BODY CONTROL SYSTEM C

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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 replacement. NOTE: If "READ CONFIGURATION" can not be used, use the "WRITE CONFIGURATION - Manual selection" after replacing BCM. AFTER REPLACEMENT **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. • If you set incorrect "WRITE CONFIGURATION", incidents might occur. NOTE: When replacing BCM, perform the system initialization (NATS) (if equipped). ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Work Procedure **1.**SAVING VEHICLE SPECIFICATION CONSULT Configuration Perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to BCS-4, "CONFIGU-RATION (BCM) : Description". NOTE: If "READ CONFIGURATION" can not be used, use the "WRITE CONFIGURATION - Manual selection" after replacing BCM. >> GO TO 2.

2.REPLACE BCM

Replace BCM. Refer to BCS-84, "Removal and Installation".

>> GO TO 3.

3.WRITING VEHICLE SPECIFICATION

(P)CONSULT Configuration

Perform "WRITE CONFIGURATION - Config file" or "WRITE CONFIGURATION - Manual selection" to write vehicle specification. Refer to BCS-4, "CONFIGURATION (BCM) : Work Procedure".

>> GO TO 4.

4.INITIALIZE BCM (NATS) (IF EQUIPPED)

Perform BCM initialization. (NATS)

>> WORK END CONFIGURATION (BCM) А

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< BASIC INSPECTION >

CONFIGURATION (BCM) : Description

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

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-5, "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-5, "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.

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

4. OPERATION CHECK

Confirm that each function controlled by BCM operates normally.

>> WORK END

CONFIGURATION (BCM) : Configuration list

CAUTION:

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

EXCEPT FOR MEXICO

MANUAL SETTING ITEM		NOTE	_
Items	Setting value		E
AV C/U	WITH ⇔ WITHOUT	WITH: With navigation systemWITHOUT: Without navigation system	
AUTO BACK DOOR	WITH ⇔ WITHOUT	WITH: With automatic back door systemWITHOUT: Without automatic back door system	Г
AUTO LIGHT	$WITH \Leftrightarrow WITHOUT$	_	G
DTRL	WITH ⇔ WITHOUT	WITH: With daytime running light systemWITHOUT: Without daytime running light system	0
RAIN SENSOR	$WITH \Leftrightarrow WITHOUT$	_	Н
THEFT ALM AREA	WITHOUT \Leftrightarrow MODE2	WITHOUT: Without vehicle security systemMODE2: With vehicle security system	
Key Fob Type	$MODE7 \Leftrightarrow MODE9$	MODE7: With automatic back door systemMODE9: Without automatic back door system	

⇔: Items which confirm vehicle specifications

AUTO SETTING ITEM		NOTE	0
Items	Setting value	NOTE	
BATTERY SAVER FUNCTION	MODE3	-	K
Trunk/Glass Hatch select	Glass Hatch	Even on a vehicle without glass hatch. It displays "Glass Hatch".	_
TRANSIT MODE	WITH	-	L
ACC BAT SAVE FUNC	MODE2	_	
TR OPEN SW (INT)	MODE1	_	BC
H/L BULB	DEFAULT	_	
FR FOG LAMP	WITH	_	-
RR FOG LAMP	WITH	Even on a vehicle without rear fog lamp. It displays "WITH".	N
DI LMP VARIAT	MODE2	-	-
LIGHT RECOG	MODE7		
TRANSMISSION	AT with ABS	_	0
REAR WIPER	WITH	_	-
HAZARD SW TYPE	MODE1	-	P
TR CANCEL SW	WITHOUT	_	-
BCM AC CONTROL	MODE1	_	-
TRUNK ACT OUTPUT	MODE2	-	-
TPMS	WITH	-	-
TIRE PRESSURE	230kPa	-	-

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INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

AUTO SETTING ITEM		NOTE
Items	Setting value	NOTE
RAIN SEN TYPE	MODE2	_
FOG ON WITH AUTO LIGHT	WITHOUT	_

FOR MEXICO

MANUAL SETTING ITEM		NOTE
Items	Setting value	NOTE
AV C/U	WITH	_
AUTO BACK DOOR	WITHOUT	_
AUTO LIGHT	$WITH \Leftrightarrow WITHOUT$	_
DTRL	WITHOUT	_
RAIN SENSOR	$WITH \Leftrightarrow WITHOUT$	_
THEFT ALM AREA	MODE2	_
HAZARD SW TYPE	MODE1	
	1 10 11	

 \Leftrightarrow : Items which confirm vehicle specifications

AUTO SETTING ITEM		NOTE
Items	Setting value	NOTE
BATTERY SAVER FUNCTION	MODE3	_
Trunk/Glass Hatch select	Glass Hatch	Even on a vehicle without glass hatch. It displays "Glass Hatch".
TRANSIT MODE	WITH	_
ACC BAT SAVE FUNC	MODE2	_
TR OPEN SW (INT)	MODE1	_
H/L BULB	DEFAULT	_
FR FOG LAMP	WITH	_
RR FOG LAMP	WITH	Even on a vehicle without rear fog lamp. It displays "WITH".
DI LMP VARIAT	MODE2	_
LIGHT RECOG	MODE7	
TRANSMISSION	AT with ABS	_
REAR WIPER	WITH	_
TR CANCEL SW	WITHOUT	_
BCM AC CONTROL	MODE1	_
TRUNK ACT OUTPUT	MODE2	_
TPMS	WITHOUT	_
TIRE PRESSURE	240kPa	_
RAIN SEN TYPE	MODE2	_
FOG ON WITH AUTO LIGHT	WITHOUT	_
Key Fob Type	MODE9	

SHIPPING MODE CANCEL OPERATION

< BASIC INSPECTION >

SHIPPING MODE CANCEL OPERATION

Description

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DESCRIPTION

- The combination meter transmits meter CAN signal^{*1} 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^{*1} from K combination meter, and transmits shipping mode status signal to combination meter via CAN communication.
- The combination meter displays extended storage fuse warning message^{*2} 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-81. "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

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1.SHIPPING MODE CANCEL OPERATION

- 1. Turn ignition switch OFF.
- 2. Push in (switch on) the extended storage fuse switch. Refer to PG-28, "Fuse".
- 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 displays on information display.

>> WORK END

< SYSTEM DESCRIPTION >

SYSTEM DESCRIPTION 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-10, "System Diagram"
Signal buffer system	BCS-14, "System Diagram"
Power consumption control system	BCS-15. "System Diagram"
Auto light system	EXL-15, "System Diagram"
Turn signal and hazard warning lamp system	 <u>EXL-19, "System Diagram"</u> (Xenon type headlamp) <u>EXL-159, "System Diagram"</u> (Halogen type headlamp)
Headlamp system	 <u>EXL-10, "System Diagram"</u> (Xenon type headlamp) <u>EXL-151, "System Diagram"</u> (Halogen type headlamp)
Parking, license plate and tail lamps system	 <u>EXL-21, "System Diagram"</u> (Xenon type headlamp) <u>EXL-161, "System Diagram"</u> (Halogen type headlamp)
Front fog lamp system	 <u>EXL-17, "System Diagram"</u> (Xenon type headlamp) <u>EXL-157, "System Diagram"</u> (Halogen type headlamp)
Exterior lamp battery saver system	 <u>EXL-23, "System Diagram"</u> (Xenon type headlamp) <u>EXL-163, "System Diagram"</u> (Halogen type headlamp)
Daytime running light system	 <u>EXL-13, "System Diagram"</u> (Xenon type headlamp) <u>EXL-153, "System Diagram"</u> (Halogen type headlamp)
Interior room lamp control system	INI -6 "System Diagram"
Step lamp system	
Interior room lamp battery saver system	INL-9, "System Diagram"
Front wiper and washer system	 <u>WW-6</u>, "WITH RAIN SENSOR : System Diagram" (With rain sensor) <u>WW-10</u>, "WITHOUT RAIN SENSOR : System Diagram" (Without rain sensor)
Rear wiper and washer system	WW-15, "System Diagram"
Warning chime system	WCS-5, "WARNING CHIME SYSTEM : System Diagram"
Door lock system	DLK-14, "System Diagram"
Automatic back door system	DLK-44, "System Diagram"
Automatic drive positioner system	ADP-12, "AUTOMATIC DRIVE POSITIONER SYSTEM : System Diagram"
Nissan Vehicle Immobilizer System (NVIS) - NATS	SEC-14, "System Diagram"
Vehicle security system	SEC-10 "System Diagram"
Panic alarm	<u>SECTO, System Diagram</u>

BODY CONTROL SYSTEM

< SYSTEM DESCRIPTION >

System	Reference	Δ
Rear window defogger system	 <u>DEF-4, "WITH BOSE SYSTEM : System Diagram"</u> (With BOSE system) <u>DEF-6, "WITHOUT BOSE SYSTEM : System Diagram"</u> (Without BOSE system) 	B
Intelligent Key system/engine start system	DLK-18, "INTELLIGENT KEY SYSTEM : System Diagram"	
Power window system	PWC-7, "System Diagram"	
Retained accessory power (RAP) system	PWC-7. "System Description"	С
Tire pressure monitor system (TPMS) - AIR PRESSURE MONI- TOR	WT-7, "System Description"	D

Component Parts Location

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1. BCM

A. Behind of combination meter

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< SYSTEM DESCRIPTION >

COMBINATION SWITCH READING SYSTEM

System Diagram



NOTE:

- *1: TAIL LAMP switch links lighting switch 1ST position.
- *2: "FR WIP INT/AT" is FR WIPER INT/AUTO.

System Description

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OUTLINE

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

COMBINATION SWITCH MATRIX

Combination switch circuit

		Combination swite	ch			BCM	
Lighting	switch		Wiper switch			•	
		FR WIPER LOW	FR WASHER			INPUT 1	
HEADLAMP 1	PASSING	FR WIP INT/AT*2	┝━━━━━━	FR WIPER HI			
	HEADLAMP 2		RR WASHER				
TAIL LAMP*1			WIP VOLUME 3				CPU
 	FR FOG			WIP VOLUME 2	,		
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NOTE:

- *1: TAIL LAMP switch links lighting switch 1ST position.
- *2: "FR WIP INT/AT" is FR WIPER INT/AUTO.

< SYSTEM DESCRIPTION >

combination switch INPUT-OUTPUT system list							
System	OUTPUT 1	OUTPUT 2	OUTPUT 3	OUTPUT 4	OUTPUT 5	A	
INPUT 1	—	FR WASHER	FR WIPER LOW	TURN LH	TURN RH		
INPUT 2	FR WIPER HI	_	FR WIPER INT/ AUTO	PASSING	HEADLAMP 1	В	
INPUT 3	WIP VOLUME 1	RR WASHER		HEADLAMP 2	HI BEAM		
INPUT 4	RR WIPER INT	WIP VOLUME 3	AUTO LIGHT	_	TAIL LAMP	0	
INPUT 5	WIP VOLUME 2	RR WIPER ON	—	FR FOG	—	C	

NOTE:

Headlamp has a dual system switch.

COMBINATION SWITCH READING FUNCTION

Description



NOTE:

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

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



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< SYSTEM DESCRIPTION >

Operation Example

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

Example 1: When a switch (TURN RH switch) is turned ON

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



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• BCM detects the combination switch status signal "1E" when the signal of OUTPUT 5 is input to INPUT 1.

BCM judges that the TURN RH switch is ON when the signal "1E" is detected.

Example 2: When some switches (turn RH switch, front wiper LO switch) are turned ON

The circuits between INPUT 1 and OUTPUT 5 and between INPUT 1 and OUTPUT 3 are formed when the TURN RH switch and FR WIPER LOW switch are turned ON.



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

WIPER VOLUME DIAL POSITION

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

Winor volume dial position	Switch status			
	WIP VOLUME 1	WIP VOLUME 2	WIP VOLUME 3	
1	ON	ON	ON	
2	ON	ON	OFF	

< SYSTEM DESCRIPTION >

Winer volume dial position	Switch status			
wiper volume dial position	WIP VOLUME 1	WIP VOLUME 2	WIP VOLUME 3	- A
3	ON	OFF	OFF	_
4	OFF	OFF	OFF	В
5	OFF	OFF	ON	
6	OFF	ON	ON	
7	OFF	ON	OFF	С

NOTE:

For details of wiper volume dial position, refer to <u>WW-6, "WITH RAIN SENSOR : System Description"</u> (with rain sensor), <u>WW-10, "WITH-</u> <u>OUT RAIN SENSOR : System Description"</u> (without rain sensor).

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SIGNAL BUFFER SYSTEM

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SIGNAL BUFFER SYSTEM

System Diagram



System Description

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OUTLINE

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

Signal transmission function list

Signal name	Input	Output	Description
 Ignition switch ON signal Ignition switch signal	Push-button ignition switch (Push switch)	 IPDM E/R (CAN) Driver seat control unit (CAN) Automatic back door control unit (CAN) 	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	 Combination meter (CAN) IPDM E/R (CAN) Driver seat control unit (CAN) 	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.
Stop lamp switch signal	 Stop lamp switch ICC brake hold relay (With ICC) 	TCM (CAN)	Inputs the stop lamp switch 1 signal, and stop lamp switch 2 signal or ICC brake hold relay (with ICC) signal, and transmits it via CAN communication.
Interlock/PNP switch signal	ТСМ	IPDM E/R (CAN)	Inputs the selector lever P/N po- sition signal, and transmits the interlock/PNP switch signal via CAN communication.

POWER CONSUMPTION CONTROL SYSTEM

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POWER CONSUMPTION CONTROL SYSTEM

System Diagram



System Description

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OUTLINE

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

Normal mode (wake-up)

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

CAN communication sleep mode (CAN sleep)

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

Low power consumption mode (BCM sleep)

- Low power consumption control is active

- CAN transmission is stopped

LOW POWER CONSUMPTION CONTROL WITH BCM

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

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

Sleep mode activation

- BCM receives the sleep-ready signal (ready) from IPDM E/R and combination meter 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.

POWER CONSUMPTION CONTROL SYSTEM

< SYSTEM DESCRIPTION >

Sleep condition

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

Wake-up operation

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

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

POWER CONSUMPTION CONTROL SYSTEM

< SYSTEM DESCRIPTION >

Component Parts Location

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- 1.
- 4. Driver seat control unit
- Engine room (LH) Α.
- D. Dash side lower (Passenger side)
- 5. Automatic back door control unit
- В. Behind of combination meter
- C. Backside of the seat cushion (driver seat)

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< SYSTEM DESCRIPTION > DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

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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	Read and save the vehicle specification.Write the vehicle specification when replacing BCM.

SYSTEM APPLICATION

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

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

				×: Applicable item	
Suctor	Sub system selection item	Diagnosis mode			
System	Sub system selection item	Work Support	Data Monitor	Active Test	
Door lock	DOOR LOCK	×	×	×	
Rear window defogger	REAR DEFOGGER		×	×	
Warning chime	BUZZER		×	×	
Interior room lamp timer	INT LAMP	×	×	×	
Exterior lamp	HEAD LAMP	×	×	×	
Wiper and washer	WIPER	×* ¹	×	×	
Turn signal and hazard warning lamps	FLASHER	×	×	×	
_	AIR CONDITONER*2				
Intelligent Key systemEngine start system	INTELLIGENT KEY	×	×	×	
Combination switch	COMB SW		×		
Body control system	BCM	×			
NVIS - NATS	IMMU		×	×	
Interior room lamp battery saver	BATTERY SAVER	×	×	×	
Back door opener system	TRUNK		×	×	
Vehicle security system	THEFT ALM	×	×	×	
RAP system	RETAINED PWR		×		
Signal buffer system	SIGNAL BUFFER		×	×	
TPMS	TPMS (AIR PRESSURE MONITOR)	×	×	×	

NOTE:

• *1: For models with rain sensor this mode is displayed, but is not used.

• *2: This item is displayed, but is not used.

FREEZE FRAME DATA (FFD)

< SYSTEM DESCRIPTION >

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

CONSULT screen item	Indication/Unit		Description		
Vehicle Speed	km/h	Vehicle speed of the moment a particular DTC is detected			
Odo/Trip Meter	km	Total mileage (Odometer value) of the moment a particular DTC is detected			
	SLEEP>LOCK	-	While turning BCM status from low power consumption mode to normal mode (Power supply position is "LOCK"*)	С	
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power supply position is "OFF".)		
	LOCK>ACC		While turning power supply position from "LOCK" to "ACC"	D	
	ACC>ON		While turning power supply position from "ACC" to "IGN"		
	RUN>ACC		While turning power supply position from "RUN" to "ACC" (Vehicle is stopping and selector lever is except P position.)	Е	
	CRANK>RUN		While turning power supply position from "CRANKING" to "RUN" (From cranking up the engine to run it)	_	
	RUN>URGENT	Power position status of the moment a particular DTC is detected	While turning power supply position from "RUN" to "ACC" (Emer- gency stop operation)	F	
	ACC>OFF		While turning power supply position from "ACC" to "OFF"	G	
	OFF>LOCK		While turning power supply position from "OFF" to "LOCK"*		
Vehicle Condition	OFF>ACC		While turning power supply position from "OFF" to "ACC"	_	
	ON>CRANK		While turning power supply position from "IGN" to "CRANKING"	Н	
	OFF>SLEEP		While turning BCM status from normal mode (Power supply posi- tion is "OFF".) to low power consumption mode		
	LOCK>SLEEP		While turning BCM status from normal mode (Power supply posi- tion is "LOCK"*) to low power consumption mode		
	LOCK		Power supply position is "LOCK"*		
	OFF		Power supply position is "OFF" (Ignition switch OFF)	J	
	ACC		Power supply position is "ACC" (Ignition switch ACC)		
	ON		Power supply position is "IGN" (Ignition switch ON with engine stopped)	K	
	ENGINE RUN		Power supply position is "RUN" (Ignition switch ON with engine running)		
	CRANKING		Power supply position is "CRANKING" (At engine cranking)	L	
IGN Counter0 - 39The number of times that ignition switch is turned ON after DTC is detected • The number is 0 when a malfunction is detected now. • The number increases like $1 \rightarrow 2 \rightarrow 338 \rightarrow 39$ after returning to the normal whenever ignition switch OFF \rightarrow ON. • The number is fixed to 39 until the self-diagnosis results are erased if it is over			It ignition switch is turned ON after DTC is detected a malfunction is detected now. Is like $1 \rightarrow 2 \rightarrow 338 \rightarrow 39$ after returning to the normal condition inch OFF \rightarrow ON.	BC	

NOTE:

*: Power supply position shifts to "LOCK" from "OFF", when ignition switch is in the OFF position, selector lever 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 "LOCK".

DOOR LOCK

DOOR LOCK : CONSULT Function (BCM - DOOR LOCK)

BCM CONSULT FUNCTION

CONSULT performs the following functions via CAN communication with BCM.

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< SYSTEM DESCRIPTION >

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

WORK SUPPORT

Monitor item	Description
DOOR LOCK-UNLOCK SET	Selective unlock function mode can be changed to operate (WITH) or not operate (WITHOUT) with this mode.
AUTOMATIC DOOR LOCK SE- LECT	 Automatic door lock function mode can be selected from the following in this mode. VH SPD: All doors are locked when vehicle speed more than 24km/h (15MPH) P RANGE: All doors are locked when shifting the selector lever from P position to other than the P position
AUTOMATIC DOOR UNLOCK SELECT	 Automatic door unlock function mode can be selected from the following in the mode. MODE 1: All doors are unlocked when the power supply position is changed from ON to OFF MODE 2: All doors are unlocked when shifting the selector lever from any position other than the P to P position MODE 3: Driver side door is unlocked when the power supply position is changed from ON to OFF MODE 4: Driver side door is unlocked when shifting the selector lever from any position other than the P to P position
AUTOMATIC LOCK/UNLOCK SET	 Automatic door lock/unlock function mode can be selected from the following in this mode. Off: non-operational Unlock Only: door unlock operation only Lock Only: door lock operation only Lock/Unlock: lock/unlock operation

DATA MONITOR

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 rear door switch RH.
DOOR SW-RL	Indicated [ON/OFF] condition of rear door switch LH.
DOOR SW-BK	Indicated [ON/OFF] condition of back door switch.
CDL LOCK SW	Indicated [ON/OFF] condition of lock signal from door lock unlock switch.
CDL UNLOCK SW	Indicated [ON/OFF] condition of unlock signal from door lock unlock switch.
KEY CYL LK-SW	Indicated [ON/OFF] condition of lock signal from door key cylinder.
KEY CYL UN-SW	Indicated [ON/OFF] condition of unlock signal from door key cylinder.

ACTIVE TEST

< SYSTEM DESCRIPTION >

Test item	Description	A
DOOR LOCK	 This test is able to check door lock/unlock operation. The all door lock actuators are locked when "ALL LCK" on CONSULT screen is touched. The all door lock actuators are unlocked when "ALL UNLK" on CONSULT screen is touched. The door lock actuator (driver side) is unlocked when "DR UNLK" on CONSULT screen is touched. The door lock actuator (passenger side) is unlocked when "AS UNLK" on CONSULT screen is touched. The door lock actuator (rear LH and RH) is unlocked when "OTR ULK" on CONSULT screen is touched. 	B

REAR WINDOW DEFOGGER

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

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DATA MONITOR

NOTE:

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

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

ACTIVE TEST

Test Item	Description
REAR DEFOGGER	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	_
	Data Monitor	Displays BCM input data in real time.	L
DUZZER	Active Test	Operation of electrical loads can be checked by sending driving signal to them.	_

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 [Unit]	Description	0
PUSH SW [On/Off]	Status of push button ignition switch judged by BCM.	0
UNLK SEN-DR [On/Off]	Status of unlock sensor judged by BCM.	Ρ
VEH SPEED 1 [Km/h]	Value of vehicle speed signal received from ABS actuator and electric unit (control unit) with CAN communication line.	
KEY SW-SLOT [On/Off]	Status of key slot judged by BCM.	
TAIL LAMP SW [On/Off]	Status of each switch judged by BCM using the combination switch readout function.	

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< SYSTEM DESCRIPTION >

Display item [Unit]	Description
FR FOG SW [On/Off]	Status of front fog lamp switch judged by BCM.
DOOR SW-DR [On/Off]	Status of driver side door switch judged by BCM.

ACTIVE TEST

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

INT LAMP

INT LAMP : CONSULT Function (BCM - INT LAMP)

INFOID:000000008949528

WORK SUPPORT



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

< SYSTEM DESCRIPTION >

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

*: 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 request switch (driver side)					
REQ SW-AS [On/Off]	The switch status input from front request switch (passenger side)					
PUSH SW [On/Off]	The switch status input from push-button ignition switch					
KEY SW-SLOT [On/Off]	Key switch status input from key slot					
DOOR SW-DR [On/Off]	The switch status input from front door switch (driver side)					
DOOR SW-AS [On/Off]	The switch status input from front door switch (passenger side)					
DOOR SW-RR [On/Off]	The switch status input from rear door switch RH					
DOOR SW-RL [On/Off]	The switch status input from rear door switch LH					
DOOR SW-BK [On/Off]	NOTE: The item is indicated, but not monitored.					
CDL LOCK SW [On/Off]	Lock switch status received from door lock/unlock switch by power window switch serial link					
CDL UNLOCK SW [On/Off]	Unlock switch status received from door lock/unlock switch by power window switch serial link					
KEY CYL LK-SW [On/Off]	Lock switch status received from key cylinder lock/unlock switch by power window switch serial link					
KEY CYL UN-SW [On/Off]	Unlock switch status received from key cylinder lock/unlock switch by power window switch serial link					
BACK DOOR SW [On/Off]	The switch status input from back door switch					
RKE-LOCK [On/Off]	Lock signal status received from remote keyless entry receiver					
RKE-UNLOCK [On/Off]	Unlock signal status received from remote keyless entry receiver					

ACTIVE TEST

Test item	Operation	Description
INT LAMP	On	Outputs the interior room lamp control signal to turn map lamp and personal lamp ON (Map lamp switch is in DOOR position).
	Off	Stops the interior room lamp control signal to turn map lamp and personal lamp OFF.
STEP LAMP TEST	On	Outputs the step lamp control signal to turn step lamp ON.
	Off	Stops the step lamp control signal to turn step lamp OFF.

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< SYSTEM DESCRIPTION >

Test item	Operation	Description
LUGGAGE LAMP TEST	On	NOTE:
	Off	The item is displayed, but cannot be tested.

HEADLAMP

HEADLAMP : CONSULT Function (BCM - HEAD LAMP)

INFOID:000000008949523

WORK SUPPORT

Service item	Setting item		Setting	
	On*	With the exterior lamp battery saver function		
DATTERT SAVER SET	Off	Without the exterior lamp battery saver function		
	MODE 1*	45 sec.		
ILL DELAY SET	MODE 2	Without the func- tion		
	MODE 3	30 sec.		
	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*	Normal		
CUSTOM A/LIGHT SET-	MODE 2	More sensitive setting than normal setting (Turns ON earlier than normal operation.)		
TING	MODE 3	More sensitive setting than MODE 2 (Turns ON earlier than MODE 2.)		
	MODE 4	Less sensitive set	ting than normal setting (Turns ON later than normal operation.)	

*: 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
PUSH SW [On/Off]	The switch status input from push-button ignition switch
ENGINE STATE [Stop/Stall/Crank/Run]	The engine status received from ECM with CAN communication
VEH SPEED 1 [km/h]	The value of the vehicle speed received from combination meter with CAN commu- nication
KEY SW-SLOT [On/Off]	Key switch status input from key slot

< SYSTEM DESCRIPTION >

Monitor item [Unit]	Description	
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 detects from the combination switch reading function	
HEAD LAMP SW2 [On/Off]		
PASSING SW [On/Off]		
AUTO LIGHT SW [On/Off]		
FR FOG SW [On/Off]		
RR FOG SW [On/Off]	NOTE: The item is indicated, but not monitored.	
DOOR SW-DR [On/Off]	The switch status input from front door switch (driver side)	
DOOR SW-AS [On/Off]	The switch status input from front door switch (passenger side)	
DOOR SW-RR [On/Off]	The switch status input from rear door switch RH	
DOOR SW-RL [On/Off]	The switch status input from rear door switch LH	
DOOR SW-BK [On/Off]	NOTE: The item is indicated, but not monitored.	
OPTICAL SENSOR [V]	The value of exterior brightness voltage input from the optical sensor	

ACTIVE TEST

Test item	Operation	Description
TAIL LAMP	On	Transmits the position light request signal to IPDM E/R with CAN com- munication to turn the tail lamp ON.
	Off	Stops the position light request signal transmission.
	Hi	Transmits the high beam request signal with CAN communication to turn the headlamp (HI).
HEAD LAMP	Low	Transmits the low beam request signal with CAN communication to turn the headlamp (LO).
	Off	Stops the high & low beam request signal transmission.
FR FOG LAMP	On	Transmits the front fog light request signal to IPDM E/R with CAN com- munication to turn the front fog lamp ON.
	Off	On munication to turn the tail lamp ON. Off Stops the position light request signal transmission. Hi Transmits the high beam request signal with CAN communication to turn the headlamp (HI). .ow Transmits the low beam request signal with CAN communication to turn the headlamp (LO). Off Stops the high & low beam request signal transmission. On Transmits the front fog light request signal to IPDM E/R with CAN communication to turn the front fog lamp ON. Off Stops the front fog light request signal transmission. On NOTE: Off The item is indicated, but cannot be tested.
	On	NOTE:
	Off	The item is indicated, but cannot be tested.
	On	NOTE:
	Off	The item is indicated, but cannot be tested.

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< SYSTEM DESCRIPTION >

Test item	Operation	Description
	RH	
CORNERING LAMP	LH	NOTE: The item is indicated, but cannot be tested.
	Off	
	On	NOTE:
ILE DIVI SIGNAL	Off	The item is indicated, but cannot be tested.

WIPER

WIPER : CONSULT Function (BCM - WIPER)

INFOID:000000008949530

WORK SUPPORT

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

*:Factory setting

NOTE:

Work support item is not indicated when the vehicle with rain sensor.

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

ACTIVE TEST

< SYSTEM DESCRIPTION >

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

FLASHER

FLASHER : CONSULT Function (BCM - FLASHER)

WORK SUPPORT

Service item	Setting item	Setting		
HAZARD ANSWER BACK	Lock Only*	With locking only		
	Unlk Only	With unlocking only	Sets the hazard warning lamp answer back function	
	Lock/Unlk	With locking/unlocking	the key fob.	
	Off	Without the function		ŀ

*: 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 the request switch (driver side)	K
REQ SW-AS [On/Off]	The switch status input from the request switch (passenger side)	L
PUSH SW [On/Off]	The switch status input from the push-button ignition switch	
TURN SIGNAL R [On/Off]	Each quitch statue that PCM datasts from the combination quitch reading function	
TURN SIGNAL L [On/Off]		N
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	С
RKE-UNLOCK [On/Off]	Unlock signal status received from the remote keyless entry receiver	P
RKE-PANIC [On/Off]	Panic alarm signal status received from the remote keyless entry receiver	

ACTIVE TEST

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< SYSTEM DESCRIPTION >

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

INTELLIGENT KEY

INTELLIGENT KEY : CONSULT Function (BCM - INTELLIGENT KEY)

INFOID:000000008949518

BCM CONSULT FUNCTION

CONSULT performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function.
SELF-DIAG RESULTS	Displays the diagnosis results judged by BCM.
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.

WORK SUPPORT

Monitor item	Description
REMO CONT ID CONFIR	It can be checked whether Intelligent Key ID code is registered or not in this mode.
AUTO LOCK SET	 Auto door lock time can be changed in this mode. MODE 1: 1 minute MODE 2: 5 minutes MODE 3: 30 seconds MODE 4: 2 minutes
LOCK/UNLOCK BY I-KEY	Door lock/unlock function by door request switch (driver side, passenger side and back door) mode can be changed to operate (ON) or not operate (OFF) in this mode.
ENGINE START BY I-KEY	Engine start function mode can be changed to operate (ON) or not operate (OFF) with this mode.
TRUNK/GLASS HATCH OPEN	Buzzer reminder function mode by back door request switch can be changed to operate (ON) or not operate (OFF) with this mode.
PANIC ALARM SET	 Panic alarm button pressing time on Intelligent Key remote control button can be selected from the following with this mode. MODE 1: 0.5 sec. MODE 2: Non-operation MODE 3: 1.5 sec.
PW DOWN SET	 Unlock button pressing time on Intelligent Key button can be selected from the following with this mode. MODE 1: 3 sec. MODE 2: Non-operation MODE 3: 5 sec.
TRUNK OPEN DELAY	NOTE: This item is displayed, but cannot be supported.
LO- BATT OF KEY FOB WARN	Intelligent Key low battery warning mode can be changed to operate (ON) or not operate (OFF) with this mode.
ANTI KEY LOCK IN FUNCTI	Key reminder function mode can be changed to operate (ON) or not operate (OFF) with this mode.
HAZARD ANSWER BACK	 Hazard reminder function mode can be selected from the following with this mode. LOCK ONLY: Door lock operation only UNLOCK ONLY: Door unlock operation only LOCK/UNLOCK: Lock/unlock operation OFF: Non-operation

< SYSTEM DESCRIPTION >

Monitor item	Description	^
ANS BACK I-KEY LOCK	 Buzzer reminder function (lock operation) mode by door request switch (driver side and passenger side) can be selected from the following with this mode. Horn chirp: Sound horn Buzzer: Sound Intelligent Key warning buzzer OFF: Non-operation 	A B
ANS BACK I-KEY UNLOCK	Buzzer reminder function (unlock operation) mode by door request switch can be changed to operate (ON) or not operate (OFF) with this mode.	C
SHORT CRANKING OUTPUT	Starter motor can operate during the times below. • 70 msec • 100 msec • 200 msec	D
INSIDE ANT DIAGNOSIS	This function allows inside key antenna self-diagnosis.	
HORN WITH KEYLESS LOCK	Horn reminder function mode by Intelligent Key button can be changed to operate (ON) or not operate (OFF) with this mode.	Е

SELF-DIAG RESULT

Refer to <u>BCS-77, "DTC Index"</u>.

DATA MONITOR

NOTE:

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

Monitor Item	Condition	Н
REQ SW -DR	Indicates [ON/OFF] condition of door request switch (driver side).	
REQ SW -AS	Indicates [ON/OFF] condition of door request switch (passenger side).	
REQ SW -RR	NOTE: This item is displayed, but cannot be monitored.	
REQ SW -RL	NOTE: This item is displayed, but cannot be monitored.	J
REQ SW -BD/TR	Indicates [ON/OFF] condition of back door request switch.	
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch.	
IGN RLY2 -F/B	Indicates [ON/OFF] condition of ignition relay 2.	K
ACC RLY-FB	NOTE: This item is displayed, but cannot be monitored.	
CLUCH SW	NOTE: This item is displayed, but cannot be monitored.	
BRAKE SW 1	Indicates [ON/OFF]* condition of brake switch power supply.	BCS
BRAKE SW 2	Indicates [ON/OFF] condition of brake switch.	D00
DETE/CANCL SW	Indicates [ON/OFF] condition of P position.	
SFT PN/N SW	Indicates [ON/OFF] condition of P or N position.	N
S/L -LOCK	Indicates [ON/OFF] condition of steering lock unit (LOCK). NOTE: For models without steering lock unit this item is not displayed.	0
S/L -UNLOCK	Indicates [ON/OFF] condition of steering lock unit (UNLOCK). NOTE: For models without steering lock unit this item is not displayed.	0
S/L RELAY -F/B	Indicates [ON/OFF] condition of ignition switch. NOTE: For models without steering lock unit this item is not displayed.	P
UNLK SEN -DR	Indicates [ON/OFF] condition of driver door UNLOCK status.	
PUSH SW -IPDM	Indicates [ON/OFF] condition of push-button ignition switch.	
IGN RLY1 -F/B	Indicates [ON/OFF] condition of ignition relay 1.	

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< SYSTEM DESCRIPTION >

Monitor Item	Condition
DETE SW -IPDM	Indicates [ON/OFF] condition of P position.
SFT PN -IPDM	Indicates [ON/OFF] condition of P or N position.
SFT P -MET	Indicates [ON/OFF] condition of P position.
SFT N -MET	Indicates [ON/OFF] condition of N position.
ENGINE STATE	Indicates [STOP/START/CRANK/RUN] condition of engine states.
S/L LOCK-IPDM	Indicates [ON/OFF] condition of steering lock unit (LOCK). NOTE: For models without steering lock unit this item is not displayed.
S/L UNLK-IPDM	Indicates [ON/OFF] condition of steering lock unit (UNLOCK). NOTE: For models without steering lock unit this item is not displayed.
S/L RELAY-REQ	Indicates [ON/OFF] condition of steering lock relay. NOTE: For models without steering lock unit this item is not displayed.
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 CVT by numerical value [Km/h].
DOOR STAT-DR	Indicates [LOCK/READY/UNLOCK] condition of driver side door status.
DOOR STAT-AS	Indicates [LOCK/READY/UNLOCK] condition of passenger side door status.
ID OK FLAG	Indicates [SET/RESET] condition of key ID.
PRMT ENG STRT	Indicates [SET/RESET] condition of engine start possibility.
PRMT RKE STRT	NOTE: This item is displayed, but cannot be monitored.
KEY SW -SLOT	Indicates [ON/OFF] condition of key slot.
TRNK/HAT MNTR	NOTE: This item is displayed, but cannot be monitored.
RKE-LOCK	Indicates [ON/OFF] condition of LOCK signal from Intelligent Key.
RKE-UNLOCK	Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key.
RKE-TR/BD	NOTE: This item is displayed, but cannot be monitored.
RKE-PANIC	Indicates [ON/OFF] condition of PANIC button of Intelligent Key.
RKE-P/W OPEN	Indicates [ON/OFF] condition of P/W DOWN signal from Intelligent Key.
RKE-MODE CHG	Indicates [ON/OFF] condition of MODE CHANGE signal from Intelligent Key.
RKE OPE COUN1	When remote keyless entry receiver receives the signal transmitted while operating on Intelligent Key, the numerical value start changing.
RKE OPE COUN2	NOTE: This item is displayed, but cannot be monitored.

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

ACTIVE TEST

Test item	Description
BATTERY SAVER	This test is able to check interior room lamp operation. The interior room lamp will be activated after "ON" on CONSULT screen is touched.
PW REMOTO DOWN SET	This test is able to check power window down operation. The power window down will be activated after "ON" on CONSULT screen is touched.
INSIDE BUZZER	 This test is able to check warning chime in combination meter operation. Take away warning chime sounds when "TAKE OUT" on CONSULT screen is touched. Key warning chime sounds when "KEY WARN" on CONSULT screen is touched. P position warning chime sounds when "P RNG WARN" on CONSULT screen is touched. ACC warning chime sounds when "ACC WARN" on CONSULT screen is touched.

< SYSTEM DESCRIPTION >

Test item	Description	٥
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation. The Intelligent Key warning buzzer will be activated after "ON" on CONSULT screen is touched.	A
INDICATOR	 This test is able to check warning lamp operation. "KEY" Warning lamp illuminates when "KEY ON" on CONSULT screen is touched. "KEY" Warning lamp flashes when "KEY IND" on CONSULT screen is touched. 	В
INT LAMP	This test is able to check interior room lamp operation. The interior room lamp will be activated after "ON" on CONSULT screen is touched.	С
LCD	 This test is able to check meter display information Engine start information displays when "BP N" on CONSULT screen is touched. Engine start information displays when "BP I" on CONSULT screen is touched. Key ID warning displays when "ID NG" on CONSULT screen is touched. Steering lock information displays when "ROTAT" on CONSULT screen is touched. NOTE: For models without steering lock unit, "ROTAT" is displayed, but cannot be tested. P position warning displays when "SFT P" on CONSULT screen is touched. Intelligent Key insert information displays when "INSRT" on CONSULT screen is touched. Intelligent Key low battery warning displays when "BATT" on CONSULT screen is touched. Take away through window warning displays when "NO KY" on CONSULT screen is touched. 	D E F
TRUNK/GLASS HATCH	 Take away warning display when "OUTKEY" on CONSULT screen is touched. OFF position warning display when "LK WN" on CONSULT screen is touched. This test is able to check back door opener actuator open operation. 	G
	This actuator opens when "ON" on CONSULT screen is touched.	
FLASHER	The hazard warning lamps will be activated after "ON" on CONSULT screen is touched.	Н
HORN	This test is able to check horn operation. The horn will be activated after "ON" on CONSULT screen is touched.	
IGN CONT2	This test is able to check ignition relay operation. The ignition relay will be activated after "ON" on CONSULT screen is touched.	
P RANGE	This test is able to check CVT shift selector power supply CVT shift selector power is supplied when "ON" on CONSULT screen is touched.	I
ENGINE SW ILLUMI	This test is able to check push-ignition switch illumination operation. Push-ignition switch illumination illuminates when "ON" on CONSULT screen is touched.	0
LOCK INDICATOR	NOTE: This item is displayed, but cannot be tested.	Κ
ACC INDICATOR	This test is able to check indicator in push-ignition switch operation. Indicator in push-button ignition switch illuminates when "ON" on CONSULT screen is touched.	I
IGNITION ON IND	This test is able to check indicator in push-ignition switch operation. Indicator in push-button ignition switch illuminates when "ON" on CONSULT screen is touched.	L
KEY SLOT ILLUMI	This test is able to check key slot illumination operation. Key slot illumination flash when "ON" on CONSULT screen is touched.	BC
AUTOMATIC BACK DOOR	NOTE: This item is displayed, but cannot be tested.	
AUTOMATIC SLIDING DOOR	NOTE: This item is displayed, but cannot be tested.	N

COMB SW

COMB SW : CONSULT Function (BCM - COMB SW)

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.

INFOID:000000008458112

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< SYSTEM DESCRIPTION >

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

BCM

BCM : CONSULT Function (BCM - BCM)

INFOID:000000008458113

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

< SYSTEM DESCRIPTION >

IMMU : CONSULT Function (BCM - IMMU)

INFOID:000000008949521

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APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description	
DATA MONITOR	The BCM input/output signals are displayed.	
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.	С

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. Switch to [DONE] when a registered Intelligent Key is inserted into the key slot	F
CONFIRM ID3		
CONFIRM ID2		
CONFIRM ID1	-	G
TP 4		
TP 3	Indicator the number of ID which has been registered	F
TP 2		
TP 1	-	
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch.	
KEY SW -SLOT	Indicates [ON/OFF] condition of key slot.	
ACTIVE TEST		J

ACTIVE TEST

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

BATTERY SAVER

BATTERY SAVER : CONSULT Function (BCM - BATTERY SAVER)

INFOID:000000008949529

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BCS

WORK SUPPORT

Service item	Setting item		Setting	
	On*	With the	exterior lamp battery saver function	Ν
BATTERT SAVER SET	Off	Without th	ne exterior lamp battery saver function	
	On*	With the i	nterior room lamp battery saver function	0
ROOM LAMP BAT SAV SET	Off	Without th	ne interior room lamp battery saver function	C
	MODE 1	30 min.		
ROOM LAMP TIMER SET	MODE 2	60 min.	Sets the interior room lamp battery saver timer operating	Р
	MODE 3*	15 min.	, uno.	

*: 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.

< SYSTEM DESCRIPTION >

Monitor item [Unit]	Description
REQ SW-DR [On/Off]	The switch status input from request switch (driver side)
REQ SW-AS [On/Off]	The switch status input from front request switch (passenger side)
REQ SW-RR [On/Off]	NOTE:
REQ SW-RL [On/Off]	The item is indicated, but not monitored.
PUSH SW [On/Off]	The switch status input from push-button ignition switch
KEY SW-SLOT [On/Off]	Key switch status input from key slot
UNLK SEN-DR [On/Off]	Driver door unlock status input from unlock sensor
DOOR SW-DR [On/Off]	The switch status input from front door switch (driver side)
DOOR SW-AS [On/Off]	The switch status input from front door switch (passenger side)
DOOR SW-RR [On/Off]	The switch status input from rear door switch RH
DOOR SW-RL [On/Off]	The switch status input from rear door switch LH
DOOR SW-BK [On/Off]	NOTE: The item is indicated, but not monitored.
CDL LOCK SW [On/Off]	Lock switch status received from door lock/unlock switch by power window switch serial link
CDL UNLOCK SW [On/Off]	Unlock switch status received from door lock/unlock switch by power window switch serial link
KEY CYL LK-SW [On/Off]	Lock switch status received from key cylinder lock/unlock switch by power window switch serial link
KEY CYL UN-SW [On/Off]	Unlock switch status received from key cylinder lock/unlock switch by power window switch serial link
BACK DOOR SW [On/Off]	The switch status input from back door switch
RKE-LOCK [On/Off]	Lock signal status received from remote keyless entry receiver
RKE-UNLOCK [On/Off]	Unlock signal status received from remote keyless entry receiver

ACTIVE TEST

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

*: Each lamp switch is in ON position.

TRUNK

TRUNK : CONSULT Function (BCM - TRUNK)

BCM CONSULT FUNCTION

CONSULT performs the following functions via CAN communication with BCM.

BCS-34

INFOID:000000008949519

< SYSTEM DESCRIPTION >

Diagnosis mode	Function Description	A
DATA MONITOR	The BCM input/output signals are displayed.	
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.	P

DATA MONITOR

NOTE:

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

Monitor Item	Contents	_
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch.	- D
UNLK SEN -DR	NOTE: This item is displayed, but cannot be monitored.	F
VEH SPEED 1	Indicates [Km/h] condition of vehicle speed signal from combination meter.	
KEY CYL SW-TR	NOTE: This item is displayed, but cannot be monitored.	F
TR CANCEL SW	NOTE: This item is displayed, but cannot be monitored.	
TR/BD OPEN SW	Indicates [ON/OFF] condition of back door opener switch.	G
TRNK/HAT MNTR	NOTE: This item is displayed, but cannot be monitored.	
RKE-TR/BD*	NOTE: This item is displayed, but cannot be monitored.	Н

*: With back door opener system

ACTIVE TEST

Test item	Description	-
TRUNK/GLASS HATCH	This test is able to check back door opener actuator open operation. This actuator opens when ""	

THEFT ALM

THEFT ALM : CONSULT Function (BCM - THEFT)

APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

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

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.

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.

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INFOID:000000008949520

< SYSTEM DESCRIPTION >

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

WORK SUPPORT

Test Item	Description
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.

ACTIVE TEST

Test Item	Description
THEFT IND	This test is able to check security indicator lamp operation. The lamp will be turned on when "ON" on CONSULT screen is touched.
VEHICLE SECURITY HORN	This test is able to check vehicle security horn operation. The horns will be activated for 0.5 seconds after "ON" on CONSULT screen is touched.
HEADLAMP(HI)	This test is able to check vehicle security lamp operation. The headlamps will be activated for 0.5 seconds after "ON" on CONSULT screen is touched.
FLASHER	This test is able to check vehicle security hazard lamp operation. The hazard lamps will be activated after "ON" on CONSULT screen is touched.

RETAINED PWR

RETAINED PWR : CONSULT Function (BCM - RETAINED PWR)

INFOID:000000008949522

Data monitor **NOTE**:
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	Description	
DOOR SW-DR	Indicates [ON/OFF] condition of driver side door switch.	E
DOOR SW-AS	Indicates [ON/OFF] condition of passenger side door switch.	

SIGNAL BUFFER

SIGNAL BUFFER : CONSULT Function (BCM - SIGNAL BUFFER)

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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.

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	ŀ
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)

APPLICATION ITEMS

CONSULT performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description	_
Self Diagnostic Result	Displays the diagnosis results judged by BCM.	L
Data Monitor	The BCM input/output signals are displayed.	
Active Test	The signals used to activate each device are forcibly supplied from BCM.	BCS
Work Support	Components can be quickly and accurately adjusted.	

SELF DIAGNOSTIC RESULT Refer to <u>BCS-77, "DTC Index"</u>.

When "CRNT" is displayed on self-diagnosis result,

• The system is presently malfunctioning.

When "PAST" is displayed on self-diagnosis result,

• System malfunction in the past is detected, but the system is presently normal.

DATA MONITOR MODE

Screen of data monitor mode is displayed. **NOTE:**

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

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

• 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 (Unit)	Remark	
AIR PRESS FL (kPa//kg/cm ² /Psi)		
AIR PRESS FR (kPa//kg/cm ² /Psi)		
AIR PRESS RR (kPa//kg/cm ² /Psi)		
AIR PRESS RL (kPa//kg/cm ² /Psi)		
ID REGST FL1 (Green/Red)		
ID REGST FR1 (Green/Red)	- Registration ID	
ID REGST RR1 (Green/Red)		
ID REGST RL1 (Green/Red)		
WARNING LAMP (On/Off)	Low tire pressure warning lamp	
BUZZER (On/Off)	NOTE: This item is displayed, but cannot be use this item.	

NOTE:

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

ACTIVE TEST MODE

NOTE:

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

TEST ITEM LIST

Test item	Content	
WARNING LAMP	This test is able to check to check that the low tire pressure warning lamp turns on.	
ID REGIST WARNING	This test is able to check to check that the low tire pressure warning lamp turns on.	
FLASHER	This test is able to check to check that each turn signal lamp turns on.	
HORN	This test is able to check to check that the horn sounds.	

WORK SUPPORT MODE

Item	Description
ID READ	Registered tire pressure sensor ID can be displayed.
ID REGIST	Tire pressure sensor ID can be registered.

< DTC/CIRCUIT DIAGNOSIS >

DTC/CIRCUIT DIAGNOSIS U1000 CAN COMM

Description

INFOID:000000008458121

INFOID:000000008458122

INFOID:000000008458123

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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.

DTC Logic

DTC DETECTION LOGIC

DTC	CONSULT display de- scription	DTC Detection Condition	Possible cause	F
U1000	CAN COMM	When BCM cannot communicate CAN com- munication signal continuously for 2 seconds or more.	CAN communication system	0

Diagnosis Procedure

1.PERFORM SELF DIAGNOSTIC

- 1. Turn ignition switch ON and wait for 2 seconds or more.
- 2. Check "Self Diagnostic Result".
- Is DTC "U1000" displayed?
- YES >> Refer to LAN-18, "Trouble Diagnosis Flow Chart".
- NO >> Refer to <u>GI-45</u>, "Intermittent Incident".

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U1010 CONTROL UNIT (CAN)

< DTC/CIRCUIT DIAGNOSIS >

U1010 CONTROL UNIT (CAN)

DTC Logic

INFOID:000000008458124

DTC DETECTION LOGIC

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

Diagnosis Procedure

INFOID:000000008458125

1.REPLACE BCM

When DTC "U1010" is detected, replace BCM.

>> Replace BCM. Refer to <u>BCS-84, "Exploded View"</u>.

< DTC/CIRCUIT DIAGNOSIS >

U0415 VEHICLE SPEED SIG

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:000000008458127

INFOID:000000008458128

INFOID:000000008458126

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DTC DETECTION LOGIC

DTC	CONSULT display de- scription	DTC Detection Condition	Probable cause	
U0415	VEHICLE SPEED	When the vehicle speed signal received from the ABS actuator and electric unit (control unit) remains abnormal for 2 seconds or more.	 ABS actuator and electric unit (control unit) BCM 	
отс со	NFIRMATION PRO	CEDURE		

1.DTC CONFIRMATION

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

Is any DTC detected?

- YES >> Refer to <u>BCS-41, "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
28, "CONSULT Function".	
la any DTC detected?	

Is any DTC detected?

- YES >> Repair or replace the malfunctioning part.
- NO >> Replace BCM. Refer to <u>BCS-84, "Exploded View"</u>.

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< DTC/CIRCUIT DIAGNOSIS >

B2562 LOW VOLTAGE

DTC Logic

INFOID:000000008458129

INFOID:000000008458130

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 CONSULT, when passed 120 seconds or more after the ignition switch is turned ON.

Is any DTC detected?

- YES >> Refer to <u>BCS-42</u>, "Diagnosis Procedure".
- NO >> INSPECTION END

Diagnosis Procedure

1.CHECK POWER SUPPLY CIRCUIT

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

Is the circuit normal?

- YES >> Replace BCM. Refer to <u>BCS-84, "Exploded View"</u>.
- NO >> Repair the malfunctioning part.

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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 nar	ne		Fuse and fusible link No.	
	Potton novier	aupply		L	
	Ballery power	supply		10	
Is the fuse fusin YES >> Rej blo NO >> GC 2.CHECK PO\	n <u>g?</u> place the blowr wn.) TO 2. WER SUPPLY (n fuse or fusible CIRCUIT	e link after rej	pairing the affected circuit if a fuse or fusible link is	
 Turn ignitio Disconnect Check volta 	n switch OFF. BCM connecto age between B0	ors. CM harness co	nnector and g	round.	
	Terminals			_	
(- 	(+) BCM		Voltage (Approx.)		
ConnectorTerminalM1181		Ground			
			Battery volta		
M119	11		Dattery Volta		
<u>s the measurer</u> YES >> GC NO >> Rej 3. CHECK GRO) TO 3. pair harness or OUND CIRCUI	nar <u>e</u> connector. T / harness conr	nector and gro	und.	
	,				
BC Connector	CM Terminal	Ground	Continuity	_	
M119	13		Existed	—	
<u>Does continuity</u> YES >> INS NO >> Rej	<u>exist?</u> SPECTION ENI pair harness or) connector.		—	

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INFOID:000000008458131

COMBINATION SWITCH INPUT CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

COMBINATION SWITCH INPUT CIRCUIT

Diagnosis Procedure

INFOID:000000008458132

1.CHECK INPUT 1 - 5 SYSTEM CIRCUIT FOR OPEN

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

Svetom	BC	CM	Combinat	Continuity	
System	Connector	Terminal	Connector	Terminal	Continuity
INPUT 1	M122	107	M103	11	Existed
INPUT 2		109		9	
INPUT 3		88		7	
INPUT 4		108		10	
INPUT 5		87		13	

Does continuity exist?

YES >> GO TO 2.

NO >> Repair the harnesses or connectors.

2.CHECK INPUT 1 - 5 SYSTEM CIRCUIT FOR SHORT

Check for continuity between BCM harness connector and ground.

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

Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> GO TO 3.

3.CHECK BCM OUTPUT VOLTAGE

1. Connect the BCM connector.

2. Check voltage between BCM harness connector and ground.

Suctor	(+	·)	(-)	Voltage
System	BC	M		(Approx.)
	Connector	Terminal	Ground	
INPUT 1	M122	107		Refer to <u>BCS-</u> <u>48, "Refer-</u> <u>ence Value</u> ".
INPUT 2		109		
INPUT 3		88		
INPUT 4		108		
INPUT 5		87		

Is the measurement value normal?

YES >> GO TO 4.

NO >> Replace BCM. Refer to <u>BCS-84, "Exploded View"</u>.

COMBINATION SWITCH INPUT CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

4.CHECK BCM INPUT SIGNAL

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

		Terminals	6		
System	(+	-)	(-)	Voltage	
System	BC	M		(Approx.)	
	Connector	Terminal			
INPUT 1		107			
INPUT 2		109	Ground	Refer to BCS-	
INPUT 3	M122	88		48, "Refer- ence Value".	
INPUT 4		108			
INPUT 5		87			

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

- YES >> Replace BCM. Refer to <u>BCS-84, "Exploded View"</u>.
- NO >> Replace the combination switch.

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COMBINATION SWITCH OUTPUT CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

COMBINATION SWITCH OUTPUT CIRCUIT

Diagnosis Procedure

1.CHECK OUTPUT 1 - 5 SYSTEM CIRCUIT FOR OPEN

- 1. Turn the ignition switch OFF.
- 2. Disconnect the BCM and combination switch connectors. **NOTE:**
 - BCM connector disconnects M123 only.
- 3. Check continuity between BCM harness connector and combination switch harness connector.

	BC	M	Combinati	0 11 11	
System	Connector	Terminal	Connector	Terminal	Continuity
OUTPUT 1		143	M103	12	Existed
OUTPUT 2	M123	144		14	
OUTPUT 3		145		5	
OUTPUT 4		146		2	
OUTPUT 5		142		8	

Does continuity exist?

YES >> GO TO 2.

NO >> Repair the harnesses or connectors.

2. CHECK OUTPUT 1 - 5 SYSTEM CIRCUIT FOR SHORT

Check for continuity between BCM harness connector and ground.

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

Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> GO TO 3.

 $\mathbf{3}$. CHECK COMBINATION SWITCH INTERNAL CIRCUIT

1. Connect the combination switch connector.

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

3. Check voltage between combination switch harness connector and ground. **NOTE:**

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

COMBINATION SWITCH OUTPUT CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

		Terminals			
	(.)		()		
System	(+)		(-)	Value (Approx.)	
Cycloni	Combination switch				
	Connector	Terminal			
OUTPUT 1		12			
OUTPUT 2		14			
OUTPUT 3		5	Ground		
OUTPUT 4	M103	2		0	
OUTPUT 5		8		2 ms JPMIA0041GB	
				1.4 V	
s the meas	surement v	alue norn	nal when a	any of the switches is turned C	<u>?</u>
YES >> Replace BCM. Refer to <u>BCS-84, "Exploded View"</u> .					
NO >>	Replace t	he combi	nation sw	itch.	

BCS

G

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Ρ

ECU DIAGNOSIS INFORMATION BCM (BODY CONTROL MODULE)

Reference Value

INFOID:000000008458134

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
	Front wiper switch HI	On
	Other than front wiper switch LO	Off
FR WIFER 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/AUTO	Off
	Front wiper switch INT/AUTO	On
	Front wiper is not in STOP position	Off
	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
KK WIFER ON	Rear wiper switch ON	On
	Other than rear wiper switch INT	Off
	Rear wiper switch INT	On
	Rear washer switch OFF	Off
KK WASHEN SW	Rear washer switch ON	On
	Rear wiper is in STOP position	Off
KK WIFER 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
TURN SIGNAL L	Turn signal switch LH	On
	Other than lighting switch 1ST and 2ND	Off
TAIL LAWF SVV	Lighting switch 1ST or 2ND	On
HI BEAM SW	Other than lighting switch HI	Off
	Lighting switch HI	On
	Other than lighting switch 2ND	Off
	Lighting switch 2ND	On
HEAD LAMP SW/ 2	Other than lighting switch 2ND	Off
	Lighting switch 2ND	On
PASSING SW	Other than lighting switch PASS	Off
	Lighting switch PASS	On
	Other than lighting switch AUTO	Off
	Lighting switch AUTO	On

< ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status	_
	Front fog lamp switch OFF	Off	- A
FR FOG SW	Front fog lamp switch ON	On	_
RR FOG SW	NOTE: The item is indicated, but not monitored.	Off	В
	Driver door closed	Off	-
DOOR SW-DR	Driver door opened	On	С
	Passenger door closed	Off	_
DOOR SW-AS	Passenger door opened	On	_
	Rear RH door closed	Off	- D
DOOR SW-RR	Rear RH door opened	On	-
	Rear LH door closed	Off	E
DOOR SW-RL	Rear LH door opened	On	_
	Back door closed	Off	_
DOOR SW-BR	Back door opened	On	F
	Other than power door lock switch LOCK	Off	-
CDE LOCK SVV	Power door lock switch LOCK	On	G
	Other than power door lock switch UNLOCK	Off	
CDL UNLOCK SW	Power door lock switch UNLOCK	On	_
	Other than driver door key cylinder LOCK position	Off	H
KEY CYL LK-SW	Driver door key cylinder LOCK position	On	-
	Other than driver door key cylinder UNLOCK position	Off	-
KEY CYL UN-SW	Driver door key cylinder UNLOCK position	On	-
KEY CYL SW-TR	NOTE: The item is indicated, but not monitored.	Off	-
	Hazard switch is OFF	Off	
HAZARD SW	Hazard switch is ON	On	_
REAR DEF SW NOTE:	Rear window defogger switch OFF	Off	K
For models with BOSE audio system this item is not monitored.	Rear window defogger switch ON	On	1
TR CANCEL SW	NOTE: The item is indicated, but not monitored.	Off	
	Back door opener switch OFF	Off	BC
TR/BD OPEN SW	While the back door opener switch is turned ON	On	
TRNK/HAT MNTR	NOTE: The item is indicated, but not monitored.	Off	N
	LOCK button of Intelligent Key is not pressed	Off	-
RKE-LOCK	LOCK button of Intelligent Key is pressed	On	_
	UNLOCK button of Intelligent Key is not pressed	Off	0
RKE-UNLOCK	UNLOCK button of Intelligent Key is pressed	On	-
	BACK DOOR OPEN button of Intelligent Key is not pressed	Off	D
KKE-IK/BD	BACK DOOR OPEN button of Intelligent Key is pressed	On	_ F
	PANIC button of Intelligent Key is not pressed	Off	_
KKE-PANIC	PANIC button of Intelligent Key is pressed	On	-
	UNLOCK button of Intelligent Key is not pressed	Off	_
KKE-P/W OPEN	UNLOCK button of Intelligent Key is pressed and held	On	-

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Monitor Item	Condition	Value/Status
	LOCK/UNLOCK button of Intelligent Key is not pressed and held si- multaneously	Off
RRE-WODE CHG	LOCK/UNLOCK button of Intelligent Key is pressed and held simul- taneously	On
	Bright outside of the vehicle	Close to 5 V
OF HEAL SENSOR	Dark outside of the vehicle	Close to 0 V
	Driver door request switch is not pressed	Off
	Driver door request switch is pressed	On
	Passenger door request switch is not pressed	Off
	Passenger door request switch is pressed	On
REQ SW -RR	NOTE: The item is indicated, but not monitored.	Off
REQ SW -RR	NOTE: The item is indicated, but not monitored.	Off
	Back door request switch is not pressed	Off
	Back door request switch is pressed	On
	Push-button ignition switch (push switch) is not pressed	Off
FUSH 3W	Push-button ignition switch (push switch) is pressed	On
	Ignition switch in OFF or ACC position	Off
IGN RETZ -F/D	Ignition switch in ON position	On
ACC RLY -F/B	NOTE: The item is indicated, but not monitored.	Off
CLUCH SW	NOTE: The item is indicated, but not monitored.	Off
	The brake pedal is depressed when No. 7 fuse is blown	Off
BRAKE SW 1	The brake pedal is not depressed when No. 7 fuse is blown, or No. 7 fuse is normal	On
	The brake pedal is not depressed	Off
BRAKE SW 2	Stop lamp switch 1 signal circuit is normal	On
	Selector lever in P position	Off
DETE/CANCE SW	Selector lever in any position other than P	On
	Selector lever in any position other than P and N	Off
SFT PIN/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 unlocked	Off
	Driver door is locked	On
	Push-button ignition switch (push-switch) is not pressed	Off
	Push-button ignition switch (push-switch) is pressed	On
	Ignition switch in OFF or ACC position	Off
	Ignition switch in ON position	On
	Selector lever in any position other than P	Off
	Selector lever in P position	On

Monitor Item	Condition	Value/Status	^
	Selector lever in any position other than P and N	Off	A
SFT PN -IPDM	Selector lever in P or N position	On	
SET D MET	Selector lever in any position other than P	Off	В
SFIF-MEI	Selector lever in P position	On	
	Selector lever in any position other than N	Off	
SFT N-MET	Selector lever in N position	On	С
	Engine stopped	Stop	
ENCINE STATE	While the engine stalls	Stall	D
ENGINE STATE	At engine cranking	Crank	
	Engine running	Run	
S/L LOCK-IPDM	NOTE: The item is indicated, but not monitored.	Off	E
S/L UNLK-IPDM	NOTE: The item is indicated, but not monitored.	Off	F
S/L RELAY-REQ	NOTE: The item is indicated, but not monitored.	Off	
VEH SPEED 1	While driving	Equivalent to speed- ometer reading	G
VEH SPEED 2	While driving	Equivalent to speed- ometer reading	Н
	Driver door is locked	LOCK	
DOOR STAT-DR	Wait with selective UNLOCK operation (5 seconds)	READY	
	Driver door is unlocked	UNLOCK	
	Passenger door is locked	LOCK	
DOOR STAT-AS	Wait with selective UNLOCK operation (5 seconds)	READY	J
	Passenger door is unlocked	UNLOCK	
	Power supply position in LOCK position	Reset	
ID OKTEAG	Power supply position in any position other than LOCK	Set	K
DPMT ENG STPT	The engine start is prohibited	Reset	
	The engine start is permitted	Set	1
PRMT RKE STRT	NOTE: The item is indicated, but not monitored.	Reset	
KEY SW SLOT	Intelligent Key is not inserted into key slot	Off	BC
KET SW-SLOT	Intelligent Key is inserted into key slot	On	
RKE OPE COUN1	During the operation of Intelligent Key	Operation frequency of Intelligent Key	Ν
RKE OPE COUN2	NOTE: The item is indicated, but not monitored.	_	
	The Intelligent Key ID that the key slot receives is not recognized by any Intelligent Key ID registered to BCM.	Yet	0
	The Intelligent Key ID that the key slot receives is recognized by any Intelligent Key ID registered to BCM.	Done	P
	The Intelligent Key ID that the key slot receives is not recognized by the fourth Intelligent Key ID registered to BCM.	Yet	
	The Intelligent Key ID that the key slot receives is recognized by the fourth Intelligent Key ID registered to BCM.	Done	

Monitor Item	Condition	Value/Status
	The Intelligent Key ID that the key slot receives is not recognized by the third Intelligent Key ID registered to BCM.	Yet
CONFIRMIDS	The Intelligent Key ID that the key slot receives is recognized by the third Intelligent Key ID registered to BCM.	Done
	The Intelligent Key ID that the key slot receives is not recognized by the second Intelligent Key ID registered to BCM.	Yet
	The Intelligent Key ID that the key slot receives is recognized by the second Intelligent Key ID registered to BCM.	Done
	The Intelligent Key ID that the key slot receives is not recognized by the first Intelligent Key ID registered to BCM.	Yet
CONFIRMIDI	The Intelligent Key ID that the key slot receives is recognized by the first Intelligent Key ID registered to BCM.	Done
	The ID of fourth Intelligent Key is not registered to BCM	Yet
15 4	The ID of fourth Intelligent Key is registered to BCM	Done
	The ID of third Intelligent Key is not registered to BCM	Yet
IF J	The ID of third Intelligent Key is registered to BCM	Done
TP 2	The ID of second Intelligent Key is not registered to BCM	Yet
15 2	The ID of second Intelligent Key is registered to BCM	Done
	The ID of first Intelligent Key is not registered to BCM	Yet
	The ID of first Intelligent Key is registered to BCM	Done
AIR PRESS FL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front LH tire
AIR PRESS FR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front RH tire
AIR PRESS RR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear RH tire
AIR PRESS RL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear LH tire
	ID of front LH tire transmitter is registered	Done
	ID of front LH tire transmitter is not registered	Yet
	ID of front RH tire transmitter is registered	Done
ID REGST FRI	ID of front RH tire transmitter is not registered	Yet
	ID of rear RH tire transmitter is registered	Done
	ID of rear RH tire transmitter is not registered	Yet
	ID of rear LH tire transmitter is registered	Done
	ID of rear LH tire transmitter is not registered	Yet
	Tire pressure indicator OFF	Off
	Tire pressure indicator ON	On
RI 177ED	Tire pressure warning alarm is not sounding	Off
DULLER	Tire pressure warning alarm is sounding	On

< ECU DIAGNOSIS INFORMATION >

TERMINAL LAYOUT



Termi	inal No.	Description				Value
(Wire	e color)	Signal name	Input/	Condition		(Approx.)
+	_	5	Output			
1 (W)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage
2 (GR)	Ground	P/W power supply (BAT)	Output	Ignition switch OF	F	Battery voltage
3 (L)	Ground	P/W power supply (IGN)	Output	Ignition switch ON		Battery voltage
				Interior room lamp (Cuts the interior r	battery saver is activated. oom lamp power supply)	0 V
4 (P/W)	Ground	power supply	Output	Interior room lamp ed.	battery saver is not activat-	Battery voltage
5	0	Passenger door UN-	0.1.1		UNLOCK (Actuator is activated)	Battery voltage
(G)	Ground	LOCK	Output	Passenger door	Other than UNLOCK (Actuator is not activated)	0 V
7	Ground	Step Jamp control	Output	Step lamp	ON	0 V
(W)			Output		OFF	Battery voltage
8	Ground		Output		LOCK (Actuator is activat- ed)	Battery voltage
(V)	Ground	All doors LOCK	Output	All doors	Other than LOCK (Actuator is not activated)	0 V
9	Ground		Output		UNLOCK (Actuator is activated)	Battery voltage
(G)	Ground	Driver door UNLOCK	Output	Driver door	Other than UNLOCK (Actuator is not activated)	0 V
10	Oracia	Rear RH door and	Outrast	Rear RH door	UNLOCK (Actuator is activated)	Battery voltage
(P)	Ground	LOCK	Output	and rear LH door	Other than UNLOCK (Actuator is not activated)	0 V
11 (LG)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage
13 (B)	Ground	Ground		Ignition switch ON		0 V
					OFF	0 V
14 (O)	Ground	Push-button ignition switch illumination	Output	Tail lamp		NOTE: When the illumination brighten- ing/dimming level is in the neutral position
		ground			ON	10 0 2 ms
15 (L)	Ground	ACC indicator lamp	Output	Ignition switch	OFF (LOCK and ON indi- cator lamps are not illumi- nated.)	Battery voltage
					ACC	0 V

Term	inal No.	Description					
(Wire	e color)	0:	Input/		Condition	Value	А
+	-	Signal name	Output			(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
					Turn signal switch OFF	0 V	В
17 (G)	Ground	Turn signal RH	Output	Ignition switch ON	Turn signal switch RH		С
						PKID0926E 6.5 V	D
					Turn signal switch OFF	0 V	Е
18 (BR)	Ground	Turn signal LH	Output	Ignition switch ON	Turn signal switch LH	(V) 15 0 1 1 1 1 1 1 1 1 1 1 1 1 1	F
19	. .	Interior room lamp		Interior room lamp	OFF	Battery voltage	Н
(Y)	Ground	control	Output		ON	0 V	
23			Output		OPEN (Back door opener actuator is activated)	Battery voltage	I
(BR)	Ground	Back door open		Back door	Other than OPEN (Back door opener actuator is not activated)	0 V	J
26	Cround	Deer winer	Output	Boorwiner	OFF (Stopped)	0 V	
(G)	Ground	Real wiper	Output	Real wiper	ON (Operated)	Battery voltage	
34	Ground	Luggage room anten-	Output	Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0062GB	K L BCS
(B)	Ground	na (-)	Output	ŌFF	When Intelligent Key is not in the passenger compart- ment	(V) 15 0 10 1 1 1 1 1 1 1 1 1 1 1 1 1	N O P

< ECU DIAGNOSIS INFORMATION >

Termi	inal No.	Description				Value	
(VVire	e color)	Signal name	Input/	Condition		(Approx.)	
+ 35	Ground	Luggage room anten-	Output	Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0062GB	
(W)		na (+)		When Intelligent Key is not in the passenger compart- ment		(V) 15 0 1 1 1 1 1 1 1 1 1 1 1 1 1	
38	Ground	Rear bumper anten-	Output s e	Output	When the back door request	When Intelligent Key is in the antenna detection area	(V) 15 0 1 s JMKIA0062GB
(L)		na (-)			ed with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 0 0 1 s JMKIA0063GB
39	Ground	Rear bumper anten-	Output	When the back door request	When Intelligent Key is in the antenna detection area	(V) 15 0 15 0 15 15 15 15 15 15 15 15 15 15	
(BK)		na (+)		switch is operat- ed with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	
47	Ground	Ignition relay (IPDM	Output	Ignition switch	OFF or ACC	Battery voltage	
(L)	2.00110	E/R) control		3	ON	0 V	

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Term	inal No.	Description) (alice	
(Wire	e color)	Signal name	Input/	Condition		(Approx.)	A
+	_		Output		When selector lever is in P		
				Ignition switch	or N position	Battery voltage	В
52 (R)	Ground	Starter relay control	Output	ON	When selector lever is not in P or N position	0.3 V	-
				Ignition switch OFI	F	0 V	С
60		Push-button ignition		Push-button igni-	Pressed	0 V	
(BR)	Ground	switch (push switch)	Input	tion switch (push switch)	Not pressed	Battery voltage	D
					ON (Pressed)	0 V	
61 (R)	Ground	Back door request switch	Input	Back door re- quest switch	OFF (Not pressed)	(V) 15 10 5 0	E F
							G
64	Cround	Intelligent key warn-	Qutout	Morning huzzor	Sounding	0 V	-
(GR)	Ground	ing buzzer control	Output	warning buzzer	Not sounding	Battery voltage	Н
65 (O)	Ground	Rear wiper stop posi- tion	Input	Rear wiper	In stop position	(V) 15 10 5 10 10 ms JPMIA0016GB 1.0 V	l J
					Not in stop position	0 V	K
66 (Y)	Ground	Back door switch	Input	Back door switch	OFF (When back door closes)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8 V	BC
					ON (When back door	0 V	N
					Pressed	0 V	-
67 (LG)	Ground	Back door opener switch	Input	Back door opener switch	Not pressed	(V) 15 10 5 0 10 ms 10 ms JPMIA0011GB 11.8 V	O

Terminal No. Description					Value	
(Wire +	e color) –	Signal name	Input/ Output		Condition	(Approx.)
68 (W)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (When rear RH door closes)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8 V
					ON (When rear RH door opens)	0 V
69 (R)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (When rear LH door closes)	(V) 15 0 10 ms JPMIA0011GB 11.8 V
					ON (When rear LH door opens)	0 V
72	Ground	Room antenna (-)	Output	Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0062GB
72 (B)	Ground	(Center console)	Output	OFF	When Intelligent Key is not in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0063GB

Term	inal No.	Description				Value	
(Wire +	e color) –	Signal name	Input/ Output		Condition	Value (Approx.)	A
					When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 • • • •	B
73	Ground	Room antenna (+)	Output	Ignition switch		JMKIA0062GB	D
(vv)		(Center console)		OFF	When Intelligent Key is not		Е
					ment	JMKIA0063GB	F
						(V)	G
					When Intelligent Key is in the antenna detection area		Н
74	74 . Passenger door an-	Output	When the pas- senger door re-			I	
(Y)	Ground	tenna (-)	Cupu	quest switch is operated with ig- nition switch OFF			J
					When Intelligent Key is not in the antenna detection area		K
						JMKIA0063GB	L
					When Intelligent Key is in	(V) 15 10 5	BC
75		When Intelligent Key is in the antenna detection area When the pas-	0 1 s JMKIA0062GB	Ν			
(LG)	(LG) Ground Passenger door an- tenna (+) Ou	Output	quest switch is operated with ig-		(V)	0	
				nition switch OFF	When Intelligent Key is not in the antenna detection area		Ρ
						JMKIA0063GB	

Terminal No.		Description				Value
(Wire	e color)	Signal name	Input/		Condition	(Approx.)
+	_	Signal name	Output			V TT - 7
76	Ground	Driver door antenna	Output	When the driver door request	When Intelligent Key is in the antenna detection area	(V) 15 0 1 1 1 1 1 1 1 1 1 1 1 1 1
(V)	Glound	(-)	Output	door request switch is operat- ed with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 0 1 s JMKIA0063GB
77	Ground	Driver door antenna	Outout	When the driver	When Intelligent Key is in the antenna detection area	(V) 15 0 10 5 0 1 s JMKIA0062GB
(P)		(+)		switch is operat- ed with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 0 1 1 1 1 1 1 1 1 1 1 1 1 1
80 (SB)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
81 (O)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
82	Ground	Ignition relay [fuse		Ignition switch	OFF or ACC	0 V
(BR)	Ground	block (J/B)] control	Output	Ighillon Switch	ON	Battery voltage

Term	inal No.	Description		Valua								
(Wire +	e color) -	Signal name	Input/ Output		Condition	(Approx.)	A					
	83 (P) Ground Remote keyless entry receiver communica- tion		During waiting		(V) 15 10 5 0 1 ms JMKIA0064GB	B						
83 (P)		Input/ Output	When operating either button on Intelligent Key		(V) 15 10 5 0 1 ms JMKIA0065GB	E						
							G					
				All switches OFF (Wiper intermittent dial 4)	All switches OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB	Н					
					1.4 V							
07									Combination	Front fog lamp switch ON (Wiper intermittent dial 4)	(V) 15 0 2 ms JPMIA0037GB 1.3 V	J K L
(R)	Ground	INPUT 5	Input	switch								
		Rear wiper switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0039GB 1.3 V	BC								
				Any of the conditions below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7	(V) 15 0 2 ms JPMIA0040GB 1.3 V	P						

Terminal No. (Wire color)		Description				Value
(Wire	e color)	Signal name	Input/		Condition	(Approx.)
+	_	e.g.a. name	Output			
					All switches OFF (Wiper intermittent dial 4)	(V) 10 0 2 ms JPMIA0041GB 1.4 V
					Lighting switch HI (Wiper intermittent dial 4)	(V) 15 0 2 ms JPMIA0036GB 1.3 V
88 (GR)	Ground	Combination switch INPUT 3	Input	Combination switch	Lighting switch 2ND (Wiper intermittent dial 4)	(V) 10 0 2 ms JPMIA0037GB 1.3 V
				Rear washer switch ON (Wiper intermittent dial 4)	(V) 15 0 2 ms JPMIA0039GB 1.3 V	
	Any of with al • Wip • Wip • Wip				Any of the conditions below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	(V) 10 0 2 ms JPMIA0040GB 1.3 V
90 (P)	Ground	CAN-L	Input/ Output		-	_
91 (L)	Ground	CAN-H	Input/ Output		_	_

Terminal No. Description					Velue		
(Wire	e color)	0:	Input/	Condition		Value	А
+	-	Signal name	Output			(/,pp/0x.)	
					OFF	0 V	
92 (R)	Ground	Key slot illumination	Output	Key slot illumina- tion	Blinking	(V) 15 0 1 1 1 1 5 0 1 5 1	D C B
					ON	Battery voltage	_
93 (P)	Ground	ON indicator lamp	Output	Ignition switch	OFF (LOCK and ACC indi- cator lamps are not illumi- nated.)	Battery voltage	E
					ON	0 V	F
95	<u> </u>				OFF	0 V	
(L)	Ground	ACC relay control	Output	Ignition switch	ACC or ON	Battery voltage	G
96 (Y)	Ground	CVT shift selector (detention switch) power supply	Output		_	Battery voltage	Ц
99		Selector lever P posi-			P position	0 V	
(V)	Ground	tion switch	Input	Selector lever	Any position other than P	Battery voltage	
					ON (Pressed)	0 V	
100 (P)	Ground	Passenger door re- quest switch	Input	Passenger door request switch	OFF (Not pressed)	(V) 15 10 10 10 10 10 10 10 10 10 10	J
					ON (Pressed)	0 V	L
101 (W)	Ground	Driver door request switch	Input	Driver door re- quest switch	OFF (Not pressed)	(V) 15 0 10 10 ms JPMIA0016GB 1.0 V	BCS N
102	Ground	Blower fan motor re-	Outout	Ignition switch	OFF or ACC	0 V	0
(Y)	Ground	lay control	Output		ON	Battery voltage	
103 (L)	Ground	Remote keyless entry receiver power sup- ply	Output	Ignition switch OF	F	Battery voltage	Ρ

Term	inal No.	Description				Value	
(Wire +	e color) –	Signal name	Input/ Output		Condition	(Approx.)	
					All switches OFF	(V) 15 0 2 ms JPMIA0041GB 1.4 V	
		Combination switch INPUT 1	Input	Combination switch (Wiper intermit- tent dial 4)	Turn signal switch LH	(V) 15 0 2 ms 1.3 V	
107 (O)	Ground				Turn signal switch RH	(V) 15 0 2 ms JPMIA0036GB 1.3 V	
					Front wiper switch LO	(V) 15 0 2 ms JPMIA0038GB 1.3 V	
					Front washer switch ON	(V) 15 10 2 ms JPMIA0039GB 1.3 V	

< ECU DIAGNOSIS INFORMATION >

Terminal No.		Description				Value	
(Wire +	e color) –	Signal name	Input/ Output	-	Condition	(Approx.)	
					All switches OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2.ms. JPMIA0041GB 1.4.V	B C D
					Lighting switch AUTO (Wiper intermittent dial 4)	(V) 15 10 2 ms JPMIA0038GB 1.3 V	E
108 (P)	Ground	Combination switch INPUT 4	Input	Combination switch	Lighting switch 1ST (Wiper intermittent dial 4)	(V) 15 0 2 ms JPMIA0036GB 1.3 V	G H I
					Rear wiper switch INT (Wiper intermittent dial 4)	(V) 15 0 2 ms JPMIA0040GB 1.3 V	J K L
					Any of the conditions below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	(V) 15 0 2 ms JPMIA0039GB 1.3 V	BC

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Term	inal No.	Description				Value
(Wire	e color)	Signal name	Input/	Condition		(Approx.)
+			Output		All switches OFF	(V) 15 0 2 ms JPMA0041GB 1.4 V
					Lighting switch PASS	(V) 15 0 2 ms JPMIA0037GB 1.3 V
109 (SB)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermit- tent dial 4)	Lighting switch 2ND	(V) 15 0 2 ms JPMIA0036GB 1.3 V
					Front wiper switch INT/ AUTO	(V) 15 0 2 ms JPMIA0038GB 1.3 V
					Front wiper switch HI	(V) 15 0 2 ms JPMA0040GB 1.3 V
					ON	0 V
110 (G)	Ground	Hazard switch	Input	Hazard switch	OFF	(V) 15 0 10 ms 10 ms JPMIA0012GB 1.1 V

< ECU DIAGNOSIS INFORMATION >

Term	inal No.	Description				Valua		^			
(Wire	e color)		Input/		Condition		A				
+	_	Signal name	Output			(Approx.)					
112 (R)	Ground	Rain sensor serial link	Input/ Output	Ignition switch ON		(V) 15 10 5 0 	B C D				
113	Ground	Optical sensor	Input	Ignition switch	When bright outside of the vehicle	Close to 5 V	E				
(P/B)	0.00110			ON	When dark outside of the vehicle	Close to 0 V	E				
116 (GR)	Ground	Stop lamp switch 1	Input		_	Battery voltage	F				
118	Ground	Stop Jamp switch 2	loout	Stop Jamp switch	OFF (Brake pedal is not depressed)	0 V					
(L)	Giouna	Stop lamp switch 2	input	Stop lamp switch	ON (Brake pedal is de- pressed)	Battery voltage	G				
119 (W)	Ground	Front door lock as- sembly driver side (Unlock sensor)	Input	Driver door	LOCK status (unlock sen- sor switch OFF)	(V) 15 10 5 0 10 ms JPMIA0012GB	H				
									UNLOCK status (unlock sensor switch ON)	1.1 V 0 V	J
121				When Intelligent K	ey is inserted into key slot	Battery voltage	K				
(Y)	Ground	Key slot switch	Input	When Intelligent K	ey is not inserted into key slot	0 V					
123				0	OFF or ACC	0 V					
(G)	Ground	IGN feedback	Input	Ignition switch	ON	Battery voltage	L				
124 (R)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closes)	(V) 15 10 5 0 JPMIA0011GB 11.8 V	BCS N				
					ON (When passenger door opens)	0 V					

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Terminal No.		Description				Value	
(Wire color) + –		Signal name	Input/	Condition		(Approx.)	
130 (BR)	Ground	Rear window defog- ger switch	Input	Ignition switch ON	Rear window defogger switch OFF	(V) 15 10 5 0 	
					Rear window defogger switch ON	JPMIA0012GB 1.1 V 0 V	
132 (G)	Ground	Power window switch communication	Input/ Output	Ignition switch ON		(V) 15 10 10 10 10 10 10 10 10 10 10	
				Ignition switch OFF	F or ACC	Battery voltage	
					ON (When tail lamps OFF)	9.5 V	
133 (W)	Ground	Push-button ignition switch illumination	Output	Push-button igni- tion switch illumi- nation	ON (When tail lamps ON)	NOTE: The pulse width of this wave is varied by the illumination bright- ening/dimming level. (V) 15 10 5 0 11 11 11 11 11 11 11 11 11	
					OFF	JPMIA0159GB	
134 (R)	Ground	LOCK indicator lamp	Output	LOCK indicator lamp	OFF (ACC and ON indica- tor lamps are not illuminat- ed.)	Battery voltage	
137	Ground	Receiver and sensor	Input	Ignition switch ON	UN	0 V	
(P)		ground	r	<u> </u>	OFF	0.V	
(V)	Ground	Receiver and sensor power supply	Output	Ignition switch	ACC or ON	5.0 V	

Terminal No. Description					Velue		
(Wire +	e color) –	Signal name	Input/ Output		Condition	Value (Approx.)	A
					Standby state	(V) 6 4 2 0 • • • 0.2s	B
139 (O)	Ground	Tire pressure receiv- er communication	Input/ Output	Ignition switch ON		OCC3881D	D
					When receiving the signal		E
					from the transmitter	+ + 0.2s	F
140		Selector lever P/N			P or N position	Battery voltage	G
(GR)	Ground	position	Input	Selector lever	Except P and N positions	0 V	
					ON	0 V	
141 (O)	Ground	Security indicator	Output	Security indicator	Blinking	(V) 15 10 5 0 1 s JPMIA0014GB 11.3 V	J
					OFF	Battery voltage	K
					All switches OFF	0 V	
142 (L)	Ground	Combination switch	Output	Combination switch (Wiper intermit-	Lighting switch 1ST Lighting switch HI Lighting switch 2ND	(V) 15 10 5 0	L
				tent dial 4)	Turn signal switch RH	2 ms	BC
					All switches OFF (Wiper intermittent dial 4)	0 V	IN
					Front wiper switch HI (Wiper intermittent dial 4)	00	0
143 (W)	Ground	Combination switch OUTPUT 1	Output	Combination switch	Rear wiper switch INT (Wiper intermittent dial 4) Any of the conditions below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3 • Wiper intermittent dial 6 • Wiper intermittent dial 7	(V) 10 0 2 ms JPMIA0032GB 10.7 V	Ρ

Terminal No.		Description				Value	
(Wire color) + –		Signal name	Input/	Condition		(Approx.)	
+	_	e.g.a. name	Output				
					All switches OFF (Wiper intermittent dial 4)	0 V	
144 (P) Grou					Front washer switch ON (Wiper intermittent dial 4)		
		Combination switch		Combination	Rear wiper switch ON (Wiper intermittent dial 4)	(V) 15	
	Ground	OUTPUT 2	Output	switch	Rear washer switch ON (Wiper intermittent dial 4)		
					Any of the conditions below with all switches OFF	2 ms	
					 Wiper intermittent dial 1 Wiper intermittent dial 5 Wiper intermittent dial 6 	JPMIA0033GB 10.7 V	
					All switches OFF	0 V	
					Front wiper switch INT/ AUTO	(V)	
145 (V)	Ground	Combination switch OUTPUT 3	Output	Combination switch (Wiper intermit- tent dial 4)	Front wiper switch LO	15	
					Lighting switch AUTO	5 2 ms JPMIA0034GB	
						10.7 V	
					All switches OFF	0 V	
					Front fog lamp switch ON	(M)	
				Combination	Lighting switch 2ND		
146	Ground	Combination switch	Output	switch	Lighting switch PASS	5	
(1)		0019014		tent dial 4)	Turn signal switch LH	U 2 ms 10.7 V	
150 (SB)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closes)	(V) 15 0 10 10 ms JPMIA0011GB 11.8 V	
					ON (When driver door opens)	0 V	
151		Rear window defor-		Rear window do-	Active	0 V	
(G)	Ground	ger relay control	Output	fogger	Not activated	Battery voltage	

< ECU DIAGNOSIS INFORMATION >

Wiring Diagram - BCM -

For connector terminal arrangements, harness layouts, and alphabets in a 🔿 (option abbreviation; if not described in wiring diagram), refer to GI-12, "Connector Information".



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< ECU DIAGNOSIS INFORMATION >

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< ECU DIAGNOSIS INFORMATION >

(RS) : With rain sensor (WX) : With xenon headlamp (OX) : Without xenon headlamp



< ECU DIAGNOSIS INFORMATION >





Fail-safe

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FAIL-SAFE CONTROL BY DTC

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

< ECU DIAGNOSIS INFORMATION >

Display contents of CONSULT	Fail-safe	Cancellation
B2190: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI SCANNING	Inhibit engine cranking	Ignition switch $ON \rightarrow OFF$
B2560: STARTER CONT RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status becomes consistentStarter control relay signalStarter relay status signal
B2608: STARTER RELAY	Inhibit engine cranking	 500 ms after the following signal communication status becomes consistent Starter motor relay control signal Starter relay status signal (CAN)
B260A: IGNITION RELAY	Inhibit engine cranking	 500 ms after the following conditions are fulfilled IGN relay (IPDM E/R) control signal: OFF (Battery voltage) Ignition ON signal (CAN to IPDM E/R): OFF (Request signal) Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)
B260F: ENG STATE SIG LOST	Maintains the power supply position attained at the time of DTC detection	When any of the following conditions are fulfilledPower position changes to ACCReceives engine status signal (CAN)
B2617: STARTER RELAY CIRC	Inhibit engine cranking	1 second after the starter motor relay control inside BCM becomes normal
B2618: BCM	Inhibit engine cranking	1 second after the ignition relay (IPDM E/R) control inside BCM be- comes normal
B261E: VEHICLE TYPE	Inhibit engine cranking	BCM initialization

HIGH FLASHER OPERATION

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

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

NOTE:

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

FAIL-SAFE CONTROL BY RAIN SENSOR MALFUNCTION

- BCM judges the rain sensor serial link error by the rain sensor serial link condition and detects the rain sensor malfunction by rain sensor malfunction signal.
- When BCM detects the rain sensor serial link error or the rain sensor malfunction while front wiper AUTO operation, BCM operates a fail-safe control.

NOTE:

If rain sensor malfunction is detected when ignition switch is turned OFF \Rightarrow ON and front wiper switch is INT/ AUTO position, BCM operates a fail-safe control.

REAR WIPER MOTOR PROTECTION

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

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

Condition of cancellation

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

DTC Inspection Priority Chart

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

BCS-76

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< ECU DIAGNOSIS INFORMATION >

Priority	DTC	A
1	B2562: LOW VOLTAGE	_
2	U1000: CAN COMM U1010: CONTROL UNIT(CAN)	В
3	 B2190: NATS ANTENNA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM B2195: ANTI SCANNING 	С
4	 B2553: IGNITION RELAY B2555: STOP LAMP B2556: PUSH-BTN IGN SW B2557: VEHICLE SPEED B2560: STARTER CONT RELAY B2601: SHIFT POSITION B2602: SHIFT POSI STATUS B2603: SHIFT POSI STATUS B2604: PNP SW B2605: PNP SW B2606: STARTER RELAY B2607: IGNITION RELAY B2608: STARTER RELAY B2607: IGNITION RELAY B2607: Gamma and a strate s	D E G H
	C1704: LOW PRESSURE FL C1705: LOW PRESSURE FR C1705: LOW PRESSURE FR	J
5	 C1700. LOW PRESSURE RK C1707: LOW PRESSURE RL C1708: [NO DATA] FL C1709: [NO DATA] FR C1710: [NO DATA] RR 	К
-	 C1711: [NO DATA] RL C1716: [PRESSDATA ERR] FL C1717: [PRESSDATA ERR] FR C1718: [PRESSDATA ERR] RR 	L
	C1719: [PRESSDATA ERR] RL C1734: CONTROL UNIT	BC
6	B2622: INSIDE ANTENNA B2623: INSIDE ANTENNA	N

DTC Index

NOTE:

The details of time display are as follows.

• CRNT: A malfunction is detected now.

• PAST: A malfunction was detected in the past.

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

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< 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
No DTC is detected. further testing may be required.	_	_	_	_	_
U1000: CAN COMM	—	—	—	—	BCS-39
U1010: CONTROL UNIT(CAN)	—	—	—		BCS-40
U0415: VEHICLE SPEED SIG	—	—	—		BCS-41
B2190: NATS ANTENNA AMP	×	—	—	_	<u>SEC-42</u>
B2191: DIFFERENCE OF KEY	×	—	—		<u>SEC-45</u>
B2192: ID DISCORD BCM-ECM	×	—	—	—	<u>SEC-46</u>
B2193: CHAIN OF BCM-ECM	×	—	—	_	<u>SEC-48</u>
B2195: ANTI SCANNING	×	—	—	—	<u>SEC-49</u>
B2553: IGNITION RELAY	—	×	—		PCS-47
B2555: STOP LAMP	—	×	—	_	<u>SEC-50</u>
B2556: PUSH-BTN IGN SW		×	×	—	<u>SEC-52</u>
B2557: VEHICLE SPEED	×	×	×	_	<u>SEC-54</u>
B2560: STARTER CONT RELAY	×	×	×	_	<u>SEC-55</u>
B2562: LOW VOLTAGE	_	×		_	BCS-42
B2601: SHIFT POSITION	×	×	×	_	<u>SEC-56</u>
B2602: SHIFT POSITION	×	×	×	_	<u>SEC-59</u>
B2603: SHIFT POSI STATUS	×	×	×	_	<u>SEC-61</u>
B2604: PNP SW	×	×	×	_	<u>SEC-64</u>
B2605: PNP SW	×	×	×	_	<u>SEC-66</u>
B2608: STARTER RELAY	×	×	×	_	<u>SEC-68</u>
B260A: IGNITION RELAY	×	×	×	_	PCS-49
B260F: ENG STATE SIG LOST	×	×	×	_	<u>SEC-70</u>
B2614: ACC RELAY CIRC	_	×	×	_	PCS-51
B2615: BLOWER RELAY CIRC		×	×	—	PCS-54
B2616: IGN RELAY CIRC	_	×	×	_	PCS-57
B2617: STARTER RELAY CIRC	×	×	×	_	<u>SEC-72</u>
B2618: BCM	×	×	×	_	PCS-60
B261A: PUSH-BTN IGN SW		×	×	_	<u>SEC-75</u>
B261E: VEHICLE TYPE	×	×	× (Turn ON for 15 seconds)	_	<u>SEC-78</u>
B2622: INSIDE ANTENNA	_	×	_	_	DLK-91
B2623: INSIDE ANTENNA	_	×	_	_	DLK-93
B26EA: KEY REGISTRATION	—	×	× (Turn ON for 15 seconds)	_	<u>SEC-71</u>
C1704: LOW PRESSURE FL	—	—	—	×	
C1705: LOW PRESSURE FR	—	—	—	×	
C1706: LOW PRESSURE RR	—	—	—	×	<u>vv 1-20</u>
C1707: LOW PRESSURE RL	_	_	_	×	

< 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	A
C1708: [NO DATA] FL	—	—	—	×		
C1709: [NO DATA] FR	_	_	_	×	\N/T_22	С
C1710: [NO DATA] RR		_	_	×	<u>vv1-22</u>	0
C1711: [NO DATA] RL	—	—	—	×		
C1716: [PRESSDATA ERR] FL	—	—	—	×		D
C1717: [PRESSDATA ERR] FR		_	_	×	W/T-25	
C1718: [PRESSDATA ERR] RR	—	—	—	×	<u>vv1-25</u>	F
C1719: [PRESSDATA ERR] RL	_	_	_	×		
C1729: VHCL SPEED SIG ERR	_	—	_	×	<u>WT-26</u>	
C1734: CONTROL UNIT	—	—		×	<u>WT-27</u>	F

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COMBINATION SWITCH SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS COMBINATION SWITCH SYSTEM SYMPTOMS

Symptom Table

INFOID:000000008458139

Malfunction item: ×

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

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

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

Malfunction combination	Malfunctioning part	Repair or replace	
А	Combination switch INPUT 1 circuit		
В	Combination switch INPUT 2 circuit		
С	Combination switch INPUT 3 circuit	Inspect the combination switch input circuit applicable to the malfunctioning part. Refer to BCS-44. "Diagnosis Procedure".	
D	Combination switch INPUT 4 circuit	· · · · · · · · · · · · · · · · · · ·	
E	Combination switch INPUT 5 circuit		
F	Combination switch OUTPUT 1 circuit		
G	Combination switch OUTPUT 2 circuit		
Н	Combination switch OUTPUT 3 circuit	Inspect the combination switch output circuit applicable to the malfunction- ing part. Refer to BCS-46. "Diagnosis Procedure".	
I	Combination switch OUTPUT 4 circuit		
J	Combination switch OUTPUT 5 circuit		
К	BCM	Replace BCM. Refer to <u>BCS-84, "Exploded View"</u> .	
L	Combination switch	Replace the combination switch.	

Revision: 2012 September

< SYMPTOM DIAGNOSIS > NORMAL OPERATING CONDITION

Description

Description	INFOID:00000008942329	
 SHIPPING MODE Shipping mode inhibits battery power consumption during transportation set to shipping mode before being shipped from the factory. When ignition switch is OFF, BCM operates shipping mode. BCM control functions are limited in shipping mode. The limited items th ping mode are as follows. 	or storage of the vehicle. Vehicle is at are not operated during the ship-	B
 Door lock and unlock switch function Remote keyless entry function 		D
 Theft warning alarm function Lighting & turn signal switch function Interior room lamp timer control function For shipping mode cancel operation, refer to <u>BCS-7, "Description"</u>. NOTE: Do not cancel shipping mode during storage of the vehicle. Always cance the vehicle to customer 	el shipping mode before delivery of	E
		G
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< PRECAUTION >

PRECAUTION PRECAUTIONS FOR USA AND CANADA

FOR USA AND CANADA : Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

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

WARNING:

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.

FOR MEXICO

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

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. 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:

PRECAUTIONS

< PRECAUTION >

Always observe the following items for preventing accidental activation.

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

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< REMOVAL AND INSTALLATION >

REMOVAL AND INSTALLATION BCM (BODY CONTROL MODULE)

Exploded View

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NOTE:

Before replacing BCM, perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to <u>BCS-3</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Description".



1. BCM

Removal and Installation

INFOID:000000008458144

NOTE:

Before replacing BCM, perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to <u>BCS-3</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Description".

REMOVAL

- 1. Remove combination meter. Refer to <u>MWI-94, "Exploded View"</u>.
- 2. Remove screws.
- 3. Remove BCM and disconnect the connector.

INSTALLATION

Install in the reverse order of removal.

CAUTION:

Be sure to perform "WRITE CONFIGURATION" when replacing BCM. 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-3</u>, "<u>ADDITIONAL SER-</u><u>VICE WHEN REPLACING CONTROL UNIT (BCM)</u>: Work Procedure".

COMBINATION SWITCH

< REMOVAL AND INSTALLATION >

COMBINATION SWITCH

Exploded View

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