# BODY CONTROL SYSTEM C

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# < PRECAUTION > PRECAUTION PRECAUTIONS

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER" INFOID:000000011324299

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. D Information necessary to service the system safely is included in the "SRS AIR BAG" and "SEAT BELT" of this Service Manual.

### WARNING:

Always observe the following items for preventing accidental activation.

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see "SRS AIR BAG".
- Never use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

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

### WARNING:

Always observe the following items for preventing accidental activation.

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

# Precautions for Removing Battery Terminal

• When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds. NOTE:

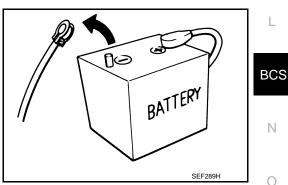
ECU may be active for several tens of seconds after the ignition switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption may occur.

 For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch. NOTE:

If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.

After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC. NOTE:

The removal of 12V battery may cause a DTC detection error.



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# **COMPONENT PARTS**

### < SYSTEM DESCRIPTION >

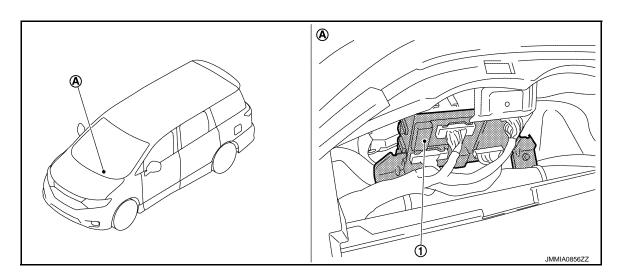
# SYSTEM DESCRIPTION

COMPONENT PARTS

BODY CONTROL SYSTEM

**BODY CONTROL SYSTEM : Component Parts Location** 

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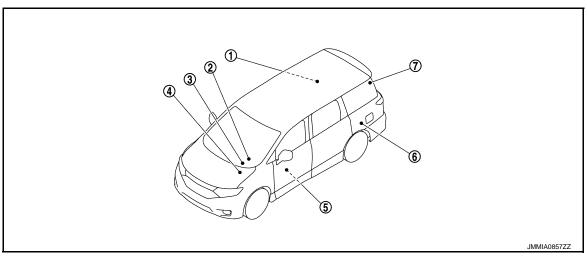


- 1. BCM
- A. Behind of combination meter

# POWER CONSUMPTION CONTROL SYSTEM

# POWER CONSUMPTION CONTROL SYSTEM : Component Parts Location

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- 1. Sliding door control unit RH Refer to <u>DLK-23, "AUTOMATIC</u> <u>SLIDING DOOR SYSTEM : Component Parts Location"</u>.
- 2. Combination meter 3. Refer to <u>MWI-6. "METER SYSTEM :</u> <u>Component Parts Location"</u>.
- BCM Refer to <u>BCS-4, "BODY CONTROL</u> <u>SYSTEM : Component Parts Loca-</u> tion".

# **COMPONENT PARTS**

# < SYSTEM DESCRIPTION >

- 4. IPDM E/R 5. Refer to <u>PCS-4, "IPDM E/R : Com-</u> ponent Parts Location".
- 7. Automatic back door control module Refer to <u>DLK-22, "AUTOMATIC</u> <u>BACK DOOR SYSTEM :</u> <u>Component Parts Location"</u>.
- Driver seat control unit
   6.
   Sliding door control unit LH

   Refer to ADP-5, "Component Parts
   Refer to DLK-23, "AUTOMATIC

   Location".
   SLIDING DOOR SYSTEM : Component Parts Location".

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# < SYSTEM DESCRIPTION >

# SYSTEM BODY CONTROL SYSTEM

# **BODY CONTROL SYSTEM : System Description**

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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 and various settings.

# BCM CONTROL FUNCTION LIST

System	Reference
Combination switch reading system	BCS-8, "COMBINATION SWITCH READING SYSTEM : System Description"
Signal buffer system	BCS-12, "SIGNAL BUFFER SYSTEM : System Description"
Power consumption control system	BCS-13. "POWER CONSUMPTION CONTROL SYSTEM : Sys- tem Description"
Headlamp system	<ul> <li><u>EXL-12. "HEADLAMP SYSTEM : System Description"</u> (Xenon type headlamp)</li> <li><u>EXL-124. "HEADLAMP SYSTEM : System Description"</u> (Halogen type headlamp)</li> </ul>
Auto light system	<ul> <li>Xenon type headlamp models</li> <li><u>EXL-14. "AUTO LIGHT SYSTEM (EXCEPT FOR CANADA) :</u> <u>System Description"</u> (Except for Canada)</li> <li><u>EXL-17. "AUTO LIGHT SYSTEM (FOR CANADA) : System</u> <u>Description"</u> (For Canada)</li> <li>Halogen type headlamp models</li> <li><u>EXL-14. "AUTO LIGHT SYSTEM (EXCEPT FOR CANADA) :</u> <u>System Description"</u> (Except for Canada)</li> <li><u>EXL-129. "AUTO LIGHT SYSTEM (FOR CANADA) : System</u> <u>Description"</u> (For Canada)</li> </ul>
Daytime running light system	<ul> <li><u>EXL-20, "DAYTIME RUNNING LIGHT SYSTEM : System Description"</u> (Xenon type headlamp)</li> <li><u>EXL-132, "DAYTIME RUNNING LIGHT SYSTEM : System Description"</u> (Halogen type headlamp)</li> </ul>
Turn signal and hazard warning lamp system	EXL-22. "TURN SIGNAL AND HAZARD WARNING LAMP <u>SYSTEM : System Description"</u> (Xenon type headlamp)     EXL-134. "TURN SIGNAL AND HAZARD WARNING LAMP <u>SYSTEM : System Description"</u> (Halogen type headlamp)
Parking, license plate, side maker and tail lamps system	<ul> <li>EXL-23, "PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMP SYSTEM : System Description" (Xenon type head- lamp)</li> <li>EXL-135, "PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMP SYSTEM : System Description" (Halogen type headlamp)</li> </ul>
Front fog lamp system	<ul> <li>EXL-26. "FRONT FOG LAMP SYSTEM : System Description" (Xenon type headlamp)</li> <li>EXL-138. "FRONT FOG LAMP SYSTEM : System Descrip- tion" (Halogen type headlamp)</li> </ul>
Exterior lamp battery saver system	EXL-28, "EXTERIOR LAMP BATTERY SAVER SYSTEM : System Description" (Xenon type headlamp)     EXL-140, "EXTERIOR LAMP BATTERY SAVER SYSTEM : System Description" (Halogen type headlamp)

### < SYSTEM DESCRIPTION >

System		Reference	
Interior room lamp control system		INL-6, "INTERIOR ROOM LAMP CONTROL SYSTEM : System Description"	
Interior room lamp battery saver syster	n	INL-11, "INTERIOR ROOM LAMP BATTERY SAVER SYSTEM : System Description"	
Front wiper and washer system		WW-8, "FRONT WIPER AND WASHER SYSTEM : System De- scription"	
Rear wiper and washer system		WW-12, "REAR WIPER AND WASHER SYSTEM : System De- scription"	
Rear window defogger system		DEF-7, "System Description"	
Warning chime system		WCS-5, "WARNING CHIME SYSTEM : System Description"	
Air conditioning control system		HAC-16. "FRONT AUTOMATIC AIR CONDITIONING SYS- <u>TEM : System Description"</u> (Automatic air conditioning)     HAC-162. "FRONT MANUAL AIR CONDITIONING SYSTEM : <u>System Description"</u> (Manual air cinditionimg)	
Power door lock system		DLK-33, "System Description"	
Intelligent Key system/engine start sys	tem	DLK-36, "INTELLIGENT KEY SYSTEM : System Description"	
Nissan Vehicle Immobilizer System (N	/IS) - NATS	SEC-14, "NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS : System Description"	
Theft warning ala			
Vehicle security system	Panic alarm	SEC-19, "VEHICLE SECURITY SYSTEM : System Diagram"	
Power window system		PWC-9, "System Description"	
Retained accessory power (RAP) system		PWC-9, "System Description"	
TPMS (Tire Pressure Monitoring System)		WT-8, "System Description"	

# BODY CONTROL SYSTEM : Fail-safe

# FAIL-SAFE CONTROL BY DTC

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

Display contents of CONSULT	Fail-safe	Cancellation	K
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 $ON \rightarrow OFF$	L
B2196: DONGLE NG	Inhibit engine cranking	Erase DTC	
B2198: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC	BC
B2608: STARTER RELAY	Inhibit engine cranking	<ul> <li>500 ms after the following signal communication status becomes consistent</li> <li>Starter motor relay control signal</li> <li>Starter relay status signal (CAN)</li> </ul>	N
B260F: ENG STATE SIG LOST	Inhibit engine cranking	<ul><li>When any of the following conditions are fulfilled</li><li>Ignition switch changes to ACC</li><li>Receives engine status signal (CAN)</li></ul>	0
B26F1: IGN RELAY OFF	Inhibit engine cranking	<ul> <li>When the following conditions are fulfilled</li> <li>Ignition switch ON signal (CAN: Transmitted from BCM): ON</li> <li>Ignition switch ON signal (CAN: Transmitted from IPDM E/R): ON</li> </ul>	P
B26F2: IGN RELAY ON	Inhibit engine cranking	<ul> <li>When the following conditions are fulfilled</li> <li>Ignition switch ON signal (CAN: Transmitted from BCM): OFF</li> <li>Ignition switch ON signal (CAN: Transmitted from IPDM E/R): OFF</li> </ul>	
B26F3: START CONT RLY ON	Inhibit engine cranking	<ul> <li>When the following conditions are fulfilled</li> <li>Starter control relay signal (CAN: Transmitted from BCM): OFF</li> <li>Starter control relay signal (CAN: Transmitted from IPDM E/R): OFF</li> </ul>	-

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### < SYSTEM DESCRIPTION >

Display contents of CONSULT	Fail-safe	Cancellation
B26F4: START CONT RLY OFF	Inhibit engine cranking	<ul> <li>When the following conditions are fulfilled</li> <li>Starter control relay signal (CAN: Transmitted from BCM): ON</li> <li>Starter control relay signal (CAN: Transmitted from IPDM E/R): ON</li> </ul>
B26F7: BCM	Inhibit engine cranking by Intelligent Key sys- tem	When room antenna and luggage room antenna functions normally

### REAR WIPER MOTOR PROTECTION

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

Condition of cancellation

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

FAIL-SAFE CONTROL OF COMBINATION SWITCH READING FUNCTION CAUSED BY LOW POWER SUPPLY VOLTAGE

If voltage of battery power supply lower, BCM maintains combination switch reading to the status when input voltage is less than approximately 9 V.

### NOTĚ:

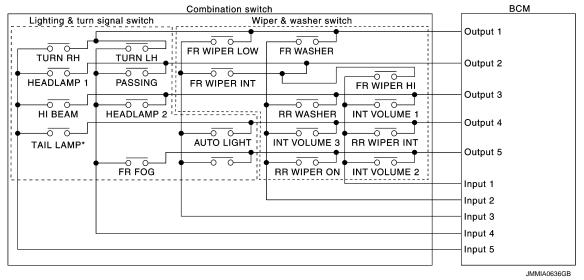
When voltage of battery power supply is approximately 9 V or more, combination switch reading function returns to normal operation.

# COMBINATION SWITCH READING SYSTEM

# **COMBINATION SWITCH READING SYSTEM : System Description**

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### SYSTEM DIAGRAM



### NOTE:

\*: TAIL LAMP switch links lighting switch 1ST and 2ND positions.

### OUTLINE

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

### COMBINATION SWITCH MATRIX

# < SYSTEM DESCRIPTION >

### Combination switch circuit

	Combination own	on on our		
	Combination switch		BCM	A
Lighting & turn	signal switch Wiper & washer	switch	t	
		ER Output	t	В
HEADLAMP 1			t	
	HEADLAMP 2		4	С
TAIL LAMP*		Output	5 CPU	D
		Input	2 VF	Е
		Input Input Input	3 — 4	
			JMMIA0637GB	F

### NOTE:

\*: TAIL LAMP switch links lighting switch 1ST and 2ND positions.

Combination sw	itch INPUT-OUTPUT sys	tem list				0
System	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5	•
OUTPUT 1	_	FR WASHER	FR WIPER LOW	TURN LH	TURN RH	Н
OUTPUT 2	FR WIPER HI	—	FR WIPER INT	PASSING	HEADLAMP 1	-
OUTPUT 3	INT VOLUME 1	RR WASHER	—	HEADLAMP 2	HI BEAM	-
OUTPUT 4	RR WIPER INT	INT VOLUME 3	AUTO LIGHT	—	TAIL LAMP	
OUTPUT 5	INT VOLUME 2	RR WIPER ON	—	FR FOG	—	_

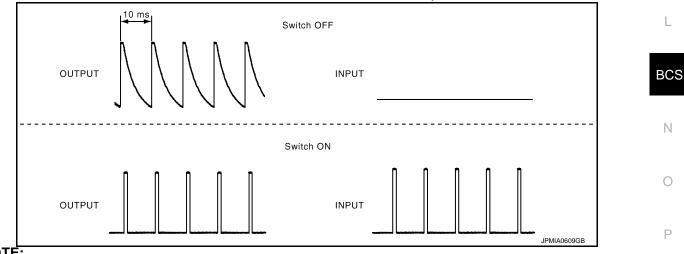
#### NOTE:

Headlamp has a dual system switch.

# COMBINATION SWITCH READING FUNCTION

### Description

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



### NOTE:

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

- BCM operates as follows and judges the status of the combination switch.
- It operates the transistor on OUTPUT side in the following order: OUTPUT 1  $\rightarrow$  2  $\rightarrow$  3  $\rightarrow$  4  $\rightarrow$  5, and outputs voltage waveform.

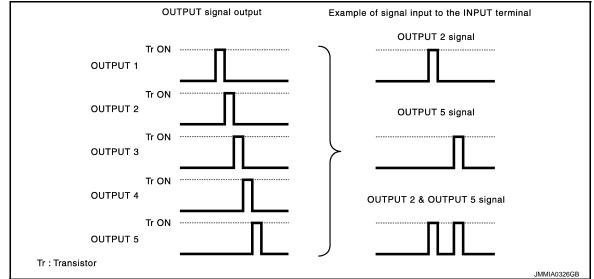
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### < SYSTEM DESCRIPTION >

- The voltage waveform of OUTPUT corresponding to the formed circuit is input into the interface on INPUT side if any (1 or more) switches are ON.
- It reads this change of the voltage as the status signal of the combination switch.



### **Operation Example**

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

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

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

	Combination switch	ВСМ
Lighting & turn signal switch	Wiper & washer switch	
		Output 1
HEADLAMP 1 PASSING		Output 2
HI BEAM HEADLAMP 2	RR WASHER INT VOLUME 1	Output 3 C
FR FOG		Output 5 - E
		Input 1
		Input 2
		Input 3
	→	
		Input 5

• BCM detects the combination switch status signal "5D" when the signal of OUTPUT 4 is input to INPUT 5.

• BCM judges that the TAIL LAMP switch is ON when the signal "5D" is detected.

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

# < SYSTEM DESCRIPTION >

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

Combination switch	ВСМ
Lighting & turn signal switch Wiper & washer switch	
	Output 1 🖌 🖉 B
HEADLAMP 1 PASSING FR WIPER INT FR WIPER HI	Output 2 B
HI BEAM HEADLAMP 2	Output 3 C
	Output 4 2 0
	Input 1 Input 2 F
→	Input 3 UF 3 Input 4 UF 4
	Input 5 5

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

### WIPER INTERMITTENT DIAL POSITION

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

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

NOTE:

For details of wiper intermittent dial position, refer to WW-8, "FRONT WIPER AND WASHER SYSTEM : System Description". SIGNAL BUFFER SYSTEM

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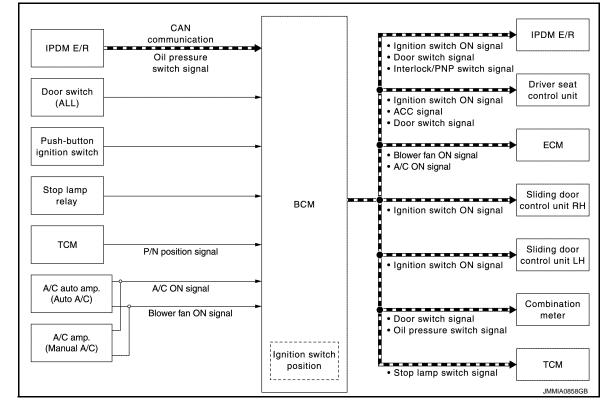
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### < SYSTEM DESCRIPTION >

# SIGNAL BUFFER SYSTEM : System Description

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### SYSTEM DIAGRAM



# 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>ACC signal</li></ul>	Push-button ignition switch (Push switch)	<ul> <li>IPDM E/R (CAN)</li> <li>Driver seat control unit (CAN)</li> <li>Sliding door control unit LH (CAN)</li> <li>Sliding door control unit RH (CAN)</li> </ul>	Inputs the push-button ignition switch (push switch) signal and transmits the ignition switch sta- tus judged with BCM via CAN communication.
Door switch signal	Any door switch	<ul> <li>Combination meter (CAN)</li> <li>IPDM E/R (CAN)</li> <li>Driver seat control unit (CAN)</li> </ul>	Inputs the door switch signal and transmits it via CAN com- munication.
Oil pressure switch signal	IPDM E/R (CAN)	Combination meter (CAN)	Transmits the received oil pres- sure switch signal via CAN communication.
Blower fan ON signal	<ul> <li>A/C auto amp. (Auto A/C)</li> <li>A/C amp. (Manual A/C)</li> </ul>	ECM (CAN)	Input blower fan ON signal, and transmits it via CAN communi- cation.
A/C ON signal	<ul> <li>A/C auto amp. (Auto A/C)</li> <li>A/C amp. (Manual A/C)</li> </ul>	ECM (CAN)	Input A/C ON signal, and trans- mits it via CAN communication.

### < SYSTEM DESCRIPTION >

Signal name	Input	Output	Description	
Stop lamp switch signal	Stop lamp relay	TCM (CAN)	Inputs the stop lamp switch 1 signal and stop lamp switch 2 signal, and transmits it via CAN communication.	B
Interlock/PNP switch signal	ТСМ	IPDM E/R (CAN)	Inputs the P/N position signal and transmits Interlock/PNP switch signal via CAN commu- nication.	С

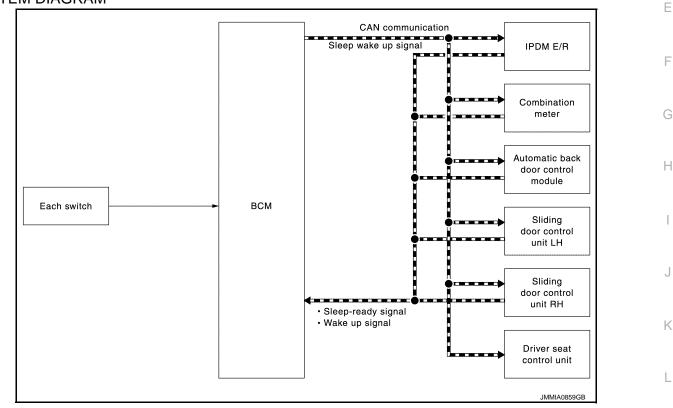
# POWER CONSUMPTION CONTROL SYSTEM

# POWER CONSUMPTION CONTROL SYSTEM : System Description

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# SYSTEM DIAGRAM



### 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, driver seat control unit, automatic back door control module, sliding door control unit LH and sliding door control unit RH) 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

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### < SYSTEM DESCRIPTION >

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, combination meter, automatic back door control module, sliding door control unit LH and sliding door control unit RH 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.

#### 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: Not operation</li> <li>Warning chime: Not operation</li> <li>Intelligent Key system buzzer: Not operation</li> <li>Stop lamp switch: OFF</li> <li>Turn signal indicator lamp: Not operation</li> <li>Exterior lamp: OFF</li> <li>Door lock status: No change</li> <li>CONSULT 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: OFF</li> <li>NVIS: Not operation</li> <li>Remote keyless entry receiver communication status: No communication</li> <li>LOCK indicator lamp: Not operation</li> <li>ACC indicator lamp: Not operation</li> <li>ON indicator lamp: Not operation</li> </ul>	

### NOTE:

\*: Refer to INL-11, "INTERIOR ROOM LAMP BATTERY SAVER SYSTEM : System Description" for details of the interior room lamp battery saver time.

### Wake-up operation

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

# < SYSTEM DESCRIPTION >

BCM wake-up condition	CAN wake-up condition
	Receiving the sleep-ready signal (Not-ready) from any units
	<ul> <li>Push-button ignition switch (push switch): OFF→ ON</li> </ul>
	Hazard switch: ON
	• HI BEAM switch: OFF $\rightarrow$ ON, ON $\rightarrow$ OFF
	<ul> <li>PASSING switch: OFF → ON, ON → OFF</li> </ul>
	• HEADLAMP 1 switch: OFF $\rightarrow$ ON, ON $\rightarrow$ OFF
	• HEADLAMP 2 switch: OFF $\rightarrow$ ON, ON $\rightarrow$ OFF
	• TAIL LAMP switch: OFF $\rightarrow$ ON
	• FR FOG switch: OFF $\rightarrow$ ON, ON $\rightarrow$ OFF
	• TURN RH: OFF $\rightarrow$ ON
	• TURN LH: OFF $\rightarrow$ ON
	• Driver door switch: $OFF \rightarrow ON$ , $ON \rightarrow OFF$
	<ul> <li>Passenger door switch: OFF → ON, ON → OFF</li> </ul>
Back door opener switch: $OFF \to ON$	• Rear RH door switch: $OFF \rightarrow ON$ , $ON \rightarrow OFF$
	• Rear LH door switch: OFF $\rightarrow$ ON, ON $\rightarrow$ OFF
	• Back door switch: $OFF \rightarrow ON$ , $ON \rightarrow OFF$
	• Driver door request switch: $OFF \rightarrow ON$
	• Passenger door request switch: $OFF \rightarrow ON$
	• Back door request switch: $OFF \rightarrow ON$
	• Stop lamp switch: ON
	• Door lock and unlock switch: NEUTRAL $\rightarrow$ LOCK, NEUTRAL $\rightarrow$
	Front door lock assembly (driver side) (door key cylinder switch):
	NEUTRAL $\rightarrow$ LOCK, NEUTRAL $\rightarrow$ UNLOCK
	Remote keyless entry receiver communication: Receiving
	<ul> <li>Front door lock assembly (driver side) (unlock sensor): OFF → ON, ON → OFF</li> </ul>

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# < SYSTEM DESCRIPTION >

# DIAGNOSIS SYSTEM (BCM) COMMON ITEM

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

INFOID:000000011324308

# APPLICATION ITEM

CONSULT 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.
Data Monitor	The BCM input/output signals are displayed.
Active Test	The signals used to activate each device are forcibly supplied from BCM.
Ecu Identification	The BCM part number is displayed.
Configuration	<ul><li>Read and save the vehicle specification.</li><li>Write the vehicle specification when replacing BCM.</li></ul>

### SYSTEM APPLICATION

BCM can perform the following functions for each system. **NOTE:** 

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

Curata m	Out and a strategy is the strategy it and	Diagnosis mode		
System	Sub system selection item	Work Support	Data Monitor	Active Test
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp control system	INT LAMP	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
Air conditioning control system	AIR CONDITONER		×	×*
<ul><li>Intelligent Key system</li><li>Engine start system</li></ul>	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
NVIS	IMMU	×	×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door open	TRUNK		×	
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	AIR PRESSURE MONITOR	×	×	×

### NOTE:

\*: For models with automatic air conditioning control system, this diagnosis mode is not used.

# FREEZE FRAME DATA (FFD)

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

# **BCS-16**

### < 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 OFF (LOCK)]	
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode [Power supply position is OFF (OFF)]	
	LOCK>ACC		While turning power supply position from OFF (LOCK) to ACC	
	ACC>ON		While turning power supply position from ACC to ON	
	RUN>ACC		While turning power supply position from RUN to ACC (Except emergency stop operation)	
	CRANK>RUN		While turning power supply position from CRANK to RUN	
Vehicle Condition	RUN>URGENT	Power position status of the moment a particular DTC is detected*	While turning power supply position from RUN to ACC (Emergency stop operation)	
	ACC>OFF		While turning power supply position from ACC to OFF (OFF)	
	OFF>LOCK		While turning power supply position from OFF (OFF) to OFF (LOCK)	
	OFF>ACC		While turning power supply position from OFF (OFF) to ACC	
	ON>CRANK		While turning power supply position from ON to CRANK	
	OFF>SLEEP		While turning BCM status from normal mode [Power supply posi- tion is OFF (OFF)] to low power consumption mode	
	LOCK>SLEEP		While turning BCM status from normal mode [Power supply posi- tion is OFF (LOCK)] to low power consumption mode	
	LOCK		Power supply position is OFF (LOCK)	
	OFF		Power supply position is OFF (OFF)	
	ACC		Power supply position is ACC	
	ON		Power supply position is ON	
	ENGINE RUN		Power supply position is RUN	
	CRANKING		Power supply position is CRANK	
IGN Counter	0 - 39	<ul> <li>The number is 0 wher</li> <li>The number increases whenever ignition swit</li> </ul>	t ignition switch is turned ON after DTC is detected a malfunction is detected now. If like $1 \rightarrow 2 \rightarrow 338 \rightarrow 39$ after returning to the normal condition inch OFF $\rightarrow$ ON.	

NOTE:

- \*: Refer to the following for details of the power supply position.
- OFF (OFF, LOCK): Ignition switch OFF
- ACC: Ignition switch ACC
- IGN: Ignition switch ON with engine stopped
- RUN: Ignition switch ON with engine running
- CRANK: At engine cranking

Power supply position shifts to "OFF (LOCK)" from "OFF (OFF)", when ignition switch is in the OFF position, shift position is in the P position, and any of the following conditions are met.

- Closing door
- Opening door
- Door is locked using door request switch
- Door is locked using Intelligent Key

The power supply position shifts to "ACC" when the push-button ignition switch (push switch) is pushed at "OFF (LOCK)".

DOOR LOCK

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< SYSTEM DESCRIPTION >

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

### BCM CONSULT FUNCTION

CONSULT performs the following functions via CAN communication with BCM. WORK SUPPORT

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

# DATA MONITOR

### NOTE:

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

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

### ACTIVE TEST

### < SYSTEM DESCRIPTION >

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 LOCK" on CONSULT screen is touched</li> <li>The all door lock actuators are unlocked when "ALL UNLK" on CONSULT screen is touched</li> <li>The front door lock actuator (driver side) is unlocked when "DR UNLK" on CONSULT screen is touched</li> <li>The front door lock actuator (passenger side) is unlocked when "AS UNLK" on CONSULT screen is touched</li> <li>The door lock actuator (other) is unlocked when "OTR ULK" on CONSULT screen is touched</li> </ul>

# REAR WINDOW DEFOGGER

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

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INFOID:000000011561500

### DATA MONITOR

### NOTE:

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

Monitor Item	Description	-
REAR DEF SW	Displays "Press (ON)/other (OFF)" status determined with the rear window defogger switch.	G
PUSH SW	Indicates [ON/OFF] condition of push switch.	_

### ACTIVE TEST

Test Item	Description
REAR DEFOGGER	Rear window defogger operates when ON on CONSULT screen is touched.

# BUZZER

# BUZZER : CONSULT Function (BCM - BUZZER)

# CONSULT APPLICATION ITEMS

Test item	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.		Operation of electrical loads can be checked by sending driving signal to them.	

# DATA MONITOR

# NOTE:

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

### < SYSTEM DESCRIPTION >

Display item [Unit]	Description			
DOOR SW-DR [On/Off]	Status of driver side door switch judged by BCM.			
CDL LOCK SW [On/Off]	Status of door lock unlock switch judged by BCM.			

### ACTIVE TEST

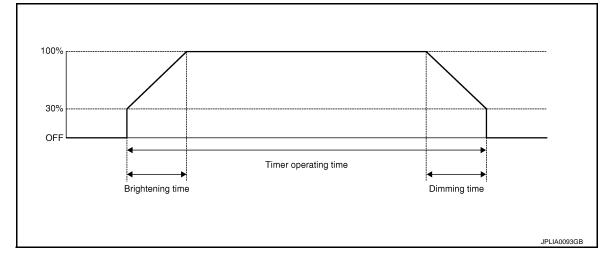
Display item [Unit]	Description
SEAT BELT WARN TEST	The seat belt warning chime operation can be checked by operating the relevant function (On/Off).
ID REGIST WARNING	The ID regist warning chime operation can be checked by operating the relevant function (On/Off).
LIGHT WARN ALM	The light warning chime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

# INT LAMP

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

INFOID:000000011561496

# WORK SUPPORT



Service item	Setting item		Setting
	MODE 2	7.5 sec.	
ROOM LAMP TIMER SET	MODE 3*	15 sec.	Sets the interior room lamp ON time. (Timer operating time)
	MODE 4	30 sec.	
SET I/L D-UNLCK INTCON	On*	With the i	nterior room lamp timer function
SET I/E D-ONECK INTCOM	Off	Without th	ne interior room lamp timer function
	MODE 1	0.5 sec.	
	MODE 2*	1 sec.	
ROOM LAMP ON TIME SET	MODE 3	2 sec.	Sets the interior room lamp gradual brightening time.
	MODE 4	3 sec.	
	MODE 5	0 sec.	
	MODE 1	0.5 sec.	
	MODE 2*	1 sec.	
ROOM LAMP OFF TIME SET	MODE 3	2 sec.	Sets the interior room lamp gradual dimming time.
	MODE 4	3 sec.	
	MODE 5	0 sec.	

### < SYSTEM DESCRIPTION >

Service item	Setting item	Setting	٨
	MODE 1*	Interior room lamp timer activates with synchronizing all doors.	A
R LAMP TIMER LOGIC SET	MODE 2	Interior room lamp timer activates with synchronizing the driver door only.	R

\*: Factory setting

### DATA MONITOR

### NOTE:

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

Monitor item [Unit]	Description				
REQ SW-DR [On/Off]	The switch status input from door request switch (driver side)				
REQ SW-AS [On/Off]	The switch status input from door 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				
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 sliding door switch RH				
DOOR SW- RL [On/Off]	The switch status input from sliding door switch LH				
DOOR SW- BK [On/Off]	The switch status input from back door switch				
CDL LOCK SW [On/Off]	Lock switch status input from door lock and unlock switch				
CDL UNLOCK SW [On/Off]	Unlock switch status input from door lock and unlock switch				
TRNK/HAT MNTR [On/Off]	NOTE: The item is indicated, but not monitored				
KEY CYL LK-SW [On/Off]	Lock switch status received from door key cylinder switch				
KEY CYL UN-SW [On/Off]	Unlock switch status received from door key cylinder 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

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### < SYSTEM DESCRIPTION >

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

# HEADLAMP

# HEADLAMP : CONSULT Function (BCM - HEADLAMP) (Xenon Type Headlamp)

INFOID:000000011561492

### WORK SUPPORT

Service item	Setting item	Setting			
	MODE 1* <sup>3</sup>	Normal			
CUSTOM A/LIGHT SET- TING* <sup>1</sup>	MODE 2	More sensitive setting than normal setting (Turns ON earlier than normal opera- tion)			
TING	MODE 3	More sensitive setting than MODE 2 (Turns ON earlier than MODE 2)			
	MODE 4	Less sensitiv	e setting than normal setting (Turns ON later than normal operation.)		
BATTERY SAVER SET	On* <sup>3</sup>	With the exte	With the exterior lamp battery saver function		
DATTERT SAVER SET	Off	Without the e	exterior lamp battery saver function		
	MODE 1* <sup>3</sup>	45 sec.			
	MODE 2	Without the function			
	MODE 3	30 sec.			
ILL DELAY SET* <sup>1</sup>	MODE 4	60 sec.	Sets delay timer function timer operation time. (All doors closed)		
	MODE 5	90 sec.			
	MODE 6	120 sec.			
	MODE 7	150 sec.			
	MODE 8	180 sec.			
	MODE 1* <sup>3</sup>	With twilight ON custom & with wiper INT, LO and HI			
	MODE 2	With twilight ON custom & with wiper LO and HI			
AUTO LIGHT LOGIC SET*2	MODE 3	With twilight ON custom & without			
AUTO LIGHT LOGIC SET	MODE 4	Without twilight ON custom & with wiper INT, LO and HI			
	MODE 5	Without twilight ON custom & with wiper LO and HI			
	MODE 6	Without twilight ON custom & without			

\*<sup>1</sup>: For models without auto light system, this item is displayed but is not operated.

\*<sup>2</sup>: For models without auto light system and all models for Canada, this item is displayed but is not operated.

\*<sup>3</sup>: Factory setting

# DATA MONITOR **NOTE**:

# < SYSTEM DESCRIPTION >

Monitor item [Unit]	Description
PUSH SW [On/Off]	The switch status input from push-button ignition switch
ENGINE STATE [Stop/Stall/Crank/Run]	The engine status received from ECM with CAN communication
VEH SPEED 1 [km/h]	The value of the vehicle speed received from combination meter via CAN communication
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* <sup>1</sup> [On/Off]	
FR FOG SW <sup>*2</sup> [On/Off]	
DOOR SW-DR [On/Off]	The switch status input from front door switch (driver side)
DOOR SW-AS [On/Off]	The switch status input from front door switch (passenger side)
DOOR SW-RR [On/Off]	The switch status input from sliding door switch RH
DOOR SW- RL [On/Off]	The switch status input from sliding door switch LH
DOOR SW-BK [On/Off]	The switch status input from back door switch
OPTICAL SENSOR [On/Off/NG]	NOTE: This item is indicated, but can not monitored
OPTI SEN (DTCT)* <sup>1</sup> [V]	The value of outside brightness voltage input from the optical sensor
OPTI SEN (FILT)* <sup>1</sup> [V]	The value of outside brightness voltage filtered by BCM

\*<sup>1</sup>: For models without auto light system, this item is not displayed.
\*<sup>2</sup>: For models without front fog lamp, this item is displayed but is not monitored.

### ACTIVE TEST

Test item	Operation	Description
TAIL LAMP	On	Transmits the position light request signal to IPDM E/R via CAN commu- nication to turn the tail lamp ON
	Off	Stops the tail lamp request signal transmission

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### < SYSTEM DESCRIPTION >

Test item	Operation	Description	
	Hi	Transmits the high beam request signal via CAN communication to turn the headlamp (HI)	
HEAD LAMP	Lo	Transmits the low beam request signal via CAN communication to turn the headlamp (LO)	
	Off	Stops the high & low beam request signal transmission	
FR FOG LAMP* <sup>1</sup>	On	Transmits the front fog light request signal to IPDM E/R via CAN commu- nication to turn the front fog lamp ON	
	Off	Stops the front light request signal transmission	
DAYTIME RUNNING LIGHT*2	On	Transmits the daytime running light request signal via CAN communica- tion to IPDM E/R	
	Off	Stop the daytime running light request signal transmission	
ILL DIM SIGNAL	On	<ul> <li>Transmits the dimmer signal to combination meter via CAN communication and dims combination meter*<sup>3</sup></li> <li>Transmits the dimmer signal to AV control unit and dims display</li> </ul>	
	Off	Stops the dimmer signal transmission	

\*1: For models without front fog lamp, this item is displayed but is not tested.
\*2: For models without daytime running light system, this item is not displayed.

\*<sup>3</sup>: Except for CANADA

# HEADLAMP : CONSULT Function (BCM - HEADLAMP) (Halogen Type Headlamp)

INFOID:000000011561493

# WORK SUPPORT

Service item	Setting item	Setting		
	MODE 1* <sup>3</sup>	Normal		
CUSTOM A/LIGHT SET- TING* <sup>1</sup>	MODE 2	More sensitive setting than normal setting (Turns ON earlier than normal operation)		
TING	MODE 3	More sensitive setting than MODE 2 (Turns ON earlier than MODE 2)		
	MODE 4	Less sensitiv	e setting than normal setting (Turns ON later than normal operation.)	
BATTERY SAVER SET	On* <sup>3</sup>	With the exte	rior lamp battery saver function	
BATTERT GAWER GET	Off	Without the e	exterior lamp battery saver function	
	MODE 1* <sup>3</sup>	45 sec.		
	MODE 2	Without the function		
	MODE 3	30 sec.		
ILL DELAY SET*1	MODE 4	60 sec.	Sets delay timer function timer operation time. (All doors closed)	
	MODE 5	90 sec.		
	MODE 6	120 sec.		
	MODE 7	150 sec.		
	MODE 8	180 sec.		
	MODE 1* <sup>3</sup>	With twilight ON custom & with wiper INT, LO and HI		
	MODE 2	With twilight ON custom & with wiper LO and HI		
AUTO LIGHT LOGIC SET*2	MODE 3	With twilight ON custom & without		
AUTO LIGHT LUGIC SET	MODE 4	Without twilight ON custom & with wiper INT, LO and HI		
	MODE 5	Without twilight ON custom & with wiper LO and HI		
	MODE 6	Without twilight ON custom & without		

\*<sup>1</sup>: For models without auto light system, this item is displayed but is not operated.

### < SYSTEM DESCRIPTION >

\*<sup>2</sup>: For models without auto light system and all models for Canada, this item is displayed but is not operated. \*<sup>3</sup>: Factory setting

# DATA MONITOR

# NOTE:

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

Monitor item [Unit]	Description	
PUSH SW [On/Off]	The switch status input from push-button ignition switch	
ENGINE STATE [Stop/Stall/Crank/Run]	The engine status received from ECM with CAN communication	
VEH SPEED 1 [km/h]	The value of the vehicle speed received from combination meter via CAN communication	
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* <sup>1</sup> [On/Off]		
FR FOG SW <sup>*2</sup> [On/Off]		
DOOR SW-DR [On/Off]	The switch status input from front door switch (driver side)	
DOOR SW-AS [On/Off]	The switch status input from front door switch (passenger side)	
DOOR SW-RR [On/Off]	The switch status input from sliding door switch RH	
DOOR SW- RL [On/Off]	The switch status input from sliding door switch LH	
DOOR SW-BK [On/Off]	The switch status input from back door switch	
OPTICAL SENSOR [On/Off/NG]	NOTE: This item is indicated, but can not monitored	
OPTI SEN (DTCT)* <sup>1</sup> [V]	The value of outside brightness voltage input from the optical sensor	
OPTI SEN (FILT)* <sup>1</sup> [V]	The value of outside brightness voltage filtered by BCM	

\*<sup>1</sup>: For models without auto light system, this item is not displayed.

\*<sup>2</sup>: For models without front fog lamp, this item is displayed but is not monitored.

ACTIVE TEST

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### < SYSTEM DESCRIPTION >

Test item	Operation	Description	
TAIL LAMP	On	Transmits the position light request signal to IPDM E/R via CAN commu- nication to turn the tail lamp ON	
	Off	Stops the tail lamp request signal transmission	
	Hi	Transmits the high beam request signal via CAN communication to turn the headlamp (HI)	
HEAD LAMP	Lo	Transmits the low beam request signal via CAN communication to turn the headlamp (LO)	
	Off	Stops the high & low beam request signal transmission	
FR FOG LAMP* <sup>1</sup>	On	Transmits the front fog light request signal to IPDM E/R via CAN commu- nication to turn the front fog lamp ON	
	Off	Stops the front light request signal transmission	
DAYTIME RUNNING LIGHT*2	On	Transmits the daytime running light request signal via CAN communication to IPDM $\ensuremath{E/R}$	
	Off	Stop the daytime running light request signal transmission	
ILL DIM SIGNAL	On	<ul> <li>Transmits the dimmer signal to combination meter via CAN communication and dims combination meter*<sup>3</sup></li> <li>Transmits the dimmer signal to AV control unit and dims display</li> </ul>	
	Off	Stops the dimmer signal transmission	

\*<sup>1</sup>: For models without front fog lamp, this item is displayed but is not tested.

\*<sup>2</sup>: For models without daytime running light system, this item is not displayed.

\*<sup>3</sup>: Except for CANADA

# WIPER

# WIPER : CONSULT Function (BCM - WIPER)

INFOID:000000011561498

# WORK SUPPORT

Service item	Setting item	Description	
WIPER SPEED	On	With vehicle speed (Front wiper intermittent time linked with the vehicle speed and wip- er intermittent dial position)	The setting of front wip- er INT operation can be
SETTING	Off*	Without vehicle speed (Front wiper intermittent time linked with the wiper intermittent dial position)	changed

\*: Factory setting

### DATA MONITOR

### NOTE:

Monitor Item [Unit]	Description	
PUSH SW [Off/On]	The switch status input from push-button ignition switch.	
VEH SPEED 1 [km/h]	Displays the value of the vehicle speed signal received from combination meter via CAN com- munication.	

< SYSTEM DESCRIPTION >

Monitor Item [Unit]	Description	
FR WIPER HI [Off/On]		
FR WIPER LOW [Off/On]	Status of each quitch judged by PCM using the combination quitch reading function	
FR WASHER SW [Off/On]	Status of each switch judged by BCM using the combination switch reading function	
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 via CAN communication.	
INT VOLUME [1 – 7]	Status of each switch judged by BCM using the combination switch reading function	
RR WIPER ON [Off/On]		
RR WIPER INT [Off/On]	Status of each switch judged by BCM using the combination switch reading function	
RR WASHER SW [Off/On]		
RR WIPER STOP [Off/On]	Rear wiper motor (stop position) status input from the rear wiper motor	

### ACTIVE TEST

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

# FLASHER

# FLASHER : CONSULT Function (BCM - FLASHER) (Xenon Type Headlamp)

INFOID:000000011561494

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### WORK SUPPORT

Service item	Setting item	Setting		
	Lock Only	With locking only		0
HAZARD ANSWER BACK	Unlk Only	With unlocking only	Sets the hazard warning lamp answer back function when the door is lock/unlock with the request switch or the key fob.	
	Lock&Unlk <sup>*</sup>	With locking/unlocking		
	Off	Without the function		Ρ

\*: Factory setting

# DATA MONITOR

### NOTE:

### < SYSTEM DESCRIPTION >

Monitor item [Unit]	Description	
REQ SW-DR [On/Off]	The switch status input from the request switch (driver side)	
REQ SW-AS [On/Off]	The switch status input from the request switch (passenger side)	
PUSH SW [On/Off]	The switch status input from the push-button ignition switch	
TURN SIGNAL R [On/Off]	Each quitch status that DOM data at from the combination quitch reading function	
TURN SIGNAL L [On/Off]	Each switch status that BCM detects from the combination switch reading function	
HAZARD SW [On/Off]	The switch status input from the hazard switch	
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 turn on the right side turn signal lamps.
FLASHER	LH	Outputs the voltage to turn on the left side turn signal lamps.
	Off	Stops the voltage to turn the turn signal lamps OFF.

# FLASHER : CONSULT Function (BCM - FLASHER) (Halagen Type Headlamp)

INFOID:000000011561495

### WORK SUPPORT

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

\*: Factory setting

# DATA MONITOR

# NOTE:

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]	Each switch status that BCM detects from the combination switch reading function	
TURN SIGNAL L [On/Off]		
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	F
	RH	Outputs the voltage to turn on the right side turn signal lamps.	_
FLASHER	LH	Outputs the voltage to blink turn on left side turn signal lamps.	G
	Off	Stops the voltage to turn the turn signal lamps OFF.	

# AIR CONDITIONER

AIR CONDITIONER : CONSULT Function (BCM - AIR CONDITIONER) (Auto A/C)

INFOID:000000011561481

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# DATA MONITOR

### NOTE:

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

**Display Item List** 

Monitor Iter	m [Unit]	Contents	K
FAN ON SIG	[On/Off]	Displays the status of blower fan ON signal received from A/C auto amp.	
AIR COND SW	[On/Off]	Displays the status of A/C ON signal received from A/C auto amp.	
			L

# AIR CONDITIONER : CONSULT Function (BCM - AIR CONDITIONER) (Manual A/C)

### DATA MONITOR

### NOTE:

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

**Display Item List** 

			_
FAN ON SIG	On/Off]	Displays the status of blower fan ON signal received from A/C amp.	0
AIR COND SW [9	On/Off]	Displays the status of A/C ON signal received from A/C amp.	

# INTELLIGENT KEY

INTELLIGENT KEY : CONSULT Function (BCM - INTELLIGENT KEY)

INFOID:000000011561485

# WORK SUPPORT

### < SYSTEM DESCRIPTION >

Monitor item Description		
INSIDE ANT DIAGNOSIS	This function allows inside key antenna self-diagnosis	
LOCK/UNLOCK BY I-KEY	Door lock/unlock function by door request switch mode can be changed to operation in this mode <ul> <li>On: Operate</li> <li>Off: Non-operation</li> </ul>	
ENGINE START BY I-KEY	<ul><li>Engine start function mode can be changed to operation with this mode</li><li>On: Operate</li><li>Off: Non-operation</li></ul>	
TRUNK/GLASS HATCH OPEN	NOTE: This item is displayed, but cannot be used	
PANIC ALARM SET	<ul> <li>Panic alarm button pressing time on Intelligent Key button can be selected from the following with this mode</li> <li>MODE 1: 0.5 sec</li> <li>MODE 2: Non-operation</li> <li>MODE 3: 1.5 sec</li> </ul>	
TRUNK OPEN DELAY	NOTE: This item is displayed, but cannot be used	
LO- BATT OF KEY FOB WARN	<ul><li>Intelligent Key low battery warning mode can be changed to operation with this mode</li><li>On: Operate</li><li>Off: Non-operation</li></ul>	
ANTI KEY LOCK IN FUNCTI	<ul><li>Key reminder function mode can be changed to operation with this mode</li><li>On: Operate</li><li>Off: Non-operation</li></ul>	
HAZARD ANSWER BACK	<ul> <li>Hazard reminder function mode by door request switch and Intelligent Key button can be selected from the following with this mode</li> <li>Lock Only: Door lock operation only</li> <li>Unlock Only: Door unlock operation only</li> <li>Lock/Unlock: Lock and unlock operation</li> <li>Off: Non-operation</li> </ul>	
ANS BACK I-KEY LOCK	<ul> <li>Buzzer reminder function (lock operation) mode by door request switch can be selected from the following with this mode</li> <li>Horn Chirp: Sound horn</li> <li>Buzzer: Sound Intelligent Key warning buzzer</li> <li>Off: Non-operation</li> </ul>	
ANS BACK I-KEY UNLOCK	<ul> <li>Buzzer reminder function (unlock operation) mode by door request switch can be changed to operation with this mode</li> <li>On: Operate</li> <li>Off: Non-operation</li> </ul>	
SHORT CRANKING OUTPUT	Starter motor can operate during the times below • 70 msec • 100 msec • 200 msec	
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 operation time can be changed in this mode  MODE 1: OFF MODE 2: 30 sec MODE 3: 1 minute MODE 4: 2 minutes MODE 5: 3 minutes MODE 6: 4 minutes MODE 7: 5 minutes	

### < SYSTEM DESCRIPTION >

Monitor item	Description	
HORN WITH KEYLESS LOCK	<ul> <li>Horn reminder function mode by Intelligent Key button can be selected from the following with this mode</li> <li>On: Operate</li> <li>Off: Non-operation</li> </ul>	AB
PW DOWN SET	<ul> <li>Unlock button pressing time on Intelligent Key button can be selected from the following with this mode</li> <li>MODE 1: 3 sec</li> <li>MODE 2: Non-operation</li> <li>MODE 3: 5 sec</li> </ul>	С

# SELF-DIAG RESULT

Refer to <u>BCS-63, "DTC Index"</u>.

# DATA MONITOR

### NOTE:

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

Monitor Item	Condition	
REQ SW -DR	Indicates [On/Off] condition of door request switch (driver side)	
REQ SW -AS	Indicates [On/Off] condition of door request switch (passenger side)	
REQ SW -BD/TR	Indicates [On/Off] condition of back door request switch	
PUSH SW	Indicates [On/Off] condition of push-button ignition switch	
CLUTCH SW	NOTE: This item is displayed, but cannot be monitored	
BRAKE SW 1	Indicates [On/Off]* condition of stop lamp switch power supply	
BRAKE SW 2	Indicates [On/Off] condition of stop lamp 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	NOTE: This item is displayed, but cannot be monitored	
S/L -UNLOCK	NOTE: This item is displayed, but cannot be monitored	
S/L RELAY -F/B	NOTE: This item is displayed, but cannot be monitored	
UNLK SEN -DR	Indicates [On/Off] condition of driver door UNLOCK status	
PUSH SW -IPDM	Indicates [On/Off] condition of push-button ignition switch	
GN RLY1 -F/B	Indicates [On/Off] condition of ignition relay 1	
DETE SW -IPDM	Indicates [On/Off] condition of P position	
SFT PN -IPDM	Indicates [On/Off] condition of P or N position	
SFT P -MET	Indicates [On/Off] condition of P position	
SFT N -MET	Indicates [On/Off] condition of N position	
ENGINE STATE	Indicates [Stop/Stall/Crank/Run] condition of engine states	
S/L LOCK-IPDM	NOTE: This item is displayed, but cannot be monitored	
S/L UNLK-IPDM	NOTE: This item is displayed, but cannot be monitored	
S/L RELAY-REQ	NOTE: This item is displayed, but cannot be monitored	
VEH SPEED 1	Display the vehicle speed signal received from combination meter by numerical value [km/h]	
VEH SPEED 2	Display the vehicle speed signal received from ABS or VDC or TCM by numerical value [km/h]	
DOOR STAT-DR	Indicates [LOCK/READY/UNLK] condition of unlock sensor	

Revision: 2014 August

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# < SYSTEM DESCRIPTION >

Monitor Item	Condition
DOOR STAT-AS	Indicates [LOCK/READY/UNLK] condition of passenger side door status
ID OK FLAG	Indicates [Set/Reset] condition of key ID
PRMT ENG STRT	Indicates [Set/Reset] condition of engine start possibility
PRMT RKE STRT	NOTE: This item is displayed, but cannot be monitored
TRNK/HAT MNTR	NOTE: This item is displayed, but cannot be monitored
RKE-LOCK	Indicates [On/Off] condition of LOCK signal from Intelligent Key
RKE-UNLOCK	Indicates [On/Off] condition of UNLOCK signal from Intelligent Key
RKE-TR/BD	NOTE: This item is displayed, but cannot be monitored
RKE-PANIC	Indicates [On/Off] condition of PANIC button of Intelligent Key
RKE-MODE CHG	Indicates [On/Off] condition of MODE CHANGE signal from Intelligent Key
RKE OPE COUN1	When remote keyless entry receiver receives the signal transmitted while operating on Intelli- gent Key, the numerical value start changing
RKE OPE COUN2	NOTE: This item is displayed, but cannot be monitored

\*: OFF is displayed when brake pedal is depressed while brake switch power supply is OFF.

# ACTIVE TEST

Test item	Description	
BATTERY SAVER	<ul><li>This test is able to check interior room lamp operation</li><li>On: Operate</li><li>Off: Non-operation</li></ul>	
OUTSIDE BUZZER	<ul><li>This test is able to check Intelligent Key warning buzzer operation</li><li>On: Operate</li><li>Off: Non-operation</li></ul>	
INSIDE BUZZER	<ul> <li>This test is able to check warning chime in combination meter operation</li> <li>Take Out: Take away warning chime sounds when CONSULT screen is touched</li> <li>Key: Key warning chime sounds when CONSULT screen is touched</li> <li>Knob: OFF position warning chime sounds when CONSULT screen is touched</li> <li>Off: Non-operation</li> </ul>	
INDICATOR	<ul> <li>This test is able to check warning lamp operation</li> <li>KEY ON: "KEY" Warning lamp illuminates when CONSULT screen is touched</li> <li>KEY IND: "KEY" Warning lamp blinks when CONSULT screen is touched</li> <li>Off: Non-operation</li> </ul>	
INT LAMP	<ul><li>This test is able to check interior room lamp operation</li><li>On: Operate</li><li>Off: Non-operation</li></ul>	
LCD	<ul> <li>This test is able to check meter display information</li> <li>Engine start information displays when "BP N" on CONSULT screen is touched</li> <li>Engine start information displays when "BP I" on CONSULT screen is touched</li> <li>Key ID warning displays when "ID NG" on CONSULT screen is touched</li> <li>ROTAT: This item is displayed, but cannot be used.</li> <li>P position warning displays when "SFT P" on CONSULT screen is touched</li> <li>INSRT: This item is displayed, but cannot be monitored</li> <li>BATT: This item is displayed, but cannot be monitored</li> <li>Take away through window warning displays when "NO KY" on CONSULT screen is touched</li> <li>Take away warning display when "OUTKEY" on CONSULT screen is touched</li> <li>OFF position warning display when "LK WN" on CONSULT screen is touched</li> </ul>	
FLASHER	<ul> <li>This test is able to check hazard warning lamp operation</li> <li>LH: LH side hazard warning lamps operate</li> <li>RH: RH side hazard warning lamps operate</li> <li>Off: Non-operation</li> </ul>	

### < SYSTEM DESCRIPTION >

Test item	Description	
P RANGE	<ul><li>This test is able to check CVT shift selector power supply</li><li>On: Operate</li><li>Off: Non-operation</li></ul>	
ENGINE SW ILLUMI	<ul><li>This test is able to check push-button ignition switch illumination operation</li><li>On: Operate</li><li>Off: Non-operation</li></ul>	
LOCK INDICATOR	<ul><li>This test is able to check LOCK indicator (push-button ignition switch) operation</li><li>On: Operate</li><li>Off: Non-operation</li></ul>	
ACC INDICATOR	<ul><li>This test is able to check ACC indicator (push-button ignition switch) operation</li><li>On: Operate</li><li>Off: Non-operation</li></ul>	
IGNITION ON IND	<ul><li>This test is able to check ON indicator (push-button ignition switch) operation</li><li>On: Operate</li><li>Off: Non-operation</li></ul>	
HORN	<ul><li>This test is able to check horn operation</li><li>On: Operate</li><li>Off: Non-operation</li></ul>	
TRUNK/BACK DOOR	NOTE: This item is displayed, but cannot be used	
POWER SLIDE DOOR	<ul><li>This test is able to check automatic siding door operation</li><li>RR PSD ON: Auto open/close operate</li><li>RL PSD ON: Auto open/close operate</li></ul>	

# COMB SW

COMB SW : CONSULT Function	(BCM - COMB SW)
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INFOID:000000011324321

# DATA MONITOR

### NOTE:

Monitor item [UNIT]	Description	Κ
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.	L
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.	BC
FR WIPER INT [Off/On]	Displays the status of the FR WIPER INT switch in combination switch judged by BCM with the combination switch reading function.	
INT VOLUME [1 - 7]	Displays the status of wiper intermittent dial position judged by BCM with the combination switch reading function.	Ν
RR WIPER ON [Off/On]	Displays the status of the RR WIPER ON switch in combination switch judged by BCM with the combination switch reading function.	0
RR WIPER INT [Off/On]	Displays the status of the RR WIPER INT switch in combination switch judged by BCM with the combination switch reading function.	
RR WASHER SW [Off/On]	Displays the status of the RR WASHER switch in combination switch judged by BCM with the combination switch reading function.	Ρ
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.	

### < SYSTEM DESCRIPTION >

Monitor item [UNIT]	Description
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.

# BCM

# BCM : CONSULT Function (BCM - BCM)

### WORK SUPPORT

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

# IMMU

# IMMU : CONSULT Function (BCM - IMMU)

WORK SUPPORT

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

# DATA MONITOR

### NOTE:

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

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

INFOID:000000011324322

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### < SYSTEM DESCRIPTION >

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

# **BATTERY SAVER**

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

### WORK SUPPORT

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Service item	Setting item		Setting	C
	MODE 1	30 min.	Sets the interior room lamp battery saver timer operating	
	MODE 2	60 min.	time. NOTE:	_
ROOM LAMP TIMER SET	MODE 3	15 min.	The factor setting is 10 minutes. The setting cannot be re- turned to the factory setting, when the setting is changed once.	E
BATTERY SAVER SET	On <sup>*</sup>	With the e	exterior lamp battery saver function	F
	Off	Without th	ne exterior lamp battery saver function	

\*:Factory setting

### DATA MONITOR

### NOTE:

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

Monitor item [Unit]	Description			
REQ SW-DR [On/Off]	The switch status input from door request switch (driver side)			
REQ SW-AS [On/Off]	The switch status input from door 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			
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 sliding door switch RH			
DOOR SW- RL [On/Off]	The switch status input from sliding door switch LH			
DOOR SW- BK [On/Off]	The switch status input from back door switch			
CDL LOCK SW [On/Off]	Lock switch status input from door lock and unlock switch			
CDL UNLOCK SW [On/Off]	Unlock switch status input from door lock and unlock switch			

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INFOID:000000011561497

### < SYSTEM DESCRIPTION >

Monitor item [Unit]	Description
TRNK/HAT MNTR [On/Off]	NOTE: The item is indicated, but not monitored
KEY CYL LK-SW [On/Off]	Lock switch status received from door key cylinder switch
KEY CYL UN-SW [On/Off]	Unlock switch status received from door key cylinder 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 lamps OFF.
DATTERT SAVER	On	Outputs the interior room lamp power supply to turn interior room lamps ON.*

\*: Each lamp switch is in ON position.

### TRUNK

# TRUNK : CONSULT Function (BCM - TRUNK)

INFOID:000000011561486

# DATA MONITOR

### NOTE:

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

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

# THEFT ALM

# THEFT ALM : CONSULT Function (BCM - THEFT)

INFOID:0000000011561487

### WORK SUPPORT

Service 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 screen.

# DATA MONITOR

### NOTE:

## **DIAGNOSIS SYSTEM (BCM)**

#### < SYSTEM DESCRIPTION >

Monitored Item	Description	
REQ SW -DR	Indicates [ON/OFF] condition of door request switch (driver side).	
REQ SW -AS	Indicates [ON/OFF] condition of door request switch (passenger side).	
REQ SW -RR	NOTE: This is displayed even when it is not equipped.	
REQ SW -RL	NOTE: This is displayed even when it is not equipped.	
REQ SW -BD/TR	Indicates [ON/OFF] condition of back door request switch.	
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch	
UNLK SEN -DR	Indicates [ON/OFF] condition of driver door UNLOCK status.	
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch (driver side).	
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch (passenger side).	
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.	
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.	
DOOR SW-BK	Indicates [ON/OFF] condition of back door switch.	
CDL LOCK SW	Indicates [ON/OFF] condition of lock signal from door lock/unlock switch.	
CDL UNLOCK SW	Indicates [ON/OFF] condition of unlock signal from door lock/unlock switch.	
KEY CYL LK-SW	Indicates [ON/OFF] condition of lock signal from door key cylinder.	
KEY CYL UN-SW	Indicates [ON/OFF] condition of unlock signal from door key cylinder.	
TR/BD OPEN SW	Indicates [ON/OFF] condition of back door opener switch.	
TRNK/HAT MNTR	NOTE: This is displayed even when it is not equipped.	
RKE-LOCK	Indicates [ON/OFF] condition of LOCK signal from Intelligent Key.	
RKE-UNLOCK	Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key.	
RKE-TR/BD	NOTE: This is displayed even when it is not equipped.	

## ACTIVE TEST

Test Item	Description	
THEFT IND	This test is able to check security indicator lamp operation. Security indicator lamp is turned on when "ON" on CONSULT screen is touched.	
VEHICLE SECURITY HORN	This test is able to check horns operation. Horns are activated for 0.5 seconds after "ON" on CONSULT screen is touched.	
HEADLAMP(HI)	This test is able to check headlamp operation. Headlamps are activated for 0.5 seconds after "ON" on CONSULT screen is touched.	B
FLASHER	This test is able to check hazard warning lamp operation. Hazard warning lamps are activated after "ON" on CONSULT screen is touched.	

## **RETAIND PWR**

## RETAIND PWR : CONSULT Function (BCM - RETAINED PWR) (Front Window Antipinch)

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## DATA MONITOR **NOTE**:

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

## **DIAGNOSIS SYSTEM (BCM)**

#### < SYSTEM DESCRIPTION >

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

## RETAIND PWR : CONSULT Function (BCM - RETAINED PWR) (Driver Side Window Anti-pinch)

INFOID:0000000011561490

#### DATA MONITOR

#### NOTE:

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

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

### SIGNAL BUFFER

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

INFOID:000000011324329

#### DATA MONITOR

#### NOTE:

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

Monitor item [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 combination meter via CAN communica- tion, which illuminates the oil pressure warning lamp in the combination meter.

## AIR PRESSURE MONITOR

#### AIR PRESSURE MONITOR : CONSULT Function (BCM - AIR PRESSURE MONI-TOR) INFOID:000000011561480

### **APPLICATION ITEM**

CONSULT performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
Self Diagnostic Result	Retrieve DTC from ECU and display diagnostic items.
Data Monitor	Monitor the input/output signal of the control unit in real time.
Active Test	Send the drive signal from CONSULT to the actuator. The operation check can be performed.
Work Support	This mode enables a technician to adjust some devices faster and more accurately.

## SELF DIAGNOSTIC RESULT Refer to BCS-63, "DTC Index".

DATA MONITOR MODE NOTE:

Revision: 2014 August

## **DIAGNOSIS SYSTEM (BCM)**

#### < SYSTEM DESCRIPTION >

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

Monitor item (Unit)	Remarks	
AIR PRESS FL (kPa kg/cm2 or Psi)		E
AIR PRESS FR (kPa, kg/cm2 or Psi)		(
AIR PRESS RR (kPa, kg/cm2 or Psi)	Tire pressure	
AIR PRESS RL (kPa, kg/cm2 or Psi)		Ε
ID REGST FL1 (Yet, Done)		E
ID REGST FR1 (Yet, Done)		L
ID REGST RR1 (Yet, Done)	Registration ID	F
ID REGST RL1 (Yet, Done)		(
WARNING LAMP (On/Off)	Low tire pressure warning lamp	(
BUZZER (On/Off)	<b>NOTE:</b> This item is displayed, but cannot be use this item.	ŀ

#### ACTIVE TEST MODE

#### NOTE:

After completing the work below, perform an active test.

- 1. Check ID registration state and perform self-diagnosis.
- 2. Erase the self-diagnosis result history.

Item	Description	
WARNING LAMP	Low tire pressure warning lamp can be turned ON arbitrarily.	K
ID REGIST WARNING	NOTE: Displayed but not used in TPMS.	
RUN FLAT TIRE W/L	NOTE: Displayed but not used in TPMS.	L
RUN FLAT/T WARN BUZZER	NOTE: Displayed but not used in TPMS.	BCS
FLASHER	Turn signal lamps can be turned ON arbitrarily.	
HORN	This test is able to check to check that the horn sounds.	

#### WORK SUPPORT

Item	Description	$\circ$
ID READ	Registered tire pressure sensor ID can be displayed.	0
ID REGIST	Tire pressure sensor ID can be registered.	

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## ECU DIAGNOSIS INFORMATION BCM

## Reference Value

INFOID:000000011324331

#### VALUES ON THE DIAGNOSIS TOOL

#### NOTE:

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

#### CONSULT MONITOR ITEM

Monitor Item	Condition	Value/Status
	Other than front wiper switch HI	Off
TR WIPER HI   TR WIPER LOW   TR WIPER LOW   TR WIPER INT   TR WIPER STOP   TVOLUME   RR WIPER ON   RR WIPER INT   RR WIPER STOP   TURN SIGNAL R   TURN SIGNAL L   TURN SIGNAL L   TURN SIGNAL L   TAIL LAMP SW   HI BEAM SW   HEAD LAMP SW 1   HEAD LAMP SW 2	Front wiper switch HI	On
	Other than front wiper switch LO	Off
FR WIPER LOW	Front wiper switch LO	On
	Front washer switch OFF	Off
FR WASHER SW	Front washer switch ON	On
	Other than front wiper switch INT	Off
	Front wiper switch INT	On
	Front wiper is not in STOP position	Off
FR WIFER STOP	Front wiper is in STOP position	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	Wiper intermittent dial position
	Other than rear wiper switch ON	Off
	Rear wiper switch ON	On
RR WIPER INT	Other than rear wiper switch INT	Off
	Rear wiper switch INT	On
	Rear washer switch OFF	Off
RR WASHER SW	Rear washer switch ON	On
	Rear wiper is in STOP position	Off
RR WIPER STOP	Rear wiper is not in STOP position	On
	Other than turn signal switch RH	Off
TURN SIGNAL R	Turn signal switch RH	On
	Other than turn signal switch LH	Off
TORN SIGNAL L	Turn signal switch LH	On
	Other than lighting switch 1ST and 2ND	Off
TAIL LAWF SW	Lighting switch 1ST or 2ND	On
	Other than lighting switch HI	Off
TI DEAN SW	Lighting switch HI	On
	Other than lighting switch 2ND	Off
HEAD LAMP SW 1	Lighting switch 2ND	On
	Other than lighting switch 2ND	Off
	Lighting switch 2ND	On
	Other than lighting switch PASS	Off
PASSING SW	Lighting switch PASS	On
	Other than lighting switch AUTO	Off
AUTO LIGHT SW	Lighting switch AUTO	On

Monitor Item	Condition	Value/Status	
FR FOG SW	Front fog lamp switch OFF	Off	_
FR FUG SW	Front fog lamp switch ON	On	_
DOOR SW-DR	Driver door closed	Off	_
DOOR 3W-DR	Driver door opened	On	
DOOR SW-AS	Passenger door closed	Off	
	Passenger door opened	On	
	Sliding door RH closed	Off	
DOOR SW-RR	Sliding door RH opened	On	
	Sliding door LH closed	Off	_
DOOR SW-RL	Sliding door LH opened	On	
DOOR SW-BK CDL LOCK SW	Back door closed	Off	
	Back door opened	On	
	Other than power door lock switch LOCK	Off	
	Power door lock switch LOCK	On	_
CDL UNLOCK SW KEY CYL LK-SW	Other than power door lock switch UNLOCK	Off	_
	Power door lock switch UNLOCK	On	
	Other than driver door key cylinder LOCK position	Off	
	Driver door key cylinder LOCK position	On	
KEY CYL UN-SW	Other than driver door key cylinder UNLOCK position	Off	
	Driver door key cylinder UNLOCK position	On	
HAZARD SW	Hazard switch is OFF	Off	
	Hazard switch is ON	On	
REAR DEF SW	Rear window defogger switch OFF	Off	
	Rear window defogger switch ON	On	
TR/BD OPEN SW	Back door opener switch OFF	Off	
	While the back door opener switch is turned ON	On	
TRNK/HAT MNTR	NOTE: The item is indicated, but not monitored.	Off	
	Blower fan OFF	Off	
FAN ON SIG	Blower fan ON	On	
	Air conditioner OFF (A/C switch indicator OFF) (Automatic A/C)     A/C switch OFF (Manual A/C)	Off	
AIR COND SW	<ul> <li>Air conditioner ON (A/C switch indicator ON) (Automatic A/C)</li> <li>A/C switch ON (Manual A/C)</li> </ul>	On	_
	LOCK button of the key is not pressed	Off	
RKE-LOCK	LOCK button of the key is pressed	On	-
	UNLOCK button of the key is not pressed	Off	
RKE-UNLOCK	UNLOCK button of the key is pressed	On	
RKE-TR/BD	NOTE: The item is indicated, but not monitored.	Off	
	PANIC button of the key is not pressed	Off	
RKE-PANIC	PANIC button of the key is pressed	On	_
	LOCK/UNLOCK button of the key is not pressed and held simultaneously	Off	_
RKE-MODE CHG	LOCK/UNLOCK button of the key is pressed and held simultaneously	On	—

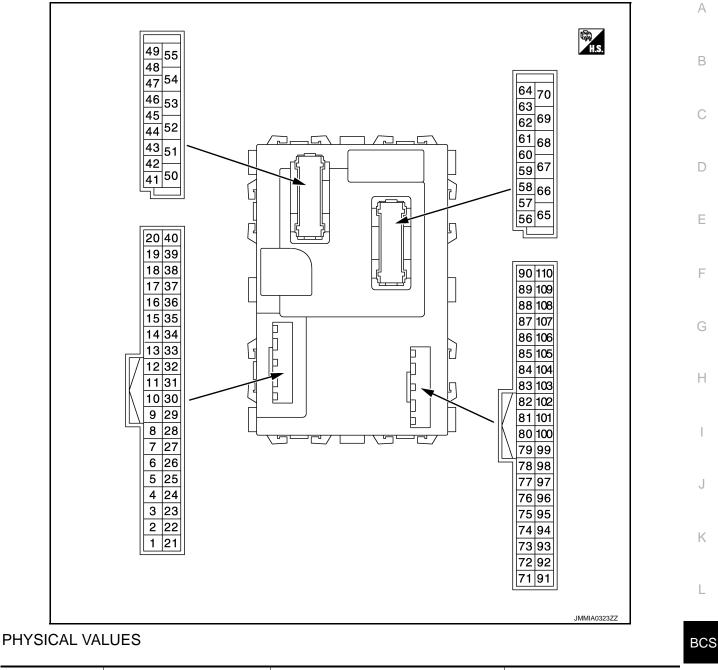
Monitor Item	Condition	Value/Status
	Air bag signal (NORMAL) is detected.	NOMAL
SHOCK SENSOR	Air bag signal (AIR BAG OPEN) is detected.	On
	Air bag signal is not detected.	Off
	Bright outside of the vehicle	Close to 5 V
OPTI SEN (DTCT)	Dark outside of the vehicle	Close to 0 V
	Bright outside of the vehicle (Lighting switch AUTO)	Close to 5 V
OPTI SEN (FILT)	Dark outside of the vehicle (Lighting switch AUTO)	Close to 1.50 V
OPTICAL SENSOR	NOTE: The item is indicated, but not monitored.	Off
RAIN SENSOR	NOTE: The item is indicated, but not monitored.	Off
	Driver door request switch is not pressed	Off
REQ SW -DR	Driver door request switch is pressed	On
	Passenger door request switch is not pressed	Off
REQ SW -AS	Passenger door request switch is pressed	On
REQ SW -RR	NOTE: The item is indicated, but not monitored.	Off
REQ SW -RL	NOTE: The item is indicated, but not monitored.	Off
	Back door request switch is not pressed	Off
REQ SW -BD/TR	Back door request switch is pressed	On
	Push-button ignition switch (push switch) is not pressed	Off
PUSH SW	Push-button ignition switch (push switch) is pressed	On
CLUCH SW	NOTE: The item is indicated, but not monitored.	Off
	The brake pedal is not depressed	Off
BRAKE SW 1	The brake pedal is depressed	On
	The brake pedal is depressed when No. 7 fuse is blown	Off
BRAKE SW 2	The brake pedal is not depressed when No. 7 fuse is blown, or No. 7 fuse is normal	On
	Selector lever in P position	Off
DETE/CANCL SW	Selector lever in any position other than P	On
	Selector lever in any position other than P and N	Off
SFT PN/N SW	Selector lever in P or N position	On
S/L -LOCK	NOTE: The item is indicated, but not monitored.	Off
S/L -UNLOCK	NOTE: The item is indicated, but not monitored.	Off
S/L RELAY-F/B	NOTE: The item is indicated, but not monitored.	Off
	Driver door is locked	Off
UNLK SEN -DR	Driver door is unlocked	On
	Push-button ignition switch (push-switch) is not pressed	Off
PUSH SW -IPDM	Push-button ignition switch (push-switch) is pressed	On
	Ignition switch in OFF or ACC position	Off
IGN RLY1 -F/B	Ignition switch in ON position	On

Monitor Item	Condition	Value/Status
DETE SW -IPDM	Selector lever in any position other than P	Off
	Selector lever in P position	On
SFT PN -IPDM	Selector lever in any position other than P and N	Off
	Selector lever in P or N position	On
SFT P -MET	Selector lever in any position other than P	Off
SFT P -WET	Selector lever in P position	On
	Selector lever in any position other than N	Off
SFT N -MET	Selector lever in N position	On
	Engine stopped	Stop
	While the engine stalls	Stall
ENGINE STATE	At engine cranking	Crank
	Engine running	Run
S/L LOCK-IPDM	<b>NOTE:</b> The item is indicated, but not monitored.	Off
S/L UNLK-IPDM	NOTE: The item is indicated, but not monitored.	Off
S/L RELAY-REQ	NOTE: The item is indicated, but not monitored.	Off
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	Driver side door is open after ignition switch is turned OFF (Shift position is in the P position)	Reset
	Ignition switch ON	Set
	The engine start is prohibited	Reset
PRMT ENG STRT	The engine start is permitted	Set
PRMT RKE STRT	NOTE: The item is indicated, but not monitored.	Reset
RKE OPE COUN1	During the operation of the key	Operation frequency of the key
RKE OPE COUN2	<b>NOTE:</b> The item is indicated, but not monitored.	_
	The key ID that the key slot receives is not recognized by any key ID reg- istered to BCM.	Yet
CONFRM ID ALL	The key ID that the key slot receives is recognized by any key ID registered to BCM.	Done
	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 reg- istered to BCM.	Done

Monitor Item	Condition	Value/Status
CONFIRM ID3	The key ID that the key slot receives is not recognized by the third key ID registered to BCM.	Yet
CONFIRMIDS	The key ID that the key slot receives is recognized by the third key ID reg- istered to BCM.	Done
CONFIRM ID2	The key ID that the key slot receives is not recognized by the second key ID registered to BCM.	Yet
	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
	The key ID that the key slot receives is recognized by the first key ID reg- istered to BCM.	Done
NOT REGISTERED	BCM detects registered key ID, or BCM does not detect key ID.	ID OK
NOT REGISTERED	BCM detects non-registration key ID.	ID NG
TP 4	The ID of fourth key is not registered to BCM	Yet
1 F 4	The ID of fourth key is registered to BCM	Done
	The ID of third key is not registered to BCM	Yet
TP 3	The ID of third key is registered to BCM	Done
	The ID of second key is not registered to BCM	Yet
TP 2	The ID of second key is registered to BCM	Done
	The ID of first key is not registered to BCM	Yet
TP 1	The ID of first key is registered to BCM	Done
AIR PRESS FL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of fron LH tire
AIR PRESS FR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of fron RH tire
AIR PRESS RR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of real RH tire
AIR PRESS RL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of real LH tire
ID REGST FL1	ID of front LH tire transmitter is registered	Done
	ID of front LH tire transmitter is not registered	Yet
ID REGST FR1	ID of front RH tire transmitter is registered	Done
	ID of front RH tire transmitter is not registered	Yet
ID REGST RR1	ID of rear RH tire transmitter is registered	Done
	ID of rear RH tire transmitter is not registered	Yet
ID REGST RL1	ID of rear LH tire transmitter is registered	Done
	ID of rear LH tire transmitter is not registered	Yet
WARNING LAMP	Tire pressure indicator OFF	Off
	Tire pressure indicator ON	On
DI 177ED	Tire pressure warning alarm is not sounding	Off
BUZZER	Tire pressure warning alarm is sounding	On

#### < ECU DIAGNOSIS INFORMATION >

## **TERMINAL LAYOUT**



	nal No.	Description				Value	
(Wire	color)	Cigned perso	Input/		Condition	(Approx.)	Ν
+	-	Signal name	Output			(, (pp) ox.)	
1	Ground	Rear window defog-	lagut	Rear window	OFF	9 – 16 V	
(W)	Giouna	ger relay control	Input	defogger	ON	0-0.6 V	0

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(Wife color)     Signal name     Input/ Output     Condition     Value (Approx.)       *     -     Signal name     Input/ Output     Condition     0 V       *     -     Signal name     Output     0 V       *     -     O     0 V       *     -     O     0 V       *     -     O     0 V       *     -     O     0 V       *     -     O     0 V       *     -     -     O       *     -     -     O       *     -     -     -       *     -     -     -       *     -     -     -       *     -     -     -       *     -     -     -       *     -     -     -       *     -     -     -       *     -     -     -       *     -     -     -       *     -     -     -       *     -     -     -       *     -     -     -       *     -     -     -       *     -     -     -       *     -     -		nal No.	Description				Value		
2 (R)     Ground     Combination switch INPUT 5     Input     Combination switch (Wiper volume dial 4)     Lighting switch HI     Input (Wiper volume dial 4)       3 (G)     Ground     Combination switch INPUT 4     Input     Combination (Wiper volume dial 4)     All switches OFF     0 V       4 (BE)     Ground     Combination switch INPUT 3     Input     Combination switch (Wiper volume dial 4)     All switches OFF     0 V       4 (BE)     Ground     Combination switch INPUT 3     Input     Combination switch (Wiper volume dial 4)     All switches OFF     0 V       4 (BE)     Ground     Combination switch INPUT 3     Input     Combination switch (Wiper volume dial 4)     All switches OFF     0 V       4 (BE)     Ground     Combination switch INPUT 3     Input     Combination switch (Wiper volume dial 4)     All switches OFF     0 V       4 (BE)     Ground     Combination switch INPUT 3     Input     Combination switch (Wiper volume dial 4)     All switches OFF     0 V			Signal name	Input/ Output		Condition			
2 (R)       Ground       Combination switch INPUT 5       Input       Combination switch dial 4)       Lighting switch 1ST       Input						Turn signal switch RH	(V) 15 10 5		
3 (G)     Ground     Combination switch INPUT 4     Imput     Combination switch Miger volume dial 4)     All switches OFF     0 V       4 (BE)     Ground     Combination switch INPUT 3     Imput     Combination switch Miger volume dial 4)     Combination switch Miger volume dial 4)     All switches OFF     0 V       4 (BE)     Ground     Combination switch INPUT 3     Imput     Combination switch Miger volume dial 4)     All switches OFF     0 V       4 (BE)     Ground     Combination switch INPUT 3     Imput     Combination switch Miger volume dial 4)     All switches OFF     0 V       4 (BE)     Ground     Combination switch INPUT 3     Imput     Combination switch Miger volume dial 4)     All switches OFF     0 V       4 (BE)     Ground     Combination switch INPUT 3     Imput     Combination switch Miger switch AUTO     Miger switch AUTO	2 (R)	Ground		Input	switch (Wiper volume	Lighting switch 1ST	+ 10ms → KIB4958J		
3 (G)       Ground       Combination switch INPUT 4       Input       Combination switch (Wiper volume dial 4)       Combination switch (Wiper volume dial 4)       Lighting switch 2ND       Input       Front fog lamp switch ON       Input       PKB4985U 1.0 V         4 (BE)       Ground       Combination switch INPUT 3       Input       Input       Combination switch (Wiper volume dial 4)       Front fog lamp switch ON       Input       PKB4985U 1.0 V         4 (BE)       Ground       Combination switch INPUT 3       Input       Combination switch (Wiper volume dial 4)       All switches OFF       0 V         Front wiper switch INT Input       Input       Combination switch (Wiper volume dial 4)       All switches OFF       0 V				dial 4)	dial 4)	dial 4)	Lighting switch 2ND	50 ++10 ms JPMA0342JP	
3 (G)     Ground     Combination switch INPUT 4     Input     Combination switch (Wiper volume dial 4)     Lighting switch PASS     (V) Lighting switch 2ND       Front fog lamp switch ON     V(V) (V) (V) (V) (V) (V) (V) (V) (V) (V)						All switches OFF	0 V		
3 (G)       Ground       Combination switch INPUT 4       Input       Combination switch (Wiper volume dial 4)       Lighting switch 2ND       Imput       PRIBADESU 1.0 V         Front fog lamp switch ON       Imput       Front fog lamp switch ON       Imput       Imput <td></td> <td></td> <td></td> <td></td> <td></td> <td>Turn signal switch LH</td> <td>(1)</td>						Turn signal switch LH	(1)		
4       Ground       Combination switch INPUT 3       Input       Combination switch (Wiper volume dial 4)       Front wiper switch INT       (V)	3 (G)	Ground		Input	Input	Input	switch (Wiper volume		0 ++10ms ++10ms PKIB4958J
4 (BE)     Ground     Combination switch INPUT 3     Input     Input     Combination switch (Wiper volume dial 4)     All switches OFF     0 V       4     Ground     Combination switch INPUT 3     Front wiper switch MIST     10 15 10 5 10 10 10 10 10 10 10 10 10 10 10 10 10					dial 4)	Front fog lamp switch ON	15 10 5 0 ••••10ms ••••10ms •••••10ms		
4 (BE)     Ground     Combination switch INPUT 3     Input     Combination switch (Wiper volume dial 4)     Front wiper switch LO       Front wiper switch INT     Front wiper switch INT       Lighting switch AUTO     FKIB4956J						All switches OFF			
4 (BE)     Ground     Combination switch INPUT 3     Input     Combination switch (Wiper volume dial 4)     Front wiper switch MIST Front wiper switch INT     (V) 15 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5									
(BE) INPUT 3 (Wiper volume dial 4) Lighting switch AUTO					Combination	Front wiper switch MIST	(V) 15		
PKIB4958J	4 (BE)	Ground		Input	switch (Wiper volume				

	nal No.	Description				Value
(Wire +	color)	Signal name	Input/ Output		Condition	(Approx.)
					All switches OFF (Wiper volume dial 4) Front washer switch ON (Wiper volume dial 4)	0 V
5 (G)	Ground	Combination switch INPUT 2	Input	Combination	Rear washer switch ON (Wiper volume dial 4) Any of the condition below with all switches OFF • Wiper volume dial 1 • Wiper volume dial 5	10 6 6 6 6 6 7 7 7 7 7 7 7 7 7 7 7 7 7
				Switch	Wiper volume dial 6 Rear wiper switch ON (Wiper volume dial 4)	(V) 15 10 5 0 +10ms FKIB4956J 0.8 V
					All switches OFF (Wiper volume dial 4)	0 V
					Front wiper switch HI (Wiper volume dial 4) Rear wiper switch INT (Wiper volume dial 4)	(V) 15 10 5 0 10 10 10 10 10 10 10 10 10
					Wiper volume dial 3 (All switches OFF)	++10ms PKIB4958J 1.0 V
6 (W)	Ground	Combination switch INPUT 1	Input	Combination switch	Any of the condition below with all switches OFF • Wiper volume dial 1 • Wiper volume dial 2	(V) 15 0 15 0 10 10 10 10 10 10 10 10 10
					Any of the condition below with all switches OFF • Wiper volume dial 6	(V) 15 10 5 0 10 10 10 10 10 10 10 10 10
					<ul> <li>Wiper volume dial 7</li> </ul>	+ +10ms

	nal No.	Description				Value
(Wire +	color)	Signal name	Input/ Output		Condition	(Approx.)
7* <sup>1</sup> (W)	Ground	Door key cylinder switch UNLOCK	Input	Door key cylin- der switch	NEUTRAL position	(V) 15 10 5 0 + 10ms PKIB4960J 7.0 - 8.0 V
					UNLOCK position	0 V
8		Power window switch communica- tion (with automatic sliding door system)	Input/ Output	Ignition switch O	N	(V) 15 10 5 20ms PKIA7023E 9.0 - 10 V
(GR)* <sup>1</sup> (Y)* <sup>2</sup>	Ground	Door key cylinder switch LOCK (with- out automatic sliding door system)	Input	Door key cylin- der switch	NEUTRAL position	(V) 15 10 5 0 + 10ms PKIB4960J 7.0 - 8.0 V
					LOCK position	0 V
9 (GR)	Ground	Stop lamp switch 1	Input	Stop lamp switch	OFF (Brake pedal is not depressed)	0 V
(GR)				Switch	ON (Brake pedal is de- pressed)	9–16 V
12* <sup>1</sup> (GR)	Ground	Door lock and unlock switch LOCK	Input	Door lock and unlock switch	NEUTRAL position	(V) 15 10 5 0 10 ms JPMIA0012GB 1.0 - 1.5 V
					LOCK position	0 V
13* <sup>1</sup> (BR)	Ground	Door lock and unlock switch UNLOCK	Input	Door lock and unlock switch	NEUTRAL position	(V) 15 0 10 10 10 10 10 10 10 10 10
					UNLOCK position	0 V

	nal No.	Description				Value	
(Wire +	color)	Signal name	Input/ Output		Condition	(Approx.)	
14 (L)	Ground	Optical sensor	Input	Ignition switch ON	When bright outside of the vehicle When dark outside of the	Close to 5 V	
(-)					vehicle	Close to 0 V	
15 (W)	Ground	Rear window defog- ger switch	Input	Rear window defogger switch	Not pressed	(V) 15 10 0 10 ms 10 ms JPMIA0012GB 1.0 - 1.5 V	
					Pressed	0 V	
16 <sup>*3</sup> (Y)	Ground	Dimmer signal	Output	Ignition switch ON	<ul> <li>Either of the following conditions</li> <li>Lighting switch OFF</li> <li>The area around the vehicle is bright (Shine a light on the optical sensor)</li> </ul>	0 V	
						The area around the vehi- cle is dark (Block the light from the optical sensor)	7.5 – 16 V
17	Ground	Sensor power sup-	Output	Ignition switch	OFF, ACC	0 V	
(O)	0.00.00	ply		.g	ON	4.65 – 5.5 V	
18 (R)	Ground	Receiver and sensor ground	Input	Ignition switch O	N	0 V	
21 (GR)	Ground	NATS antenna amp.	Input/ Output	Intelligent Key: Intelligent Key battery is re- moved	Brake pedal: Depressed <b>NOTE:</b> Waveform varies each time when brake pedal is depressed	(V) 15 10 5 0 • • • • • • • • • • • • • • • • • • •	
					Brake pedal: Not de- pressed	9 – 16 V	
					ON	0 – 0.5 V	
23 (W)	Ground	Security indicator lamp control	Output	Security indica- tor lamp	Blinking (Ignition switch OFF)	(V) <sub>15</sub> 10 5 0 ++1s JPMIA0590GB	
						12.0 V	
0.4+4			lpr://		OFF	9 – 16 V	
24* <sup>4</sup>	Ground	Dongle link	Input/ Output	Ignition switch O	FF	5 V	

	nal No.	Description				Value
(vvire	e color) _	Signal name	Input/ Output		Condition	(Approx.)
25 (P)	Ground	NATS antenna amp.	Input/ Output	During waiting	Brake pedal: Depressed <b>NOTE:</b> Waveform varies each time when brake pedal is depressed	(V) 15 10 10 10 10 10 10 10 10 10 10
					Brake pedal: Not de- pressed	9 – 16 V
27 (O)	Ground	A/C ON (Automatic air conditioner)	Input	A/C	OFF (A/C switch indicator: OFF)	(V) 15 10 5 0 + 10ms PKIB4960J 7.0 - 8.0 V
					ON (A/C switch indicator: ON)	0 V
				Ignition switch	A/C switch OFF	12 V
		A/C ON (Manual c air conditioner)		ON and blower fan switch other than OFF	A/C switch ON	0 V
		Blower fan ON (Au-			OFF	12 V
		tomatic air condition- er)		Fan switch	ON	0 V
28 (BR)	Ground	Blower fan ON (Manual air condi- tioner)	Input	Fan switch	OFF	(V) 15 0 + 10ms PKIB4960J 70. 8 0 V/
					Other than OFF	7.0 - 8.0 V 0 V
29					OFF	9 – 16 V
29 (P)	Ground	Hazard switch	Input	Hazard switch	ON	0 – 1.5 V
					Pressed	0 V
30 (L)	Ground	Back door opener switch	Input	Back door opener switch	Not pressed	(V) 15 10 5 0 10 ms JPMIA0012GB 1.0 - 1.5 V

	nal No. color)	Description				Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
31 (G)	Ground	Front door lock as- sembly driver side (Unlock sensor)	Input	Driver door	LOCK status (Unlock sensor switch OFF)	(V) 10 5 0 + 10ms FKIB49601 7.0 - 8.0 V
					UNLOCK status (Unlock sensor switch ON)	0 V
					All switches OFF (Wiper volume dial 4)	(V) 15 10 5 0 + 10ms PKIB4960J 7.0 - 8.0 V
32 (R)	Ground	Combination switch OUTPUT 5	Output	Combination switch	Front fog lamp switch ON (Wiper volume dial 4)	
					Rear wiper switch ON (Wiper volume dial 4)	(V) 15 10 5
					Any of the condition below with all switches OFF • Wiper volume dial 1 • Wiper volume dial 2 • Wiper volume dial 6 • Wiper volume dial 7	0 ← ← 10ms PKIB4956J 1.0 V
					All switches OFF (Wiper volume dial 4)	(V) 15 10 5 0 • • 10ms
33		Combination switch		Combination	Lighting switch 1ST	PKIB4960J 7.0 - 8.0 V
(W)	Ground	OUTPUT 4	Output	switch	(Wiper volume dial 4) Lighting switch AUTO	(V) 15
					(Wiper volume dial 4) Rear wiper switch INT	
					(Wiper volume dial 4) Any of the condition below	→ +10ms
					<ul><li>with all switches OFF</li><li>Wiper volume dial 1</li><li>Wiper volume dial 5</li><li>Wiper volume dial 6</li></ul>	PKiB4958J 1.2 V

	Terminal No. Description (Wire color)					Value					
(vvire +		Signal name	Input/ Output		Condition	(Approx.)					
					All switches OFF (Wiper volume dial 4)	(V) 10 50 • • 10ms • • 10ms • • 10ms • • 10ms • • • • 0 • • • • • • • • • • • • • • •					
34 (P)	Ground	Combination switch OUTPUT 3	Output	Combination switch	Lighting switch 2ND (Wiper volume dial 4)						
					Lighting switch HI (Wiper volume dial 4)						
					Rear washer switch ON (Wiper volume dial 4)						
					Any of the condition below with all switches OFF • Wiper volume dial 1 • Wiper volume dial 2 • Wiper volume dial 3	PKIB4958J 1.2 V					
35		Combination switch		Combination	All switches OFF	(V) 10 50 ↓ 10ms → 10ms PKIB4960J 7.0 - 8.0 V					
(GR)	Ground	OUTPUT 2				Output (V	switch (Wiper volume	Lighting switch 2ND			
				dial 4)	Lighting switch PASS	(V) 15					
					Front wiper switch INT						
					Front wiper switch HI	++10ms ++10ms PKIB4958J 1.2 V					
36		Combination switch			Combination switch	Combination	All switches OFF	(V) 10 50 ↓ ↓ 10ms PKIB4960J 7.0 - 8.0 V			
(R)		OUTPUT 1	Output	(Wiper volume	Turn signal switch RH						
				dial 4)	Turn signal switch LH	(V) 15					
					Front wiper switch LO						
					Front wiper switch MIST						
										Front washer switch ON	++10ms PKIB4958J 1.2 V

	nal No. color)	Description	Description		Value	
+	-	Signal name	Input/ Output		Condition	(Approx.)
37					P position (Release selec- tor button)	0 – 1.5 V
(G)	Ground	Detention switch	Input	Selector lever	P position (Push selector button)	6 – 16 V
					Any position other than P	
					Waiting	12 V
				Ignition switch OFF (Remote keyless entry communication)	When operating either button on Intelligent Key	(V) 15 10 5 0
						200 ms JMMIA0572GB
38 (BE)	Ground	Receiver communi- cation	Input/ Output		Waiting	(V) 15 10 5 0
				Ignition switch ON (TPMS		100 ms JMMIA0573GB
				communication)	When receiving signal from tire pressure sensor	(V) 15 0 0 100 ms JJMMA0574GB
39 (L)	Ground	CAN-H	Input/ Output		_	
40 (P)	Ground	CAN-L	Input/ Output		_	_
43 (P)	Ground	Back door switch	Input	Back door switch	OFF (When back door closed)	(V) 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
					ON (When back door opened)	0 V
44		Rear wiper stop po-		Ignition switch	Rear wiper stop position	12 V
(GR)	Ground	sition	Input	ON	Any position other than rear wiper stop position	0 V

Terminal No.		Description				Value
(Wire +	color)	Signal name	Input/ Output		Condition	(Approx.)
45 (W)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closed) ON (When passenger	(V) 15 0 0 0 0 0 0 0 0 0 0 0 0 0
					door opened)	0 V
46 (R)	Ground	Sliding door RH switch	Input	Sliding door RH switch	OFF (When sliding door RH closed)	(V) 50 0 • • 10ms • • • 10ms • • • 10ms • • • 0 • • • 0 • • • • • • • • • • • •
					ON (When sliding door RH opened)	0 V
47 (G)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closed)	(V) 15 10 50 •••••••••••••••••••••••••••••••••
					ON (When driver door opened)	0 V
48 (BE)	Ground	Sliding door LH switch	Input	Sliding door LH switch	OFF (When sliding door LH closed)	(V) 15 0 5 0 • • • 10ms • • • 10ms • • • 10ms • • • • • • • • • • • • • • • • • • •
					ON (When sliding door LH opened)	0 V
49 (D)	Ground	Luggage room lamp	Output	Luggage room	OFF	9 – 16 V
(B)		control		lamp	ON UNLOCK (Actuator is acti-	0 – 1.0 V
50* <sup>2</sup> (V)	Ground	Selective unlock re- lay control (Sliding door LH UNLOCK	Input	Sliding door LH	vated) Other than UNLOCK (Ac-	0 – 0.6 V 9 – 16 V
		control)		Dealada	tuator is not activated) ON (Pressed)	0 – 1.5 V
51	Ground	Back door request	Input	Back door re- quest switch		0 1.0 V

	nal No. color)	Description				Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
53* <sup>5</sup>	Organis	Back door open re-	Outrast	Back door	OFF (Actuator is not activated)	9 – 16 V
(BR)	Ground	quest	Output	opener switch	ON (Actuator is activat- ed)	0 – 1.5 V (Approx. 500m seconds)
54	Cround	Rear wiper	Quitout	Beerwiner	OFF (Stopped)	0 V
(R)	Ground	Real wiper	Output	Rear wiper	ON (Activated)	9 – 16 V
		Sliding door RH UN- LOCK (with auto-		Sliding door RH	UNLOCK (Actuator is activated)	9 – 16 V
55	Ground	matic sliding door system)	Output		Other than UNLOCK (Ac- tuator is not activated)	0 V
(G)	Cround	Sliding door UN- LOCK (without auto-	Output	Sliding door	UNLOCK (Actuator is activated)	9 – 16 V
		matic sliding door system)		_	Other than UNLOCK (Ac- tuator is not activated)	0 V
					p battery saver is activated. room lamp power supply)	0 V
56 (P)	Ground	Interior room lamp power supply	Output	vated.	p battery saver is not acti- rior room lamp power sup-	9 – 16 V
57 (Y)	Ground	Battery power sup- ply	Input	Ignition switch O	FF	9 – 16 V
					OFF	5 V
58 (O)	Ground	Air bag signal	Input	Ignition switch	ON	(V) 15 10 5 0 
					UNLOCK (Actuator is acti-	2.5 V 9 – 16 V
59 (SB)	Ground	Passenger door UN- LOCK	Output	Passenger door	vated) Other than UNLOCK (Ac-	0 V
					tuator is not activated)	
					Turn signal switch OFF	0 V
60 (V)	Ground	Turn signal LH	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 → ← 15 15 15 15 15 15 15 15 15 15
						(Turn signal lamp turn on: 9 - 16 V)

	nal No.	Description				Value
(vvire +	color)	Signal name	Input/ Output		Condition	(Approx.)
					Turn signal switch OFF	0 V
61 (G)	Ground	Turn signal RH	Output	lgnition switch ON	Turn signal switch RH	(V) 15 10 5 0 
62		•			ON	0 – 1.0 V
(W)	Ground	Step lamp	Output	Step lamp	OFF	9 – 16 V
63	0	Interior room lamp	0.1.1	Interior room	OFF	9 – 16 V
(R)	Ground	control	Output	lamp	ON	0 – 1.0 V
					Engine stopped (Selector lever is in P position)	0 – 1.0 V
64 (W)		d Cranking request	input	Ignition switch ON	Engine stopped (Selector lever is not in P position)	9 – 16 V
					Engine running	9 – 16 V
65	Ground	All doors LOCK	Quitout	All doors	LOCK (Actuator is activat- ed)	9 – 16 V
(V)	Ground	All doors LOCK	Output	All doors	Other than LOCK (Actua- tor is not activated)	0 V
66	Ground	Driver door UN-	Output	Driver door, fuel	UNLOCK (Actuator is activated)	9 – 16 V
(G)	Ground	LOCK	Output	lid	Other than UNLOCK (Ac- tuator is not activated)	0 V
67 (B)	Ground	Ground	Output	Ignition switch O	N	0 V
68	Ground	P/W power supply	Output	Ignition switch O	FF	0 V
(L)	Cround	(IGN)	Output	Ignition switch O	N	9 – 16 V
69 (P)	Ground	P/W power supply (BAT)	Output	Ignition switch O	FF	9 – 16 V
70 (L)	Ground	Battery power sup- ply	Input	Ignition switch O	FF	9 – 16 V
73 (G)	Ground	ON indicator lamp	Output	Ignition switch	OFF (LOCK indicator is not illuminated)	9 – 16 V
(0)					ON	0 – 1.5 V
75	Ground	Driver door request	Input	Driver door re-	ON (Pressed)	0 – 1.5 V
(G)	Ground	switch	input	quest switch	OFF (Not pressed)	9 – 16 V
76	Ground	Push-button ignition	Innut	Push-button ig- nition switch	Pressed	0 – 1.5 V
(V)	Ground	switch (push switch)	Input	(push switch)	Not pressed	9 – 16 V

Terminal No. Description (Wire color)				Value		
(vvire	COIOR)	Signal name	Input/ Output	Condition		(Approx.)
78		Driver door antenna		When the driver door request	When Intelligent Key is not in the antenna detec- tion area (The distance between In- telligent Key and antenna: Approx. 2 m)	(V) 15 10 50 50 500 ms JMKIA5954GB
(B)	Ground (+) Output Output Switch is operated with ignition switch ON	When Intelligent Key is in the antenna detection area (The distance between In- telligent Key and antenna: 80 cm or less)	(V) 15 10 5 0 5 5 5 5 5 5 5 5 5 5 5 5 5			
79	Ground	Driver door antenna	Output	When the driver door request	When Intelligent Key is not in the antenna detec- tion area (The distance between In- telligent Key and antenna: Approx. 2 m)	(V) 15 10 5 0 5 5 5 5 5 5 5 5 5 5 5 5 5
(W)	Glound	(-)	Output	switch is operat- ed with ignition switch ON	When Intelligent Key is in the antenna detection area (The distance between In- telligent Key and antenna: 80 cm or less)	(V) 15 10 5 0 5 5 5 5 5 5 5 5 5 5 5 5 5
80	Ground	Passenger door an-	Outout	When the pas- senger door re- quest switch is	When Intelligent Key is not in the antenna detec- tion area (The distance between In- telligent Key and antenna: Approx. 2 m)	(V) 15 10 5 0 
(GR) Ground	Sidurd	Ground tenna (+) Output q		operated with ignition switch ON	When Intelligent Key is in the antenna detection area (The distance between In- telligent Key and antenna: 80 cm or less)	(V) 15 10 5 0 5 5 5 5 5 5 5 5 5 5 5 5 5

	nal No.	Description				Value
(Wire +	color)	Signal name	Input/ Output	Condition		(Approx.)
81	BE) Ground toppa (.) Output quest switch is		When Intelligent Key is not in the antenna detec- tion area (The distance between In- telligent Key and antenna: Approx. 2 m)	(V) 15 10 50 50 500 ms JMKIA5954GB		
(BE)	Giouna	tenna (-)	Cutput	quest switch is – operated with ignition switch ON	When Intelligent Key is in the antenna detection area (The distance between In- telligent Key and antenna: 80 cm or less)	(V) 15 10 5 0 500 ms JMKIA5955GB
82	Ground	round Rear bumper anten- na (+)	Output	When the back door request switch is operat- ed with ignition switch ON	When Intelligent Key is not in the antenna detec- tion area (The distance between In- telligent Key and antenna: Approx. 2 m)	(V) 15 10 50 500 ms JMKIA5954GB
(G)					When Intelligent Key is in the antenna detection area (The distance between In- telligent Key and antenna: 80 cm or less)	(V) 15 10 5 5 0 5 0 5 0 5 0 5 0 5 0 5 5 0 5 5 5 0 5 5 5 5 5 5 5 5 5 5 5 5 5
83	Ground	Rear bumper anten-	r humpor anton-	When the back door request	When Intelligent Key is not in the antenna detec- tion area (The distance between In- telligent Key and antenna: Approx. 2 m)	(V) 15 10 50 500 ms JMKIA5954GB
(R)	Ground	Ground na (-) Output	switch is operat- ed with ignition switch ON	When Intelligent Key is in the antenna detection area (The distance between In- telligent Key and antenna: 80 cm or less)	(V) 15 10 5 0 500 ms JMKIA5955GB	

	nal No.	Description				Value	Δ
(vvire +	color)	Signal name	Input/ Output		Condition	(Approx.)	А
84		Room antenna 1 (+)		Ignition switch	When Intelligent Key is not in the antenna detec- tion area	(V) 15 10 5 0 11 1 1 1 1 1 1 1 1 1 1 1 1 1	B C D
(GR)		(Instrument center)	Output	ON	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 1 5 0 1 5 0 1 5 0 1 5 0 1 5 0 1 5 1 5	E
85	0	Room antenna 1 (-)	0.000	Ignition switch	When Intelligent Key is not in the antenna detec- tion area	(V) 15 10 5 0 11 1 1 1 1 1 1 1 1 1 1 1 1 1	G H
(B)	Ground	(Instrument center)	Output	ON	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 5 1 5	J K L
86	Ground	Room antenna 2 (+)	Qutout	Ignition switch	When Intelligent Key is not in the antenna detec- tion area	(V) 15 10 5 0 11 1 5 0 11 1 5 0 11 1 5 0 11 10 10 10 10 10 10 10 10 10 10 10 1	BCS N
(W)	Ground		ŌN	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 15 10 5 0 15 15 10 5 0 15 15 10 5 0 15 15 10 5 0 15 15 10 5 0 15 15 10 5 0 15 15 10 5 0 15 10 5 0 15 15 10 15 10 15 10 15 10 15 10 15 10 15 10 10 10 10 10 10 10 10 10 10 10 10 10	P	

	nal No. e color)	Description				Value
+	-	Signal name	Input/ Output	Condition		(Approx.)
87	Ground	Room antenna 2 (-)	Output	Ignition switch	When Intelligent Key is not in the antenna detec- tion area	(V) 15 10 5 0 1 s JMKIA5951GB
(BE)		(Console)		ON	When Intelligent Key is in the antenna detection area	(V) 15 0 5 0 1 s JMKIA3839GB
88	Ground	ound Luggage room an- tenna (+)	Output	Ignition switch ON	When Intelligent Key is not in the antenna detec- tion area	(V) 15 10 5 0 1 1 1 1 1 1 1 1 1 1 1 1 1
(GR)					When Intelligent Key is in the antenna detection area	(V) 15 10 50 1 s JMKIA3839GB
89	Ground	nd Luggage room an- tenna (-) Output		Ignition switch	When Intelligent Key is not in the antenna detec- tion area	(V) 15 10 5 0 1 1 5 0 1 1 5 0 1 1 5 0 1 1 5 0 1 1 5 0 1 1 5 0 1 1 5 0 1 1 5 0 1 1 5 0 1 1 1 5 0 1 1 1 1
(B)	Ground		ON	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 10 10 10 10 10 10 10 10 10 10 10 10	

#### < ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value
(Wire	color)	Signal name	Input/ Output	Condition		(Approx.)
		5	Output	Push-button ig-	ON	9 – 16 V
90 (P)	Ground	Push-button ignition switch illumination	Output	nition switch illu-	OFF	0 – 1.5 V
91				LOCK indicator	OFF (Ignition switch OFF)	9 – 16 V
(W)	Ground	LOCK indicator lamp	Output	lamp	ON	0 – 1.5 V
					OFF	0 V
		Puch button ignition				NOTE: When the illumination brighten- ing/dimming level is in the neutral position
92 (B)	Ground	Push-button ignition switch illumination ground	Output	Tail lamp	ut Tail lamp ON	(V) 15 10 5 10 0 10 10 10 10 10 10 10 10
						JPMIA1554GB 6.0 - 7.0 V
93	Ground	Intelligent Key warn-	Output	Intelligent Key	Sounding	0 – 1.5 V
(R)	Ground	ing buzzer	Output	warning buzzer	Not sounding	9 – 16 V
96	Ground	ACC relay control	Output	Ignition switch	OFF	0 – 0.5 V
(BE)	Giouna	ACC relay control	Output	Ignition switch	ACC or ON	9 – 16 V
97 (W)	Ground	Starter relay control	Output	Ignition switch ON	Other than engine crank- ing	9 – 16 V
(vv)					Engine cranking	0 – 0.5 V
98	Ground	Ignition relay (IPDM	Output	Ignition switch	OFF or ACC	9 – 16 V
(P)	Ciouna	E/R) control	Output	ignition switch	ON	0 – 0.5 V
99	Ground	Ignition relay control	Output	Ignition switch	OFF or ACC	0 – 0.5 V
(G)	Ciouna	ignition relay control	Output	ignition switch	ON	9 – 16 V
100	Ground	Passenger door re-	Input	Passenger door	ON (Pressed)	0 – 1.5 V
(R)	Cround	quest switch	input	request switch	OFF (Not pressed)	9 – 16 V
101	Ground	Ignition power sup-	Output	Ignition switch	OFF or ACC	0 V
(BR)		ply No. 2		.g.m.orr ownorr	ON	9 – 16 V
102	Ground	P/N position	Input	Selector lever	P or N position	9 – 16 V
(P)					Except P and N positions	0 – 1.5 V
104 (L)	Ground	CVT shift selector (detention switch) power supply	Output	Ignition switch O	N	9 – 16 V
105 (R)	Ground	Stop lamp switch 2	Input	Ignition switch O	FF	9 – 16 V
106	Crownel	Blower fan motor re-	0	Institute available	OFF or ACC	0 – 0.5 V
(O)	Ground	lay control	Output	Ignition switch	ON	9 – 16 V
109	Ground	ACC indicator lamp	Output	Ignition switch	OFF (LOCK indicator is not illuminated)	9 – 16 V
(R)		· · · · · · · · · · · · · · · · · · ·			ACC	0 – 1.5 V

• \*1: Without automatic sliding door system

• \*2: With automatic sliding door system

• \*3: With rear entertainment

• \*4: For Canada

< ECU DIAGNOSIS INFORMATION >

• \*5: Without automatic back door system

#### Fail-safe

#### FAIL-SAFE CONTROL BY DTC

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

Display contents of CONSULT	Fail-safe	Cancellation
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 $ON \rightarrow OFF$
B2196: DONGLE NG	Inhibit engine cranking	Erase DTC
B2198: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC
B2608: STARTER RELAY	Inhibit engine cranking	<ul> <li>500 ms after the following signal communication status becomes consistent</li> <li>Starter motor relay control signal</li> <li>Starter relay status signal (CAN)</li> </ul>
B260F: ENG STATE SIG LOST	Inhibit engine cranking	<ul><li>When any of the following conditions are fulfilled</li><li>Ignition switch changes to ACC</li><li>Receives engine status signal (CAN)</li></ul>
B26F1: IGN RELAY OFF	Inhibit engine cranking	<ul> <li>When the following conditions are fulfilled</li> <li>Ignition switch ON signal (CAN: Transmitted from BCM): ON</li> <li>Ignition switch ON signal (CAN: Transmitted from IPDM E/R): ON</li> </ul>
B26F2: IGN RELAY ON	Inhibit engine cranking	<ul> <li>When the following conditions are fulfilled</li> <li>Ignition switch ON signal (CAN: Transmitted from BCM): OFF</li> <li>Ignition switch ON signal (CAN: Transmitted from IPDM E/R): OFF</li> </ul>
B26F3: START CONT RLY ON	Inhibit engine cranking	<ul> <li>When the following conditions are fulfilled</li> <li>Starter control relay signal (CAN: Transmitted from BCM): OFF</li> <li>Starter control relay signal (CAN: Transmitted from IPDM E/R): OFF</li> </ul>
B26F4: START CONT RLY OFF	Inhibit engine cranking	<ul> <li>When the following conditions are fulfilled</li> <li>Starter control relay signal (CAN: Transmitted from BCM): ON</li> <li>Starter control relay signal (CAN: Transmitted from IPDM E/R): ON</li> </ul>
B26F7: BCM	Inhibit engine cranking by Intelligent Key sys- tem	When room antenna and luggage room antenna functions normally

#### REAR WIPER MOTOR PROTECTION

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

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

Condition of cancellation

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

## FAIL-SAFE CONTROL OF COMBINATION SWITCH READING FUNCTION CAUSED BY LOW POWER SUPPLY VOLTAGE

If voltage of battery power supply lower, BCM maintains combination switch reading to the status when input voltage is less than approximately 9 V.

#### NOTE:

When voltage of battery power supply is approximately 9 V or more, combination switch reading function returns to normal operation.

### DTC Inspection Priority Chart

INFOID:000000011324333

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

#### < ECU DIAGNOSIS INFORMATION >

Priority	DTC	A
1	B2562: LOW VOLTAGE	
2	<ul><li>U1000: CAN COMM</li><li>U1010: CONTROL UNIT (CAN)</li></ul>	В
3	<ul> <li>B2192: ID DISCORD BCM-ECM</li> <li>B2193: CHAIN OF BCM-ECM</li> <li>B2195: ANTI-SCANNING</li> <li>B2196: DONGLE NG</li> <li>B2198: NATS ANTENNA AMP</li> </ul>	C
	<ul> <li>B2555: STOP LAMP</li> <li>B2556: PUSH-BTN IGN SW</li> <li>B2557: VEHICLE SPEED</li> <li>B2601: SHIFT POSITION</li> </ul>	D
	<ul> <li>B2602: SHIFT POSITION</li> <li>B2603: SHIFT POSI STATUS</li> <li>B2604: PNP/CLUTCH SW</li> <li>B2605: PNP/CLUTCH SW</li> <li>D2609: GTADTED BELAX</li> </ul>	E
	<ul> <li>B2608: STARTER RELAY</li> <li>B260F: ENG STATE SIG LOST</li> <li>B2614: BCM</li> <li>B2615: BCM</li> </ul>	F
4	<ul> <li>B2616: BCM</li> <li>B2618: BCM</li> <li>B261A: PUSH-BTN IGN SW</li> <li>B26F1: IGN RELAY OFF</li> </ul>	G
	<ul> <li>B26F2: IGN RELAY ON</li> <li>B26F3: START CONT RLY ON</li> <li>B26F4: START CONT RLY OFF</li> <li>B26F6: BCM</li> </ul>	1
	<ul> <li>B26F7: BCM</li> <li>B26F8: BCM</li> <li>B26F9: CRANK REQ CIR SHORT</li> <li>B26FA: CRANK REQ CIR OPEN</li> <li>B26FC: KEY REGISTRATION</li> <li>C1729: VHCL SPEED SIG ERR</li> <li>U0415: VEHICLE SPEED</li> </ul>	J
	<ul> <li>C1704: LOW PRESSURE FL</li> <li>C1705: LOW PRESSURE FR</li> <li>C1706: LOW PRESSURE RR</li> <li>C1707: LOW PRESSURE RL</li> <li>C1708: [NO DATA] FL</li> </ul>	K
5	<ul> <li>C1709: [NO DATA] FR</li> <li>C1710: [NO DATA] RR</li> <li>C1711: [NO DATA] RL</li> <li>C1716: [PRESSDATA ERR] FL</li> <li>C1717: [PRESSDATA ERR] FR</li> </ul>	BC
	C1718: [PRESSDATA ERR] RR     C1719: [PRESSDATA ERR] RL     B2621: INSIDE ANTENNA	N
5	B2622: INSIDE ANTENNA     B2623: INSIDE ANTENNA	0
6	<ul> <li>B2626: OUTSIDE ANTENNA</li> <li>B2627: OUTSIDE ANTENNA</li> <li>B2628: OUTSIDE ANTENNA</li> </ul>	P

## DTC Index

#### NOTE:

The details of time display are as follows.

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

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#### < ECU DIAGNOSIS INFORMATION >

IGN counter is displayed on Freeze Frame Data. For details of Freeze Frame Data, refer to <u>BCS-16, "COM-MON ITEM : CONSULT Function (BCM - COMMON ITEM)"</u>.

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condi- tion	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	_	_	_	_	_
U1000: CAN COMM				_	BCS-87
U1010: CONTROL UNIT (CAN)		_		_	BCS-88
U0415: VEHICLE SPEED	_	_	×	_	BCS-89
B2192: ID DISCORD BCM-ECM	×	_	_	_	<u>SEC-61</u>
B2193: CHAIN OF BCM-ECM	×		_	_	<u>SEC-62</u>
B2195: ANTI-SCANNING	×		_	_	<u>SEC-63</u>
B2196: DONGLE NG	×	_	_	_	<u>SEC-64</u>
B2198: NATS ANTENNA AMP	×	—	_	_	<u>SEC-66</u>
B2555: STOP LAMP		×	×	_	<u>SEC-69</u>
B2556: PUSH-BTN IGN SW		×	×	_	<u>SEC-72</u>
B2557: VEHICLE SPEED		×	×	_	<u>SEC-74</u>
B2562: LOW VOLTAGE		×	_	_	BCS-90
B2601: SHIFT POSITION		×	×	_	<u>SEC-75</u>
B2602: SHIFT POSITION		×	×	_	<u>SEC-77</u>
B2603: SHIFT POSI STATUS		×	×	_	<u>SEC-80</u>
B2604: PNP/CLUTCH SW		×	×	_	<u>SEC-85</u>
B2605: PNP/CLUTCH SW		×	×	_	<u>SEC-88</u>
B2608: STARTER RELAY	×	×	×	_	<u>SEC-91</u>
B260F: ENG STATE SIG LOST	×	×	×	_	<u>SEC-93</u>
B2614: BCM		×	×	_	PCS-57
B2615: BCM		×	×	_	PCS-59
B2616: BCM		×	×	_	PCS-61
B2618: BCM		×	×	_	PCS-63
B261A: PUSH-BTN IGN SW		×	×	_	PCS-65
B2621: INSIDE ANTENNA		×	_	_	DLK-226
B2622: INSIDE ANTENNA		×	_	_	DLK-228
B2623: INSIDE ANTENNA	_	×	_	_	DLK-230
B2626: OUTSIDE ANTENNA	_	×	_	_	DLK-234
B2627: OUTSIDE ANTENNA		×	_	_	DLK-232
B2628: OUTSIDE ANTENNA	_	×	_	_	DLK-236
B26F1: IGN RELAY OFF	×	×	×	_	PCS-67
B26F2: IGN RELAY ON	×	×	×	_	PCS-68
B26F3: START CONT RLY ON	×	×	×	_	<u>SEC-96</u>
B26F4: START CONT RLY OFF	×	×	×	_	<u>SEC-97</u>
B26F6: BCM	_	×	×	_	PCS-70
B26F7: BCM	×	×	×	_	<u>SEC-98</u>

## < ECU DIAGNOSIS INFORMATION >

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condi- tion	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page	A
B26F8: BCM	—	×	×	_	<u>SEC-99</u>	
B26F9: CRANK REQ CIR SHORT	_	×	×	_	<u>SEC-100</u>	C
B26FA: CRANK REQ CIR OPEN	—	×	×	—	<u>SEC-102</u>	0
B26FC: KEY REGISTRATION	—	×	×	—	<u>SEC-104</u>	
C1704: LOW PRESSURE FL		—	_	×		D
C1705: LOW PRESSURE FR	—	—	_	×	WT-25	
C1706: LOW PRESSURE RR		—		×	<u>vv1-25</u>	Е
C1707: LOW PRESSURE RL		—	_	×	•	
C1708: [NO DATA] FL		—	_	×		
C1709: [NO DATA] FR		—	_	×	WT-27	F
C1710: [NO DATA] RR	_	—	_	×	<u>vv1-27</u>	
C1711: [NO DATA] RL	—	—	—	×		
C1716: [PRESSDATA ERR] FL	_	—	—	×		G
C1717: [PRESSDATA ERR] FR	_	—	_	×	WT 20	
C1718: [PRESSDATA ERR] RR		—	_	×	<u>WT-29</u>	Н
C1719: [PRESSDATA ERR] RL		—	—	×	+	
C1729: VHCL SPEED SIG ERR		—	_	×	<u>WT-31</u>	

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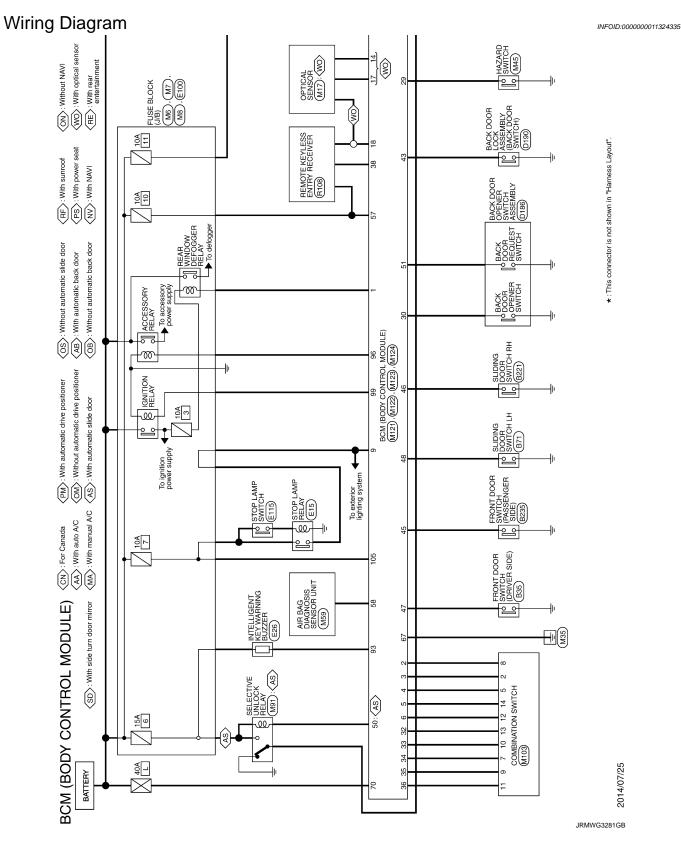
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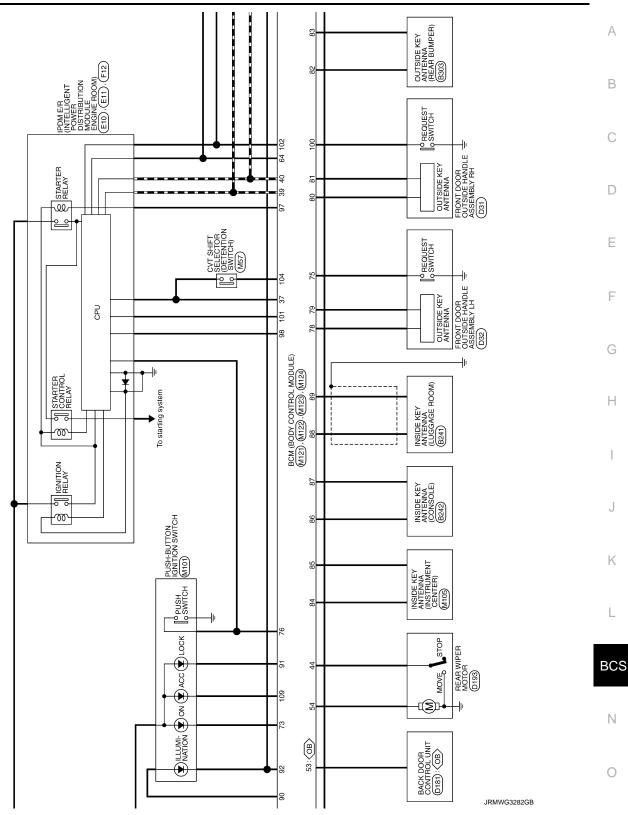
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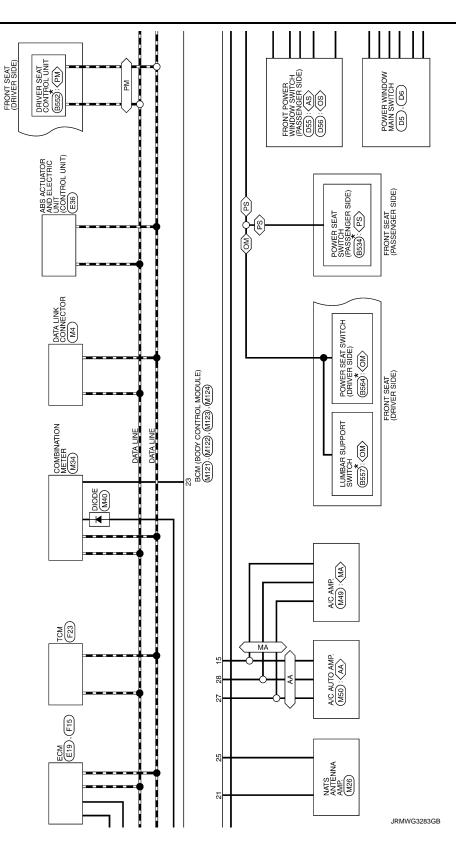
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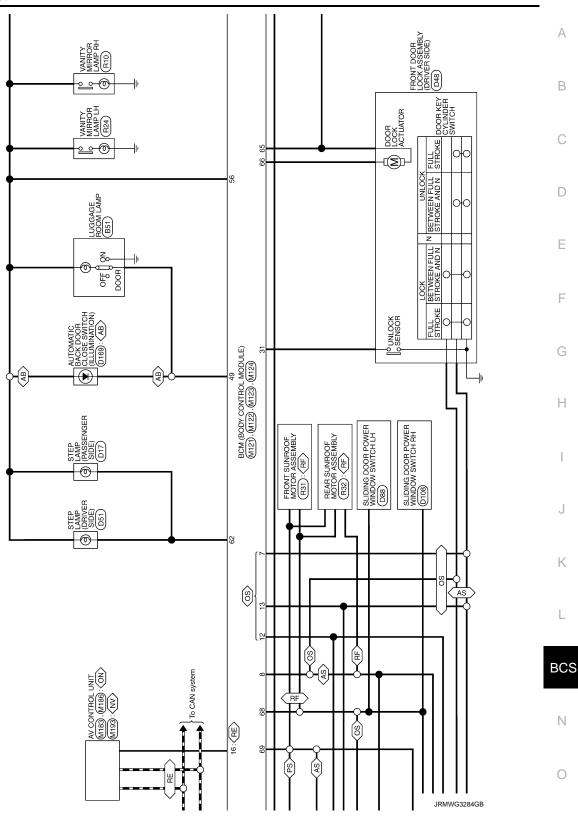
BCM



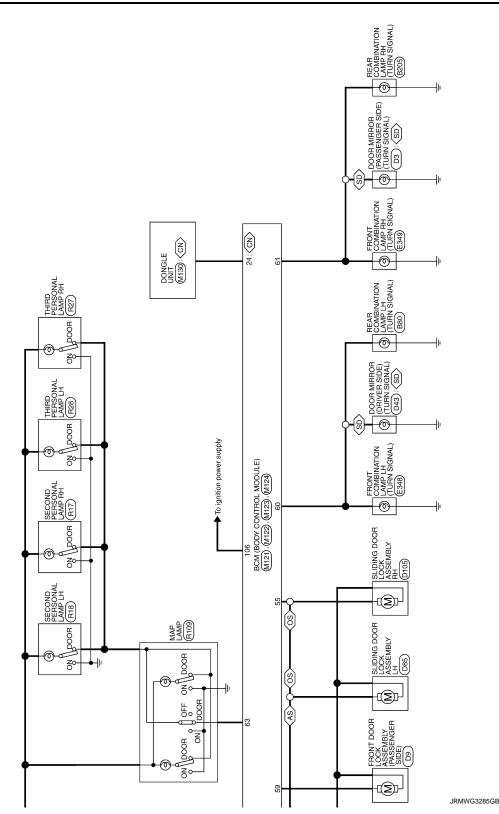


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E23       Prover tools switch (PASSENERR EDE)       Prover tools switch (PASSENERR EDE)       Prover tools switch (PASSENERR EDE)       Signal Name (Specification)       Signal Name (Specification)	С	
eter No. eter No. Bill Color Of With With With Color Of With With With With With With With With	D	
	Е	
B205       RE AC CONDITIANT LIVE RH       REAC CONDITIANT LIVE RH       REACCONDITIANT LIVE RH       REACCONDITIANT LIVE RH       REACCONDITIANT LIVE RH       Signal Name (Specification)       Signal Name (Specification)	F	
	G	
Connector No. Connector Name Connector Name Connector Name Connector Name Connector Name 2 B B 2 M Connector Name 2 M	Η	
Signal Name [Specification]	I	
B80 E8204E04	J	
Connector No. If Connector Nume 1 Connector Type 1 Connec	К	
	L	
BEI     DOULL       EBI     PRONT DOOR SWITCH (DRIVER RDE)       PRONT DOOR SWITCH (DRIVER RDE)     PRONT DOOR SWITCH (DRIVER RDE)       PRONT DOOR SWITCH (DRIVER RDE)     PRONT DOOR SWITCH (DRIVER RDE)       PRONT DOOR SWITCH (DRIVER RDE)     PRONT DOOR SWITCH (DRIVER RDE)       PRONT DOOR SWITCH (DRIVER RDE)     PRONT DOOR SWITCH (DRIVER RDE)       PRONT DOOR SWITCH (DRIVER RDE)     PRONT DOOR SWITCH (DRIVER RDE)       PRONT DOOR SWITCH (DRIVER RDE)     PRONT DOOR SWITCH (DRIVER RDE)       PRONT DOOR SWITCH (DRIVER RDE)     PRONT DOOR SWITCH (DRIVER RDE)       PRONT DOOR SWITCH (DRIVER RDE)     PRONT DOOR SWITCH (DRIVER RDE)       PRONT DOOR SWITCH (DRIVER RDE)     PRONT DOOR SWITCH (DRIVER RDE)       PRONT DOOR SWITCH (DRIVER RDE)     PRONT DOOR SWITCH (DRIVER RDE)       PRONT DOOR SWITCH (DRIVER RDE)     PRONT DOOR SWITCH (DRIVER RDE)       PRONT DOOR SWITCH (DRIVER RDE)     PRONT DOOR SWITCH (DRIVER RDE)       PRONT DOOR SWITCH (DRIVER RDE)     PRONT DOOR SWITCH (DRIVER RDE)       PRONT DOOR SWITCH (DRIVER RDE)     PRONT DOOR SWITCH (DRIVER RDE)       PRONT DOOR SWITCH (DRIVER RDE)     PRONT DOOR SWITCH (DRIVER RDE)       PRONT DOOR SWITCH (DRIVER RDE)     PRONT DOOR SWITCH (DRIVER RDE)       PRONT DOOR SWITCH (DRIVER RDE)     PRONT DOOR SWITCH (DRIVER RDE)       PRONT DOOR SWITCH (DRIVER RDE)     PRONT DOOR SWITCH (DRIVER RDE)       PRONT DOOR SWITCH (DRIVER RDE)     PRON	BCS	
BCM (BODY CONTROL MODULE)         Connector Num       ENVI CONTROL MODULE)         Connector Num       FONT CONTROL MODULE)         Connector Num       Connector Num       Connector Num       Connector Num         Connector Num       Connector Num       Connector Num         Connector Num       Connector Num       Connector Num         Connector Num       Connector Num       Connector Num         Connector Num       Connector Num         Connector Num       Connector Num         Connector Num <th co<="" td=""><td>Ν</td></th>	<td>Ν</td>	Ν
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< WIRING DIAGRAM >

BCM (BODY CONTROL MODULE)	0	DEat	1770 UU		;		
	CONTRECTOR INC.	±000	+	ND-1	+		
Connector Name INSIDE KEY ANTENNA (CONSOLE)	Connector Name	POWER SEAT SWITCH (PASSENGER SIDE)		SI IDF SW (FORWARD)	t	1 0	
Connector Type RK02FL	Connector Type	NS10FW-CS	┢	RECLINER SW (FORWARD)			
			26 Y/R	FRONT LIFTER SW (UPWARD)			
	E		27 Y/L	REAR LIFTER SW (UPWARD)	Connector No.	D3	
			28 G	SET SW	Connector Name	DODR MIRBOR (DASSENGER SIDE)	
	Ż	43 L 33					
((1 2))		35 38 34 39			Connector Type	be TH24MW-NH	
Ð			Connector No. B557	7	ą		
			Connector Name LUM	LUMBAR SUPPORT SWITCH	International Sector		
Tauminal Dalay Of	Tauminal Dalay Of		Connector Line MICO	NISO4EWL-CS	H.S.H		
No Wire Signal Name [Specification]		Signal Name [Specification]		20 11	ļ		
+	+	i	Æ			24 23 22 21 20 19 18 17 13	
2 8			it.				
	╞		H.S.				
	-			A2 23 A6 A5	Terminal Col	Color Of	
Connector No. B303	39 Y	1		01 01 01 01		Wire Signal Name [Specification]	
	43 LG	1			-		
Connector Name OUTSIDE KEY ANTENNA (REAR BUMPER)					2	- M	
Connector Type RK02FL			Terminal Color Of		9	1 22	
	Connector No.	B552	No. Wire	Signal Name [Specification]	7		
	Concernent Name	DBMEB SEAT CONTROL LINE	33 R	1	10	N	
		DRIVEN SEMT CONTROL ONLY	43 LG	1	11	- 9	
	Connector Type	TH32FW-NH	Η	-	12	R -	
((1))	q		46 BR	1	13	۲ – ۲	
	F				17 SH	SHIELD -	
	S I	(			18	B -	
	2	1 2 4 6 7 8 9 10 11 12 1	Connector No. B564				
la l		47 40 40 00 00 00 02 02 02 02 00	Connector Name POW	POWER SEAT SWITCH (DRIVER SIDE)	20		
			- 1		_	۲ ۲	
-			Connector Type NS1	NS10FW-CS	_	- -	
2 W -			ģ		-		
	Terminal Color Of No Wire	Signal Name [Specification]	B	•	24 (	GR -	
	┢	CAN-H	H.S.	43 40 36 33			
	2 R	UART (TX/RX)		35 47 38 34 41 30			
	4 R/L	PULSE (RECLINER)					
	6 R/W	ADDRESS 2					
	_	IND-2					
	8 8	SLIDE SW (BACKWARD)	-	Signal Name [Specification]			
	- 5	RECLINER SW (BACKWARD)	No. Wire	-			

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Oomester No.     D43       Connector Name     DOOR MIRROR (DRIVER SIDE)       Connector Types     TP24MM-NH       Connector Types     TP24MM-1H       Call     T21211110       T21212120131817     T15	Thrminal         Color         Signal Name         Specification/           1         1         1         -         -           1         1         1         -         -         -           1         1         1         1         -         -         -           1         1         1         1         -	
Connector Nu.         D01           Connector Nume         FR04T D010 OurStdE HANDLE ASSEMBLY RH           Connector Type         FR04MB	Tuninal Opico     Opica Of       no     0       1     0       2     0       3     0       1     0	
Othereture No.     09       Connector Name     Bone Control Annel       Connector Type     E06FGV-RS	Terminal (a)     Control     Signal Name (Sace)franton)       (b)     (b)     (b)     (c)       (c)     (c)     (c)     (c)	
BCM (BODY CONTROL MODULE) Connector Name Connector Name NEVEN WINDOW MAIN SWITCH Connector Type NEVEN-CS 1234567 1234657 1234567 1234567 1234567 123557 123567 12	Turmini     Calcot     Sgnal Name       1     V     Sgnal Name       2     P     V       3     BB     -       4     Sgnal Name     Sgnal Name       5     BP     -     -       4     Sgnal Name     Sgnal Name       5     BP     -     -       6     Sgnal Name     Sgnal Name       13     LV     -       14     R     -       15     Connector Name     Name       Connector Name     Poster Nacoon Nation       Connector Name     Poster Nacoon Nation       Connector Name     Poster Nacoon Nation       16     Connector Name       17     D       18     -       19     V       10     Sgnal Name	

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BCM (BODY CONTROL MODULE)	Connector No. D56 Connector Name Read Frontis network sericit physical state	Connector No. D88 Connector Nome subsko poor Power Window SwiTcH LH	Oormeetur No. 0108 Commetor Name 1.2040 DOOR POWER NAMEOW SWITCH FM
Connector No. D51 Connector Nome STED I AMD (INDIVER STINE)	Connector Type INS12PW-CS		
TK02FW	H.S. 12 3 167 8 1112	H.S. 2 3 4 5 1	H.S. 23451
H.S.			
	Terminal Color Of Signal Name [Specification] No. Wire	Terminal Color Of Signal Name [Specification] No. Wire	Terminal Color Of Signal Name [Specification] No. Wire Vie
	C - C - C - C - C - C - C - C - C -	2 2 SB	SB <
Terminal Color Of Signal Name [Specification] No. Wire	3 B	3 P	3 P
«			5 L
	LG BB		
Connector No. D55	+	Connector No. D105	Connector No. D169
Connector Name FROMT POWER WINDOW SWITCH IPASSENGER SIDE	Connector No. D85	Connector Name SLIDING DOOR LOCK ASSEMBLY RH	Connector Name AUTOMATIC BACK DOOR CLOSE SWITCH
Connector Type NS16FW-CS	Connector Name SLIDING DOOR LOCK ASSEMBLY LH	Connector Type SGY02FGY	Connector Type TK06FGY
E	Connector Type SGY02FGY	E E	() () () () () () () () () () () () () (
	115 [2]1]		4321
Terminal Color Of Signal Name [Specification]	)	Terminal Color Of Signal Name [Specification]	Terminal Color Of Signal Name [Specification] Wine (Specification]
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Commetter No.         E11           Commetter Name         E00.           All         E	D
Burrow MOOULE Eleast           Sinflex theory	E
E10 means me	F
Commettor         No.         Terminal         Rel         No.	Н
	I
2130     Sack book       2133     Sgnal       2133     Sgnal       2133     Sgnal       214     Sgnal	J
Connector No.     Connector No.       Connector Name     1       Connector Name     1       Connector Name     1       No.     Wire       1     P       2     P       3     P       4     B       3     B       4     A	K
MODULE)	L
Product         Product <t< td=""><td>BCS</td></t<>	BCS
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BCM (BO) Connector No. Connector Name Connector Type	(BOD <sup>1</sup> r Name E r Type	BCM (BODY CONTROL MODULE) Connector Name E(1) Connector Name E(2) Connector Name E(2) Connector Name (2) Connector Name (	Connector No. Connector Name Connector Type		E26 INTELLIGENT KEY WARNING BUZZER RK03FBR	22 BR 23 L 25 O 26 B	VDC OF SWITCH SIGNAL CANH G SENSOR SIGNAL (-) G SENSOR SIGNAL (-)	Connector No. E348 Connector Nume FFOVT COMBINATION LAMP LH Connector Type 200FBR	
H.S.		121년 121년 131년 131년 131년 131년 131년 131년	SH			Connector No. Connector Type	E100 FUSE BLOOK (J/B) NS16FW-CS	13	
Terminal No.	5	Signal Name [Specification]	Terminal No.	°°	Signal Name [Specification]	H.S.		Terminal Color Of Signal Name [Specification] No. Wire	
121	ی م	EVAP CONTROL SYSTEM PRESSURE SENSOR CAN COMMUNICATION LINE (CAN-L)	- 6	o R	1 1		12 11E 11E 11E	1 P	_
124	× L	CAN COMMUNICATION LINE (CAN-H) SENSOR POWER SUIPPLY						3 C	_
128	~	FUEL TANK TEMPERATURE SENSOR	Connector No.	or No.	E36	al C	Signal Name [Snacification]		r
133	HB >	IGNITION SWITCH	Connect	Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)	No. Wire	Francesco and a sum the des	Connector No. E349	
135	BR	SENSOR GROUND	Connector Type	or Type	AEZ22FB-AJZ4-LH	12F <		Connector Name FRONT COMBINATION LAMP RH	
139	SB		ģ				1	Connector Type Z03FBR	_
141	- BR	BRAKE PEDAL POSITION SWITCH EVAP CANISTER VENT CONTROL VALVE	B			2F R 4F L	1 1	- E	
142	H	SENSOR POWER SUPPLY	2		21 07 17 77 07	$\left  \right $	1		
143	~ 0 0	ACCELERATOR PEDAL POSITION SENSOR 2 SENSOR GROLIND			13 12111098765432	8F 9F BR	1 1	(321)	
145	_	POWER SUPPLY FOR ECM							
146	٩	SENSOR POWER SUPPLY							
147	а >	ECM GROUND SENSOR GROUND	Terminal No.	Color Of Wire	Signal Name [Specification]	Connector No.		Terminal Color Of	_
149	8	ECM GROUND	-	α	VALVE BATTERY	Connector Name	STOP LAMP SWITCH	No. Wire Signal Name [Specification]	
150		ACCELERATOR PEDAL POSITION SENSOR 1	2	~	RR LH WHEEL SENSOR SIGNAL	Connector Type	M04FW-LC	1 W -	
151	8	SENSOR GROUND	e	L	RR LH WHEEL SENSOR POWER SUPPLY	ģ		2 GR –	_
152	m	ECM GROUND	4	σ	G SENSOR POWER SUPPLY	B		3 W -	_
			9 9	m ≥	FR RH WHEEL SENSOR POWER SUPPLY FR RH WHEEL SENSOR SIGNAL	H.S.	3 4		
			~	>	BRAKE FLUID LEVEL SWITCH SIGNAL		- 0		
			~	LG	FR LH WHEEL SENSOE SIGNAL		11		
			6	L	FR LH WHEEL SENSOR POWER SUPPLY				

Signal Name [Sp

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WWW CONNECTOR Signal Name (Spectro R) Signal	С
Connector         Min         Min           Connector         Name         Di11A           SA         Connector         Name           A         Connector         Connector           A         Connector         Name           SA         Connector         Name	D
	E
22 CM HereField T T T T T T T T T T T T T T T T T T T	F
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Connector Momentor Type Momentor Type Momentor Mome	Н
Signal Nume (Seecification)       E-CVITC2       E-CVITC2       E-CVITC2       E-EVITC2       E-EVITC2       ERISOR 00000       AF SENSOR 1(BAMK 1)       BATTEX VLIPENETALINE       BATTEX VLIPENETALINE       BATTEX VLIPENETALINE       BATTEX VLIPENETALINE       BATTEX VLIPENETALINE       BATTEX VLIPENETALINE       SENSOR 00000       AF SENSOR 11 (BAMK 1)       BATTEX VLIPENETALINE       SENSOR 00000       AF SENSOR 11 (BAMK 1)       BATTEX VLIPENET ENSOR       IANTEX VLIPENET ENSOR       SENSOR 00000       AF SENSOR 00000       BATTEX VLIPENET ENSOR       BATTEX SENSOR 00000       SENSOR 000000       SENSOR 000000       BATTEX SENSOR       BATTEX SENSOR 000000       BATTEX SENSOR 000000       SEN	I
Supra I Nume E-E-C- E-C- BATTERY 2018 BATTERY 2018 BATTERY 2018 BATTERY 2018 BATTERY 2018 BATTERY 2018 BATTERY 2018 Control 1 Annual Control 1	J
Terminal No.         Color Of Wire         Color Of Wire           53         P/U         0           64         Wr         0           63         Wr         0           63         Wr         0           64         Wr         0           73         U         0           93         B         0           93         B         0           101         U         0           103         CR/B         0           111         Wr         111           111         Wr         111           111         V         N           111         V         N           111         V         N	К
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BEAM (BODT CONTROL MODULE)       Diameter Na.     Particular Poster Discretation Poster Discretatio Poster Discretation Poster Discretation Poster Discretatio	BCS
BCM (BODY CO connector Num     End (CODY CO connector Num       Definition     Part of connector Num       Definition     Connector Num       Main     Part of connector Num       Sign     V       Sign     Sign        Sign	Ν
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BCM (BODY CONTROL MODULE)	Connector No.	M17	Connector No.	M34	31	8	VEHICLE SPEED SIGNAL (8-PULSE)
Connector Name FLISE BLOCK (J/B)	Connector Name	I OPTICAL SENSOR	Connector Name	COMBINATION METER	32	a.	OVERDRIVE CONTROL SWITCH SIGNAL
- 1					34	0	FUEL LEVEL SENSOR SIGNAL
Connector Type NS10FW-CS	Connector Type	TK03FW	Connector Type	TH40FW-NH	35	BR	SZAT BELT BUCKLE SWECH SIGNAL (DRFRER SEE) (Websuk automatic drive positioner)
¢	ģ		ģ		35	٩	SEAT BELT BUCKLE SWECH SIGNAL (DRF/ER SIDE) (IREA externatio drive positioner)
F	F		F		36	BR	PASSENGER SEAT BELT WARNING SIGNAL
	S H		S H	K			
	5			1 2 3 4 5 8 10 11 12 13 14 15 18 19 20			
98 88 68 58		1 2 3		21 22 23 24 25 25 27 28 29 31 32 34 35 36 3	Connector No.		M4U
					Connector Name		DIODE
					Connector Type	Т	24335_C9902
Terminal Color Of	Terminal Color Of		Terminal Color Of			1	
No. Wire Signal Name [Specification]	No. Wire	e Signal Name [Specification]	No. Wire	Signal Name [Specification]	ť		
3B V -	1	POWER	-	BATTERY POWER SUPPLY [With automatic drive positioner]			
4B W -	2	G OUTPUT	- -	BATTERY POWER SUPPLY [Without automatic drive positioner]	<i>6</i> .		
5B BR -	е С	R GROUND	2 G	IGNITION SIGNAL [Without automatic drive positioner]			2 1
6B 0 -			2 Y	[GNITION SIGNAL [With automatic drive positioner]			
8B R/L -			3 3	GROUND			
9B GR -	Connector No.	M26	4 B	GROUND			
	Connotor Nome	NATS ANTENNA AMP	5 5	ILLUMINATION CONTROL SIGNAL [Wahout automatic drive positioned]	Terminal	Color Of	Simul Name [Sacaffortion]
	CONTRECTOR INST		5 B/P	ILLUMINATION CONTROL SIGNAL [With automatic drive positioner]	No.	Wire	Fundation and the concernor of the conce
Connector No. M8	Connector Typ	Connector Type TH04FW-NH	9 8	THIP RESET SWITCH SIGNAL [Without automatic drive positioner]	-	-	
	ſ		8 SB	TRIP RESET SWITCH SIGNAL [With automatic drive positioner]	2	в	1
	E		10 P	METER CONTROL SWITCH GROUND			
Connector Type NS12FW-CS		K	11	ENTER SWITCH SIGNAL			
	Ż		12 BR	SELECT SMTCH SIGNAL [With automatic drive positioner]	Connector No.		M45
£		1 2 3 4	12 R	SELECT SMTCH SIGNAL [Without automatic drive positioner]			HAZADD SMITCH
			13 W	ELLINGATION CONTROL SAFECH SIZEML (*) [WITHOUT automatic daws postioned]	CONTRECTO		
ור			13 Y	BLILUMINATION CONTROL SWITCH SIGNAL (*) [With suffernatic drive positioner]	Connector Type		TK04FW
			14 6	LLUMMATION CONTROL SHITCH SIZHAL [-] [MIDSue astemutic then contrand			
31	Terminal Color Of		14	R.LLMINATION CONTROL SMITCH SIGNAL (-) [18th automatic drive peoplemen]	l		
	No. Wire	e Signal Name [Specification]	15 BR	t			[
	-	BAT	16 L	ENGINE COOLANT TEMPERATURE SIGNAL	2 H V		
Terminal Color Of	2 0	GR CLK	18 L	AMBIENT SENSOR SIGNAL [Without automatic drive positioner]			3 1 2 4
Wire Signal Name		P DATA	18 LG	AMBIENT SENSOR SIGNAL [With automatic drive positioner]			
10C LG	4	B GROUND	19 R	A/C AUTO AMP. CONNECTION RECOGNITION SIGNAL			
11C V -		-	20	AMBLENT SENSOR GROUND [Without automatic drive positioner]			
12C Y -			20 Y	AMBIENT SENSOR GROUND [With automatic drive positioner]	Terminal	Color Of	- 3 2 2 2
6C GR -			21 L	CAN-H	No.	Wire	Signal Name [Specification]
70 GR -			22 P	CAN-L	-		1
8C G -			23 B	GROUND	2	œ	Т
9C Y -			24 B	FUEL LEVEL SENSOR GROUND	3	ж	1
			25 BR	ALTERNATOR SIGNAL [With automatic drive positioner]	4	8	-
			_	ALTER			
			26 BR	PARKING BRAKE SWITCH SIGNAL			

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Mail       Co Auto Ame.         Main Programment       Signal Nume (Specification)         Signal Nume (Specification)       Signal Nume (Specification)         Lial Lial Lial Lial Lial Lial Lial Lial	
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Connector Name Connector Name Connector Name Connector Name Connector Name Connector Name Name Name Name Name Name Name Name	K
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Terminal Cafor Of Signal Name [Speafication] No. Wres Free Mark Signal Name [Speafication] Signal Name [Speafication] Signal Name [Speafication] Signal Name Name Signal Name Name Signal Name Name Signal Name Name Signal Name Name Signal Name Signal Name Signal Name Signal Name Signal Name Signal Name Sign	tor No. MIT24 tor Nume BCM (BODY CONTR tor Type TH40FW-NH FIG 11 11 11 11 11 11 11 11 11 11 11 11 11	Terminal No.         Cafor Of Wree         Cafor Of Signal Name [Spearfication]           76         G         ON HND           76         F         PUBCH SD           78         V         PUBCH SD           79         W         PUBCH SD           70         CR         PUBCH SD           78         W         PUBCH SD           79         W         PUBCH SD           80         CR         PUBCH SD           81         E         PASS DOR MIT-           82         G         RATA           83         R         PASS DOR MIT-           84         CR         POOR MIT-           85         B         POOR MIT-           86         W         FRAME BARE ANT-           86         B         POOR MIT-           86         W         FRAME BARE ANT-           86         W         POOR MIT-           87         B         POOR MIT-           88         W         POOR MIT-           89         W         POOR MIT-           80         W         POOR MIT-           80         POOR MIT-         POOR MIT-           81<
36         R         COMBI SW OUTPUT 1           37         6         DETENT SW           39         1         Comments SW           39         1         L           39         1         Convector Comments SW           39         1         Convector Comments SW           40         1         Convector Num           6         Convector Num         BCM (BODY CONTROL MODULE)           Connector Num         BCM (BODY CONTROL MODULE)           Connector Type         FLAORER FHAG-SA	Terminal         Color Of No.         Signal Name [Specification]           10.         Ware         Signal Name [Specification]           4.         CR         REA WREN STOP POSITION           4.3         CR         P.           4.4         CR         P.           4.5         W         PASS DOOR SW           4.6         R         DOOR RM SW           4.7         C         St. DOOR RM SW           4.8         ELECT NUK RELY CONT           9         V         SELECT NUK RELY CONT           9         V         BLOCK DOOR RE SW           9         Y         BLOCK DOOR RE SW           9         NOT NOT RELY CONT           9         NOT NOT RELY CONT           9         BLOCK DOOR RE SW	R R R R R R R R R R R R R R R R R R R
Terminal No.         Concretion           1         Wre         Signal Name (Specification)           2         B	Terminal         Calor Of Nerse         Supral Name [Specification]           1         Wree         Supral Name [Specification]           2         R         COMBI SWINPUT 5           3         G         COMBI SWINPUT 3           4         RE         COMBI SWINPUT 3           5         G         COMBI SWINPUT 3           6         COMBI SWINPUT 3         COMBI SWINPUT 3           7         W         COMBI SWINPUT 3           8         G         COMBI SWINPUT 3           9         G         COMBI SWINPUT 3           9         G         COMBI SWINPUT 3           1         W         REY VLIUNCK SWINPUT 3           9         G         COMBI SWINPUT 3           1         W         REY VLIUNCK SWINPUT 3           9         G         COMBI SWINPUT 3           1         V         WEY VLIUNCK SWINPUT 3           9         GR         COMBI SWINPUT 2           1         V         MEY VLIUNCK SWINPUT 3	
BCM (BODY CONTROL MODULE)	Terminal         Color of Mo.         Signal Mane (Specification)           1         R         RR           2         G         OUTPUT 4           3         P         FR           4         W         IGN           5         BE         OUTPUT 3           6         B/Y         RR           7         P         Mouth 3           8         R         OUTPUT 3           9         B/Y         RRUT 3           10         W         INPUT 2           11         R         Mouth 3           12         W         INPUT 3	Ctor Name INSIE KEY ANTENN

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FRH Free story	В
R10     VANITY MIRROR LAND RH       VANITY MIRROR LAND RH     Signal Name [Specification]       Signal Name [Specification]     Signal Name [Specification]	С
Connector No.     R10       Connector Name     VAN       Connector Name     VAN       No.     No.	D
1111213141518 1111213141518 IBI 88 89 99 99 99 IBI 88 89 99 99 99 IBI 99 99 99 IBI 99 99 99 IBI 90 99 99 IBI 90 99 IBI 90 99 99 IBI 90 99 IBI 90 IBI 9	E
M193     M193       AV CONTROL UNIT     TH32FW-HH       TH32FW-HH     TH172/TH317       TH32FW-HH     TH172/TH317       Signal Name (Saverfreat-ton)     Signal Name (Saverfreat-ton)       Signal Name (Saverfreat-ton)     Signal Name (Saverfreat-ton)       AV COMM (CONT-DIST)     AV COMM (L)       AV COMM (H)     AV COMM (H)	F
Connector         M193           Connector         M194	G
NUTROL UNIT SUBJECT SU	J
5         L         500           1         0         0         0           1         0         0         0           1         0         0         0           1         0         0         0           1         0         0         0           1         0         0         0           1         0         0         0           1         0         0         0           1         0         0         0           1         0         0         0           1         0         0         0           1         0         0         0           1         0         0         0           10         0         0         0           10         0         0         0           100         0         0         0           100         0         0         0           100         0         0         0	К
	L
MISH       MODULE         PugH-ETM ION SWILL GND       PugH-ETM ION SWILL GND         PugH-ETM ION SWILL GND       PugH-ETM ION SWILL GND         FEEX DAMP SEA       ACC FIEX CONT OUTPUT         RATER FEEX FUEX CONT OUTPUT       EAST DOTATION         ION FELAX CONT OUTPUT       ACC FIEX CONT OUTPUT         ACC DID       ONULL UNT         M130       ONULL UNT         M100       M100         M110       ACC DID         M120       DONULL UNT         M130       ONULL UNT         M130       ACC DID         M130       ACC DID         M130       ACC DID         M130       ACC DID         M131       ACC DID         M130       ACC DID         M131       ACC DID         M130       ACC DID         ACC DID       ACC DID         ACC DID       ACC DID         ACC DID       ACC DID         Sgral Num [Specification]       Sgral Num [Specification]         Sgral Num [Specification]       Sgran Scional Specification]         Sgran Num [Specification]       Sgran Scional Specification]         Sgran Num [Specification]       Sgran Scional Specification]         Sgran Num [S	BCS
BCM     (BOD)     CONTROL     MODUL       22     E     PUSH-ETM (ON SWARL BLD)       29     E     Actor RELW WONN BLD.       20     E     IN PASITOR       20     E     E       20     E     E <t< td=""><td>Ν</td></t<>	Ν
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BCM (BODY CONTROL MODULE) Connector No. R18	Connector No. R27	Connector No. R31	Connector No. R108	
Connector Name SECOND PERSONAL LAMP LH Connector Type TK03FW	Connector Name THIRD FERSONAL LAMP RH Connector Type TK03FW	Connector Name FRONT SUNROOF MOTOR ASSEMBLY Connector Type YEA10FGY	Connector Name REMOTE KEYLESS ENTRY RECEIVER Connector Type TH04FW-NH	
4.S 13112	级 HS [3112]	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	(1) HS [1] [1] [1]	
Terminal Color Of Signal Name [Specification] No.	Terminal Color Of Signal Name [Specification] No. Wire	Terminal Color Of Signal Name [Specification] No. Wire	Terminal Color Of Signal Name [Specification] No.	
		1 B GROUND	1 BR BAT	
2 0 -	2 0 -			
	3 8	5 LG OPENSWBIT-0	4 LG GROUND	
		Y VEHICLE S	Т	
Connector No. R24	Connector No. R28	10 V CLOSESWBIT-1	Connector No. R109	
Connector Name VANITY MIRROR LAMP LH	Connector Name THIRD PERSONAL LAMP LH		Connector Name MAP LAMP	
Connector Type MCA02FW	Connector Type TK03FW	Connector No. R32	Connector Type TK06FGY	
		Connector Name REAR SUNROOF MOTOR ASSEMBLY		
V		Connector Type YEA10FGY		
2			12	
Ē		H.S. 11 3 5	5	
		R 7 8 10		
Terminal Color Of Signal Name [Specification] No. Wire	Terminal Color Of Signal Name [Specification] No. Wire	-11	Terrminal Color Of Signal Name [Specification] No. Wire	
			1 Y =	
2 B -	2 0 -	al	2 V -	
	3 B		3 L	
		8		
		>	+	
		BR OPEN	6 SB -	
		6 L BAT		

SB COM γ VEHICLE SPEED (8-PUL SB CLOSE SW(MAP)

JRMWG3297GB

## **INSPECTION AND ADJUSTMENT**

< BASIC INSPECTION >

BASIC INSPECTION	
INSPECTION AND ADJUSTMENT	
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM)	
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Description	
BEFORE REPLACEMENT	
When replacing BCM, save or print current vehicle specification with CONSULT configuration before replament. NOTE:	ice-
If "READ CONFIGURATION" can not be used, use the "WRITE CONFIGURATION - Manual selection" a replacing BCM.	lfter
AFTER REPLACEMENT	
CAUTION: When replacing BCM, always perform "WRITE CONFIGURATION" with CONSULT. Or not doing BCM control function does not operate normally. • Complete the procedure of "WRITE CONFIGURATION" in order.	so,
<ul> <li>Configuration is different for each vehicle model. Confirm configuration of each vehicle model.</li> <li>If you set incorrect "WRITE CONFIGURATION", incidents might occur.</li> <li>NOTE:</li> </ul>	
When replacing BCM, perform the system initialization (NATS) (if equipped).	
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Work Proc	e-
	32433
1.SAVING VEHICLE SPECIFICATION	
CONSULT Configuration Perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to <u>BCS-84, "CONF</u> <u>URATION (BCM) : Description"</u> .	-IG
<b>NOTE:</b> If "READ CONFIGURATION" can not be used, use the "WRITE CONFIGURATION - Manual selection" a replacing BCM.	lfte
>> GO TO 2.	
2.REPLACE BCM	
Replace BCM. Refer to BCS-98, "Removal and Installation".	
>> GO TO 3.	
3.WRITING VEHICLE SPECIFICATION	
CONSULT Configuration Perform "WRITE CONFIGURATION - Config file" or "WRITE CONFIGURATION - Manual selection" to w vehicle specification. Refer to <u>BCS-84, "CONFIGURATION (BCM) : Work Procedure"</u> .	/rite
>> GO TO 4.	
4.INITIALIZE BCM (NATS) (IF EQUIPPED)	
Perform BCM initialization. (NATS)	
>> WORK END	
CONFIGURATION (BCM)	

< BASIC INSPECTION >

### **CONFIGURATION (BCM) : Description**

INFOID:0000000011324338

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

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

#### NOTE:

Manual setting item: Items which need selection by vehicle specifications

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

For some models and specifications, the automatic setting item may not be displayed.

#### CAUTION:

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

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

### **CONFIGURATION (BCM) : Work Procedure**

**1.**WRITING MODE SELECTION

CONSULT Configuration Select "CONFIGURATION" of BCM.

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

2.PERFORM "WRITE CONFIGURATION - CONFIG FILE"

CONSULT Configuration Perform "WRITE CONFIGURATION - Config file".

#### >> WORK END

**3.** PERFORM "WRITE CONFIGURATION - MANUAL SELECTION"

CONSULT Configuration

- 1. Select "WRITE CONFIGURATION Manual selection".
- Identify the correct model and configuration list. Refer to <u>BCS-85, "CONFIGURATION (BCM) : Configura-</u> tion list".
- 3. Confirm and/or change setting value for each item. CAUTION:

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

#### NOTE:

If items are not displayed, touch "SETTING". Refer to <u>BCS-85, "CONFIGURATION (BCM) : Configuration</u> <u>list"</u> for written items and setting value.

4. Select "SETTING".

#### CAUTION:

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

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

>> GO TO 4.

INFOID:000000011324339

## **INSPECTION AND ADJUSTMENT**

< BASIC INSPECTION >

# 4. OPERATION CHECK

Confirm that each function controlled by BCM operates normally.

#### >> WORK END

## **CONFIGURATION (BCM) : Configuration list**

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#### **CAUTION:**

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

			D
SETTING ITEM		NOTE	
Items	Setting value	NOTE	
CAN CONNECTION UNIT	WITHOUT $\Leftrightarrow$ MODE13 $\Leftrightarrow$ MODE15	<ul> <li>WITHOUT: Without automatic sliding door system and automatic back door system</li> <li>MODE13: With automatic sliding door system and automatic back door system</li> <li>MODE15: With automatic sliding door system, and without automatic back door system</li> </ul>	E F
AUTO LIGHT	WITH $\Leftrightarrow$ WITHOUT	_	
DTRL	WITH $\Leftrightarrow$ WITHOUT	<ul><li>WITH: With daytime running light system</li><li>WITHOUT: Without daytime running light system</li></ul>	G

 $\Leftrightarrow$ : Items which confirm vehicle specifications

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# SHIPPING MODE CANCEL OPERATION

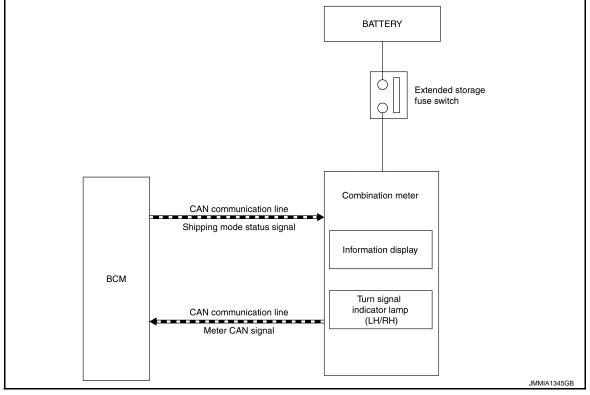
< BASIC INSPECTION >

# SHIPPING MODE CANCEL OPERATION

## Description

INFOID:000000011324341





### DESCRIPTION

- The combination meter transmits meter CAN signal<sup>\*1</sup> to BCM via CAN communication, when the extended storage fuse switch is ON.
- BCM switches the status (shipping mode or normal mode) by itself according to the meter CAN signal<sup>\*1</sup> from combination meter, and transmits shipping mode status signal to combination meter via CAN communication.
- The combination meter displays extended storage fuse warning message\*<sup>2</sup> on the information display, and turns the turn signal indicator lamp (LH/RH) ON, when BCM is in shipping mode.
- BCM control functions are limited in shipping mode. Refer to <u>BCS-97, "Description"</u>.
- \*1: Odometer signal, wake up signal and each signal.
- \*2: When shipping mode function operates, "SHIPPING MODE ON PUSH STORAGE FUSE" is displayed.

### Work Procedure

INFOID:000000011324342

# **1.**SHIPPING MODE CANCEL OPERATION

- 1. Turn ignition switch OFF.
- 2. Push in (switch on) the extended storage fuse switch. Refer to PG-113, "How To Check".
- 3. Turn ignition switch ON.
- 4. Turn ignition switch OFF and wait at least 2 seconds.

### >> GO TO 2.

2. SHIPPING MODE CANCEL CHECK

- 1. Turn ignition switch ON.
- 2. Check that extended storage fuse warning message is not displayed on odometer display.

>> WORK END

### < DTC/CIRCUIT DIAGNOSIS >

# DTC/CIRCUIT DIAGNOSIS U1000 CAN COMM

## Description

INFOID:000000011324343

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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 <u>LAN-32, "CAN COMMUNICATION SYSTEM : CAN Communica-</u> tion Signal Chart".

### **DTC Logic**

INFOID:000000011324344

INFOID:000000011324345

## DTC DETECTION LOGIC

				F
DTC	CONSULT display de- scription	DTC Detection Condition	Possible cause	
U1000	CAN COMM	When BCM cannot communicate CAN com- munication signal continuously for 2 seconds or more.	CAN communication system	G

## **Diagnosis Procedure**

### **1.**PERFORM SELF DIAGNOSTIC

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

#### Is DTC "U1000" displayed?

- YES >> Refer to LAN-17, "Trouble Diagnosis Flow Chart".
- NO >> Refer to GI-42, "Intermittent Incident".

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# **U1010 CONTROL UNIT (CAN)**

### < DTC/CIRCUIT DIAGNOSIS >

# U1010 CONTROL UNIT (CAN)

# DTC Logic

INFOID:000000011324346

# DTC DETECTION LOGIC

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

# **Diagnosis Procedure**

INFOID:000000011324347

# **1.**REPLACE BCM

When DTC "U1010" is detected, replace BCM.

>> Replace BCM. Refer to <u>BCS-98, "Removal and Installation"</u>.

### < DTC/CIRCUIT DIAGNOSIS >

# U0415 VEHICLE SPEED

# Description

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

# DTC Logic

INFOID:000000011324349

INFOID:000000011324350

INFOID:000000011324348

### DTC DETECTION LOGIC

DTC	DTC CONSULT display de- scription DTC Detection Condition		Probable cause	D
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.	<ul><li>ABS actuator and electric unit (control unit)</li><li>BCM</li></ul>	Е
DTC CONFIRMATION PROCEDURE  1.DTC CONFIRMATION				

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

#### Is any DTC detected?

- YES >> Refer to <u>BCS-89, "Diagnosis Procedure"</u>.
- 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. Refer to BRC-	J
38, "DTC Index".	
Is any DTC detected?	

- YES >> Repair or replace the malfunctioning part.
- NO >> Replace BCM. Refer to <u>BCS-98, "Removal and Installation"</u>.

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# < DTC/CIRCUIT DIAGNOSIS >

# B2562 LOW VOLTAGE

# DTC Logic

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INFOID:000000011324352

### DTC DETECTION LOGIC

DTC	CONSULT display de- scription	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.

- 2. Turn ignition switch OFF.
- 3. Perform the "Self Diagnostic Result" of BCM with CONSULT, when passed 120 seconds or more after the ignition switch is turned ON.

#### Is any DTC detected?

- YES >> Refer to <u>BCS-90, "Diagnosis Procedure"</u>.
- NO >> INSPECTION END

### Diagnosis Procedure

1.CHECK POWER SUPPLY CIRCUIT

Check BCM power supply circuit. Refer to BCS-91, "Diagnosis Procedure".

Is the circuit normal?

- YES >> Replace BCM. Refer to <u>BCS-98, "Removal and Installation"</u>.
- NO >> Repair the malfunctioning part.

< DTC/CIRCUIT DIAGNOSIS >
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# POWER SUPPLY AND GROUND CIRCUIT

# Diagnosis Procedure

**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			L
	Ballery powers			10
s the fuse fusin	ig?			
		fuse or fusible	e link after repai	ing the affected circuit if a fuse or fusible link i
NO >> GO				
	VER SUPPLY (			
	n switch OFF.			
	BCM connecto	rs.		
. Check volta	age between BC	CM harness co	nnector and gro	und.
			1	
	Terminals		_	
(-		(–)	Voltage (Approx.)	
	CM Terminal	4	(πρίον.)	
Connector	Terminal	Ground	Battery voltage	
M123	70 57			Battery voltage
YES >> GO	ment value norn	<u>nal :</u>		
	pair harness or	connector.		
<b>B.</b> CHECK GRO	OUND CIRCUIT	-		
			nector and groun	d.
	,		0	
BC	CM		Continuity	
Connector	Terminal	Ground	Continuity	
M123	67		Existed	
<u>Does continuity</u>	<u>exist?</u>			
	PECTION END			
NO >> Re	pair harness or	connector.		

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INFOID:000000011324353

# **COMBINATION SWITCH OUTPUT CIRCUIT**

### < DTC/CIRCUIT DIAGNOSIS >

# COMBINATION SWITCH OUTPUT CIRCUIT

## **Diagnosis Procedure**

INFOID:000000011324354

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

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

System	BCM		Combinat	Continuity	
System	Connector	Terminal	Connector	Terminal	Continuity
OUTPUT 1		36		11	
OUTPUT 2		35		9	
OUTPUT 3	M121	34	M103	7	Existed
OUTPUT 4		33		10	
OUTPUT 5		32		13	

### Does continuity exist?

YES >> GO TO 2.

NO >> Repair harnesses or connectors.

2. CHECK OUTPUT 1 - 5 CIRCUIT FOR SHORT

Check for continuity between BCM harness connector and ground.

System	BCM			Continuity
System	Connector	Terminal		Continuity
OUTPUT 1		36		
OUTPUT 2		35	Ground	
OUTPUT 3	M121	34		Not existed
OUTPUT 4		33		
OUTPUT 5		32		

#### Does continuity exist?

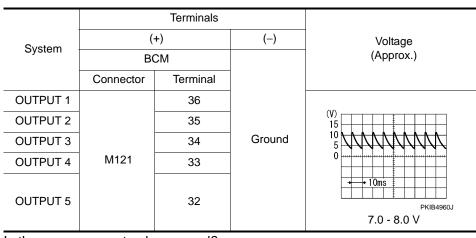
YES >> Repair harnesses or connectors.

NO >> GO TO 3.

# **3.**CHECK BCM OUTPUT VOLTAGE

1. Connect BCM connector.

2. Check voltage between BCM harness connector and ground.



Is the measurement value normal?

	COMBINATION SWITCH OUTPUT CIRCUIT	
< DTC/	CIRCUIT DIAGNOSIS >	
YES NO	>> Replace combination switch. >> Replace BCM. Refer to <u>BCS-98, "Removal and Installation"</u> .	A
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# **COMBINATION SWITCH INPUT CIRCUIT**

### < DTC/CIRCUIT DIAGNOSIS >

# COMBINATION SWITCH INPUT CIRCUIT

## **Diagnosis Procedure**

INFOID:000000011324355

# 1. CHECK INPUT 1 - 5 CIRCUIT FOR OPEN

1. Turn ignition switch OFF.

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

System	BC	М	Combinat	Continuity			
System	Connector	Terminal	Connector	Terminal	Continuity		
INPUT 1		6		12			
INPUT 2		5		14			
INPUT 3	M121	4	M103	5	Existed		
INPUT 4		3		2			
INPUT 5		2		8			

Does continuity exist?

YES >> GO TO 2.

NO >> Repair harnesses or connectors.

2.CHECK INPUT 1 - 5 CIRCUIT FOR SHORT

Check for continuity between BCM harness connector and ground.

System	BC	CM		Continuity		
System	Connector	Terminal				
INPUT 1		6				
INPUT 2	M121	5	Ground			
INPUT 3		4		Not existed		
INPUT 4		3				
INPUT 5		2				

#### Does continuity exist?

YES >> Repair harnesses or connectors.

NO >> GO TO 3.

3. CHECK BCM INPUT SIGNAL

1. Connect BCM and combination switch connectors.

2. Turn ON any switch in the system that is malfunction.

3. Check voltage between BCM harness connector and ground.

System	(+	·)	(-)	Voltage	
	BC	М		(Approx.)	
	Connector	Terminal			
INPUT 1		6			
INPUT 2		5 G	Ground	Refer to BCS-	
INPUT 3	M121	4		40, "Refer-	
INPUT 4		3		ence Value".	
INPUT 5		2			

#### Is the measurement value normal?

Yes >> Replace BCM. Refer to <u>BCS-98, "Removal and Installation"</u>.

### **BCS-94**

# **COMBINATION SWITCH INPUT CIRCUIT**

No >> Replace combined and the second	nation switch.
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Revision: 2014 August

# **COMBINATION SWITCH SYSTEM SYMPTOMS**

#### < SYMPTOM DIAGNOSIS >

# SYMPTOM DIAGNOSIS COMBINATION SWITCH SYSTEM SYMPTOMS

## Symptom Table

INFOID:000000011324356

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

Data monitor item																	
FR WIPER HI	FR WIPER LOW	FR WASHER SW	FR WIPER INT	RR WIPER ON	RR WIPER INT	RR WASHER SW	INT VOLUME	TURN SIGNAL R	TURN SIGNAL L	TAIL LAMP SW	HI BEAM SW	HEAD LAMP SW 1	HEAD LAMP SW 2	PASSING SW	AUTO LIGHT SW	FR FOG SW	Malfunc- tion com- bination
	×	×						×	×								A
×			×									×		×			В
						×	×				×		×				С
					×		×			×					×		D
				×			×									×	E
×					×		×										F
		×		×		×	×										G
	×		×												×		Н
									×				×	×		×	I
								×		×	×	×					J
								All Item	IS								К
If only one item is detected or the item is not applicable to the combinations A to K									L								

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

Malfunction combination	Malfunctioning part	Repair or replace				
А	Combination switch OUTPUT 1 circuit					
В	Combination switch OUTPUT 2 circuit					
С	Combination switch OUTPUT 3 circuit	Inspect the combination switch output circuit applicable to the malfunction- ing part. Refer to <u>BCS-92, "Diagnosis Procedure"</u> .				
D	Combination switch OUTPUT 4 circuit	Ing part. Refer to <u>DOS'32, Diagnosis Procedure</u> .				
E	Combination switch OUTPUT 5 circuit					
F	Combination switch INPUT 1 circuit					
G	Combination switch INPUT 2 circuit					
Н	Combination switch INPUT 3 circuit	Inspect the combination switch input circuit applicable to the malfunctioning part. Refer to <u>BCS-94, "Diagnosis Procedure"</u> .				
I	Combination switch INPUT 4 circuit					
J	Combination switch INPUT 5 circuit					
К	BCM	Replace BCM. Refer to BCS-98. "Removal and Installation".				
L	Combination switch	Replace combination switch.				

Malfunction item: ×

# < SYMPTOM DIAGNOSIS > NORMAL OPERATING CONDITION

# Description

Description	INFOID:000000011324357	
<ul> <li>SHIPPING MODE</li> <li>Shipping mode inhibits battery power consumption during transportation or storage of the viset to shipping mode before being shipped from the factory.</li> <li>When ignition switch is OFF, BCM operates shipping mode.</li> <li>BCM control functions are limited in shipping mode. The limited items that are not operated.</li> </ul>	vehicle. Vehicle is	B
<ul> <li>ping mode are as follows.</li> <li>Door lock and unlock switch function</li> <li>Remote keyless entry function</li> <li>Theft warning alarm function</li> <li>Lighting &amp; turn signal switch function</li> </ul>		D
<ul> <li>Lighting &amp; turn signal switch function</li> <li>Interior room lamp timer control function</li> <li>For shipping mode cancel operation, refer to <u>BCS-86, "Description"</u>.</li> <li>NOTE:</li> </ul>		E
Do not cancel shipping mode during storage of the vehicle. Always cancel shipping mode the vehicle to customer.	before delivery of	F
		G
		Η

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# REMOVAL AND INSTALLATION

# BCM

### Removal and Installation

INFOID:000000011324358

#### NOTE:

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

#### REMOVAL

- 1. Remove combination meter. Refer to <u>MWI-90, "Removal and Installation"</u>.
- 2. Remove bolts.
- 3. Remove BCM and disconnect the connectors.

#### INSTALLATION

Install in the reverse order of removal.

#### CAUTION:

Be sure to perform "WRITE CONFIGURATION" when replacing BCM. Or not doing so, BCM control function does not operate normally. NOTE:

Be sure to perform the system initialization (NATS) when replacing BCM. Refer to <u>BCS-83. "ADDITIONAL</u> <u>SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Work Procedure"</u>.

# **COMBINATION SWITCH**

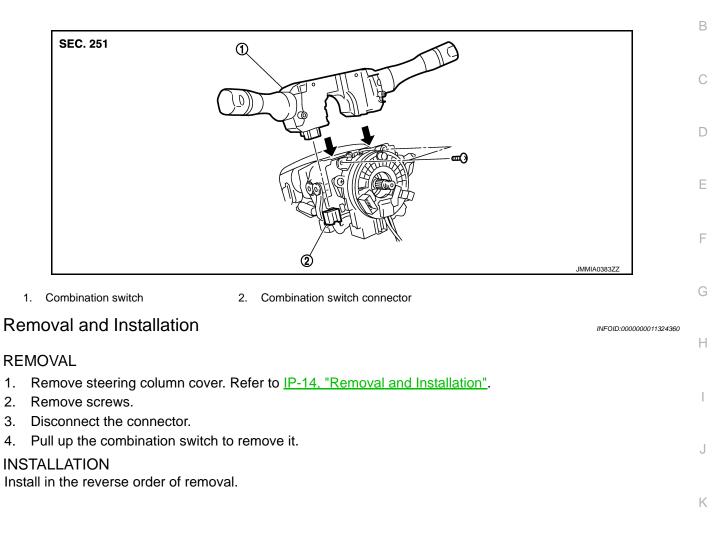
# < REMOVAL AND INSTALLATION >

# COMBINATION SWITCH

# Exploded View

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