS).

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM): Special Repair Requirement

1. SAVING VEHICLE SPECIFICATION

CONSULT-III Configuration

Perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to <u>BCS-5</u>, "CONFIGURATION (BCM): <u>Description"</u>.

NOTE:

If "READ CONFIGURATION" can not be used, use the "WRITE CONFIGURATION - Manual selection" after replacing BCM.

>> GO TO 2.

2.replace $_{ m BCM}$

Replace BCM. Refer to BCS-81, "Exploded View".

>> GO TO 3.

3. WRITING VEHICLE SPECIFICATION

(P)CONSULT-III Configuration

Perform "WRITE CONFIGURATION - Config file" or "WRITE CONFIGURATION - Manual selection" to write vehicle specification. Refer to <u>BCS-6</u>, "CONFIGURATION (BCM): Special Repair Requirement".

>> GO TO 4.

4. INITIALIZE BCM (NATS)

Revision: 2009 October

Perform BCM initialization. (NATS)

>> WORK END

CONFIGURATION (BCM)

CONFIGURATION (BCM): Description

BCS-5

Vehicle specification needs to be written with CONSULT-III because it is not written after replacing BCM.

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INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[WITH INTELLIGENT KEY SYSTEM]

Configuration has three functions as follows

Function	Description
READ CONFIGURATION	 Reads the vehicle configuration of current BCM. Saves the read vehicle configuration.
WRITE CONFIGURATION - Manual selection	Writes the vehicle configuration with manual selection.
WRITE CONFIGURATION - Config file	Writes the vehicle configuration with saved data.

CAUTION:

- When replacing BCM, you must perform "WRITE CONFIGURATION" with CONSULT-III.
- Complete the procedure of "WRITE CONFIGURATION" in order.
- If you set incorrect "WRITE CONFIGURATION", incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.
- Never perform "WRITE CONFIGURATION" except for new BCM.

CONFIGURATION (BCM): Special Repair Requirement

INFOID:0000000005490377

1. WRITING MODE SELECTION

©CONSULT-III Configuration Select "CONFIGURATION" of BCM.

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

2.PERFORM "WRITE CONFIGURATION - CONFIG FILE"

(P)CONSULT-III Configuration

Perform "WRITE CONFIGURATION - Config file".

>> WORK END

${f 3.}$ PERFORM "WRITE CONFIGURATION - MANUAL SELECTION"

CONSULT-III Configuration

- 1. Select "WRITE CONFIGURATION Manual selection".
- Identify the correct model and configuration list. Refer to <u>BCS-6, "CONFIGURATION (BCM) : Configuration list".</u>
- 3. Confirm and/or change setting value for each item.

CAUTION:

Thoroughly read and understand the vehicle specification. Incorrect settings may result in abnormal control of ECU.

4. Select "SETTING".

CAUTION:

Make sure to select "SETTING" even if the indicated configuration of brand new BCM is same as the desirable configuration. If not, configuration which is set automatically by selecting vehicle model can not be memorized.

5. When "COMMAND FINISHED", select "END".

>> GO TO 4.

4. OPERATION CHECK

Confirm that each function controlled by BCM operates normally.

>> WORK END

CONFIGURATION (BCM): Configuration list

INFOID:0000000005490378

CAUTION:

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[WITH INTELLIGENT KEY SYSTEM]

Thoroughly read and understand the vehicle specification. Incorrect settings may result in abnormal control of ECU.

SETTIN	IG ITEM	- NOTE	
Items	Setting value		
DTRL	WITH ⇔ WITHOUT	WITH: With daytime running light system WITHOUT: Without daytime running light system	
TRANSMISSION	AT with ABS ⇔ MT with ABS	AT with ABS: Except M/T models MT with ABS: M/T models	

⇔: Items which confirm vehicle specifications

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SYSTEM DESCRIPTION

BODY CONTROL SYSTEM

System Description

INFOID:0000000005490379

OUTLINE

- BCM (Body Control Module) controls the various electrical components. It inputs the information required to the control from CAN communication and the signal received from each switch and sensor.
- BCM has combination switch reading function for reading the operation status of combination switches (light, turn signal, wiper and washer) in addition to a function for controlling the operation of various electrical components. It also has the signal transmission function as the passed point of signal and the power saving control function that reduces the power consumption with the ignition switch OFF.
- BCM is equipped with the diagnosis function that performs the diagnosis with CONSULT-III and various settings.

BCM CONTROL FUNCTION LIST

System		Reference	
Combination switch reading system		BCS-10, "System Diagram"	
Signal buffer system		BCS-14, "System Diagram"	
Power consumption control system		BCS-15, "System Diagram"	
Auto light system		EXL-11, "System Diagram"	
Turn signal and hazard warning lamp syste	em	EXL-16, "System Diagram"	
Headlamp system		EXL-7, "System Diagram"	
Parking, license plate, side maker and tail	lamps system	EXL-18, "System Diagram"	
Front fog lamp system		EXL-14, "System Diagram"	
Exterior lamp battery saver system		EXL-20, "System Diagram"	
Daytime running light system		EXL-9, "System Diagram"	
Interior room lamp control system		INL-5, "System Diagram"	
Interior room lamp battery saver system		INL-8, "System Diagram"	
Front wiper and washer system		WW-6, "System Diagram"	
Rear wiper and washer system		WW-10, "System Diagram"	
Automatic air conditioner		HAC-15, "System Diagram"	
Warning chime system		WCS-5, "WARNING CHIME SYSTEM : System Diagram"	
Power door lock system		DLK-13, "System Diagram"	
Nissan Vehicle Immobilizer System (NVIS)	- NATS	SEC-15, "System Diagram"	
Vehicle security system		SEC-20, "System Diagram"	
Panic alarm		SEC-20, "System Description"	
Rear window defogger system		DEF-4, "System Diagram"	
	Door lock function		
	Remote keyless entry function		
Intelligent Key system/engine start system	Key reminder function	DLK-16, "INTELLIGENT KEY SYSTEM : System Diagram"	
	Warning function		
	Engine start function		
Power window system		PWC-6, "System Diagram"	
Retained accessory power (RAP) system		PWC-6, "System Description"	
Tire pressure monitor system (TPMS) - AIR PRESSURE MONITOR		WT-9, "TIRE PRESSURE MONITORING SYSTEM : System Diagram"	

BODY CONTROL SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

Component Parts Location

INFOID:0000000005490380

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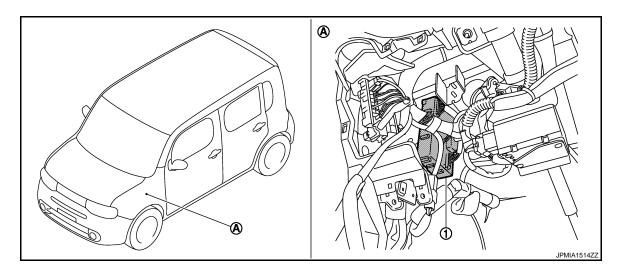
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- 1. BCM
- A. Behind of instrument lower panel LH (Left side)

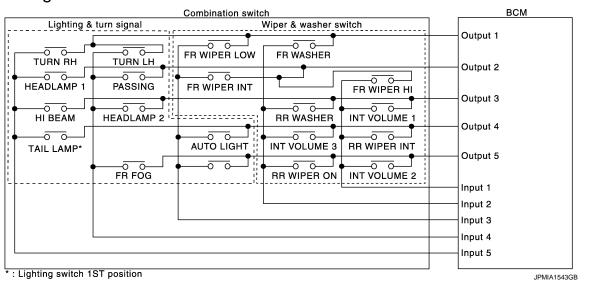
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System Diagram



System Description

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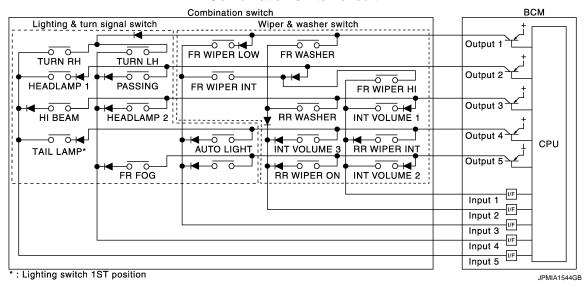
INFOID:0000000005490381

OUTLINE

- BCM reads the status of the combination switch (light, turn signal, wiper and washer) and recognizes the status of each switch.
- BCM has a combination of 5 output terminals (OUTPUT 1 5) and 5 input terminals (INPUT 1 5). It reads a
 maximum of 20 switch status.

COMBINATION SWITCH MATRIX

Combination switch circuit



Combination switch INPUT-OUTPUT system list

System	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5
OUTPUT 1	_	FR WASHER	FR WIPER LOW	TURN LH	TURN RH
OUTPUT 2	FR WIPER HI	_	FR WIPER INT	PASSING	HEADLAMP 1
OUTPUT 3	INT VOLUME 1	RR WASHER	_	HEADLAMP 2	HI BEAM

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

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System	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5
OUTPUT 4	RR WIPER INT	INT VOLUME 3	AUTO LIGHT	_	TAIL LAMP
OUTPUT 5	INT VOLUME 2	RR WIPER	_	FR FOG	_

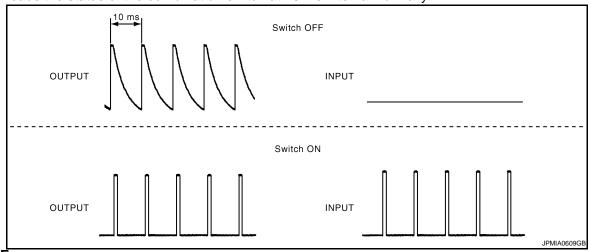
NOTE:

Headlamp has a dual system switch.

COMBINATION SWITCH READING FUNCTION

Description

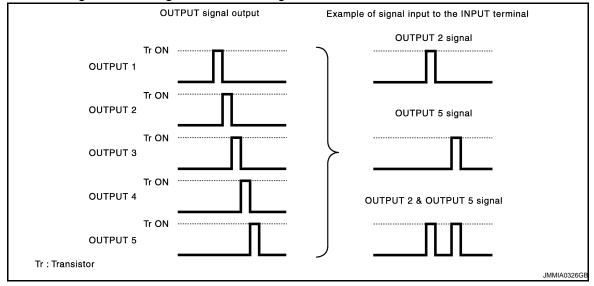
• BCM reads the status of the combination switch at 10 ms interval normally.



NOTE:

BCM reads the status of the combination switch at 60 ms interval when BCM is controlled at low power consumption control mode.

- BCM operates as follows and judges the status of the combination switch.
- It operates the transistor on OUTPUT side in the following order: OUTPUT 1 \rightarrow 2 \rightarrow 3 \rightarrow 4 \rightarrow 5, and outputs voltage waveform.
- The voltage waveform of OUTPUT corresponding to the formed circuit is input into the interface on INPUT side if any (1 or more) switches are ON.
- It reads this change of the voltage as the status signal of the combination switch.



Operation Example

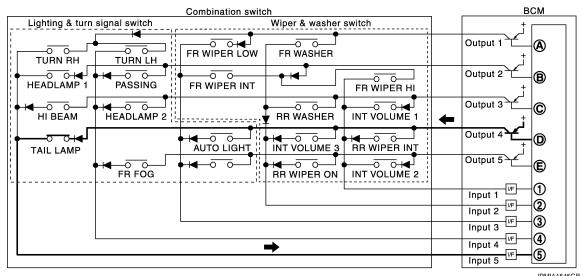
In the following operation example, the combination of the status signals of the combination switch is replaced as follows: INPUT 1 - 5 to "1 - 5" and OUTPUT 1 - 5 to "A - E".

Example 1: When a switch (TAIL LAMP switch) is turned ON

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

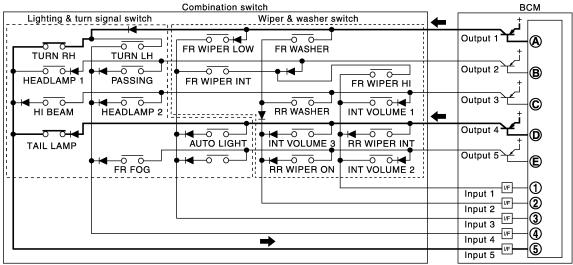
The circuit between OUTPUT 4 and INPUT 5 is formed when the TAIL LAMP switch is turned ON.



- BCM detects the combination switch status signal "5D" when the signal of OUTPUT 4 is input to INPUT 5.
- BCM judges that the TAIL LAMP switch is ON when the signal "5D" is detected.

Example 2: When some switches (TURN RH switch, TAIL LAMP switch) are turned ON

 The circuits between OUTPUT 1 and INPUT 5 and between OUTPUT 4 and INPUT 5 are formed when the TURN RH switch and TAIL LAMP switch are turned ON.



- JPMIA1546GB
- BCM detects the combination switch status signal "5AD" when the signals of OUTPUT 1 and OUTPUT 4 are input to INPUT 5.
- BCM judges that the TURN RH switch and TAIL LAMP switch are ON when the signal "5AD" is detected.

WIPER INTERMITTENT DIAL POSITION

BCM judges the wiper intermittent dial 1 - 7 by the status of INT VOLUME 1, 2 and 3 switches.

Wiper intermittent	Switch status			Switch status		
dial position	INT VOLUME 1	INT VOLUME 2	INT VOLUME 3			
1	ON	ON	ON			
2	ON	ON	OFF			
3	ON	OFF	OFF			
4	OFF	OFF	OFF			
5	OFF	OFF	ON			

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Wiper intermittent			
dial position	INT VOLUME 1	INT VOLUME 2	INT VOLUME 3
6	OFF	ON	ON
7	OFF	ON	OFF

NOTE:

For details of wiper intermittent dial position, refer to WW-6, "System Description".

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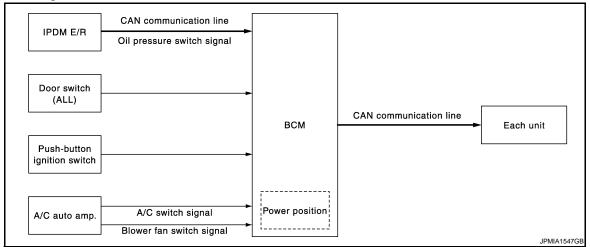
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SIGNAL BUFFER SYSTEM

System Diagram

INFOID:0000000005490383



System Description

INFOID:0000000005490384

OUTLINE

BCM has the signal transmission function that outputs/transmits each input/received signal to each unit. Signal transmission function list

Signal name Input		Output	Description
Ignition switch ON signal	Push-button ignition switch (Push switch)	IPDM E/R (CAN)	Inputs the push-button ignition switch (push switch) signal and transmits the ignition switch status judged with BCM via CAN communication.
Door switch signal	Any door switch	Combination meter (CAN) IPDM E/R (CAN)	Inputs the door switch signal and transmits it via CAN communication.
Blower fan on signal		ECM (CAN)	Input each signals, and transmit
A/C on signal	A/C auto amp.		the blower fan on signal and A/C on signal via CAN communication.
Oil pressure switch signal	IPDM E/R (CAN)	Combination meter (CAN)	Transmits the received oil pressure switch signal via CAN communication.

POWER CONSUMPTION CONTROL SYSTEM

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

POWER CONSUMPTION CONTROL SYSTEM

System Diagram

INFOID:0000000005490385 CAN communication line Sleep wake up signal IPDM E/R Each switch **BCM** Combination meter · Sleep-ready signal · Wake up signal JPMIA0731G

System Description

INFOID:0000000005490386

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OUTLINE

- BCM incorporates a power saving control function that reduces the power consumption according to the vehicle status.
- BCM switches the status (control mode) by itself with the power saving control function. It performs the sleep request to each unit (IPDM E/R and combination meter) that operates with the ignition switch OFF.

Normal mode (wake-up)

- CAN communication is normally performed with other units
- Each control with BCM is operating properly

CAN communication sleep mode (CAN sleep)

- CAN transmission is stopped
- Control with BCM only is operating

Low power consumption mode (BCM sleep)

- Low power consumption control is active
- CAN transmission is stopped

LOW POWER CONSUMPTION CONTROL WITH BCM

BCM reduces the power consumption with the following operation in the low power consumption mode.

The reading interval of the each switches changes from 10 ms interval to 60 ms interval.

Sleep mode activation

- BCM receives the sleep-ready signal (ready) from IPDM E/R and combination meter via CAN communica-
- BCM transmits the sleep wake up signal (sleep) to each unit when all of the CAN sleep conditions are ful-
- Each unit stops the transmission of CAN communication with the sleep wake up signal. BCM is in CAN communication sleep mode.
- BCM is in the low power consumption mode and perform the low power consumption control when all of the BCM sleep conditions are fulfilled with CAN sleep condition.

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POWER CONSUMPTION CONTROL SYSTEM

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

CAN sleep condition	BCM sleep condition
 Receiving the sleep-ready signal (ready) from all units Ignition switch: OFF Vehicle security system and panic alarm: Not operation Warning chime: Not operation Intelligent Key system buzzer: Not operation Stop lamp switch: OFF Turn signal indicator lamp: Not operation Exterior lamp: OFF Door lock status: No change CONSULT-III communication status: Not communication Meter display signal: Non-transmission Door switch status: No change Rear window defogger: OFF Driver door lock status: No change 	Interior room lamp battery saver: Time out RAP system: OFF Nissan Vehicle Immobilizer System (NVIS) - NATS: Not operation Remote keyless entry receiver communication status: No communication Tire pressure monitor system (TPMS) - AIR PRESSURE MONITOR: Stop ACC/ON indicator lamp: Not operation

Wake-up operation

- BCM transmits sleep wake up signal (wake up) to each unit when any condition listed below is established, and then goes into normal mode from low power consumption mode.
- Each unit starts transmissions with CAN communication by receiving sleep wake up signals. Each unit transmit wake up signals to BCM with CAN communication to convey the start of CAN communication.

Wake-up condition

Wake-up condition

- · Receiving the sleep-ready signal (Not-ready) from any units
- Push-button ignition switch (push switch): OFF→ ON
- · Hazard switch: ON
- HI BEAM switch: OFF \rightarrow ON, ON \rightarrow OFF
- PASSING switch: OFF \rightarrow ON, ON \rightarrow OFF
- HEADLAMP 1 switch: OFF \rightarrow ON, ON \rightarrow OFF
- HEADLAMP 2 switch: OFF \rightarrow ON, ON \rightarrow OFF
- TAIL LAMP switch: OFF → ON
- FR FOG switch: OFF \rightarrow ON, ON \rightarrow OFF
- TURN RH: OFF \rightarrow ON, ON \rightarrow OFF
- TURN LH: OFF → ON, ON → OFF
- Driver door switch: OFF \rightarrow ON, ON \rightarrow OFF
- Passenger door switch: OFF → ON, ON → OFF
- Rear RH door switch: OFF \rightarrow ON, ON \rightarrow OFF
- Rear LH door switch: OFF \rightarrow ON, ON \rightarrow OFF
- Back door switch: OFF → ON, ON → OFF
- Driver door request switch: OFF \rightarrow ON
- Passenger door request switch: OFF → ON
- Back door request switch: OFF → ON
- · Stop lamp switch: ON
- Door lock and unlock switch:

 $\mathsf{NEUTRAL} \to \mathsf{LOCK}, \, \mathsf{NEUTRAL} \to \mathsf{UNLOCK}$

- Front door lock assembly (driver side) (door key cylinder switch):
 NEUTRAL → LOCK, NEUTRAL → UNLOCK
- · Remote keyless entry receiver communication: Receiving
- Front door lock assembly (driver side) (unlock sensor):

 $\mathsf{OFF} \to \mathsf{ON},\, \mathsf{ON} \to \mathsf{OFF}$

POWER CONSUMPTION CONTROL SYSTEM

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Component Parts Location

INFOID:0000000005490387

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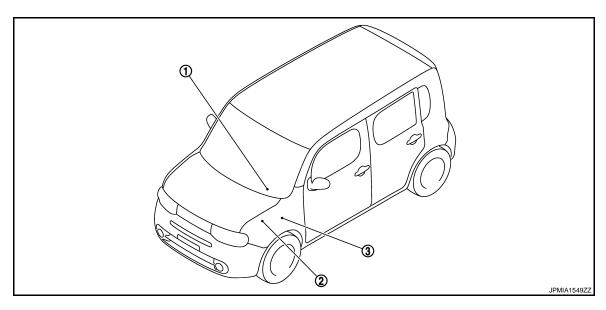
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- Combination meter
- IPDM E/R
 Refer to PCS-6, "Component Parts
 Location".
- 3. BCM
 Refer to BCS-9, "Component Parts
 Location".

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COMMON ITEM

COMMON ITEM: CONSULT-III Function (BCM - COMMON ITEM)

INFOID:0000000005490388

APPLICATION ITEM

CONSULT-III performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
Work Support	Changes the setting for each system function.
Self Diagnostic Result	Displays the diagnosis results judged by BCM.
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM. Refer to CONSULT-III operation manual.
Data Monitor	The BCM input/output signals are displayed.
Active Test	The signals used to activate each device are forcibly supplied from BCM.
Ecu Identification	The BCM part number is displayed.
Configuration	 Read and save the vehicle specification. Write the vehicle specification when replacing BCM.

SYSTEM APPLICATION

BCM can perform the following functions for each system.

NOTE:

It can perform the diagnosis modes except the following for all sub system selection items.

x: Applicable item

System	Sub system selection item	Diagnosis mode		
System	Sub system selection item	Work Support	Data Monitor	Active Test
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
Automatic air conditioner	AIR CONDITONER		×	×
Intelligent Key system Engine start system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	ВСМ	×		
NVIS - NATS	IMMU	×	×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door	TRUNK		×	
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	TPMS (AIR PRESSURE MONITOR)	×	×	×

FREEZE FRAME DATA (FFD)

The BCM records the following vehicle condition at the time a particular DTC is detected, and displays on CONSULT-III.

[WITH INTELLIGENT KEY SYSTEM]

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CONSULT screen item	Indication/Unit	Description		
Vehicle Speed	km/h	Vehicle speed of the moment a particular DTC is detected		
Odo/Trip Meter	km	Total mileage (Odometer value) of the moment a particular DTC is detected		
	SLEEP>LOCK		While turning BCM status from low power consumption mode to normal mode (Power supply position is "LOCK")	
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power supply position is "OFF".)	
	LOCK>ACC		While turning power supply position from "LOCK" to "ACC"	
	ACC>ON		While turning power supply position from "ACC" to "IGN"	
	RUN>ACC		While turning power supply position from "RUN" to "ACC" (Vehicle is stopping and selector lever is except P position.)	
	CRANK>RUN		While turning power supply position from "CRANKING" to "RUN" (From cranking up the engine to run it)	
	RUN>URGENT		While turning power supply position from "RUN" to "ACC" (Emergency stop operation)	
	ACC>OFF		While turning power supply position from "ACC" to "OFF"	
	OFF>LOCK	Power position status of the moment a particular DTC is detected	While turning power supply position from "OFF" to "LOCK"	
Vehicle Condition	OFF>ACC		While turning power supply position from "OFF" to "ACC"	
	ON>CRANK		While turning power supply position from "IGN" to "CRANKING"	
	OFF>SLEEP		While turning BCM status from normal mode (Power supply position is "OFF".) to low power consumption mode	
	LOCK>SLEEP		While turning BCM status from normal mode (Power supply position is "LOCK".) to low power consumption mode	
	LOCK		Power supply position is "LOCK" (Ignition switch OFF with steering is locked.)	
	OFF		Power supply position is "OFF" (Ignition switch OFF with steering is unlocked.)	
	ACC		Power supply position is "ACC" (Ignition switch ACC)	
	ON		Power supply position is "IGN" (Ignition switch ON with engine stopped)	
	ENGINE RUN		Power supply position is "RUN" (Ignition switch ON with engine running)	
	CRANKING		Power supply position is "CRANKING" (At engine cranking)	
IGN Counter	0 - 39	 The number of times that ignition switch is turned ON after DTC is detected The number is 0 when a malfunction is detected now. The number increases like 1 → 2 → 338 → 39 after returning to the normal condition whenever ignition switch OFF → ON. The number is fixed to 39 until the self-diagnosis results are erased if it is over 39. 		

DOOR LOCK

DOOR LOCK: CONSULT-III Function (BCM - DOOR LOCK)

INFOID:0000000005840365

BCM CONSULT-III FUNCTION

CONSULT-III performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function
DATA MONITOR	The BCM input/output signals are displayed
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM

WORK SUPPORT

[WITH INTELLIGENT KEY SYSTEM]

Monitor item	Description
DOOR LOCK-UNLOCK SET	Selective unlock function mode can be changed to operation with this mode On: Operate Off: Non-operation
AUTOMATIC DOOR LOCK SE- LECT	Automatic door lock function mode can be selected from the following in this mode • VH SPD: All doors are locked when vehicle speed more than 24km/h (15MPH) • P RANGE*: All doors are locked when shifting the selector lever from P position to other than the P position
AUTOMATIC DOOR UNLOCK SELECT	 Automatic door unlock function mode can be selected from the following in the mode MODE 1: All doors are unlocked when the power supply position is changed from ON to OFF MODE 2*: All doors are unlocked when shifting the selector lever from any position other than the P to P position MODE 3: Driver side door is unlocked when the power supply position is changed from ON to OFF MODE 4*: Driver side door is unlocked when shifting the selector lever from any position other than the P to P position MODE 5: This item is displayed, but cannot be monitored MODE 6: This item is displayed, but cannot be monitored
AUTOMATIC LOCK/UNLOCK SET	Automatic door lock/unlock function mode can be selected from the following in this mode. Off: non-operational Unlock Only: door unlock operation only Lock Only: door lock operation only Lock/Unlock: lock/unlock operation

^{*:} P range interlock door lock can be selected for M/T models, but automatic door lock/unlock function does not operate.

DATA MONITOR

Monitor Item	Contents
REQ SW-DR	Indicated [On/Off] condition of door request switch (driver side)
REQ SW-AS	Indicated [On/Off] condition of door request switch (passenger side)
REQ SW-BD/TR	Indicated [On/Off] condition of back door request switch
DOOR SW-DR	Indicated [On/Off] condition of front door switch (driver side)
DOOR SW-AS	Indicated [On/Off] condition of front door switch (passenger side)
DOOR SW-RR	Indicated [On/Off] condition of rear door switch RH
DOOR SW-RL	Indicated [On/Off] condition of rear door switch LH
DOOR SW-BK	Indicated [On/Off] condition of back door switch
CDL LOCK SW	Indicated [On/Off] condition of lock signal from door lock unlock switch
CDL UNLOCK SW	Indicated [On/Off] condition of unlock signal from door lock unlock switch
KEY CYL LK-SW	Indicated [On/Off] condition of lock signal from door key cylinder
KEY CYL UN-SW	Indicated [On/Off] condition of unlock signal from door key cylinder

ACTIVE TEST

Test item	Description
DOOR LOCK	This test is able to check door lock/unlock operation The all door lock actuators are locked when "ALL LOCK" on CONSULT-III screen is touched The all door lock actuators are unlocked when "ALL UNLK" on CONSULT-III screen is touched The door lock actuator (driver side) is unlocked when "DR UNLK" on CONSULT-III screen is touched The door lock actuator (passenger side) is unlocked when "AS UNLK" on CONSULT- III screen is touched The door lock actuator (other) is unlocked when "OTR ULK" on CONSULT-III screen is touched

REAR WINDOW DEFOGGER

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

REAR WINDOW DEFOGGER: CONSULT-III Function (BCM - REAR DEFOGGER)

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DATA MONITOR

Monitor Item	Description	
PUSH SW	Indicates [ON/OFF] condition of push switch.	
REAR DEF SW	This is displayed even when it is not equipped.	

ACTIVE TEST

Test Item	Description	
REAR DEFOGGER	This test is able to check rear window defogger operation. Rear window defogger operates when "ON" on CONSULT-III screen is touched.	

BUZZER

BUZZER: CONSULT-III Function (BCM - BUZZER)

INFOID:0000000005840644

CONSULT-III APPLICATION ITEMS

Test item	Diagnosis mode	Description
BUZZER	Data Monitor	Displays BCM input data in real time.
DOZZEN	Active Test	Operation of electrical loads can be checked by sending driving signal to them.

DATA MONITOR

Display item [Unit]	Description			
PUSH SW [On/Off]	Status of push-button ignition switch judged by BCM.			
UNLK SEN-DR [On/Off]	Status of unlock sensor judged by BCM.			
VEH SPEED 1 [km/h]	Value of vehicle speed signal received from combination meter with CAN communication line.			
TAIL LAMP SW [On/Off]	Status of lighting switch judged by BCM using the combination switch readout function.			
FR FOG SW [On/Off]	Status of front fog lamp switch judged by BCM using the combination switch readout function.			
DOOR SW-DR [On/Off]	Status of driver side door switch judged by BCM.			
CDL LOCK SW [On/Off]	Status of door lock unlock switch judged by BCM.			

ACTIVE TEST

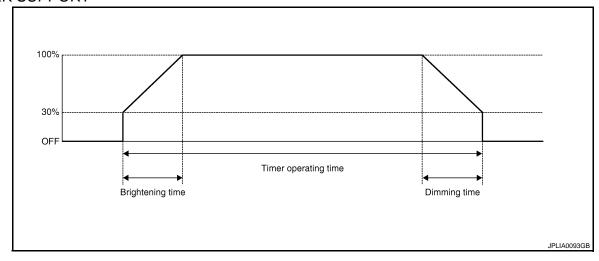
Display item [Unit]	Description
SEAT BELT WARN TEST	The seat belt warning chime operation can be checked by operating the relevant function (On/Off).
ID REGIST WARNING	The ID regist warning chime operation can be checked by operating the relevant function (On/Off).
LIGHT WARN ALM	The light warning chime operation can be checked by operating the relevant function (On/Off).

INT LAMP

INT LAMP: CONSULT-III Function (BCM - INT LAMP)

INFOID:0000000005840375

WORK SUPPORT



Service item	Setting item	g item Setting		
	MODE 2	7.5 sec.		
ROOM LAMP TIMER SET	MODE 3*	15 sec.	Sets the interior room lamp ON time. (Timer operating time)	
	MODE 4	30 sec.		
SET I/L D-UNLCK INTCON	On*	With the in	With the interior room lamp timer function	
SET I/L D-UNLER INTCOM	Off	Without th	ne interior room lamp timer function	
	MODE 1	0.5 sec.		
	MODE 2*	1 sec.		
ROOM LAMP ON TIME SET	MODE 3	2 sec.	Sets the interior room lamp gradual brightening time.	
	MODE 4	3 sec.		
	MODE 5	0 sec.		
	MODE 1	0.5 sec.		
	MODE 2*	1 sec.		
ROOM LAMP OFF TIME SET	MODE 3	2 sec.	Sets the interior room lamp gradual dimming time.	
	MODE 4	3 sec.		
	MODE 5	0 sec.		
	MODE 1*	Interior ro	om lamp timer activates with synchronizing all doors.	
R LAMP TIMER LOGIC SET	MODE 2	Interior ro only.	om lamp timer activates with synchronizing the driver door	

^{*:} Factory setting

DATA MONITOR

Monitor item [Unit]	Description
REQ SW-DR [On/Off]	The switch status input from request switch (driver side)
REQ SW-AS [On/Off]	The switch status input from request switch (passenger side)
REQ SW-RR [On/Off]	NOTE:
REQ SW-RL [On/Off]	The item is indicated, but not monitored.

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Monitor item [Unit]	Description	
PUSH SW [On/Off]	Push switch status received from Intelligent Key unit by CAN communication	
UNLK SEN -DR [On/Off]	Driver door unlock status input from unlock sensor	
DOOR SW-DR [On/Off]	The switch status input from front door switch (driver side)	
DOOR SW-AS [On/Off]	The switch status input from front door switch (passenger side)	
DOOR SW-RR [On/Off]	The switch status input from rear door switch RH	
DOOR SW- RL [On/Off]	The switch status input from rear door switch LH	
DOOR SW- BK [On/Off]	The switch status input from back door switch	
CDL LOCK SW [On/Off]	Lock switch status input from door lock and unlock switch	
CDL UNLOCK SW [On/Off]	Unlock switch status input from door lock and unlock switch	
KEY CYL LK-SW [On/Off]	Lock switch status received from key cylinder lock/unlock switch	
KEY CYL UN-SW [On/Off]	Unlock switch status received from key cylinder lock/unlock switch	
TRNK/HAT MNTR [On/Off]	NOTE: The item is indicated, but not monitored.	
RKE-LOCK [On/Off]	Lock signal status received from remote keyless entry receiver	
RKE-UNLOCK [On/Off]	Unlock signal status received from remote keyless entry receiver	

ACTIVE TEST

Test item	Operation	Description
INT LAMP	On	Outputs the interior room lamp control signal to turn the interior room lamps ON. [Map lamp, personal lamp, room lamp, luggage room lamp (when applicable lamps switch is in DOOR position.)]
	Off	Stops the interior room lamp control signal to turn the interior room lamps.

HEADLAMP

HEADLAMP: CONSULT-III Function (BCM - HEAD LAMP)

INFOID:0000000005840373

WORK SUPPORT

For USA

Service item	Setting item	Setting
	MODE 1*	With twilight ON custom & with wiper INT, LO and HI
	MODE 2	With twilight ON custom & with wiper LO and HI
AUTO LIGHT LOGIC SET	MODE 3	With twilight ON custom & without
ACTO LIGHT EGGIO GET	MODE 4	Without twilight ON custom & with wiper INT, LO and HI
	MODE 5	Without twilight ON custom & with wiper LO and HI
	MODE 6	Without twilight ON custom & without

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[WITH INTELLIGENT KEY SYSTEM]

Service item	Setting item	Setting			
	MODE 1*	Normal			
	MODE 2	More sensitive setting than normal setting (Turns ON earlier than normal operation.)			
CUSTOM A/LIGHT SETTING	MODE 3	More sensitive setting than MODE 2 (Turns ON earlier than MODE 2.)			
	MODE 4	Without twilight ON custom & less sensitive setting than normal setting (Turns ON later than normal operation.)			
BATTERY SAVER SET	On [*]	With the exterior lamp battery saver function			
DATTERT SAVER SET	Off	Without the exterior lamp battery saver function			
	MODE 1*	45 sec.			
	MODE 2	Without the function			
	MODE 3	30 sec.			
III DELAY SET	MODE 4	60 sec.	Sets delay timer function timer operation time.		
ILL DELAT OF T	MODE 5	90 sec.	(All doors closed)		
	MODE 6	120 sec.			
	MODE 7	150 sec.			
	MODE 8	180 sec.			

^{*:} Factory setting

For CANADA

Service item	Setting item	Setting					
	MODE 1						
	MODE 2	NOTE: The item is indicated, but not operated.					
AUTO LIGHT LOGIC SET	MODE 3						
AUTO LIGHT LOGIC SET	MODE 4						
	MODE 5						
	MODE 6						
	MODE 1*	Normal					
CUSTOM A/LIGHT SETTING	MODE 2	More sensitive setting than normal setting (Turns ON earlier than normal operation.)					
OOTOW/VEIOITI GETTING	MODE 3	More sensitive setting than MODE 2 (Turns ON earlier than MODE 2.)					
	MODE 4	Less sensitive setting than normal setting (Turns ON later than normal operation.)					
BATTERY SAVER SET	On [*]	With the exterior lamp battery saver function					
BATTER OAVEROLT	Off	Without the exterior lamp battery saver function					
	MODE 1*	45 sec.					
	MODE 2	Without the function					
	MODE 3	30 sec.					
ILL DELAY SET	MODE 4	60 sec. Sets delay timer function timer operation time.					
	MODE 5	90 sec. (All doors closed)					
	MODE 6	120 sec.					
	MODE 7	150 sec.					
	MODE 8	180 sec.					

^{*:} Factory setting

DATA MONITOR

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Monitor item [Unit]	Description			
PUSH SW [On/Off]	The switch status input from push-button ignition switch			
ENGINE STATE [Stop/Stall/Crank/Run]	The engine status received from ECM with CAN communication			
VEH SPEED 1 [km/h]	The value of the vehicle speed received from combination meter with CAN communication			
HI BEAM SW [On/Off]				
HEAD LAMP SW1 [On/Off]				
HEAD LAMP SW2 [On/Off]				
LIGHT SW 1ST [On/Off]	Each switch status that BCM judges from the combination switch reading function			
PASSING SW [On/Off]				
FR FOG SW [On/Off]				
AUTO LIGHT SW [On/Off]				
DOOR SW-DR [On/Off]	The switch status input from front door switch (driver side)			
DOOR SW-AS [On/Off]	The switch status input from front door switch (passenger side)			
DOOR SW-RR [On/Off]	The switch status input from rear door switch RH			
DOOR SW- RL [On/Off]	The switch status input from rear door switch LH			
BACK DOOR SW [On/Off]	The switch status input from back door switch			
TURN SIGNAL R [On/Off]				
TURN SIGNAL L [On/Off]	Each switch status that BCM judges from the combination switch reading function			
TAIL LAMP SW [On/Off]				
OPTICAL SENSOR [On/Off]	The sensor status input from optical sensor			
OPTI SEN (DTCT) [V]	The value of outside brightness voltage input from the optical sensor			
OPTI SEN (FILT) [V]	The value of outside brightness voltage filtered by BCM			

ACTIVE TEST

Test item	Operation	Description
TAIL LAMP	On	Transmits the position light request signal to IPDM E/R with CAN communication to turn the tail lamp ON.
	Off	Stops the tail lamp request signal transmission.

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[WITH INTELLIGENT KEY SYSTEM]

Test item	Operation	Description
	Hi	Transmits the high beam request signal with CAN communication to turn the headlamp (HI).
HEAD LAMP	Lo	Transmits the low beam request signal with CAN communication to turn the headlamp (LO).
	Off	Stops the high & low beam request signal transmission.
FR FOG LAMP	On	Transmits the front fog lights request signal to IPDM E/R with CAN communication to turn the front fog lamp ON.
	Off	Stops the front fog lights request signal transmission.
ILL DIM SIGNAL	On	NOTE:
ILL DIW SIGNAL	Off	The item is indicated, but cannot be tested.

WIPER

WIPER: CONSULT-III Function (BCM - WIPER)

INFOID:0000000005840642

WORK SUPPORT

Service item	Setting item	Description
WIPER SPEED	On WIPER SPEED	With vehicle speed (Front wiper intermittent time linked with the vehicle speed and wiper intermittent dial position)
SETTING	Off*	Without vehicle speed (Front wiper intermittent time linked with the wiper intermittent dial position)

^{*:}Factory setting

DATA MONITOR

Monitor Item [Unit]	Description	
PUSH SW [Off/On]	The switch status input from push-button ignition switch.	
VEH SPEED 1 [km/h]	The value of the vehicle speed signal received from combination meter with CAN communication.	
FR WIPER HI [Off/On]		
FR WIPER LOW [Off/On]	Each quitch status that PCM judges from the combination quitch reading function	
FR WASHER SW [Off/On]	Each switch status that BCM judges from the combination switch reading function.	
FR WIPER INT [Off/On]		
FR WIPER STOP [Off/On]	Front wiper motor (stop position) status received from IPDM E/R with CAN communication.	
INT VOLUME [1 – 7]	Each switch status that BCM judges from the combination switch reading function.	
RR WIPER ON [Off/On]		
RR WIPER INT [Off/On]	Each switch status that BCM judges from the combination switch reading function.	
RR WASHER SW [Off/On]		

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Monitor Item [Unit]	Description
RR WIPER STOP [Off/On]	Rear wiper motor (stop position) status input from the rear wiper motor.
RAIN SENSOR [Off/On]	NOTE: The item is indicated, but not monitored.

ACTIVE TEST

Test item	Operation	Description
	Hi	Transmits the front wiper request signal (HI) to IPDM E/R with CAN communication to operate the front wiper HI operation.
FR WIPER	Lo	Transmits the front wiper request signal (LO) to IPDM E/R with CAN communication to operate the front wiper LO operation.
	INT	Transmits the front wiper request signal (INT) to IPDM E/R with CAN communication to operate the front wiper INT operation.
	Off	Stops transmitting the front wiper request signal to stop the front wiper operation.
RR WIPFR	On	Outputs the voltage to operate the rear wiper motor.
	Off	Stops the voltage to stop.

FLASHER

FLASHER: CONSULT-III Function (BCM - FLASHER)

WORK SUPPORT

Service item	Setting item	Setting		
	Lock Only	With locking only		
HAZARD ANSWER	Unlk Only	With unlocking only	Sets the hazard warning lamp answer back function	
BACK	Lock/Unlk*	With locking/unlocking	when the door is lock/unlock with the request switch or the key fob.	
	Off	Without the function		

^{*:} Factory setting

DATA MONITOR

Revision: 2009 October

Monitor item [Unit]	Description
REQ SW-DR [On/Off]	The switch status input from the request switch (driver side)
REQ SW-AS [On/Off]	The switch status input from the request switch (passenger side)
PUSH SW [On/Off]	The switch status input from the push-button ignition switch
TURN SIGNAL R [On/Off]	Fach quitab status that DCM detects from the combination quitab reading function
TURN SIGNAL L [On/Off]	Each switch status that BCM detects from the combination switch reading function
HAZARD SW [On/Off]	The switch status input from the hazard switch
RKE-LOCK [On/Off]	Lock signal status received from the remote keyless entry receiver

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[WITH INTELLIGENT KEY SYSTEM]

Monitor item [Unit]	Description
RKE-UNLOCK [On/Off]	Unlock signal status received from the remote keyless entry receiver
RKE-PANIC [On/Off]	Panic alarm signal status received from the remote keyless entry receiver

ACTIVE TEST

Test item	Operation	Description
	RH	Outputs the voltage to blink the right side turn signal lamps.
FLASHER	LH	Outputs the voltage to blink the left side turn signal lamps.
	Off	Stops the voltage to turn the turn signal lamps OFF.

AIR CONDITIONER

AIR CONDITIONER: CONSULT-III Function (BCM - AUTO AIR CONDITIONER)

INFOID:0000000005840645

DATA MONITOR Display Item List

Monitor Item [Unit]		Contents
FAN ON SIG	[On/Off]	Displays the blower fan status as jugged from the A/C auto amp.
AIR COND SW	[On/Off]	Displays [COMP (On)/COMP (Off)] status as judged from the A/C auto amp.

INTELLIGENT KEY

INTELLIGENT KEY: CONSULT-III Function (BCM - INTELLIGENT KEY) INFOID:000000005840366

WORK SUPPORT

Monitor item	Description
CONFIRM KEY FOB ID	It can be checked whether Intelligent Key ID code is registered or not in this mode
AUTO LOCK SET	Auto door lock time can be changed in this mode • MODE 1: OFF • MODE 2: 30 sec • MODE 3: 1 minute • MODE 4: 2 minutes • MODE 5: 3 minutes • MODE 6: 4 minutes • MODE 7: 5 minutes
LOCK/UNLOCK BY I-KEY	Door lock/unlock function by door request switch mode can be changed to operation in this mode On: Operate Off: Non-operation
ENGINE START BY I-KEY	Engine start function mode can be changed to operation with this mode On: Operate Off: Non-operation
TRUNK/GLASS HATCH OPEN	NOTE: This item is displayed, but cannot be monitored
PANIC ALARM SET	Panic alarm button pressing time on Intelligent Key remote control button can be selected from the following with this mode • MODE 1: 0.5 sec • MODE 2: Non-operation • MODE 3: 1.5 sec
TRUNK OPEN DELAY	NOTE: This item is displayed, but cannot be monitored

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Monitor item	Description		
LO- BATT OF KEY FOB WARN	Intelligent Key low battery warning mode can be changed to operation with this mode On: Operate Off: Non-operation		
ANTI KEY LOCK IN FUNCTI	Key reminder function mode can be changed to operation with this mode On: Operate Off: Non-operation		
HAZARD ANSWER BACK	Hazard reminder function mode by door request switch and Intelligent Key button can be selected from the following with this mode Lock Only: Door lock operation only Unlock Only: Door unlock operation only Lock/Unlock: Lock/unlock operation Off: Non-operation		
ANS BACK I-KEY LOCK	Buzzer reminder function (lock operation) mode by door request switch (driver side and passenger side) can be selected from the following with this mode Horn Chirp: Sound horn Buzzer: Sound Intelligent Key warning buzzer Off: Non-operation		
ANS BACK I-KEY UNLOCK	Buzzer reminder function (unlock operation) mode by door request switch can be changed to operation with this mode On: Operate Off: Non-operation		
SHORT CRANKING OUTPUT	Starter motor can operate during the times below		
INSIDE ANT DIAGNOSIS	This function allows inside key antenna self-diagnosis		
HORN WITH KEYLESS LOCK	Horn reminder function mode by Intelligent Key button can be changed to operate (ON) or not operate (OFF) with this mode On: Operate Off: Non-operation		

SELF-DIAG RESULT

Refer to DLK-139, "DTC Index".

DATA MONITOR

Monitor Item	Condition
REQ SW -DR	Indicates [On/Off] condition of door request switch (driver side)
REQ SW -AS	Indicates [On/Off] condition of door request switch (passenger side)
REQ SW -BD/TR	Indicates [On/Off] condition of back door request switch
PUSH SW	Indicates [On/Off] condition of push-button ignition switch
CLUTCH SW*1	Indicates [On/Off] condition of clutch switch
BRAKE SW 1	Indicates [On/Off]*2 condition of brake switch power supply
BRAKE SW 2	Indicates [On/Off] condition of brake switch
DETE/CANCL SW	Indicates [On/Off] condition of P position
SFT PN/N SW	Indicates [On/Off] condition of P or N position
S/L -LOCK	Indicates [On/Off] condition of steering lock unit (LOCK)
S/L -UNLOCK	Indicates [On/Off] condition of steering lock unit (UNLOCK)
S/L RELAY -F/B	Indicates [On/Off] condition of steering lock relay
UNLK SEN -DR	Indicates [On/Off] condition of driver door UNLOCK status
PUSH SW -IPDM	Indicates [On/Off] condition of push-button ignition switch
IGN RLY1 -F/B	Indicates [On/Off] condition of ignition relay 1
DETE SW -IPDM	Indicates [On/Off] condition of P position
SFT PN -IPDM	Indicates [On/Off] condition of P or N position
SFT P -MET	Indicates [On/Off] condition of P position

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[WITH INTELLIGENT KEY SYSTEM]

Monitor Item	Condition
SFT N -MET	Indicates [On/Off] condition of N position
ENGINE STATE	Indicates [Stop/Stall/Crank/Run] condition of engine states
S/L LOCK-IPDM	Indicates [On/Off] condition of steering lock unit (LOCK)
S/L UNLK-IPDM	Indicates [On/Off] condition of steering lock unit (UNLOCK)
S/L RELAY-REQ	Indicates [On/Off] condition of steering lock relay
VEH SPEED 1	Display the vehicle speed signal received from combination meter by numerical value [Km/h]
VEH SPEED 2	Display the vehicle speed signal received from ABS or VDC or TCM by numerical value [Km/h]
DOOR STAT-DR	Indicates [LOCK/READY/UNLK] condition of driver side door status
DOOR STAT-AS	Indicates [LOCK/READY/UNLK] condition of passenger side door status
ID OK FLAG	Indicates [Set/Reset] condition of key ID
PRMT ENG STRT	Indicates [Set/Reset] condition of engine start possibility
PRMT RKE STRT	NOTE: This item is displayed, but cannot be monitored
TRNK/HAT MNTR	NOTE: This item is displayed, but cannot be monitored
RKE-LOCK	Indicates [On/Off] condition of LOCK signal from Intelligent Key
RKE-UNLOCK	Indicates [On/Off] condition of UNLOCK signal from Intelligent Key
RKE-TR/BD	NOTE: This item is displayed, but cannot be monitored
RKE-PANIC	Indicates [On/Off] condition of PANIC button of Intelligent Key
RKE-MODE CHG	Indicates [On/Off] condition of MODE CHANGE signal from Intelligent Key
RKE OPE COUN1	When remote keyless entry receiver receives the signal transmitted while operating on Intelligent Key, the numerical value start changing
RKE OPE COUN2	NOTE: This item is displayed, but cannot be monitored

^{*1:} It is displayed but does not operate on M/T models.

ACTIVE TEST

Test item	Description				
BATTERY SAVER	This test is able to check interior room lamp operation On: Operate Off: Non-operation				
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation On: Operate Off: Non-operation				
INSIDE BUZZER	This test is able to check warning chime in combination meter operation • Take out: Take away warning chime sounds when CONSULT-III screen is touched • Key: Key warning chime sounds when CONSULT-III screen is touched • Knob: OFF position warning chime sounds when CONSULT-III screen is touched				
INDICATOR	This test is able to check warning lamp operation • KEY ON: "KEY" Warning lamp illuminates when CONSULT-III screen is touched • "KEY" Warning lamp blinks when CONSULT-III screen is touched				
INT LAMP	This test is able to check interior room lamp operation On: Operate Off: Non-operation				

^{*2:} OFF is displayed when brake pedal is depressed while brake switch power supply is OFF.

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Test item	Description
LCD	This test is able to check meter display information BP N: Engine start operation indicator lamp indicate when CONSULT-III screen is touched BP I: Engine start operation indicator lamp indicate when CONSULT-III screen is touched ID NG: This item is displayed, but cannot be monitored ROTAT: This item is displayed, but cannot be monitored SFT P: Shift P warning lamp indicate when CONSULT-III screen is touched INSRT: This item is displayed, but cannot be monitored BATT: Key warning lamp indicator when CONSULT-III screen is touched NO KY: This item is displayed, but cannot be monitored OUTKEY: Engine start operation indicator lamp indicate when CONSULT-III screen is touched LK WN: Engine start operation indicator lamp indicate when CONSULT-III screen is touched
FLASHER	This test is able to check security hazard lamp operation The hazard lamps are activated after "LH/RH/Off" on CONSULT-III screen is touched
HORN	This test is able to check horn operation The horn is activated after "ON" on CONSULT-III screen is touched
P RANGE	This test is able to check CVT shift selector power supply On: Operate Off: Non-operation
ENGINE SW ILLUMI	This test is able to check push-ignition switch illumination operation Push-ignition switch illumination illuminates when "ON" on CONSULT-III screen is touched
PUSH SWITCH INDICATOR	This test is able to check LOCK indicator in push-ignition switch operation LOCK indicator in push-ignition switch illuminates when "ON" on CONSULT-III screen is touched
TRUNK/BACK DOOR	NOTE: This item is displayed, but cannot be monitored

COMB SW

COMB SW: CONSULT-III Function (BCM - COMB SW)

INFOID:0000000005490398

DATA MONITOR

Monitor item [UNIT]	Description
FR WIPER HI [Off/On]	Displays the status of the FR WIPER HI switch in combination switch judged by BCM with the combination switch reading function.
FR WIPER LOW [Off/On]	Displays the status of the FR WIPER LOW switch in combination switch judged by BCM with the combination switch reading function.
FR WASHER SW [Off/On]	Displays the status of the FR WASHER switch in combination switch judged by BCM with the combination switch reading function.
FR WIPER INT [Off/On]	Displays the status of the FR WIPER INT switch in combination switch judged by BCM with the combination switch reading function.
INT VOLUME [1 - 7]	Displays the status of wiper intermittent dial position judged by BCM with the combination switch reading function.
RR WIPER ON [Off/On]	Displays the status of the RR WIPER ON switch in combination switch judged by BCM with the combination switch reading function.
RR WIPER INT [Off/On]	Displays the status of the RR WIPER INT switch in combination switch judged by BCM with the combination switch reading function.
RR WASHER SW [Off/On]	Displays the status of the RR WASHER switch in combination switch judged by BCM with the combination switch reading function.
TURN SIGNAL R [Off/On]	Displays the status of the TURN RH switch in combination switch judged by BCM with the combination switch reading function.
TURN SIGNAL L [Off/On]	Displays the status of the TURN LH switch in combination switch judged by BCM with the combination switch reading function.
TAIL LAMP SW [Off/On]	Displays the status of the TAIL LAMP switch in combination switch judged by BCM with the combination switch reading function.

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< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Monitor item [UNIT]	Description
HI BEAM SW [Off/On]	Displays the status of the HI BEAM switch in combination switch judged by BCM with the combination switch reading function.
HEAD LAMP SW 1 [Off/On]	Displays the status of the HEADLAMP 1 switch in combination switch judged by BCM with the combination switch reading function.
HEAD LAMP SW 2 [Off/On]	Displays the status of the HEADLAMP 2 switch in combination switch judged by BCM with the combination switch reading function.
PASSING SW [Off/On]	Displays the status of the PASSING switch in combination switch judged by BCM with the combination switch reading function.
AUTO LIGHT SW [Off/On]	Displays the status of the AUTO LIGHT switch in combination switch judged by BCM with the combination switch reading function.
FR FOG SW [Off/On]	Displays the status of the FR FOG switch in combination switch judged by BCM with the combination switch reading function.

BCM

BCM: CONSULT-III Function (BCM - BCM)

INFOID:0000000005490399

WORK SUPPORT

Item	Description
RESET SETTING VALUE	Return a value set with Work Support of each system to a default value in factory shipment.

IMMU

IMMU: CONSULT-III Function (BCM - IMMU)

INFOID:0000000005840369

DATA MONITOR

Monitor item	Content	
CONFRM ID ALL		
CONFIRM ID4	Indicates [YET] at all time.	
CONFIRM ID3	Switches to [DONE] when a registered Intelligent Key backside is contacted to push-button ignition switch.	
CONFIRM ID2		
CONFIRM ID1		
NOT REGISTERED	Indicates [ID OK] when key ID that is registered is received or is not yet received. Indicates [ID NG] when key ID that is not registered is received.	
TP 4		
TP 3	Indicates the number of IDs that are registered	
TP 2	Indicates the number of IDs that are registered.	
TP 1	7	
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch.	

ACTIVE TEST

Test item	Description
THEFT IND	This test is able to check security indicator lamp operation. Security indicator lamp is turned on when "ON" on CONSULT-III screen touched.

WORK SUPPORT

Service item	Description
CONFIRM DONGLE ID	It is possible to check that dongle unit is applied to the vehicle.

BATTERY SAVER

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

BATTERY SAVER : CONSULT-III Function (BCM - BATTERY SAVER)

INFOID:0000000005840376

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WORK SUPPORT

Service item	Setting item		Setting
ROOM LAMP TIMER SET	MODE 1*	30 min.	Sets the interior room lamp battery saver timer operating
NOOM EANT TIMEN SET	MODE 2	60 min.	time.
BATTERY SAVER SET	On*	With the exterior lamp battery saver function	
BATTERT SAVER SET	Off	Without the exterior lamp battery saver function	
ROOM LAMP BAT SAV SET	On*	With the interior room lamp battery saver function	
NOOM LAMIF BAT GAV SET	Off	Without the interior room lamp battery saver function	

^{*:}Factory setting

DATA MONITOR

Monitor item [Unit]	Description			
REQ SW-DR [On/Off]	The switch status input from request switch (driver side)			
REQ SW-AS [On/Off]	The switch status input from front request switch (passenger side)			
REQ SW-RR [On/Off]	NOTE:			
REQ SW-RL [On/Off]	The item is indicated, but not monitored.			
PUSH SW [On/Off]	Push switch status received from Intelligent Key unit by CAN communication			
UNLK SEN-DR [On/Off]	Driver door unlock status input from unlock sensor			
DOOR SW-DR [On/Off]	The switch status input from front door switch (driver side)			
DOOR SW-AS [On/Off]	The switch status input from front door switch (passenger side)			
DOOR SW-RR [On/Off]	The switch status input from rear door switch RH			
DOOR SW- RL [On/Off]	The switch status input from rear door switch LH			
DOOR SW- BK [On/Off]	The switch status input from back door switch			
CDL LOCK SW [On/Off]	Lock switch status input from door lock and unlock switch			
CDL UNLOCK SW [On/Off]	Unlock switch status input from door lock and unlock switch			
KEY CYL LK-SW [On/Off]	Lock switch status received from key cylinder lock/unlock switch			
KEY CYL UN-SW [On/Off]	Unlock switch status received from key cylinder lock/unlock switch			
TRNK/HAT MNTR [On/Off]	NOTE: The item is indicated, but not monitored.			
RKE-LOCK [On/Off]	Lock signal status received from remote keyless entry receiver			
RKE-UNLOCK [On/Off]	Unlock signal status received from remote keyless entry receiver			

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ACTIVE TEST

Test item	Operation	Description
BATTERY SAVER	Off	Cuts the interior room lamp power supply to turn interior room lamps OFF.
	On	Outputs the interior room lamp power supply to turn interior room lamps ON.*

^{*:} Each lamp switch is in ON position.

TRUNK

TRUNK: CONSULT-III Function (BCM - TRUNK)

INFOID:0000000005840367

BCM CONSULT-III FUNCTION

CONSULT-III performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
DATA MONITOR	The BCM input/output signals are displayed

DATA MONITOR

Monitor Item	Contents
PUSH SW	Indicates [On/Off] condition of push switch
UNLK SEN -DR	Indicates [On/Off] condition of unlock sensor
VEH SPEED 1	Indicates [Km/h] condition of vehicle speed signal from combination meter
TR/BD OPEN SW	NOTE: This item is displayed, but cannot be monitored
TRNK/HAT MNTR	NOTE: This item is displayed, but cannot be monitored
RKE-TR/BD	NOTE: This item is displayed, but cannot be monitored

ACTIVE TEST

Test item	Description
TRUNK/GLASS HATCH	NOTE: This item is displayed, but cannot be monitored

THEFT ALM

THEFT ALM: CONSULT-III Function (BCM - THEFT)

INFOID:0000000005840368

DATA MONITOR

Monitored Item	Description
REQ SW -DR	Indicates [ON/OFF] condition of door request switch (driver side).
REQ SW -AS	Indicates [ON/OFF] condition of door request switch (passenger side).
REQ SW -RR	NOTE: This is displayed even when it is not equipped.
REQ SW -RL	NOTE: This is displayed even when it is not equipped.
REQ SW -BD/TR	Indicates [ON/OFF] condition of back door request switch.
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch
UNLK SEN -DR	Indicates [ON/OFF] condition of driver door UNLOCK status.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch (driver side).
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch (passenger side).

< SYSTEM DESCRIPTION >

IWITH INTELLIGENT KEY SYSTEM

	> [WITH INTELLIGENT KEY SYSTEM]				
Monitored Item	Description				
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.				
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.				
DOOR SW-BK	Indicates [ON/OFF] condition of back door switch.				
CDL LOCK SW	ndicates [ON/OFF] condition of lock signal from door lock/unlock switch LH and RH.				
CDL UNLOCK SW	Indicates [ON/OFF] condition of unlock signal from door lock/unlock switch LH and RH.				
KEY CYL LK-SW	Indicates [ON/OFF] condition of lock signal from door key cylinder.				
KEY CYL UN-SW	ndicates [ON/OFF] condition of lock signal from door key cylinder. ndicates [ON/OFF] condition of unlock signal from door key cylinder.				
TR/BD OPEN SW	NOTE: This is displayed even when it is not equipped.				
TRNK/HAT MNTR	NOTE: This is displayed even when it is not equipped.				
RKE-LOCK	Indicates [ON/OFF] condition of LOCK signal from Intelligent Key.				
RKE-UNLOCK	Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key.				
RKE-TR/BD	NOTE: This is displayed even when it is not equipped.				
WORK SUPPORT Service Item	This is displayed even when it is not equipped. Description				
WORK SUPPORT					
Service Item SECURITY ALARM SET	Description This mode is able to confirm and change security alarm ON-OFF setting. The switch which triggered vehicle security alarm is recorded.				
NORK SUPPORT Service Item	Description This mode is able to confirm and change security alarm ON-OFF setting.				
Service Item SECURITY ALARM SET THEFT ALM TRG	Description This mode is able to confirm and change security alarm ON-OFF setting. The switch which triggered vehicle security alarm is recorded. This mode is able to confirm and erase the record of vehicle security alarm.				
Service Item SECURITY ALARM SET	Description This mode is able to confirm and change security alarm ON-OFF setting. The switch which triggered vehicle security alarm is recorded. This mode is able to confirm and erase the record of vehicle security alarm.				
Service Item SECURITY ALARM SET THEFT ALM TRG	Description This mode is able to confirm and change security alarm ON-OFF setting. The switch which triggered vehicle security alarm is recorded. This mode is able to confirm and erase the record of vehicle security alarm. The trigger data can be erased by touching "CLEAR" on CONSULT-III screen.				
Service Item SECURITY ALARM SET THEFT ALM TRG ACTIVE TEST Test Item	Description This mode is able to confirm and change security alarm ON-OFF setting. The switch which triggered vehicle security alarm is recorded. This mode is able to confirm and erase the record of vehicle security alarm. The trigger data can be erased by touching "CLEAR" on CONSULT-III screen. Description This test is able to check security indicator lamp operation. Security indicator lamp is turned on				
Service Item SECURITY ALARM SET THEFT ALM TRG ACTIVE TEST Test Item THEFT IND	Description This mode is able to confirm and change security alarm ON-OFF setting. The switch which triggered vehicle security alarm is recorded. This mode is able to confirm and erase the record of vehicle security alarm. The trigger data can be erased by touching "CLEAR" on CONSULT-III screen. Description This test is able to check security indicator lamp operation. Security indicator lamp is turned on when "ON" on CONSULT-III screen is touched. This test is able to check horn operation. Horn is activated for 0.5 seconds after "ON" on CONSULT				
Service Item SECURITY ALARM SET THEFT ALM TRG ACTIVE TEST Test Item THEFT IND VEHICLE SECURITY HORN	Description This mode is able to confirm and change security alarm ON-OFF setting. The switch which triggered vehicle security alarm is recorded. This mode is able to confirm and erase the record of vehicle security alarm. The trigger data can be erased by touching "CLEAR" on CONSULT-III screen. Description This test is able to check security indicator lamp operation. Security indicator lamp is turned on when "ON" on CONSULT-III screen is touched. This test is able to check horn operation. Horn is activated for 0.5 seconds after "ON" on CONSULT III screen is touched. This test is able to check headlamp operation. Headlamps are activated for 0.5 seconds after "ON on CONSULT-III screen is touched.				
Service Item SECURITY ALARM SET THEFT ALM TRG ACTIVE TEST Test Item THEFT IND VEHICLE SECURITY HORN HEADLAMP(HI)	Description This mode is able to confirm and change security alarm ON-OFF setting. The switch which triggered vehicle security alarm is recorded. This mode is able to confirm and erase the record of vehicle security alarm. The trigger data can be erased by touching "CLEAR" on CONSULT-III screen. Description This test is able to check security indicator lamp operation. Security indicator lamp is turned on when "ON" on CONSULT-III screen is touched. This test is able to check horn operation. Horn is activated for 0.5 seconds after "ON" on CONSULT III screen is touched. This test is able to check headlamp operation. Headlamps are activated for 0.5 seconds after "ON" on CONSULT-III screen is touched. This test is able to check hazard warning lamp operation. Hazard warning lamps are activated after				

Monitor Item	Description
DOOR SW-DR	Indicates [ON/OFF] condition of driver side door switch.
DOOR SW-AS	Indicates [ON/OFF] condition of passenger side door switch.

SIGNAL BUFFER

SIGNAL BUFFER : CONSULT-III Function (BCM - SIGNAL BUFFER)

NFOID:0000000005490405

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DATA MONITOR

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Monitor item [UNIT]	Description
PUSH SW [Off/On]	Displays the status of the push-button ignition switch (push switch) judged by BCM.

ACTIVE TEST

Test item	Opera- tion	Description
OIL PRESSURE SW	Off	OFF
	On	BCM transmits the oil pressure switch signal to the combination meter via CAN communication, which illuminates the oil pressure warning lamp in the combination meter.

AIR PRESSURE MONITOR

AIR PRESSURE MONITOR: Diagnosis Description

INFOID:0000000005840371

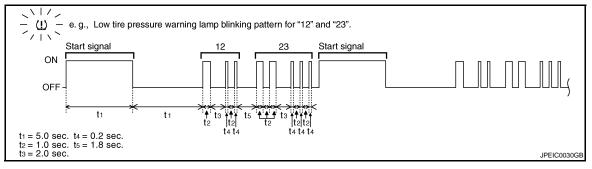
DESCRIPTION

During driving, the transmitter installed at each road wheel transmits the tire pressure information signal to the receiver. The receiver receives the tire pressure signal and transmits it to the BCM. The BCM judges whether or not the tire pressure is OK based on the tire pressure information signal, and if it judges that the tire pressure is low, it transmits the information via CAN communication to the combination meter.

After receiving the tire pressure information via CAN communication from the BCM, the combination meter illuminates the low tire pressure warning lamp and displays.

SELF DIAGNOSTIC PROCEDURE

- 1. Initiate diagnosis mode by short-circuiting the low tire pressure warning check switch to the ground.
- 2. The blinking pattern of the low tire pressure warning lamp indicates the conditions of the malfunction.



NOTE:

If the low tire pressure warning lamp is blinking repeatedly at 5 Hz, there is no malfunction occurring in the system.

Blinking pattern	Items	Diagnostic items detected when	Check item	
15	Tire pressure value (Front LH)	Front LH tire pressure drops to 182.7 kPa (1.9 kg/cm ² , 26 psi) or less.		
16	Tire pressure value (Front RH)	Front RH tire pressure drops to 182.7 kPa (1.9 kg/cm ² , 26 psi) or less.	WT-30	
17	Tire pressure value (Rear RH)	Rear RH tire pressure drops to 182.7 kPa (1.9 kg/cm ² , 26 psi) or less.	<u> </u>	
18	Tire pressure value (Rear LH)	Rear LH tire pressure drops to 182.7 kPa (1.9 kg/cm ² , 26 psi) or less.		
21	Transmitter no data (Front LH)	Data from front LH transmitter cannot be received.		
22	Transmitter no data (Front RH)	Data from front RH transmitter cannot be received.	WT 22	
23	Transmitter no data (Rear RH)	Data from rear RH transmitter cannot be received.	<u>WT-32</u>	
24	Transmitter no data (Rear LH)	Data from rear LH transmitter cannot be received.		

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Blinking pattern	Items	Diagnostic items detected when	Check item	А
35	Transmitter pressure data error (Front LH)	Air pressure data from front LH transmitter is malfunction.		
36	Transmitter pressure data error (Front RH)	Air pressure data from front RH transmitter is malfunction.	WT-35	В
37	Transmitter pressure data error (Rear RH)	Air pressure data from rear RH transmitter is malfunction.	<u>W1-33</u>	С
38	Transmitter pressure data error (Rear LH)	Air pressure data from rear LH transmitter is malfunction.		
52	Vehicle speed signal error	Vehicle speed signal error.	WT-37	D
53	Control unit	Tire pressure monitoring system malfunction in BCM.	WT-39	
No blinking	Tire pressure warning check switch	Tire pressure warning switch circuit is open.	-	Е

ERASE SELF-DIAGNOSIS

After performing self-diagnosis by short-circuiting the tire pressure warning check switch to the body, turn the ignition switch OFF.

AIR PRESSURE MONITOR: CONSULT-III Function

INFOID:0000000005840372

FUNCTION

The diagnosis functions (main functions) include the following: "WORK SUPPORT", "SELF DIAGNOSTIC RESULT", "DATA MONITOR" and "ACTIVE TEST".

Diagnostic test mode	Function	
Work support	In this mode, it is possible to make quick and accurate adjustments by following the instructions on the CONSULT-III display.	
Self diagnostic result	Receives self-diagnosis results from the low tire pressure warning control unit, and indicates DTCs and the number of malfunctions.	
Data monitor	Receives input/output signals from the low tire pressure warning control unit and indicates and stores them to facilitate locating the causes of malfunctions.	
Active test	Transmits command to the low tire pressure warning control unit to change output signals and check operation of output system.	

WORK SUPPORT MODE

Refer to WT-28, "Special Repair Requirement".

SELF-DIAG RESULTS MODE

Refer to BCS-76, "DTC Index".

DATA MONITOR MODE

Screen of data monitor mode is displayed.

NOTF:

When malfunction is detected, CONSULT-III perform REAL-TIME DIAGNOSIS.

Also, any malfunction detected while in this mode will be displayed at real time.

Monitor item (Unit)	Remark
AIR PRESS FL (kPa), (kg/cm ²), (Psi)	
AIR PRESS FR (kPa), (kg/cm ²), (Psi)	Air pressure of tires
AIR PRESS RR (kPa), (kg/cm²), (Psi)	All pressure of thes
AIR PRESS RL (kPa), (kg/cm ²), (Psi)	

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DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Monitor item (Unit)	Remark	
ID REGST FL1		
ID REGST FR1	ID is registered: Done	
ID REGST RR1	ID is not registered: Yet	
ID REGST RL1		
WARNING LAMP	Low tire pressure warning lamp ON: On Low tire pressure warning lamp OFF: Off	
BUZZER	Combination meter buzzer ON: On Combination meter buzzer OFF: Off	

NOTE:

Before performing the self-diagnosis, be sure to register the ID, or erase the actual malfunction location may be different from that displayed on CONSULT-III.

ACTIVE TEST MODE

NOTE:

Before performing the self-diagnosis, be sure to register the ID, or erase the actual malfunction may be different from that displayed on CONSULT-III.

TEST ITEM LIST

Test item	Content	
WARNING LAMP	This test is able to check to check that the low tire pressure warning lamp turns on.	
ID REGIST WARNING	This test is able to check to check that the buzzer sounds or the low tire pressure warning lamp turns on.	
RUN FLAT TIRE W/L	NOTE: This item is displayed, but cannot be use this item.	
FLASHER	This test is able to check to check that each turn signal lamp turns on.	
HORN	This test is able to check to check that the horn sounds.	

[WITH INTELLIGENT KEY SYSTEM]

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM

Description INFOID:000000005490408

CAN (Controller Area Network) is a serial communication line for real time applications. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Modern vehicle is equipped with many electronic control unit, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H-line, CAN L-line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only. CAN Communication Signal Chart. Refer to LAN-23, "CAN Communication Signal Chart".

DTC Logic

DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC Detection Condition	Possible cause	
U1000	CAN COMM	When BCM cannot communicate CAN communication signal continuously for 2 seconds or more.	CAN communication system	

Diagnosis Procedure

1.PERFORM SELF DIAGNOSTIC

- 1. Turn ignition switch ON and wait for 2 seconds or more.
- 2. Check "Self Diagnostic Result".

Is DTC "U1000" displayed?

YES >> Refer to LAN-14, "Trouble Diagnosis Flow Chart".

NO >> Refer to GI-35, "Intermittent Incident".

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INFOID:0000000005490410

U1010 CONTROL UNIT (CAN)

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

U1010 CONTROL UNIT (CAN)

DTC Logic

DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC Detection Condition	Possible cause
U1010	CONTROL UNIT (CAN)	BCM detected internal CAN communication circuit malfunction.	BCM

Diagnosis Procedure

INFOID:0000000005490412

1.REPLACE BCM

When DTC "U1010" is detected, replace BCM.

>> Replace BCM. Refer to BCS-81, "Exploded View".

U0415 VEHICLE SPEED

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

U0415 VEHICLE SPEED

Description INFOID:0000000005490413

U0415 is displayed if any unusual condition is present in the reception status of the vehicle speed signal from the ABS actuator and electric unit (control unit).

DTC Logic INFOID:0000000005490414

DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC Detection Condition	Probable cause
U0415	VEHICLE SPEED	When the vehicle speed signal received from the ABS actuator and electric unit (control unit) remains abnormal for 2 seconds or more.	ABS actuator and electric unit (control unit) BCM

DTC CONFIRMATION PROCEDURE

1.DTC CONFIRMATION

- Erase the DTC.
- Turn ignition switch OFF.
- Perform the "Self Diagnostic Result" of CONSULT-III, when passed 2 seconds or more after the ignition switch is turned ON.

Is any DTC detected?

YES >> Refer to BCS-41, "Diagnosis Procedure".

>> INSPECTION END NO

Diagnosis Procedure

1. ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) SELF-DIAG RESULTS

Perform "Self-Diagnostic Result" of ABS actuator and electric unit (control unit) with CONSULT-III. Refer to BRC-23, "CONSULT-III Function".

Is any DTC detected?

YES >> Repair or replace the malfunctioning part.

NO >> Replace BCM. Refer to BCS-81, "Exploded View".

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B2562 LOW VOLTAGE

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B2562 LOW VOLTAGE

DTC Logic

DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC Detection Condition	Possible cause
B2562	LOW VOLTAGE	When the power supply voltage to BCM remains less than 8.8 V for 120 seconds or more	Harness or connector (power supply circuit)

DTC CONFIRMATION PROCEDURE

1. DTC CONFIRMATION

- 1. Erase DTC.
- Turn ignition switch OFF.
- Perform the "Self Diagnostic Result" of CONSULT-III, when passed 120 seconds or more after the ignition switch is turned ON.

Is any DTC detected?

YES >> Refer to BCS-42, "Diagnosis Procedure".

NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000005490417

1. CHECK POWER SUPPLY CIRCUIT

Check BCM power supply circuit. Refer to BCS-43, "Diagnosis Procedure".

Is the circuit normal?

YES >> Replace BCM. Refer to BCS-81, "Exploded View".

NO >> Repair the malfunctioning part.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

POWER SUPPLY AND GROUND CIRCUIT

Diagnosis Procedure

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1. CHECK FUSE AND FUSIBLE LINK

Check that the following fuse and fusible link are not blown.

Signal name	Fuse and fusible link No.	
Battery power supply	G	
battery power supply	8	

Is the fuse fusing?

YES >> Replace the blown fuse or fusible link after repairing the affected circuit if a fuse or fusible link is blown.

NO >> GO TO 2.

2. CHECK POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM connectors.
- 3. Check voltage between BCM harness connector and ground.

1			
(+)	(-)	Voltage (Approx.)
В	CM		
Connector	Terminal	Ground	
M70	70	Ground	Battery voltage
IVI7 O	57		

Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

В	CM		Continuity
Connector Terminal		Ground	Continuity
M70	67		Existed

Does continuity exist?

YES >> INSPECTION END

NO >> Repair harness or connector.

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Revision: 2009 October BCS-43 2010 Z12

COMBINATION SWITCH OUTPUT CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

COMBINATION SWITCH OUTPUT CIRCUIT

Diagnosis Procedure

INFOID:0000000005490419

1. CHECK OUTPUT 1 - 5 CIRCUIT FOR OPEN

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM and combination switch connectors.
- 3. Check continuity between BCM harness connector and combination switch harness connector.

System	ВСМ		Combinat	Continuity	
System	Connector	Terminal	Connector	Terminal	Continuity
OUTPUT 1		36		11	
OUTPUT 2		35		9	
OUTPUT 3	M68	34	M27	7	Existed
OUTPUT 4		33		10	
OUTPUT 5		32	•	13	

Does continuity exist?

YES >> GO TO 2.

NO >> Repair harnesses or connectors.

2. CHECK OUTPUT 1 - 5 CIRCUIT FOR SHORT

Check for continuity between BCM harness connector and ground.

System	В	CM		Continuity
System	Connector	Terminal		Continuity
OUTPUT 1		36		
OUTPUT 2		35	Ground	
OUTPUT 3	M68	34		Not existed
OUTPUT 4		33		
OUTPUT 5		32		

Does continuity exist?

YES >> Repair harnesses or connectors.

NO >> GO TO 3.

3.CHECK BCM OUTPUT VOLTAGE

- 1. Connect BCM connector.
- 2. Check voltage between BCM harness connector and ground.

	Terminals					
System	(+)		(-)	Voltage		
System	BCM			(Approx.)		
	Connector	Terminal				
OUTPUT 1		36				
OUTPUT 2		35	0	(V) 15		
OUTPUT 3		34	Ground	10 5		
OUTPUT 4	M68	33		0		
OUTPUT 5	UTPUT 5			++10ms PKIB4960J 7.0 - 8.0 V		

Is the measurement value normal?

COMBINATION SWITCH OUTPUT CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

YES >> Replace combination switch.

NO >> Replace BCM. Refer to BCS-81, "Exploded View".

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COMBINATION SWITCH INPUT CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

COMBINATION SWITCH INPUT CIRCUIT

Diagnosis Procedure

INFOID:0000000005490420

1. CHECK INPUT 1 - 5 CIRCUIT FOR OPEN

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM and combination switch connectors.
- 3. Check continuity between BCM harness connector and combination switch harness connector.

System	ВСМ		Combinat	Continuity	
System	Connector	Terminal	Connector	Terminal	Continuity
INPUT 1		6		12	
INPUT 2		5		14	
INPUT 3	M68	4	M27	5	Existed
INPUT 4		3		2	
INPUT 5		2		8	

Does continuity exist?

YES >> GO TO 2.

NO >> Repair harnesses or connectors.

2.CHECK INPUT 1 - 5 CIRCUIT FOR SHORT

Check for continuity between BCM harness connector and ground.

System	В	СМ		Continuity
System	Connector	Terminal		Continuity
INPUT 1		6		
INPUT 2		5	Ground	
INPUT 3	M68	4		Not existed
INPUT 4		3		
INPUT 5		2		

Does continuity exist?

YES >> Repair harnesses or connectors.

NO >> GO TO 3.

3. CHECK BCM INPUT SIGNAL

- 1. Connect BCM and combination switch connectors.
- 2. Turn ON any switch in the system that is malfunction.
- Check voltage between BCM harness connector and ground.

	Terminals			
System	(+)		(-)	Voltage
System	BCM			(Approx.)
	Connector	Terminal		
INPUT 1		6		
INPUT 2		5	Ground	Refer to BCS-
INPUT 3	M68	4		48, "Refer-
INPUT 4		3		ence Value".
INPUT 5		2		

Is the measurement value normal?

Yes >> Replace BCM. Refer to BCS-81, "Exploded View".

COMBINATION SWITCH INPUT CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

No >> Replace combination switch.

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ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)

Reference Value

VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

Monitor Item	Condition	Value/Status
FR WIPER HI	Other than front wiper switch HI	Off
I IX WIF LIX I II	Front wiper switch HI	On
FR WIPER LOW	Other than front wiper switch LO	Off
TR WIFER LOW	Front wiper switch LO	On
FR WASHER SW	Front washer switch OFF	Off
TIX WASHER SW	Front washer switch ON	On
FR WIPER INT	Other than front wiper switch INT/AUTO	Off
FR WIFER INT	Front wiper switch INT/AUTO	On
FR WIPER STOP	Front wiper is not in STOP position	Off
FR WIFER STOP	Front wiper is in STOP position	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	Wiper intermittent dial position
RR WIPER ON	Other than rear wiper switch ON	Off
RR WIPER ON	Rear wiper switch ON	On
RR WIPER INT	Other than rear wiper switch INT	Off
KK WIPEK IINI	Rear wiper switch INT	On
RR WASHER SW	Rear washer switch OFF	Off
RK WASHER SW	Rear washer switch ON	On
RR WIPER STOP	Rear wiper is in STOP position	Off
RR WIPER STOP	Rear wiper is not in STOP position	On
TURN SIGNAL R	Other than turn signal switch RH	Off
TORN SIGNAL K	Turn signal switch RH	On
TURN SIGNAL L	Other than turn signal switch LH	Off
TORN SIGNAL L	Turn signal switch LH	On
TAIL LAMP SW	Other than lighting switch 1ST and 2ND	Off
TAIL LAWIF SW	Lighting switch 1ST or 2ND	On
HI BEAM SW	Other than lighting switch HI	Off
TII DEAW 3W	Lighting switch HI	On
HEAD LAMP SW 1	Other than lighting switch 2ND	Off
HEAD LAWP SW 1	Lighting switch 2ND	On
HEAD LAMP SW 2	Other than lighting switch 2ND	Off
HEAD LAWIF SW 2	Lighting switch 2ND	On
PASSING SW	Other than lighting switch PASS	Off
I AUDING OW	Lighting switch PASS	On
ALITO LIGHT SW	Other than lighting switch AUTO	Off
AUTO LIGHT SW	Lighting switch AUTO	On
ED EOC SW	Front fog lamp switch OFF	Off
FR FOG SW	Front fog lamp switch ON	On

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

Monitor Item	Condition	Value/Status
DOOD SW DD	Driver door closed	Off
DOOR SW-DR	Driver door opened	On
DOOR SW-AS	Passenger door closed	Off
DOOR SW-AS	Passenger door opened	On
DOOD OW DD	Rear RH door closed	Off
DOOR SW-RR	Rear RH door opened	On
DOOD CW DI	Rear LH door closed	Off
DOOR SW-RL	Rear LH door opened	On
DOOD CW DV	Back door closed	Off
DOOR SW-BK	Back door opened	On
ODL LOOK OW	Other than power door lock switch LOCK	Off
CDL LOCK SW	Power door lock switch LOCK	On
ODL LINI OOK OW	Other than power door lock switch UNLOCK	Off
CDL UNLOCK SW	Power door lock switch UNLOCK	On
KEN OM TIK OM	Other than driver door key cylinder LOCK position	Off
KEY CYL LK-SW	Driver door key cylinder LOCK position	On
KEN ON THE OW	Other than driver door key cylinder UNLOCK position	Off
KEY CYL UN-SW	Driver door key cylinder UNLOCK position	On
114.74.DD 014/	Hazard switch is OFF	Off
HAZARD SW	Hazard switch is ON	On
Rear window defogger switch OFF		Off
REAR DEF SW	Rear window defogger switch ON	On
TR/BD OPEN SW	NOTE: The item is indicated, but not monitored.	Off
TRNK/HAT MNTR	NOTE: The item is indicated, but not monitored.	Off
FAN ON SIG	Blower fan OFF	Off
I AN ON SIG	Blower fan ON	On
AIR COND SW	Air conditioner OFF (A/C switch indicator OFF)	Off
AIR COND SW	Air conditioner ON (A/C switch indicator ON)	On
RKE-LOCK	LOCK button of the key is not pressed	Off
RRE-LOCK	LOCK button of the key is pressed	On
RKE-UNLOCK	UNLOCK button of the key is not pressed	Off
IXIL-ONLOOK	UNLOCK button of the key is pressed	On
RKE-TR/BD	BACK DOOR OPEN button of the key is not pressed	Off
IXXE-11/DD	BACK DOOR OPEN button of the key is pressed	On
RKE-PANIC	PANIC button of the key is not pressed	Off
INNLTAINIO	PANIC button of the key is pressed	On
RKE-MODE CHG	LOCK/UNLOCK button of the key is not pressed and held simultaneously	Off
INICIPE CHG	LOCK/UNLOCK button of the key is pressed and held simultaneously	On
ODTI SEN (DTCT)	Bright outside of the vehicle	Close to 5 V
OPTI SEN (DTCT)	Dark outside of the vehicle	Close to 0 V
ODTI SEN /EUT\	Bright outside of the vehicle (Lighting switch AUTO)	Close to 5 V
OPTI SEN (FILT)	Dark outside of the vehicle (Lighting switch AUTO)	Close to 1.50 V

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< ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
OPTICAL SENSOR	NOTE: The item is indicated, but not monitored.	Off
RAIN SENSOR	NOTE: The item is indicated, but not monitored.	Off
REQ SW -DR	Driver door request switch is not pressed	Off
REQ 3W -DR	Driver door request switch is pressed	On
DEO CW. AC	Passenger door request switch is not pressed	Off
REQ SW -AS	Passenger door request switch is pressed	On
REQ SW -RR	NOTE: The item is indicated, but not monitored.	Off
REQ SW -RL	NOTE: The item is indicated, but not monitored.	Off
REQ SW -BD/TR	Back door request switch is not pressed	Off
IVER OM -DD/ IV	Back door request switch is pressed	On
PUSH SW	Push-button ignition switch (push switch) is not pressed	Off
I USIT SVV	Push-button ignition switch (push switch) is pressed	On
CLUCH SW	NOTE: The item is indicated, but not monitored.	Off
DDAKE CWA	The brake pedal is not depressed	Off
BRAKE SW 1	The brake pedal is depressed	On
	The brake pedal is depressed when No. 7 fuse is blown	Off
BRAKE SW 2	The brake pedal is not depressed when No. 7 fuse is blown, or No. 7 fuse is normal	On
DETE/CANCL CW/	Selector lever in P position	Off
DETE/CANCL SW	Selector lever in any position other than P	On
OFT DAI/ALOVA/	Selector lever in any position other than P and N	Off
SFT PN/N SW	Selector lever in P or N position	On
0/1 1 001/	Steering is locked	Off
S/L -LOCK	Steering is unlocked	On
0/1 11011 0017	Steering is unlocked	Off
S/L -UNLOCK	Steering is locked	On
0/1 001 11/0	Steering is unlocked	Off
S/L RELAY-F/B	Steering is locked	On
	Driver door is locked	Off
UNLK SEN -DR	Driver door is unlocked	On
	Push-button ignition switch (push-switch) is not pressed	Off
PUSH SW -IPDM	Push-button ignition switch (push-switch) is pressed	On
1011 511/4 5/5	Ignition switch in OFF or ACC position	Off
IGN RLY1 -F/B	Ignition switch in ON position	On
	Selector lever in any position other than P	Off
DETE SW -IPDM	Selector lever in P position	On
	Selector lever in any position other than P and N	Off
SFT PN -IPDM	Selector lever in P or N position	On
	Selector lever in any position other than P	Off
SFT P -MET	Selector lever in P position	On

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

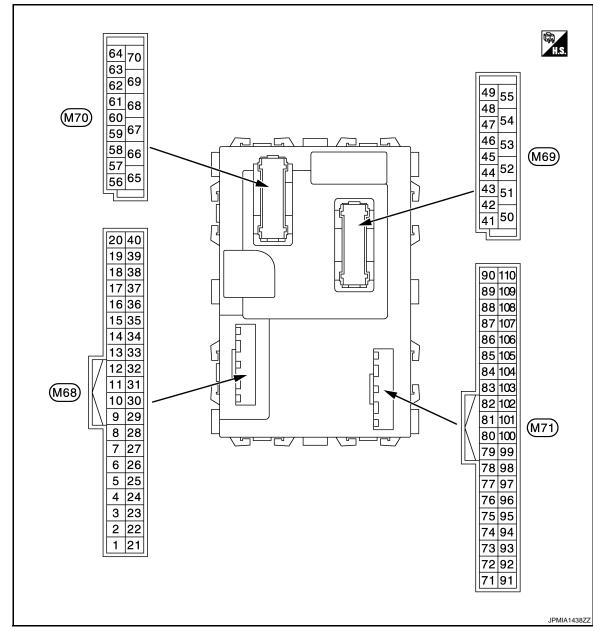
Monitor Item	Condition	Value/Status
SFT N -MET	Selector lever in any position other than N	Off
SFI IN -IVIET	Selector lever in N position	On
	Engine stopped	Stop
ENGINE STATE	While the engine stalls	Stall
ENGINE STATE	At engine cranking	Crank
	Engine running	Run
0/1.1.001/.1001/1	Steering is locked	Off
S/L LOCK-IPDM	Steering is unlocked	On
0/1.10111/.10014	Steering is unlocked	Off
S/L UNLK-IPDM	Steering is locked	On
0.11.01.01.01	Steering is unlocked	Off
S/L RELAY-REQ	Steering is locked	On
VEH SPEED 1	While driving	Equivalent to speed- ometer reading
VEH SPEED 2	While driving	Equivalent to speed- ometer reading
	Driver door is locked	LOCK
DOOR STAT-DR	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door is unlocked	UNLOCK
	Passenger door is locked	LOCK
DOOR STAT-AS	Wait with selective UNLOCK operation (5 seconds)	READY
	Passenger door is unlocked	UNLOCK
	Steering is locked	Reset
ID OK FLAG	Steering is unlocked	Set
	The engine start is prohibited	Reset
PRMT ENG STRT	The engine start is permitted	Set
PRMT RKE STRT	NOTE: The item is indicated, but not monitored.	Reset
RKE OPE COUN1	During the operation of the key	Operation frequency of the key
RKE OPE COUN2	NOTE: The item is indicated, but not monitored.	_
CONFRM ID ALL	The key ID that the key slot receives is not recognized by any key ID registered to BCM.	Yet
CONFRINTID ALL	The key ID that the key slot receives is recognized by any key ID registered to BCM.	Done
CONEIDM ID4	The key ID that the key slot receives is not recognized by the fourth key ID registered to BCM.	Yet
CONFIRM ID4	The key ID that the key slot receives is recognized by the fourth key ID registered to BCM.	Done
CONFIDM ID2	The key ID that the key slot receives is not recognized by the third key ID registered to BCM.	Yet
CONFIRM ID3	The key ID that the key slot receives is recognized by the third key ID registered to BCM.	Done
OONEDM ISS	The key ID that the key slot receives is not recognized by the second key ID registered to BCM.	Yet
CONFIRM ID2	The key ID that the key slot receives is recognized by the second key ID registered to BCM.	Done

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< ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
CONFIRM ID1	The key ID that the key slot receives is not recognized by the first key ID registered to BCM.	Yet
CONFIRM ID	The key ID that the key slot receives is recognized by the first key ID registered to BCM.	Done
NOT REGISTERED	BCM detects registered key ID, or BCM does not detect key ID.	ID OK
	BCM detects non-registration key ID.	ID NG
TP 4	The ID of fourth key is not registered to BCM	Yet
174	The ID of fourth key is registered to BCM	Done
TP 3	The ID of third key is not registered to BCM	Yet
IF 3	The ID of third key is registered to BCM	Done
TP 2	The ID of second key is not registered to BCM	Yet
IP Z	The ID of second key is registered to BCM	Done
TD 4	The ID of first key is not registered to BCM	Yet
TP 1	The ID of first key is registered to BCM	Done
AIR PRESS FL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front LH tire
AIR PRESS FR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front RH tire
AIR PRESS RR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear RH tire
AIR PRESS RL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear LH tire
ID DECCE EL 4	ID of front LH tire transmitter is registered	Done
ID REGST FL1	ID of front LH tire transmitter is not registered	Yet
ID DECOT ED4	ID of front RH tire transmitter is registered	Done
ID REGST FR1	ID of front RH tire transmitter is not registered	Yet
ID DECOT DD4	ID of rear RH tire transmitter is registered	Done
ID REGST RR1	ID of rear RH tire transmitter is not registered	Yet
ID DECCE DI 4	ID of rear LH tire transmitter is registered	Done
ID REGST RL1	ID of rear LH tire transmitter is not registered	Yet
MADNING LAMP	Tire pressure indicator OFF	Off
WARNING LAMP	Tire pressure indicator ON	On
DUZZED	Tire pressure warning alarm is not sounding	Off
BUZZER	Tire pressure warning alarm is sounding	On

TERMINAL LAYOUT



NOTE:

Connector color
• M68, M70: Black
• M69, M71: White

PHYSICAL VALUES

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	nal No.	Description	Description			Value
(Wire	color)	Signal name	Input/ Output	Condition		(Approx.)
					All switch OFF	0 V
					Turn signal switch RH	
					Lighting switch HI	(V) 15
2 (BR/W) Ground	Ground	Ground Combination switch INPUT 5		Combination switch (Wiper intermit-	Lighting switch 1ST	10 5 0 PKIB4958J
				tent dial 4)	Lighting switch 2ND	(V) 15 10 5 0 ++10 ms JPMIA0342JP 2.0 V
					All switch OFF	0 V
					Turn signal switch LH	
					Lighting switch PASS	(V)
3	Cround	Combination switch	on switch	Combination switch	Lighting switch 2ND	15 10 5 0 PKIB4958J
(GR)	Ground	INPUT 4	Input	(Wiper intermit-		1.0 V
				tent dial 4)	Front fog lamp switch ON	(V) 15 10 5 0 ++10ms PKIB4956J
						0.8 V
					All switch OFF	0 V
					Front wiper switch LO	(V)
				Combination	Front wiper switch MIST	(V) 15
4	Ground	Combination switch	Input	switch	Front wiper switch INT	10
(L/Y)		INPUT 3		(Wiper intermittent dial 4)	Lighting switch AUTO	→ →10ms PKIB4958J

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description			0 1111	Value (Approx.)	
+ (VVire	e color)	Signal name	Input/ Output		Condition		
					All switch OFF (Wiper intermittent dial 4) Front washer switch	0 V	
					(Wiper intermittent dial 4) Rear washer ON (Wiper intermittent dial 4)	(V) 15 10	
5	Ground	Combination switch	Input	Combination	Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5	0 → →10ms PKIB4958J	
(G)	Ground	INPUT 2	mpat	switch	Wiper intermittent dial 6	1.0 V	
					Rear wiper switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0	
						0.8 V	
				All switch OFF (Wiper intermittent dial 4)	0 V		
					Front wiper switch HI (Wiper intermittent dial 4)	(V)	
					Rear wiper switch INT (Wiper intermittent dial 4)	10 5 0	
					Wiper intermittent dial 3 (All switch OFF)	++10ms PKIB4958J	
						1.0 V	
6 (L/R)	Ground	Combination switch INPUT 1	Input	Combination switch	Any of the condition below with all switch OFF • Wiper intermittent dial 1	(V) 15 10 5 0	
					Wiper intermittent dial 2	+10ms PKIB4952J	
						(V) 15	
					Any of the condition below with all switch OFF • Wiper intermittent dial 6 • Wiper intermittent dial 7	15 10 5 0	
						PKIB4956J 0.8 V	

	nal No.	Description				Value
+	color)	Signal name	Input/ Output		Condition	(Approx.)
7 (W/R)	Ground	Door key cylinder switch UNLOCK	Input	Door key cylin- der switch	NEUTRAL position	(V) 15 10 5 0 JPMIA0587GB
					UNLOCK position	8.0 - 8.5 V 0 V
8		Door key cylinder		Door key cylin-	NEUTRAL position	12 V
(W/B)	Ground	switch LOCK	Input	der switch	LOCK position	0 V
9	Crownd	Cton large quitab 4	lan: 4	Stop lamp	OFF (Brake pedal is not depressed)	0 V
(R)	Ground	Stop lamp switch 1	Input	switch	ON (Brake pedal is depressed)	Battery voltage
10 (V/W)	Ground	Tire pressure warning check switch	Input	Ignition switch O	FF	(V) 15 10 5 10 ms JPMIA0012GB 1.0 - 1.5 V
11	Ground	ACC feedback	Input	Ignition switch O	FF	0 V
(L/Y)	Ground	7.00 recuback	Прис	Ignition switch A	CC or ON	Battery voltage
12 (SB)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closed)	(V) 15 10 5 0 → 10ms PKIB4960J 7.0 - 8.0 V
					ON (When passenger door opened)	0 V
13 (GR/L)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (When rear RH door closed)	(V) 15 10 5 0 → 10ms PKIB4960J 7.0 - 8.0 V
					ON (When rear RH door opened)	0 V
14	Ground	Optical sensor	Input	Ignition switch	When bright outside of the vehicle	Close to 5 V
(L/B)	Ground	Optical Selisul	Input	ŌN	When dark outside of the vehicle	Close to 0 V

< ECU DIAGNOSIS INFORMATION >

	nal No. color)	Description			0	Value	
+	-	Signal name	Input/ Output		Condition	(Approx.)	,
15 (W/L)	Ground	Rear window defog- ger switch	Input	Rear window defogger switch	Not pressed	(V) 15 10 5 0	(
					Pressed	1.0 - 1.5 V 0 V	[
17 (R/G)	Ground	Optical sensor pow- er supply	Output	Ignition switch	OFF, ACC	0 V 5 V	ı
18 (V)	Ground	Receiver and sensor ground	Input	Ignition switch O	N	0 V	ı
19 (BR)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OFF		(V) 15 10 5 0 500 ms	(
20	Ground	Remote keyless en-	lan:#	Waiting		(V) 15 10 5 0 500 ms	,
(G/Y)	Ground	try receiver commu- nication	Input	Signal receiving		(V) 15 10 5 WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW	В
21 (P/L)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.	
				Waiting		0 V	
22 (W/G)	Ground	Remote keyless entry receiver RSSI	Input	Signal receiving		(V) 15 10 5 0 JMKIA3838GB	(

	nal No.	Description				Val.
(Wire	color)	Signal name	Input/ Output		Condition	Value (Approx.)
					ON	0 V
23 (R/Y)	Ground	Security indicator lamp	Output	Security indicator	Blinking (Ignition switch OFF)	(V) 15 10 5 0 JPMIA0590GB 12.0 V
					OFF	Battery voltage
24* (GR/R)	Ground	Dongle link	Input/ Output	Ignition switch O		5 V
25 (LG)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
27 (Y/G)	Ground	A/C switch	Input	Air conditioner	OFF (A/C switch indicator: OFF)	(V) 15 10 5 0 10 ms JPMIA0012GB
					ON (A/C switch indicator: ON)	0 V
					OFF	0 V
28 (G/W)	Ground	Blower fan switch	Input	Blower fan	ON	(V) 15 10 5 0 → 10ms PKIB4960J 7.0 - 8.0 V
29	Ground	Hazard switch	Innut	Hazard switch	OFF	12 V
(L/W)	Ground	i iazaiu Switch	Input	ı ıazalu SWILCII	ON	0 V
31 (G/B)	Ground	Front door lock assembly driver side (Unlock sensor)	Input	Driver door	LOCK status (Unlock sensor switch OFF)	(V) 15 10 5 0 ** 10ms PKIB4960J 7.0 - 8.0 V
					UNLOCK status (Unlock sensor switch ON)	0 V

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

	nal No. color)	Description	Description		0 1111	Value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 + 10ms PKIB4960J 7.0 - 8.0 V	
32 (LG)	Ground	Combination switch OUTPUT 5	Output	Combination switch	Front fog lamp switch ON (Wiper intermittent dial 4)	AD.	
					Rear wiper switch ON (Wiper intermittent dial 4)	(V) 15 10 5	
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2	0	
					Wiper intermittent dial 6Wiper intermittent dial 7	1.0 V	
					All switch OFF	(V) 15 10 5	
					(Wiper intermittent dial 4)	* 10ms	
						PKIB4960J 7.0 - 8.0 V	
33 (Y/L)	Ground	Combination switch OUTPUT 4	Output	Combination switch	Lighting switch 1ST (Wiper intermittent dial 4)		
					Lighting switch AUTO (Wiper intermittent dial 4)	(V) 15 10	
					Rear wiper switch INT (Wiper intermittent dial 4)	0	
					Any of the condition below with all switch OFF	++10ms	
					Wiper intermittent dial 1Wiper intermittent dial 5Wiper intermittent dial 6	РКIВ4958J 1.2 V	E

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	nal No.	Description				Value
+ (Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 + 10ms PKIB4960J 7.0 - 8.0 V
34 (W)	Ground	Combination switch OUTPUT 3	Output	Combination switch	Lighting switch 2ND (Wiper intermittent dial 4)	
					Lighting switch HI (Wiper intermittent dial 4)	(V) 15 10
					Rear washer switch ON (Wiper intermittent dial 4)	5
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	PKIB4958J 1.2 V
		Combination switch OUTPUT 2	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	(V) 15 10 5 0 → 10ms PKIB4960J
35 (R/L)	Ground				Lighting switch 2ND	7.0 - 8.0 V
					Lighting switch PASS	(V) 15
					Front wiper switch INT	10 5 0
					Front wiper switch HI	++10ms PKIB4958J
36		Combination switch		Combination switch	All switch OFF	(V) 15 10 5 0 10ms PKIB4960J 7.0 - 8.0 V
(L/O)	Ground	OUTPUT 1	Output	(Wiper intermit- tent dial 4)	Turn signal switch RH	40
				tent dial 4)	Turn signal switch LH Front wiper switch LO	(V) 15 10 5
					(Front wiper switch MIST) Front washer switch ON	0
						РКІВ4958J 1.2 V

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

	nal No.	Description				Value
(Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
37 (G/O)	Ground	Selector lever P position switch	Input	Selector lever	P position Any position other than P	0 V 12 V
38 (O)	Ground	IGN feedback	Input	Ignition switch	OFF or ACC	0 V
39 (L)	Ground	CAN-H	Input/ Output		ON	Battery voltage —
40 (P)	Ground	CAN-L	Input/ Output		_	_
43 (W)	Ground	Back door switch	Input	Back door switch	OFF (When back door closed)	(V) 15 10 5 0 *****************************
				ON (When back door opened)	0 V	
					Rear wiper stop position	12 V
44 (LG)	Ground	Rear wiper stop position	Input	Ignition switch ON	Any position other than rear wiper stop position	0 V
45 (GR)	Ground	Door lock and unlock switch LOCK	Input	Door lock and unlock switch	NEUTRAL position	(V) 15 10 10 ms JPMIA0012GB 1.0 - 1.5 V
					LOCK position	0 V
46 (BR)	Ground	Door lock and unlock switch UNLOCK	Input	Door lock and unlock switch	NEUTRAL position	(V) 15 10 5 0 10 ms JPMIA0012GB 1.0 - 1.5 V
					UNLOCK position	0 V
47 (BR/Y)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closed)	(V) 15 10 *** 10ms PKIB4960J
						7.0 - 8.0 V
					ON (When driver door opened)	0 V

	nal No.	Description				Value
(Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
48 (W/G)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (When rear LH door closed)	(V) 15 10 5 0 +
					ON (When rear door LH opened)	0 V
54	Ground	Rear wiper	Output	Rear wiper	OFF (Stopped)	0 V
(L/W)	Orodila	Real wiper	Output	Real Wiper	ON (Activated)	12 V
55	Ground	Rear door UNLOCK	Output	Rear door	UNLOCK (Actuator is activated)	12 V
(G)	Oround	Real door of the cont	Output	real door	Other then UNLOCK (Actuator is not activated)	0 V
				Interior room lamp battery saver is activated. (Cuts the interior room lamp power supply)		0 V
56 (L)	Ground	Interior room lamp power supply	Output	vated.	p battery saver is not acti- rior room lamp power sup-	12 V
57 (Y)	Ground	Battery power sup- ply	Input	Ignition switch OFF		Battery voltage
59 (G)	Ground	Passenger door UN- LOCK	Output	Passenger door	UNLOCK (Actuator is activated) Other then UNLOCK (Ac-	12 V
					tuator is not activated)	0 V
					Turn signal switch OFF	0 V
60 (W/B)	Ground	Turn signal LH	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0
					Turn signal switch OFF	0 V
61 (W/L)	Ground	Turn signal RH	Output	Ignition switch ON	Turn signal switch RH	(V) 15 10 5 0 1s 1s PKIC6370E
63		Interior room lamp	•	Interior room	OFF	12 V
(BR)	Ground	timer control	Output	lamp	ON	0 V

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value
+ (vvire	color)	Signal name	Input/ Output		Condition	(Approx.)
65	Ground	All doors LOCK	Output	All doors	LOCK (Actuator is activated)	12 V
(V)	0.04.14	7 iii	o a.p.a.	7 m dd 6.0	Other then LOCK (Actuator is not activated)	0 V
66	Ground	Driver door UN-	Output	Driver door	UNLOCK (Actuator is activated)	12 V
(L/B)	(L/B) LOCK	LOCK	Output	Driver door	Other then UNLOCK (Actuator is not activated)	0 V
67 (B)	Ground	Ground	Output	Ignition switch O	N	0 V
68 (L)	Ground	P/W power supply (IGN)	Output	Ignition switch O	N	12 V
69 (L/W)	Ground	P/W power supply (BAT)	Output	Ignition switch OFF		12 V
70 (Y)	Ground	Battery power sup- ply	Input	Ignition switch OFF		Battery voltage
71	Ground	Tire pressure receiv-			Standby state	(V) 6 4 2 0 * * 0.2s OCC3881D
(R)		er communication	Output		When receiving the signal from the transmitter	(V) 6 4 2 0 + 0.2s OCC3880D
72	0	Back door lock actu-	O tra . t	Dools door	LOCK (Actuator is activated)	0 V
(R/W)	Ground	ator relay control	Output	Back door	Other than LOCK (Actuator is not activated)	Battery voltage
75 (SB)	Ground	Driver door request switch	Input	Driver door request switch	ON (Pressed)	0 V
				-	OFF (Not pressed) ON (Pressed)	12 V 0 V
76 (G)	Ground	Passenger door request switch	Input	Passenger door request switch	OFF (Not pressed)	12 V
77		Back door request		Back door re-	ON (Pressed)	0 V
(W)	Ground	switch	Input	quest switch	OFF (Not pressed)	12 V

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value
+ (Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
78	Ground	Driver door antenna		When the driver door request	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA3838GB
(LG)	Clound	(+)	Output	switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA3839GB
79	Ground	Driver door antenna	Output	When the driver door request switch is operat- ed with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA3838GB
(V)		(-)	Output s		When Intelligent Key is in the antenna detection area	(V) 15 10 5 11 1 s JMKIA3839GB
80	Ground Passenger door antenna (+)	Output	When the passenger door re-	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA3838GB	
(BR/Y)			Output	quest switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA3839GB

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value	А
+ (vvire	e color)	Signal name	Input/ Output		Condition	(Approx.)	A
81		Passenger door an-		When the passenger door re-	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 MKIA3838GB	B C D
(L/Y)	Ground	tenna (-)	Output	quest switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA3839GB	E
82	82 . Back door antenna		When the back door request	When Intelligent Key is not in the antenna detection area	(V) 15 10 50 MKIA3838GB	G H	
(W/B)	Ground	(+)	Output	switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA3839GB	J K L
83	0	Back door antenna (-)	Output	When the back door request switch is operat- ed with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA3838GB	BCS N
(B/W)	Ground				When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA3839GB	O P

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value
(Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
84	Ground	Room antenna (+)	Output	Ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA3838GB
(Y/G)	Glodina	(Instrument panel)	Сири		When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA3839GB
85	Ground	Room antenna (-) (Instrument panel)	Output	Ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA3838GB
(Y/L)	Ground				When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA3839GB
86	Ground	Luggage room antenna (+)		Ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA3838GB
(P)			Output		When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA3839GB

< ECU DIAGNOSIS INFORMATION >

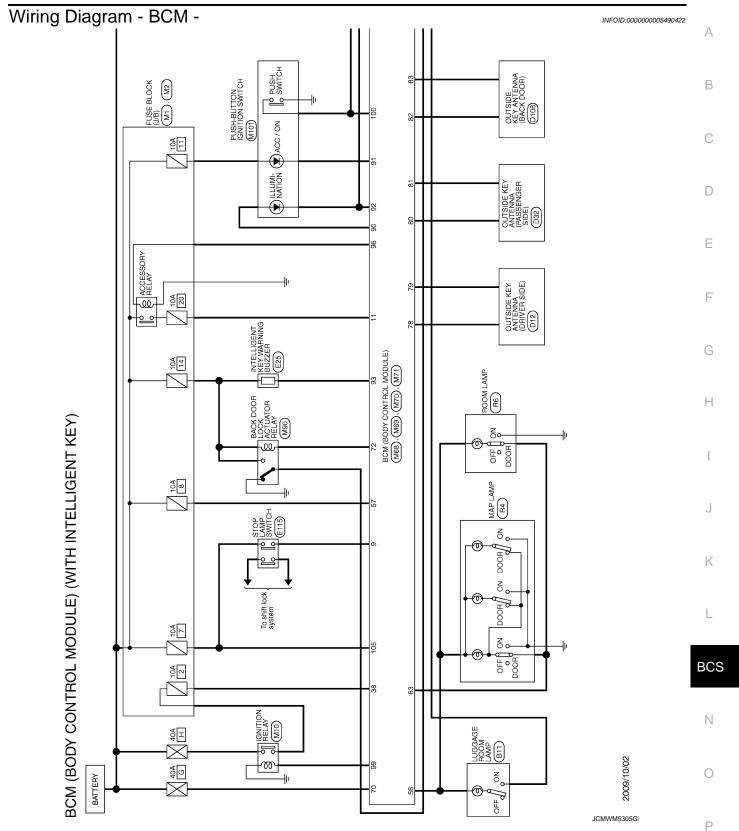
[WITH INTELLIGENT KEY SYSTEM]

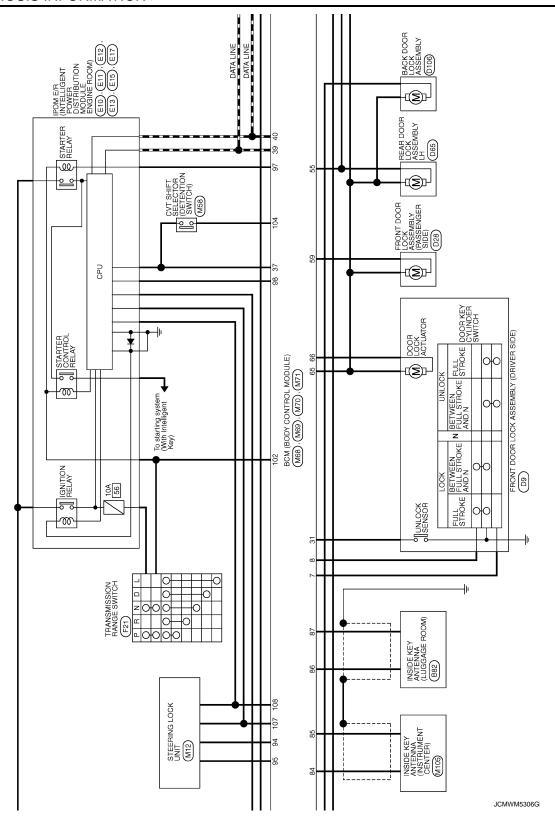
Terminal No.		Description				Value	
(Wire	/ire color) Signal name Input/ Output		Input/ Output	Condition		(Approx.)	
87 (L)	Ground	Luggage room antenna (-)	Output	Ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 500 ms JMKIA3838GB	
					When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA3839GB	
90 (W/L)	Ground	Push-button ignition switch illumination	Output	Push-button ig- nition switch illu- mination	ON	12 V	
					OFF	0 V	
91		ACC/ON indicator			OFF	Battery voltage	
(Y)	Ground	lamp	Output	Ignition switch	ACC or ON	0.5 V	
92 (BR/R)	Ground	Push-button ignition switch illumination ground	Output	Tail lamp	OFF	0 V	
					ON	NOTE: When the illumination brightening/dimming level is in the neutral position (V) 15 10 5 10 ms JPMIA1554GB 6.0 - 7.0 V	
93 (GR/W)	Ground	Intelligent Key warn-	Output	Intelligent Key	Sounding	0 V	
(GK/W)		ing buzzer		warning buzzer	Not sounding		
94 (Y/R)	Ground	Steering lock unit communication	Input/ Output	Steering lock	LOCK status LOCK or UNLOCK	12 V (V) 15 10 50 ms JMKIA0066GB	
					For 15 seconds after UN- LOCK 15 seconds or later after	12 V	
					UNLOCK	0 V	
95 (W/G)	Ground	Steering lock unit power supply	Output	Ignition switch	OFF or ACC	12 V	
(٧٧/७)		power suppry			ON	0 V	

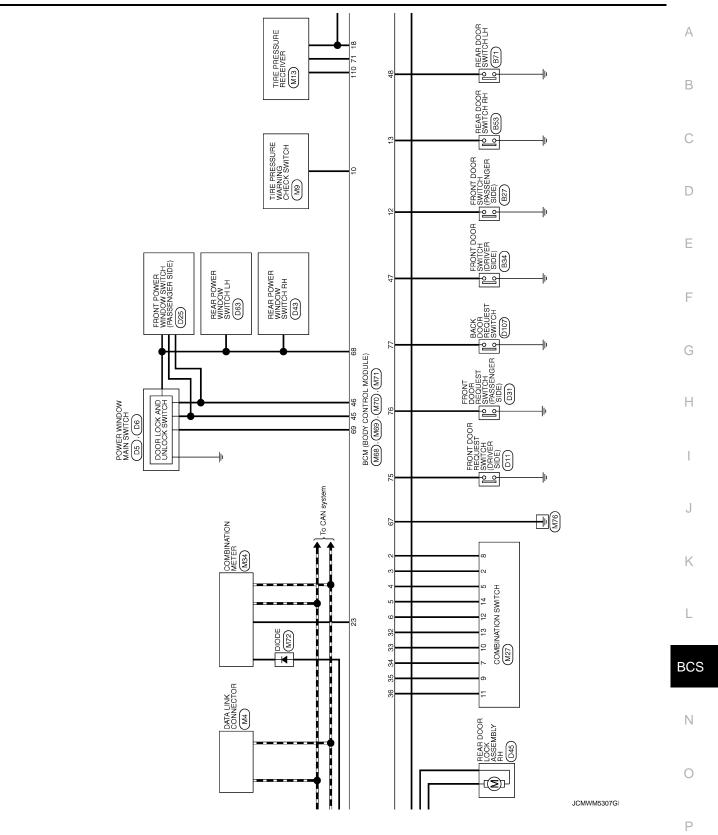
< ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description				Value
		Signal name	Input/ Output	Condition		(Approx.)
96 (G)	Ground	ACC relay control	Output	Ignition switch	OFF	0 V
					ACC or ON	12 V
97 (L/R)	Ground	Starter relay control	Output	Ignition switch ON	When selector lever is in P or N position	Battery voltage
					When selector lever is not in P or N position	0 V
98 (BR)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC	12 V
					ON	0 V
99	Ground	Ignition relay control	Output	Ignition switch	OFF or ACC	0 V
(W/R)					ON	12 V
100	Ground	Push-button ignition switch (push switch)	Input	Push-button ig- nition switch (push switch)	Pressed	0 V
(L/O)					Not pressed	12 V
102	Ground	Selector lever P/N position	Input	Selector lever	P or N position	Battery voltage
(G)					Except P and N positions	0 V
104 (Y/R)	Ground	CVT shift selector (detention switch) power supply	Output	Ignition switch ON		12 V
105 (B/O)	Ground	Stop lamp switch 2	Input	Ignition switch OFF		Battery voltage
106	Ground	Blower fan motor re- lay control	Output	Ignition switch	OFF or ACC	0 V
(Y/B)					ON	12 V
107 (L/W)	Ground	Steering lock condition No. 1	Input	Steering lock	LOCK status	0 V
					UNLOCK status	12 V
108 (P/L)	Ground	Steering lock condition No. 2	Input	Steering lock	LOCK status	12 V
					UNLOCK status	0 V
110 (BR/W)	Ground	Tire pressure receiver power supply	Output	Ignition switch	OFF or ACC	0 V
					ON	5 V

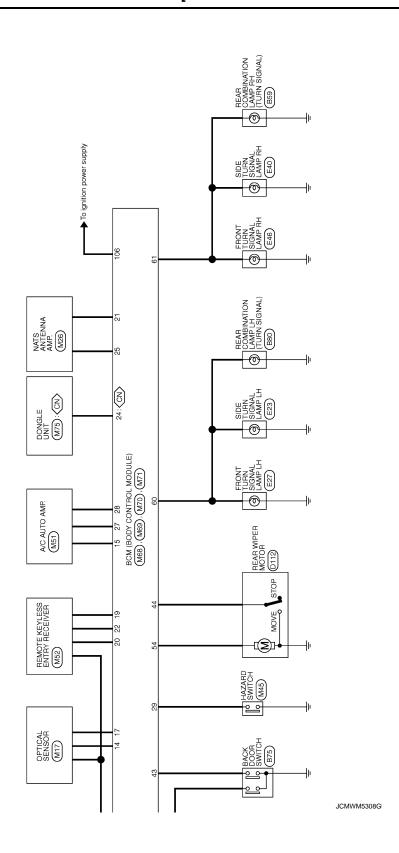
^{*:} For Canada











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8.3 B.W 8.6 Y.L 8.7 L 9.1 L 9.2 BR.NR PUSH-EL 9.3 BR.NR PUSH-EL 9.9 W.RR PUSH-EL 100 L/O C 100 BR.N C 101 BR.N TIR 110 BR.W TIR	C
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DOULE) State	Е
EAMORE B-FHAGE-SA FEAGUSE B-FHAGE-SA Signal Name [Specification] NITERIOR ROOM LAMP POWER SUPPLY BAT (TUSE) FOOM LAMP TIMER CONTROL TURN SIGNAL HOUTPUT TOWN SIGNAL HOUTPUT FROOM LAMP TIMER CONTROL BATOR DOOR NULCOK OUTPUT FROOM LAMP TIMER CONTROL BATOR BOOK OUTPUT BATOR BOOK NULCE Signal Name [Specification] TIRE PRESS RECEIVER COMM BATOR BOOK REQUEST SW DRIVER BOOR RATT- PASSENGER BOOR ANT- BACK BOOR ANT- PASSENGER BOOR ANT- PASSENGER BOOR ANT- PASSENGER BOOR ANT- BACK BOOR ANT- PASSENGER BOOR ANT- BACK BOOR ANT- PASSENGER	F
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TIRE PRESS WARNING CHECK SW ACC F/B PASSENGER DOOR SW PRAR RH DOOR SW POTTCAL SENSOR FOWER SUPPLY RECRETER AS SENSOR FOWER SUPPLY RECRETER AS SENSOR FOWER SUPPLY RECRETER AS SENSOR FOWER SUPPLY REVIESS ENTRY RECEIVER FOWER SUPPLY REVIESS ENTRY RECEIVER ROSE COMBIS WOUTPUT 3 COMBIS WOUTPUT 4 COMBIS WOUTPUT 4 COMBIS WOUTPUT 5 COMBIS WOUTPUT 5 COMBIS WOUTPUT 5 COMBIS WOUTPUT 6 COMBIS WOUTPUT	I
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Fail-safe

FAIL-SAFE CONTROL BY DTC

BCM performs fail-safe control when any DTC are detected.

[WITH INTELLIGENT KEY SYSTEM]

Display contents of CONSULT	Fail-safe	Cancellation
B2013: ID DISCORD BCM-S/L	Inhibit engine cranking	When communication between BCM and steering lock unit are communicated normally.
B2014: CHAIN OF S/L-BCM	Inhibit engine cranking	When communication between BCM and steering lock unit are communicated normally.
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI-SCANNING	Inhibit engine cranking	Ignition switch ON → OFF
B2196: DONGLE NG	Inhibit engine cranking	Erase DTC
B2198: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC
B2557: VEHICLE SPEED	Inhibit steering lock	When the following CAN signal status (vehicle speed signal) becomes consistent • Vehicle speed signal (ABS) • Vehicle speed signal (Meter)
B2601: SHIFT POSITION	Inhibit steering lock	 500 ms after the following signal reception status becomes consistent Selector lever P position switch signal P range signal (CAN)
B2602: SHIFT POSITION	Inhibit steering lock	 5 seconds after the following BCM recognition conditions are fulfilled Ignition switch is in the ON position Selector lever P position switch signal: Except P position (battery voltage) Vehicle speed: 4 km/h (2.5 MPH) or more
B2603: SHIFT POSI STATUS	Inhibit steering lock	 500 ms after any of the following BCM recognition conditions are fulfilled Status 1 Ignition switch is in the ON position Selector lever P position switch signal: Except P position (12 V) Selector lever P/N position signal: Except P and N positions (0 V) Status 2 Ignition switch is in the ON position Selector lever P position switch signal: P position (0 V) Selector lever P/N position signal: P or N positions (12 V)
B2604: PNP/CLUTCH SW	Inhibit steering lock	 500 ms after any of the following BCM recognition conditions are fulfilled Status 1 Ignition switch is in the ON position Selector lever P/N position signal: P or N position (12 V) Shift position signal (CAN): P or N position Status 2 Ignition switch is in the ON position Selector lever P/N position signal: Except P and N positions (0 V) Shift position signal (CAN): Except P and N position
B2605: PNP/CLUTCH SW	Inhibit steering lock	500 ms after any of the following BCM recognition conditions are fulfilled • Status 1 - Power position: IGN - Selector lever P/N position signal: Except P and N positions (0 V) - Interlock/PNP switch signal (CAN): OFF • Status 2 - Ignition switch is in the ON position - Selector lever P/N position signal: P or N position (12 V) - Interlock/PNP switch signal (CAN): ON
B2608: STARTER RELAY	Inhibit engine cranking	500 ms after the following signal communication status becomes consistent • Starter motor relay control signal • Starter relay status signal (CAN)
B2609: S/L STATUS	Inhibit engine crank- ing Inhibit steering lock	When the following steering lock conditions agree BCM steering lock control status Steering lock condition No. 1 signal status Steering lock condition No. 2 signal status
B260B: STEERING LOCK UNIT	Inhibit steering lock	Erase DTC

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

Display contents of CONSULT	Fail-safe	Cancellation
B260D: STEERING LOCK UNIT	Inhibit steering lock	Erase DTC
B260F: ENG STATE SIG LOST	Inhibit engine cranking	When any of the following conditions are fulfilled • Power position changes to ACC • Receives engine status signal (CAN)
B2612: S/L STATUS	Inhibit engine cranking Inhibit steering lock	When any of the following conditions are fulfilled Steering lock unit status signal (CAN) is received normally The BCM steering lock control status matches the steering lock status recognized by the steering lock unit status signal (CAN from IPDM E/R)
B2619: BCM	Inhibit engine cranking	1 second after the steering lock unit power supply output control inside BCM becomes normal
B26EF: STRG LCK RELAY OFF	Inhibit engine cranking	When the following conditions are fulfilled • Steering lock relay signal (CAN): ON • Steering lock unit status signal (CAN): ON
B26F0: STRG LCK RELAY ON	Inhibit engine cranking	When the following conditions are fulfilled • Steering lock relay signal (CAN): OFF • Steering lock unit status signal (CAN): OFF
B26F1: IGN RELAY OFF	Inhibit engine cranking	When the following conditions are fulfilled Ignition switch ON signal (CAN: Transmitted from BCM): ON Ignition switch ON signal (CAN: Transmitted from IPDM E/R): ON
B26F2: IGN RELAY ON	Inhibit engine cranking	When the following conditions are fulfilled Ignition switch ON signal (CAN: Transmitted from BCM): OFF Ignition switch ON signal (CAN: Transmitted from IPDM E/R): OFF
B26F3: START CONT RLY ON	Inhibit engine cranking	When the following conditions are fulfilled • Starter control relay signal (CAN: Transmitted from BCM): OFF • Starter control relay signal (CAN: Transmitted from IPDM E/R): OFF
B26F4: START CONT RLY OFF	Inhibit engine cranking	When the following conditions are fulfilled • Starter control relay signal (CAN: Transmitted from BCM): ON • Starter control relay signal (CAN: Transmitted from IPDM E/R): ON
B26F7: BCM	Inhibit engine cranking by Intelligent Key sys- tem	When room antenna and luggage room antenna functions normally
U0415: VEHICLE SPEED	Inhibit steering lock	When vehicle speed signal (Meter) (CAN) is received normally

REAR WIPER MOTOR PROTECTION

BCM detects the rear wiper stopping position according to the rear wiper stop position signal. When the rear wiper stop position signal does not change for more than 5 seconds while driving the rear wiper, BCM stops power supply to protect the rear wiper motor.

Condition of cancellation

- 1. More than 1 minute is passed after the rear wiper stop.
- 2. Turn rear wiper switch OFF.
- 3. Operate the rear wiper switch or rear washer switch.

DTC Inspection Priority Chart

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If some DTCs are displayed at the same time, perform inspections one by one based on the following priority chart.

Priority	DTC
1	B2562: LOW VOLTAGE
2	U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)
3	B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM B2195: ANTI-SCANNING B2196: DONGLE NG B2198: NATS ANTENNA AMP

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[WITH INTELLIGENT KEY SYSTEM]

Priority	DTC
4	 ■ B2013: ID DISCORD BCM-S/L ■ B2014: CHAIN OF S/L-BCM ■ B2553: IGNITION RELAY ■ B2555: STOP LAMP ■ B2555: PUSH-BTN IGN SW ■ B2555: VEHICLE SPEED ■ B2601: SHIFT POSITION ● B2602: SHIFT POSITION ● B2602: SHIFT POSITION ● B2603: SHIFT POSITION ● B2604: PNP/CLUTCH SW ● B2604: PNP/CLUTCH SW ■ B2605: STATUS ■ B2609: STATUS ■ B2609: STATUS ■ B2609: STEERING LOCK UNIT ■ B2600: STEERING LOCK UNIT ■ B2600: STEERING LOCK UNIT ■ B2601: SIE SING STATE SIG LOST ■ B2612: S/L STATUS ■ B2614: BCM ■ B2615: BCM ■ B2616: BCM ■ B2616: BCM ■ B2616: BCM ■ B2617: PUSH-BTN IGN SW ■ B2618: BCM ■ B2619: LOCK MALFUNCTION ■ B2669: LOCK MALFUNCTION ■ B2669: STRG LCK RELAY OFF ■ B2667: STRG LCK RELAY OFF ■ B2667: STRG LCK RELAY ON ■ B2678: START CONT RLY ON ■ B2678: START CONT RLY ON ■ B2676: BCM ■ B26776: BCM
5	 C1704: LOW PRESSURE FL C1705: LOW PRESSURE FR C1706: LOW PRESSURE RR C1707: LOW PRESSURE RL C1708: [NO DATA] FL C1709: [NO DATA] FR C1710: [NO DATA] RR C1711: [NO DATA] RL C1716: [PRESSDATA ERR] FL C1717: [PRESSDATA ERR] FR C1718: [PRESSDATA ERR] RR C1719: [PRESSDATA ERR] RR C1734: CONTROL UNIT
6	B2621: INSIDE ANTENNA B2622: INSIDE ANTENNA
7	 B2626: OUTSIDE ANTENNA B2627: OUTSIDE ANTENNA B2628: OUTSIDE ANTENNA

DTC Index

NOTE

The details of time display are as follows.

- CRNT: A malfunction is detected now.
- PAST: A malfunction was detected in the past.

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[WITH INTELLIGENT KEY SYSTEM]

IGN counter is displayed on Freeze Frame Data. For details of Freeze Frame Data, refer to BCS-18, "COM-MON ITEM: CONSULT-III Function (BCM - COMMON ITEM)".

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	_	_	_	_	_
U1000: CAN COMM		_	_	_	BCS-39
U1010: CONTROL UNIT (CAN)	_	_	_	_	BCS-40
U0415: VEHICLE SPEED	×	_	×	_	BCS-41
B2013: ID DISCORD BCM-S/L	×	×	×	_	<u>SEC-45</u>
B2014: CHAIN OF S/L-BCM	×	×	×	_	SEC-46
B2192: ID DISCORD BCM-ECM	×	_	_	_	SEC-35
B2193: CHAIN OF BCM-ECM	×	_	_	_	SEC-37
B2195: ANTI-SCANNING	×	_	_		SEC-38
B2196: DONGLE NG	×	_	_		SEC-39
B2198: NATS ANTENNA AMP	×	_	_	_	SEC-41
B2553: IGNITION RELAY	_	×	×	_	PCS-77
B2555: STOP LAMP	_	×	×	_	SEC-49
B2556: PUSH-BTN IGN SW	_	×	×	_	SEC-51
B2557: VEHICLE SPEED	×	×	×	_	SEC-53
B2562: LOW VOLTAGE	_	×	_	_	BCS-42
B2601: SHIFT POSITION	×	×	×	_	SEC-54
B2602: SHIFT POSITION	×	×	×	_	SEC-57
B2603: SHIFT POSI STATUS	×	×	×	_	SEC-60
B2604: PNP/CLUTCH SW	×	×	×	_	SEC-65
B2605: PNP/CLUTCH SW	×	×	×		SEC-68
B2608: STARTER RELAY	×	×	×		SEC-70
B2609: S/L STATUS	×	×	×		SEC-72
B260B: STEERING LOCK UNIT	×	×	×		SEC-75
B260C: STEERING LOCK UNIT	_	×	×		SEC-76
B260D: STEERING LOCK UNIT	×	×	×	_	SEC-77
B260F: ENG STATE SIG LOST	×	×	×	_	SEC-78
B2612: S/L STATUS	×	×	×	_	SEC-79
B2614: BCM	_	×	×		PCS-79
B2615: BCM	_	×	×	_	PCS-82
B2616: BCM		×	×	_	PCS-85
B2618: BCM	_	×	×	_	PCS-88
B2619: BCM	×	×	×	_	SEC-82
B261A: PUSH-BTN IGN SW	_	×	×	_	PCS-89
B2621: INSIDE ANTENNA	_	×	_	_	DLK-44
B2622: INSIDE ANTENNA	_	×	_	_	DLK-46
B2626: OUTSIDE ANTENNA	_	×	_	_	DLK-48

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[WITH INTELLIGENT KEY SYSTEM]

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page	
B2627: OUTSIDE ANTENNA	_	×	_	_	DLK-50	
B2628: OUTSIDE ANTENNA	_	×	_	_	DLK-52	
B26E9: LOCK MALFUNCTION	_	×	× (Turn ON for 15 seconds)	_	<u>SEC-83</u>	
B26EF: STRG LCK RELAY OFF	×	×	×	_	SEC-84	
B26F0: STRG LCK RELAY ON	×	×	×	_	SEC-86	
B26F1: IGN RELAY OFF	×	×	×	_	PCS-91	
B26F2: IGN RELAY ON	×	×	×	_	PCS-94	
B26F3: START CONT RLY ON	×	×	×	_	SEC-87	
B26F4: START CONT RLY OFF	×	×	×	_	SEC-88	
B26F5: STRG LCK STS SW	_	×	×	_	SEC-90	
B26F6: BCM	_	×	×	_	PCS-97	
B26F7: BCM	×	×	×	_	SEC-93	
B26F8: BCM	_	×	×	_	SEC-94	
B26FC: KEY REGISTRATION	_	×	×	_	SEC-95	
C1704: LOW PRESSURE FL	_	_	_	×		
C1705: LOW PRESSURE FR	_	_	_	×	WT 20	
C1706: LOW PRESSURE RR	_	_	_	×	WT-30	
C1707: LOW PRESSURE RL	_	_	_	×		
C1708: [NO DATA] FL	_	_	_	×		
C1709: [NO DATA] FR	_	_	_	×	WT 22	
C1710: [NO DATA] RR	_	_	_	×	<u>WT-32</u>	
C1711: [NO DATA] RL	_	_	_	×		
C1716: [PRESSDATA ERR] FL	_	_	_	×		
C1717: [PRESSDATA ERR] FR	_	_	_	×	W/T 25	
C1718: [PRESSDATA ERR] RR	_	_	_	×	<u>WT-35</u>	
C1719: [PRESSDATA ERR] RL	_	_	_	×		
C1729: VHCL SPEED SIG ERR	_	_	_	×	<u>WT-37</u>	
C1734: CONTROL UNIT	_	_	_	×	<u>WT-39</u>	

COMBINATION SWITCH SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

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SYMPTOM DIAGNOSIS

COMBINATION SWITCH SYSTEM SYMPTOMS

Symptom Table INFOID:0000000005490426

- 1. Perform "Data Monitor" of CONSULT-III to check for any malfunctioning item.
- Check the malfunction combinations.

								r item	monito	Data							
Malfunction combination	FR FOG SW	AUTO LIGHT SW	PASSING SW	HEAD LAMP SW 2	HEAD LAMP SW 1	HI BEAM SW	TAIL LAMP SW	TURN SIGNAL L	TURN SIGNAL R	INT VOLUME	RR WASHER SW	RR WIPER INT	RR WIPER ON	FR WIPER INT	FR WASHER SW	FR WIPER LOW	FR WIPER HI
А								×	×						×	×	
В			×		×									×			×
С				×		×				×	×						
D		×					×			×		×					
Е	×									×			×				
F										×		×					×
G										×	×		×		×		
Н		×												×		×	
I	×		×	×				×									
J					×	×	×		×								
K	All Items																
L	If only one item is detected or the item is not applicable to the combinations A to K																

Identify the malfunctioning part from the agreed combination and repair or replace the part.

Malfunction combination	Malfunctioning part	Repair or replace				
Α	Combination switch OUTPUT 1 circuit		L			
В	Combination switch OUTPUT 2 circuit	Inspect the combination switch output circuit applicable to the malfunctioning part. Refer to BCS-44, "Diagnosis Procedure".				
С	Combination switch OUTPUT 3 circuit					
D	Combination switch OUTPUT 4 circuit					
Е	Combination switch OUTPUT 5 circuit	t				
F	Combination switch INPUT 1 circuit		ľ			
G	Combination switch INPUT 2 circuit					
Н	Combination switch INPUT 3 circuit	Inspect the combination switch input circuit applicable to the malfunctioning part. Refer to BCS-46, "Diagnosis Procedure".				
I	Combination switch INPUT 4 circuit	para Notor to <u>1900 40, "Braghtone" i Teologice</u> .				
J	Combination switch INPUT 5 circuit					
K	BCM	Replace BCM. Refer to BCS-81, "Exploded View".				
L	Combination switch	Replace combination switch.				

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PRECAUTION

PRECAUTIONS

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

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

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal
 injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag
 Module, see the "SRS AIR BAG".
- 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 Air Bag Diagnosis Sensor Unit or other Air Bag 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 3 minutes before performing any service.

[WITH INTELLIGENT KEY SYSTEM]

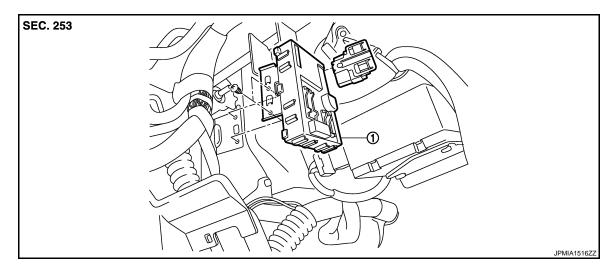
REMOVAL AND INSTALLATION

BCM (BODY CONTROL MODULE)

Exploded View

CAUTION:

Before replacing BCM, perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to <u>BCS-5</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM)</u>: <u>Description</u>".



1. BCM

Removal and Installation

CAUTION:

Before replacing BCM, perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to <u>BCS-5</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM)</u>: <u>Description</u>".

REMOVAL

- Remove knee protector. Refer to <u>IP-12</u>, "Exploded View".
- Remove fuse block (J/B).
- 3. Remove harness clip.
- Remove screws.
- 5. Remove BCM and disconnect the connector.
- 6. Remove the ignition relay and back door lock actuator relay.

INSTALLATION

Install in the reverse order of removal.

CAUTION:

- Be sure to perform "WRITE CONFIGURATION" when replacing BCM.
- Be sure to perform the system initialization (NATS) when replacing BCM. Refer to <u>BCS-5</u>, "ADDI-TIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM): Special Repair Requirement".

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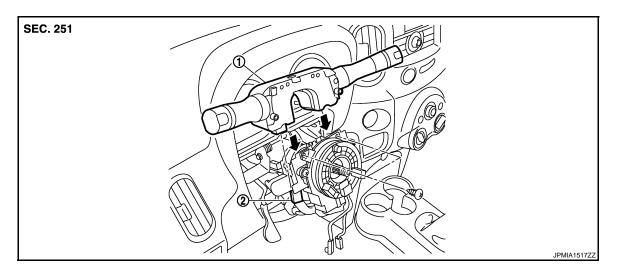
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Revision: 2009 October BCS-81 2010 Z12

COMBINATION SWITCH

Exploded View



1. Combination switch

2. Combination switch connector

Removal and Installation

INFOID:0000000005490431

REMOVAL

- 1. Remove steering column cover. Refer to IP-12, "Exploded View".
- 2. Remove screws.
- 3. Disconnect the connector.
- 4. Pull up the combination switch to remove it.

INSTALLATION

Install in the reverse order of removal.

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

BASIC INSPECTION

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM)

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM): Description

INFOID:0000000005490432

BEFORE REPLACEMENT

When replacing BCM, save or print current vehicle specification with CONSULT-III configuration before replacement.

NOTE:

If "READ CONFIGURATION" can not be used, use the "WRITE CONFIGURATION - Manual selection" after replacing BCM.

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AFTER REPLACEMENT

CAUTION:

- When replacing BCM, you must perform "WRITE CONFIGURATION" with CONSULT-III.
- Complete the procedure of "WRITE CONFIGURATION" in order.
- If you set incorrect "WRITE CONFIGURATION", incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.
- When replacing BCM, perform the system initialization (NATS).

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM): Special Repair Requirement INFOID:0000000005490433

1. SAVING VEHICLE SPECIFICATION

(P)CONSULT-III Configuration

Perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to BCS-83, "CONFIG-URATION (BCM): Description".

NOTE:

If "READ CONFIGURATION" can not be used, use the "WRITE CONFIGURATION - Manual selection" after replacing BCM.

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>> GO TO 2.

2.replace $_{ m BCM}$

Replace BCM. Refer to BCS-146, "Exploded View".

BCS

>> GO TO 3.

3.writing vehicle specification

(P)CONSULT-III Configuration

Perform "WRITE CONFIGURATION - Config file" or "WRITE CONFIGURATION - Manual selection" to write vehicle specification. Refer to BCS-84, "CONFIGURATION (BCM): Special Repair Requirement".

>> GO TO 4.

4. INITIALIZE BCM (NATS)

Perform BCM initialization, (NATS)

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>> WORK END

CONFIGURATION (BCM)

CONFIGURATION (BCM): Description

Vehicle specification needs to be written with CONSULT-III because it is not written after replacing BCM.

BCS-83 Revision: 2009 October 2010 Z12

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Configuration has three functions as follows

Function	Description
READ CONFIGURATION	 Reads the vehicle configuration of current BCM. Saves the read vehicle configuration.
WRITE CONFIGURATION - Manual selection	Writes the vehicle configuration with manual selection.
WRITE CONFIGURATION - Config file	Writes the vehicle configuration with saved data.

CAUTION:

- When replacing BCM, you must perform "WRITE CONFIGURATION" with CONSULT-III.
- Complete the procedure of "WRITE CONFIGURATION" in order.
- If you set incorrect "WRITE CONFIGURATION", incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.
- Never perform "WRITE CONFIGURATION" except for new BCM.

CONFIGURATION (BCM) : Special Repair Requirement

INFOID:0000000005490435

1. WRITING MODE SELECTION

©CONSULT-III Configuration Select "CONFIGURATION" of BCM.

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

2.PERFORM "WRITE CONFIGURATION - CONFIG FILE"

(P)CONSULT-III Configuration

Perform "WRITE CONFIGURATION - Config file".

>> WORK END

3.PERFORM "WRITE CONFIGURATION - MANUAL SELECTION"

©CONSULT-III Configuration

- 1. Select "WRITE CONFIGURATION Manual selection".
- Identify the correct model and configuration list. Refer to <u>BCS-84, "CONFIGURATION (BCM): Configuration list".</u>
- 3. Confirm and/or change setting value for each item.

CAUTION:

Thoroughly read and understand the vehicle specification. Incorrect settings may result in abnormal control of ECU.

4. Select "SETTING".

CAUTION:

Make sure to select "SETTING" even if the indicated configuration of brand new BCM is same as the desirable configuration. If not, configuration which is set automatically by selecting vehicle model can not be memorized.

5. When "COMMAND FINISHED", select "END".

>> GO TO 4.

4. OPERATION CHECK

Confirm that each function controlled by BCM operates normally.

>> WORK END

CONFIGURATION (BCM): Configuration list

INFOID:0000000005490436

CAUTION:

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Thoroughly read and understand the vehicle specification. Incorrect settings may result in abnormal control of ECU.

SETTIN	IG ITEM	NOTE	
Items	Setting value	NOTE	
CAN CONNECTION UNIT	MODE4 ⇔ WITHOUT	MODE4: M/T models WITHOUT: Except M/T models	
AUTO LIGHT	WITH ⇔ WITHOUT	_	
DTRL	WITH ⇔ WITHOUT	WITH: With daytime running light system WITHOUT: Without daytime running light system	
AIR COND	MANUAL A/C ⇔ AUTO A/C	MANUAL A/C: Except automatic air conditioner models AUTO A/C: Automatic air conditioner models	

 $[\]Leftrightarrow:$ Items which confirm vehicle specifications

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BODY CONTROL SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

SYSTEM DESCRIPTION

BODY CONTROL SYSTEM

System Description

INFOID:0000000005490437

OUTLINE

- BCM (Body Control Module) controls various electrical components. It receives the information required from CAN communication and the signals received from each switch and sensor.
- BCM has a combination switch reading function for reading the status of combination switches (light, turn signal, wiper and washer) in addition to functions for controlling the operation of various electrical components. It also has a signal transmission function, for other systems, and a power consumption control function that reduces the power consumption with the ignition switch OFF.
- BCM is equipped with a diagnosis function that operates with CONSULT-III and allows for various settings to be changed.

BCM FUNCTION LIST

System	Reference page
Combination switch reading system	BCS-88, "System Diagram"
Signal buffer system	BCS-92, "System Diagram"
Power consumption control system	BCS-93. "System Diagram"
Headlamp system	EXL-7, "System Diagram"
Daytime running light system	EXL-9, "System Diagram"
Auto light system	EXL-11, "System Diagram"
Front fog lamp system	EXL-14, "System Diagram"
Turn signal and hazard warning lamp system	EXL-16, "System Diagram"
Parking, license plate, side maker and tail lamps system	EXL-18, "System Diagram"
Exterior lamp battery saver system	EXL-20, "System Diagram"
Interior room lamp control system	INL-5, "System Diagram"
Interior room lamp battery saver system	INL-8, "System Diagram"
Front wiper and washer system	WW-6, "System Diagram"
Rear wiper and washer system	WW-10, "System Diagram"
Automatic air conditioner system	HAC-15, "System Diagram"
Manual air conditioner system	HAC-161, "System Diagram"
Warning chime system	WCS-5, "WARNING CHIME SYSTEM : System Diagram"
Power door lock system	DLK-230, "System Diagram"
Nissan vehicle immobilizer system-NATS (NVIS)	SEC-203, "System Diagram"
Vehicle security system	SEC-205, "System Diagram"
Panic alarm	SEC-205, "System Description"
Rear window defogger system	DEF-4, "System Diagram"
Remote keyless entry system	DLK-233, "System Diagram"
Power window system	PWC-6. "System Diagram"
Retained accessory power (RAP) system	PWC-6, "System Description"
Tire pressure monitor system (TPMS) - AIR PRESSURE MONITOR	WT-9, "TIRE PRESSURE MONITORING SYSTEM : System Diagram"

BODY CONTROL SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

Component Parts Location

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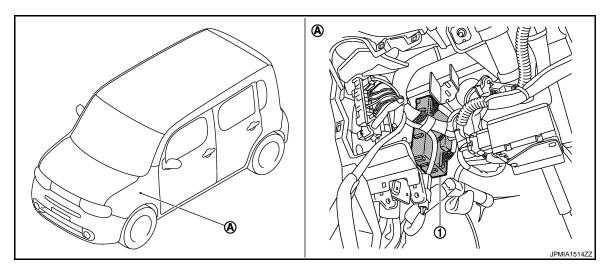
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- 1. BCM
- A. Behind of instrument lower panel LH (Left side)

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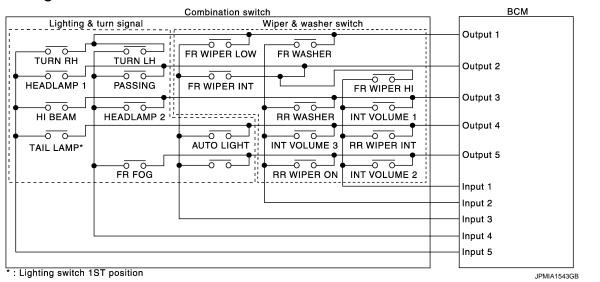
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System Diagram



System Description

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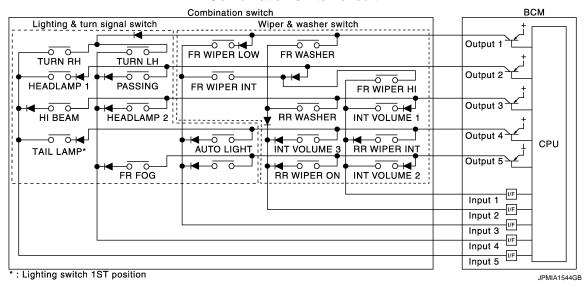
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OUTLINE

- BCM reads the status of the combination switch (light, turn signal, wiper and washer) and recognizes the status of each switch.
- BCM has a combination of 5 output terminals (OUTPUT 1 5) and 5 input terminals (INPUT 1 5). It reads a
 maximum of 20 switch status.

COMBINATION SWITCH MATRIX

Combination switch circuit



Combination switch INPUT-OUTPUT system list

System	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5
OUTPUT 1	_	FR WASHER	FR WIPER LOW	TURN LH	TURN RH
OUTPUT 2	FR WIPER HI	_	FR WIPER INT	PASSING	HEADLAMP 1
OUTPUT 3	INT VOLUME 1	RR WASHER	_	HEADLAMP 2	HI BEAM

< SYSTEM DESCRIPTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

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System	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5
OUTPUT 4	RR WIPER INT	INT VOLUME 3	AUTO LIGHT	_	TAIL LAMP
OUTPUT 5	INT VOLUME 2	RR WIPER	_	FR FOG	_

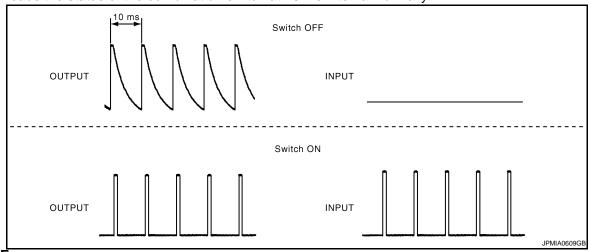
NOTE:

Headlamp has a dual system switch.

COMBINATION SWITCH READING FUNCTION

Description

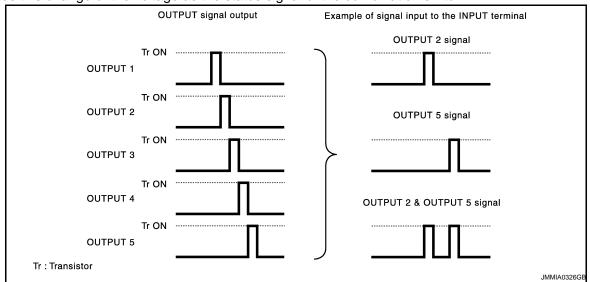
• BCM reads the status of the combination switch at 10 ms interval normally.



NOTE:

BCM reads the status of the combination switch at 65 ms interval when BCM is controlled at low power consumption control mode.

- BCM operates as follows and judges the status of the combination switch.
- It operates the transistor on OUTPUT side in the following order: OUTPUT 1 \rightarrow 2 \rightarrow 3 \rightarrow 4 \rightarrow 5, and outputs voltage waveform.
- The voltage waveform of OUTPUT corresponding to the formed circuit is input into the interface on INPUT side if any (1 or more) switches are ON.
- It reads this change of the voltage as the status signal of the combination switch.



Operation Example

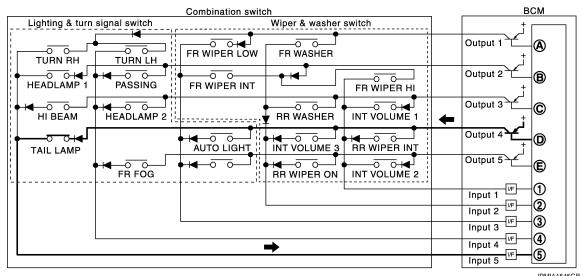
In the following operation example, the combination of the status signals of the combination switch is replaced as follows: INPUT 1 - 5 to "1 - 5" and OUTPUT 1 - 5 to "A - E".

Example 1: When a switch (TAIL LAMP switch) is turned ON

< SYSTEM DESCRIPTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

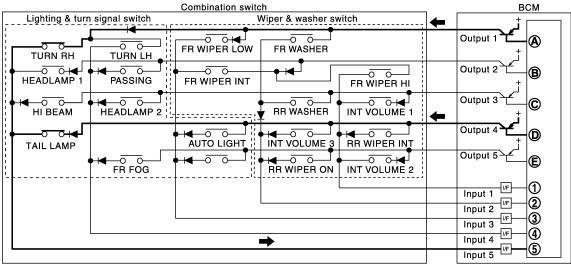
The circuit between OUTPUT 4 and INPUT 5 is formed when the TAIL LAMP switch is turned ON.



- BCM detects the combination switch status signal "5D" when the signal of OUTPUT 4 is input to INPUT 5.
- BCM judges that the TAIL LAMP switch is ON when the signal "5D" is detected.

Example 2: When some switches (TURN RH switch, TAIL LAMP switch) are turned ON

 The circuits between OUTPUT 1 and INPUT 5 and between OUTPUT 4 and INPUT 5 are formed when the TURN RH switch and TAIL LAMP switch are turned ON.



- JPMIA1546GB
- BCM detects the combination switch status signal "5AD" when the signals of OUTPUT 1 and OUTPUT 4 are input to INPUT 5.
- BCM judges that the TURN RH switch and TAIL LAMP switch are ON when the signal "5AD" is detected.

WIPER INTERMITTENT DIAL POSITION

BCM judges the wiper intermittent dial 1 - 7 by the status of INT VOLUME 1, 2 and 3 switches.

Wiper intermittent	Switch status			
dial position	INT VOLUME 1	INT VOLUME 2	INT VOLUME 3	
1	ON	ON	ON	
2	ON	ON	OFF	
3	ON	OFF	OFF	
4	OFF	OFF	OFF	
5	OFF	OFF	ON	

< SYSTEM DESCRIPTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Wiper intermittent		Switch status	
dial position	INT VOLUME 1	INT VOLUME 2	INT VOLUME 3
6	OFF	ON	ON
7	OFF	ON	OFF

NOTE:

For details of wiper intermittent dial position, refer to WW-6, "System Description".

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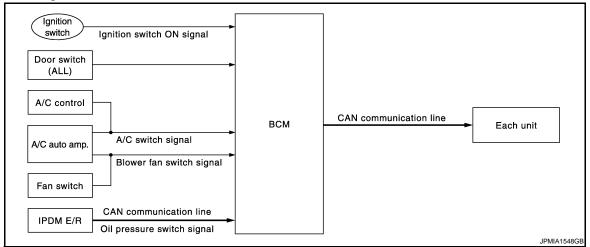
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SIGNAL BUFFER SYSTEM

System Diagram

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System Description

INFOID:0000000005490442

OUTLINE

BCM has the signal transmission function that outputs/transmits each input/received signal to each unit.

SIGNAL TRANSMISSION FUNCTION LIST

Signal name	Input	Output	Description
Ignition switch ON signal	Ignition switch	IPDM E/R (CAN)	Inputs the ignition switch signal and transmits it with CAN communication.
Door switch signal	Any door switch	Combination meter (CAN) IPDM E/R (CAN)	Inputs the door switch signal and transmits it with CAN communication.
Blower fan on signal	A/C auto amp. Fan switch	- ECM (CAN)	Inputs each signals, and transmits the blower fan on signal
A/C on signal	A/C auto amp.A/C control	LOW (O/W)	and A/C on signal via CAN communication.
Oil pressure switch signal	IPDM E/R (CAN)	Combination meter (CAN)	Transmits the received oil pressure switch signal with CAN communication.

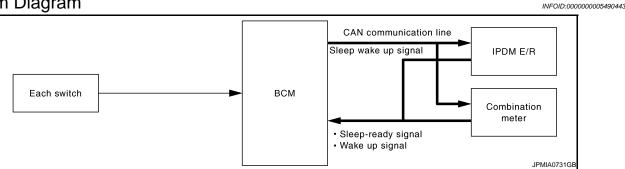
POWER CONSUMPTION CONTROL SYSTEM

< SYSTEM DESCRIPTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

POWER CONSUMPTION CONTROL SYSTEM

System Diagram



System Description

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OUTLINE

- BCM incorporates a power saving control function that reduces the power consumption according to the vehicle status.
- BCM switches the status (control mode) by itself with the power saving control function. It performs the sleep request to each unit (IPDM E/R and combination meter) that operates with the ignition switch OFF.

Normal mode (wake-up)

- CAN communication is normally performed with other units
- Each control with BCM is operating properly

CAN communication sleep mode (CAN sleep)

- CAN transmission is stopped
- Control with BCM only is operating

Low power consumption mode (BCM sleep)

- Low power consumption control is active
- CAN transmission is stopped

LOW POWER CONSUMPTION CONTROL WITH BCM

BCM reduces the power consumption with the following operation in the low power consumption mode.

The reading interval of the each switches changes from 10 ms interval to 60 ms interval.

Sleep mode activation

- BCM receives the sleep-ready signal (ready) from IPDM E/R and combination meter via CAN communica-
- BCM transmits the sleep wake up signal (sleep) to each unit when all of the CAN sleep conditions are ful-
- Each unit stops the transmission of CAN communication with the sleep wake up signal. BCM is in CAN communication sleep mode.
- BCM is in the low power consumption mode and perform the low power consumption control when all of the BCM sleep conditions are fulfilled with CAN sleep condition.

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BCS-93 Revision: 2009 October 2010 Z12

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POWER CONSUMPTION CONTROL SYSTEM

< SYSTEM DESCRIPTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Sleep condition CAN sleep condition	BCM sleep condition
Receiving the sleep-ready signal (ready) from all units Ignition switch: OFF Vehicle security system and panic alarm: Not operation Warning chime: Not operation Stop lamp switch: OFF Turn signal indicator lamp: Not operation Exterior lamp: OFF Door lock status: No change CONSULT-III communication status: Not communication Door switch status: No change Rear window defogger: OFF Driver door lock status: No change Key switch status: No change	Interior room lamp battery saver: Time out RAP system: OFF Nissan Vehicle Immobilizer System (NVIS) - NATS: Not operation Remote keyless entry receiver communication status: No communication Tire pressure monitor system (TPMS) - AIR PRESSURE MONITOR: Stop

Wake-up operation

- BCM transmits sleep wake up signal (wake up) to each unit when any condition listed below is established, and then goes into normal mode from low power consumption mode.
- Each unit starts transmissions with CAN communication by receiving sleep wake up signals. Each unit transmit wake up signals to BCM with CAN communication to convey the start of CAN communication.

Wake-up condition

Wake-up condition

- · Receiving the sleep-ready signal (Not-ready) from any units
- · Hazard switch: ON
- HI BEAM switch: OFF \rightarrow ON, ON \rightarrow OFF
- PASSING switch: OFF \rightarrow ON, ON \rightarrow OFF
- HEADLAMP 1 switch: OFF \rightarrow ON, ON \rightarrow OFF
- HEADLAMP 2 switch: OFF \rightarrow ON, ON \rightarrow OFF
- TAIL LAMP switch: OFF \rightarrow ON
- FR FOG switch: OFF \rightarrow ON, ON \rightarrow OFF
- TURN RH: OFF \rightarrow ON, ON \rightarrow OFF
- TURN LH: OFF \rightarrow ON, ON \rightarrow OFF
- Driver door switch: OFF \rightarrow ON, ON \rightarrow OFF
- Passenger door switch: OFF → ON, ON → OFF
- Rear RH door switch: OFF \rightarrow ON, ON \rightarrow OFF
- Rear LH door switch: OFF \rightarrow ON, ON \rightarrow OFF
- Back door switch: OFF \rightarrow ON, ON \rightarrow OFF
- · Stop lamp switch: ON
- · Door lock and unlock switch:
 - $\mathsf{NEUTRAL} \to \mathsf{LOCK}, \, \mathsf{NEUTRAL} \to \mathsf{UNLOCK}$
- Front door lock assembly (driver side) (door key cylinder switch):
 NEUTRAL → LOCK, NEUTRAL → UNLOCK
- Remote keyless entry receiver communication: Receiving

POWER CONSUMPTION CONTROL SYSTEM

< SYSTEM DESCRIPTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Component Parts Location

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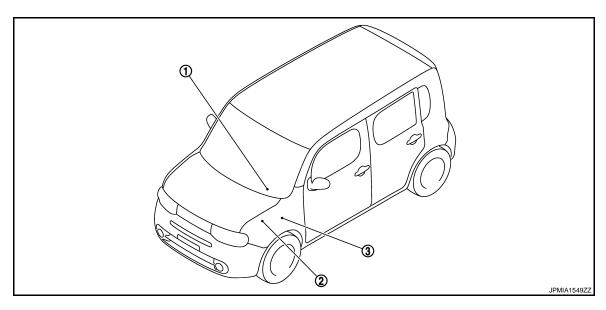
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- Combination meter
- 2. IPDM E/R
 Refer to PCS-36, "Component Parts
 Location".
- 3. BCM Refer to BCS-87, "Component Parts Location".

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< SYSTEM DESCRIPTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM: CONSULT-III Function (BCM - COMMON ITEM)

INFOID:0000000005490446

APPLICATION ITEM

CONSULT-III performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
Work Support	Changes the setting for each system function.
Self Diagnostic Result	Displays the diagnosis results judged by BCM.
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM. Refer to CONSULT-III operation manual.
Data Monitor	The BCM input/output signals are displayed.
Active Test	The signals used to activate each device are forcibly supplied from BCM.
Ecu Identification	The BCM part number is displayed.
Configuration	 Read and save the vehicle specification. Write the vehicle specification when replacing BCM.

SYSTEM APPLICATION

BCM can perform the following functions for each system.

NOTE:

It can perform the diagnosis modes except the following for all sub system selection items.

×: Applicable item

System	Sub system selection item	Diagnosis mode		
System	Sub system selection item	Work Support	Data Monitor	Active Test
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp control	INT LAMP	×	×	×
Remote keyless entry system	MULTI REMOTE ENT	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER		×	×
Automatic air conditioner Manual air conditioner	AIR CONDITONER		×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
NVIS - NATS	IMMU	×	×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door	TRUNK		×	
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	×
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	TPMS (AIR PRESSURE MONITOR)	×	×	×
Panic alarm system	PANIC ALARM			×

DOOR LOCK

[WITHOUT INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

DOOR LOCK: CONSULT-III Function (BCM - DOOR LOCK)

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BCM CONSULT-III FUNCTION

CONSULT-III performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function
DATA MONITOR	The BCM input/output signals are displayed
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM

WORK SUPPORT

Monitor item	Description	
DOOR LOCK-UNLOCK SET	Selective unlock function mode can be changed to operate with this mode On: Operate Off: Non-operation	E
AUTOMATIC DOOR LOCK SE- LECT	Automatic door lock function mode can be selected from the following in this mode • VH SPD: All doors are locked when vehicle speed more than 24km/h (15MPH) • P RANGE: All doors are locked when shifting the selector lever from P position to other than the P position	F
AUTOMATIC DOOR UNLOCK SELECT	 Automatic door unlock function mode can be selected from the following in the mode MODE 1: All doors are unlocked when the power supply position is changed from ON to OFF MODE 2: All doors are unlocked when shifting the selector lever from any position other than the P to P position MODE 3: Driver side door is unlocked when the power supply position is changed from ON to OFF MODE 4: Driver side door is unlocked when shifting the selector lever from any position other than the P to P position MODE 5: Driver side door is unlocked when key out of key switch MODE 6: All doors are unlocked when key out of key switch 	- (- -
AUTOMATIC LOCK/UNLOCK SET	Automatic door lock/unlock function mode can be selected from the following in this mode Off: Non-operation Unlock Only: door unlock operation only Lock Only: door lock operation only Lock/Unlock: lock/unlock operation	J K

DATA MONITOR

Monitor Item	Contents
IGN ON SW	Indicated [On/Off] condition of ignition switch in ON position
KEY ON SW	Indicated [On/Off] condition of key switch
DOOR SW-DR	Indicated [On/Off] condition of front door switch (driver side)
DOOR SW-AS	Indicated [On/Off] condition of front door switch (passenger side)
DOOR SW-RR	Indicated [On/Off] condition of rear door switch RH
DOOR SW-RL	Indicated [On/Off] condition of rear door switch LH
BACK DOOR SW	Indicated [On/Off] condition of back door switch
LOCK STATUS	Indicated [On/Off] condition of driver side door
ACC ON SW	Indicated [On/Off] condition of ignition switch in ACC position
KEYLESS LOCK	Indicated [On/Off] condition of lock signal from key fob
KEYLESS UNLOCK	Indicated [On/Off] condition of unlock signal from key fob
SHOCK SENSOR	NOTE: This item is displayed, but cannot be supported
CDL LOCK SW	Indicated [On/Off] condition of lock signal from door lock unlock switch
CDL UNLOCK SW	Indicated [On/Off] condition of unlock signal from door lock unlock switch

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< SYSTEM DESCRIPTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Monitor Item	Contents
KEY CYL LK-SW	Indicated [On/Off] condition of lock signal from door key cylinder
KEY CYL UN-SW	Indicated [On/Off] condition of unlock signal from door key cylinder
VEHICLE SPEED	Display the vehicle speed signal received from combination meter by numerical value [Km/h]

ACTIVE TEST

Test item	Description
DOOR LOCK	This test is able to check door lock/unlock operation The all door lock actuators are locked when "ALL LCK" on CONSULT-III screen is touched The all door lock actuators are unlocked when "ALL UNLK" on CONSULT-III screen is touched The door lock actuator (driver side) is unlocked when "DR UNLK" on CONSULT-III screen is touched The door lock actuator (other) is unlocked when "OTR ULK" on CONSULT-III screen is touched

REAR WINDOW DEFOGGER

REAR WINDOW DEFOGGER: CONSULT-III Function (BCM - REAR DEFOGGER)

INFOID:0000000005840664

DATA MONITOR

Monitor Item	Description		
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.		
ACC ON SW	Indicates [ON/OFF] condition of ignition switch in ACC position.		
REAR DEF SW	Displays "Press (ON)/other (OFF)" status determined with the rear window defogger switch.		

ACTIVE TEST

Test Item	Description
REAR DEFOGGER	This test is able to check rear window defogger operation. Rear window defogger operates when "ON" on CONSULT-III screen is touched.

BUZZER

BUZZER: CONSULT-III Function (BCM - BUZZER)

INFOID:0000000005840663

CONSULT-III APPLICATION ITEMS

Test item	Diagnosis mode	Description	
BUZZER	Data Monitor	Displays BCM input data in real time.	
DUZZEN	Active Test	Operation of electrical loads can be checked by sending driving signal to them.	

DATA MONITOR

Display item [Unit]	Description			
IGN ON SW [On/Off]	Status of ignition switch judged by BCM.			
KEY ON SW [On/Off]	Status of key switch judged by BCM.			
DOOR SW-DR [km/h]	Status of driver side door switch judged by BCM.			
REVERSE SW CAN [On/Off]	This item is displayed, but cannot be monitored.			

DIAGNOSIS SYSTEM (BCM) [WITHOUT INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

Display item [Unit]	Description
TAIL LAMP SW [On/Off]	Status of lighting switch judged by BCM using the combination switch readout function.
FR FOG SW [On/Off]	Status of front fog lamp switch judged by BCM using the combination switch readout function.
BUCKLE SW [On/Off]	Status of seatbelt buckle switch (driver side) received from combination meter with CAN communication line.
VEHICLE SPEED [km/h]	Value of vehicle speed signal received from combination meter with CAN communication line.

ACTIVE TEST

Display item [Unit]	Description
IGN KEY WARN ALM	The key warning chime operation can be checked by operating the relevant function (On/Off).
SEAT BELT WARN TEST	The seat belt warning chime operation can be checked by operating the relevant function (On/Off).
LIGHT WARN ALM	The light warning chime operation can be checked by operating the relevant function (On/Off).

INT LAMP

INT LAMP : CONSULT-III Function (BCM - INT LAMP)

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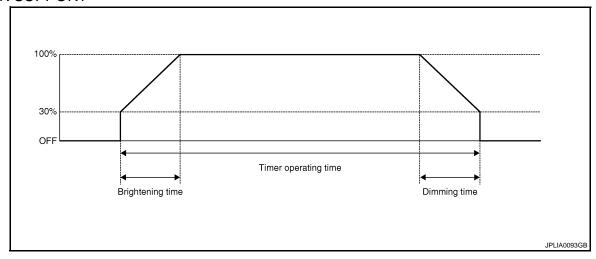
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WORK SUPPORT



Service item	Setting item	Setting	
	MODE 1*	0 sec.	
ROOM LAMP TIMER SET	MODE 2	7.5 sec.	Sets the interior room lamp ON time. (Timer operating time)
TOOM LAW! TIME! GET	MODE 3	15 sec.	Octobric interior room lamp on time. (Time: operating time)
	MODE 4	30 sec.	
SET I/L D-UNLCK INTCON	On*	With the i	nterior room lamp timer function
SET I/E D-ONLOR INTOON	Off	Without the interior room lamp timer function	

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DIAGNOSIS SYSTEM (BCM) [WITHOUT INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

Service item	Setting item	Setting	
	MODE 1	0.5 sec.	
	MODE 2*	1 sec.	
	MODE 3	2 sec.	
ROOM LAMP ON TIME SET	MODE 4	3 sec.	Sets the interior room lamp gradual brightening time.
	MODE 5	4 sec.	
	MODE 6	5 sec.	
	MODE 7	0 sec.	
	MODE 1	0.5 sec.	
	MODE 2*	1 sec.	
	MODE 3	2 sec.	
ROOM LAMP OFF TIME SET	MODE 4	3 sec.	Sets the interior room lamp gradual dimming time.
	MODE 5	4 sec.	
	MODE 6	5 sec.	
	MODE 7	0 sec.	
	MODE 1*	Interior ro	om lamp timer activates with synchronizing all doors.
R LAMP TIMER LOGIC SET	MODE 2	Interior ro only.	om lamp timer activates with synchronizing the driver door

^{*:} Factory setting

DATA MONITOR

Monitor item [Unit]	Description	
IGN ON SW [On/Off]	The switch status input from request switch (driver side)	
ACC SW [On/Off]	Ignition switch (ACC) status judges from ACC signal (ACC power supply)	
KEY ON SW [On/Off]	The switch status input from request switch (passenger side)	
DOOR SW-DR [On/Off]	The switch status input from front door switch (driver side)	
DOOR SW-AS [On/Off]	The switch status input from front door switch (passenger side)	
DOOR SW-RR [On/Off]	The switch status input from rear door switch RH	
DOOR SW- RL [On/Off]	The switch status input from rear door switch LH	
BACK DOOR SW [On/Off]	The switch status input from back door switch	
LOCK STATUS [On/Off]	The switch status input from door lock status switch (driver side)	
CDL LOCK SW [On/Off]	Lock switch status input from door lock and unlock switch	
CDL UNLOCK SW [On/Off]	Unlock switch status input from door lock and unlock switch	
KEYLESS LOCK [On/Off]	Lock signal status received from remote keyless entry receiver	
KEYLESS UNLOCK [On/Off]	Unlock signal status received from remote keyless entry receiver	
KEY CYL LK-SW [On/Off]	Lock switch status received from key cylinder lock/unlock switch	

< SYSTEM DESCRIPTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Monitor item [Unit]	Description
KEY CYL UN-SW [On/Off]	Unlock switch status received from key cylinder lock/unlock switch
TRNK/HAT MNTR [On/Off]	NOTE: The item is indicated, but not monitored.

ACTIVE TEST

Test item	Operation	Description
On		Outputs the interior room lamp control signal to turn the interior room lamps ON. [Map lamp, personal lamp, room lamp, luggage room lamp (when applicable lamps switch is in DOOR position.)]
	Off	Stops the interior room lamp control signal to turn the interior room lamps.

MULTI REMOTE ENT

MULTI REMOTE ENT : CONSULT-III Function (BCM - MULTI REMOTE ENT)

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BCM CONSULT-III FUNCTION

CONSULT-III performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function
DATA MONITOR	The BCM input/output signals are displayed
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM

DATA MONITOR

Monitor Item	Condition
IGN ON SW	Indicates [On/Off] condition of ignition switch in ON position
KEY ON SW	Indicates [On/Off] condition of key switch
ACC ON SW	Indicates [On/Off] condition of ignition switch in ACC position
KEYLESS LOCK	Indicates [On/Off] condition of lock signal from keyfob
KEYLESS UNLOCK	Indicates [On/Off] condition of unlock signal from keyfob
KYLS TRNK/HAT	NOTE: This item is displayed, but cannot be tested
DOOR SW-DR	Indicates [On/Off] condition of front door switch (driver side)
DOOR SW-AS	Indicates [On/Off] condition of front door switch (passenger side)
DOOR SW-RR	Indicates [On/Off] condition of rear door switch RH
DOOR SW-RL	Indicates [On/Off] condition of rear door switch LH
BACK DOOR SW	Indicates [On/Off] condition of back door switch
TRNK/HAT MNTR	NOTE: This item is displayed, but cannot be tested
CDL LOCK SW	Indicates [On/Off] condition of door lock and unlock switch
CDL UNLOCK SW	Indicates [On/Off] condition of door lock and unlock switch
KEYLESS PANIC	Indicates [On/Off] condition of PANIC button of keyfob

ACTIVE TEST

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DIAGNOSIS SYSTEM (BCM) [WITHOUT INTELLIGENT KEY SYSTEM]

Test item	Description
INT LAMP	This test is able to check interior room lamp operation On: Operate Off: Non-operation
FLASHER	This test is able to check flasher operation [LH/RH/Off]
HORN	This test is able to check horn operation On: Operate

WORK SUPPORT

Test item	Description			
REMO CONT IN REGIST	Keyfob ID code can be registered			
REMO CONT IN ERASUR	Keyfob ID code can be erased			
REMO CONT IN CONFIR	It can be checked whether Intelligent Key ID code is registered or not in this mode			
MULTI ANSWER BACK SET	NOTE: This item is displayed, but cannot be tested			
HORN CHIRP SET	Hazard and horn reminder function (horn operation) mode can be changed in this mode On: Operate Off: Non-operation			
HAZARD LAMP SET	Hazard and horn reminder function (hazard operation) mode can be changed in this mode • MODE1: Non-operation • MODE2: Unlock operation only • MODE3: Lock operation only • MODE4: Lock and unlock operation			
AUTO LOCK SET	Auto door lock time can be changed in this mode • MODE 1: Non-operation • MODE 2: 30 sec • MODE 3: 1 minute • MODE 4: 2 minute • MODE 5: 3 minute • MODE 6: 4 minute • MODE 7: 5 minute			
PANIC ALARM SET	Panic alarm button pressing time on keyfob remote control button can be selected from the following with this mode • MODE1: 0.5 sec • MODE2: Non-operation • MODE3: 1.5 sec			
TRUNK OPEN SET	NOTE: This item is displayed, but cannot be tested			

HEADLAMP

HEADLAMP : CONSULT-III Function (BCM - HEAD LAMP)

INFOID:0000000005840654

WORK SUPPORT

For USA

Service item	Setting item	Setting	
AUTO LIGHT LOGIC SET	MODE 1*	With twilight ON custom & with wiper INT, LO and HI	
	MODE 2	With twilight ON custom & with wiper LO and HI	
	MODE 3	With twilight ON custom & without	
	MODE 4	Without twilight ON custom & with wiper INT, LO and HI	
	MODE 5	Without twilight ON custom & with wiper LO and HI	
	MODE 6	Without twilight ON custom & without	

< SYSTEM DESCRIPTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Service item	Setting item	Setting	
BATTERY SAVER SET	On [*]	With the exterior lamp battery saver function	
DATTERT SAVER SET	Off	Without the exterior lamp battery saver function	
	MODE 1*	45 sec.	
	MODE 2	Without the function	
	MODE 3	30 sec.	
ILL DELAY SET	MODE 4	60 sec.	Sets delay timer function timer operation time.
	MODE 5	90 sec.	(All doors closed)
	MODE 6	120 sec.	
	MODE 7	150 sec.	
	MODE 8	180 sec.	

^{*:} Factory setting

For CANADA

Service item	Setting item	Setting			
	MODE 1				
	MODE 2				
AUTO LIGHT LOGIC SET	MODE 3	NOTE: The item is indicated, but not operated.			
AUTO LIGHT LOGIO SET	MODE 4				
	MODE 5				
	MODE 6				
BATTERY SAVER SET	On*	With the exterior lamp battery saver function			
DATILITY OAVER OF	Off	Without the exterior lamp battery saver function			
	MODE 1*	45 sec.			
	MODE 2	Without the function			
	MODE 3	30 sec.			
ILL DELAY SET	MODE 4	60 sec.	Sets delay timer function timer operation time.		
ILL DELAT GET	MODE 5	90 sec.	(All doors closed)		
	MODE 6	120 sec.			
	MODE 7	150 sec.			
	MODE 8	180 sec.			

^{*:} Factory setting

DATA MONITOR

Monitor item [Unit]	Description
IGN ON SW [On/Off]	Ignition switch (ON) status judged from IGN signal (ignition power supply)
ACC SW [On/Off]	Ignition switch (ACC) status judged from ACC signal (ACC power supply)
VEH SPEED [km/h]	The value of the vehicle speed received from combination meter with CAN communication

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DIAGNOSIS SYSTEM (BCM) [WITHOUT INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

Monitor item [Unit]	Description	
HI BEAM SW [On/Off]		
HEAD LAMP SW1 [On/Off]		
HEAD LAMP SW2 [On/Off]	Each switch status that BCM judges from the combination switch reading function	
PASSING SW [On/Off]	Lacif switch status that bowl judges from the combination switch reading function	
FR FOG SW [On/Off]		
AUTO LIGHT SW [On/Off]		
RR FOG SW [On/Off]	NOTE: The item is indicated, but not monitored	
DOOR SW-DR [On/Off]	The switch status input from front door switch (driver side)	
DOOR SW-AS [On/Off]	The switch status input from front door switch (passenger side)	
DOOR SW-RR [On/Off]	The switch status input from rear door switch RH	
DOOR SW- RL [On/Off]	The switch status input from rear door switch LH	
BACK DOOR SW [On/Off]	The switch status input from back door switch	
TURN SIGNAL R [On/Off]		
TURN SIGNAL L [On/Off]	Each switch status that BCM judges from the combination switch reading func-	
TAIL LAMP SW [On/Off]		
KEY ON SW [On/Off]	The switch status input from key on switch	
KEYLESS LOCK [On/Off]	Lock signal status received from remote keyless entry receiver (integrated in the BCM)	
PKB SW [On/Off]	The parking brake switch status received from combination meter with CAN comm nication	
ENGINE RUN [On/Off]	The engine status received from ECM with CAN communication	
LIG SEN COND [On/Off]	The sensor condition received from light sensor	
OPTI SEN (DTCT) [V]	The value of outside brightness voltage input from the optical sensor	
OPTI SEN (FILT) [V]	The value of outside brightness voltage filtered by BCM	

ACTIVE TEST

Test item	Operation	Description
TAIL LAMP	On	Transmits the position light request signal to IPDM E/R with CAN communication to turn the tail lamp ON.
	Off	Stops the tail lamp request signal transmission.

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[WITHOUT INTELLIGENT KEY SYSTEM]

Test item	Operation	Description
	Hi	Transmits the high beam request signal with CAN communication to turn the headlamp (HI).
HEAD LAMP	Lo	Transmits the low beam request signal with CAN communication to turn the headlamp (LO).
	Off	Stops the high & low beam request signal transmission.
FR FOG LAMP	On	Transmits the front fog lights request signal to IPDM E/R with CAN communication to turn the front fog lamp ON.
	Off	Stops the front fog lights request signal transmission.
ILL DIM SIGNAL	On	NOTE:
ILL DIN SIGNAL	Off	The item is indicated, but cannot be tested.

WIPER

WIPER: CONSULT-III Function (BCM - WIPER)

INFOID:0000000005840656

WORK SUPPORT

Service item	Setting item	Description
WIPER SPEED	On	With vehicle speed (Front wiper intermittent time linked with the vehicle speed and wiper intermittent dial position)
SETTING	Off*	Without vehicle speed (Front wiper intermittent time linked with the wiper intermittent dial position)

^{*:} Factory setting

DATA MONITOR

Monitor Item [Unit]	Description	
IGN ON SW [On/Off]	Ignition switch ON status judged from ignition power supply.	
IGN SW CAN [On/Off]	Ignition switch ON status received from IPDM E/R with CAN communication.	
FR WIPER HI [On/Off]		
FR WIPER LOW [On/Off]	Each switch status that BCM judges from the combination switch reading function.	
FR WIPER INT [On/Off]		
FR WASHER SW [On/Off]		
INT VOLUME [1 – 7]	Each switch status that BCM judges from the combination switch reading function.	
FR WIPER STOP [On/Off]	Front wiper motor (stop position) status received from IPDM E/R with CAN communication.	
VEHICLE SPEED [km/h]	The value of the vehicle speed signal received from combination meter with CAN communication.	
RR WIPER ON [On/Off]		
RR WIPER INT [On/Off]	Each switch status that BCM judges from the combination switch reading function.	
RR WASHER SW [On/Off]		

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[WITHOUT INTELLIGENT KEY SYSTEM]

Monitor Item [Unit]	Description
REVERSE SW CAN [On/Off]	NOTE:
RAIN SENSOR [On/Off]	The item is indicated, but not monitored.

ACTIVE TEST

Test item	Operation	Description
FR WIPER	Hi	Transmits the front wiper request signal (HI) to IPDM E/R with CAN communication to operate the front wiper HI operation.
	Lo	Transmits the front wiper request signal (LO) to IPDM E/R with CAN communication to operate the front wiper LO operation.
	INT	Transmits the front wiper request signal (INT) to IPDM E/R with CAN communication to operate the front wiper INT operation.
	Off	Stops transmitting the front wiper request signal to stop the front wiper operation.
RR WIPER	On	Outputs the voltage to operate the rear wiper motor.
	Off	Stops the voltage to stop.

FLASHER

FLASHER: CONSULT-III Function (BCM - FLASHER)

INFOID:0000000005840655

DATA MONITOR

Monitor item [Unit]	Description	
IGN ON SW [On/Off]	Ignition switch (ON) status judged from IGN signal (ignition power supply)	
TURN SIGNAL R [On/Off]	Fach quitch status that DCM datasts from the combination quitch reading function	
TURN SIGNAL L [On/Off]	Each switch status that BCM detects from the combination switch reading function	
HAZARD SW [On/Off]	The switch status input from the hazard switch	

ACTIVE TEST

Test item	Operation	Description
	RH	Outputs the voltage to blink the right side turn signal lamps.
FLASHER	LH	Outputs the voltage to blink the left side turn signal lamps.
	Off	Stops the voltage to turn the turn signal lamps OFF.

AIR CONDITIONER

AIR CONDITIONER: CONSULT-III Function (BCM - AUTO AIR CONDITIONER)

INFOID:0000000005840661

DATA MONITOR Display Item List

Monitor Item [Unit]		Contents
IGN SW	[On/Off]	Displays ignition switch position status as judged from ignition switch signal.

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[WITHOUT INTELLIGENT KEY SYSTEM]

Monitor Item [Unit]		Contents
FAN ON SIG	[On/Off]	Displays the blower fan status as jugged from the A/C auto amp.
AIR COND SW	[On/Off]	Displays [COMP (On)/COMP (Off)] status as judged from the A/C auto amp.

AIR CONDITIONER: CONSULT-III Function

INFOID:0000000005840662

DATA MONITOR

Display Item List

Monitor Item [Unit]		Contents
IGN SW	[On/Off]	Displays ignition switch position status as judged form ignition switch signal.
FAN ON SIG	[On/Off]	Displays the blower fan status as judged form blower fan motor switch signal.
AIR COND SW	[On/Off]	Displays [COMP (On)/COMP (Off)] status as judged form air conditioner switch signal.
THERMO AMP	[On/Off]	Displays the thermo control amp. status as judged form thermo control amp. signal.
FR DEF SW	[On/Off]	Displays the DEF status as judged from defroster position switch signal.

COMB SW

COMB SW: CONSULT-III Function (BCM - COMB SW)

INFOID:0000000005490457

DATA MONITOR

Monitor item [UNIT]	Description
TURN SIGNAL R [Off/On]	Displays the status of TURN RH switch in combination switch judged by the combination switch reading function.
TURN SIGNAL L [Off/On]	Displays the status of the TURN LH switch in combination switch judged by the combination switch reading function.
HI BEAM SW [Off/On]	Displays the status of HI BEAM switch in combination switch judged by the combination switch reading function.
HEAD LAMP SW 1 [Off/On]	Displays the status of HEADLAMP 1 switch in combination switch judged by the combination switch reading function.
HEAD LAMP SW 2 [Off/On]	Displays the status of HEADLAMP 2 switch in combination switch judged by the combination switch reading function.
TAIL LAMP SW [Off/On]	Displays the status of TAIL LAMP switch in combination switch judged by the combination switch reading function.
PASSING SW [Off/On]	Displays the status of PASSING switch in combination switch judged by the combination switch reading function.
AUTO LIGHT SW [Off/On]	Displays the status of the AUTO LIGHT switch in combination switch judged by BCM with the combination switch reading function.
FR FOG SW [Off/On]	Displays the status of FR FOG switch in combination switch judged by the combination switch reading function.
RR FOG SW [Off/On]	NOTE: The item is indicated, but not monitored.
FR WIPER HI [Off/On]	Displays the status of FR WIPER HI switch in combination switch judged by the combination switch reading function.
FR WIPER LOW [Off/On]	Displays the status of FR WIPER LOW switch in combination switch judged by the combination switch reading function.
FR WIPER INT [Off/On]	Displays the status of FR WIPER INT switch in combination switch judged by the combination switch reading function.
FR WASHER SW [Off/On]	Displays the status of FR WASHER switch in combination switch judged by the combination switch reading function.
INT VOLUME [1 - 7]	Displays the status of wiper intermittent dial position judged by the combination switch reading function.

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< SYSTEM DESCRIPTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Monitor item [UNIT]	Description
RR WIPER ON [Off/On]	Displays the status of RR WIPER switch in combination switch judged by the combination switch reading function.
RR WIPER INT [Off/On]	Displays the status of RR WIPER INT switch in combination switch judged by the combination switch reading function.
RR WASHER SW [Off/On]	Displays the status of RR WASHER switch in combination switch judged by the combination switch reading function.

BCM

BCM: CONSULT-III Function (BCM - BCM)

INFOID:0000000005490458

WORK SUPPORT

Item	Description
RESET SETTING VALUE	Return a value set with WORK SUPPORT of each system to a default value in factory shipment.

IMMU

IMMU: CONSULT-III Function (BCM - IMMU)

INFOID:0000000005840650

DATA MONITOR

Monitor item	Content
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.
KEY ON SW	Indicates [ON/OFF] condition of key switch.

ACTIVE TEST

Test item	Description
THEFT IND	This test is able to check security indicator lamp operation [ON/OFF].

BATTERY SAVER

BATTERY SAVER : CONSULT-III Function (BCM - BATTERY SAVER)

INFOID:000000000584065

WORK SUPPORT

Service item	Setting item	Setting	
ROOM LAMP TIMER SET	MODE 1*	30 min.	Sets the interior room lamp battery saver timer operating
ROOM EAWN THREE GET	MODE 2	60 min.	time.

^{*:}Factory setting

DATA MONITOR

Monitor item [Unit]	Description
IGN ON SW [On/Off]	The switch status input from request switch (driver side)
ACC SW [On/Off]	Ignition switch (ACC) status judges from ACC signal (ACC power supply)
KEY ON SW [On/Off]	The switch status input from front request switch (passenger side)
DOOR SW-DR [On/Off]	The switch status input from front door switch (driver side)

< SYSTEM DESCRIPTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Monitor item [Unit]	Description
DOOR SW-AS [On/Off]	The switch status input from front door switch (passenger side)
DOOR SW-RR [On/Off]	The switch status input from rear door switch RH
DOOR SW- RL [On/Off]	The switch status input from rear door switch LH
BACK DOOR SW [On/Off]	The switch status input from back door switch
LOCK STATUS [On/Off]	The switch status input from door lock status switch (driver side)
CDL LOCK SW [On/Off]	Lock switch status input from door lock and unlock switch
CDL UNLOCK SW [On/Off]	Unlock switch status input from door lock and unlock switch
KEY CYL LK-SW [On/Off]	Lock switch status received from key cylinder lock/unlock switch
KEY CYL UN-SW [On/Off]	Unlock switch status received from key cylinder lock/unlock switch
TRNK/HAT MNTR [On/Off]	NOTE: The item is indicated, but not monitored.
KEYLESS LOCK [On/Off]	Lock signal status received from remote keyless entry receiver
KEYLESS UNLOCK [On/Off]	Unlock signal status received from remote keyless entry receiver

ACTIVE TEST

Test item	Operation	Description
BATTERY SAVER	Off	Cuts the interior room lamp power supply to turn interior room lamps OFF.
	On	Outputs the interior room lamp power supply to turn interior room lamps ON.*

^{*:} Each lamp switch is in ON position.

TRUNK

TRUNK: CONSULT-III Function (BCM - TRUNK)

INFOID:0000000005840649

BCM CONSULT-III FUNCTION

CONSULT-III performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
DATA MONITOR	The BCM input/output signals are displayed.

DATA MONITOR

Monitor Item	Contents
KEY ON SW	Indicates [On/Off] condition of key switch.
LOCK STATUS	NOTE: This item is displayed, but cannot be monitored.
VEHICLE SPEED	Indicates [Km/h] condition of vehicle speed signal from combination meter.
IGN ON SW	Indicates [On/Off] condition of ignition switch.

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< SYSTEM DESCRIPTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Monitor Item	Contents
TRNK OPNR SW	NOTE: This item is displayed, but cannot be monitored.
KYLS TRNK/HAT	NOTE: This item is displayed, but cannot be monitored.

THEFT ALM

THEFT ALM : CONSULT-III Function (BCM - THEFT ALM)

INFOID:00000000005840651

DATA MONITOR

Monitor Item	Condition
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.
ACC ON SW	Indicates [ON/OFF] condition of ignition switch in ACC position.
KEY ON SW	Indicates [ON/OFF] condition of key switch.
KEYLESS LOCK	Indicates [ON/OFF] condition of lock signal from keyfob.
KEYLESS UNLOCK	Indicates [ON/OFF] condition of unlock signal from keyfob.
TRUNK OPNR SW	NOTE: The item is indicated, but not monitored.
TRNK OPNR MNTR	NOTE: The item is indicated, but not monitored.
HOOD SW	NOTE: The item is indicated, but not monitored.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch (driver side).
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch (passenger side).
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.
BACK DOOR SW	Indicates [ON/OFF] condition of back door switch.
KEY CYL LK-SW	Indicates [ON/OFF] condition of door key cylinder switch.
KEY CYL UN-SW	Indicates [ON/OFF] condition of door key cylinder switch.
CDL LOCK SW	Indicates [ON/OFF] condition of door lock and unlock switch.
CDL UNLOCK SW	Indicates [ON/OFF] condition of door lock and unlock switch.
TRANSPONDER	Indicates key ID verification results by [ON/OFF].
INTELLI KEY	NOTE: The item is indicated, but not monitored.
LOCK STATUS	NOTE: The item is indicated, but not monitored.
AUTO RELOCK	NOTE: The item is indicated, but not monitored.

WORK SUPPORT

Test Item	Description
SECURITY ALARM SET	This mode is able to confirm and change security alarm ON-OFF setting.
THEFT ALM TRG	The switch which triggered vehicle security alarm is recorded. This mode is able to confirm and erase the record of vehicle security alarm. The trigger data can be erased by touching "CLEAR" on CONSULT-III screen.

ACTIVE TEST

< SYSTEM DESCRIPTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Test Item	Description
THEFT IND	This test is able to check security indicator lamp operation. Security indicator lamp will be turned on when "ON" on CONSULT-III screen is touched.
VEHICLE SECURITY HORN	This test is able to check horn operation. Horn will be activated for 0.5 seconds after "ON" on CONSULT-III screen is touched.
HEADLAMP (HI)	This test is able to check headlamp (HI) operation. Headlamps (HI) will be activated for 0.5 seconds after "ON" on CONSULT-III screen is touched.
FLASHER	This test is able to check hazard warning lamp operation. Hazard warning lamps will be activated after "LH" or "RH" on CONSULT-III screen is touched.

RETAIND PWR

RETAIND PWR: CONSULT-III Function (BCM - RETAINED PWR)

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Data monitor

Monitor Item	Description
DOOR SW-DR	Indicates [ON/OFF] condition of driver side door switch.
DOOR SW-AS	Indicates [ON/OFF] condition of passenger side door switch.

SIGNAL BUFFER

SIGNAL BUFFER: CONSULT-III Function (BCM - SIGNAL BUFFER)

INFOID:0000000005490464

DATA MONITOR

Monitor item [UNIT]	Description
OIL PRESS SW [Off/On]	Displays the status of oil pressure switch received from IPDM E/R with CAN communication.
BRAKE SW [Off/On]	Displays the switch status input from stop lamp switch.

ACTIVE TEST

Test item	Operation	Description
OIL PRESSURE SW	On	Transmits the oil pressure switch signal with CAN communication to illuminate the oil pressure warning lamp in the combination meter.
	Off	Stops the oil pressure switch signal transmission.

AIR PRESSURE MONITOR

AIR PRESSURE MONITOR: Diagnosis Description

INFOID:0000000005840659

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DESCRIPTION

Revision: 2009 October

During driving, the transmitter installed at each road wheel transmits the tire pressure information signal to the receiver. The receiver receives the tire pressure signal and transmits it to the BCM. The BCM judges whether or not the tire pressure is OK based on the tire pressure information signal, and if it judges that the tire pressure is low, it transmits the information via CAN communication to the combination meter.

After receiving the tire pressure information via CAN communication from the BCM, the combination meter illuminates the low tire pressure warning lamp and displays.

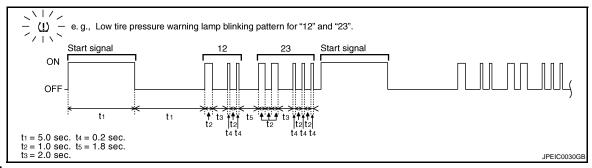
SELF DIAGNOSTIC PROCEDURE

- Initiate diagnosis mode by short-circuiting the low tire pressure warning check switch to the ground.
- The blinking pattern of the low tire pressure warning lamp indicates the conditions of the malfunction.

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NOTE:

If the low tire pressure warning lamp is blinking repeatedly at 5 Hz, there is no malfunction occurring in the system.

Blinking pattern	Items	Diagnostic items detected when	Check item	
15	Tire pressure value (Front LH)	Front LH tire pressure drops to 182.7 kPa (1.9 kg/cm ² , 26 psi) or less.		
16	Tire pressure value (Front RH)	Front RH tire pressure drops to 182.7 kPa (1.9 kg/cm ² , 26 psi) or less.	W/T 20	
17	Tire pressure value (Rear RH)	Rear RH tire pressure drops to 182.7 kPa (1.9 kg/cm ² , 26 psi) or less.	<u>WT-30</u>	
18	Tire pressure value (Rear LH)	Rear LH tire pressure drops to 182.7 kPa (1.9 kg/cm ² , 26 psi) or less.		
21	Transmitter no data (Front LH)	Data from front LH transmitter cannot be received.		
22	Transmitter no data (Front RH)	no data (Front RH) Data from front RH transmitter cannot be received.		
23	Transmitter no data (Rear RH)	Data from rear RH transmitter cannot be received.	<u>WT-32</u>	
24	Transmitter no data (Rear LH)	Data from rear LH transmitter cannot be received.		
35	Transmitter pressure data error (Front LH)	Air pressure data from front LH transmitter is malfunction.		
36	Transmitter pressure data error (Front RH)	Air pressure data from front RH transmitter is maitunction.		
37	Transmitter pressure data error (Rear RH)	Air pressure data from rear RH transmitter is malfunction.	<u>WT-35</u>	
38	Transmitter pressure data error (Rear LH)	Air pressure data from rear LH transmitter is malfunction.	+	
52	Vehicle speed signal error	Vehicle speed signal error.	<u>WT-37</u>	
53	Control unit	Tire pressure monitoring system malfunction in BCM.	<u>WT-39</u>	
No blinking	Tire pressure warning check switch	Tire pressure warning switch circuit is open.	_	

ERASE SELF-DIAGNOSIS

After performing self-diagnosis by short-circuiting the tire pressure warning check switch to the body, turn the ignition switch OFF.

AIR PRESSURE MONITOR: CONSULT-III Function

INFOID:0000000005840660

FUNCTION

The diagnosis functions (main functions) include the following: "WORK SUPPORT", "SELF DIAGNOSTIC RESULT", "DATA MONITOR" and "ACTIVE TEST".

Diagnostic test mode	Function		
Work support	In this mode, it is possible to make quick and accurate adjustments by following the instructions on the CONSULT-III display.		
Self diagnostic result	Receives self-diagnosis results from the low tire pressure warning control unit, and indicates DTCs and the number of malfunctions.		

< SYSTEM DESCRIPTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Diagnostic test mode	Function
Data monitor	Receives input/output signals from the low tire pressure warning control unit and indicates and stores them to facilitate locating the causes of malfunctions.
Active test	Transmits command to the low tire pressure warning control unit to change output signals and check operation of output system.

WORK SUPPORT MODE

Refer to WT-28, "Special Repair Requirement".

SELF-DIAG RESULTS MODE

Refer to BCS-142, "DTC Index".

DATA MONITOR MODE

Screen of data monitor mode is displayed.

NOTE:

When malfunction is detected, CONSULT-III perform REAL-TIME DIAGNOSIS.

Also, any malfunction detected while in this mode will be displayed at real time.

Monitor item (Unit)	Remark	
AIR PRESS FL (kPa), (kg/cm ²), (Psi)		
AIR PRESS FR (kPa), (kg/cm ²), (Psi)	Air pressure of tires	
AIR PRESS RR (kPa), (kg/cm ²), (Psi)	Air pressure of tires	
AIR PRESS RL (kPa), (kg/cm²), (Psi)		
ID REGST FL1		
ID REGST FR1	ID is registered: Done	
ID REGST RR1	ID is not registered: Yet	
ID REGST RL1		
WARNING LAMP	Low tire pressure warning lamp ON: On Low tire pressure warning lamp OFF: Off	
BUZZER	Combination meter buzzer ON: On Combination meter buzzer OFF: Off	

NOTE:

Before performing the self-diagnosis, be sure to register the ID, or erase the actual malfunction location may be different from that displayed on CONSULT-III.

ACTIVE TEST MODE

NOTE:

Before performing the self-diagnosis, be sure to register the ID, or erase the actual malfunction may be different from that displayed on CONSULT-III.

TEST ITEM LIST

Test item	Content		
WARNING LAMP	This test is able to check to check that the low tire pressure warning lamp turns on.		
ID REGIST WARNING	This test is able to check to check that the buzzer sounds or the low tire pressure warning lamp turns on.		
RUN FLAT TIRE W/L	NOTE: This item is displayed, but cannot be use this item.		
FLASHER	This test is able to check to check that each turn signal lamp turns on.		
HORN	This test is able to check to check that the horn sounds.		

PANIC ALARM

PANIC ALARM : CONSULT-III Function (BCM - PANIC ALARM)

CTIVE TEST

ACTIVE TEST

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< SYSTEM DESCRIPTION >

Test item	Description
VEHICLE SECURITY HORN	This test is able to check horn operation. Horn is activated for 0.5 seconds after "ON" on CONSULT-III screen touched.
HEAD LAMP (HI)	This test is able to check headlamp (HI) operation. Headlamps (HI) will be activated after "ON" on CONSULT-III screen touched.

U1000 CAN COMM

[WITHOUT INTELLIGENT KEY SYSTEM]

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM

Description INFOID:000000005490468

CAN (Controller Area Network) is a serial communication line for real time applications. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Modern vehicle is equipped with many electronic control unit, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN-H line, CAN-L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only. CAN Communication Signal Chart. Refer to LAN-23, "CAN Communication Signal Chart".

DTC Logic

DTC DETECTION LOGIC

DTC	DTC Detection Condition	Possible cause
U1000: CAN COMM	When BCM cannot communicate CAN communication signal continuously for 2 seconds or more.	CAN communication system

Diagnosis Procedure

INFOID:0000000005490470

1.PERFORM SELF DIAGNOSTIC

- 1. Turn ignition switch ON and wait for 2 seconds or more.
- 2. Check "Self Diagnostic Result" of BCM.

Is "CAN COMM CIRCUIT" displayed?

YES >> Refer to LAN-14, "Trouble Diagnosis Flow Chart".

NO >> Refer to GI-35, "Intermittent Incident".

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U1010 CONTROL UNIT (CAN)

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

U1010 CONTROL UNIT (CAN)

DTC Logic

DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC Detection Condition	Possible cause
U1010	CONTROL UNIT (CAN)	BCM detected internal CAN communication circuit malfunction.	BCM

Diagnosis Procedure

INFOID:0000000005490472

1.REPLACE BCM

When DTC "U1010" is detected, replace BCM.

>> Replace BCM. Refer to BCS-146, "Exploded View".

C1735 IGN CIRCUIT OPEN

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

C1735 IGN CIRCUIT OPEN

DTC Logic

DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC Detection Condition	Possible cause	
C1735	IGN CIRCUIT OPEN	Detected following signals are different for 2 seconds; Ignition switch ON signal inputted from ignition switch Ignition relay status signal received from IPDM E/R with CAN communication	Harness or connector (Ignition power supply circuit) BCM IPDM E/R	

NOTE:

BCM may detect that ignition switch is OFF when IGN power supply voltage is low.

DTC CONFIRMATION PROCEDURE

1.DTC CONFIRMATION

- 1. Erase DTC.
- Turn the ignition switch OFF.
- 3. Perform the "Self Diagnostic Result" of CONSULT-III, when passed 2 seconds or more after the ignition switch is turned ON.

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Is any DTC detected?

YES >> Refer to <u>BCS-117</u>, "<u>Diagnosis Procedure</u>".

NO >> INSPECTION END

Diagnosis Procedure

1. CHECK BCM IGNITION POWER SUPPLY CIRCUIT

Check BCM ignition power supply circuit. Refer to BCS-118, "Diagnosis Procedure".

Is the circuit normal?

YES >> GO TO 2.

NO >> Repair the malfunctioning part.

2.CHECK IPDM E/R POWER SUPPLY CIRCUIT

Check IPDM E/R power supply circuit. Refer to PCS-49, "Diagnosis Procedure".

Is the circuit normal?

YES >> GO TO 3.

NO >> Repair the malfunctioning part.

3.CHECK IPDM E/R IGNITION RELAY STATUS

(E)CONSULT-III DATA MONITOR

- 1. Select "IGN RLY" of IPDM E/R data monitor item.
- 2. With operating the ignition switch, check the monitor status.

Monitor item	Condition		Monitor status
IGN RLY Ignition switch	lanition switch	OFF	Off
	ON	On	

Is the item status normal?

YES >> Replace BCM. Refer to BCS-146, "Exploded View".

NO >> Replace IPDM E/R. Refer to PCS-64. "Exploded View".

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2010 Z12

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

POWER SUPPLY AND GROUND CIRCUIT

Diagnosis Procedure

INFOID:0000000005490475

1. CHECK FUSES AND FUSIBLE LINK

Check that the following fuses and fusible link are not fusing.

Signal name	Fuses and fusible link No.
Rattony powor cumply	8
Battery power supply	G
ACC power supply	20
Ignition power supply	2

Is the fuse fusing?

YES >> Replace the blown fuse or fusible link after repairing the affected circuit if a fuse or fusible link is

NO >> GO TO 2.

2. CHECK POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect BCM connectors.
- 3. Check voltage between BCM harness connector and ground.

Terminals			Ignition switch position		
(+)			ignition switch position		
BCM		(-)	OFF	ACC	ON
Connector	Terminal		OFF	ACC	ON
M67	70		Battery	Battery	Battery
	57		voltage	voltage volt	voltage
M65	11	Ground	Approx. 0 V	Battery voltage	Battery voltage
IVIOS	38		Approx. 0 V	Approx. 0 V	Battery voltage

Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

В	CM		Continuity	
Connector Terminal		Ground	Continuity	
M67	67		Existed	

Does continuity exist?

YES >> INSPECTION END

NO >> Repair harness or connector.

COMBINATION SWITCH OUTPUT CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

COMBINATION SWITCH OUTPUT CIRCUIT

Diagnosis Procedure

INFOID:0000000005490476

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1. CHECK OUTPUT 1 - 5 CIRCUIT FOR OPEN

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM and combination switch connectors.
- 3. Check continuity between BCM harness connector and combination switch harness connector.

System	BCM		Combinat	Continuity	
System	Connector Terminal		Connector	Terminal	Continuity
OUTPUT 1		36		11	
OUTPUT 2		35		9	
OUTPUT 3	M65	34	M27	7	Existed
OUTPUT 4		33		10	
OUTPUT 5		32		13	

Does continuity exist?

YES >> GO TO 2.

NO >> Repair harnesses or connectors.

2.CHECK OUTPUT 1 - 5 CIRCUIT FOR SHORT

Check for continuity between BCM harness connector and ground.

System	В	CM		Continuity
System	Connector Terminal			Continuity
OUTPUT 1		36		
OUTPUT 2		35	Ground	
OUTPUT 3	M65	34		Not existed
OUTPUT 4		33		
OUTPUT 5		32		

Does continuity exist?

YES >> Repair harnesses or connectors.

NO >> GO TO 3.

3.CHECK BCM OUTPUT VOLTAGE

- 1. Connect BCM connector.
- 2. Check voltage between BCM harness connector and ground.

		Terminals					
•	(+)	(-)	Voltage			
System	ВСМ			(Approx.)			
	Connector	Terminal					
OUTPUT 1		36					
OUTPUT 2		35		(V) 15			
OUTPUT 3		34	Ground	10 5			
OUTPUT 4	M65	33		0			
OUTPUT 5		32		+ + 10ms PKIB4960			
				1.13 6.6 1			

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Is the measurement value normal?

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COMBINATION SWITCH OUTPUT CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

YES >> Replace combination switch.

NO >> Replace BCM. Refer to BCS-146, "Exploded View".

COMBINATION SWITCH INPUT CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

COMBINATION SWITCH INPUT CIRCUIT

Diagnosis Procedure

INFOID:0000000005490477

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1. CHECK INPUT 1 - 5 CIRCUIT FOR OPEN

- Turn ignition switch OFF.
- 2. Disconnect BCM and combination switch connectors.
- 3. Check continuity between BCM harness connector and combination switch harness connector.

System	BCM		Combinat	Continuity	
System	Connector Terminal		Connector	Terminal	Continuity
INPUT 1		6		12	
INPUT 2		5		14	
INPUT 3	M65	4	M27	5	Existed
INPUT 4		3		2	
INPUT 5		2		8	

Does continuity exist?

YES >> GO TO 2.

NO >> Repair harnesses or connectors.

2.CHECK INPUT 1 - 5 CIRCUIT FOR SHORT

Check for continuity between BCM harness connector and ground.

System	В	CM		Continuity	
System	Connector Terminal			Continuity	
INPUT 1		6			
INPUT 2		5	Ground		
INPUT 3	M65	4		Not existed	
INPUT 4		3			
INPUT 5		2			

Does continuity exist?

YES >> Repair harnesses or connectors.

NO >> GO TO 3.

3. CHECK BCM INPUT SIGNAL

- 1. Connect BCM and combination switch connectors.
- 2. Turn ON any switch in the system that is malfunction.
- 3. Check voltage between BCM harness connector and ground.

System	(+	-)	(-)	Voltage
System	BCM			(Approx.)
	Connector	Terminal		
INPUT 1		6		
INPUT 2		5	Ground	Refer to BCS-
INPUT 3	M65	4		123, "Refer-
INPUT 4		3		ence Value".
INPUT 5		2		

Is the measurement value normal?

Yes >> Replace BCM. Refer to BCS-146, "Exploded View".

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COMBINATION SWITCH INPUT CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

No >> Replace combination switch.

< ECU DIAGNOSIS INFORMATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)

Reference Value

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
IGN ON SW	Ignition switch OFF or ACC	Off
IGN ON SW	Ignition switch ON	On
KEY ON SW	Mechanical key is removed from key cylinder	Off
RET ON SW	Mechanical key is inserted to key cylinder	On
CDL LOCK SW	Door lock/unlock switch does not operate	Off
CDL LOCK SW	Press door lock/unlock switch to the lock side	On
CDL UNLOCK SW	Door lock/unlock switch does not operate	Off
CDL ONLOCK SW	Press door lock/unlock switch to the unlock side	On
DOOR SW-DR	Driver's door closed	Off
DOOK SW-DK	Driver's door opened	On
DOOR SW-AS	Passenger door closed	Off
DOOR SW-AS	Passenger door opened	On
DOOD CW DD	Rear RH door closed	Off
DOOR SW-RR	Rear RH door opened	On
DOOD SW DI	Rear LH door closed	Off
DOOR SW-RL	Rear LH door opened	On
D40// D00D 0///	Back door closed	Off
BACK DOOR SW	Back door opened	On
LOCK STATUS	NOTE: The item is indicated, but not monitored.	Off
	Ignition switch OFF	Off
ACC ON SW	Ignition switch ACC or ON	On
KEVI 500 L 00K	"LOCK" button of key fob is not pressed	Off
KEYLESS LOCK	"LOCK" button of key fob is pressed	On
WEV! 500 HNII 00K	"UNLOCK" button of key fob is not pressed	Off
KEYLESS UNLOCK	"UNLOCK" button of key fob is pressed	On
SHOCK SENSOR	NOTE: The item is indicated, but not monitored.	NORMAL
14574 0741 144 0744	Other than driver door key cylinder LOCK position	Off
KEY CYL LK-SW	Driver door key cylinder LOCK position	On
14574 074 1181 0744	Other than driver door key cylinder UNLOCK position	Off
KEY CYL UN-SW	Driver door key cylinder UNLOCK position	On
VEHICLE SPEED	While driving	Equivalent to speed- ometer reading
DEAD DEE COM	Rear window defogger switch OFF	Off
REAR DEF SW	Rear window defogger switch ON	On
	NOTE:	Off
REVERSE SW CAN	The item is indicated, but not used.	On

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< ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
TAIL LAMP SW	Lighting switch OFF	Off
AIL LAWIF SW	Lighting switch 1ST	On
R FOG SW	Front fog lamp switch OFF	Off
R FOG SW	Front fog lamp switch ON	On
NICKI E CW	The seat belt (driver side) is fastened. [Seat belt switch (driver side) OFF]	Off
BUCKLE SW	The seat belt (driver side) is unfastened. [Seat belt switch (driver side) ON]	On
RNK/HAT MNTR	NOTE: The item is indicated, but not monitored.	Off
ACC SW	Off	
100 011	Ignition switch ACC or ON	On
(YLS TRNK/HAT	NOTE: The item is indicated, but not monitored.	Off
(EYLESS PANIC	PANIC button of key fob is not pressed	Off
L I LEGO PAINIC	PANIC button of key fob is pressed	On
II DEAM CW	Lighting switch OFF	Off
II BEAM SW	Lighting switch HI	On
IEAD LAMB OV	Lighting switch OFF	Off
IEAD LAMP SW 1	Lighting switch 2ND	On
	Lighting switch OFF	Off
IEAD LAMP SW 2	Lighting switch 2ND	On
ALITO L IOLIT OW	Lighting switch OFF	Off
UTO LIGHT SW	Lighting switch AUTO	On
PASSING SW	Other than lighting switch PASS	Off
	Lighting switch PASS	On
RR FOG SW	NOTE: The item is indicated, but not monitored.	Off
	Turn signal switch OFF	Off
URN SIGNAL R	Turn signal switch RH	On
	Turn signal switch OFF	Off
URN SIGNAL L	Turn signal switch LH	On
	Parking brake switch is OFF	Off
PKB SW	Parking brake switch is ON	On
	Engine stopped	Off
NGINE RUN	Engine running	On
	Bright outside of the vehicle	Close to 5 V
OPTI SEN (DTCT)	Dark outside of the vehicle	Close to 0 V
	Bright outside of the vehicle (Lighting switch AUTO)	Close to 5 V
OPTI SEN (FILT)	Dark outside of the vehicle (Lighting switch AUTO)	Close to 1.50 \
IG SEN COND	NOTE: The item is indicated, but not monitored.	OFF
	Ignition switch OFF or ACC	Off
GN SW CAN	Ignition switch ON	On
	Front wiper switch OFF	Off
R WIPER HI	Front wiper switch HI	On
	Front wiper switch OFF	Off

< ECU DIAGNOSIS INFORMATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Monitor Item	Condition	Value/Status
FR WIPER INT	Front wiper switch OFF	Off
N WIFEN IN	Front wiper switch INT	On
FR WASHER SW	Front washer switch OFF	Off
K WASHEK SW	Front washer switch ON	On
NT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7
ED WIDED STOD	Any position other than front wiper stop position	Off
FR WIPER STOP	Front wiper stop position	On
DD WIDED ON	Rear wiper switch OFF	Off
RR WIPER ON	Rear wiper switch ON	On
DD WIDED INT	Rear wiper switch OFF	Off
RR WIPER INT	Rear wiper switch INT	On
D MACHED OM	Rear washer switch OFF	Off
RR WASHER SW	Rear washer switch ON	On
DD MUDED OTOD	Rear wiper stop position	Off
RR WIPER STOP	Other than rear wiper stop position	On
RAIN SENSOR	NOTE: The item is indicated, but not monitored.	Off
	Hazard switch OFF	Off
HAZARD SW	Hazard switch ON	On
FAN ON SIG	Blower control dial OFF	Off
	Other than blower control dial OFF	On
	 Air conditioner OFF (A/C switch indicator OFF) (Automatic air conditioner) A/C switch OFF (Manual air conditioner) 	Off
AIR COND SW	Air conditioner ON (A/C switch indicator ON) (Automatic air conditioner) A/C switch ON (Manual air conditioner)	On
THERMO AMP	Ignition switch ON	Off
NOTE: At models with automatic hir conditioner this item is not monitored. Evaporator is extremely low temperature		On
D DEE CW	Other than A/C mode defroster ON position	Off
FR DEF SW	A/C mode defroster ON position	On
KEYLESS TRUNK	NOTE: The item is indicated, but not monitored.	Off
FRNK OPNR SW	NOTE: The item is indicated, but not monitored.	Off
TRNK OPN MNTR	NOTE: The item is indicated, but not monitored.	Off
100D 6M	Close the hood	Off
HOOD SW	Open the hood	On
DANODONDED	Other than the ignition switch is ON by key registered to BCM.	Off
RANSPONDER	The ignition switch is ON by key registered to BCM.	On
NTELLI KEY	NOTE: The item is indicated, but not used.	Off
AUTO RELOCK	NOTE: The item is indicated, but not monitored.	Off

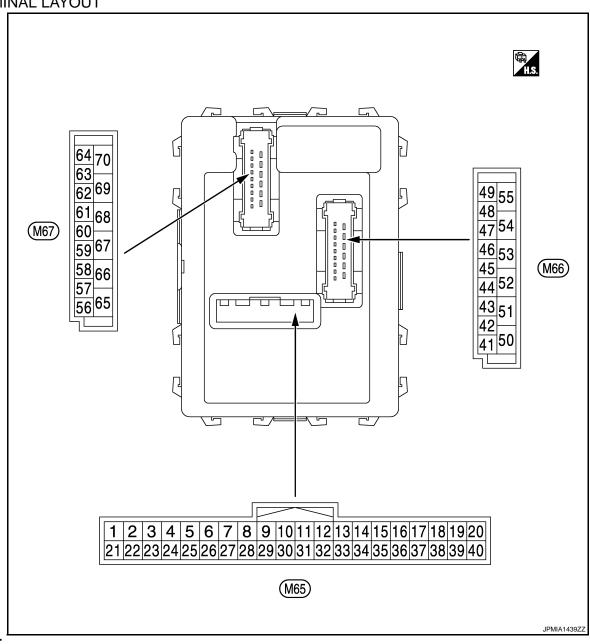
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< ECU DIAGNOSIS INFORMATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Monitor Item	Condition	Value/Status
OIL PRESS SW	Ignition switch OFF or ACCEngine running	Off
	Ignition switch ON	On
BRAKE SW	Brake pedal is not depressed	Off
DIVARLE SW	Brake pedal is depressed	On

TERMINAL LAYOUT



NOTE:

M65, M66: WhiteM67: Black

PHYSICAL VALUES

	nal No.	Description	Ti-			Value		
+ (vvire	color)	Signal name	Input/ Output		Condition	(Approx.)		
					All switch OFF	0 V		
					Turn signal switch RH			
					Lighting switch HI	(V) 15 10		
2 (BR/W)	Ground	Combination switch INPUT 5	Input	Combination switch (Wiper intermit-	Lighting switch 1ST	10 5 0 PKIB4958J		
(2.000)				tent dial 4)		Lighting switch 2ND	(V) 15 10 5 0 ++10 ms JPMIA0342JP 2.0 V	
					All switch OFF	0 V		
					Turn signal switch LH			
					Lighting switch PASS	(V) 15		
3 (GR)	Ground	Combination switch Input	d Combination switch INPUT 4	nbination switch Input switch	Combination switch sw	Combination switch (Wiper intermit-	Lighting switch 2ND	PKIB4958J
(3.1)				tent dial 4)	Front fog lamp switch ON	(V) 15 10 5 0 ++10ms PKIB4956J 0.8 V		
					All switch OFF	0 V		
					Front wiper switch LO			
				Combination	Front wiper switch MIST	(V) 15		
4	C==:::::::	Combination switch	lat	switch	Front wiper switch INT	10		
(L/Y) Ground INPUT 3 Input (Wiper in		(Wiper intermittent dial 4)	Lighting switch AUTO	0 → +10ms				
						PKIB4958J 1.0 V		

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value
+ (Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF (Wiper intermittent dial 4)	0 V
					Front washer switch (Wiper intermittent dial 4)	(V) 15
					Rear washer switch ON (Wiper intermittent dial 4)	10
					Any of the condition below with all switch OFF	→ +10ms
5 (G)	Ground	Combination switch INPUT 2	Input	Combination switch	Wiper intermittent dial 1Wiper intermittent dial 5Wiper intermittent dial 6	РКIВ4958J 1.0 V
					Rear wiper switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 PKIB4956J
					All switch OFF	0.8 V
					(Wiper intermittent dial 4) Front wiper switch HI	0 V
					(Wiper intermittent dial 4)	(V) 15
					Rear wiper switch INT (Wiper intermittent dial 4)	10 5 0
					Wiper intermittent dial 3 (All switch OFF)	→ +10ms PKIB4958J
6 (L/R)	Ground	Combination switch INPUT 1	Input	Combination switch	Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2	(V) 15 10 5 0 ++10ms PKIB4952J 1.9 V
					Any of the condition below with all switch OFF • Wiper intermittent dial 6 • Wiper intermittent dial 7	(V) 15 10 5 0 PKIB4956J 0.8 V

< ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description				Value	
+ (Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)	
7 (W/R)	Ground	Door key cylinder switch UNLOCK	Input	Door key cylinder switch	NEUTRAL position	(V) 15 10 5 0 + 10ms PKIB4960J 7.0 - 8.0 V	
					UNLOCK position	0 V	
8	Ground	Door key cylinder	Input	Door key cylin-	NEUTRAL position	12 V	
(W/B)		switch LOCK	'	der switch	LOCK position	0 V	
9	0	Oton losses surfect	1	Stop lamp	OFF (Brake pedal is not depressed)	0 V	
(R)	Ground	Stop lamp switch	Input	switch	ON (Brake pedal is depressed)	Battery voltage	
10	Ground	Rear window defog-	Input	Rear window	OFF (Not pressed)	12 V	
(W/L)		ger switch		defogger switch	ON (Pressed)	0 V	
11	Ground	Ignition switch ACC	Input	Ignition switch O		0 V	
(L/Y)		-	•	Ignition switch ACC or ON		Battery voltage	
12 (SB)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closed)	(V) 15 10 5 0 + 10ms PKIB4960J 7.0 - 8.0 V	
					ON (When passenger door opened)	0 V	
13 (GR/L)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (When rear RH door closed)	(V) 15 10 5 0 + 10ms PKIB4960J 7.0 - 8.0 V	
					ON (When rear RH door opened)	0 V	
14	Ground	Optical sensor	Input	Ignition switch	When bright outside of the vehicle	Close to 5 V	
(L/B)		- 1- 11-211 - 2-11-30		ON	When dark outside of the vehicle	Close to 0 V	

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value
+ (vvire	color)	Signal name	Input/ Output		Condition	(Approx.)
15 (V/W)	Ground	Tire pressure warning check switch	Input	Ignition switch C	FF	(V) 15 10 5 0 10 ms JPMIA0012GB 1.0 - 1.5 V
17 (R/G)	Ground	Optical sensor pow- er supply	Output	Ignition switch	OFF, ACC	0 V 5 V
18 (V)	Ground	Receiver and sensor ground	Input	Ignition switch C	N	0 V
					Insert mechanical key into ignition key cylinder	0 V
	19 (BR) Ground Remote keyless en try receiver power supply			Ignition switch OFF	Remove mechanical key from ignition key cylinder (Any door opened)	5 V
			Input		Remove mechanical key from ignition key cylinder (Any door closed)	(V) 6 4 2 0 **0.2.5 JPMIA0338JP
					Insert mechanical key into ignition key cylinder	0 V
20 (G/Y)	Ground	Remote keyless entry receiver communication	Input	Ignition switch OFF	Waiting	(V) 6 4 2 0 •••1,0ms
					Signal receiving	(V) 6 4 2 0 •••1,0ms
21 (P/L)	Ground	Immobilizer anten- na (Clock)	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.

< ECU DIAGNOSIS INFORMATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description				Value	
+ (vvire	–	Signal name	Input/ Output	Condition		(Approx.)	Α
					ON	0 V	В
23 (R/Y)	Ground	Security indicator	Input	Security indicator	Blinking (Ignition switch OFF)	(V) 15 10 5 0 1 s JPMIA0014GB	C
					OFF	12 V	_
24 (GR/R)	Ground	Dongle link	Input/ Output	Ignition switch O	FF	5 V	Е
25 (LG)	Ground	Immobilizer anten- na (Rx, Tx)	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.	F
26* ¹	Cround	Thermo control amp.	Input	Ignition switch O	N	0 V	
(GR)	Ground	mermo control amp.	input	Evaporator is ex	tremely low temperature	12 V	G
		A/C switch (Auto- matic air condition- er)		A/C	OFF (A/C switch indicator: OFF)	(V) 15 10 5 10 ms JPMIA0012GB 1.0 - 1.5 V	Н
27 (Y/G)* ²	Ground		Input		ON (A/C switch indicator: ON)	0 V	J
(Y/R)* ³	3.3.3	A/C switch (Manual c air conditioner)		A/C switch	OFF	(V) 15 10 10 ms 1.0 - 1.5 V	K L
				ON	0 V		

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	nal No.	Description				Value	
(Wire	color)	Signal name	Input/ Output	Condition		(Approx.)	
<u> </u>			Output		Blower fan switch OFF	0 V	
28	Ground	Blower fan switch (Automatic air condi- tioner)	Input	Fan switch	Blower fan switch ON	(V) 15 10 5 0 ++10ms PKIB4960J 7.0 - 8.0 V	
(G/W)		Blower fan switch (Manual air condi- tioner)	при	Fan switch	Blower fan switch OFF	(V) 15 0 5 0 + 10ms PKIB4960J 7.0 - 8.0 V	
					Blower fan switch ON	0 V	
29 (L/W)	Ground	Hazard switch	Input	Hazard switch	OFF	Battery voltage	
					ON A/C mode defroster ON position	0 V 0 V	
31 (G/Y)	Ground	Front defroster switch	Input	Ignition switch ON	Other than A/C mode de- froster ON position	(V) 15 10 5 0 FINAL PRINCIPLE OF THE PRI	
22		Combination switch		Combination	All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 → 10ms PKIB4960J 7.0 - 8.0 V	
32 (LG)	Ground	d Combination switch OUTPUT 5	Output	Combination switch	Front fog lamp switch ON (Wiper intermittent dial 4) Rear wiper switch ON (Wiper intermittent dial 4) Any of the condition below with all switch OFF Wiper intermittent dial 1 Wiper intermittent dial 2 Wiper intermittent dial 6 Wiper intermittent dial 7	(V) 15 10 5 0 ++10ms PKIB4956J 1.0 V	

< ECU DIAGNOSIS INFORMATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description				Value	
(VVire	color)	Signal name	Input/ Output		Condition	(Approx.)	
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 ++10ms PKIB4960J 7.0 - 8.0 V	
33 (Y/L)	Ground	Combination switch OUTPUT 4	Output	Combination switch	Lighting switch 1ST (Wiper intermittent dial 4)		
, ,					Lighting switch AUTO (Wiper intermittent dial 4)	(V) 15 10	
					Rear wiper switch INT (Wiper intermittent dial 4)	1.2 V	
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6		
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 + 10ms PKIB4960J 7.0 - 8.0 V	
34 (W)	Ground	Combination switch OUTPUT 3	Output	Combination switch	Lighting switch 2ND (Wiper intermittent dial 4)	7.5 2.5 1	
		· · · ·			Lighting switch HI (Wiper intermittent dial 4)	(V) 15	
					Rear washer switch ON (Wiper intermittent dial 4)	0	
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	PKIB4958J	

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< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value
+ (Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
35	0	Combination switch	0.4.4	Combination switch	All switch OFF	(V) 15 10 5 0 + 10ms PKIB4960J 7.0 - 8.0 V
(R/L)	Ground	OUTPUT 2	Output	(Wiper intermit- tent dial 4)	Lighting switch 2ND	
				terit diai 4)	Lighting switch PASS	(V) 15
					Front wiper switch INT	10
					Front wiper switch HI	0 → →10ms PKIB4958J
36	Ground	Combination switch OUTPUT 1	Output	Combination switch	All switch OFF	(V) 15 10 5 0 + 10ms PKIB4960J 7.0 - 8.0 V
(L/O)				(Wiper intermit- tent dial 4)	Turn signal switch RH	(V)
					Turn signal switch LH	(V) 15 10
					Front wiper switch LO (Front wiper switch MIST)	5 0
					Front washer switch ON	PKIB4958J
37	Cround	Kov oviteh	lmmut	Insert mechanica	al key into ignition key cylin-	Battery voltage
(R/W)	Ground	Key switch	Input	Remove mechar cylinder	nical key from ignition key	0 V
38	Ground	Ignition switch ON	Input	Ignition switch O	FF or ACC	0 V
(O)	Cround	19/11tion Switch ON	input	Ignition switch O	N	Battery voltage
39 (L)	Ground	CAN-H	Input/ Output	_		_
40 (P)	Ground	CAN-L	Input/ Output		_	_

< ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description	Description		O It's	Value
+	–	Signal name	Input/ Output		Condition	(Approx.)
43 (W)	Ground	Back door switch	Input	Back door switch	OFF (When back door closed)	(V) 15 10 5 0 ++10ms PKIB4960J
					ON (When back door opened)	7.0 - 8.0 V
					Rear wiper stop position	12 V
44 (LG)	Ground	Rear wiper stop position	Input	Ignition switch ON	Any position other than rear wiper stop position	0 V
45 (GR)	Ground	Door lock and unlock switch LOCK	Input	Door lock and unlock switch	NEUTRAL position	(V) 15 10 5 0 10 ms JPMIA0012GB 1.0 - 1.5 V
					LOCK position	0 V
46 (BR)	Ground	Door lock and unlock switch UNLOCK	Input	Door lock and unlock switch	NEUTRAL position	(V) 15 10 5 10 ms JPMIA0012GB 1.0 - 1.5 V
					UNLOCK position	0 V
47 (BR/Y)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closed)	(V) 15 10 5 0 → 10ms PKIB4960J 7.0 - 8.0 V
					ON (When driver door opened)	0 V

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value
(Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
48 (W/G)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (When rear LH door closed)	(V) 15 10 5 0 + 10ms PKIB4960J 7.0 - 8.0 V
					ON (When rear LH door opened)	0 V
50* ¹ (SB)	Ground	A/C indicator	Output	A/C indicator	OFF ON	12 V 0 V
54	0	December	0	Ignition switch	Rear wiper switch OFF	0 V
(L/W)	Ground	Rear wiper	Output	ON	Rear wiper switch ON	12 V
					np battery saver is activated. room lamp power supply)	0 V
56 (L)	Ground	Interior room lamp power supply	Output	vated.	np battery saver is not acti- rior room lamp power sup-	12 V
57 (Y)	Ground	Battery power sup- ply	Input	Ignition switch O	FF	Battery voltage
59	Ground	Driver door UN-	Output	Driver door	UNLOCK (Actuator is activated)	12 V
(L/B)	Giodila	LOCK	Carpar	Driver door	Other then UNLOCK (Actuator is not activated)	0 V
60 (W/B)	Ground	Turn signal LH	Output	Ignition switch ON	Turn signal switch OFF Turn signal switch LH	0 V (V) 15 10 5 0 PKIC6370E
					Turn signal switch OFF	0 V
61 (W/L)	Ground	Turn signal RH	Output	Ignition switch ON	Turn signal switch RH	(V) 15 10 5 0 1s 1s PKIC6370E
63		Interior room lamp	0	Interior room	OFF	12 V
(BR)	Ground	timer control	Output	lamp	ON	0 V

< ECU DIAGNOSIS INFORMATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

	erminal No. Description					Value
+ (Wire	color)	Signal name	Input/ Output	put/ Condition (Approx.)		(Approx.)
65	Cround	All doors I OCK	Quitnut	All doors	LOCK (Actuator is activated)	12 V
(V)	(-round All doore CK	Output	All doors	Other then LOCK (Actuator is not activated)	0 V	
66	Cround	und Passenger door and rear door UNLOCK	Output	put Passenger door and rear door	UNLOCK (Actuator is activated)	12 V
(G)	(G) Ground				Other then UNLOCK (Actuator is not activated)	0 V
67 (B)	Ground	Ground	Output	Ignition switch O	N	0 V
68 (L)	Ground	P/W power supply (IGN)	Output	Ignition switch ON		12 V
69 (L/W)	Ground	P/W power supply (BAT)	Output	Ignition switch OFF		12 V
70 (Y)	Ground	Battery power sup- ply	Input	Ignition switch OFF		Battery voltage

^{• *1:} Only manual air conditioner

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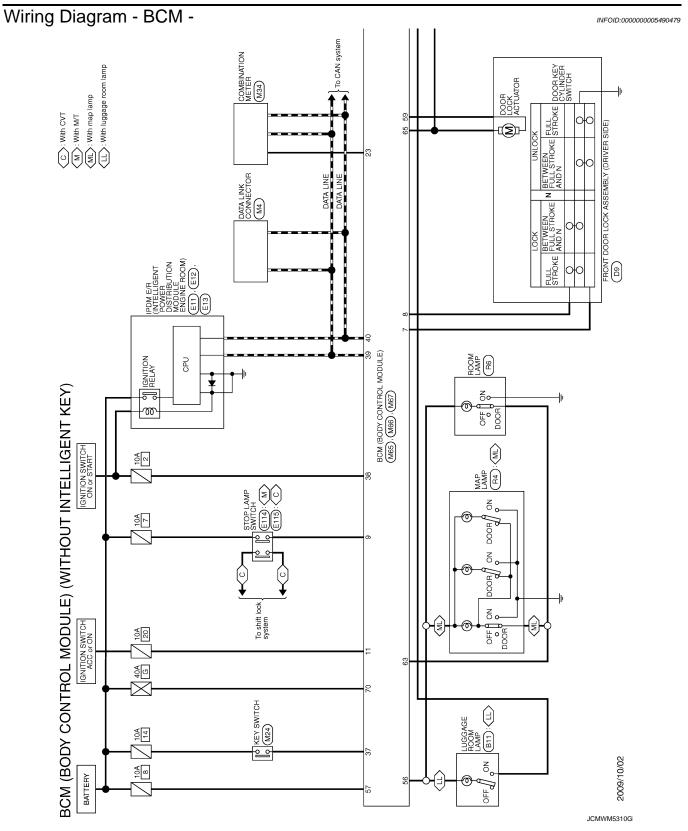
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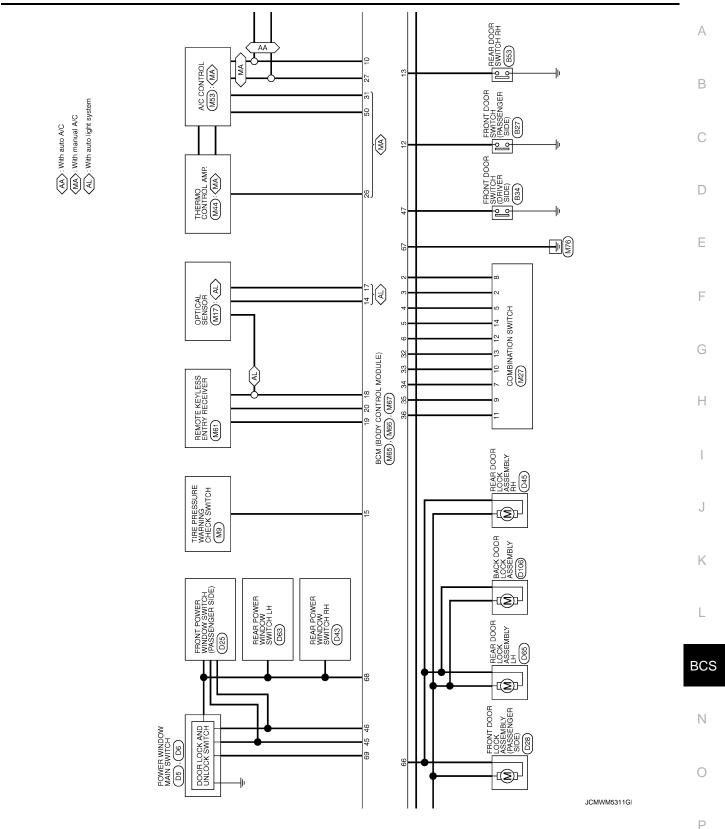
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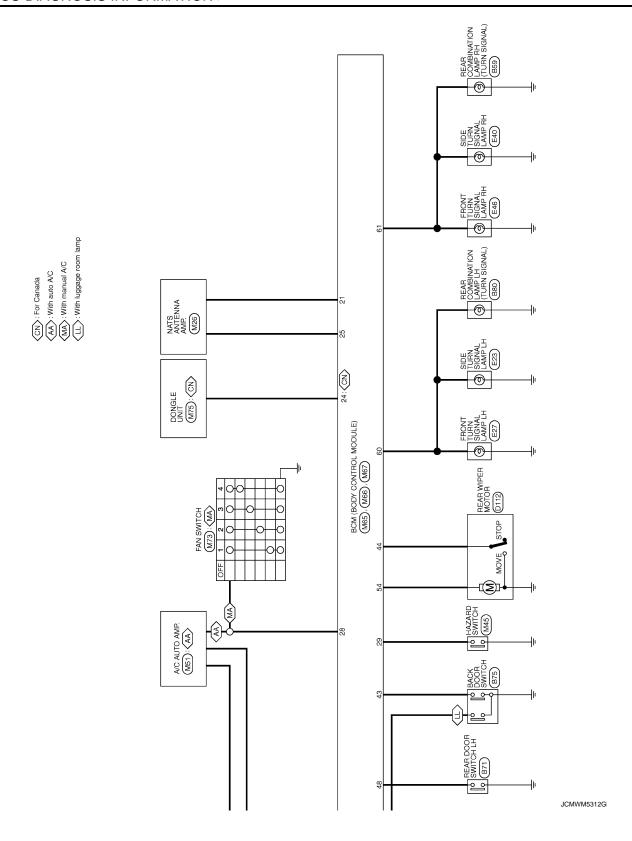
^{• *2:} Automatic air conditioner

^{• *3:} Manual air conditioner



< ECU DIAGNOSIS INFORMATION >





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FAIL-SAFE CONTROL BY DTC

Fail-safe

BCM performs fail-safe control when any DTC are detected.

< ECU DIAGNOSIS INFORMATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Display contents of CONSULT	Fail-safe	Cancellation
B2190: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI SCANNING	Inhibit engine cranking	Ignition switch $ON \to OFF$
B2196: DONGLE NG	Inhibit engine cranking	Erase DTC

REAR WIPER MOTOR PROTECTION

BCM detects the rear wiper stopping position according to the rear wiper auto stop signal.

When the rear wiper auto stop signal does not change more than 5 seconds while driving the rear wiper, BCM stops power supply to protect the rear wiper motor.

Condition of cancellation

- 1. Pass more than 1 minute after the rear wiper stop.
- Turn rear wiper switch OFF.
- Operate the rear wiper switch or rear washer switch.

DTC Inspection Priority Chart

INFOID:0000000005490481

If some DTCs are displayed at the same time, perform inspections one by one based on the following priority chart.

Priority	DTC
1	U1000: CAN COMM U1010: CONTROL UNIT (CAN)
2	B2190: NATS ANTENNA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM B2195: ANTI SCANNING B2196: DONGLE NG
3	C1735: IGN CIRCUIT OPEN
4	 C1704: LOW PRESSURE FL C1705: LOW PRESSURE FR C1706: LOW PRESSURE RR C1707: LOW PRESSURE RL C1708: [NO DATA] FL C1709: [NO DATA] FR C1710: [NO DATA] RR C1711: [NO DATA] RL C1716: [PRESSDATA ERR] FL C1717: [PRESSDATA ERR] FR C1718: [PRESSDATA ERR] RR C1719: [PRESSDATA ERR] RR C1729: VHCL SPEED SIG ERR C1734: CONTROL UNIT

DTC Index

NOTE:

Details of time display

- CRNT: Displays when there is a malfunction now or after returning to the normal condition until turning ignition switch OFF → ON again.
- 1 39: Displayed if any previous malfunction is present when current condition is normal. It increases like 1
 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. The counter
 remains at 39 even if the number of cycles exceeds it. It is counted from 1 again when turning ignition switch
 OFF → ON after returning to the normal condition if the malfunction is detected again.

< ECU DIAGNOSIS INFORMATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

CONSULT display	Fail-safe	Tire pressure monitor warn- ing lamp ON	Reference		
U1000: CAN COMM	_	_	BCS-115		
U1010: CONTROL UNIT (CAN)	_	_	BCS-116		
B2190: NATS ANTENNA AMP	×	_	SEC-219		
B2191: DIFFERENCE OF KEY	×	_	<u>SEC-222</u>		
B2192: ID DISCORD BCM-ECM	×	_	SEC-223		
B2193: CHAIN OF BCM-ECM	×	_	SEC-225		
B2195: ANTI SCANNING	×	_	SEC-226		
B2196: DONGLE NG	×	_	<u>SEC-227</u>		
C1704: LOW PRESSURE FL	_	×	<u>WT-30</u>		
C1705: LOW PRESSURE FR	_	×			
C1706: LOW PRESSURE RR	_	×			
C1707: LOW PRESSURE RL	_	×			
C1708: [NO DATA] FL	_	×			
C1709: [NO DATA] FR	_	×	<u>WT-32</u>		
C1710: [NO DATA] RR	_	×			
C1711: [NO DATA] RL	_	×			
C1716: [PRESS DATA ERR] FL	_	×			
C1717: [PRESS DATA ERR] FR	_	×	WT 25		
C1718: [PRESS DATA ERR] RR	_	×	<u>WT-35</u>		
C1719: [PRESS DATA ERR] RL	_	×			
C1729: VHCL SPEED SIG ERR	_	×	<u>WT-37</u>		
C1734: CONTROL UNIT	_	×	<u>WT-39</u>		
C1735: IGN CIRCUIT OPEN	_	_	BCS-117		

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PRECAUTIONS

[WITHOUT INTELLIGENT KEY SYSTEM]

PRECAUTION

PRECAUTIONS

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

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

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the "SRS AIR BAG".
- 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 Air Bag Diagnosis Sensor Unit or other Air Bag 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 3 minutes before performing any service.

COMBINATION SWITCH SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

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SYMPTOM DIAGNOSIS

COMBINATION SWITCH SYSTEM SYMPTOMS

Symptom Table

- 1. Perform "Data Monitor" of CONSULT-III to check for any malfunctioning item.
- 2. Check the malfunction combinations.

							Data	monito	r item								alfunction item: ×
FR WIPER HI	FR WIPER LOW	FR WASHER SW	FR WIPER INT	RR WIPER ON	RR WIPER INT	RR WASHER SW	INT VOLUME	TURN SIGNAL R	TURN SIGNAL L	TAIL LAMP SW	HI BEAM SW	HEAD LAMP SW 1	HEAD LAMP SW 2	PASSING SW	AUTO LIGHT SW	FR FOG SW	Malfunction combination
	×	×						×	×								А
×			×									×		×			В
						×	×				×		×				С
					×		×			×					×		D
				×			×									×	E
×					×		×										F
		×		×		×	×										G
	×		×												×		Н
									×				×	×		×	I
								×		×	×	×					J
1								All Item	S					•			K
If only one item is detected or the item is not applicable to the combinations A to K							L										

3. Identify the malfunctioning part from the agreed combination and repair or replace the part.

Malfunction combination	Malfunctioning part	Repair or replace				
А	Combination switch OUTPUT 1 circuit					
В	Combination switch OUTPUT 2 circuit					
С	Combination switch OUTPUT 3 circuit	Inspect the combination switch output circuit applicable to the malfun ing part. Refer to <u>BCS-119</u> , " <u>Diagnosis Procedure</u> ".				
D	Combination switch OUTPUT 4 circuit					
Е	Combination switch OUTPUT 5 circuit					
F	Combination switch INPUT 1 circuit					
G	Combination switch INPUT 2 circuit					
Н	Combination switch INPUT 3 circuit	Inspect the combination switch input circuit applicable to the malfunctioning part. Refer to BCS-121, "Diagnosis Procedure".				
I	Combination switch INPUT 4 circuit	part. Note: to <u>bee 121, blaghout recedire</u> .				
J	Combination switch INPUT 5 circuit					
K	ВСМ	Replace BCM. Refer to BCS-146, "Exploded View".				
L	Combination switch	Replace combination switch.				

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[WITHOUT INTELLIGENT KEY SYSTEM]

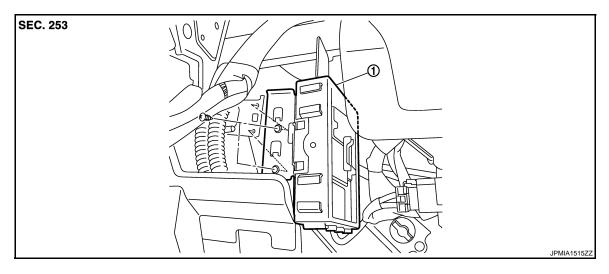
REMOVAL AND INSTALLATION

BCM (BODY CONTROL MODULE)

Exploded View

CAUTION:

Before replacing BCM, perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to <u>BCS-83</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM)</u>: <u>Description</u>".



1. BCM

Removal and Installation

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CAUTION:

Before replacing BCM, perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to <u>BCS-83</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM)</u>: <u>Description</u>".

REMOVAL

- Remove knee protector. Refer to <u>IP-12</u>, "Exploded View".
- 2. Remove fuse block (J/B).
- 3. Remove harness clip.
- Remove screws.
- Remove BCM and disconnect the connector.

INSTALLATION

Install in the reverse order of removal.

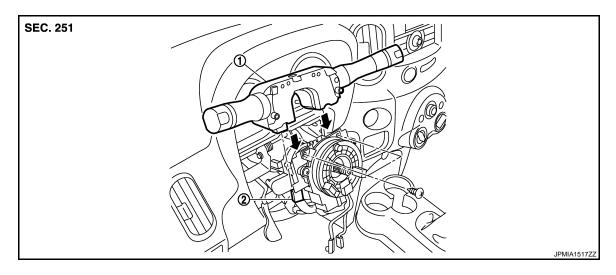
CAUTION:

- Be sure to perform "WRITE CONFIGURATION" when replacing BCM.
- Be sure to perform the system initialization (NATS) when replacing BCM. Refer to <u>BCS-83, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM): Special Repair Requirement".</u>

COMBINATION SWITCH

COMBINATION SWITCH

Exploded View



1. Combination switch

2. Combination switch connector

Removal and Installation

REMOVAL

- Remove steering column cover. Refer to <u>IP-12, "Exploded View"</u>.
- 2. Remove screws.
- 3. Disconnect the connector.
- 4. Pull up the combination switch to remove it.

INSTALLATION

Install in the reverse order of removal.

BCS

K

Α

В

D

Е

F

Н

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Ν

C

Р