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### **INSPECTION AND ADJUSTMENT**

### < BASIC INSPECTION >

## **BASIC INSPECTION**

# INSPECTION AND ADJUSTMENT ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

## ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description

INFOID:0000000004468259

Perform the system initialization when replacing BCM, replacing Intelligent Key or registering an additional Intelligent Key.

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement

Refer to the CONSULT-III operation manual for the initialization procedure.

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## SYSTEM DESCRIPTION

## **BODY CONTROL SYSTEM**

## System Description

INFOID:0000000004468261

#### **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		Refer to	
Combination switch reading system		BCS-6, "System Diagram"	
Signal buffer system		BCS-10, "System Diagram"	
Power consumption control system		BCS-11, "System Diagram"	
Auto light system		EXL-12. "System Diagram"	
Turn signal and hazard warning lamp syste	em	EXL-24, "System Diagram"	
Headlamp system		EXL-8, "System Diagram"	
Parking, license plate and tail lamps syster	n	EXL-26. "System Diagram"	
Front fog lamp system		EXL-22, "System Diagram"	
Exterior lamp battery saver system		EXL-28, "System Diagram"	
Daytime running light system		EXL-15, "System Diagram"	
Interior room lamp control system			
Step lamp system		INL-5, "System Diagram"	
Trunk room lamp system			
Interior room lamp battery saver system		INL-9, "System Diagram"	
Front wiper and washer system		WW-5. "System Diagram"	
Warning chime system		WCS-5, "WARNING CHIME SYSTEM : System Diagram"	
Door lock system		DLK-11, "System Diagram"	
Trunk open system		DLK-47, "System Diagram"	
Infiniti Vehicle Immobilizer System (IVIS) -	NATS	SEC-17, "System Diagram"	
Vehicle security system		SEC-23, "System Diagram"	
Panic alarm		DLK-30, "REMOTE KEYLESS ENTRY FUNCTION : System Description"	
Automatic drive positioner system		ADP-14, "AUTOMATIC DRIVE POSITIONER SYSTEM: System Diagram"	
Rear window defogger system		DEF-4, "System Diagram"	
	Door lock function		
	Trunk open function		
Intelligent Key system/engine start system	Remote keyless entry function	DLK-16, "INTELLIGENT KEY SYSTEM: System Diagram"	
	Key reminder function		
	Warning function		
	Engine start function		

## **BODY CONTROL SYSTEM**

### < SYSTEM DESCRIPTION >

System	Refer to
Power window system	PWC-10, "System Diagram" (Front & rear window anti-pinth)     PWC-121, "System Diagram" (Front window anti-pinch)
Retained accessory power (RAP) system	PWC-10, "System Description"
Tire pressure monitor system (TPMS) - AIR PRESSURE MONITOR	WT-9, "System Diagram"

## **Component Parts Location**

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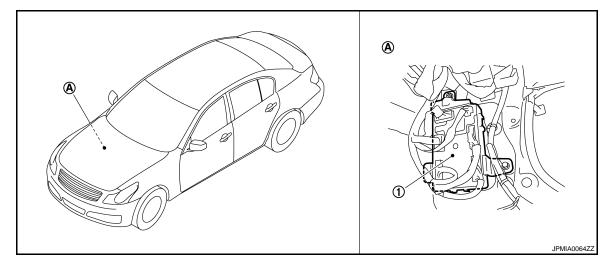
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- 1. BCM
- A. Dash side lower (passenger side)

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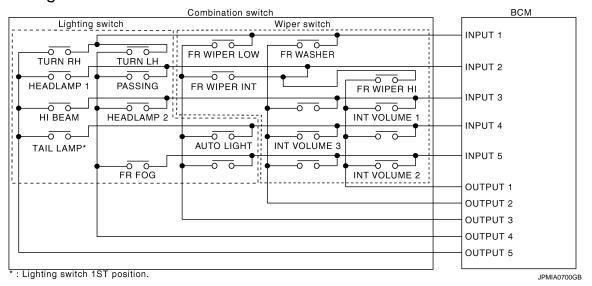
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## System Diagram

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## System Description

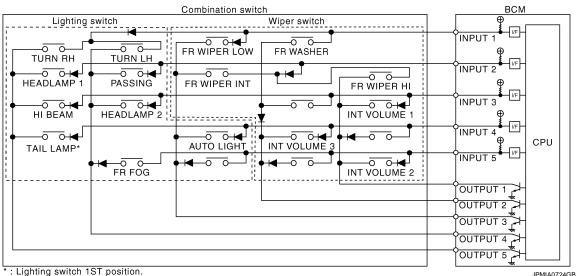
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#### **OUTLINE**

- 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	_	_	HEADLAMP 2	HI BEAM
INPUT 4	_	INT VOLUME 3	AUTO LIGHT	_	TAIL LAMP
INPUT 5	INT VOLUME 2	_	_	FR FOG	_

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#### < SYSTEM DESCRIPTION >

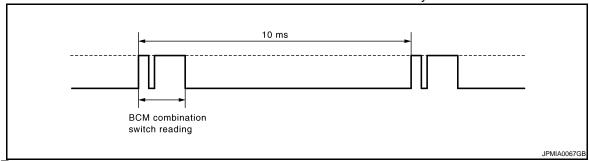
#### NOTE:

Headlamp has a dual system switch.

#### COMBINATION SWITCH READING FUNCTION

#### Description

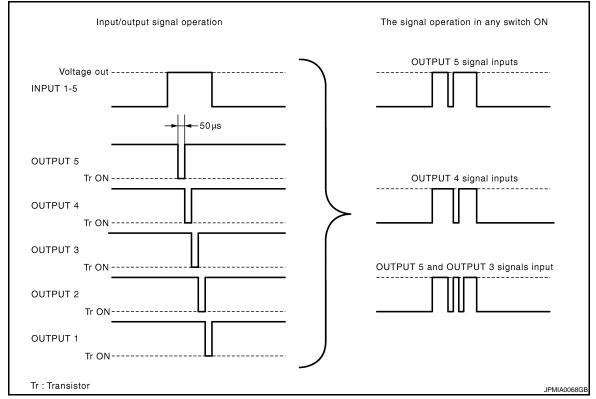
• BCM reads the status of the combination switch at 10 ms interval normally.



#### 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.



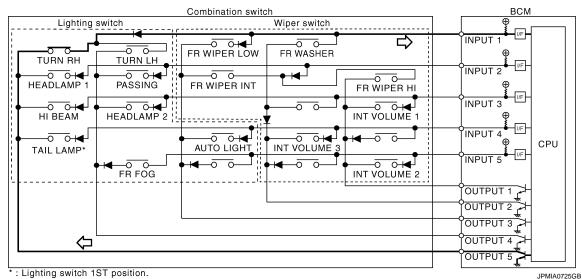
#### Operation Example

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

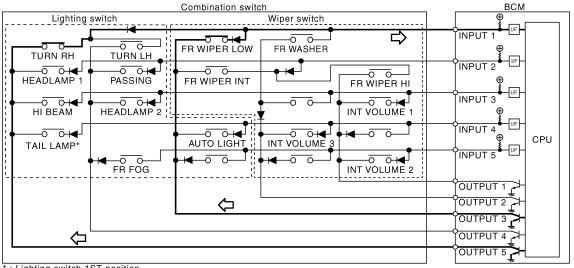
#### < SYSTEM DESCRIPTION >

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 VOLUME DIAL POSITION

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

Wiper intermittent dial position		Switch status	
wiper intermittent 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

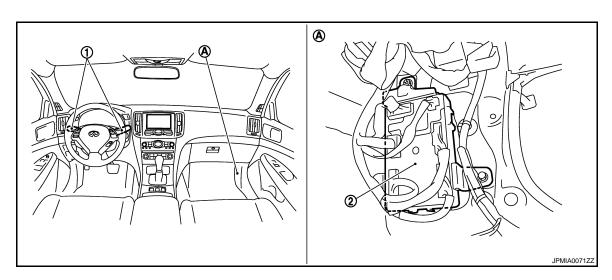
## < SYSTEM DESCRIPTION >

Wiper intermittent dial position		Switch status	
wiper intermittent diai 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".

## **Component Parts Location**



- 1. Combination switch
- 2. BCM
- A. Dash side lower (passenger side)

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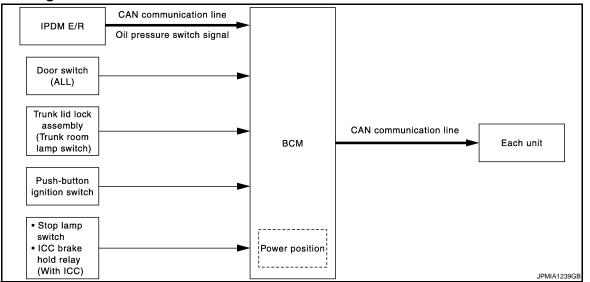
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Revision: 2009 October BCS-9 2009 G37 Sedan

## SIGNAL BUFFER SYSTEM

## System Diagram

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## System Description

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#### **OUTLINE**

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

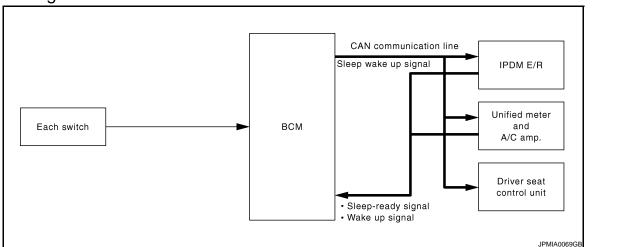
Signal name	Input	Output	Description
<ul><li> Ignition switch ON signal</li><li> Ignition switch signal</li></ul>	Push-button ignition switch (push switch)	IPDM E/R (CAN)     Driver seat control unit (CAN)	Inputs the push-button ignition switch (push switch) signal and transmits the ignition switch status 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.
Trunk switch signal	Trunk room lamp switch	Combination meter (through unified meter and A/C amp.) (CAN)	Inputs the trunk room lamp switch signal and transmits the trunk switch signal 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, and transmits the stop lamp 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: 2009 October BCS-11 2009 G37 Sedan

### POWER CONSUMPTION CONTROL SYSTEM

### < SYSTEM DESCRIPTION >

Sleep condition	
CAN sleep condition	BCM sleep condition
<ul> <li>Receiving the sleep-ready signal (ready) from all units</li> <li>Ignition switch: OFF</li> <li>Vehicle security system and panic alarm: Not operation</li> <li>Warning chime: Not operation</li> <li>Intelligent Key system buzzer: Not operation</li> <li>Trunk room lamp switch status: No change</li> <li>Stop lamp switch: OFF</li> <li>ICC brake hold relay (with ICC): OFF</li> <li>Key slot (card switch) status: No change</li> <li>Turn signal indicator lamp: Not operation</li> <li>Exterior lamp: OFF</li> <li>Door lock status: No change</li> <li>CONSULT-III communication status: Not communication</li> <li>Meter display signal: Non-transmission</li> <li>Door switch status: No change</li> <li>Rear window defogger: OFF</li> </ul>	<ul> <li>Interior room lamp battery saver: Time out</li> <li>RAP system: Not operation</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

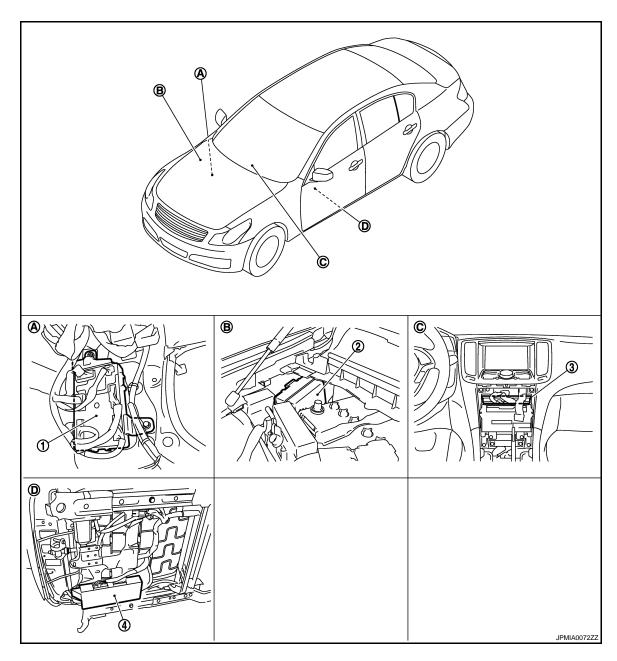
BCM wake-up condition	CAN wake-up condition	
<ul> <li>Trunk lid opener switch: OFF → ON</li> <li>Power window switch communication: Receiving</li> <li>Remote keyless entry receiver communication: Receiving</li> </ul>	<ul> <li>Receiving the sleep-ready signal (Not-ready) from any units</li> <li>Key slot (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>Trunk room lamp switch: OFF → ON, ON → OFF</li> <li>Driver door request switch: OFF → ON</li> <li>Passenger door request switch: OFF → ON</li> <li>Trunk lid opener request switch: OFF → ON</li> <li>Stop lamp switch: ON</li> <li>ICC brake hold relay (with ICC): ON</li> <li>Clutch interlock switch: OFF → ON</li> </ul>	

### POWER CONSUMPTION CONTROL SYSTEM

### < SYSTEM DESCRIPTION >

## **Component Parts Location**

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- 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)

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#### 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	This function is not used even though it is displayed.

#### SYSTEM APPLICATION

BCM can perform the following functions for each system.

#### NOTE:

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

x: Applicable item

System	Sub system selection item	Diagnosis mode		
System	Sub system selection item	Work Support	Data Monitor	Active Test
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
_	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	×	×	×
Trunk lid open	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		While turning BCM status from low power consumption mode to normal mode (Power supply position is "LOCK")	
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power supply position is "OFF".)	
	LOCK>ACC		While turning power supply position from "LOCK" to "ACC"	
	ACC>ON		While turning power supply position from "ACC" to "IGN"	
	RUN>ACC		While turning power supply position from "RUN" to "ACC" (Vehicle is stopping and selector lever is except P position.)	
	CRANK>RUN	Power position status of the moment a particular DTC is detected	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 postion is "OFF".) to low power consumption mode	
	LOCK>SLEEP		While turning BCM status from normal mode (Power supply postion is "LOCK".) to low power consumption mode	
	LOCK		Power supply position is "LOCK" (Ignition switch OFF with steer ing 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>		

DOOR LOCK

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

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

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

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

### **WORK SUPPORT**

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### < SYSTEM DESCRIPTION >

Monitor item	Description
DOOR LOCK-UNLOCK SET	Selective unlock function mode can be changed to operate (ON) or not operate (OFF) 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)     P RANGE*: 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

<sup>\*:</sup> P range interlock door lock can be selected for M/T models, but automatic door lock/unlock function does not operate.

### **DATA MONITOR**

Monitor Item	Contents
REQ SW-DR	Indicated [ON/OFF] condition of door request switch (driver side).
REQ SW-AS	Indicated [ON/OFF] condition of door request switch (passenger side).
REQ SW-BD/TR	Indicated [ON/OFF] condition of trunk lid opener 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	NOTE: This item is displayed, but cannot be monitored.
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 (other) 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:0000000004684431

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

Test item	Diagnosis mode	Diagnosis mode Description	
BUZZER	Data Monitor	Displays BCM input data in real time.	
Active Test		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).
RUN FLAT/T WARN BUZZER	The run-flat tire warning chime operation can be checked by operating the relevant function (On/Off).

## **INT LAMP**

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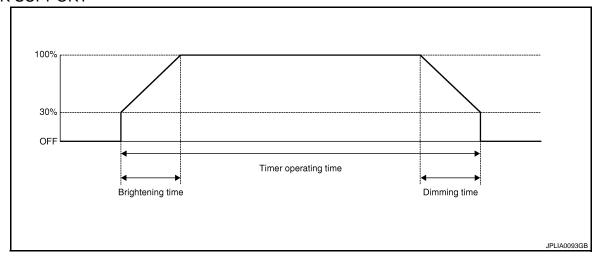
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## INT LAMP : CONSULT-III Function (BCM - INT LAMP)

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### **WORK SUPPORT**



Service item	Setting item	Setting	
SET I/L D-UNLCK INTCON	ON*	With the interior room lamp timer function	
SET I/L D-UNLOK 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.	
ROOM LAMP OFF TIME SET	MODE 2	1 sec.	Sets the interior room lamp gradual dimming time
ROOM LAMP OFF TIME SET	MODE 3	2 sec.	Sets the interior room lamp gradual dimming time.
	MODE 4*	3 sec.	
	MODE 1*	Interior room lamp timer activates with synchronizing all doors.	
R LAMP TIMER LOGIC SET	MODE 2	Interior room lamp timer activates with synchronizing the driver door only.	

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

### **DATA MONITOR**

Monitor item [Unit]	Description
REQ SW-DR [On/Off]	The switch status input from request switch (driver side)
REQ SW-AS [On/Off]	The switch status input from request switch (passenger side)
PUSH SW [On/Off]	The switch status input from push-button ignition switch
ACC RLY-F/B [On/Off]	NOTE: The item is indicated, but not monitored.
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]	NOTE: The item is indicated, but not monitored.
CDL LOCK SW [On/Off]	Lock switch status received from door lock/unlock switch by power window switch serial link
CDL UNLOCK SW [On/Off]	Unlock switch status received from door lock/unlock 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]	The switch status input from trunk room lamp switch
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 trunk room lamp ON.	
	Off	Stops the trunk room lamp control signal to turn trunk room lamp OFF.	

## **HEADLAMP**

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

INFOID:0000000004684428

### **WORK SUPPORT**

Service item	Setting item	Setting
BATTERY SAVER SET	On*	With the exterior lamp battery saver function
	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.  (All doors closed)
	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- TING	MODE 2	More sensitive setting than normal setting (Turns ON earlier than normal operation.)	
	MODE 3	More sensitive setting than MODE 2 (Turns ON earlier than MODE 2.)	
	MODE 4	Less sensitive set	ting than normal setting (Turns ON later than normal operation.)

<sup>\*:</sup> Factory 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 driver side door switch
DOOR SW-AS [On/Off]	The switch status input from passenger side door switch

### < 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]	NOTE: The item is indicated, but not monitored.
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.
DD EOC LAMD	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	The term is indicated, but odiffice so tooled.
II I DIM GIONAL	On	NOTE:
ILL DIM SIGNAL	Off	The item is indicated, but cannot be tested.

## WIPER

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

CHOIT (DOWN - WILL LIX)	INFOID:000000004684430

## **WORK SUPPORT**

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

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

### **DATA MONITOR**

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### < SYSTEM DESCRIPTION >

Monitor Item [Unit]	Description
VEH SPEED 1 [km/h]	Displays the value of the vehicle speed signal received from unified meter and A/C amp. with CAN communication.
PUSH SW [Off/On]	The switch status input from push-button ignition switch.
FR WIPER HI [Off/On]	
FR WIPER LOW [Off/On]	
FR WASHER SW [Off/On]	<ul> <li>Status of each switch judged by BCM using the combination switch reading function</li> </ul>
FR WIPER INT [Off/On]	
FR WIPER STOP [Off/On]	Displays the status of the front wiper stop position signal received from IPDM E/R with CAN communication.
INT VOLUME [1 – 7]	Status of each switch judged by BCM using the combination switch reading function

### **ACTIVE TEST**

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

## FLASHER

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

INFOID:0000000004684429

### **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	
	Lock/Unlk	With locking/unlocking	when the door is lock/unlock with the request switch or the key fob.	
	Off	Without the function		

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

### **DATA MONITOR**

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

### < SYSTEM DESCRIPTION >

Monitor item [Unit]	Description
TURN SIGNAL R [On/Off]	Figh quitab and disperse that DOM indeed from the combination quitab reading function
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:000000004684418

### **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 and passenger side) 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 trunk opener 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.
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.
TRUNK OPEN DELAY	Trunk button pressing on Intelligent Key button can be selected as per the following in this mode.  • MODE 1: Press and hold  • MODE 2: Press twice  • MODE 3: Press and hold, or press twice

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## < SYSTEM DESCRIPTION >

Monitor item	Description
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.

## **SELF-DIAG RESULT**

Refer to DLK-172, "DTC Index".

### **DATA MONITOR**

Monitor Item	Condition
REQ SW -DR	Indicates [ON/OFF] condition of door request switch (driver side).
REQ SW -AS	Indicates [ON/OFF] condition of door request switch (passenger side).
REQ SW -BD/TR	Indicates [ON/OFF] condition of trunk opener 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.
ACC RLY-FB	NOTE: This item is displayed, but cannot be monitored.
CLUTCH SW*1	Indicates [ON/OFF] condition of clutch switch.
BRAKE SW 1	Indicates [ON/OFF]*2 condition of brake switch power supply.
BRAKE SW 2	Indicates [ON/OFF] condition of brake switch.
DETE/CANCL SW	Indicates [ON/OFF] condition of P position.
SFT PN/N SW	Indicates [ON/OFF] condition of P or N position.
S/L -LOCK	Indicates [ON/OFF] condition of steering lock unit (LOCK).
S/L -UNLOCK	Indicates [ON/OFF] condition of steering lock unit (UNLOCK).
S/L RELAY -F/B	Indicates [ON/OFF] condition of steering lock relay.
UNLK SEN -DR	Indicates [ON/OFF] condition of driver door UNLOCK status.
PUSH SW -IPDM	Indicates [ON/OFF] condition of push-button ignition switch.
IGN RLY1 -F/B	Indicates [ON/OFF] condition of ignition relay 1.
DETE SW -IPDM	Indicates [ON/OFF] condition of P position.
SFT PN -IPDM	Indicates [ON/OFF] condition of P or N position.
SFT P -MET	Indicates [ON/OFF] condition of P position.

## < SYSTEM DESCRIPTION >

Monitor Item	Condition
SFT N -MET	Indicates [ON/OFF] condition of N position.
ENGINE STATE	Indicates [STOP/STALL/CRANK/RUN] condition of engine states.
S/L LOCK-IPDM	Indicates [ON/OFF] condition of steering lock unit (LOCK).
S/L UNLK-IPDM	Indicates [ON/OFF] condition of steering lock unit (UNLOCK).
S/L RELAY-REQ	Indicates [ON/OFF] condition of steering lock relay.
VEH SPEED 1	Display the vehicle speed signal received from combination meter by numerical value [Km/h].
VEH SPEED 2	Display the vehicle speed signal received from ABS or VDC or TCM by numerical value [Km/h].
DOOR STAT-DR	Indicates [LOCK/READY/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	Indicates [ON/OFF] condition of trunk lid.
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	Indicates [ON/OFF] condition of TRUNK OPEN signal from Intelligent Key.
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.
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.

<sup>\*1:</sup> It is displayed but does not operate on M/T models.

## **ACTIVE TEST**

Test item	Description
BATTERY SAVER	This test is able to check interior room lamp operation.  The interior room lamp is 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 is activated after "ON" on CONSULT-III screen is touched.
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation.  The Intelligent Key warning buzzer is 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" on CONSULT-III screen is touched.  • OFF position warning chime sounds when "KNOB" 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 blinks 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 is activated after "ON" on CONSULT-III screen is touched.

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 $<sup>^{\</sup>star2}$ : OFF is displayed when brake pedal is depressed while brake switch power supply is OFF.

### < SYSTEM DESCRIPTION >

Test item	Description
LCD	<ul> <li>This test is able to check meter display information</li> <li>Engine start information displays when "BP N" on CONSULT-III screen is touched.</li> <li>Engine start information displays when "BP I" on CONSULT-III screen is touched.</li> <li>Key ID warning displays when "ID NG" on CONSULT-III screen is touched.</li> <li>Steering lock information displays when "ROTAT" on CONSULT-III screen is touched.</li> <li>P position warning displays when "SFT P" on CONSULT-III screen is touched.</li> <li>Intelligent Key insert information displays when "INSRT" on CONSULT-III screen is touched.</li> <li>Intelligent Key low battery warning displays when "BATT" on CONSULT-III screen is touched.</li> <li>Take away through window warning displays when "NO KY" on CONSULT-III screen is touched.</li> <li>Take away warning display when "OUTKEY" on CONSULT-III screen is touched.</li> <li>OFF position warning display when "LK WN" on CONSULT-III screen is touched.</li> </ul>
TRUNK/GLASS HATCH	This test is able to check trunk lid opener actuator open operation. This actuator opens when "OPEN" on CONSULT-III screen is touched.
FLASHER	This test is able to check security hazard lamp operation. The hazard lamps are activated after "LH/RH/OFF" on CONSULT-III screen is touched.
HORN	This test is able to check horn operation. The horn is activated after "ON" on CONSULT-III screen is touched.
P RANGE	This test is able to check 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.  ACC 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. ON indicator in push-ignition switch illuminates when "ON" on CONSULT-III screen is touched.
KEY SLOT ILLUMI	This test is able to check key slot illumination operation. Key slot illumination blinks when "ON" on CONSULT-III screen is touched.
TRUNK/BACK DOOR	This test is able to check trunk lid opener actuator open operation. This actuator opens when "OPEN" on CONSULT-III screen is touched.

## COMB SW

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

INFOID:0000000004468280

## **DATA MONITOR**

Monitor item [UNIT]	Description
FR WIPER HI [Off/On]	Displays the status of the FR WIPER HI switch in combination switch judged by BCM with the combination switch reading function.
FR WIPER LOW [Off/On]	Displays the status of the FR WIPER LOW switch in combination switch judged by BCM with the combination switch reading function.
FR WASHER SW [Off/On]	Displays the status of the FR WASHER switch in combination switch judged by BCM with the combination switch reading function.
FR WIPER INT [Off/On]	Displays the status of the FR WIPER INT switch in combination switch judged by BCM with the combination switch reading function.
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.

### < SYSTEM DESCRIPTION >

Monitor item [UNIT]	Description
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.

## **BCM**

BCM: CONSULT-III Function (BCM - BCM)

INFOID:0000000004468281

### **WORK SUPPORT**

RESET SETTING VALUE Return a value set with Work Support of each system to a default value in factory shipment.	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:0000000004684421

### APPLICATION ITEM

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

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	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	- Cinicin to [2 Cina] mission a registered missing to most rod mis the top steam	
CONFIRM ID1		
TP 4		
TP 3	Indicates the number of ID which has been registered.	
TP 2	- indicates the number of ib which has been registered.	
TP 1		

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### < SYSTEM DESCRIPTION >

Monitor item	Content
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:0000000004684427

### **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	
ROOM LAMP TIMER SET	MODE 1*	30 min.	Sets the interior room lamp battery saver timer operating
NOOW LAWE THEE SET	MODE 2	60 min.	time.

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

### **DATA MONITOR**

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

### < SYSTEM DESCRIPTION >

Monitor item [Unit]	Description
DOOR SW-BK [On/Off]	NOTE: The item is indicated, but not monitored.
CDL LOCK SW [On/Off]	Lock switch status received from door lock/unlock switch by power window switch serial link
CDL UNLOCK SW [On/Off]	Unlock switch status received from door lock/unlock 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]	The switch status input from trunk room lamp switch
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:0000000004684419

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

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

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

### **DATA MONITOR**

Monitor Item	Contents
PUSH SW	Indicates [ON/OFF] condition of push switch.
UNLK SEN -DR	Indicates [ON/OFF] condition of unlock sensor.
VEH SPEED 1	Indicates [Km/h] condition of vehicle speed signal from combination meter.
KEY CYL SW-TR	NOTE: This item is displayed, but cannot be monitored.
TR CANCEL SW	Indicates [ON/OFF] condition of trunk lid opener cancel switch.
TR/BD OPEN SW	Indicates [ON/OFF] condition of trunk lid opener switch.
TRNK/HAT MNTR	Indicates [ON/OFF] condition of trunk room lamp switch.
RKE-TR/BD	Indicates [ON/OFF] condition of trunk open signal from Intelligent Key remote controller button.
TRUNK/GLASS HATCH	This test is able to check trunk lid opener actuator open operation.

### **ACTIVE TEST**

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### < SYSTEM DESCRIPTION >

Test item	Description
TRUNK/GLASS HATCH	This test is able to check trunk lid opener actuator open operation. This actuator opens when "OPEN" on CONSULT-III screen is touched.

## THEFT ALM

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

INFOID:0000000004684420

### 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.		
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**

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-BD/TR	Indicates [ON/OFF] condition of trunk opener 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	This is displayed even when it is not equipped.	
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.	
KEY CYL UN-SW	Indicates [ON/OFF] condition of unlock signal from front door key cylinder switch.	
KEY CYL SW-TR	This is displayed even when it is not equipped.	
TR/BD OPEN SW	Indicates [ON/OFF] condition of trunk lid opener switch.	
TRNK/HAT MNTR	Indicates [ON/OFF] condition of trunk room lamp switch.	
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	Indicates [ON/OFF] condition of TRUNK OPEN signal from Intelligent Key.	

### **WORK SUPPORT**

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

### **ACTIVE TEST**

#### < SYSTEM DESCRIPTION >

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 is touched.	
VEHICLE SECURITY HORN	This test is able to check vehicle security horn operation. The horns will be activated for 0.5 seconds after "ON" on CONSULT-III screen is touched.	
HEADLAMP(HI)	This test is able to check vehicle security lamp operation. The headlamps will be activated for 0.5 seconds after "ON" on CONSULT-III screen is touched.	
FLASHER	This test is able to check vehicle security hazard lamp operation. The hazard lamps will be activated after "ON" on CONSULT-III screen is touched.	

### **RETAIND PWR**

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

#### INFOID:00000000004684422

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#### Data monitor

Monitor Item	or 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:0000000004468287

#### 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**

Test item	Opera- tion	Description
	Off	OFF
OIL PRESSURE SW	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: Diagnosis Description

#### INFOID:00000000004684423

#### DESCRIPTION

During driving, the TPMS receives the signal transmitted from the transmitter installed in each wheel, when the tire pressure becomes low. The control unit (BCM) of this system has pressure judgment and trouble diagnosis functions.

When the TPMS detects low inflation pressure or another unusual symptom, the low tire pressure warning lamps in the combination meter comes on.

#### SELF DIAGNOSTIC PROCEDURE (WITH CONSULT-III)

#### With CONSULT-III

Touch "SELF-DIAG RESULT" display shows malfunction experienced since the last erasing operation. Refer to WT-79, "DTC Index".

#### SELF DIAGNOSTIC PROCEDURE (WITHOUT CONSULT-III)

### Without CONSULT-III

To start the self-diagnostic results mode, ground terminal of the tire pressure warning check connector. The malfunction location is indicated by the low tire pressure warning lamp blinking.

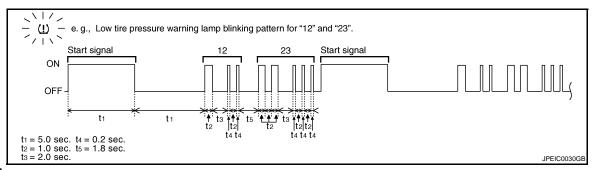
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### < SYSTEM DESCRIPTION >



NOTE:

When the low tire pressure warning lamp blinks 5 Hz and continues repeating it, the system is normal.

Blinking pattern	Items	Diagnostic items detected when	Check item	
15	Tire pressure value (Front LH)	Front LH tire pressure drops to * kPa (* bar, * kg/cm², * psi) or less. [NOTE]		
16	Tire pressure value (Front RH)	Front RH tire pressure drops to * kPa (* bar, * kg/cm², * psi) or less. [NOTE]	<u>WT-17</u>	
17	Tire pressure value (Rear RH)	Rear RH tire pressure drops to * kPa (* bar, * kg/cm², * psi) or less. [NOTE]		
18	Tire pressure value (Rear LH)	Rear LH tire pressure drops to * kPa (* bar, * kg/cm², * psi) or less. [NOTE]		
21	Transmitter no data (Front LH)	Data from front LH transmitter can not be receive.		
22	Transmitter no data (Front RH)	Data from front RH transmitter can not be receive.	WT 40	
23	Transmitter no data (Rear RH)	Data from rear RH transmitter can not be receive.	<u>WT-19</u>	
24	Transmitter no data (Rear LH)	Data from rear LH transmitter can not be receive.		
31	Transmitter checksum error (Front LH)	Checksum data from front LH transmitter is malfunctioning.		
32	Transmitter checksum error (Front RH)	Checksum data from front RH transmitter is malfunctioning.	WT 24	
33	Transmitter checksum error (Rear RH)  Checksum data from rear RH transmitter is malfunctioning.		<u>WT-21</u>	
34	Transmitter checksum error (Rear LH)	Checksum data from rear LH transmitter is malfunctioning.	+	
35	Transmitter pressure data error (Front LH)	Air pressure data from front LH transmitter is malfunction.		
36	Transmitter pressure data error (Front RH)	Air pressure data from front RH transmitter is malfunction.	WT-24	
37	Transmitter pressure data error (Rear RH)	Air pressure data from rear RH transmitter is malfunction.	<u>VV 1-24</u>	
38	Transmitter pressure data error (Rear LH)	Air pressure data from rear LH transmitter is malfunction.		
41	Transmitter function code error (Front LH)	Function code data from front LH transmitter is malfunction.		
42	Transmitter function code error (Front RH)	Function code data from front RH transmitter is malfunction.	WT 26	
43	Transmitter function code error (Rear RH)  Function code data from rear RH transmitter is malfunction.		<u>WT-26</u>	
44	Transmitter function code error (Rear LH)	Function code data from rear LH transmitter is malfunction.		

#### < SYSTEM DESCRIPTION >

Blinking pattern	Items	Diagnostic items detected when	Check item	A
45	Transmitter battery voltage low (Front LH)	Battery voltage of front LH transmitter drops.		
46	Transmitter battery voltage low (Front RH)	Battery voltage of front RH transmitter drops.	WT-29	E
47	Transmitter battery voltage low (Rear RH)	Battery voltage of rear RH transmitter drops.	<u> </u>	(
48	Transmitter battery voltage low (Rear LH)	Battery voltage of rear LH transmitter drops.		
52	Vehicle speed signal error	Vehicle speed signal error.	WT-32	[
53	Control unit	Tire pressure monitoring system malfunction in BCM.	<u>WT-33</u>	
No blinking	Tire pressure warning check switch	Tire pressure warning switch circuit is open.	_	[

NOTE: 182.7 kPa (1.827 bar, 1.9 kg/cm<sup>2</sup>, 26 psi): Standard air pressure is for 230 kPa (2.3 bar, 2.3 kg/cm<sup>2</sup>, 33 psi) vehicles.

#### **ERASE SELF-DIAGNOSIS**

#### (P)With CONSULT-III

- 1. Perform applicable inspection of malfunctioning item and then repair or replace.
- Turn ignition switch ON and select "SELF-DIAG RESULTS" mode for "AIR PRESSURE MONITOR" with CONSULT-III.
- Touch "ERASE" on CONSULT-III screen to erase memory.

#### Without CONSULT-III

- In order to make it easier to find the cause of hard-to-duplicate malfunctions, malfunction information is stored into the control unit as necessary during use by the user. This memory is not erased no matter how many times the ignition switch is turned ON and OFF.
- However, this information is erased by turning ignition switch OFF after performing self-diagnostic or by erasing the memory using the CONSULT-III.

#### AIR PRESSURE MONITOR: CONSULT-III Function (BCM - AIR PRESSURE MONI-TOR) INFOID:00000000004684424

#### **WORK SUPPORT MODE**

**ID Read** 

The registered ID number is displayed.

**ID** Regist

Refer to WT-6, "ID REGISTRATION PROCEDURE: Special Repair Requirement".

### SELF-DIAG RESULTS MODE

Operation Procedure

Refer to WT-79, "DTC Index".

#### DATA MONITOR MODE

Screen of data monitor mode is displayed.

#### NOTE:

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

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

Monitor item (Unit)	Remark
AIR PRESS FL (kPa//kg/cm <sup>2</sup> /Psi)	
AIR PRESS FR (kPa//kg/cm²/Psi)	Tire pressure
AIR PRESS RR (kPa//kg/cm <sup>2</sup> /Psi)	The pressure
AIR PRESS RL (kPa//kg/cm <sup>2</sup> /Psi)	

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### < SYSTEM DESCRIPTION >

Monitor item (Unit)	Remark
ID REGST FL1 (Green/Red)	
ID REGST FR1 (Green/Red)	Posistration ID
ID REGST RR1 (Green/Red)	Registration ID
ID REGST RL1 (Green/Red)	
WARNING LAMP (On/Off)	Low tire pressure warning lamp
BUZZER (On/Off)	Buzzer in combination meter

#### 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.	
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.	

### U1000 CAN COMM

#### < DTC/CIRCUIT DIAGNOSIS >

## DTC/CIRCUIT DIAGNOSIS

## U1000 CAN COMM

Description INFOID:0000000004468290

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-28, "CAN Communication Signal Chart".

DTC Logic (INFOID:000000004468291

### DTC DETECTION LOGIC

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

## Diagnosis Procedure

INFOID:0000000004468292

## 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-19, "Trouble Diagnosis Flow Chart".

NO >> Refer to GI-41, "Intermittent Incident".

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

### < DTC/CIRCUIT DIAGNOSIS >

## U1010 CONTROL UNIT (CAN)

DTC Logic

## DTC DETECTION LOGIC

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

## Diagnosis Procedure

INFOID:0000000004468294

## 1.REPLACE BCM

When DTC "U1010" is detected, replace BCM.

>> Replace BCM. Refer to BCS-82, "Exploded View".

### **U0415 VEHICLE SPEED SIG**

#### < DTC/CIRCUIT DIAGNOSIS >

### U0415 VEHICLE SPEED SIG

Description INFOID:00000000468295

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	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.
- 3. 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-37, "Diagnosis Procedure".

NO >> INSPECTION END

### Diagnosis Procedure

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

Perform "Self-Diagnostic Result" of ABS actuator and electric unit (control unit) with CONSULT-III. Refer to BRC-26, "CONSULT-III Function".

#### Is any DTC detected?

YES >> Repair or replace the malfunctioning part.

NO >> Replace BCM. Refer to BCS-82, "Exploded View".

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INFOID:0000000004468297

#### **B2562 LOW VOLTAGE**

#### < DTC/CIRCUIT DIAGNOSIS >

### **B2562 LOW VOLTAGE**

DTC Logic

#### DTC DETECTION LOGIC

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

#### DTC CONFIRMATION PROCEDURE

### 1. DTC CONFIRMATION

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

### Is any DTC detected?

YES >> Refer to BCS-38, "Diagnosis Procedure".

NO >> INSPECTION END

### Diagnosis Procedure

INFOID:0000000004468299

### 1. CHECK POWER SUPPLY CIRCUIT

Check BCM power supply circuit. Refer to BCS-39, "Diagnosis Procedure".

#### Is the circuit normal?

YES >> Replace BCM. Refer to BCS-82, "Exploded View".

NO >> Repair the malfunctioning part.

#### POWER SUPPLY AND GROUND CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

### POWER SUPPLY AND GROUND CIRCUIT

### Diagnosis Procedure

INFOID:0000000004468300

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### 1. CHECK FUSE AND FUSIBLE LINK

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

Signal name	Fuse and fusible link No.
Battery power supply	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 (Approx.)		
В	СМ		(Approx.)
Connector	Connector Terminal		
M118	18 1 Ground		Pattory voltage
M119	11		Battery voltage

#### Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

### 3. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

В	CM		Continuity
Connector	Terminal	Ground	Continuity
M119	13		Existed

#### Does continuity exist?

YES >> INSPECTION END

NO >> Repair harness or connector.

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### **COMBINATION SWITCH INPUT CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

## **COMBINATION SWITCH INPUT CIRCUIT**

### Diagnosis Procedure

#### INFOID:0000000004468301

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

- 1. 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	BCM		Combinat	Continuitu	
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	В	СМ		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		44, "Refer-
INPUT 4		108		ence Value".
INPUT 5		87		

#### Is the measurement value normal?

YES >> GO TO 4.

NO >> Replace BCM. Refer to BCS-82, "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.
- Check voltage between BCM harness connector and ground.

	Terminals			
System	(+)		(-)	Voltage
System	BCM			(Approx.)
	Connector	Terminal		
INPUT 1		107		
INPUT 2		109	Ground	Refer to BCS-
INPUT 3	M122	88		44, "Refer-
INPUT 4		108		ence Value".
INPUT 5		87		

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

YES >> Replace BCM. Refer to BCS-82, "Exploded View".

NO >> Replace the combination switch.

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

#### < DTC/CIRCUIT DIAGNOSIS >

### COMBINATION SWITCH OUTPUT CIRCUIT

### Diagnosis Procedure

INFOID:0000000004468302

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

- 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	ВСМ		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.

## 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.

#### NOTF:

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

### **COMBINATION SWITCH OUTPUT CIRCUIT**

### < DTC/CIRCUIT DIAGNOSIS >

	Terminals				
0	(+)		(-)	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?

YES >> Replace BCM. Refer to BCS-82, "Exploded View".

NO >> Replace the combination switch.

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< ECU DIAGNOSIS INFORMATION >

# **ECU DIAGNOSIS INFORMATION**

# BCM (BODY CONTROL MODULE)

Reference Value

### VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

Monitor Item	Condition	Value/Status
FR WIPER HI	Other than front wiper switch HI	Off
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
FR WASHER SW	Front washer switch OFF	Off
FR WASHER SW	Front washer switch ON	On
FR WIPER INT	Other than front wiper switch INT	Off
FR WIPER IN	Front wiper switch INT	On
FR WIPER STOP	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
TURN SIGNAL R	Other than turn signal switch RH	Off
TURN SIGNAL R	Turn signal switch RH	On
TUDNI CIONIAL I	Other than turn signal switch LH	Off
TURN SIGNAL L	Turn signal switch LH	On
TAIL LAMD CW	Other than lighting switch 1ST and 2ND	Off
TAIL LAMP SW	Lighting switch 1ST or 2ND	On
LU DEAM OW	Other than lighting switch HI	Off
HI BEAM SW	Lighting switch HI	On
HEAD LAMP SW 1	Other than lighting switch 2ND	Off
HEAD LAWP SW 1	Lighting switch 2ND	On
HEAD LAMP SW 2	Other than lighting switch 2ND	Off
HEAD LAIMP SW 2	Lighting switch 2ND	On
PASSING SW	Other than lighting switch PASS	Off
PASSING SW	Lighting switch PASS	On
AUTO LIGHT SW	Other than lighting switch AUTO	Off
AUTO LIGHT SW	Lighting switch AUTO	On
FR FOG SW	Front fog lamp switch OFF	Off
FR FOG SW	Front fog lamp switch ON	On
RR FOG SW	NOTE: The item is indicated, but not monitored.	Off
DOOR SW DB	Driver door closed	Off
DOOR SW-DR	Driver door opened	On
DOOR SW AS	Passenger door closed	Off
DOOR SW-AS	Passenger door opened	On
DOOD CW DD	Rear RH door closed	Off
DOOR SW-RR	Rear LH door opened	On

### < ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
DOOR SW-RL	Rear LH door closed	Off
DOOR SW-RL	Rear LH door opened	On
DOOR SW-BK	NOTE: The item is indicated, but not monitored.	Off
CDL LOCK SW	Other than power door lock switch LOCK	Off
CDL LOCK SVV	Power door lock switch LOCK	On
CDL LINILOCK CW	Other than power door lock switch UNLOCK	Off
CDL UNLOCK SW	Power door lock switch UNLOCK	On
	Other than driver door key cylinder LOCK	Off
KEY CYL LK-SW	Driver door key cylinder LOCK	On
KEY OVI LIN OW	Other than driver door key cylinder UNLOCK	Off
KEY CYL UN-SW	Driver door key cylinder LOCK	On
KEY CYL SW-TR	NOTE: The item is indicated, but not monitored.	Off
HAZADD CM	Hazard switch is OFF	Off
HAZARD SW	Hazard switch is ON	On
REAR DEF SW	NOTE: The item is indicated, but not monitored.	Off
H/L WASH SW	NOTE: The item is indicated, but not monitored.	Off
TR CANCEL SW	Trunk lid opener cancel switch OFF	Off
	Trunk lid opener cancel switch ON	On
TR/BD OPEN SW	Trunk lid opener switch OFF	Off
	While the trunk lid opener switch is turned ON	On
TRNK/HAT MNTR	Trunk lid closed	Off
IKINMAAI WINIK	Trunk lid opened	On
RKE-LOCK	LOCK button of the Intelligent Key is not pressed	Off
KKE-LOCK	LOCK button of the Intelligent Key is pressed	On
RKE-UNLOCK	UNLOCK button of the Intelligent Key is not pressed	Off
KKL-ONLOCK	UNLOCK button of the Intelligent Key is pressed	On
RKE-TR/BD	TRUNK OPEN button of the Intelligent Key is not pressed	Off
NNL-IN/DU	TRUNK OPEN button of the Intelligent Key is pressed	On
RKE-PANIC	PANIC button of the Intelligent Key is not pressed	Off
NNE-FAINIU	PANIC button of the Intelligent Key is pressed	On
DIZE DAM ODEN	UNLOCK button of the Intelligent Key is not pressed	Off
RKE-P/W OPEN	UNLOCK button of the Intelligent Key is pressed and held	On
RKE-MODE CHG	LOCK/UNLOCK button of the Intelligent Key is not pressed and held simultaneously	Off
	LOCK/UNLOCK button of the Intelligent Key is pressed and held simultaneously	On
ODTICAL SENSOR	Bright outside of the vehicle	Close to 5 V
OPTICAL SENSOR	Dark outside of the vehicle	Close to 0 V
DEO 014' 55	Driver door request switch is not pressed	Off
REQ SW -DR	Driver door request switch is pressed	On
DEO 0W 40	Passenger door request switch is not pressed	Off
REQ SW -AS	Passenger door request switch is pressed	On

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Monitor Item	Condition	Value/Status
REQ SW -RR	NOTE: The item is indicated, but not monitored.	Off
REQ SW -RL	NOTE: The item is indicated, but not monitored.	Off
DEO SW. DD/TD	Trunk lid opener request switch is not pressed	Off
REQ SW -BD/TR	Trunk lid opener request switch is pressed	On
DUCH OW	Push-button ignition switch (push switch) is not pressed	Off
PUSH SW	Push-button ignition switch (push switch) is pressed	On
IGN RLY2 -F/B	Ignition switch in OFF or ACC position	Off
IGN KL12 -F/B	Ignition switch in ON position	On
ACC RLY -F/B	NOTE: The item is indicated, but not monitored.	Off
CLUCII CW	The clutch pedal is not depressed	Off
CLUCH SW	The clutch pedal is depressed	On
	The brake pedal is depressed when No. 7 fuse is blown	Off
BRAKE SW 1	The brake pedal is not depressed when No. 7 fuse is blown, or No. 7 fuse is normal	On
	The brake pedal is not depressed	Off
BRAKE SW 2	The brake pedal is depressed	On
	<ul> <li>Selector lever in P position (Except M/T models)</li> <li>The clutch pedal is depressed (M/T models)</li> </ul>	Off
DETE/CANCL SW	<ul> <li>Selector lever in any position other than P (Except M/T models)</li> <li>The clutch pedal is not depressed (M/T models)</li> </ul>	On
OFT DN/N OW	Selector lever in any position other than P and N	Off
SFT PN/N SW	Selector lever in P or N position	On
C/L LOCK	Steering is unlocked	Off
S/L -LOCK	Steering is locked	On
S/L -UNLOCK	Steering is locked	Off
3/L -UNLOCK	Steering is unlocked	On
S/L RELAY-F/B	Ignition switch in OFF or ACC position	Off
S/L RELAT-F/D	Ignition switch in ON position	On
UNLK SEN -DR	Driver door is unlocked	Off
UNLK SEN -DR	Driver door is locked	On
PUSH SW -IPDM	Push-button ignition switch (push-switch) is not pressed	Off
FOSITOW -IFDIVI	Push-button ignition switch (push-switch) is pressed	On
IGN RLY1 -F/B	Ignition switch in OFF or ACC position	Off
IGN KLI I -F/B	Ignition switch in ON position	On
DETE SW -IPDM	Selector lever in any position other than P	Off
DETE SW -IF DIVI	Selector lever in P position	On
CET DN IDDM	<ul> <li>Selector lever in any position other than P and N (Except M/T models)</li> <li>The clutch pedal is not depressed (M/T models)</li> </ul>	Off
SFT PN -IPDM	<ul> <li>Selector lever in P or N position (Except M/T models)</li> <li>The clutch pedal is depressed (M/T models)</li> </ul>	On
OFT D 1457	Selector lever in any position other than P	Off
SFT P -MET	Selector lever in P position	On
<b></b>	Selector lever in any position other than N	Off
SFT N -MET	Selector lever in N position	On

Monitor Item	Condition	Value/Status
	Engine stopped	Stop
ENGINE STATE	While the engine stalls	Stall
	At engine cranking	Crank
	Engine running	Run
S/L LOCK-IPDM	Steering is unlocked	Off
	Steering is locked	On
0/L LINU K IDDM	Steering is locked	Off
S/L UNLK-IPDM	Steering is unlocked	On
C/L DELAY DEO	Steering lock system is not the LOCK condition and the changing condition from LOCK to UNLOCK	Off
S/L RELAY-REQ	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 (60 seconds)	READY
	Driver door is unlocked	UNLOCK
	Passenger door is locked	LOCK
DOOR STAT-AS	Wait with selective UNLOCK operation (60 seconds)	READY
	Passenger door is unlocked	UNLOCK
ID OK FLAG	Steering is locked	Reset
	Steering is unlocked	Set
DDMT ENG CEDE	The engine start is prohibited	Reset
PRMT ENG STRT	The engine start is permitted	Set
PRMT RKE STRT	NOTE: The item is indicated, but not monitored.	Reset
KEN SIM SIM	The Intelligent Key is not inserted into key slot	Off
KEY SW -SLOT	The Intelligent Key is inserted into key slot	On
RKE OPE COUN1	During the operation of the Intelligent Key	Operation frequency of the Intelligent Key
RKE OPE COUN2	NOTE: The item is indicated, but not monitored.	_
CONEDMID ALL	The key ID that the key slot receives is not recognized by any key ID registered to BCM.	Yet
CONFRM ID ALL	The key ID that the key slot receives is recognized by any key ID registered to BCM.	Done
CONFIDM ID 4	The key ID that the key slot receives is not recognized by the fourth key ID registered to BCM.	Yet
CONFIRM ID4	The key ID that the key slot receives is recognized by the fourth key ID registered to BCM.	Done
CONFIDM IDS	The key ID that the key slot receives is not recognized by the third key ID registered to BCM.	Yet
CONFIRM ID3	The key ID that the key slot receives is recognized by the third key ID registered to BCM.	Done

Monitor Item	Condition	Value/Status
CONFIRM ID2	The key ID that the key slot receives is not recognized by the second key ID registered to BCM.	Yet
CONFIRM ID2	The key ID that the key slot receives is recognized by the second key ID registered to BCM.	Done
CONFIRM ID1	The key ID that the key slot receives is not recognized by the first key ID registered to BCM.	Yet
CONFINITIO	The key ID that the key slot receives is recognized by the first key ID registered to BCM.	Done
TP 4	The ID of fourth Intelligent Key is not registered to BCM	Yet
174	The ID of fourth Intelligent Key is registered to BCM	Done
TD 2	The ID of third Intelligent Key is not registered to BCM	Yet
TP 3	The ID of third Intelligent Key is registered to BCM	Done
TD 0	The ID of second Intelligent Key is not registered to BCM	Yet
TP 2	The ID of second Intelligent Key is registered to BCM	Done
TP 1	The ID of first Intelligent Key is not registered to BCM	Yet
IFI	The ID of first Intelligent 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 DECCT EL 1	ID of front LH tire transmitter is registered	Done
ID REGST FL1	ID of front LH tire transmitter is not registered	Yet
ID REGST FR1	ID of front RH tire transmitter is registered	Done
ID REGST FRT	ID of front RH tire transmitter is not registered	Yet
ID DECCE DD4	ID of rear RH tire transmitter is registered	Done
ID REGST RR1	ID of rear RH tire transmitter is not registered	Yet
ID DECCE DI 4	ID of rear LH tire transmitter is registered	Done
ID REGST RL1	ID of rear LH tire transmitter is not registered	Yet
MADNING LAND	Tire pressure indicator OFF	Off
WARNING LAMP	Tire pressure indicator ON	On
DUZZED	Tire pressure warning alarm is not sounding	Off
BUZZER	Tire pressure warning alarm is sounding	On

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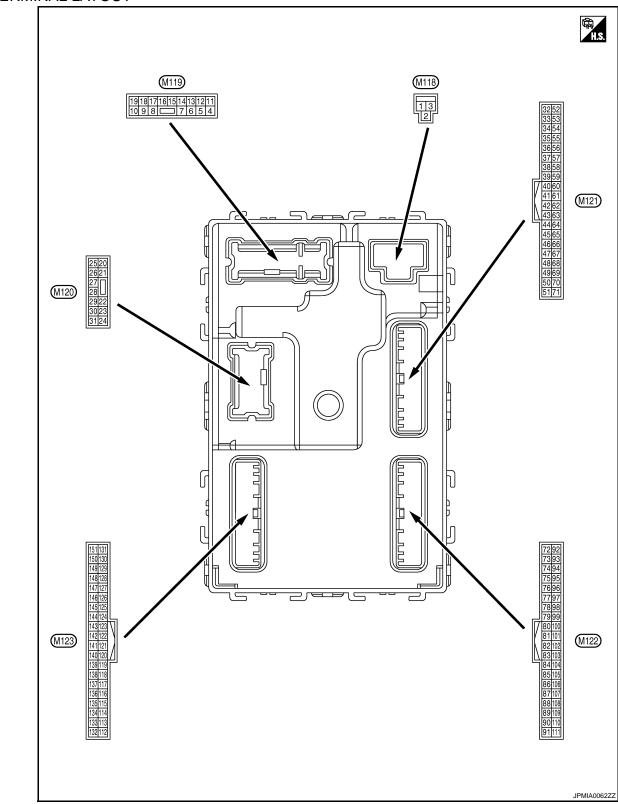
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### TERMINAL LAYOUT



PHYSICAL VALUES

Revision: 2009 October BCS-49 2009 G37 Sedan

	nal No.	Description				Value
+ (vvire	color)	Signal name	Input/ Output		Condition	(Approx.)
1 (W)	Ground	Battery power supply	Input	Ignition switch (	OFF	Battery voltage
2 (Y)	Ground	P/W power supply (BAT)	Output	Ignition switch (	DFF	12 V
3 (O)	Ground	P/W power supply (RAP)	Output	Ignition switch (	ON	12 V
					mp battery saver is activated. or room lamp power supply)	0 V
4 (LG)	Ground	Interior room lamp power supply	Output	vated.	mp battery saver is not acti- erior room lamp power sup-	12 V
5	0	Passenger door UN-	Outrout	Passenger	UNLOCK (Actuator is activated)	12 V
(P)	Ground	LOCK	Output	door	Other than UNLOCK) Actuator is not activated	0 V
7	0	Oten Inner	0	Otan Ianan	ON	0 V
(BR)	Ground	Step lamp	Output	Step lamp	OFF	12 V
8	Ground	All doors, fuel lid	Output	All doors, fuel	LOCK (Actuator is activated)	12 V
(V)	Ground	LOCK	Output	lid	Other than LOCK (Actuator is not activated)	0 V
9	Ground	Driver door, fuel lid UNLOCK	Output	Driver door,	UNLOCK (Actuator is activated)	12 V
(G)	Ground			fuel lid	Other than UNLOCK (Actuator is not activated)	0 V
10	Ground	Rear RH door and	Output	Rear RH door and rear LH	UNLOCK (Actuator is activated)	12 V
(BR)	Cround	rear LH UNLOCK	Odiput	door	Other than UNLOCK (Actuator is not activated)	0 V
11 (R)	Ground	Battery power supply	Input	Ignition switch (	OFF	Battery voltage
13 (B)	Ground	Ground		Ignition switch (	NC	0 V
					OFF	0 V
14 (W)	Ground	Push-button ignition switch illumination ground	Output	Tail lamp	ON	NOTE: When the illumination brightening/dimming level is in the neutral position  (V)  10  2 ms  JSNIA0010GB
15 (O)	Ground	ACC indicator lamp	Output	Ignition switch	OFF (LOCK indicator is not illuminated)	Battery voltage
(0)					ACC	0 V

Terminal No. (Wire color)		Description			Condition	Value	
+	-	Signal name	Input/ Output		Condition	(Approx.)	A
					Turn signal switch OFF	0 V	Е
17 (W)	Ground	Turn signal RH (Front)	Output	Ignition switch ON	Turn signal switch RH	(V) 15 10 5 0 1 s PKID0926E	
					Turn signal switch OFF	6.5 V 0 V	E
18 (O)	Ground	Turn signal LH (Front)	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s PKID0926E	F
19	Ground	Room lamp timer	Output	Interior room	OFF	12 V	-
(V)	0.000	control		lamp	ON Turn signal switch OFF	0 V 0 V	-
20 (V)	Ground	Turn signal RH (Rear)	Output	Ignition switch ON	Turn signal switch RH	(V) 15 10 5 0 PKID0926E 6.5 V	ŀ
23	0	Tours lid on an	Outrast	To only list	OPEN (Trunk lid opener actuator is activated)	12 V	L
(L)	Ground	Trunk lid open	Output	Trunk lid	Other than OPEN (Trunk lid opener actuator is not activated)	0 V	В
					Turn signal switch OFF	0 V	-
25 (Y)	Ground	Turn signal LH (Rear)	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s	r C
30				Trunk room	ON	6.5 V 0 V	=
30 (P)	Ground	Trunk room lamp	Output	lamp	OFF	12 V	-

	nal No.	Description				Value
+ (vvire	color)	Signal name	Input/ Output		Condition	(Approx.)
34		Trunk room antenna		Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1   S   S   S   S   S   S   S   S   S
(SB)	Ground	(–)	Output	OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 1
35	Ground	Trunk room antenna	Output	Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB
(V)	Glodina	(+)	Сири	OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB
38	Ground	Rear bumper anten-	Output	When the trunk	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB
(B)	Ground	na (–)	Output	quest switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB

	nal No. color)	Description	·		O a malitia m	Value	
+	-	Signal name	Input/ Output		Condition	(Approx.)	
39	Ground	Rear bumper anten-	Output	When the trunk	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0  JMKIA0062GB	
(W)	Glound	na (+)	Output	quest switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0  JMKIA0063GB	
47	01	Ignition relay (IPDM	0 1 1	190	OFF or ACC	12 V	
(Y)	Ground	E/R) control	Output	Ignition switch	ON	0 V	
50 (O)	Ground	Trunk room lamp switch	Input	Trunk room lamp switch	OFF (Trunk lid is closed)	(V) 15 10 5 0 10 ms JPMIA0011GB	
					ON (Trunk lid is opened)	0 V	
				Ignition switch ON (A/T mod-	When selector lever is in P or N position	12 V	
52	Crownd	Ctortor volov control	Outout	els)	When selector lever is not in P or N position	0 V	
(SB)	Ground	Starter relay control	Output	Ignition switch	When the clutch pedal is depressed	Battery voltage	
				ON (M/T mod- els)	When the clutch pedal is not depressed	0 V	
					ON (Pressed)	0 V	
61 (SB)	Ground	Trunk lid opener request switch	Input	Trunk lid open- er request switch	OFF (Not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB	
		Intelligent Key warn-		Intelligent Key	Sounding	0 V	
64	Ground	ing buzzer (Engine	Output	warning buzzer			

	nal No.	Description				Value
+ (Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
67 (GR)	Ground	Trunk lid opener switch	Input	Trunk lid open- er switch	Not pressed	0 V  (V) 15 10 10 ms  JPMIA0011GB
68 (BR)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (When rear RH door closes)  ON (When rear RH door	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8 V
					opens)	(V) 15
69 (R)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (When rear LH door closes)	10 5 0 10 ms JPMIA0011GB
					ON (When rear LH door opens)	11.8 V 0 V
72	Ground	Room antenna 2 (-) (Center console)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 JMKIA0062GB
(R)					When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0  JMKIA0063GB

	nal No. color)	Description			Condition	Value	А						
+	-	Signal name	Input/ Output		Condition	(Approx.)	, ,						
					When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s	С						
73 (G)	Ground	Room antenna 2 (+) (Center console)	Output	Ignition switch OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB	E						
74		Passenger door an-		When the passenger door re-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	G H						
(SB)	Ground	tenna (–)	i	σαφαί	Guipui	Cuput	Guipat	Output quest switch is operated with ignition switch OFF	operated with ignition switch	operated with ignition switch	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	J K
75		Passenger door an-		When the passenger door re-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	BC						
(BR)	Ground	tenna (+)	Output	quest 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						

	nal No.	Description				Value
+ (vvire	color)	Signal name	Input/ Output		Condition	(Approx.)
76	When the driver door antenna		When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB		
(V)	Ground	(-)	Output	switch is oper- ated with igni- tion switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB
77	Ground	Driver door antenna	Output	When the driver door request switch is oper-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB
(LG)	Grouna	(+)	Output	ated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB
78	Ground	Room antenna 1 (–)	Output	Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 JMKIA0062GB
(Y)	Ground	(Instrument panel)	Output	OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB

### < ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value
+ (vvire	color)	Signal name	Input/ Output		Condition	(Approx.)
79	Ground	Room antenna 1 (+)	Output	Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0062GB
(BR)		(Instrument panel)		OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB
80 (GR)	Ground	NATS antenna amp (Built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
81 (W)	Ground	NATS antenna amp (Built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
82 (R)	Ground	Ignition relay [Fuse block (J/B)] control	Output	Ignition switch	OFF or ACC ON	0 V 12 V
83	Ground	Remote keyless entry receiver communica-	Input/	During waiting		(V) 15 10 5 0 1 ms JMKIA0064GB
(Y)	Giodia	tion	Output	When operating gent Key	either button on the Intelli-	(V) 15 10 5 0 1 ms JMKIA0065GB

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	nal No.	Description				Value
(Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)
					All switches OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA00410
87 (Y)	Ground	Combination switch INPUT 5	Input	Combination switch	Front fog lamp switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0037G
					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 JPMIA00400

Signal name Output Output (Approx.)  All switches OFF (Wiper intermittent dial 4)  Lighting switch HI (Wiper intermittent dial 4)  Lighting switch HI (Wiper intermittent dial 4)  Lighting switch HI (Wiper intermittent dial 4)  Lighting switch Plant intermittent dial 4)  Any of the conditions below with all switches OFF (Wiper intermittent dial 2)  Any of the conditions below with all switches OFF (Wiper intermittent dial 2)  Wiper intermittent dial 2  Wiper intermittent dial 3  Push-button ignition  Push-button ignition  Pressed  O V  Pressed		nal No.	Description				Value	А
All switches OFF (Viper intermittent dial 4)    Combination switch   Input   Lighting switch HI (Viper intermittent dial 4)   Lighting switch HI (Viper intermittent dial 4)   Lighting switch HI (Viper intermittent dial 4)   Lighting switch 2ND (Viper intermittent dial 4)   Lighting switch 2ND (Viper intermittent dial 4)   Lighting switch SOFF   Wiper intermittent dial 1   Lighting switch SOFF	-	1	Signal name	Input/ Output		Condition		A
B8 (O) Ground Combination switch Input Inp							15 10 5 0 2 ms JPMIA0041GB	В
Any of the conditions below with all switches OFF   Wiper intermittent dial 1   Wiper intermittent dial 2   Wiper intermittent dial 2   Wiper intermittent dial 3   Wiper intermittent dial 3   Wiper intermittent dial 2   Wiper intermittent dial 3   Wipe		Ground		Input			15 10 5 0 2 ms JPMIA0036GB	F
Bay (BR)   Ground (Push-button ignition switch (Push switch)   Input (Push switch)   I	(0)		INPUT 3		switch		15 10 5 0 2 ms JPMIA0037GB	Н
Ground   Push-button ignition switch (Push switch)   Input   nition switch (push switch)   Not pressed   Battery voltage						<ul><li>low with all switches OFF</li><li>Wiper intermittent dial 1</li><li>Wiper intermittent dial 2</li></ul>	10 5 0 2 ms JPMIA0040GB	J K
(P) Ground CAN-L Output — — — — — — — — — — — — — — — — — — —		Ground		Input	nition switch			ВС
(L) Ground CAN-H Output OFF 0 V  92 (LG) Ground Key slot illumination Output Key slot illumination Dutput Nation Blinking  OFF 0 V  15 10 10 5 0 0 V  Application District Can-H Output Can		Ground	CAN-L			_	_	
92 (LG) Ground Key slot illumination Output Key slot illumination Blinking		Ground	CAN-H			_	_	N
92 (LG) Ground Key slot illumination Output Key slot illumination Blinking						OFF	0 V	
6.5 V		Ground	Key slot illumination	Output		Blinking	15 10 5 0	F
ON 12 V						ON	6.5 V	

	nal No.	Description				Value
+	color)	Signal name	Input/ Output		Condition	(Approx.)
93 (V)	Ground	ON indicator lamp	Output	Ignition switch	OFF (LOCK indicator is not illuminated)	Battery voltage
(-)					ON	0 V
95	Ground	ACC relay control	Output	Ignition switch	OFF	0 V
(O)	0.00	•	- Carpar	ig.men emien	ACC or ON	12 V
96 (GR)	Ground	A/T shift selector (Detention switch) power supply	Output		_	12 V
97	Ground	Steering lock condi-	Input	Steering lock	LOCK status	0 V
(L)	Cround	tion No. 1	прис	Oleching lock	UNLOCK status	12 V
98	Ground	Steering lock condi-	Input	Steering lock	LOCK status	12 V
(P)	Giodila	tion No. 2	прис	Steering lock	UNLOCK status	0 V
		Selector lever P posi-			P position	0 V
		tion switch (A/T models)		Selector lever	Any position other than P	12 V
99		ASCD clutch switch (M/T models without		ASCD clutch	OFF (Clutch pedal is depressed)	0 V
(R)* <sup>1</sup> (BR)* <sup>2</sup>	Ground	ICC)	Input	switch	ON (Clutch pedal is not depressed)	12 V
		ICC clutch switch (M/		ICC clutch	OFF (Clutch pedal is depressed)	0 V
		T models with ICC)		switch	ON (Clutch pedal is not depressed)	12 V
					ON (Pressed)	0 V
100 (Y)	Ground	Passenger door request switch	Input	Passenger door request switch	OFF (Not pressed)	(V) 15 10 5 0 10 ms JPMIA0016G
					ON (Pressed)	0 V
101 (P)	Ground	Driver door request switch	Input	Driver door request switch	OFF (Not pressed)	(V) 10 5 0 10 ms JPMIA0016G
102 (O)	Ground	Blower fan motor re- lay control	Output	Ignition switch	OFF or ACC	0 V 12 V
103 (L)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch (		12 V
106	Ground	Steering lock unit	Output	Ignition switch	OFF or ACC	12 V
(W)	Giound	power supply	Output	ignition switch	ON	0 V

### < ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value	Λ
(Wire +	color)	Signal name	Input/ Output		Condition	(Approx.)	А
					All switches OFF	(V) 15 10 5 0 2 ms JPMIA0041GB	B C
					Turn signal switch LH	(V) 15 10 5 0 2 ms	E
107 (LG)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermit- tent dial 4)	Turn signal switch RH	1.3 V  (V) 15 10 2 ms  JPMIA0036GB  1.3 V	G H
					Front wiper switch LO	(V) 15 10 5 0 2 ms  JPMIA0038GB 1.3 V	J K L
					Front washer switch ON	(V) 15 10 5 0 2 ms JPMIA0039GB	BC N

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	nal No.	Description			<del>-</del>	Value
(Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
					All switches OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB
108	Ground	Combination switch	Input	Combination	Lighting switch AUTO (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0038GB
(R)		INPUT 4		switch	Lighting switch 1ST (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0036GB
					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

	nal No.	Description				Value
+ (Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
					All switches OFF	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V
					Lighting switch PASS	(V) 15 10 5 0 2 ms JPMIA0037GB
109 (W)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermittent dial 4)	Lighting switch 2ND	(V) 15 10 5 0 2 ms JPMIA0036GB
					Front wiper switch INT	(V) 15 10 5 0 2 ms JPMIA0038GB
					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 10 ms JPMIA0012GB 1.1 V

	nal No.	Description				Value
+ (Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
					LOCK status	12 V
111 (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	12 V
					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
(O)	Ground	Option scrioor	При	ON	When dark outside of the vehicle	Close to 0 V
114	Ground	Clutch interlock	Input	Clutchinterlock	OFF (Clutch pedal is not depressed)	0 V
(R)	Greana	switch	mpat	switch	ON (Clutch pedal is depressed)	Battery voltage
116 (SB)	Ground	Stop lamp switch 1	Input		_	Battery voltage
		Stop lamp switch 2		Stop lamp	OFF (Brake pedal is not depressed)	0 V
118	Ground	(Without ICC)	- Input	switch	ON (Brake pedal is de- pressed)	Battery voltage
(BR)		Stop lamp switch 2		depressed) and	h OFF (Brake pedal is not ICC brake hold relay OFF	0 V
		(With ICC)			h ON (Brake pedal is de- brake 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 Intellig	gent Key is inserted into key	12 V
(SB)	Giouria	ival sint smitti	input	When the Intelli- key slot	gent Key is not inserted into	0 V
123	Ground	IGN feedback	Input	Ignition switch	OFF or ACC	0 V
(W)				<u> </u>	ON	Battery voltage

	nal No. color)	Description				Value
+	- COIOF)	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 JPMIA0011GB
					ON (Door open)	11.8 V 0 V
					Civ (2001 opon)	(V)
129 (O)	Ground	Trunk lid opener can- cel switch	Input	Trunk lid open- er cancel switch	CANCEL	10 5 0 10 ms
					011	JPMIA0012GB 1.1 V
					ON	0 V
132 (V)	Ground	Power window switch communication	Input/ Output	Ignition switch C	DN	(V) 15 10 5 0 10 ms
						10.2 V
				Ignition switch C		12 V
					ON (Tail lamps OFF)	9.5 V <b>NOTE</b> :
				Push-button ig-		The pulse width of this wave is varied by the illumination brightening/dimming level.
133 (L)	Ground	Push-button ignition switch illumination	Output	nition switch il- lumination	ON (Tail lamps ON)	JPMIA0159GB
					OFF	0 V
134	Ground	LOCK indicator lamp	Output	LOCKindicator	OFF	Battery voltage
(LG)	Ciodila		Carpat	lamp	ON	0 V
137 (O)	Ground	Receiver and sensor ground	Input	Ignition switch C	ON	0 V
138	Ground	Receiver and sensor	Output	Ignition switch	OFF	0 V
(V)	Giouna	power supply	Output	ignition switch	ACC or ON	5.0 V

	nal No.	Description				Value
(Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
139	Ground	Tire pressure receiv-	Input/	Ignition switch	Standby state	(V) 6 4 2 0 • • 0.2s
(L)		er communication	Output	ON	When receiving the signal from the transmitter	(V) 6 4 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
140	Ground	Selector lever P/N	Input	Selector lever	P or N position	12 V
(GR)		position	•		Except P and N positions ON	0 V
141 (R)	Ground	Security indicator	Output	Security indicator	Blinking	(V) 15 10 5 0 JPMIA0014GB
142 (BR)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermit- tent dial 4)	OFF All switches OFF Lighting switch 1ST Lighting switch HI Lighting switch 2ND Turn signal switch RH	12 V 0 V
143 (P)	Ground	Combination switch OUTPUT 1	Output	Combination switch	All switches OFF (Wiper intermittent dial 4) Front wiper switch HI (Wiper intermittent dial 4) Any of the conditions below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3 • Wiper intermittent dial 6 • Wiper intermittent dial 7	0 V  (V) 15 10 5 0 2 ms  JPMIA0032GB  10.7 V

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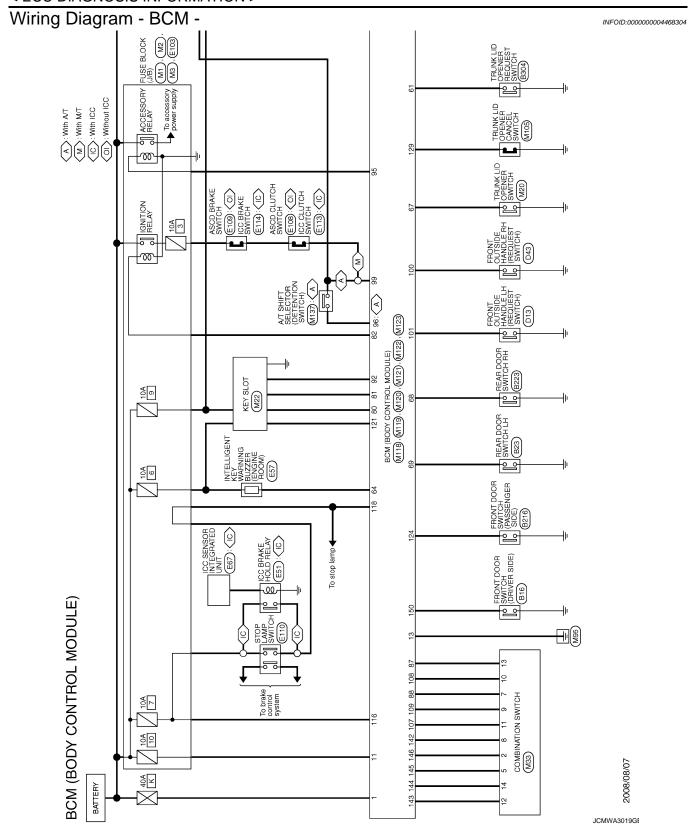
## < ECU DIAGNOSIS INFORMATION >

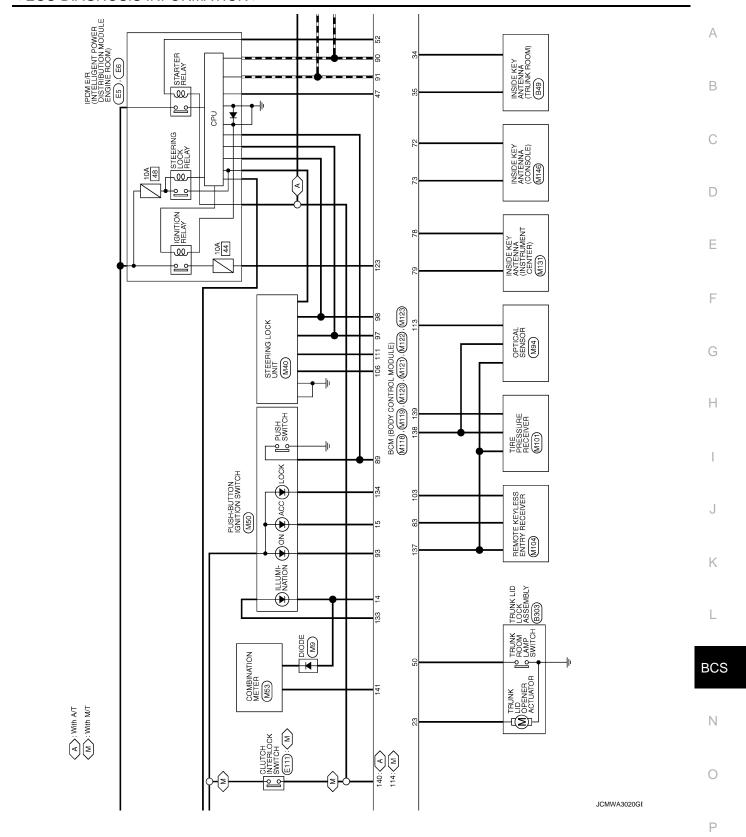
	nal No. color)	Description		_	0 100	Value
+	_	Signal name	Input/ Output		Condition	(Approx.)
					All switches OFF (Wiper intermittent dial 4)	0 V
					Front washer switch ON (Wiper intermittent dial 4)	(V)
144 (G)	Ground	Combination switch OUTPUT 2	Output	Combination switch	Any of the conditions below with all switches OFF  Wiper intermittent dial 1  Wiper intermittent dial 5  Wiper intermittent dial 6	15 10 5 0 2 ms JPMIA0033GB
					All switches OFF	0 V
					Front wiper switch INT	
				Combination	Front wiper switch LO	(V) 15
145 (L)	Ground	Combination switch OUTPUT 3	Output	switch (Wiper intermit- tent dial 4)	Lighting switch AUTO	10 5 0 2 ms JPMIA0034GB
						10.7 V
					All switches OFF	0 V
					Front fog lamp switch ON	(1)
				Combination	Lighting switch 2ND	(V) 15
146 (SB)	Ground	Combination switch OUTPUT 4	Output	switch (Wiper intermit- tent dial 4)	Lighting switch PASS  Turn signal switch LH	10 5 0 2 ms JPMIA0035GB
149 (W)	Ground	Tire pressure warning check switch	Input		_	12 V
150 (GR)	Ground	Driver door switch	Input	Driver door switch	OFF (Door close)	(V) 15 10 5 0 10 ms JPMIA0011GB
					ON (Door open)	0 V
151	Ground	Rear window defog-	Output	Rear window	Active	0 V
(G)	Cidana	ger relay control	Caipai	defogger	Not activated	Battery voltage

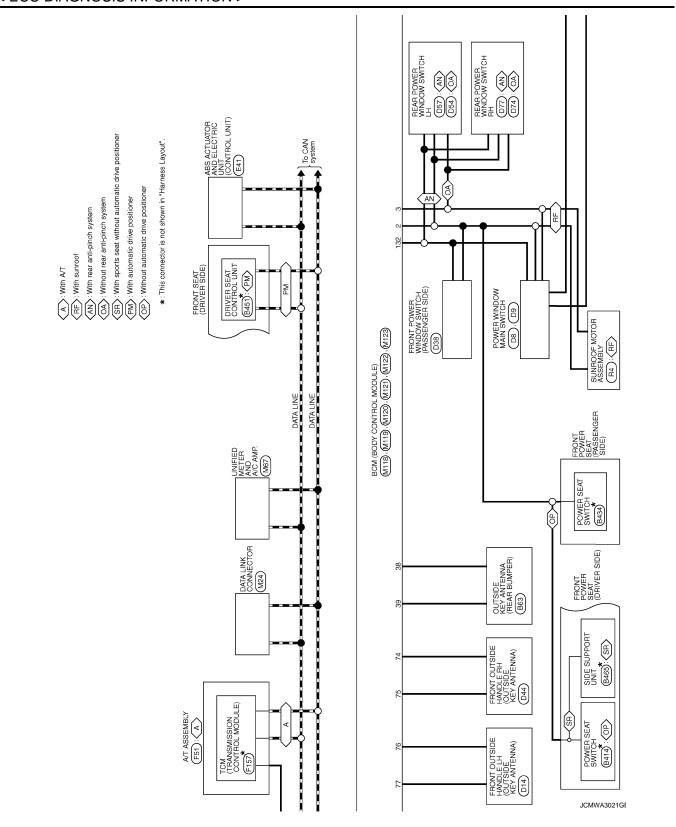
<sup>• \*1:</sup> A/T models

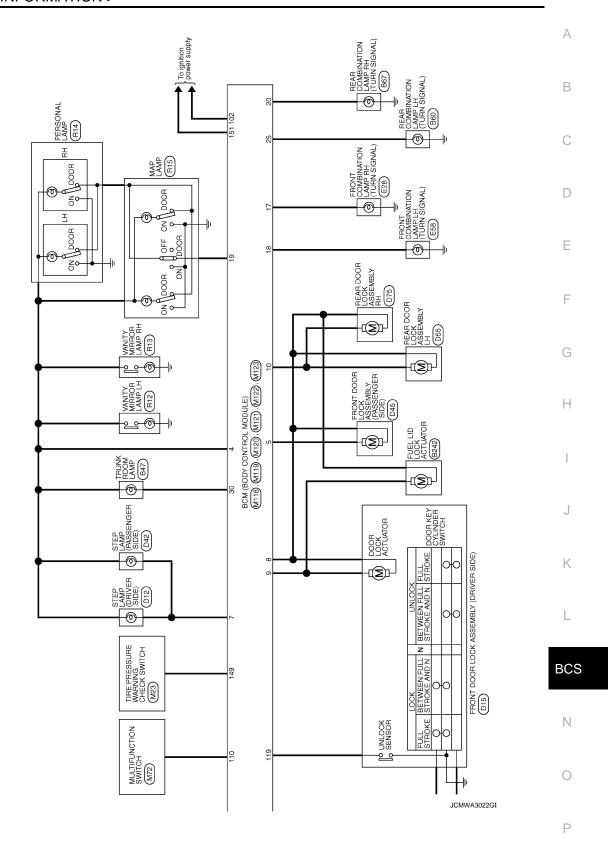
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<sup>• \*2:</sup> M/T models









BCM (BODY CONTROL MODULE) Connector No. M33	Connector No. M118	Connector No. M119	18 O TURN SIGNAL LH (FRONT)
Connector Name COMBINATION SWITCH Connector Type THI 8FW-NH	Connector Name BCM (BODY CONTROL MODULE) Connector Type M03FB-LC	Connector Name BCM (BODY CONTROL MODULE) Connector Type NS16FW-CS	19 V ROOM LAMP TIMER CONTROL
1	1	1 II	
1     2     3     4     5     6       7     8     9     10     11     12     13     14	13	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	
Terminal Color   Signal Name [Specification]   No of Wire   Signal Name [Specification]   2 S	Terminal Color   Signal Name [Specification]     of Wine   Wine   Style   Style     1	Terminal Color   Signal Name [Specification]	
10   W   INPUT 2   NPUT 2   NPUT 1   NPUT 5		9 G   DRIVER DOOR FUEL LID UNLOCK OUTPUT   10   BR   REAR DOOR HULCK OUTPUT   11   R   BATT (FUSE)   13   BB   PUSH-BUTTON IGNITION SWILL GND   14   W   PUSH-BUTTON IGNITION SWILL GND   14   W   PUSH-BUTTON IGNITION SWILL GND   15   W   P	
. 0		: ○ ×	
Connector No. M120 Connector Name RCM (BODY CONTROL MODULE)	Connector No. M121 Connector Name RCM (BODY CONTROL MODILIE)	69 R REARLH DOOR SW	
	$\neg$		
H.S. 20 21	H.S.  (H.S.)  (S. Control and A. C.		
L			
nal Color of Wire	nal Color Sig		
20 V TURN SIGNAL RH (REAR) 23 L TRUNK LID OPEN OUTPUT 25 V TURN CLID OPEN OUTPUT 26 V TURN CLID OPEN OUTPUT 27 V TURN CLIDAN OUTPUT 28 V TURN CLIDAN OUTPUT 29 V TURN CLIDAN OUTPUT 20 V TURN CLIDAN O	+		
- a	2 ≥		
	47 Y IGN RELAY (IPDM E/R) CONT 50 O TRUNK ROOM LAMP SW		
	SB SB		
	G I-KEY I		
	68 BR REAR RH DOOR SW		

JCMWA3023GE

### < ECU DIAGNOSIS INFORMATION >

134   LG   FECEIVER/SENSOR GND   137   O   FECEIVER/SENSOR GND   138   V   FECEIVER/SENSOR POWER SUIPPLY   139   L   TIRE PRESSURE RECEIVER COMM   140   GR   SELTIFF INIDIATIOR   141   R   SECLIFF INIDIATIOR   142   BR   COMBIS SWI OUTPUT 5   145   L   COMBIS SWI OUTPUT 1   LG   L   COMBIS SWI OUTPUT 3   LG   CROMBIS SWI OUTPUT 3   LG	
Connector No.   M123	
Y   KEYLESS ENTRY PECETVER COMM	
88 88 88 88 88 88 88 88 88 88 88 88 88	
Connector Name   BCM (BODY CONTROL MODULE)	
Connector Name   Connector Name   Connector Name   Connector Type   Conn	JCMWA3024Gf

### Fail-safe

### FAIL-SAFE CONTROL BY DTC

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

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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 $ON \rightarrow OFF$				
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	500 ms after the following signal reception status becomes consistent  • Selector lever P position switch signal  • P range signal (CAN)				
B2602: SHIFT POSITION	Inhibit steering lock	<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  • Status 1  - Ignition switch is in the ON position  - 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	<ul> <li>500 ms after the following CAN signal communication status has becomes consistent</li> <li>Steering lock relay signal (Request signal)</li> <li>Steering lock relay signal (Condition signal)</li> </ul>					
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	<ul> <li>When any of the following conditions are fulfilled</li> <li>Power position changes to ACC</li> <li>Receives engine status signal (CAN)</li> </ul>					
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					
B26E8: CLUTCH SW	Inhibit engine cranking	When any of the following BCM recognition conditions are fulfilled  Status 1  Clutch switch signal (CAN from ECM): ON  Clutch interlock switch signal: OFF (0 V)  Status 2  Clutch switch signal (CAN from ECM): OFF  Clutch interlock switch signal: ON (Battery voltage)					
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)					

#### HIGH FLASHER OPERATION

BCM detects the turn signal lamp circuit status by the current value.

BCM increases the turn signal lamp blinking speed if the bulb or harness open is detected with the turn signal lamp operating.

#### NOTE:

The blinking speed is normal while activating the hazard warning lamp.

### DTC Inspection Priority Chart

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

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1 B2562: LOW VOLTAGE 2 • U1000: CAN COMM • U1010: CONTROL UNIT(CAN)  • B2190: NATS ANTENNA AMP • B2191: DIFFERENCE OF KEY 3 • B2192: ID DISCORD BCM-ECM • B2193: CHAIN OF BCM-ECM • B2193: CHAIN OF BCM-ECM • B2195: ANTI SCANNING  • B2013: ID DISCORD BCM-S/L • B2014: CHAIN OF S/L-BCM • B2553: IGNITION RELAY • B2555: STOP LAMP • B2556: PUSH-BTN IGN SW • B2556: PUSH-BTN IGN SW • B2557: VEHICLE SPEED • B2560: STARTER CONT RELAY • B2601: SHIFT POSITION • B2602: SHIFT POSITION • B2603: SHIFT POSITION • B2603: SHIFT POSITION • B2604: PNP SW • B2606: PNP SW • B2605: PNP SW • B2606: S/L RELAY • B2606: S/L RELAY • B2606: S/L RELAY • B2606: S/L STATUS • B2606: S/L	Priority	DTC
2		
## U1010: CONTROL UNIT(CAN)  ## B2190: NATS ANTENNA AMP ## B2191: DIFFERENCE OF KEY ## B2192: ID DISCORD BCM-ECM ## B2193: CHAIN OF BCM-ECM ## B2195: ANTI SCANNING  ## B2013: ID DISCORD BCM-S/L ## B2014: CHAIN OF S/L-BCM ## B2553: IGNTION RELAY ## B2553: IGNTION RELAY ## B2555: STOP LAMP ## B2556: PUSH-BTN IGN SW ## B2557: VEHICLE SPEED ## B2560: STARTER CONT RELAY ## B2601: SHIFT POSITION ## B2601: SHIFT POSITION ## B2603: SHIFT POSITION ## B2603: SHIFT POSITION ## B2603: SHIFT POSITION ## B2604: PNP SW ## B2605: PNP SW ## B2606: S/L RELAY ## B2606: S/L RELAY ## B2608: STARTER RELAY ## B2609: S/L STATUS ## B2609: STEERING LOCK UNIT ## B2600: STEERING LOCK UNIT ## B2600: ENG STATE SIG LOCK UNIT ## B2600: STEERING LOCK UNIT ## B2600: ST		
B2191: DIFFERENCE OF KEY     B2192: ID DISCORD BCM-ECM     B2193: CHAIN OF BCM-ECM     B2195: ANTI SCANNING       B2014: CHAIN OF S/L-BCM     B2553: IGNITION RELAY     B2555: STOP LAMP     B2555: STOP LAMP     B2556: PUSH-BTN IGN SW     B2557: VEHICLE SPEED     B2560: STARTER CONT RELAY     B2601: SHIFT POSITION     B2602: SHIFT POSITION     B2603: SHIFT POSITION     B2603: SHIFT POSI STATUS     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: STEERING LOCK UNIT     B2600: STEERING LOCK UNIT     B2600: STEERING LOCK UNIT     B2607: ENG STATE SIG LOST	2	
<ul> <li>B2014: CHAIN OF S/L-BCM</li> <li>B2553: IGNITION RELAY</li> <li>B2555: STOP LAMP</li> <li>B2556: PUSH-BTN IGN SW</li> <li>B2557: VEHICLE SPEED</li> <li>B2560: STARTER CONT RELAY</li> <li>B2601: SHIFT POSITION</li> <li>B2602: SHIFT POSITION</li> <li>B2603: SHIFT POSI STATUS</li> <li>B2604: PNP SW</li> <li>B2605: PNP SW</li> <li>B2606: S/L RELAY</li> <li>B2607: S/L RELAY</li> <li>B2608: STARTER RELAY</li> <li>B2609: S/L STATUS</li> <li>B2609: S/L STATUS</li> <li>B26009: S/L STATUS</li> <li>B26001: STEERING LOCK UNIT</li> <li>B26001: STEERING LOCK UNIT</li> <li>B26061: ENG STATE SIG LOST</li> </ul>	3	<ul> <li>B2191: DIFFERENCE OF KEY</li> <li>B2192: ID DISCORD BCM-ECM</li> <li>B2193: CHAIN OF BCM-ECM</li> </ul>
<ul> <li>B2612: S/L STATUS</li> <li>B2614: ACC RELAY CIRC</li> <li>B2615: BLOWER RELAY CIRC</li> <li>B2616: IGN RELAY CIRC</li> <li>B2617: STARTER RELAY CIRC</li> <li>B2618: BCM</li> <li>B2619: BCM</li> <li>B2614: PUSH-BTN IGN SW</li> <li>B261E: VEHICLE TYPE</li> <li>B26E8: CLUTCH SW</li> <li>B26E9: S/L STATUS</li> <li>B26EA: KEY REGISTRATION</li> <li>C1729: VHCL SPEED SIG ERR</li> <li>U0415: VEHICLE SPEED SIG</li> </ul>	4	<ul> <li>■ B2013: ID DISCORD BCM-S/L</li> <li>■ B2014: CHAIN OF S/L-BCM</li> <li>■ B2553: IGNITION RELAY</li> <li>■ B2555: STOP LAMP</li> <li>■ B2556: PUSH-BTN IGN SW</li> <li>■ B2557: VEHICLE SPEED</li> <li>■ B2560: STARTER CONT RELAY</li> <li>■ B2601: SHIFT POSITION</li> <li>■ B2602: SHIFT POSITION</li> <li>■ B2603: SHIFT POSITION</li> <li>■ B2603: SHIFT POSITION</li> <li>■ B2604: PNP SW</li> <li>■ B2606: PNP SW</li> <li>■ B2606: S/L RELAY</li> <li>■ B2607: S/L RELAY</li> <li>■ B2608: STARTER RELAY</li> <li>■ B2609: S/L STATUS</li> <li>■ B2609: S/L STATUS</li> <li>■ B2609: S/L STATUS</li> <li>■ B2600: STEERING LOCK UNIT</li> <li>■ B2600: STEERING LOCK UNIT</li> <li>■ B2600: ENG STATE SIG LOST</li> <li>■ B2612: S/L STATUS</li> <li>■ B2614: ACC RELAY CIRC</li> <li>■ B2615: BLOWER RELAY CIRC</li> <li>■ B2616: IGN RELAY CIRC</li> <li>■ B2616: IGN RELAY CIRC</li> <li>■ B2616: BCM</li> <li>■ B2619: BCM</li> <li>■ B2614: PUSH-BTN IGN SW</li> <li>■ B2615: VEHICLE TYPE</li> <li>■ B2628: CLUTCH SW</li> <li>■ B2619: S/L STATUS</li> <li>■ B2626: CLUTCH SW</li> <li>■ B2619: S/L STATUS</li> <li>■ B2626: KEY REGISTRATION</li> <li>C 1729: VHCL SPEED SIG ERR</li> </ul>

### < ECU DIAGNOSIS INFORMATION >

Priority	DTC	
	C1704: LOW PRESSURE FL	
	C1705: LOW PRESSURE FR	
	C1706: LOW PRESSURE RR	
	C1707: LOW PRESSURE RL	E
	C1708: [NO DATA] FL	
	C1709: [NO DATA] FR	
	C1710: [NO DATA] RR	
	C1711: [NO DATA] RL	
	C1712: [CHECKSUM ERR] FL	
	C1713: [CHECKSUM ERR] FR	
	C1714: [CHECKSUM ERR] RR	_
	C1715: [CHECKSUM ERR] RL	
5	C1716: [PRESSDATA ERR] FL	
	C1717: [PRESSDATA ERR] FR	
	C1718: [PRESSDATA ERR] RR	E
	C1719: [PRESSDATA ERR] RL	ı
	C1720: [CODE ERR] FL	
	C1721: [CODE ERR] FR	
	C1722: [CODE ERR] RR	
	C1723: [CODE ERR] RL	
	C1724: [BATT VOLT LOW] FL	
	C1725: [BATT VOLT LOW] FR	
	C1726: [BATT VOLT LOW] RR	
	C1727: [BATT VOLT LOW] RL	
	C1734: CONTROL UNIT	
	B2621: INSIDE ANTENNA	
6	B2622: INSIDE ANTENNA	1
	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.

IGN counter is displayed on Freeze Frame Data. For details of Freeze Frame Data, refer to <u>BCS-14, "COM-MON ITEM"</u>.

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**BCS** 

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	Refer- ence page
No DTC is detected. further testing may be required.	_	_	_	_	_
U1000: CAN COMM	_	_	_	_	BCS-35
U1010: CONTROL UNIT(CAN)	_	_	_	_	BCS-36
U0415: VEHICLE SPEED SIG	_	_	_	_	BCS-37
B2013: ID DISCORD BCM-S/L	×	×	_	_	<u>SEC-55</u>
B2014: CHAIN OF S/L-BCM	×	×	_	_	<u>SEC-56</u>
B2190: NATS ANTENNA AMP	×	_	_	_	SEC-47
B2191: DIFFERENCE OF KEY	×	_	_	_	SEC-50
B2192: ID DISCORD BCM-ECM	×	_	_	_	SEC-51
B2193: CHAIN OF BCM-ECM	×	_	_	_	SEC-53
B2195: ANTI SCANNING	×	_	_	_	<u>SEC-54</u>
B2553: IGNITION RELAY	_	×	_	_	PCS-49
B2555: STOP LAMP	_	×	_	_	SEC-59

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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	Refer- ence page	
B2556: PUSH-BTN IGN SW	_	×	×	_	<u>SEC-61</u>	
B2557: VEHICLE SPEED	×	×	×	_	SEC-63	
B2560: STARTER CONT RELAY	×	×	×	_	SEC-64	
B2562: LOW VOLTAGE	_	×	_	_	BCS-38	
B2601: SHIFT POSITION	×	×	×	_	SEC-65	
B2602: SHIFT POSITION	×	×	×	_	<u>SEC-68</u>	
B2603: SHIFT POSI STATUS	×	×	×	_	SEC-70	
B2604: PNP SW	×	×	×	_	SEC-73	
B2605: PNP SW	×	×	×	_	SEC-75	
B2606: S/L RELAY	×	×	×	_	<u>SEC-77</u>	
B2607: S/L RELAY	×	×	×	_	SEC-78	
B2608: STARTER RELAY	×	×	×	_	SEC-80	
B2609: S/L STATUS	×	×	×	_	SEC-82	
B260A: IGNITION RELAY	×	×	×	_	PCS-51	
B260B: STEERING LOCK UNIT	_	×	×	_	SEC-86	
B260C: STEERING LOCK UNIT	_	×	×	_	SEC-87	
B260D: STEERING LOCK UNIT	_	×	×	_	<u>SEC-88</u>	
B260F: ENG STATE SIG LOST	×	×	×	_	SEC-89	
B2612: S/L STATUS	×	×	×	_	SEC-94	
B2614: ACC RELAY CIRC	_	×	×	_	PCS-53	
B2615: BLOWER RELAY CIRC	_	×	×	_	PCS-55	
B2616: IGN RELAY CIRC	_	×	×	_	PCS-57	
B2617: STARTER RELAY CIRC	×	×	×	_	SEC-98	
B2618: BCM	×	×	×	_	PCS-59	
B2619: BCM	×	×	×	_	SEC-100	
B261A: PUSH-BTN IGN SW	_	×	×	_	PCS-60	
B261E: VEHICLE TYPE	× × (Turn ON for 15 seconds)		_	SEC-101		
B2621: INSIDE ANTENNA	_	×	_	_	DLK-59	
B2622: INSIDE ANTENNA	_	×	_	_	DLK-61	
B2623: INSIDE ANTENNA	_	×	_	_	DLK-63	
B26E8: CLUTCH SW	×	×	×	_	SEC-90	
B26E9: S/L STATUS	×	×	× (Turn ON for 15 seconds)	_	SEC-92	
B26EA: KEY REGISTRATION	_	×	× (Turn ON for 15 seconds)	_	SEC-93	
C1704: LOW PRESSURE FL	_	_	_	×		
C1705: LOW PRESSURE FR	_	_	_	×	\\/T 47	
C1706: LOW PRESSURE RR	_	_	_	×	<u>WT-17</u>	
C1707: LOW PRESSURE RL		_		×	1	

### < 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	Refer- ence page	Α
C1708: [NO DATA] FL	_	_	_	×		В
C1709: [NO DATA] FR	_	_	_	×	WT 40	
C1710: [NO DATA] RR	_	_	_	×	<u>WT-19</u>	
C1711: [NO DATA] RL	_	_	_	×		С
C1712: [CHECKSUM ERR] FL	_	_	_	×		
C1713: [CHECKSUM ERR] FR	_	_	_	×	W/T O4	D
C1714: [CHECKSUM ERR] RR	_	_	_	×	<u>WT-21</u>	
C1715: [CHECKSUM ERR] RL	_	_	_	×		
C1716: [PRESSDATA ERR] FL	_	_	_	×		Е
C1717: [PRESSDATA ERR] FR	_	_	_	×	WT 04	
C1718: [PRESSDATA ERR] RR	_	_	_	×	<u>WT-24</u>	F
C1719: [PRESSDATA ERR] RL	_	_	_	×		Г
C1720: [CODE ERR] FL	_	_	_	×		
C1721: [CODE ERR] FR	_	_	_	×	W/T oc	G
C1722: [CODE ERR] RR	_	_	_	×	<u>WT-26</u>	
C1723: [CODE ERR] RL	_	_	_	×		
C1724: [BATT VOLT LOW] FL	_	_	_	×		Н
C1725: [BATT VOLT LOW] FR	_	_	_	×	W/T 00	
C1726: [BATT VOLT LOW] RR	_	_	_	×	<u>WT-29</u>	
C1727: [BATT VOLT LOW] RL	_	_	_	×		
C1729: VHCL SPEED SIG ERR	_	_	_	×	<u>WT-32</u>	
C1734: CONTROL UNIT	_	_	_	×	<u>WT-33</u>	J

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### **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.

Ma	lfun	ction	item:	X

		Data monitor item												
Malfunction combination	FR WIPER HI	FR WIPER LOW	FR WASHER SW	FR WIPER INT	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
А		×	×			×	×							
В	×			×						×		×		
С					×				×		×			
D					×			×					×	
E					×									×
F	×				×									
G			×		×									
Н		×		×									×	
I							×				×	×		×
J						×		×	×	×				
К				•			All I	tems						•
L			If only	one item	is detec	ted or th	e item is	not app	licable to	the com	nbination	s 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-40, "Diagnosis Procedure".
D	Combination switch INPUT 4 circuit	- Paris 1000 to <u>200 to 2000 t</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 <u>BCS-42</u> , " <u>Diagnosis Procedure</u> ".
ļ	Combination switch OUTPUT 4 circuit	g paint 1.0.0. to <u>200 2.129.100.0</u>
J	Combination switch OUTPUT 5 circuit	
K	BCM	Replace BCM. Refer to BCS-82, "Exploded View"
L	Combination switch	Replace the combination switch.

#### **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.

#### **WARNING:**

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

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

#### **WARNING:**

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

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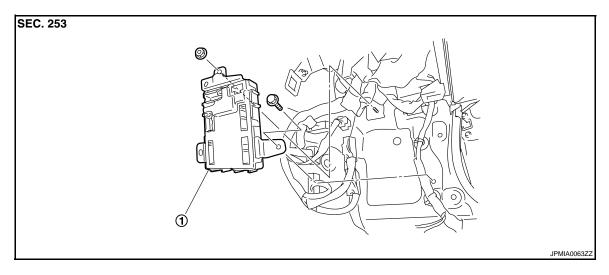
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# **REMOVAL AND INSTALLATION**

# **BCM (BODY CONTROL MODULE)**

Exploded View



1. BCM

#### Removal and Installation

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#### **REMOVAL**

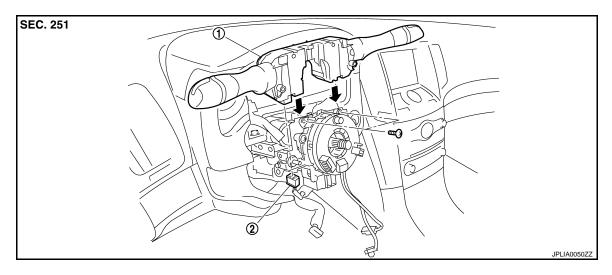
- 1. Remove dash side finisher (passenger side). Refer to <a href="INT-14">INT-14</a>, "Exploded View".
- 2. Remove bolt and nut.
- 3. Remove BCM and disconnect the connector.

#### **INSTALLATION**

Install in the reverse order of removal.

## **COMBINATION SWITCH**

Exploded View



1. Combination switch

2. Combination switch connector

### Removal and Installation

**REMOVAL** 

- Remove steering column cover. Refer to <u>IP-11, "Exploded View"</u>.
- 2. Remove screws.
- 3. Disconnect the connector.
- 4. Pull up the combination switch to remove it.

#### **INSTALLATION**

Install in the reverse order of removal.

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