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#### < BASIC INSPECTION >

## **BASIC INSPECTION**

### INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM)

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM): Description

INFOID:0000000006348514

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#### 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, always perform "WRITE CONFIGURATION" with CONSULT-III. Or not doing so, BCM control function does not operate normally.

• Complete the procedure of "WRITE CONFIGURATION" in order.

Configuration is different for each vehicle model. Confirm configuration of each vehicle model.

• If you set incorrect "WRITE CONFIGURATION", incidents might occur.

NOTE:

When replacing BCM, perform the system initialization (NATS).

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM): Work Procedure INFOID:0000000006348515

## 1. SAVING VEHICLE SPECIFICATION

©CONSULT-III Configuration

Perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to BCS-4, "CONFIGU-RATION (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 BCM

Replace BCM. Refer to BCS-86, "Exploded View".

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>> 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-4, "CONFIGURATION (BCM): Work Procedure".

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>> GO TO 4.

## 4.INITIALIZE BCM (NATS)

Perform BCM initialization. (NATS)

>> WORK END

CONFIGURATION (BCM)

BCS-3 Revision: 2011 October 2011 EX

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#### < BASIC INSPECTION >

## CONFIGURATION (BCM): Description

INFOID:0000000006348516

Vehicle specification needs to be written with CONSULT-III because it is not written after replacing BCM. Configuration has three functions as follows.

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

#### NOTE:

Manual setting item: Items which need selection by vehicle specifications

Automatic setting item: Items which are written in automatically (Setting can not be changed)

#### **CAUTION:**

When replacing BCM, always perform "WRITE CONFIGURATION" with CONSULT-III. Or not doing so, BCM control function does not operate normally.

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

### CONFIGURATION (BCM): Work Procedure

INFOID:0000000006348517

## 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"

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-5</u>, "CONFIGURATION (BCM): Configuration list."
- 3. Confirm and/or change setting value for each item.

#### **CAUTION:**

Thoroughly read and understand the vehicle specification. ECU control may not operate normally if the setting is not corret.

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.

When "COMMAND FINISHED", select "END".

>> GO TO 4.

#### 4. OPERATION CHECK

Confirm that each function controlled by BCM operates normally.

#### < BASIC INSPECTION >

>> WORK END

CONFIGURATION (BCM): Configuration list

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### **CAUTION:**

Thoroughly read and understand the vehicle specification. ECU control may not operate normally if the setting is not corret.

MANUAL SETTING ITEM		NOTE	
Items	Setting value	NOTE	
AUTO LIGHT	WITH	_	
DTRL	WITH ⇔ WITHOUT	WITH: With daytime running light system     WITHOUT: Without daytime running light system	

⇔: Items which confirm vehicle specifications

AUTO SETTING ITEM		NOTE
Items	Setting value	- NOTE
UNLOCK WITH SHOCK	WITHOUT	_
AUTO DOOR LOCK SPEED	MODE2	_
P-POS WARN	MODE1	_
ROOF FUNCTION	W/O REQ SW	_
BATTERY SAVER FUNCTION	MODE1	_
Trunk/Glass Hatch select	Glass Hatch	"Glass Hatch" is indicated also for vehicles without a glass hatch.
PANIC ALM TYPE	MODE1	_
TRANSIT MODE*	WITH	_
TR OPEN SW (INT)	MODE1	_
H/L BULB	DEFAULT	-
FR FOG LAMP	WITH	-
RR FOG LAMP	WITH	"WITH" is indicated also for vehicles without a rear fog lamp.
DI LMP VARIAT	MODE2	-
LIGHT RECOG	MODE7	_
TRANSMISSION	AT with ABS	_
RAIN SENSOR CONFIG	WITHOUT	_
REAR WIPER	WITH	-
THEFT ALM AREA	MODE2	_
H/L WASHER	MODE1	_
TR CANCEL SW	WITHOUT	-
BCM AC CONTROL	MODE1	_
WELCOME LIGHT TIMER2	MODE4	-
TPMS	WITH	_
TIRE PRESSURE	230kPa	_
FR FOG LOGIC	MODE1	_
AUTO LOCK&UNLOCK FUNC	WITH	_
AUTO DOOR LOCK SELECT	WITH	_
AUTO DOOR UNLOCK SELECT	WITH	_
FOG ON WITH AUTO LIGHT	WITHOUT	_
Key Fob Type	MODE9	_

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### < BASIC INSPECTION >

AUTO SETTING ITEM		NOTE
Items	Setting value	NOTE
DROP WIP FUNCTION	WITH	_
WELCOME LIGHT OP SET	WITH	_

#### NOTE:

<sup>\*:</sup> This item may not be displayed depending on vehicle specification.

#### TRANSIT MODE CANCEL OPERATION

#### < BASIC INSPECTION >

## TRANSIT MODE CANCEL OPERATION

Description INFOID:0000000007868409

- BCM is in transit mode if turn signal indicator on combination meter turns ON for 1 minute when ignition switch is turned from OFF to ON.
- In this case, cancel operation must be performed.

#### NOTE

Do not cancel transit mode during storage of the vehicle. Always cancel transit mode before delivery of the vehicle to customer.

Work Procedure

## 1. TRANSIT MODE CANCEL OPERATION

- 1. Turn ignition switch OFF.
- Turn and hold front wiper switch to HI, and then operate turn signal switch to RH or LH.

>> GO TO 2.

## 2.transit mode cancel check

- 1. Turn front wiper switch and turn signal switch OFF.
- 2. Turn ignition switch ON.
- 3. Check that turn signal indicator on combination meter does not turn ON.

>> WORK END

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Revision: 2011 October BCS-7 2011 EX

## SYSTEM DESCRIPTION

## **BODY CONTROL SYSTEM**

## System Description

#### INFOID:0000000006348519

#### **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-14, "System Diagram" (Xenon type headlamp)     EXL-227, "System Diagram" (Halogen type headlamp)		
Turn signal and hazard warning lamp system	EXL-26, "System Diagram" (Xenon type headlamp)     EXL-235, "System Diagram" (Halogen type headlamp)		
Headlamp system	EXL-11, "System Diagram" (Xenon type headlamp)     EXL-224, "System Diagram" (Halogen type headlamp)		
Parking, license plate and tail lamps system	EXL-28, "System Diagram" (Xenon type headlamp)     EXL-237, "System Diagram" (Halogen type headlamp)		
Front fog lamp system	<ul> <li><u>EXL-24, "System Diagram"</u> (Xenon type headlamp)</li> <li><u>EXL-233, "System Diagram"</u> (Halogen type headlamp)</li> </ul>		
Exterior lamp battery saver system	EXL-30, "System Diagram" (Xenon type headlamp)     EXL-239, "System Diagram" (Halogen type headlamp)		
Daytime running light system	<ul> <li><u>EXL-17, "System Diagram"</u> (Xenon type headlamp)</li> <li><u>EXL-230, "System Diagram"</u> (Halogen type headlamp)</li> </ul>		
Interior room lamp control system	INL-5, "System Diagram"		
Step lamp system			
Interior room lamp battery saver system	INL-9, "System Diagram"		
Front wiper and washer system	WW-5, "System Diagram"		
Rear wiper and washer system	WW-10. "System Diagram"		
Warning chime system	WCS-5, "WARNING CHIME SYSTEM : System Diagram"		
Door lock system	DLK-11, "System Diagram"		
Infiniti Vehicle Immobilizer System (IVIS) - NATS	SEC-16, "System Diagram"		
Vehicle security system	SEC-20, "System Diagram"		
Panic alarm	SEC-20, System Diagram		
Automatic drive positioner system	ADP-12, "AUTOMATIC DRIVE POSITIONER SYSTEM: System Diagram"		
Rear window defogger system	DEF-4, "System Diagram"		

## **BODY CONTROL SYSTEM**

### < SYSTEM DESCRIPTION >

System		Reference	
Intelligent Key system/engine start system	Door lock unlock function		
	Remote keyless function		
	Back door open function	DLV 45 "INTELLICENT VEV SYSTEM - System Diagram"	
	Warning function	DLK-15, "INTELLIGENT KEY SYSTEM : System Diagram"	
	Key reminder function		
	Engine start function		
Power window system		PWC-7, "System Diagram"	
Retained accessory power (RAP) system		PWC-7, "System Description"	
Tire pressure monitor system (TPMS) - AIR PRESSURE MONITOR		WT-7, "TIRE PRESSURE MONITORING SYSTEM : System Description"	

## Component Parts Location

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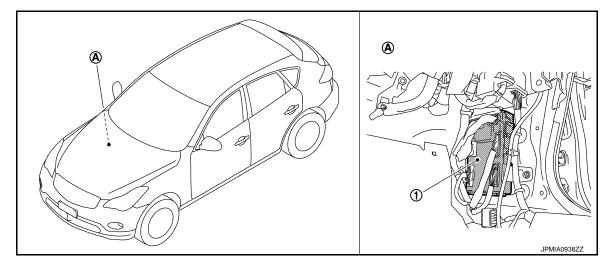
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- 1. BCM
- A. Dash side lower (passenger side)

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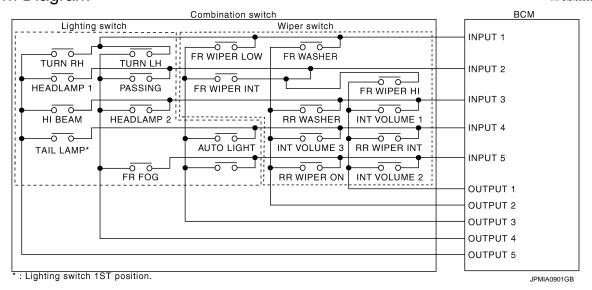
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## System Diagram

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## System Description

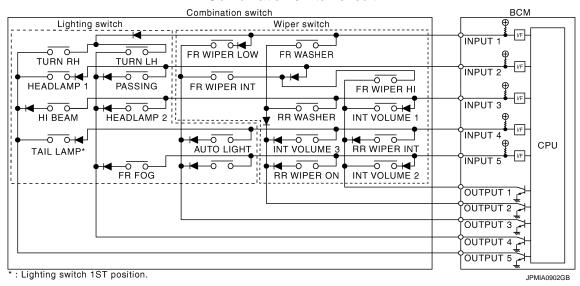
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#### **OUTLINE**

- BCM reads the status of the combination switch (light, turn signal, wiper and washer) and recognizes the status of each switch.
- BCM is 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	OUTPUT 1	OUTPUT 2	OUTPUT 3	OUTPUT 4	OUTPUT 5
INPUT 1	_	FR WASHER	FR WIPER LOW	TURN LH	TURN RH
INPUT 2	FR WIPER HI	_	FR WIPER INT	PASSING	HEADLAMP 1
INPUT 3	INT VOLUME 1	RR WASHER	_	HEADLAMP 2	HI BEAM

#### < SYSTEM DESCRIPTION >

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

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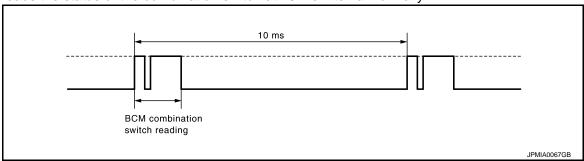
#### NOTE:

Headlamp has a dual system switch.

#### COMBINATION SWITCH READING FUNCTION

#### Description

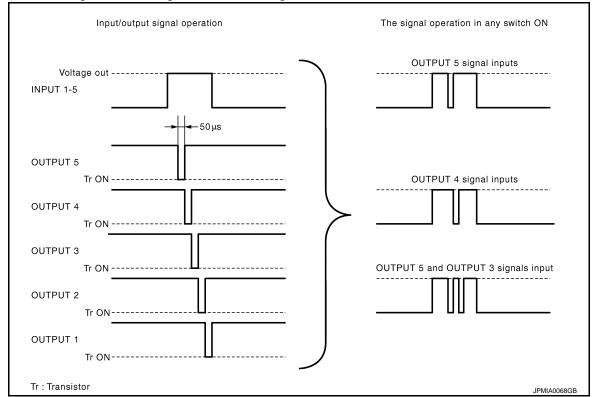
BCM reads the status of the combination switch at 10 ms interval normally.



#### NOTE:

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

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



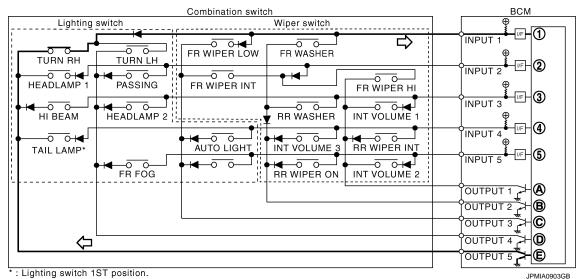
#### Operation Example

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 (TURN RH switch) is turned ON

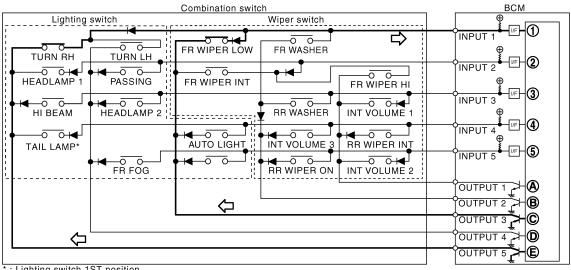
#### < SYSTEM DESCRIPTION >

The circuit between INPUT 1 and OUTPUT 5 is formed when the TURN RH switch is turned ON.



- BCM detects the combination switch status signal "1E" when the signal of OUTPUT 5 is input to INPUT 1.
- BCM judges that the TURN RH switch is ON when the signal "1E" is detected.

Example 2: When some switches (turn RH switch, front wiper LO switch) are turned ON
• The circuits between INPUT 1 and OUTPUT 5 and between INPUT 1 and OUTPUT 3 are formed when the TURN RH switch and FR WIPER LOW switch are turned ON.



- : Lighting switch 1ST position.
- BCM detects the combination switch status signal "1CE" when the signals of OUTPUT 3 and OUTPUT 5 are input to INPUT 1.
- BCM judges that the TURN RH switch and FR WIPER LOW switch are ON when the signal "1CE" 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 >

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-5, "System Description".

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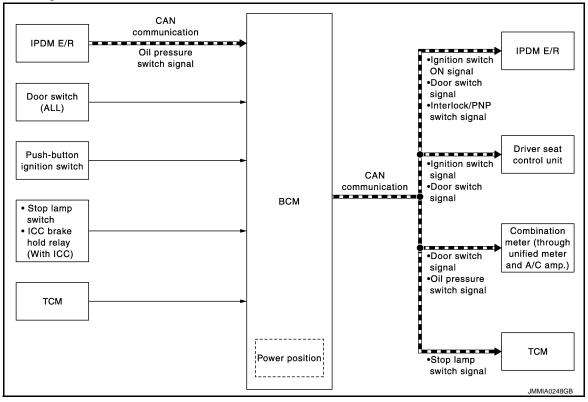
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## SIGNAL BUFFER SYSTEM

## System Diagram

INFOID:0000000006348523



## **System Description**

INFOID:0000000006348524

#### **OUTLINE**

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

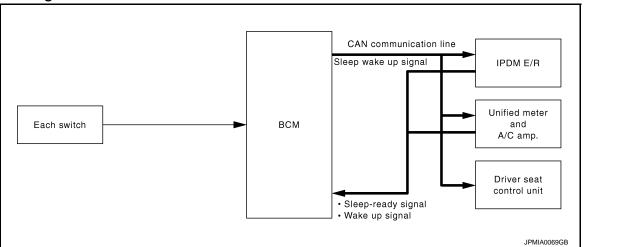
Signal name	Input	Output	Description
<ul><li> Ignition switch ON signal</li><li> Ignition switch signal</li></ul>	Push-button ignition switch (Push switch)	IPDM E/R (CAN)     Driver seat control unit (CAN)	Inputs the push-button ignition switch (push switch) signal and transmits the ignition switch status judged with BCM via CAN communication.
Door switch signal	Any door switch	Combination meter (through unified meter and A/C amp.) (CAN) IPDM E/R (CAN) Driver seat control unit (CAN)	Inputs the door switch signal and transmits it via CAN communication.
Oil pressure switch signal	IPDM E/R (CAN)	Combination meter (through unified meter and A/C amp.) (CAN)	Transmits the received oil pressure switch signal via CAN communication.
Stop lamp switch signal	Stop lamp switch     ICC brake hold relay (With ICC)	TCM (CAN)	Inputs the stop lamp switch 1 signal, and stop lamp switch 2 signal or ICC brake hold relay (with ICC) signal, and transmits it via CAN communication.
Interlock/PNP switch signal	ТСМ	IPDM E/R (CAN)	Inputs the selector lever P/N position signal, and transmits the interlock/PNP switch signal via CAN communication.

#### POWER CONSUMPTION CONTROL SYSTEM

#### < SYSTEM DESCRIPTION >

### 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, combination meter (unified meter and A/C amp.) and driver seat control unit] 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 unified meter and A/C amp. via CAN communication.
- BCM transmits the sleep wake up signal (sleep) to each unit when all of the CAN sleep conditions are fulfilled.
- 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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Revision: 2011 October BCS-15 2011 EX

#### POWER CONSUMPTION CONTROL SYSTEM

#### < SYSTEM DESCRIPTION >

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 Intelligent Key system buzzer: Not operation Stop lamp switch: OFF ICC brake hold relay (with ICC): ON Key slot (card switch) status: No change 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	<ul> <li>Interior room lamp battery saver: Time out</li> <li>RAP system: OFF</li> <li>Power window switch communication: No transmission</li> <li>Push-button ignition switch illumination: OFF</li> <li>Infiniti Vehicle Immobilizer System (IVIS) - NATS: Not operation</li> <li>Remote keyless entry receiver communication status: No communication</li> <li>Tire pressure monitor system (TPMS) - AIR PRESSURE MONITOR: Stop</li> <li>LOCK indicator lamp: OFF</li> <li>ACC indicator lamp: OFF</li> <li>ON indicator lamp: OFF</li> </ul>

#### Wake-up operation

- BCM changes from the low power consumption mode to the CAN communication sleep mode when the any of the BCM wake-up conditions is fulfilled. Only the control with BCM is activated.
- BCM transmits the sleep wake up signal (wake up) to each unit when any of the CAN wake-up conditions is fulfilled. It changes from the low power consumption mode or the CAN communication sleep mode to the normal mode.
- Each unit starts the transmission of CAN communication with the sleep wake up signal. In addition, the unified meter and A/C amp. transmits the wake up signal to BCM via CAN communication to report the CAN communication start.

Wake-up	condition
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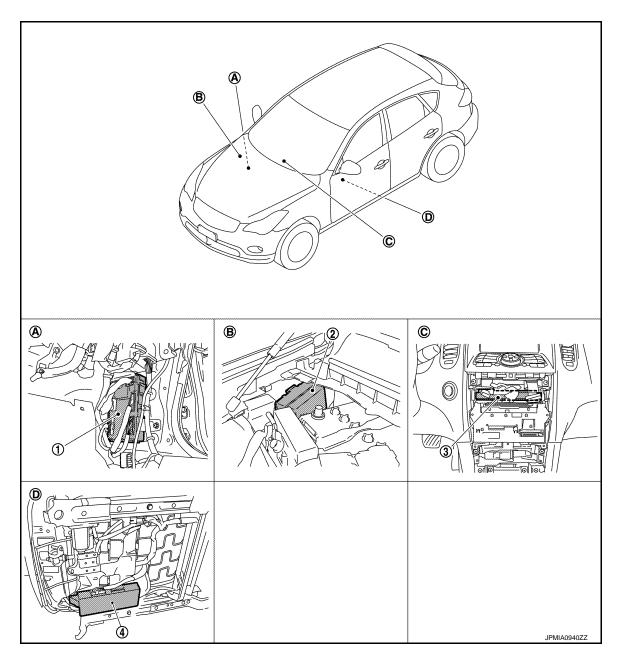
BCM wake-up condition	CAN wake-up condition	
<ul> <li>Power window switch communication: Receiving</li> <li>Remote keyless entry receiver communication: Receiving</li> </ul>	<ul> <li>Receiving the sleep-ready signal (Not-ready) from any units</li> <li>Key slot (key switch): OFF → ON, ON → OFF</li> <li>Push-button ignition switch (push switch): OFF → ON</li> <li>Hazard switch: OFF → ON</li> <li>PASSING switch: OFF → ON, ON → OFF</li> <li>TAIL LAMP switch: OFF → ON</li> <li>Driver door switch: OFF → ON, ON → OFF</li> <li>Passenger door switch: OFF → ON, ON → OFF</li> <li>Rear RH door switch: OFF → ON, ON → OFF</li> <li>Rear LH door switch: OFF → ON, ON → OFF</li> <li>Back door switch: OFF → ON, ON → OFF</li> <li>Driver door request switch: OFF → ON</li> <li>Passenger door request switch: OFF → ON</li> <li>Stop lamp switch: ON</li> <li>ICC brake hold relay (with ICC): ON</li> </ul>	

### POWER CONSUMPTION CONTROL SYSTEM

### < SYSTEM DESCRIPTION >

## **Component Parts Location**

INFOID:0000000006348527



- 1. BCM
- 4. Driver seat control unit
- A. Dash side lower (passenger side)
- D. Backside of the seat cushion (driver seat)
- 2. IPDM E/R
- B. Engine room dash panel (RH)
- 3. Unified meter and A/C amp.
- C. Behind cluster lid C

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#### < SYSTEM DESCRIPTION >

## **DIAGNOSIS SYSTEM (BCM)**

**COMMON ITEM** 

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

INFOID:0000000006348528

#### 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	<ul> <li>Read and save the vehicle specification.</li> <li>Write the vehicle specification when replacing BCM.</li> </ul>

#### 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 timer	INT LAMP	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
_	AIR CONDITONER*			
Intelligent Key system     Engine start system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
IVIS - NATS	IMMU		×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door open system	TRUNK		×	×
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	TPMS (AIR PRESSURE MONITOR)	×	×	×

#### NOTE:

#### FREEZE FRAME DATA (FFD)

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

<sup>\*:</sup> This item is displayed, but is not used.

#### < SYSTEM DESCRIPTION >

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	Power supply position status of the moment a particular DTC is detected*	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" (Except emergency stop operation)	
	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		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	<ul> <li>The number of times that ignition switch is turned ON after DTC is detected</li> <li>The number is 0 when a malfunction is detected now.</li> <li>The number increases like 1 → 2 → 338 → 39 after returning to the normal condition whenever ignition switch OFF → ON.</li> <li>The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.</li> </ul>		

#### NOTE:

\*: For models without steering lock unit, power supply position changes from "OFF" to "LOCK" when steering lock conditions are satisfied.

### **DOOR LOCK**

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

#### INFOID:0000000006937022

#### **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.

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## < SYSTEM DESCRIPTION >

### **WORK SUPPORT**

Monitor item	Description
DOOR LOCK-UNLOCK SET	Selective unlock function mode can be changed to operate (WITH) or not operate (WITHOUT) with this mode.
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)  PRANGE: All doors are locked when shifting the selector lever from P position to other than the P position
AUTOMATIC DOOR UNLOCK SELECT	<ul> <li>Automatic door unlock function mode can be selected from the following in the mode.</li> <li>MODE 1: All doors are unlocked when the power supply position is changed from ON to OFF</li> <li>MODE 2: All doors are unlocked when shifting the selector lever from any position other than the P to P position</li> <li>MODE 3: Driver side door is unlocked when the power supply position is changed from ON to OFF</li> <li>MODE 4: Driver side door is unlocked when shifting the selector lever from any position other than the P to P position</li> </ul>
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

## **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	<ul> <li>This test is able to check door lock/unlock operation.</li> <li>The all door lock actuators are locked when "ALL LCK" on CONSULT-III screen is touched.</li> <li>The all door lock actuators are unlocked when "ALL UNLK" on CONSULT-III screen is touched.</li> <li>The door lock actuator (driver side) is unlocked when "DR UNLK" on CONSULT-III screen is touched.</li> <li>The door lock actuator (passenger side) is unlocked when "AS UNLK" on CONSULT- III screen is touched.</li> <li>The door lock actuator (rear LH and RH) is unlocked when "OTR ULK" on CONSULT-III screen is touched.</li> </ul>

## **REAR WINDOW DEFOGGER**

#### < SYSTEM DESCRIPTION >

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

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#### Data monitor

Monitor Item	Description		
REAR DEF SW	This is displayed even when it is not equipped.		
PUSH SW	Indicates [ON/OFF] condition of push 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:0000000006937303

#### **CONSULT-III APPLICATION ITEMS**

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

#### **DATA MONITOR**

Display item [Unit]	Description			
VEH SPEED 1 [Km/h]	Value of vehicle speed signal received from ABS actuator and electric unit (control unit) with CAN communication line.			
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.			
KEY SW-SLOT [On/Off]	Status of key slot judged by BCM.			
TAIL LAMP SW [On/Off]	Status of each switch judged by BCM using the combination switch readout function.			
FR FOG SW [On/Off]	Status of front fog lamp switch judged by BCM.			
DOOR SW-DR [On/Off]	Status of driver side door switch judged by BCM.			

#### **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).
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**

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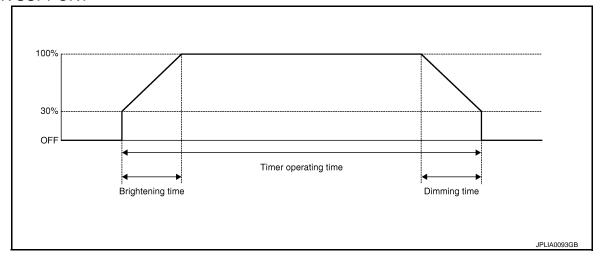
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## INT LAMP : CONSULT-III Function (BCM - INT LAMP)

INFOID:0000000006937052

### **WORK SUPPORT**



Service item	Setting item	Setting	
SET I/L D-UNLCK INTCON	ON*	With the interior room lamp timer function	
SET I/E D-ONLOR INTOON	OFF	Without the interior room lamp timer function	
	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.	
	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.	
R LAMP TIMER LOGIC SET	MODE 1*	Interior room lamp timer activates with synchronizing all doors.	
K LAIVIP TIIVIEK LOGIC SET	MODE 2	Interior room lamp timer activates with synchronizing the driver door only.	

<sup>\*:</sup> Initial 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)		
PUSH SW [On/Off]	The switch status input from push-button ignition switch		
KEY SW-SLOT [On/Off]	Key switch status input from key slot		

### < SYSTEM DESCRIPTION >

Monitor item [Unit]	Description
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 received from central door lock switch by power window switch serial link
CDL UNLOCK SW [On/Off]	Unlock switch status received from central door lock switch by power window switch serial link
KEY CYL LK-SW [On/Off]	Lock switch status received from key cylinder switch by power window switch serial link
KEY CYL UN-SW [On/Off]	Unlock switch status received from key cylinder switch by power window switch serial link
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 map lamp and personal lamp ON (Map lamp switch is in DOOR position).	
	Off	Stops the interior room lamp control signal to turn map lamp and personal lamp OFF.	
STEP LAMP TEST	On	Outputs the step lamp control signal to turn step lamp ON.	
	Off	Stops the step lamp control signal to turn step lamp OFF.	
LUGGAGE LAMP TEST	On	Outputs the trunk room lamp control signal to turn step lamp ON.	
	Off	Stops the trunk room lamp control signal to turn step lamp ON.	

## **HEADLAMP**

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

INFOID:0000000006937050

### **WORK SUPPORT**

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

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## < SYSTEM DESCRIPTION >

Service item	Setting item	Setting	
	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.	
	MODE 1*	Normal	
CUSTOM A/LIGHT SET-	MODE 2	More sensitive setting than normal setting (Turns ON earlier than normal operation.)	
TING	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.)	

<sup>\*:</sup> Initial setting

## **DATA MONITOR**

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 unified meter and A/C amp. with CAN communication	
KEY SW-SLOT [On/Off]	Key switch status input from key slot	
TURN SIGNAL R [On/Off]		
TURN SIGNAL L [On/Off]		
TAIL LAMP SW [On/Off]		
HI BEAM SW [On/Off]		
HEAD LAMP SW1 [On/Off]	Each switch status that BCM judges from the combination switch reading function	
HEAD LAMP SW2 [On/Off]		
PASSING SW [On/Off]		
AUTO LIGHT SW [On/Off]		
FR FOG 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)	

### < SYSTEM DESCRIPTION >

Monitor item [Unit]	Description
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.
OPTICAL SENSOR [V]	The value of exterior brightness voltage input from the optical sensor

#### **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 position light request signal transmission.
	Hi	Transmits the high beam request signal with CAN communication to turn the headlamp (HI).
HEAD LAMP	Low	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 light request signal to IPDM E/R with CAN communication to turn the front fog lamp ON.
	Off	Stops the front fog light request signal transmission.
RR FOG LAMP	On	NOTE:
RR FOG LAMP	Off	The item is indicated, but cannot be tested.
DAYTIME RUNNING LIGHT	On	NOTE:
DAY TIME RUNNING LIGHT	Off	The item is indicated, but cannot be tested.
	RH	
CORNERING LAMP	LH	NOTE: The item is indicated, but cannot be tested.
	Off	
II I DIM CIONAL	On	NOTE:
ILL DIM SIGNAL	Off	The item is indicated, but cannot be tested.

## WIPER

## WIPER: CONSULT-III Function (BCM - WIPER)

#### **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)

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<sup>\*:</sup>Factory setting

Monitor Item [Unit]	Description		
PUSH SW [Off/On]	The switch status input from push-button ignition switch.		
VEHICLE SPEED 1 [km/h]	The value of the vehicle speed signal received from unified meter and A/C amp. with CAN communication.		
FR WIPER HI [Off/On]			
FR WIPER LOW [Off/On]			
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]			
RR WIPER STOP [Off/On]	Rear wiper motor (stop position) status input from the rear wiper motor.		

### **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 WIPER	On	Outputs the voltage to operate the rear wiper motor.
Off	Off	Stops the voltage to stop.

## **FLASHER**

## FLASHER: CONSULT-III Function (BCM - FLASHER)

INFOID:0000000006937051

## **WORK SUPPORT**

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

<sup>\*:</sup> Initial setting

#### **DATA MONITOR**

### < SYSTEM DESCRIPTION >

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]	Fook puttick condition that DOM indeed from the combination suits by a different formation		
TURN SIGNAL L [On/Off]	Each switch condition that BCM judges 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		
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.

## INTELLIGENT KEY

## INTELLIGENT KEY: CONSULT-III Function (BCM - INTELLIGENT KEY) INFOID:000000008937028

## **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: 1 minute  • MODE 2: 5 minutes  • MODE 3: 30 seconds  • MODE 4: 2 minutes
LOCK/UNLOCK BY I-KEY	Door lock/unlock function by door request switch (driver side, passenger side and back door) mode can be changed to operate (ON) or not operate (OFF) in this mode.
ENGINE START BY I-KEY	Engine start function mode can be changed to operate (ON) or not operate (OFF) with this mode.
TRUNK/GLASS HATCH OPEN	Buzzer reminder function mode by back door request switch can be changed to operate (ON) or not operate (OFF) with this mode.
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.

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## < SYSTEM DESCRIPTION >

Monitor item	Description	
PW DOWN SET	Unlock button pressing time on Intelligent Key button can be selected from the following with this mode.  • MODE 1: 3 sec.  • MODE 2: Non-operation  • MODE 3: 5 sec.	
TAKE OUT FROM WIN WARN	NOTE: This item is displayed, but cannot be supported.	
TRUNK OPEN DELAY	NOTE: This item is displayed, but cannot be supported.	
LO- BATT OF KEY FOB WARN	Intelligent Key low battery warning mode can be changed to operate (ON) or not operate (OFF) with this mode.	
ANTI KEY LOCK IN FUNCTI	Key reminder function mode can be changed to operate (ON) or not operate (OFF) with this mode.	
HAZARD ANSWER BACK	Hazard reminder function mode 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 operate (ON) or not operate (OFF) with this mode.	
SHORT CRANKING OUTPUT	Starter motor can operate during the times below.  • 70 msec.  • 100 msec.  • 200 msec.	
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.	
WELCOME LIGHT OP SET	Welcome light function mode can be changed to operate (WITH) or not operate (WITHOUT) with this mode.	
WELCOME LIGHT SELECT	Welcome light function mode can be selected from the following with this mode.  • Without room lamp  • With room lamp  • Without paddle lamp  • With paddle lamp	

## SELF-DIAG RESULT

Refer to DLK-171, "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 -RR	NOTE: This item is displayed, but cannot be monitored.
REQ SW -RL	NOTE: This item is displayed, but cannot be monitored.
REQ SW -BD/TR	Indicates [ON/OFF] condition of back door request switch.
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch.
IGN RLY2 -F/B	Indicates [ON/OFF] condition of ignition relay 2.

## < SYSTEM DESCRIPTION >

Monitor Item	Condition		
CLUCH SW	NOTE: This item is displayed, but cannot be monitored.		
BRAKE SW 1	Indicates [ON/OFF] 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).  NOTE:  For models without steering lock unit, this item is not monitored.		
S/L -UNLOCK	Indicates [ON/OFF] condition of steering lock unit (UNLOCK).  NOTE:  For models without steering lock unit, this item is not monitored.		
S/L RELAY -F/B	Indicates [ON/OFF] condition of ignition switch.  NOTE: For models without steering lock unit, this item is not monitored.		
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.		
SFT N -MET	Indicates [ON/OFF] condition of N position.		
ENGINE STATE	Indicates [STOP/START/CRANK/RUN] condition of engine states.		
S/L LOCK-IPDM	Indicates [ON/OFF] condition of steering lock unit (LOCK).  NOTE:  For models without steering lock unit, this item is not monitored.		
S/L UNLK-IPDM	Indicates [ON/OFF] condition of steering lock unit (UNLOCK).  NOTE:  For models without steering lock unit, this item is not monitored.		
S/L RELAY-REQ	Indicates [ON/OFF] condition of steering lock relay.  NOTE: For models without steering lock unit, this item is not monitored.		
VEH SPEED 1	Display the vehicle speed signal received from unified meter and A/C amp. by numerical value [Km/h].		
VEH SPEED 2	Display the vehicle speed signal received from ABS or VDC or CVT by numerical value [Km/h].		
DOOR STAT-DR	Indicates [LOCK/READY/UNLOCK] condition of driver side door status.		
DOOR STAT-AS	Indicates [LOCK/READY/UNLOCK] 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.		
KEY SW -SLOT	Indicates [ON/OFF] condition of key slot.		
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-P/W OPEN	Indicates [ON/OFF] condition of P/W DOWN signal from Intelligent Key.		

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## < SYSTEM DESCRIPTION >

Monitor Item	Condition
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.

#### **ACTIVE TEST**

Test item	Description
BATTERY SAVER	This test is able to check interior room lamp operation. The interior room lamp will be activated after "ON" on CONSULT-III screen is touched.
PW REMOTO DOWN SET	This test is able to check power window down operation. The power window down will be activated after "ON" on CONSULT-III screen is touched.
INSIDE BUZZER	This test is able to check warning chime in combination meter operation.  Take away warning chime sounds when "TAKE OUT" on CONSULT-III screen is touched.  Key warning chime sounds when "KEY WARN" on CONSULT-III screen is touched.  Position warning chime sounds when "PRNG WARN" on CONSULT-III screen is touched.  ACC warning chime sounds when "ACC WARN" on CONSULT-III screen is touched.
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation.  The Intelligent Key warning buzzer will be activated after "ON" on CONSULT-III screen is touched.
INDICATOR	This test is able to check warning lamp operation.  • "KEY" Warning lamp illuminates when "KEY ON" on CONSULT-III screen is touched.  • "KEY" Warning lamp flashes when "KEY IND" on CONSULT-III screen is touched.
INT LAMP	This test is able to check interior room lamp operation. The interior room lamp will be activated after "ON" on CONSULT-III screen is touched.
LCD	This test is able to check meter display information  • Engine start information displays when "BP N" on CONSULT-III screen is touched.  • Engine start information displays when "BP I" on CONSULT-III screen is touched.  • Key ID warning displays when "ID NG" on CONSULT-III screen is touched.  • Steering lock information displays when "ROTAT" on CONSULT-III screen is touched.  NOTE:  For models without steering lock unit, "ROTAT" is displayed, but cannot be tested.  • P position warning displays when "SFT P" on CONSULT-III screen is touched.  • Intelligent Key insert information displays when "INSRT" on CONSULT-III screen is touched.  • Intelligent Key low battery warning displays when "BATT" on CONSULT-III screen is touched.  • Take away through window warning displays when "NO KY" on CONSULT-III screen is touched.  • Take away warning display when "OUTKY" on CONSULT-III screen is touched.  • OFF position warning display when "LK WN" on CONSULT-III screen is touched.
TRUNK/GLASS HATCH	This test is able to check back door opener actuator open operation. This actuator opens when "ON" on CONSULT-III screen is touched.
FLASHER	This test is able to check hazard warning lamp operation. The hazard warning lamps will be activated after "ON" on CONSULT-III screen is touched.
HORN	This test is able to check horn operation. The horn will be activated after "ON" on CONSULT-III screen is touched.
P RANGE	This test is able to check A/T shift selector power supply A/T shift selector power is supplied when "ON" on CONSULT-III screen is touched.
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.
LOCK 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;
ACC INDICATOR	This test is able to check ACC indicator in push-ignition switch operation. Indicator in push-ignition switch illuminates when "ON" on CONSULT-III screen is touched.
IGNITION ON IND	This test is able to check ON indicator in push-ignition switch operation. Indicator in push-ignition switch illuminates when "ON" on CONSULT-III screen is touched.

#### < SYSTEM DESCRIPTION >

Test item	Description
KEY SLOT ILLUMI	This test is able to check key slot illumination operation. Key slot illumination flash when "ON" on CONSULT-III screen is touched.
TRUNK/BACK DOOR	NOTE: This item is displayed, but cannot be tested.

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## **COMB SW**

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

INFOID:0000000006348537

### **DATA MONITOR**

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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.
FR WIPER STOP [Off/On]	Displays the status of the front wiper stop position signal received from IPDM E/R via CAN communication.
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.
RR WIPER STOP [Off/On]	Displays the status of the rear wiper stop position signal received from rear wiper motor.
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.
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.
RR FOG SW [Off/On]	NOTE: The item is indicated, but not monitored.

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BCM

#### < SYSTEM DESCRIPTION >

## BCM: CONSULT-III Function (BCM - BCM)

INFOID:0000000006348538

#### **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:0000000006937036

#### **DATA MONITOR**

Monitor item	Content	
CONFRM ID ALL		
CONFIRM ID4		
CONFIRM ID3	Indicates [YET] at all time.  Switch to [DONE] when a registered Intelligent Key is inserted into the key slot.	
CONFIRM ID2		
CONFIRM ID1		
TP 4	Indicates the number of ID which has been registered.	
TP 3		
TP 2	indicates the number of ib which has been registered.	
TP 1		
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch.	
KEY SW -SLOT	Indicates [ON/OFF] condition of key slot.	

### **ACTIVE TEST**

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

## **BATTERY SAVER**

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

INFOID:0000000006937053

### **WORK SUPPORT**

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		
ROOM LAMP BAT SAV SET	On*	With the interior room lamp battery saver function		
ROOM LAWF BAT SAV SET	Off	Without the interior room lamp battery saver function		
	MODE 1	30 min.		
ROOM LAMP TIMER SET	MODE 2	60 min.	Sets the interior room lamp battery saver timer operating time.	
	MODE 3*	15 min.		

<sup>\*:</sup> Initial setting

#### **DATA MONITOR**

#### < SYSTEM DESCRIPTION >

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.			
PUSH SW [On/Off]	The switch status input from push-button ignition switch			
KEY SW-SLOT [On/Off]	Key switch status input from key slot			
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 received from central door lock switch by power window switch serial link			
CDL UNLOCK SW [On/Off]	Unlock switch status received from central door lock switch by power window switch serial link			
KEY CYL LK-SW [On/Off]	Lock switch status received from key cylinder switch by power window switch serial link			
KEY CYL UN-SW [On/Off]	Unlock switch status received from key cylinder switch by power window switch serial link			
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
BATTERY SAVER	Off	Cuts the interior room lamp power supply to turn interior room lamp OFF.
	On	Outputs the interior room lamp power supply to turn interior room lamp ON.*

<sup>\*:</sup> Each lamp switch is in ON position.

## **TRUNK**

TRUNK: CONSULT-III Function (BCM - TRUNK)

#### INFOID:0000000006937029

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#### **BCM CONSULT-III FUNCTION**

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

#### < SYSTEM DESCRIPTION >

Diagnosis mode	Function Description		
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	Contents
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch.
UNLK SEN -DR	Indicates [ON/OFF] condition of driver door UNLOCK status.
VEH SPEED 1	Indicates [Km/h] condition of vehicle speed signal from combination meter.
KEY CYL SW-TR	NOTE: This item is displayed, but cannot be monitored.
TR CANCEL SW	NOTE: This item is displayed, but cannot be monitored.
TR/BD OPEN SW	Indicates [ON/OFF] condition of back door opener switch.
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	This test is able to check back door opener actuator open operation.  This actuator opens when ""

## THEFT ALM

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

INFOID:0000000006937035

#### **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.	
KEY SW -SLOT	Indicates [ON/OFF] condition of key slot.	
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch LH.	
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch RH.	
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	Indicates [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 front door key cylinder switch.	

Monitored Item	Description		
KEY CYL UN-SW	Indicates [ON/OFF] condition of unlock signal from front door key cylinder switch.		
KEY CYL SW-TR	NOTE: This is displayed even when it is not equipped.		
TR/BD OPEN SW	Indicates [ON/OFF] condition of back door opener switch.		
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			
Test Item	Description		
Test Item SECURITY ALARM SET	Description  This mode is able to confirm and change security alarm ON-OFF setting.		
	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		
SECURITY ALARM SET THEFT ALM TRG	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		
SECURITY ALARM SET THEFT ALM TRG	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		
SECURITY ALARM SET  THEFT ALM TRG  ACTIVE TEST	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		
SECURITY ALARM SET  THEFT ALM TRG  ACTIVE TEST  Test Item  THEFT IND	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. The lamp will be turned on when "ON"		
SECURITY ALARM SET  THEFT ALM TRG  ACTIVE TEST  Test Item	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. The lamp will be turned on when "ON" on CONSULT-III screen is touched.  This test is able to check vehicle security horn operation. The horns will be activated for 0.5 sec-		

## **RETAIND PWR**

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

INFOID:0000000006937041

#### 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:0000000006348544

#### **DATA MONITOR**

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

#### **ACTIVE TEST**

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#### < SYSTEM DESCRIPTION >

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

#### AIR PRESSURE MONITOR

# AIR PRESSURE MONITOR : CONSULT-III Function (BCM - AIR PRESSURE MONITOR)

#### **WORK SUPPORT MODE**

**ID Read** 

The registered ID number is displayed.

**ID Regist** 

Refer to WT-21, "Work Procedure".

#### SELF-DIAG RESULTS MODE

**Operation Procedure** 

Refer to BCS-80, "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.

#### Display item list

Monitor	Condition	Specification
AIR PRESS FL AIR PRESS FR AIR PRESS RR AIR PRESS RL	Drive vehicle for a few minutes.     or     Ignition switch ON and transmitter activation tool is transmitting activation signals.	Tire pressure (kPa, kg/cm <sup>2</sup> or Psi)
ID REGST FL1 ID REGST FR1 ID REGST RR1 ID REGST RL1		Registration ID: Green No registration: Red
WARNING LAMP	Ignition switch ON	Low tire pressure warning lamp ON: on Low tire pressure warning lamp OFF: off
BUZZER		Buzzer in combination meter ON: on Buzzer in combination meter 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.

## **DIAGNOSIS SYSTEM (BCM)**

# < SYSTEM DESCRIPTION >

Test item	Content
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.

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#### **U1000 CAN COMM CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

## DTC/CIRCUIT DIAGNOSIS

### U1000 CAN COMM CIRCUIT

Description INFOID:000000006348547

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-25, "CAN Communication Signal Chart".

DTC Logic

#### DTC DETECTION LOGIC

DTC	OTC 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

INFOID:0000000006348549

### 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-16, "Trouble Diagnosis Flow Chart".

NO >> Refer to GI-42, "Intermittent Incident".

## **U1010 CONTROL UNIT (CAN)**

### < DTC/CIRCUIT DIAGNOSIS >

## U1010 CONTROL UNIT (CAN)

DTC Logic

### DTC DETECTION LOGIC

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

## Diagnosis Procedure

INFOID:0000000006348551

## 1.REPLACE BCM

When DTC "U1010" is detected, replace BCM.

>> Replace BCM. Refer to BCS-86, "Exploded View".

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#### **U0415 VEHICLE SPEED SIG**

#### < DTC/CIRCUIT DIAGNOSIS >

#### U0415 VEHICLE SPEED SIG

Description INFOID:0000000006348552

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

#### DTC DETECTION LOGIC

DTC	OTC 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

- 1. 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-40, "Diagnosis Procedure".

NO >> INSPECTION END

#### Diagnosis Procedure

INFOID:0000000006348554

## $1.\mathsf{abs}$ 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-31, "CONSULT-III Function".

#### Is any DTC detected?

YES >> Repair or replace the malfunctioning part.

NO >> Replace BCM. Refer to BCS-86, "Exploded View".

#### **B2562 LOW VOLTAGE**

#### < DTC/CIRCUIT DIAGNOSIS >

### **B2562 LOW VOLTAGE**

**DTC** Logic INFOID:0000000006348555

#### 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. 2.
- 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-41, "Diagnosis Procedure".

NO >> INSPECTION END

### Diagnosis Procedure

1. CHECK POWER SUPPLY CIRCUIT

Check BCM power supply circuit. Refer to BCS-42, "Diagnosis Procedure".

#### Is the circuit normal?

YES >> Replace BCM. Refer to BCS-86, "Exploded View".

NO >> Repair the malfunctioning part.

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#### **POWER SUPPLY AND GROUND CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

### POWER SUPPLY AND GROUND CIRCUIT

### Diagnosis Procedure

INFOID:0000000006348557

## 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	К	
battery power suppry	10	

#### 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.

	Voltage		
(			
В	СМ		(Approx.)
Connector	Terminal	Ground	
M118	1	Glound	Battery voltage
M119	11		ballery vollage

### 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	СМ		Continuity	
Connector	Connector Terminal		Continuity	
M119	13		Existed	

#### Does continuity exist?

YES >> INSPECTION END

NO >> Repair harness or connector.

#### **COMBINATION SWITCH INPUT CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

## **COMBINATION SWITCH INPUT CIRCUIT**

## Diagnosis Procedure

#### INFOID:0000000006348558

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## 1. CHECK INPUT 1 - 5 SYSTEM CIRCUIT FOR OPEN

- Turn the ignition switch OFF.
- 2. Disconnect the 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		107		11	
INPUT 2		109		9	
INPUT 3	M122	88	M33	7	Existed
INPUT 4		108		10	
INPUT 5		87		13	

#### Does continuity exist?

YES >> GO TO 2.

NO >> Repair the harnesses or connectors.

## 2.CHECK INPUT 1 - 5 SYSTEM CIRCUIT FOR SHORT

Check for continuity between BCM harness connector and ground.

System	BCM			Continuity
System	Connector	Terminal		Continuity
INPUT 1		107		
INPUT 2		109	Ground	
INPUT 3	M122	88		Not existed
INPUT 4		108		
INPUT 5		87		

#### Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> GO TO 3.

## 3.CHECK BCM OUTPUT VOLTAGE

1. Connect the BCM connector.

2. Check voltage between BCM harness connector and ground.

System	(+)		(-)	Voltage
System	BCM			(Approx.)
	Connector	Terminal		
INPUT 1		107		
INPUT 2		109	Ground	Refer to BCS-
INPUT 3	M122	88		47, "Refer-
INPUT 4		108		ence Value".
INPUT 5		87		

#### Is the measurement value normal?

YES >> GO TO 4.

NO >> Replace BCM. Refer to BCS-86, "Exploded View".

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### **COMBINATION SWITCH INPUT CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

## 4. CHECK BCM INPUT SIGNAL

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

Custom	(+)		(-)	Voltage
System	BCM			(Approx.)
	Connector	Terminal		
INPUT 1		107		
INPUT 2		109	Ground	Refer to BCS-
INPUT 3	M122	88		47, "Reference Value".
INPUT 4		108		
INPUT 5		87		

Is the measurement value normal when any of the switches is turned ON?

YES >> Replace BCM. Refer to BCS-86, "Exploded View".

NO >> Replace the combination switch.

#### **COMBINATION SWITCH OUTPUT CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

## COMBINATION SWITCH OUTPUT CIRCUIT

## Diagnosis Procedure

### INFOID:0000000006348559

## 1. CHECK OUTPUT 1 - 5 SYSTEM CIRCUIT FOR OPEN

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- 1. Turn the ignition switch OFF.
- 2. Disconnect the BCM and combination switch connectors.

#### NOTE:

- BCM connector disconnects M123 only.
- 3. Check continuity between BCM harness connector and combination switch harness connector.

System	BCM		Combinat	Continuity	
System	Connector	Terminal	Connector	Terminal	Continuity
OUTPUT 1		143		12	
OUTPUT 2		144		14	
OUTPUT 3	M123	145	M33	5	Existed
OUTPUT 4		146		2	
OUTPUT 5		142		8	

#### Does continuity exist?

YES >> GO TO 2.

NO >> Repair the harnesses or connectors.

## 2.CHECK OUTPUT 1 - 5 SYSTEM CIRCUIT FOR SHORT

Check for continuity between BCM harness connector and ground.

System	В	CM		Continuity
System	Connector	Terminal		Continuity
OUTPUT 1		143		
OUTPUT 2		144	Ground	
OUTPUT 3	M123	145		Not existed
OUTPUT 4		146		
OUTPUT 5		142		

#### Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> GO TO 3.

## ${f 3.}$ check combination switch internal circuit

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

#### NOTE:

Check that the combination switch outputs a signal from combination switch input system.

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### **COMBINATION SWITCH OUTPUT CIRCUIT**

### < DTC/CIRCUIT DIAGNOSIS >

		Terminals				
System	(+)	)	(-)	Value (Approx.)		
System	Combination switch			Value (Approx.)		
	Connector	Terminal				
OUTPUT 1		12				
OUTPUT 2		14	0	(V) 15		
OUTPUT 3		5	Ground	10		
OUTPUT 4	M33	2		0		
OUTPUT 5		8		2 ms JPMIA0041GB		

Is the measurement value normal when any of the switches is turned ON?

>> Replace BCM. Refer to <u>BCS-86, "Exploded View"</u>. >> Replace the combination switch. YES

NO

< ECU DIAGNOSIS INFORMATION >

## **ECU DIAGNOSIS INFORMATION**

## **BCM (BODY CONTROL MODULE)**

Reference Value

### VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
FR WIPER HI	Other than front wiper switch HI	Off
TIX WIF LIX III	Front wiper switch HI	On
ED WIDER LOW	Other than front wiper switch LO	Off
FR WIPER LOW	Front wiper switch LO	On
ED WACHED OW	Front washer switch OFF	Off
FR WASHER SW	Front washer switch ON	On
ED WIDED INT	Other than front wiper switch INT	Off
R WIPER STOP	Front wiper switch INT	On
ED WIDED CTOD	Front wiper is not in STOP position	Off
FR WIPER STOP	Front wiper is in STOP position	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	Wiper intermittent dia position
DD WIDED ON	Other than rear wiper switch ON	Off
RR WIPER INT	Rear wiper switch ON	On
DD WIDED INT	Other than rear wiper switch INT	Off
RR WIPER INT	Rear wiper switch INT	On
DD WAGUED OW	Rear washer switch OFF	Off
RR WASHER SW	Rear washer switch ON	On
RR WIPER STOP	Rear wiper is in STOP position	Off
	Rear wiper is not in STOP position	On
	Other than turn signal switch RH	Off
TURN SIGNAL R	Turn signal switch RH	On
TUDNI CIONALI	Other than turn signal switch LH	Off
TURN SIGNAL L	Turn signal switch LH	On
TAIL LAND OW	Other than lighting switch 1ST and 2ND	Off
TAIL LAMP SW	Lighting switch 1ST or 2ND	On
LILDEAM CM	Other than lighting switch HI	Off
HI BEAIN SW	Lighting switch HI	On
LIEAD LAMB OW	Other than lighting switch 2ND	Off
HEAD LAMP SW 1	Lighting switch 2ND	On
LIEAD LAMB CW C	Other than lighting switch 2ND	Off
HEAD LAIMP SW 2	Lighting switch 2ND	On
	Other than lighting switch PASS	Off
PASSING SW	Lighting switch PASS	On
ALITO LIQUIT C'Y	Other than lighting switch AUTO	Off
AUTO LIGHT SW	Lighting switch AUTO	On
ED 500 0W	Front fog lamp switch OFF	Off
RR WIPER ON RR WIPER INT	Front fog lamp switch ON	On

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Monitor Item	Condition	Value/Status
RR FOG SW	NOTE: The item is indicated, but not monitored.	Off
DOOR SW-DR	Driver door closed	Off
DOOK SW-DK	Driver door opened	On
DOOD CW AC	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
	Back door closed	Off
DOOR SW-BK	Back door opened	On
	Other than power door lock switch LOCK	Off
CDL LOCK SW	Power door lock switch LOCK	On
	Other than power door lock switch UNLOCK	Off
CDL UNLOCK SW	Power door lock switch UNLOCK	On
	Other than driver door key cylinder LOCK position	Off
KEY CYL LK-SW	Driver door key cylinder LOCK position	On
	Other than driver door key cylinder UNLOCK position	Off
KEY CYL UN-SW	Driver door key cylinder UNLOCK position	On
KEY CYL SW-TR	NOTE: The item is indicated, but not monitored.	Off
HAZARD SW	Hazard switch is OFF	Off
HAZARD SW	Hazard switch is ON	On
REAR DEF SW	NOTE: The item is indicated, but not monitored.	Off
TR CANCEL SW	NOTE: The item is indicated, but not monitored.	Off
TR/BD OPEN SW	Back door opener switch OFF	Off
IIVDD OI EN SW	While the back door opener switch is turned ON	On
TRNK/HAT MNTR	NOTE: The item is indicated, but not monitored.	Off
RKE-LOCK	LOCK button of the key is not pressed	Off
RRE-LOCK	LOCK button of the key is pressed	On
DIVE LINI OCK	UNLOCK button of the key is not pressed	Off
RKE-UNLOCK	UNLOCK button of the key is pressed	On
RKE-TR/BD	NOTE: The item is indicated, but not monitored.	Off
DICE DANIC	PANIC button of the key is not pressed	Off
RKE-PANIC	PANIC button of the key is pressed	On
DICE DAM OBEN	UNLOCK button of the key is not pressed	Off
RKE-P/W OPEN	UNLOCK button of the key is pressed and held	On
RKE-MODE CHG	LOCK/UNLOCK button of the key is not pressed and held simultaneously	Off
	LOCK/UNLOCK button of the key is pressed and held simultaneously	On
	Bright outside of the vehicle	Close to 5 V
OPTICAL SENSOR	Dark outside of the vehicle	Close to 0 V

### < ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
EQ SW -DR	Driver door request switch is not pressed	Off
EQ SW -DR	Driver door request switch is pressed	On
EO SW AS	Passenger door request switch is not pressed	Off
EQ SW -AS	Passenger door request switch is pressed	On
EQ SW -RR	NOTE: The item is indicated, but not monitored.	Off
EQ SW -RL	NOTE: The item is indicated, but not monitored.	Off
EQ SW -BD/TR	Back door request switch is not pressed	Off
EQ OW -DD/TK	Back door request switch is pressed	On
USH SW	Push-button ignition switch (push switch) is not pressed	Off
USH SW	Push-button ignition switch (push switch) is pressed	On
ON DLVO. E/D	Ignition switch in OFF or ACC position	Off
GN RLY2 -F/B	Ignition switch in ON position	On
CC RLY -F/B	NOTE: The item is indicated, but not monitored.	Off
LUCH SW	NOTE: The item is indicated, but not monitored.	Off
	The brake pedal is depressed when No. 7 fuse is blown	Off
RAKE SW 1	The brake pedal is not depressed when No. 7 fuse is blown, or No. 7 fuse is normal	On
BRAKE SW 2	The brake pedal is not depressed	Off
RAKE SW 2	The brake pedal is depressed	On
	Selector lever in P position	Off
ETE/CANCL SW	Selector lever in any position other than P	On
	Selector lever in any position other than P and N	Off
FT PN/N SW	Selector lever in P or N position	On
/L -LOCK	Steering is unlocked	Off
OTE: or models without steering lock it, this item is not monitored.	Steering is locked	On
/L -UNLOCK	Steering is locked	Off
OTE: r models without steering lock	Steering is unlocked	On
nit, this item is not monitored.  /L RELAY-F/B	Ignition switch in OFF or ACC position	Off
OTE: or models without steering lock nit, this item is not monitored.	Ignition switch in ON position	On
	Driver door is unlocked	Off
NLK SEN -DR	Driver door is locked	On
	Push-button ignition switch (push-switch) is not pressed	Off
JSH SW -IPDM	Push-button ignition switch (push-switch) is pressed	On
	Ignition switch in OFF or ACC position	Off
SN RLY1 -F/B	Ignition switch in ON position	On
	Selector lever in any position other than P	Off
ETE SW -IPDM	Selector lever in P position	On
	Selector lever in any position other than P and N	Off
FT PN -IPDM	Ocicion level in any position other than F and N	Oii

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Monitor Item	Condition	Value/Status
CET D. MET	Selector lever in any position other than P	Off
SFT P -MET	Selector lever in P position	On
OFT N. MET	Selector lever in any position other than N	Off
SFT N -MET	Selector lever in N position	On
	Engine stopped	Stop
ENOINE OTATE	While the engine stalls	Stall
ENGINE STATE	At engine cranking	Crank
	Engine running	Run
S/L LOCK-IPDM	Steering is unlocked	Off
<b>NOTE:</b> For models without steering lock unit, this item is not monitored.	Steering is locked	On
S/L UNLK-IPDM	Steering is locked	Off
<b>NOTE:</b> For models without steering lock unit, this item is not monitored.	Steering is unlocked	On
S/L RELAY-REQ NOTE:	Steering lock system is not the LOCK condition and the changing condition from LOCK to UNLOCK.	Off
For models without steering lock unit, this item is not monitored.	Steering lock system is the LOCK condition or the changing condition from LOCK to UNLOCK.	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
ID OK FLAG	Steering is locked	Reset
ID ON I EAG	Steering is unlocked	Set
PRMT ENG STRT	The engine start is prohibited	Reset
TRWIT ENG STRI	The engine start is permitted	Set
PRMT RKE STRT	NOTE: The item is indicated, but not monitored.	Reset
KEY SW -SLOT	The key is not inserted into key slot	Off
KET OW OLOT	The key is inserted into key slot	On
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 does not accord with any key ID registered to BCM.	Yet
SOM INVIDIAL	The key ID that the key slot receives accords with any key ID registered to BCM.	Done
CONFIRM ID4	The key ID that the key slot receives does not accord with the fourth key ID registered to BCM.	Yet
CONFIRM ID4	The key ID that the key slot receives accords with the fourth key ID registered to BCM.	Done

## < ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
CONFIRM ID3	The key ID that the key slot receives does not accord with the third key ID registered to BCM.	Yet
CONFIRMIDS	The key ID that the key slot receives accords with the third key ID registered to BCM.	Done
CONFIRM ID2	The key ID that the key slot receives does not accord with the second key ID registered to BCM.	Yet
CONTINUID2	The key ID that the key slot receives accords with the second key ID registered to BCM.	Done
CONFIRM ID1	The key ID that the key slot receives does not accord with the first key ID registered to BCM.	Yet
CONTINUED	The key ID that the key slot receives accords with the first key ID registered to BCM.	Done
TP 4	The ID of fourth key is not registered to BCM	Yet
11 7	The ID of fourth key is registered to BCM	Done
TP 3	The ID of third key is not registered to BCM	Yet
IF J	The ID of third key is registered to BCM	Done
TP 2	The ID of second key is not registered to BCM	Yet
IF <b>Z</b>	The ID of second key is registered to BCM	Done
TP 1	The ID of first key is not registered to BCM	Yet
IF I	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 REGST FL1	ID of front LH tire transmitter is registered	Done
ID REGGI FLI	ID of front LH tire transmitter is not registered	Yet
ID REGST FR1	ID of front RH tire transmitter is registered	Done
ID REGGI FRI	ID of front RH tire transmitter is not registered	Yet
ID REGST RR1	ID of rear RH tire transmitter is registered	Done
ID REGOT KKT	ID of rear RH tire transmitter is not registered	Yet
ID REGST DI 1	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
DI 177ED	Tire pressure warning alarm is not sounding	Off
BUZZER	Tire pressure warning alarm is sounding	On

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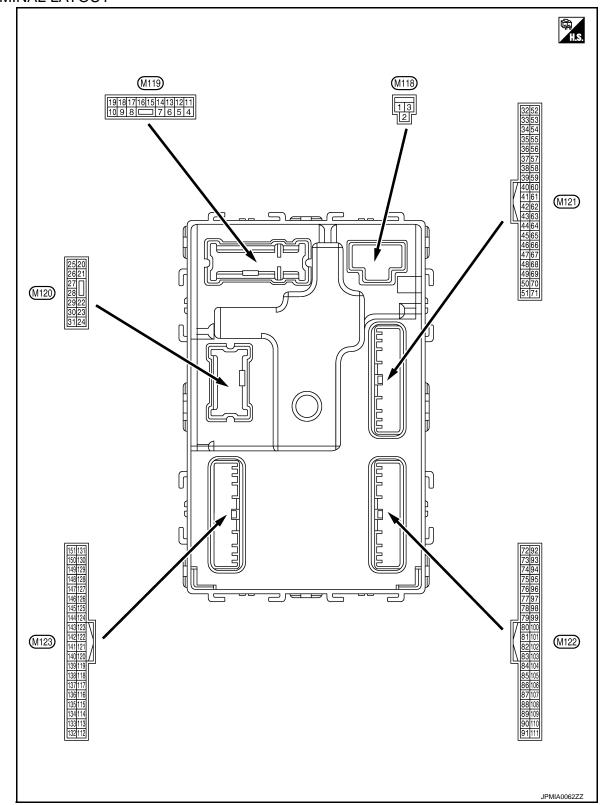
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### TERMINAL LAYOUT



PHYSICAL VALUES

Termi	inal No.	Description					А												
	e color)	Signal name	Input/ Output		Condition	Value (Approx.)	,												
1 (W)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage	В												
2 (W)	Ground	P/W power supply (BAT)	Output	Ignition switch OF	F	Battery voltage	C												
3 (Y)	Ground	P/W power supply (RAP)	Output	Ignition switch ON	I	Battery voltage													
4		Interior room lamp			b battery saver is activated. coom lamp power supply)	0 V	D												
4 (LG)	Ground	Interior room lamp power supply	Output	ed.	battery saver is not activator room lamp power supply)	Battery voltage	Е												
5	Ground	Passenger door UN-	Output	Passenger door	UNLOCK (Actuator is activated)	Battery voltage	F												
(L)	Giouna	LOCK	Output	rassenger door	Other than UNLOCK (Actuator is not activated)	0 V	Г												
7	Craund	Ot a large	0 1 1	Cton lower	ON	0 V	C												
(Y)	Ground	Step lamp	Output	Step lamp	OFF	Battery voltage													
8	Ground	All doors, fuel lid	0	All do	LOCK (Actuator is activated)	Battery voltage	F												
(V)	Ground	LOCK		LOCK	LOCK	LOCK			LOCK	LOCK	LOCK	LOCK	LOCK	LOCK	Output	All doors	Other than LOCK (Actuator is not activated)	0 V	
9	Ground	Driver door, fuel lid	er door, fuel lid Output Privat door (Actuator is acti	d Output	UNLOCK (Actuator is activated)	Battery voltage													
(G)	Giouria	UNLOCK	Output	Other than UNLOCK (Actuator is not activated)	0 V														
10	Ground	Rear RH door and rear LH door UN-	Output	Rear RH door	UNLOCK (Actuator is activated)	Battery voltage													
(BR)	Ground	LOCK	Odiput	and rear LH door	Other than UNLOCK (Actuator is not activated)	0 V	ŀ												
11 (R)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage	I												
13 (B)	Ground	Ground	_	Ignition switch ON	I	0 V													
					OFF	0 V	В												
14		Push-button ignition				NOTE: When the illumination brightening/dimming level is in the neutral position	N												
14 (W)	Ground	switch illumination ground Output Tail lamp	Tail lamp	ON	(V) 10 0 2 ms  JSNIA0010GB	()													
15	O	ACC indicates lass	0	louition control	OFF or ON	Battery voltage													
(Y)	Ground	ACC indicator lamp	Output	Ignition switch	ACC	0 V													

	inal No. e color)	Description			O a region	Value	
+	-	Signal name	Input/ Output		Condition	(Approx.)	
17 (W)	Ground	Turn signal RH (Front)	Output	Ignition switch ON	Turn signal switch OFF  Turn signal switch RH	0 V	
					Turn signal switch OFF	6.5 V 0 V	
18 (BG)	Ground	Turn signal LH (Front)	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s PKID0926E 6.5 V	
19	Ground	Room lamp timer	Output	Interior room	OFF	Battery voltage	
(V)	Cround	control	control	Output	lamp	ON	0 V
20 (V)	Ground	Turn signal RH (Rear)	Output	Ignition switch ON	Turn signal switch OFF  Turn signal switch RH	0 V  (V) 15 10 1   S   PKID0926E  6.5 V	
23	Ground	Back door open	Output	Back door	OPEN (Back door opener actuator is activated)	Battery voltage	
(G)	Glound	Back door open	Odiput	Back door	Other than OPEN (Back door opener actuator is not activated)	0 V	
					Turn signal switch OFF	0 V	
25 (G)	Ground	Turn signal LH (Rear)	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s	
26					OFF (Stopped)	6.5 V 0 V	
(G)	Ground	Rear wiper	Output	Rear wiper	ON (Operated)	Battery voltage	

	ninal No. re color)	Description			One distant	Value	Д
+	- Color)	Signal name	Input/ Output		Condition	(Approx.)	,
					When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB	С
34 (SB)	Ground	Luggage room antenna (–)	Output	Ignition switch OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB	E
35		Luggage room anten-		Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 JMKIA0062GB	G H
(V)	Ground	na (+)	OFF  When Intelligent Key is no	Output Ignition switch OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB	J K
28		Rack door antonna (		When the back	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	BO
38 (B)	Ground	Back door antenna (- )	Output	Output door opener request switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	P

	inal No. e color)	Description			0 - 123	Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
39	Ground	Back door antenna	Output	When the back door opener re-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0062GB
(W)	Ciodila	(+)	Cutput	quest switch is operated with ig- nition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s
47	Ground	Ignition relay (IPDM	Output	Ignition switch	OFF or ACC	Battery voltage
(Y) 52		E/R) control	-	Ignition switch	ON When selector lever is in P or N position	0 V  Battery voltage
(SB)	Ground	Starter relay control	Output	Ignition switch ON	When selector lever is not in P or N position	0 V
60* <sup>1</sup> (BR)	Ground	Push-button ignition switch (Push switch)	Input	Push-button ignition switch (push switch)	Pressed  Not pressed	0 V Battery voltage
					ON (Pressed)	0 V
61 (W)	Ground	Back door opener request switch	Input	Back door opener request switch	OFF (Not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB 1.0 V
64	0	Intelligent Key warn-	0 1 1	Intelligent Key	Sounding	0 V
(V)	Ground	ing buzzer (Engine room)	Output	warning buzzer (Engine room)	Not sounding	Battery voltage
65 (BG)	Ground	Rear wiper stop position	Input	Rear wiper	In stop position	(V) 15 10 5 0 10 ms JPMIA0016GB
					Not in stop position	1.0 V 0 V
			1			- ·

### < ECU DIAGNOSIS INFORMATION >

	inal No. e color)	Description			0 111	Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
66 (R)	Ground	Back door switch	Input	Back door switch	OFF (Door close)	(V) 15 10 5 0 10 ms JPMIA0011GB
					ON (Door open)	0 V
					Pressed	0 V
67 (GR)	Ground	Back door opener switch	Input	Back door opener switch	Not pressed	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8 V
68 (BR)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (Door close)	(V) 15 10 5 0 10 ms JPMIA0011GB
					ON (Door open)	0 V
69 (R)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (Door close)	(V) 15 10 5 0 10 ms 10 ms JPMIA0011GB
					ON (Door open)	0 V

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	ninal No. e color)	Description			Condition	Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
72		Room antenna 2 (–)		lanition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB
(R)	Ground	(Center console)	Output	Ignition switch OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB
73	Ground	Room antenna 2 (+)	Output	Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB
(G)	Signific	(Center console)	Сигри	OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB
74	Ground	Passenger door an-	Output	When the passenger door re-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB
(SB)	Glound	tenna (-)	Output		When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB

	ninal No. re color)	Description			One dition	Value	A
+	e color)	Signal name	Input/ Output		Condition	(Approx.)	
				When the pas-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 11 1 s  JMKIA0062GB	E
75 (GR)	Ground	Passenger door antenna (+)	Output	senger door request switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	E
76		Driver door antenna		When the driver door request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	F
(V)	Ground	(-)	Output	switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 1	ŀ
77		Driver door antenna		When the driver	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	B
77 (LG)	Ground	(+)	Output	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 1 s JMKIA0063GB	F

	inal No.	Description	I			Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
78	Ground	Room antenna 1 (–)	Output	utput Ignition switch OFF	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 JMKIA0062GB
(Y)		(Instrument panel)			When Intelligent Key is not in the passenger compartment	(V) 15 10 5 11 1 s  JMKIA0063GB
79	Ground	Room antenna 1 (+)	Output	Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 JMKIA0062GB
(BR)	Clound	(Instrument panel)	Cutput	OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB
80 (GR)	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.
81 (W)	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.
82	Ground	Ignition relay [Fuse	Output	Ignition switch	OFF or ACC	0 V
(R)	Cibana	block (J/B)] control	Caipai	ignition switch	ON	Battery voltage

	ninal No. e color)	Description			O a a little a	Value	
+	-	Signal name	Input/ Output		Condition	(Approx.)	
83	Od	Remote keyless entry	Input/	During waiting		(V) 15 10 5 1 ms 1 ms	
(Y)	Ground	receiver communication	Output	When operating e	ither button on the key	(V) 15 10 5 0 1 ms  JMKIA0065GB	-
					All switches OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB	-
87 (BR)	Ground	Combination switch	Input	t Combination switch	Front fog lamp switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0037GB 1.3 V	-
		INPUT 5			Rear wiper switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0039GB	
					Any of the conditions below with all switches OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 2  • Wiper intermittent dial 6  • Wiper intermittent dial 7	(V) 15 10 5 0 2 ms JPMIA0040GB	

	inal No. e color)	Description	T		O a little	Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
					All switches OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB
					Lighting switch HI (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3 V
88 (V)	Ground	Combination switch INPUT 3	Input	Combination switch	Lighting switch 2ND (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0037GB
					Rear washer switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0039GB 1.3 V
					Any of the conditions below with all switches OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 2  • Wiper intermittent dial 3	(V) 15 10 5 0 2 ms JPMIA0040GB 1.3 V
89* <sup>2</sup>	Crownsi	Push-button ignition	lowt	Push-button igni-	Pressed	0 V
(BR)	Ground	switch (Push switch)	Input	tion switch (push switch)	Not pressed	Battery voltage
90 (P)	Ground	CAN-L	Input/ Output	_		
91 (L)	Ground	CAN-H	Input/ Output	_		_

	inal No.	Description				Value	
(Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)	
					OFF	Battery voltage	-
92 (LG)	Ground	Key slot illumination	Output	Key slot illumina- tion	Blinking	(V) 15 10 5 0 1 s JPMIA0015GB	
					ON	6.5 V 0 V	=
93					OFF or ACC	Battery voltage	=
(V)	Ground	ON indicator lamp	Output	Ignition switch	ON	0 V	
94		D. I III. I	0	B 1111.1	OFF	Battery voltage	-
(Y)	Ground	Puddle lamp control	Output	Puddle lamp	ON	0 V	
95	0	ACC ===================================	O to .	Innition	OFF	0 V	-
(BG)	Ground	ACC relay control	Output	Ignition switch	ACC or ON	Battery voltage	
96 (GR)	Ground	A/T shift selector (Detention switch) power supply	Output	_		Battery voltage	5
97*2	Ground	Steering lock condi-	Input	Steering lock	LOCK status	0 V	
(L)		tion No. 1		Steering lock	UNLOCK status	Battery voltage	
98* <sup>2</sup>	Ground	Steering lock condi-	Input	Steering lock	LOCK status	Battery voltage	
(P)		tion No. 2		3	UNLOCK status	0 V	
99	Ground	Selector lever P posi-	Input	Selector lever	P position	0 V	
(R)		tion switch			Any position other than P	Battery voltage	
					ON (Pressed)	0 V	-
100 (G)	Ground	Passenger door request switch	Input	Passenger door request switch	OFF (Not pressed)	(V) 15 10 5 0	
					ON (Pressed)	JPMIA0016GB 1.0 V	
					ON (1 16356U)	U V	-
101 (SB)	Ground	Driver door request switch	Input	Driver door request switch	OFF (Not pressed)	(V) 10 5 0 10 ms JPMIA0016GB	
						1.0 V	
102	Ground	Blower fan motor re-	Output	Ignition switch	OFF or ACC	0 V	_
(BG)	2.34.14	lay control	- Carpar	-g	ON	Battery voltage	

	inal No.	Description				
	e color)	Signal name	Input/ Output		Condition	Value (Approx.)
103 (LG)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OF	F	Battery voltage
106* <sup>2</sup> (W)	Ground	Steering lock unit power supply	Output	Ignition switch	OFF or ACC	Battery voltage 0 V
(11)					All switches OFF	(V) 15 10 2 ms JPMIA0041GB
					Turn signal switch LH	(V) 15 10 5 0 2 ms JPMIA0037GB 1.3 V
107 (LG)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermit- tent dial 4)	Turn signal switch RH	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3 V
					Front wiper switch LO	(V) 15 10 5 0 2 ms JPMIA0038GB 1.3 V
					Front washer switch ON	(V) 15 10 5 0 2 ms JPMIA0039GB 1.3 V

### < ECU DIAGNOSIS INFORMATION >

Terminal No. Description		1			Value	
(Wire color)	Signal name	Input/ Output		Condition	(Approx.)	
				All switches OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V	
				Lighting switch AUTO (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0038GB	
108 (R) Ground	Combination switch INPUT 4	Input	Combination switch	Lighting switch 1ST (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3 V	
				Rear wiper switch INT (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0040GB	
				Any of the conditions below with all switches OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 5  • Wiper intermittent dial 6	(V) 15 10 5 0 2 ms JPMIA0039GB 1.3 V	

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	inal No.	Description				Volue	
(Wire	e color)	Signal name	Input/ Output		Condition	Value (Approx.)	
					All switches OFF	(V) 15 10 5 0  JPMIA0041GB 1.4 V	
					Lighting switch PASS	(V) 15 10 5 0 2 ms JPMIA0037GB 1.3 V	
109 (Y)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermit- tent dial 4)	Lighting switch 2ND	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3 V	
					Front wiper switch INT	(V) 15 10 5 0 2 ms JPMIA0038GB 1.3 V	
					Front wiper switch HI	(V) 15 10 5 0 2 ms JPMIA0040GB	
					ON	0 V	
110 (G)	Ground	Hazard switch	Input	Hazard switch	OFF	(V) 15 10 5 0 JPMIA0012GB 1.1 V	

### < ECU DIAGNOSIS INFORMATION >

	inal No. e color)	Description	1		0 100	Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
					LOCK status	Battery voltage
111* <sup>2</sup> (Y) Ground	Steering lock unit communication	Input/ Output	Steering lock	LOCK or UNLOCK	(V) 15 10 50 ms JMKIA0066GB	
					For 15 seconds after UN- LOCK	Battery voltage
					15 seconds or later after UNLOCK	0 V
113	Ground	Optical sensor	Input	Ignition switch	When bright outside of the vehicle	Close to 5 V
(P)	Ground	Optical serisor	input	ON	When dark outside of the vehicle	Close to 0 V
116 (SB)	Ground	Stop lamp switch 1	Input	_	_	Battery voltage
		Stop lamp switch 2 (Without ICC)  Stop lamp switch 2	- Input	Stop lamp switch	OFF (Brake pedal is not depressed)	0 V
118	Ground				ON (Brake pedal is depressed)	Battery voltage
(P)				Stop lamp switch OFF (Brake pedal is not depressed) and ICC brake hold relay OFF		0 V
		(With ICC)		Stop lamp switch ( pressed) or ICC bi	ON (Brake pedal is de- rake hold relay ON	Battery voltage
119 (SB)	Ground	Front door lock assembly driver side (Unlock sensor)	Input	Driver door	LOCK status (Unlock sensor switch OFF)	(V) 15 10 5 0 10 ms JPMIA0012GB
					UNLOCK status (Unlock switch sensor ON)	0 V
121	Ground	Key slot switch	Input	When the key is in	serted into key slot	Battery voltage
(BR)	Ciodila	. toy olot ownor	put	When the key is no	ot inserted into key slot	0 V
123	Ground	IGN feedback	Input	Ignition switch	OFF or ACC	0 V
(W)				_	ON	Battery voltage

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Terminal No.		Description				Value
+	e color)	Signal name	Input/ Output	Condition		(Approx.)
124 (LG)	Ground	Passenger door switch	Input	Passenger door switch	OFF (Door close)	(V) 15 10 5 0 10 ms 10 ms 11.8 V
					ON (Door open)	0 V
132 (BR)	Ground	Power window switch communication	Input/ Output	Ignition switch ON		(V) 15 10 5 0 10 ms JPMIA0013GB
				Ignition switch OFF or ACC		Battery voltage
					ON (Tail lamps OFF)	9.5 V
133 (W)	Ground	Push-button ignition switch illumination	Output	Push-button ignition switch illumination	ON (Tail lamps ON)	NOTE: The pulse width of this wave is varied by the illumination brightening/dimming level.  (V) 15 10 5 0  JPMIA0159GB
					OFF	0 V
134	Ground	LOCK indicator lamp	Output	LOCK indicator	OFF	Battery voltage
(GR)	Cround	2001 indicator lamp	Caipai	lamp	ON	0 V
137 (BG)	Ground	Receiver and sensor ground	Input	Ignition switch ON		0 V
138	Ground	Receiver and sensor power supply	Output	Ignition switch	OFF	0 V
(Y)				ignition switch	ACC or ON	5.0 V

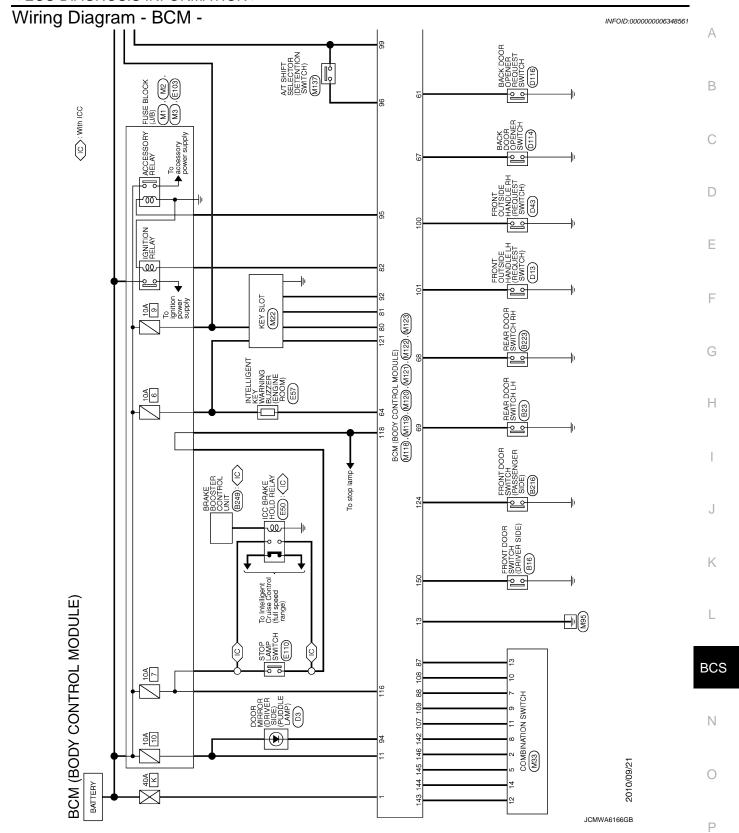
Terminal No. (Wire color)		Description				Value	
(Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)	
139		Tire pressure receiv-	Input/	Ignition switch	Standby state	(V) 6 4 2 0 + 0.2s OCC3881D	
(L)	Ground	er communication	Output	ON ON	When receiving the signal from the transmitter	(V) 6 4 2 0 0 0.2s OCC3880D	
140		Selector lever P/N			P or N position	Battery voltage	
(GR)	Ground	position	Input	Selector lever	Except P and N positions	0 V	
					ON	0 V	
141 (G)	Ground	Security indicator	Output	Security indicator	Blinking	(V) 15 10 5 0 JPMIA0014GB 11.3 V	
					OFF	Battery voltage	
					All switches OFF	0 V	
142 (BG)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermittent dial 4)	Lighting switch 1ST Lighting switch HI Lighting switch 2ND	(V) 15 10 5	
					Turn signal switch RH	0	
143 (P)		Combination switch OUTPUT 1	Output	Combination switch	All switches OFF (Wiper intermittent dial 4)	0 V	
	Ground				Front wiper switch HI (Wiper intermittent dial 4)		
					Rear wiper switch INT (Wiper intermittent dial 4)  Any of the conditions below with all switches OFF  • Wiper intermittent dial 1	(V) 15 10 5 0	
					<ul> <li>Wiper intermittent dial 2</li> <li>Wiper intermittent dial 3</li> <li>Wiper intermittent dial 6</li> <li>Wiper intermittent dial 7</li> </ul>	JPMIA0032GB 10.7 V	

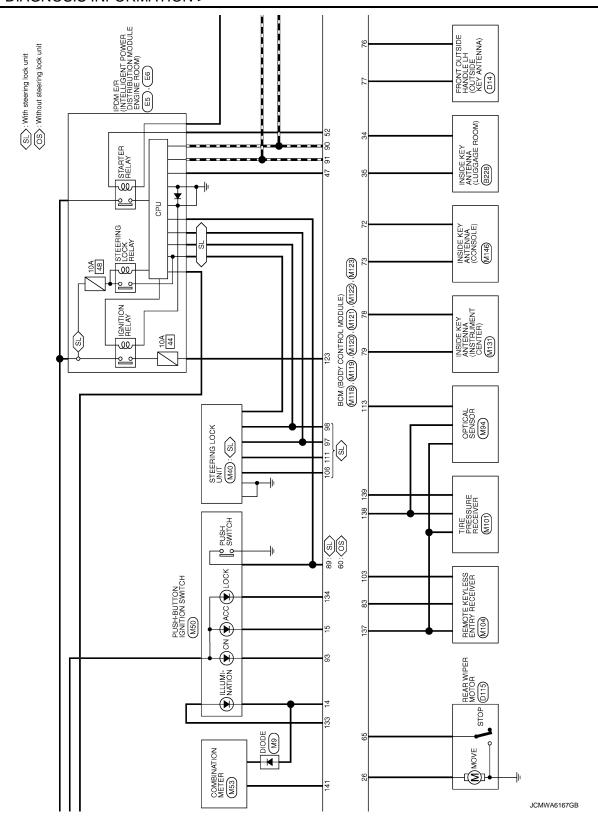
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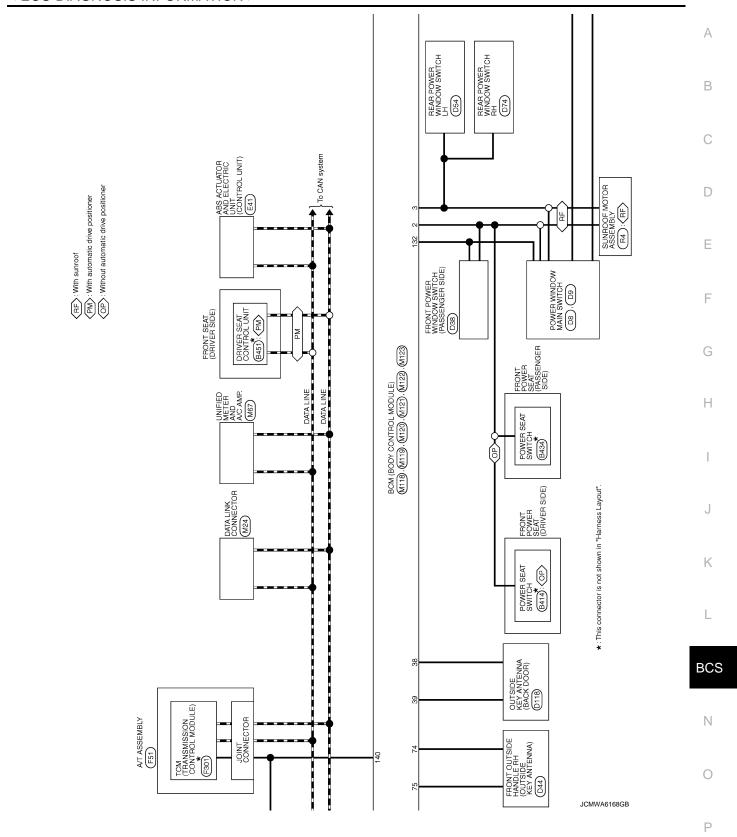
Terminal No. (Wire color)		Description		Condition		Value	
+	-	Signal name	Input/ Output	Condition		(Approx.)	
144 (G)	Ground	Combination switch OUTPUT 2	Output	Combination switch	All switches OFF (Wiper intermittent dial 4)	0 V	
					Front washer switch ON (Wiper intermittent dial 4)		
					Rear wiper switch ON (Wiper intermittent dial 4)	(V) 15 10	
					Rear washer switch ON (Wiper intermittent dial 4)	10 5 0	
					Any of the conditions below with all switches OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 5  • Wiper intermittent dial 6	2 ms JPMIA0033GB	
		Combination switch OUTPUT 3	Output	Combination switch (Wiper intermit- tent dial 4)	All switches OFF	0 V	
					Front wiper switch INT		
145 (L)					Front wiper switch LO	(V)	
	Ground				Lighting switch AUTO	10 5 0 2 ms JPMIA0034GB	
					All switches OFF	10.7 V 0 V	
	Ground	Combination switch OUTPUT 4	Output	Combination switch (Wiper intermit- tent dial 4)	Front fog lamp switch ON	0 V	
146 (SB)					Lighting switch 2ND	(V)	
					Lighting switch PASS	15	
					Turn signal switch LH	2 ms JPMIA0035GB	
150 (LG)	Ground	Driver door switch	Input	Driver door switch	OFF (Door close)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8 V	
					ON (Door open)	0 V	
151	Ground	Rear window defog- ger relay control	Output	Rear window de- fogger	Active	0 V	
(G)					Not activated	Battery voltage	

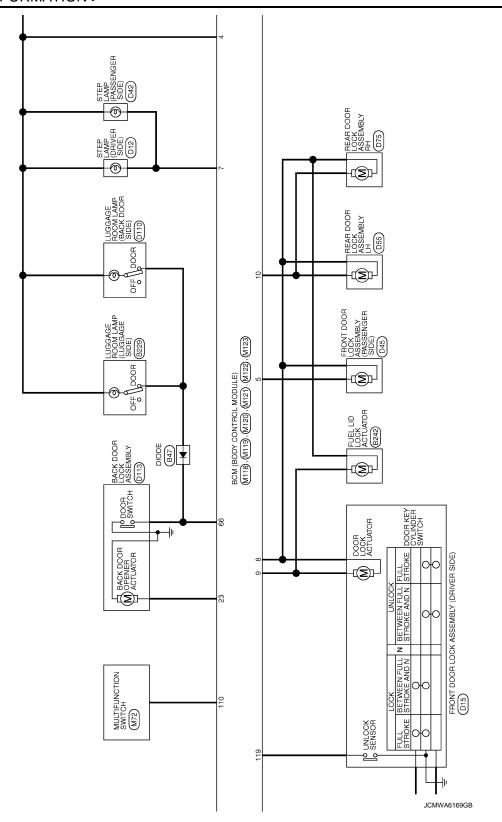
#### NOTE:

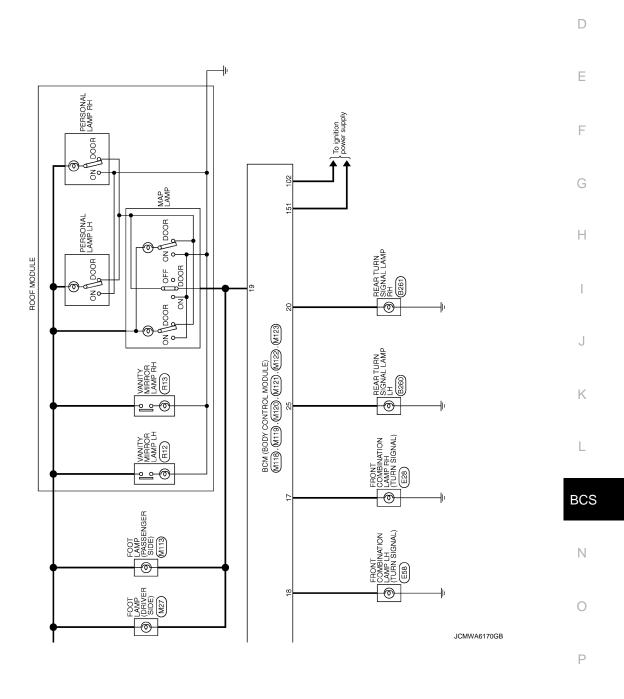
- \*1: Without steering lock unit
- \*2: With steering lock unit











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80 GR NATS ANT AMP.	81 W NATS ANT AMP.	Я	Y KEYLES	H :	88 V COMBI SW INPUT 3	۵	7	LG	93 V ON IND	BG	GR A/T SHIFT	7	NS 4	œ	100 G PASSENGER DOOR REQUEST SW	BG SB	LG KE	۸	PT	108 R COMBI SW INPUT 4	109 Y COMBI SW INPUT 2	o :	111 Y S/L UNIT COMM																
L					L	L	Ш			L	Ш				Τ΄	1	L	L							_														
M121	BCM (BODY CONTROL MOBILE)	SOM (BOD) CONTINCE MODOLE/	TH40FGY-NH				47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 87 86 65 64 83 87 61 80 59 58 57 56 55 54 53 52				Signal Name [Specification]	LUGGAGE ROOM ANT-	LUGGAGE ROOM ANT+	BACK DOOR ANT-	BACK DOOR ANI+	STARTER RELAY CONT	PUSH SW [Without steering lock unit]	BACK DOOR OPENER REQUEST SW	I-KEY WARN BUZZER (ENG ROOM)	REAR WIPER STOP POSITION	BACK DOOR SW	BACK DOOR OPENER SW	REAR RH DOOR SW REAR LH DOOR SW		M122	BCM (BODY CONTROL MODULE)	TH40FB-NH	0.00	8 98 98 98 98 98 98 98 97 77 77 77 77 77 77 77 77 77 77 77 77	10/1 10/1 10/1 10/1 10/1 10/1 10/1 10/1	3	Signal Name [Specification]	ROOM ANT2-	ROOM ANT2+	PASSENGER DOOR ANT-	PASSENGER DOOR ANT+	DRIVER DOOR ANT-	DRIVER DOOR ANT+	-POOM ANTI-
Γ							51 50 49 48 47 46 45 71 70 69 68 67 66 65			Color	of Wire	SB	>	В	× ;	- 87	88	*	>	BG	œ	GR	# ~			_ e	Т	1	91 90 88	111111111111111111111111111111111111111	Color	of Wire	ď	G	SB	GR	>	5 ;	>
Connector No.	Connector Mamo	COLLIGOCO	Connector Type	<b>1</b>	E	֓֟֟ <b></b>		_		Terminal	No.	34	32	38	39	25	9	19	64	65	99	67	89 69		Connector No	Connector Name	Connector Type		子 E	_	Terminal	No.	72	73	74	75	9/		9
o. M119	BCM (BODY CONTBOL MOBILIE)	$\neg$	ype NS16FW-CS			4567	12 13 14 15 16 17			Color	of Wire Signal Name (Specification)	LG INTERIOR ROOM LAMP POWER SUPPLY	L PASSENGER DOOR UNLOCK OUTPUT	Y STEP LAMP OUTPUT	V ALL DOOR, FUEL LID LOCK OUTPUT	T	L		W PUSH-BUTTON IGNITION SWILL GND	Y AGC IND	W TURN SIGNAL RH (FRONT)	BG TURN SIGNAL LH (FRONT)	V ROOM LAMP TIMER CONTROL	ſ	Т	_	ype NS12FW-CS		20 21 22 83 24 25 26 27 28 29 30 31		Golor Signal Name [Specification]		В		G REAR WIPER OUTPUT				
tor No	Connector Mano	DATE INCOME	Connector Type		<u>ر</u> ع =	3				Ferminal C		4	2	_		10	╀	13	14	15	17	+	61		Connector No.	Connector Name	Connector Type	7	ς <u>i</u>		rerminal C No. of	H	23	25	26				
nec	ا ا	5	Con	ą <u>t</u>	手	•				L <sub>P</sub>	_				Т Т	I T	L T	Ľ I	Ĺ T				J T	<u>[</u> 	Con	<u>ල්</u> [	5	<b>☞</b> ]		l	<u></u>	<u> </u>	П						
M33 Connector No.	HOLLING NOLLYNDROG		TH16FW-NH				& 4	7 8 9 10 11 12 13 14	•	: :	Signal Name [Specification]	FR WASHER(-)	OUTPUT 4	FR WASHER(+)	IGN	SIGNO	INPUT 3	OUTPUT 5	INPUT 2	INPUT 4	INPUT 1	OUTPUT 1	INPUT 5 OUTPUT 2		M118	BCM (BODY CONTROL MODULE)	M03FB-1 C	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		2	4	Signal Name [Specification]	BAT (F/L)	POWER WINDOW POWER SUPPLY(BAT)	POWER WINDOW POWER SUPPLY(RAP)				
Connector No. M33 Connec	MOTIVE MOTIVE COMPLETE	$\neg$	Connector Type THI6FW-NH				3 4 5	9 10 11 12 1		Ferminal Color	of Wire	P FR WASHER(-)			IGN G	SIGNO		BG OUTPUT 5		R INPUT 4	LG INPUT 1		BR INPUT 5  G OUTPUT 2		Connector No M118	ē	$\neg$	2	Hs.	[2]	Terminal Color	of Wire	Н	W POWER WINDOW POWER SUPPLY	Y POWER WINDOW POWER SUPPLY				

JCMWA6171GB

#### < ECU DIAGNOSIS INFORMATION >

읪	Connector No. M123 Connector Name BCM (BODY CONTROL MODULE)	Connector Type TH40FG-NH	H.S. Since the second s
BC	Connect	Connect	₽ H.S.

Signal Name [Specification]	OPLICAL SENSOR	STOP LAMP SW 1	STOP LAMP SW 2	DR DOOR UNLOCK SENSOR	KEY SLOT SW	IGN F/B	PASSENGER DOOR SW	POWER WINDOW SW COMM	PUSH-BUTTON IGNITION SWILL POWER	LOCK IND	RECEIVER/SENSOR GND	RECEIVER/SENSOR POWER SUPPLY	TIRE PRESSURE RECEIVER COMM	SHIFT N/P	SECURITY INDICATOR OUTPUT	COMBI SW OUTPUT 5	COMBI SW OUTPUT 1	COMBI SW OUTPUT 2	COMBI SW OUTPUT 3	COMBI SW OUTPUT 4	DRIVER DOOR SW	REAR WINDOW DEFOGGER RELAY CONT	
Color of Wire	۵	SB	۵	SB	BR	W	PC	BR	W	GR	BG	Υ	٦	GR	9	BG	Ь	9	٦	SB	PΠ	9	
Terminal No.	113	116	118	119	121	123	124	132	133	134	137	138	139	140	141	142	143	144	145	146	150	151	

JCMWA6172GB

FAIL-SAFE CONTROL BY DTC

Fail-safe

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

**BCS-77** Revision: 2011 October 2011 EX

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## < ECU DIAGNOSIS INFORMATION >

Display contents of CONSULT	Fail-safe	Cancellation
B2013: ID DISCORD BCM-S/L	Inhibit engine cranking	Erase DTC
B2014: CHAIN OF S/L-BCM	Inhibit engine cranking	Erase DTC
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 → OFF
B2557: VEHICLE SPEED	Inhibit steering lock	When normal vehicle speed signals are received from ABS actuator and electric unit (control unit) for 500 ms
B2560: STARTER CONT RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status becomes consistent  • Starter control relay signal  • Starter relay status signal
B2601: SHIFT POSITION	Inhibit steering lock	<ul> <li>500 ms after the following signal reception status becomes consistent</li> <li>Selector lever P position switch signal</li> <li>P range signal (CAN)</li> </ul>
B2602: SHIFT POSITION	Inhibit steering lock	<ul> <li>5 seconds after the following BCM recognition conditions are fulfilled</li> <li>Ignition switch is in the ON position</li> <li>Selector lever P position switch signal: Except P position (battery voltage)</li> <li>Vehicle speed: 4 km/h (2.5 MPH) or more</li> </ul>
B2603: SHIFT POSI STATUS	Inhibit steering lock	<ul> <li>500 ms after the following BCM recognition conditions are fulfilled</li> <li>Ignition switch is in the ON position</li> <li>Selector lever P position switch signal: Except P position (battery voltage)</li> <li>Selector lever P/N position signal: Except P and N positions (0 V)</li> </ul>
B2604: PNP SW	Inhibit steering lock	<ul> <li>500 ms after any of the following BCM recognition conditions are fulfilled</li> <li>Status 1</li> <li>Ignition switch is in the ON position</li> <li>Selector lever P/N position signal: P and N position (battery voltage)</li> <li>P range signal or N range signal (CAN): ON</li> <li>Status 2</li> <li>Ignition switch is in the ON position</li> <li>Selector lever P/N position signal: Except P and N positions (0 V)</li> <li>P range signal and N range signal (CAN): OFF</li> </ul>
B2605: PNP SW	Inhibit steering lock	500 ms after any of the following BCM recognition conditions are fulfilled  • Ignition switch is in the ON position  - 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 (battery voltage)  - PNP switch signal (CAN): ON
B2606: S/L RELAY	Inhibit engine cranking	<ul> <li>500 ms after the following CAN signal communication status becomes consistent</li> <li>Steering lock relay signal (Request signal)</li> <li>Steering lock relay signal (Condition signal)</li> </ul>

#### < ECU DIAGNOSIS INFORMATION >

Display contents of CONSULT	Fail-safe	Cancellation
B2607: S/L RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status becomes consistent  • Steering lock relay signal (Request signal)  • Steering lock relay signal (Condition signal)
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 cranking     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
B260A: IGNITION RELAY	Inhibit engine cranking	<ul> <li>500 ms after the following conditions are fulfilled</li> <li>IGN relay (IPDM E/R) control signal: OFF (Battery voltage)</li> <li>Ignition ON signal (CAN to IPDM E/R): OFF (Request signal)</li> <li>Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)</li> </ul>
B260F: ENG STATE SIG LOST	Maintains the power supply position attained at the time of DTC detection	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)
B2617: STARTER RELAY CIRC	Inhibit engine cranking	1 second after the starter motor relay control inside BCM becomes normal
B2618: BCM	Inhibit engine cranking	1 second after the ignition relay (IPDM E/R) control inside BCM becomes normal
B2619: BCM	Inhibit engine cranking	1 second after the steering lock unit power supply output control inside BCM becomes normal
B261E: VEHICLE TYPE	Inhibit engine cranking	BCM initialization
B26E9: S/L STATUS	Inhibit engine cranking     Inhibit steering lock	When BCM transmits the LOCK request signal to steering lock unit, and receives LOCK response signal from steering lock unit, the following conditions are fulfilled  Steering condition No. 1 signal: LOCK (0 V)  Steering condition No. 2 signal: LOCK (Battery voltage)

#### 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 stops.
- 2. Turn rear wiper switch OFF.
- Operate the rear wiper switch or rear washer switch.

### DTC Inspection Priority Chart

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)

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#### < ECU DIAGNOSIS INFORMATION >

Priority	DTC
3	B2190: NATS ANTENNA AMP     B2191: DIFFERENCE OF KEY     B2192: ID DISCORD BCM-ECM     B2193: CHAIN OF BCM-ECM     B2195: ANTI SCANNING
4	B2013: ID DISCORD BCM-S/L     B2014: CHAIN OF S/L-BCM     B2553: IGNITION RELAY     B2555: STOP LAMP     B2556: PUSH-BTN IGN SW     B2557: VEHICLE SPEED     B2560: STARTER CONT RELAY     B2601: SHIFT POSITION     B2602: SHIFT POSITION     B2602: SHIFT POSITION     B2604: PNP SW     B2605: PNP SW     B2606: S/L RELAY     B2606: S/L RELAY     B2607: S/L RELAY     B2608: STARTER RELAY     B2609: S/L STATUS     B2609: S/L STATUS     B2609: S/L STATUS     B2600: STEERING LOCK UNIT     B2600: STEERING LOCK UNIT     B2600: STEERING LOCK UNIT     B2600: STEERING LOCK UNIT     B2601: S/L STATUS     B2614: ACC RELAY CIRC     B2615: BLOWER RELAY CIRC     B2616: IGN RELAY CIRC     B2616: IGN RELAY CIRC     B2616: BCM     B2617: STATER RELAY CIRC     B2618: BCM     B2619: BCM     B2619: BCM     B2619: BCM     B2619: SCM     B2619: VHICLE TYPE     B26E9: S/L STATUS     B26EA: KEY REGISTRATION     C1729: VHCL SPEED SIG ERR     U0415: VEHICLE SPEED SIG
5	<ul> <li>C1704: LOW PRESSURE FL</li> <li>C1705: LOW PRESSURE FR</li> <li>C1706: LOW PRESSURE RR</li> <li>C1707: LOW PRESSURE RL</li> <li>C1708: [NO DATA] FL</li> <li>C1709: [NO DATA] FR</li> <li>C1710: [NO DATA] RR</li> <li>C1711: [NO DATA] RL</li> <li>C1716: [PRESSDATA ERR] FL</li> <li>C1717: [PRESSDATA ERR] FR</li> <li>C1718: [PRESSDATA ERR] RR</li> <li>C1719: [PRESSDATA ERR] RL</li> <li>C1734: CONTROL UNIT</li> </ul>
6	B2621: INSIDE ANTENNA     B2622: INSIDE ANTENNA     B2623: INSIDE 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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#### < ECU DIAGNOSIS INFORMATION >

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)".

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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	В
No DTC is detected. further testing may be required.	_	_	_	_	_	
U1000: CAN COMM CIRCUIT	_	_	_	_	BCS-38	D
U1010: CONTROL UNIT (CAN)	_	_	_	_	BCS-39	
U0415: VEHICLE SPEED SIG	<del>-</del>	_	_	_	BCS-40	Е
B2013: ID DISCORD BCM-S/L*	×	×	_	_	SEC-49	
B2014: CHAIN OF S/L-BCM*	×	×	_	_	SEC-50	
B2190: NATS ANTENNA AMP	×	_	_	_	SEC-42	F
B2191: DIFFERENCE OF KEY	×	_	_	_	SEC-45	
B2192: ID DISCORD BCM-ECM	×	_	_	_	SEC-46	G
B2193: CHAIN OF BCM-ECM	×	_	_	_	SEC-47	
B2195: ANTI SCANNING	×	_	_	_	SEC-48	
B2553: IGNITION RELAY		×	_		PCS-50	Н
B2555: STOP LAMP		×	_		SEC-53	
B2556: PUSH-BTN IGN SW		×	×		SEC-55	
B2557: VEHICLE SPEED	×	×	×		SEC-57	1
B2560: STARTER CONT RELAY	×	×	×		SEC-58	
B2562: LOW VOLTAGE		×	_		BCS-41	J
B2601: SHIFT POSITION	×	×	×	_	SEC-59	
B2602: SHIFT POSITION	×	×	×		SEC-62	17
B2603: SHIFT POSI STATUS	×	×	×		SEC-64	K
B2604: PNP SW	×	×	×		SEC-67	
B2605: PNP SW	×	×	×		SEC-69	L
B2606: S/L RELAY*	×	×	×		SEC-71	
B2607: S/L RELAY*	×	×	×		SEC-72	
B2608: STARTER RELAY	×	×	×	_	SEC-74	BCS
B2609: S/L STATUS*	×	×	×	_	SEC-76	
B260A: IGNITION RELAY	×	×	×		PCS-52	Ν
B260B: STEERING LOCK UNIT*	_	×	×	_	SEC-80	
B260C: STEERING LOCK UNIT*	_	×	×	_	SEC-81	
B260D: STEERING LOCK UNIT*	_	×	×	_	SEC-82	0
B260F: ENG STATE SIG LOST	×	×	×	_	SEC-83	
B2612: S/L STATUS*	×	×	×	_	SEC-87	Р
B2614: ACC RELAY CIRC	_	×	×	_	PCS-54	'
B2615: BLOWER RELAY CIRC	_	×	×	_	PCS-57	
B2616: IGN RELAY CIRC	_	×	×	_	PCS-60	
B2617: STARTER RELAY CIRC	×	×	×	_	SEC-91	
B2618: BCM	×	×	×	_	PCS-63	

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### < ECU DIAGNOSIS INFORMATION >

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
B2619: BCM*	×	×	×	_	SEC-93
B261A: PUSH-BTN IGN SW	_	×	×	_	SEC-94
B261E: VEHICLE TYPE	×	×	× (Turn ON for 15 seconds)	_	<u>SEC-97</u>
B2621: INSIDE ANTENNA	_	×	_	_	DLK-59
B2622: INSIDE ANTENNA	_	×	_	_	DLK-61
B2623: INSIDE ANTENNA	_	×	_	_	DLK-63
B26E1: ENG STATE NO RES	×	×	×	_	SEC-84
B26E9: S/L STATUS*	×	×	× (Turn ON for 15 seconds)	_	<u>SEC-85</u>
B26EA: KEY REGISTRATION	_	×	× (Turn ON for 15 seconds)	_	<u>SEC-86</u>
C1704: LOW PRESSURE FL	_	_	_	×	
C1705: LOW PRESSURE FR	_	_	_	×	W/T 22
C1706: LOW PRESSURE RR	_	_	_	×	<u>WT-23</u>
C1707: LOW PRESSURE RL	_	_	_	×	
C1708: [NO DATA] FL	_	_	_	×	
C1709: [NO DATA] FR	_	_	_	×	WT-25
C1710: [NO DATA] RR	_	_	_	×	<u> </u>
C1711: [NO DATA] RL	_	_	_	×	
C1716: [PRESSDATA ERR] FL	_	_	_	×	
C1717: [PRESSDATA ERR] FR	_	_	_	×	WT-28
C1718: [PRESSDATA ERR] RR	_		_	×	<u> </u>
C1719: [PRESSDATA ERR] RL	_	_	_	×	
C1729: VHCL SPEED SIG ERR	_	_	_	×	<u>WT-30</u>
C1734: CONTROL UNIT	_	_	_	×	<u>WT-32</u>

<sup>\*:</sup> For models without steering lock unit, this DTC is not applied.

#### **COMBINATION SWITCH SYSTEM SYMPTOMS**

< SYMPTOM DIAGNOSIS >

# 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.

								Doto	ma a m :4 a	w i4 a ma					IVIAI	lunction	item: ×
					T			Data	monito	ritem		ı		T	T	T	
Malfunction combination	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
Α		×	×						×	×							
В	×			×									×		×		
С							×	×				×		×			
D						×		×			×					×	
E					×			×									×
F	×					×		×									
G			×		×		×	×									
Н		×		×												×	
I										×				×	×		×
J									×		×	×	×				
К		•	•	•		•	•		All Item	S	•	•	•				•
L			lf	only or	ne item	is dete	cted or	the iter	n is not	applica	able to	the con	nbinatio	ons A to	K		

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 INPUT 1 circuit									
В	Combination switch INPUT 2 circuit									
С	Combination switch INPUT 3 circuit	Inspect the combination switch input circuit applicable to the malfunctioning part. Refer to BCS-43, "Diagnosis Procedure".								
D	Combination switch INPUT 4 circuit	part. Note: to <u>500 45, Diagnosis i roccudio</u> .								
Е	Combination switch INPUT 5 circuit									
F	Combination switch OUTPUT 1 circuit									
G	Combination switch OUTPUT 2 circuit									
Н	Combination switch OUTPUT 3 circuit	Inspect the combination switch output circuit applicable to the malfunctioning part. Refer to BCS-45, "Diagnosis Procedure".								
I	Combination switch OUTPUT 4 circuit	. Ing part. Rolor to <u>Dog vo, Diagnosio i roccadio</u> .								
J	Combination switch OUTPUT 5 circuit									
K	ВСМ	Replace BCM. Refer to BCS-86, "Exploded View".								
L	Combination switch	Replace the combination switch.								

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#### NORMAL OPERATING CONDITION

#### < SYMPTOM DIAGNOSIS >

### NORMAL OPERATING CONDITION

Description INFOID:0000000007868411

#### TRANSIT MODE

- Transit mode inhibits battery power consumption during transportation or storage of the vehicle.
- BCM is set to transit mode before delivery.
- In transit mode, remote keyless entry function, headlamp ON/OFF function, theft warning alarm function, and other BCM control functions do not operate normally.
- Therefore, cancel operation must be performed so that the vehicle is used in normal status.
- For transit mode cancel operation, refer to BCS-7, "Description".

#### NOTE:

Do not cancel transit mode during storage of the vehicle. Always cancel transit mode before delivery of the vehicle to customer.

#### **PRECAUTIONS**

#### < PRECAUTION >

### **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.

Always observe the following items for preventing accidental activation.

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that 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 "SRS AIR BAG".
- Never use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

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

#### **WARNING:**

Always observe the following items for preventing accidental activation.

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never 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.

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< REMOVAL AND INSTALLATION >

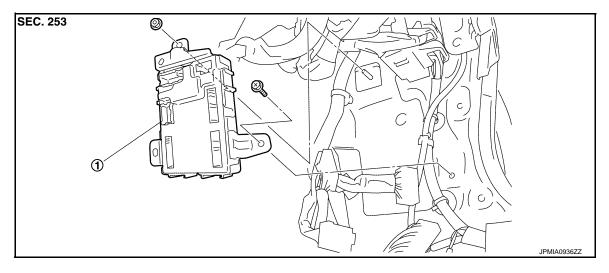
## REMOVAL AND INSTALLATION

## **BCM (BODY CONTROL MODULE)**

Exploded View

#### **CAUTION:**

Before replacing BCM, perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to BCS-4, "CONFIGURATION (BCM): Description".



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 <a href="https://BCS-4, "CONFIGURATION (BCM)">BCS-4, "CONFIGURATION (BCM)</a>: <a href="https://Description">Description</a>.

#### REMOVAL

- 1. Remove dash side finisher (passenger side). Refer to INT-21, "Exploded View".
- 2. Remove bolt and nut.
- 3. Remove BCM and disconnect the connector.

#### **INSTALLATION**

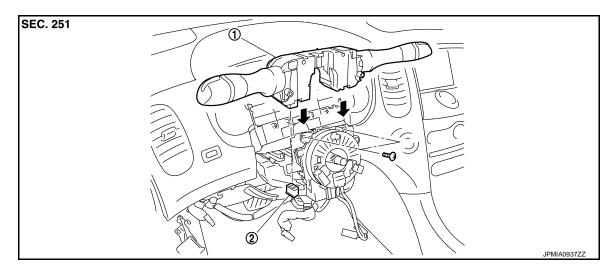
Install in the reverse order of removal.

#### **CAUTION:**

- Be sure to perform "WRITE CONFIGURATION" when replacing BCM.
- Be sure to perform the system initialization (NATS) when replacing BCM. Refer to BCS-4, "CONFIGU-RATION (BCM): Work Procedure".

# **COMBINATION SWITCH**

Exploded View



1. Combination switch

2. Combination switch connector

#### Removal and Installation

**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.

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