SECTION **BCS**

BODY CONTROL SYSTEM

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PRECAUTION

PRECAUTIONS

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

INFOID:0000000006274786

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

WARNING:
- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision 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 the "SRS AIR BAG".**
- **Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.**

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

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

SYSTEM DESCRIPTION

COMPONENT PARTS
BODY CONTROL SYSTEM

BODY CONTROL SYSTEM : Component Parts Location

INFOID:0000000006274787

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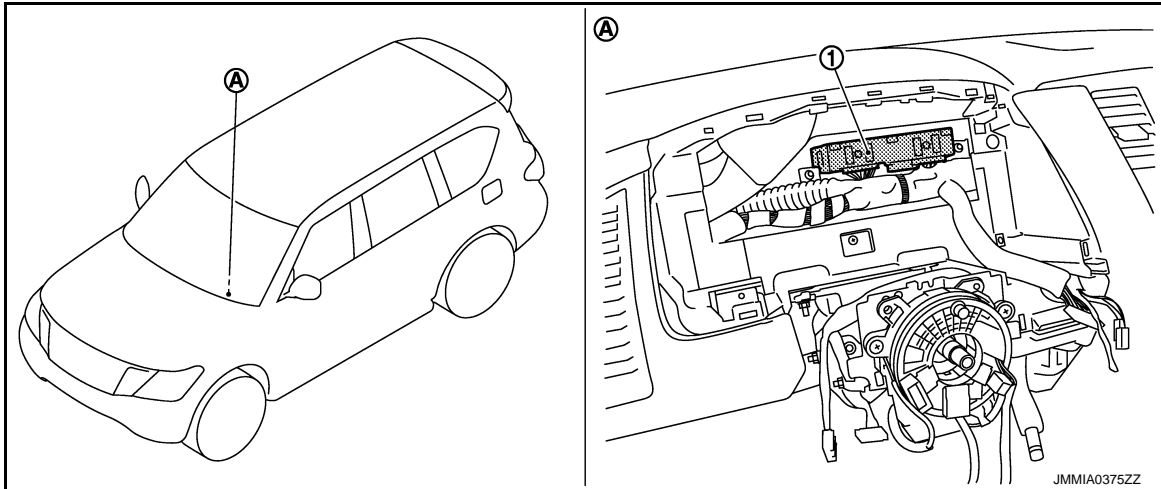
1. BCM
A. Behind of combination meter

POWER CONSUMPTION CONTROL SYSTEM

POWER CONSUMPTION CONTROL SYSTEM : Component Parts Location

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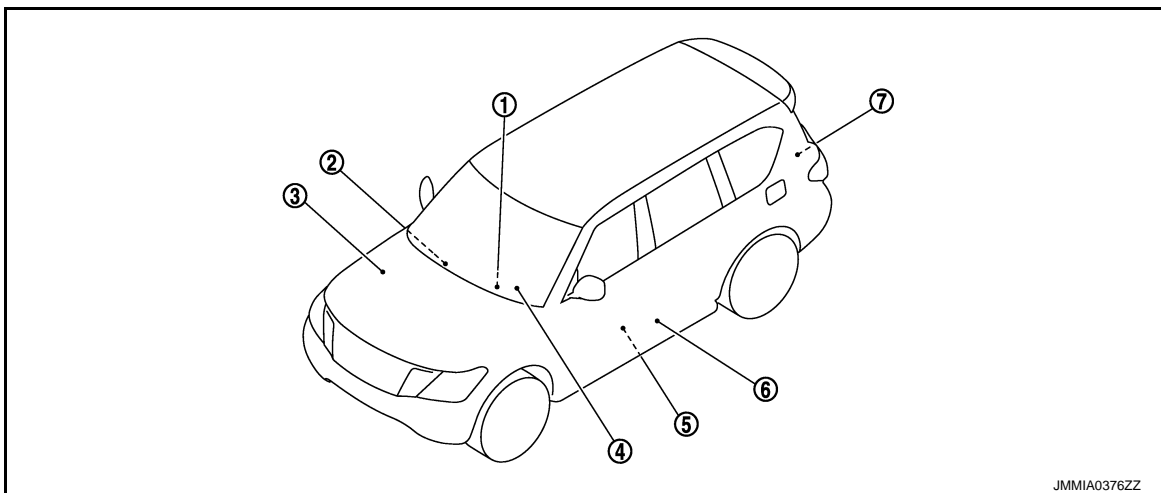
1.	BCM Refer to BCS-4, "BODY CONTROL SYSTEM : Component Parts Location".	2.	CAN gateway Refer to LAN-103, "Component Parts Location".	3.	IPDM E/R Refer to PCS-4, "Component Parts Location".

COMPONENT PARTS

< SYSTEM DESCRIPTION >

4. Combination meter

5. Driver seat control unit
Refer to ADP-6, "Component Parts Location".

6. Pre-crash seat belt control unit
Refer to SBC-5, "Component Parts Location".

7. Automatic back door control module
Refer to DLK-14, "AUTOMATIC BACK DOOR SYSTEM : Component Parts Location".

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SYSTEM
BODY CONTROL SYSTEM

BODY CONTROL SYSTEM : System Description

INFOID:0000000006274789

OUTLINE

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

BCM CONTROL FUNCTION LIST

System		Reference
Combination switch reading system		BCS-7, "COMBINATION SWITCH READING SYSTEM : System Diagram"
Signal buffer system		BCS-10, "SIGNAL BUFFER SYSTEM : System Diagram"
Power consumption control system		BCS-11, "POWER CONSUMPTION CONTROL SYSTEM : System Diagram"
Auto light system		EXL-11, "AUTO LIGHT SYSTEM : System Diagram"
Turn signal and hazard warning lamp system		EXL-18, "TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM : System Diagram"
Headlamp system		EXL-10, "HEADLAMP SYSTEM : System Diagram"
Daytime running light system		EXL-14, "DAYTIME RUNNING LIGHT SYSTEM : System Diagram"
Parking, license plate, side maker and tail lamps system		EXL-18, "PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMP SYSTEM : System Diagram"
Front fog lamp system		EXL-20, "FRONT FOG LAMP SYSTEM : System Diagram"
Exterior lamp battery saver system		EXL-20, "EXTERIOR LAMP BATTERY SAVER SYSTEM : System Diagram"
Interior room lamp control system		INL-6, "INTERIOR ROOM LAMP CONTROL SYSTEM : System Diagram"
Interior room lamp battery saver system		INL-9, "INTERIOR ROOM LAMP BATTERY SAVER SYSTEM : System Diagram"
Front wiper and washer system		WW-7, "FRONT WIPER AND WASHER SYSTEM : System Diagram"
Rear wiper and washer system		WW-10, "REAR WIPER AND WASHER SYSTEM : System Diagram"
Headlamp washer system		WW-13, "HEADLAMP WASHER SYSTEM : System Diagram"
Warning chime system		WCS-6, "WARNING CHIME SYSTEM : System Diagram"
Power door lock system		DLK-16, "System Diagram"
Infiniti Vehicle immobilizer System (IVIS)		SEC-15, "INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS : System Diagram"
Vehicle security system	Theft warning alarm	SEC-17, "VEHICLE SECURITY SYSTEM : System Diagram"
	Panic alarm	
Rear window defogger system		DEF-6, "System Diagram"
Intelligent Key system/engine start system		DLK-18, "INTELLIGENT KEY SYSTEM : System Diagram"
Power window system		PWC-8, "System Diagram"
Retained accessory power (RAP) system		PWC-8, "System Description"

COMBINATION SWITCH READING SYSTEM

COMBINATION SWITCH READING SYSTEM : System Diagram
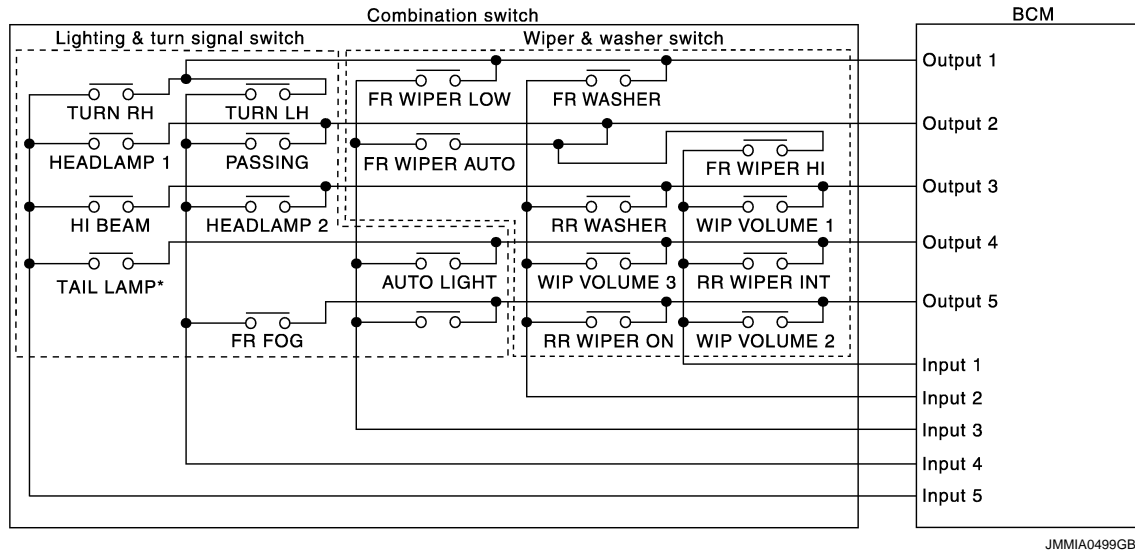
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NOTE:
*: TAIL LAMP switch links lighting switch 1ST and 2ND positions.

COMBINATION SWITCH READING SYSTEM : System Description

INFOID:0000000006274791

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

COMBINATION SWITCH MATRIX
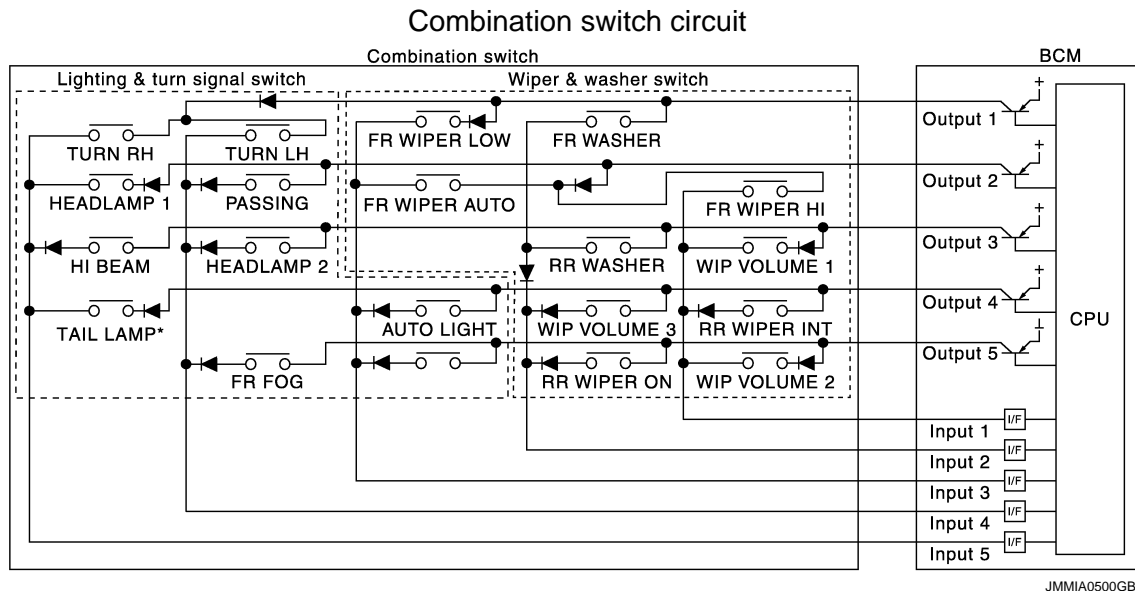
Combination switch circuit

JMMIA0500GB

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

Combination switch INPUT-OUTPUT system list

System	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5
OUTPUT 1	—	FR WASHER	FR WIPER LOW	TURN LH	TURN RH
OUTPUT 2	FR WIPER HI	—	FR WIPER AUTO	PASSING	HEADLAMP 1

System	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5
OUTPUT 3	WIP VOLUME 1	RR WASHER	—	HEADLAMP 2	HI BEAM
OUTPUT 4	RR WIPER INT	WIP VOLUME 3	AUTO LIGHT	—	TAIL LAMP
OUTPUT 5	WIP VOLUME 2	RR WIPER ON	RR FOG	FR FOG	—

NOTE:

Headlamp has a dual system switch.

COMBINATION SWITCH READING FUNCTION

Description
• BCM reads the status of the combination switch at 10 ms interval normally.
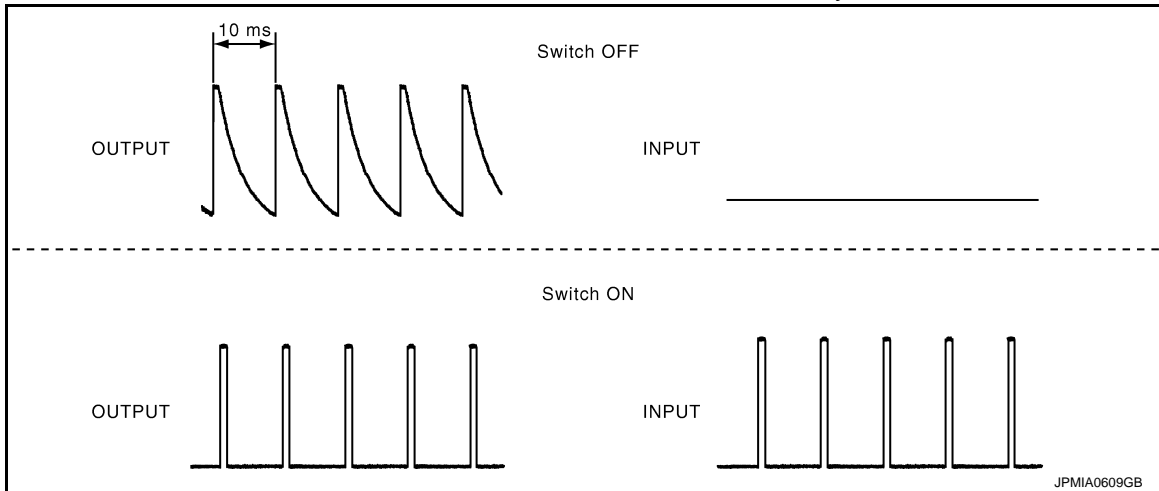
NOTE:
BCM reads the status of the combination switch at 60 ms interval when BCM is controlled at low power consumption control mode.
• BCM operates as follows and judges the status of the combination switch.
- It operates the transistor on OUTPUT side in the following order: OUTPUT 1 → 2 → 3 → 4 → 5, and outputs voltage waveform.
- The voltage waveform of OUTPUT corresponding to the formed circuit is input into the interface on INPUT side if any (1 or more) switches are ON.
- It reads this change of the voltage as the status signal of the combination switch.
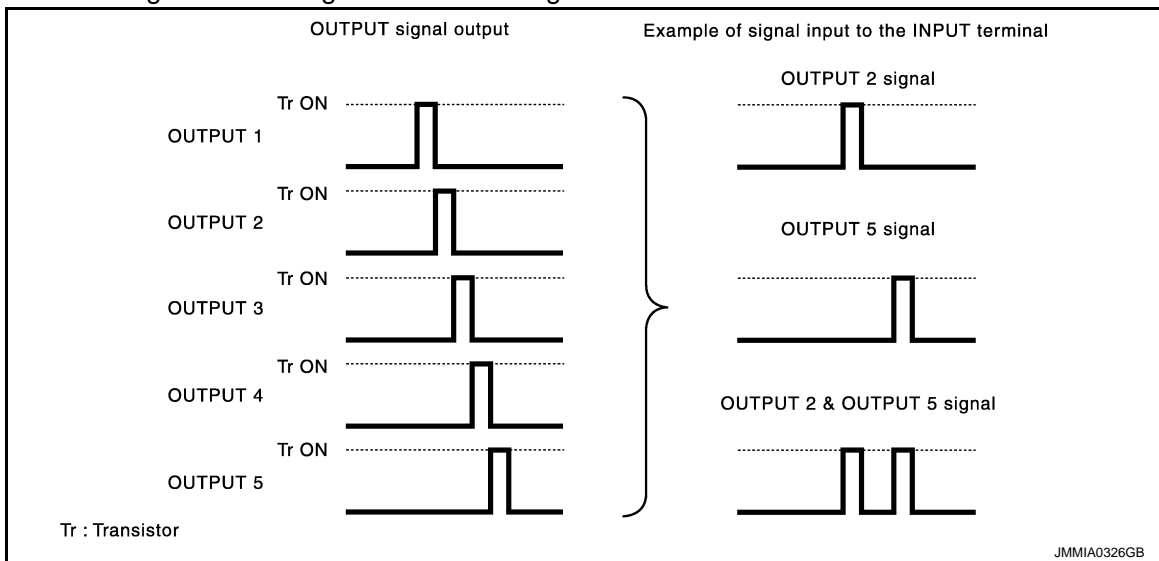
Operation Example
In the following operation example, the combination of the status signals of the combination switch is replaced as follows: INPUT 1 - 5 to "1 - 5" and OUTPUT 1 - 5 to "A - E".

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

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

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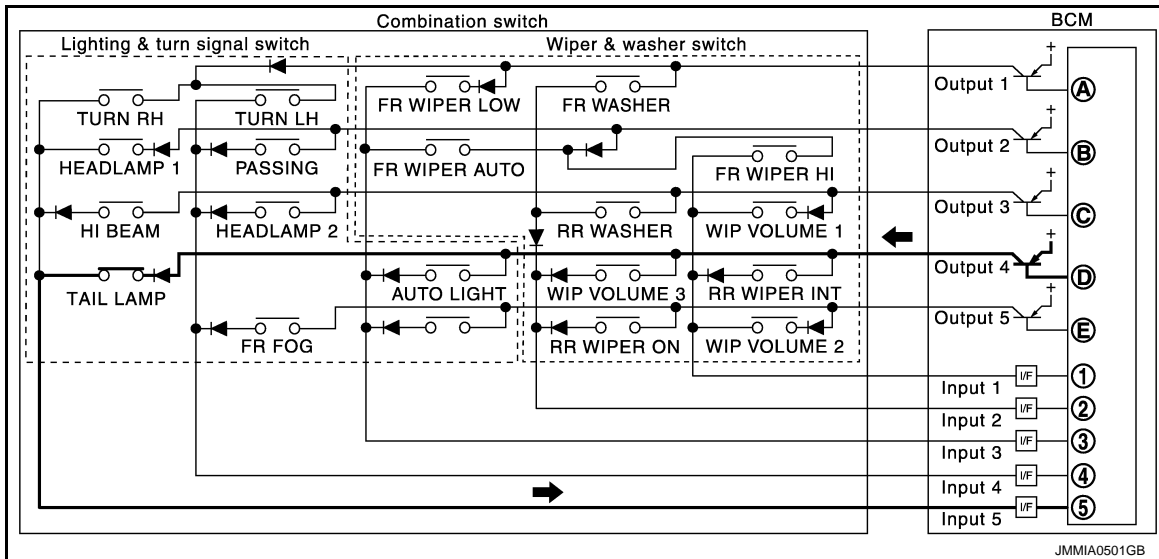
• BCM detects the combination switch status signal "5D" when the signal of OUTPUT 4 is input to INPUT 5.
• BCM judges that the TAIL LAMP switch is ON when the signal "5D" is detected.

Example 2: When some switches (TURN RH switch, TAIL LAMP switch) are turned ON
• The circuits between OUTPUT 1 and INPUT 5 and between OUTPUT 4 and INPUT 5 are formed when the TURN RH switch and TAIL LAMP switch are turned ON.

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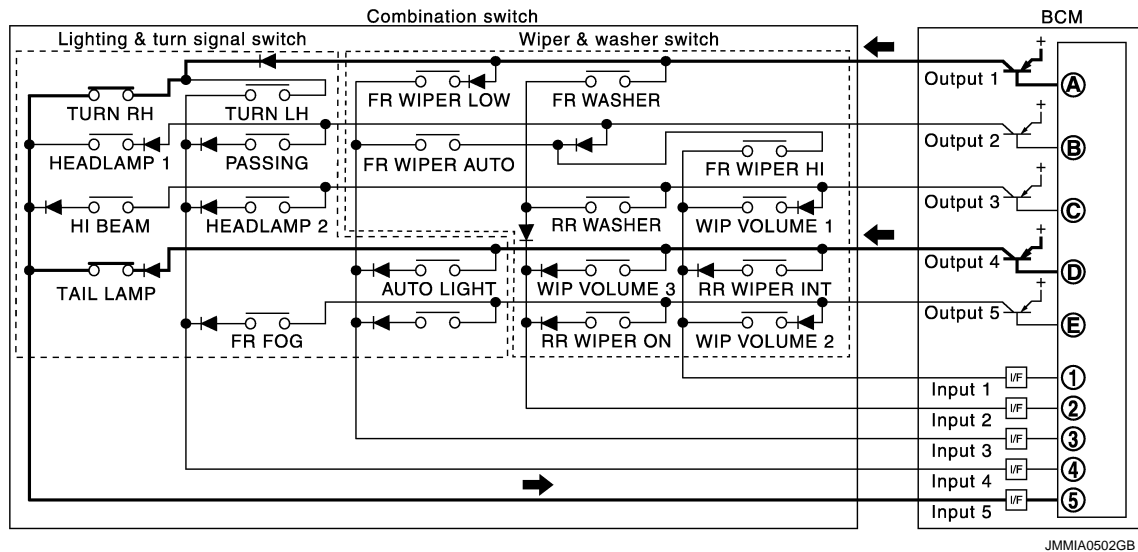
• BCM detects the combination switch status signal "5AD" when the signals of OUTPUT 1 and OUTPUT 4 are input to INPUT 5.
• BCM judges that the TURN RH switch and TAIL LAMP switch are ON when the signal "5AD" is detected.

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

Wiper volume dial position	Switch status		
	WIP VOLUME 1	WIP VOLUME 2	WIP VOLUME 3
1	ON	ON	ON
2	ON	ON	OFF
3	ON	OFF	OFF
4	OFF	OFF	OFF
5	OFF	OFF	ON

Wiper volume dial position	Switch status		
	WIP VOLUME 1	WIP VOLUME 2	WIP VOLUME 3
6	OFF	ON	ON
7	OFF	ON	OFF

NOTE:

For details of wiper volume dial position, refer to WW-7, "FRONT WIPER AND WASHER SYSTEM : System Description".

SIGNAL BUFFER SYSTEM

SIGNAL BUFFER SYSTEM : System Diagram

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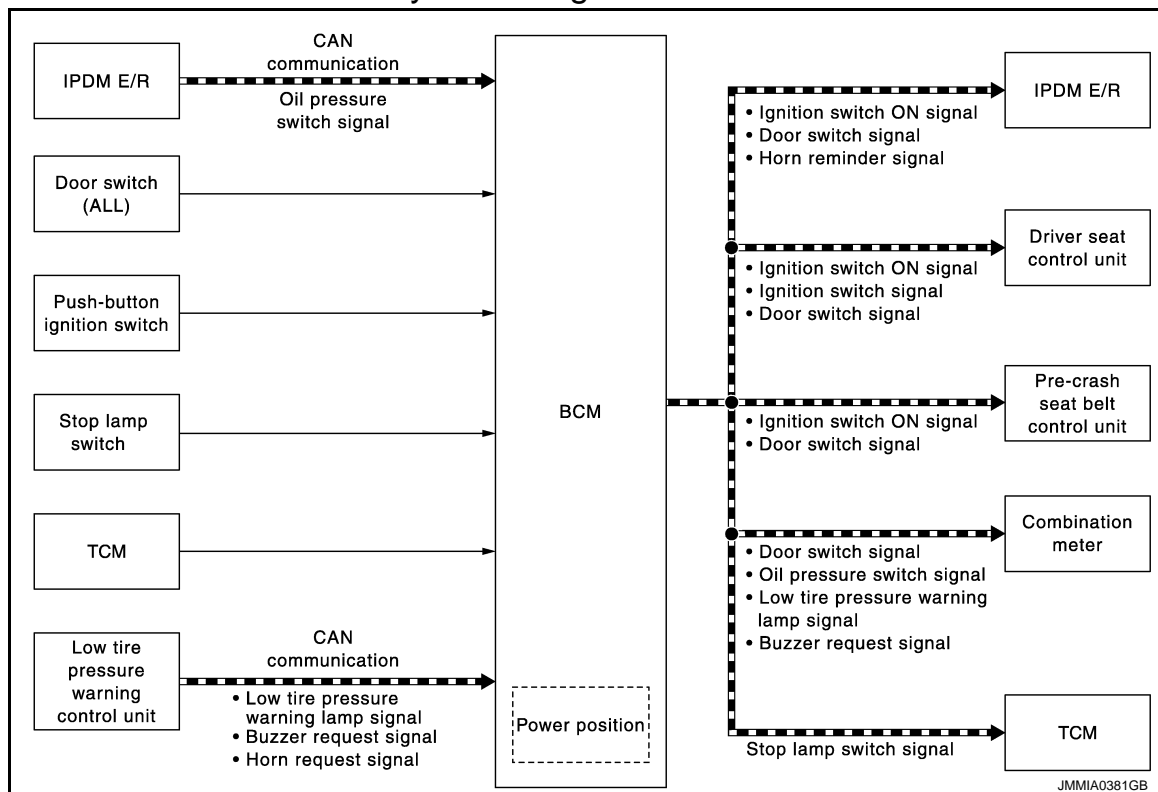
SIGNAL BUFFER SYSTEM : System Description

INFOID:0000000006274793

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) • Pre-crash seat belt control unit (CAN)	Inputs the push-button ignition switch (push switch) signal and transmits the ignition switch status judged with BCM via CAN communication.
Door switch signal	Any door switch	• Combination meter (CAN) • IPDM E/R (CAN) • Driver seat control unit (CAN) • Pre-crash seat belt control unit (CAN)	Inputs the door switch signal and transmits it via CAN communication.
Oil pressure switch signal	IPDM E/R (CAN)	Combination meter (CAN)	Transmits the received oil pressure switch signal via CAN communication.

SYSTEM

< SYSTEM DESCRIPTION >

Signal name	Input	Output	Description
Stop lamp switch signal	Stop lamp switch	TCM (CAN)	Inputs the stop lamp switch 1 signal and stop lamp switch 2 signal, and transmits it via CAN communication.
Low tire pressure warning lamp signal	Low tire pressure warning control unit	Combination meter (CAN)	Transmits the received low tire pressure warning signal via CAN communication.
Buzzer request signal	Low tire pressure warning control unit	Combination meter (CAN)	Transmits the received buzzer request signal via CAN communication.
Horn request signal	Low tire pressure warning control unit	IPDM E/R (CAN)	Received the horn request signal, transmits the horn reminder signal via CAN communication.

POWER CONSUMPTION CONTROL SYSTEM

POWER CONSUMPTION CONTROL SYSTEM : System Diagram
INFOID:0000000006274794

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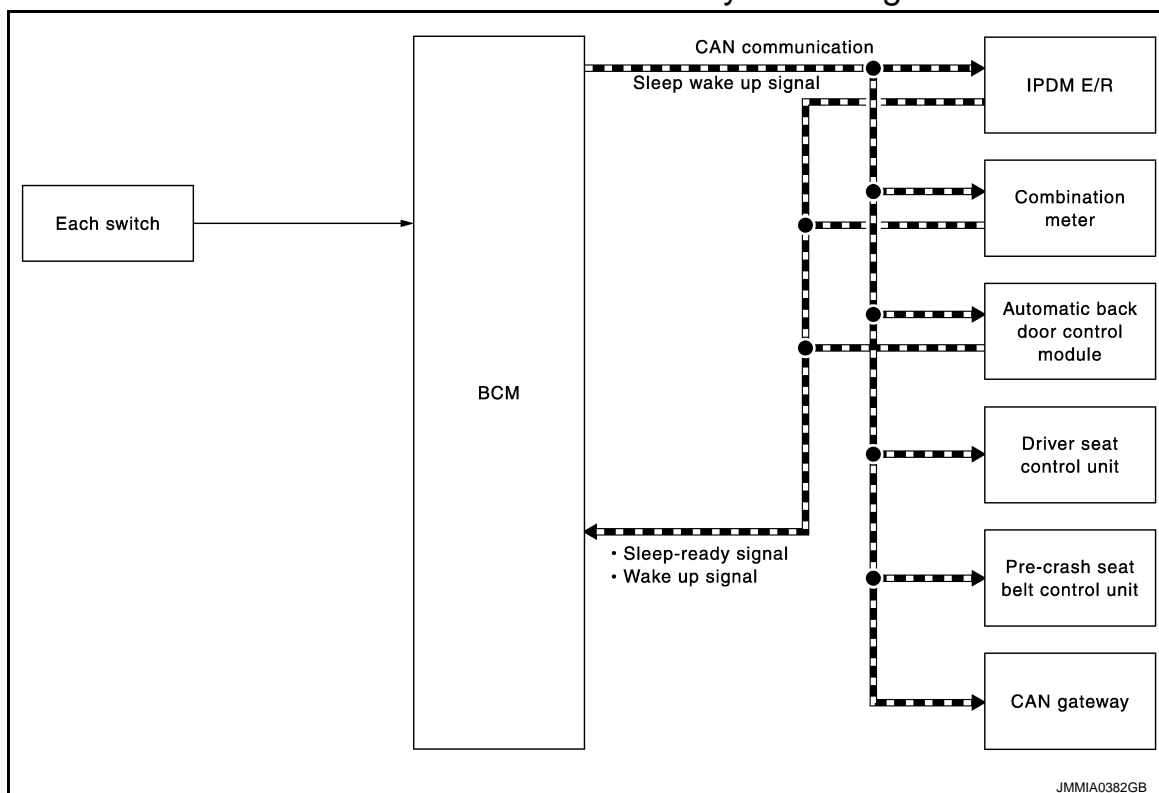
POWER CONSUMPTION CONTROL SYSTEM : System Description
INFOID:0000000006274795

OUTLINE
- BCM incorporates a power saving control function that reduces the power consumption according to the vehicle status.
- BCM switches the status (control mode) by itself with the power saving control function. It performs the sleep request to each unit (IPDM E/R, combination meter, driver seat control unit, automatic back door control module, pre-crash seat belt control unit and CAN gateway) 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, combination meter and automatic back door control module via CAN communication.
• BCM transmits the sleep wake up signal (sleep) to each unit when all of the CAN sleep conditions are fulfilled.
• Each unit stops the transmission of CAN communication with the sleep wake up signal. BCM is in CAN communication sleep mode.
• BCM is in the low power consumption mode and perform the low power consumption control when all of the BCM sleep conditions are fulfilled with CAN sleep condition.

Sleep condition

CAN sleep condition	BCM sleep condition
• Receiving the sleep-ready signal (ready) from all units • Ignition switch: OFF • Vehicle security system: Not operation • Warning chime: Not operation • Intelligent Key system buzzer: Not operation • Stop lamp switch: OFF • Turn signal indicator lamp: Not operation • Exterior lamp: OFF • Door lock status: No change • CONSULT-III communication status: Not communication • Meter display signal: Non-transmission • Door switch status: No change • Rear window defogger: OFF • Driver door lock status: No change	• Interior room lamp battery saver: Time out • RAP system: OFF • IVIS: Not operation • Remote keyless entry receiver communication status: No communication • LOCK indicator lamp: Not operation • ACC indicator lamp: Not operation • ON indicator lamp: Not operation

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

SYSTEM

< SYSTEM DESCRIPTION >

Wake-up condition

A

Wake-up condition

- Receiving the sleep-ready signal (Not-ready) from any units
- Push-button ignition switch (push switch): OFF→ ON
- Hazard switch: ON
- HI BEAM switch: OFF → ON, ON → OFF
- PASSING switch: OFF → ON, ON → OFF
- HEADLAMP 1 switch: OFF → ON, ON → OFF
- HEADLAMP 2 switch: OFF → ON, ON → OFF
- TAIL LAMP switch: OFF → ON
- FR FOG switch: OFF → ON, ON → OFF
- TURN RH: OFF → ON, ON → OFF
- TURN LH: OFF → ON, ON → OFF
- Driver door 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 switch: OFF → ON, ON → OFF
- Driver door request switch: OFF → ON
- Passenger door request switch: OFF → ON
- Back door request switch: OFF → ON
- Back door opener switch: OFF → ON
- Stop lamp switch: ON
- Door lock and unlock switch:
  NEUTRAL → LOCK, NEUTRAL → UNLOCK
- Front door lock assembly (driver side) (door key cylinder switch):
  NEUTRAL → LOCK, NEUTRAL → UNLOCK
- Remote keyless entry receiver communication: Receiving
- Front door lock assembly (driver side) (unlock sensor):
  OFF → ON, ON → OFF

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DIAGNOSIS SYSTEM (BCM)
COMMON ITEM

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

INFOID:0000000006274796

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

Diagnosis mode	Function Description
Work Support	Changes the setting for each system function.
Self Diagnostic Result	Displays the diagnosis results judged by BCM. Refer to BCS-57, "DTC Index".
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM. Refer to CONSULT-III operation manual.
Data Monitor	The BCM input/output signals are displayed.
Active Test	The signals used to activate each device are forcibly supplied from BCM.
Ecu Identification	The BCM part number is displayed.
Configuration	• Read and save the vehicle specification. • Write the vehicle specification when replacing BCM.

SYSTEM APPLICATION
BCM can perform the following functions for each system.
NOTE:
It can perform the diagnosis modes except the following for all sub system selection items.

×: Applicable item

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

*: This item is indicated, but not used.

FREEZE FRAME DATA (FFD)
The BCM records the following vehicle condition at the time a particular DTC is detected, and displays on CONSULT-III.

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
Vehicle Condition	SLEEP>LOCK	Power position status of the moment a particular DTC is detected	While turning BCM status from low power consumption mode to normal mode (Power supply position is "LOCK")
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power supply position is "OFF".)
	LOCK>ACC		While turning power supply position from "LOCK" to "ACC"
	ACC>ON		While turning power supply position from "ACC" to "IGN"
	RUN>ACC		While turning power supply position from "RUN" to "ACC" (Vehicle is stopping and selector lever is except P position.)
	CRANK>RUN		While turning power supply position from "CRANKING" to "RUN" (From cranking up the engine to run it)
	RUN>URGENT		While turning power supply position from "RUN" to "ACC" (Emergency stop operation)
	ACC>OFF		While turning power supply position from "ACC" to "OFF"
	OFF>LOCK		While turning power supply position from "OFF" to "LOCK"
	OFF>ACC		While turning power supply position from "OFF" to "ACC"
	ON>CRANK		While turning power supply position from "IGN" to "CRANKING"
	OFF>SLEEP		While turning BCM status from normal mode (Power supply position is "OFF".) to low power consumption mode
	LOCK>SLEEP		While turning BCM status from normal mode (Power supply position is "LOCK".) to low power consumption mode
	LOCK		Power supply position is "LOCK" (Ignition switch OFF with steering is locked.)
	OFF		Power supply position is "OFF" (Ignition switch OFF with steering is unlocked.)
	ACC		Power supply position is "ACC" (Ignition switch ACC)
	ON		Power supply position is "IGN" (Ignition switch ON with engine stopped)
	ENGINE RUN		Power supply position is "RUN" (Ignition switch ON with engine running)
	CRANKING		Power supply position is "CRANKING" (At engine cranking)
IGN Counter	0 - 39		The number of times that ignition switch is turned ON after DTC is detected • The number is 0 when a malfunction is detected now. • The number increases like 1 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. • The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.

DOOR LOCK

DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK)   *INFOID:0000000006376454*

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

WORK SUPPORT

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

DATA MONITOR

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

ACTIVE TEST

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

REAR WINDOW DEFOGGER

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

INFOID:0000000006376460

Data monitor

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

ACTIVE TEST

Test Item	Description
REAR DEFOGGER	Give a drive signal to the rear window defogger relay to activate it.

BUZZER

BUZZER : CONSULT-III Function (BCM - BUZZER)

INFOID:0000000006376483

CONSULT-III APPLICATION ITEMS

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

DATA MONITOR

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

ACTIVE TEST

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

INT LAMP

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

INFOID:0000000006376481

WORK SUPPORT

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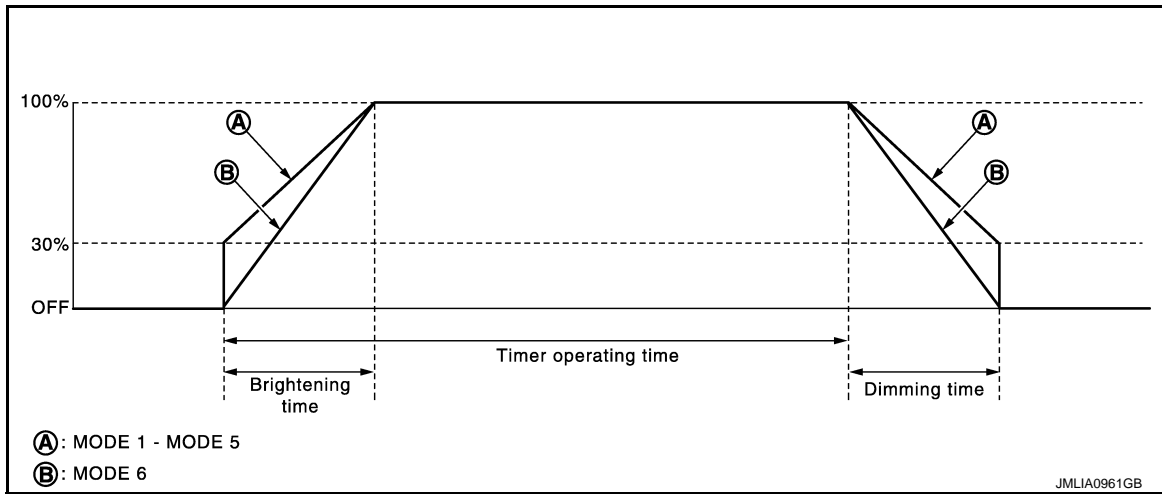
Service item	Setting item	Setting
SET I/L D-UNLCK INTCON	On*	With the interior room lamp timer function
	Off	Without the interior room lamp timer function
ROOM LAMP TIMER SET	MODE 2	7.5 sec.
	MODE 3*	15 sec.
	MODE 4	30 sec.
ROOM LAMP ON TIME SET	MODE 1	0.5 sec.
	MODE 2	1 sec.
	MODE 3	2 sec.
	MODE 4	3 sec.
	MODE 5	0 sec.
	MODE 6*	Gradually brightens from 0% to 100% brightness in 1 second.
ROOM LAMP OFF TIME SET	MODE 1	0.5 sec.
	MODE 2	1 sec.
	MODE 3	2 sec.
	MODE 4	3 sec.
	MODE 5	0 sec.
	MODE 6*	Gradually dims from 100% to 0% in 1 second.
R LAMP TIMER LOGIC SET	MODE 1*	Interior room lamp timer activates with synchronizing all doors.
	MODE 2	Interior room lamp timer activates with synchronizing the driver door only.

- ROOM LAMP TIMER SET: "Sets the interior room lamp ON time. (Timer operating time)"
- ROOM LAMP ON TIME SET (MODE 1-5): "Sets the interior room lamp gradual brightening time."
- ROOM LAMP OFF TIME SET (MODE 1-5): "Sets the interior room lamp gradual dimming time."

DATA MONITOR

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

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

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

ACTIVE TEST

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

HEADLAMP

HEADLAMP : CONSULT-III Function (BCM - HEAD LAMP)   *INFOID:0000000006376461*

WORK SUPPORT

Service item	Setting item	Setting
CUSTOM A/LIGHT SETTING	MODE 1*1	Normal
	MODE 2	More sensitive setting than normal setting (Turns ON earlier than normal operation)
	MODE 3	More sensitive setting than MODE 2 (Turns ON earlier than MODE 2)
	MODE 4	Less sensitive setting than normal setting (Turns ON later than normal operation)

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

Service item	Setting item	Setting
BATTERY SAVER SET	On*1	With the exterior lamp battery saver function
	Off	Without the exterior lamp battery saver function
ILL DELAY SET	MODE 1*1	45 sec.	Sets delay timer function timer operation time (All doors closed)
	MODE 2	Without the function	
	MODE 3	30 sec.	
	MODE 4	60 sec.	
	MODE 5	90 sec.	
	MODE 6	120 sec.	
	MODE 7	150 sec.	
	MODE 8	180 sec.	
AUTO LIGHT LOGIC SET*2	MODE 1*1	With twilight ON custom & with wiper INT, LO and HI
	MODE 2	With twilight ON custom & with wiper LO and HI
	MODE 3	With twilight ON custom & without
	MODE 4	Without twilight ON custom & with wiper INT, LO and HI
	MODE 5	Without twilight ON custom & with wiper LO and HI
	MODE 6	Without twilight ON custom & without

*1: Factory setting

*2: For models for Canada, this item is displayed but is not operated.

DATA MONITOR

Monitor item [Unit]	Description
PUSH SW [On/Off]	The switch status input from push-button ignition switch
ENGINE STATE [Stop/Stall/Crank/Run]	The engine status received from ECM via CAN communication
VEH SPEED 1 [km/h]	The value of the vehicle speed received from combination meter via CAN communication
TURN SIGNAL R [On/Off]	Each switch status that BCM judges from the combination switch reading function
TURN SIGNAL L [On/Off]	
TAIL LAMP SW [On/Off]	
HI BEAM SW [On/Off]	
HEAD LAMP SW1 [On/Off]	
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:** This item is indicated, but can not monitored

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

Monitor item [Unit]	Description
DOOR SW-DR [On/Off]	The switch status input from front door switch (driver side)
DOOR SW-AS [On/Off]	The switch status input from front door switch (passenger side)
DOOR SW-RR [On/Off]	The switch status input from rear door switch RH
DOOR SW- RL [On/Off]	The switch status input from rear door switch LH
DOOR SW-BK [On/Off]	The switch status input from back door switch
OPTICAL SENSOR [On/Off]	The sensor status input from optical sensor
OPTI SEN (DTCT) [V]	The value of outside brightness voltage input from the optical sensor
OPTI SEN (FILT) [V]	The value of outside brightness voltage filtered by BCM

ACTIVE TEST

Test item	Operation	Description
TAIL LAMP	On	Transmits the position light request signal to IPDM E/R via CAN communication to turn the tail lamp ON
	Off	Stops the tail lamp request signal transmission
HEAD LAMP	Hi	Transmits the high beam request signal via CAN communication to turn the headlamp (HI)
	Lo	Transmits the low beam request signal via CAN communication to turn the headlamp (LO)
	Off	Stops the high & low beam request signal transmission
FR FOG LAMP	On	Transmits the front fog lights request signal to IPDM E/R via CAN communication to turn the front fog lamp ON
	Off	Stops the front light request signal transmission
RR FOG LAMP	On	**NOTE:** This item is indicated, but can not tested
	Off	
DAYTIME RUNNING LIGHT*	On	Transmits the front fog lights request signal to IPDM E/R via CAN communication to turn the front fog lamp ON (daytime running light system)
	Off	Stops the front light request signal transmission (daytime running light system)
ILL DIM SIGNAL	On	• Transmits the dimmer signal to combination meter via CAN communication and dims combination meter • Transmits the dimmer signal to AV control unit and dims display
	Off	Stops the dimmer signal transmission

*: Only models for Canada display this item.

WIPER

WIPER : CONSULT-III Function (BCM - WIPER)

INFOID:0000000006376469

WORK SUPPORT

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

Service item	Setting item	Description	
WIPER SPEED SETTING*1	On	With vehicle speed (Front wiper intermittent time linked with the vehicle speed and wiper intermittent dial position)	The setting of front wiper INT operation can be changed
	Off	Without vehicle speed (Front wiper intermittent time linked with the wiper intermittent dial position)	
RAIN SEN WIP FUNC SET	On*2	With rain sensor (Front wiper intermittent time linked with the rain sensor, vehicle speed, and AUTO dial position)	The setting of front wiper AUTO operation can be changed
	Off	Without rain sensor (Front wiper intermittent time linked with the vehicle speed and AUTO dial position)	
DROP WIPE FUNC SET*1	MODE1	Front wiper and rear wiper OFF	The setting of drop wipe operation can be changed
	MODE2*2	Front wiper ON and rear wiper OFF	
	MODE3	Front wiper OFF and rear wiper ON	
	MODE4	Front wiper and rear wiper ON	

*1:The item is indicated, but not operated

*2:Factory setting

DATA MONITOR

Monitor Item [Unit]	Description
PUSH SW [Off/On]	The switch status input from push-button ignition switch.
VEH SPEED 1 [km/h]	Displays the value of the vehicle speed signal received from combination meter via CAN communication.
FR WIPER HI [Off/On]	Status of each switch judged by BCM using the combination switch reading function
FR WIPER LOW [Off/On]	
FR WASHER SW [Off/On]	
FR WIPER INT [Off/On]	
FR WIPER STOP [Off/On]	Displays the status of the front wiper stop position signal received from IPDM E/R via CAN communication.
INT VOLUME [1 – 7]	Status of each switch judged by BCM using the combination switch reading function
RR WIPER ON [Off/On]	Status of each switch judged by BCM using the combination switch reading function
RR WIPER INT [Off/On]	
RR WASHER SW [Off/On]	
RR WIPER STOP [Off/On]	Rear wiper motor (stop position) status input from the rear wiper motor
H/L WASH SW [Off/On]	**NOTE:** This item is indicated, but not monitored
RAIN SENSOR [OFF/LOW/HIGH/SPLASH/NG]	Request signal from rain sensor detected by BCM is displayed

ACTIVE TEST

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

FLASHER

FLASHER : CONSULT-III Function (BCM - FLASHER)

INFOID:0000000006376462

WORK SUPPORT

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

*: Factory setting

DATA MONITOR

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

ACTIVE TEST

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

INTELLIGENT KEY

INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY) *INFOID:0000000006376455*

WORK SUPPORT

Monitor item	Description
INSIDE ANT DIAGNOSIS	This function allows inside key antenna self-diagnosis
LOCK/UNLOCK BY I-KEY	Door lock/unlock function by door request switch mode can be changed to operation in this mode • On: Operate • Off: Non-operation
ENGINE START BY I-KEY	Engine start function mode can be changed to operation with this mode • On: Operate • Off: Non-operation
TRUNK/GLASS HATCH OPEN	Buzzer reminder function mode by back door opener switch can be changed to operation with this mode • On: Operate • Off: Non-operation
PANIC ALARM SET	Panic alarm button pressing time on Intelligent Key button can be selected from the following with this mode • MODE 1: 0.5 sec • MODE 2: Non-operation • MODE 3: 1.5 sec
TRUNK OPEN DELAY	Back door open button pressing to Intelligent Key button can be selected as per the following in this mode • MODE 1: Press and hold • MODE 2: Press twice • MODE 3: Press and hold, or press twice
LO- BATT OF KEY FOB WARN	Intelligent Key low battery warning mode can be changed to operation with this mode • On: Operate • Off: Non-operation
ANTI KEY LOCK IN FUNCTI	Key reminder function mode can be changed to operation with this mode • On: Operate • Off: Non-operation
HAZARD ANSWER BACK	Hazard reminder function mode by door request switch and Intelligent Key button can be selected from the following with this mode • Lock Only: Door lock operation only • Unlock Only: Door unlock operation only • Lock/Unlock: Lock and unlock operation • Off: Non-operation
ANS BACK I-KEY LOCK	Buzzer reminder function (lock operation) mode by door request switch can be selected from the following with this mode • Horn Chirp: Sound horn • Buzzer: Sound Intelligent Key warning buzzer • Off: Non-operation
ANS BACK I-KEY UNLOCK	Buzzer reminder function (unlock operation) mode by door request switch can be changed to operation with this mode • On: Operate • Off: Non-operation

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

Monitor item	Description
SHORT CRANKING OUTPUT	Starter motor can operate during the times below • 70 msec • 100 msec • 200 msec
CONFIRM KEY FOB ID	It can be checked whether Intelligent Key ID code is registered or not in this mode
AUTO LOCK SET	Auto door lock operation time can be changed in this mode • MODE 1: OFF • MODE 2: 30 sec • MODE 3: 1 minute • MODE 4: 2 minutes • MODE 5: 3 minutes • MODE 6: 4 minutes • MODE 7: 5 minutes
HORN WITH KEYLESS LOCK	Horn reminder function mode by Intelligent Key button can be selected from the following with this mode • On: Operate • Off: Non-operation
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
WELCOME LIGHT SELECT	Welcome light function mode can be selected from the following with this mode • Puddle/Outside Handle • Room lamp • Head & Tail Lamps (this item is displayed, but cannot be used) • Heart Beat
WELCOME LIGHT OP SET	Welcome light function mode can be changed to operation with this mode • On: Operate • Off: Non-operation

SELF-DIAG RESULT
Refer to BCS-57, "DTC Index".

DATA MONITOR

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

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

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

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

Test item	Description
LCD	This test is able to check meter display information • Engine start information displays when "BP N" on CONSULT-III screen is touched • Engine start information displays when "BP I" on CONSULT-III screen is touched • Key ID warning displays when "ID NG" on CONSULT-III screen is touched • Steering lock information displays when "ROTAT" on CONSULT-III screen is touched • P position warning displays when "SFT P" on CONSULT-III screen is touched • INSRT: This item is displayed, but cannot be monitored • BATT: This item is displayed, but cannot be monitored • Take away through window warning displays when "NO KY" on CONSULT-III screen is touched • Take away warning display when "OUTKEY" on CONSULT-III screen is touched • OFF position warning display when "LK WN" on CONSULT-III screen is touched
FLASHER	This test is able to check security hazard lamp operation The hazard lamps are activated after "LH/RH/Off" on CONSULT-III screen is touched
P RANGE	This test is able to check A/T shift selector power supply • On: Operate • Off: Non-operation
ENGINE SW ILLUMI	This test is able to check push-button ignition switch illumination operation Push-ignition switch illumination illuminates when "ON" on CONSULT-III screen is touched
LOCK INDICATOR	This test is able to check LOCK indicator (push-button ignition switch) operation • On: Operate • Off: Non-operation
ACC INDICATOR	This test is able to check ACC indicator (push-button ignition switch) operation • On: Operate • Off: Non-operation
IGNITION ON IND	This test is able to check ON indicator (push-button ignition switch) operation • On: Operate • Off: Non-operation
HORN	This test is able to check horn operation • On: Operate • Off: Non-operation
TRUNK/BACK DOOR	**NOTE:** This item is displayed, but cannot be used

COMB SW

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

INFOID:0000000006274810

DATA MONITOR

Monitor item [UNIT]	Description
FR WIPER HI [Off/On]	Displays the status of the FR WIPER HI switch in combination switch judged by BCM with the combination switch reading function.
FR WIPER LOW [Off/On]	Displays the status of the FR WIPER LOW switch in combination switch judged by BCM with the combination switch reading function.
FR WASHER SW [Off/On]	Displays the status of the FR WASHER switch in combination switch judged by BCM with the combination switch reading function.
FR WIPER INT [Off/On]	Displays the status of the FR WIPER AUTO switch in combination switch judged by BCM with the combination switch reading function.
INT VOLUME [1 - 7]	Displays the status of wiper volume 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.

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

BCM

BCM : CONSULT-III Function (BCM - BCM)

INFOID:0000000006274811

WORK SUPPORT

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

IMMU

IMMU : CONSULT-III Function (BCM - IMMU)

INFOID:0000000006376458

DATA MONITOR

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

ACTIVE TEST

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

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

WORK SUPPORT

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

BATTERY SAVER

BATTERY SAVER : CONSULT-III Function (BCM - BATTERY SAVER)   *INFOID:0000000006376482*

WORK SUPPORT

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

*:Factory setting

DATA MONITOR

Monitor item [Unit]	Description
REQ SW-DR [On/Off]	The switch status input from door request switch (driver side)
REQ SW-AS [On/Off]	The switch status input from door request switch (passenger side)
REQ SW-RR [On/Off]	**NOTE:** The item is indicated, but not monitored.
REQ SW-RL [On/Off]	
PUSH SW [On/Off]	The switch status input from push-button ignition switch
UNLK SEN-DR [On/Off]	Driver door unlock status input from unlock sensor
DOOR SW-DR [On/Off]	The switch status input from door switch (driver side)
DOOR SW-AS [On/Off]	The switch status input from door switch (passenger side)
DOOR SW-RR [On/Off]	The switch status input from rear door switch RH
DOOR SW- RL [On/Off]	The switch status input from rear door switch LH
DOOR SW- BK [On/Off]	The switch status input from back door switch
CDL LOCK SW [On/Off]	Lock switch status input from door lock and unlock switch
CDL UNLOCK SW [On/Off]	Unlock switch status input from door lock and unlock switch
KEY CYL LK-SW [On/Off]	Lock switch status received from door key cylinder switch

Monitor item [Unit]	Description
KEY CYL UN-SW [On/Off]	Unlock switch status received from door key cylinder switch
TRNK/HAT MNTR [On/Off]	**NOTE:** The item is indicated, but not monitored.
RKE-LOCK [On/Off]	Lock signal status received from remote keyless entry receiver
RKE-UNLOCK [On/Off]	Unlock signal status received from remote keyless entry receiver

ACTIVE TEST

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

*: Each lamp switch is in ON position.

TRUNK

TRUNK : CONSULT-III Function (BCM - TRUNK)

INFOID:0000000006376456

DATA MONITOR

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

THEFT ALM

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

INFOID:0000000006376457

DATA MONITOR

Monitored Item	Description
REQ SW -DR	Indicates [ON/OFF] condition of door request switch (driver side).
REQ SW -AS	Indicates [ON/OFF] condition of door request switch (passenger side).
REQ SW -RR	**NOTE:** This item is displayed, but cannot be monitored.
REQ SW -RL	**NOTE:** This item is displayed, but cannot be monitored.
REQ SW -BD/TR	Indicates [ON/OFF] condition of back door request switch.
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch
UNLK SEN -DR	Indicates [ON/OFF] condition of driver door UNLOCK status.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch (driver side).
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch (passenger side).
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

Monitored Item	Description
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 door key cylinder.
KEY CYL UN-SW	Indicates [ON/OFF] condition of unlock signal from door key cylinder.
TR/BD OPEN SW	Indicates [ON/OFF] condition of back door opener switch.
TRNK/HAT MNTR	**NOTE:** This 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.

WORK SUPPORT

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

ACTIVE TEST

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

RETAIND PWR

RETAIND PWR : CONSULT-III Function (BCM - RETAINED PWR)   INFOID:0000000006376459

Data monitor

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

SIGNAL BUFFER

SIGNAL BUFFER : CONSULT-III Function (BCM - SIGNAL BUFFER)   INFOID:0000000006274818

DATA MONITOR

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

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

ACTIVE TEST

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

ECU DIAGNOSIS INFORMATION

BCM

Reference Value

INFOID:0000000006274819

VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

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

BCM

< ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
RR FOG SW	**NOTE:** The item is indicated, but not monitored.	Off
DOOR SW-DR	Driver door closed	Off
	Driver door opened	On
DOOR SW-AS	Passenger door closed	Off
	Passenger door opened	On
DOOR SW-RR	Rear RH door closed	Off
	Rear RH door opened	On
DOOR SW-RL	Rear LH door closed	Off
	Rear LH door opened	On
DOOR SW-BK	Back door closed	Off
	Back door opened	On
CDL LOCK SW	Other than power door lock switch LOCK	Off
	Power door lock switch LOCK	On
CDL UNLOCK SW	Other than power door lock switch UNLOCK	Off
	Power door lock switch UNLOCK	On
KEY CYL LK-SW	Other than driver door key cylinder LOCK position	Off
	Driver door key cylinder LOCK position	On
KEY CYL UN-SW	Other than driver door key cylinder UNLOCK position	Off
	Driver door key cylinder UNLOCK position	On
HAZARD SW	Hazard switch is OFF	Off
	Hazard switch is ON	On
REAR DEF SW	Rear window defogger switch OFF	Off
	Rear window defogger switch ON	On
TR/BD OPEN SW	Back door opener switch OFF	Off
	While the back door opener switch is turned ON	On
TRNK/HAT MNTR	**NOTE:** The item is indicated, but not monitored.	Off
FAN ON SIG	**NOTE:** The item is indicated, but not monitored.	Off
AIR COND SW	**NOTE:** The item is indicated, but not monitored.	Off
RKE-LOCK	LOCK button of the key is not pressed	Off
	LOCK button of the key is pressed	On
RKE-UNLOCK	UNLOCK button of the key is not pressed	Off
	UNLOCK button of the key is pressed	On
RKE-TR/BD	BACK DOOR OPEN button of the key is not pressed	Off
	BACK DOOR OPEN button of the key is pressed	On
RKE-PANIC	PANIC button of the key is not pressed	Off
	PANIC button of the key is pressed	On
RKE-MODE CHG	LOCK/UNLOCK button of the key is not pressed and held simultaneously	Off
	LOCK/UNLOCK button of the key is pressed and held simultaneously	On
OPTI SEN (DTCT)	Bright outside of the vehicle	Close to 5 V
	Dark outside of the vehicle	Close to 0 V
OPTI SEN (FILT)	Bright outside of the vehicle (Lighting switch AUTO)	Close to 5 V
	Dark outside of the vehicle (Lighting switch AUTO)	Close to 1.50 V

BCM

< ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
OPTICAL SENSOR	**NOTE:** The item is indicated, but not monitored.	Off
RAIN SENSOR	No rain (or very light rain)	Off
	Light rain	LOW
	Heavy rain	HIGH
	When liquid is splashed on the front window	SPLSH
	Rain sensor internal error	NG
REQ SW -DR	Driver door request switch is not pressed	Off
	Driver door request switch is pressed	On
REQ SW -AS	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 -RL	**NOTE:** The item is indicated, but not monitored.	Off
REQ SW -BD/TR	Back door request switch is not pressed	Off
	Back door request switch is pressed	On
PUSH SW	Push-button ignition switch (push switch) is not pressed	Off
	Push-button ignition switch (push switch) is pressed	On
CLUCH SW	**NOTE:** The item is indicated, but not monitored.	Off
BRAKE SW 1	The brake pedal is not depressed	Off
	The brake pedal is depressed	On
BRAKE SW 2	The brake pedal is depressed when No. 7 fuse is blown	Off
	The brake pedal is not depressed when No. 7 fuse is blown, or No. 7 fuse is normal	On
DETE/CANCL SW	Selector lever in P position	Off
	Selector lever in any position other than P	On
SFT PN/N SW	Selector lever in any position other than P and N	Off
	Selector lever in P or N position	On
S/L -LOCK	Steering is locked	Off
	Steering is unlocked	On
S/L -UNLOCK	Steering is unlocked	Off
	Steering is locked	On
S/L RELAY-F/B	Steering is unlocked	Off
	Steering is locked	On
UNLK SEN -DR	Driver door is locked	Off
	Driver door is unlocked	On
PUSH SW -IPDM	Push-button ignition switch (push-switch) is not pressed	Off
	Push-button ignition switch (push-switch) is pressed	On
IGN RLY1 -F/B	Ignition switch in OFF or ACC position	Off
	Ignition switch in ON position	On
DETE SW -IPDM	Selector lever in any position other than P	Off
	Selector lever in P position	On
SFT PN -IPDM	Selector lever in any position other than P and N	Off
	Selector lever in P or N position	On

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BCM

< ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
SFT P -MET	Selector lever in any position other than P	Off
	Selector lever in P position	On
SFT N -MET	Selector lever in any position other than N	Off
	Selector lever in N position	On
ENGINE STATE	Engine stopped	Stop
	While the engine stalls	Stall
	At engine cranking	Crank
	Engine running	Run
S/L LOCK-IPDM	Steering is locked	Off
	Steering is unlocked	On
S/L UNLK-IPDM	Steering is unlocked	Off
	Steering is locked	On
S/L RELAY-REQ	Steering is unlocked	Off
	Steering is locked	On
VEH SPEED 1	While driving	Equivalent to speed-ometer reading
VEH SPEED 2	While driving	Equivalent to speed-ometer reading
DOOR STAT-DR	Driver door is locked	LOCK
	Wait with selective UNLOCK operation (60 seconds)	READY
	Driver door is unlocked	UNLOCK
DOOR STAT-AS	Passenger door is locked	LOCK
	Wait with selective UNLOCK operation (60 seconds)	READY
	Passenger door is unlocked	UNLOCK
ID OK FLAG	Steering is locked	Reset
	Steering is unlocked	Set
PRMT ENG STRT	The engine start is prohibited	Reset
	The engine start is permitted	Set
PRMT RKE STRT	**NOTE:** The item is indicated, but not monitored.	Reset
RKE OPE COUN1	During the operation of the key	Operation frequency of the key
RKE OPE COUN2	**NOTE:** The item is indicated, but not monitored.	—
CONFRM ID ALL	The key ID that the key slot receives is not recognized by any key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by any key ID registered to BCM.	Done
CONFIRM ID4	The key ID that the key slot receives is not recognized by the fourth key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by the fourth key ID registered to BCM.	Done
CONFIRM ID3	The key ID that the key slot receives is not recognized by the third key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by the third key ID registered to BCM.	Done

BCM

< ECU DIAGNOSIS INFORMATION >

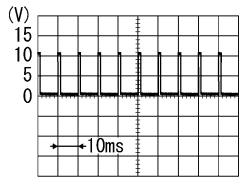| Monitor Item	Condition	Value/Status
CONFIRM ID2	The key ID that the key slot receives is not recognized by the second key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by the second key ID registered to BCM.	Done
CONFIRM ID1	The key ID that the key slot receives is not recognized by the first key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by the first key ID registered to BCM.	Done
NOT REGISTERED	BCM detects registered key ID, or BCM does not detect key ID.	ID OK
	BCM detects non-registration key ID.	ID NG
TP 4	The ID of fourth key is not registered to BCM	Yet
	The ID of fourth key is registered to BCM	Done
TP 3	The ID of third key is not registered to BCM	Yet
	The ID of third key is registered to BCM	Done
TP 2	The ID of second key is not registered to BCM	Yet
	The ID of second key is registered to BCM	Done
TP 1	The ID of first key is not registered to BCM	Yet
	The ID of first key is registered to BCM	Done
BUZZER	Tire pressure warning alarm is not sounding	Off
	Tire pressure warning alarm is sounding	On

A

B

C

D

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BCM
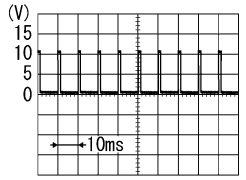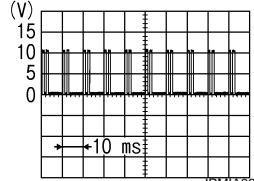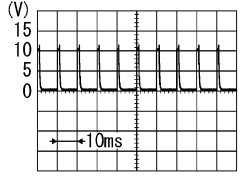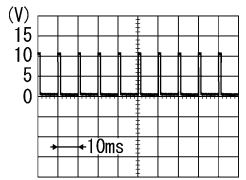
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TERMINAL LAYOUT
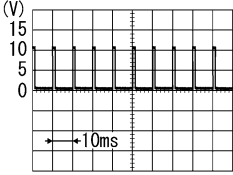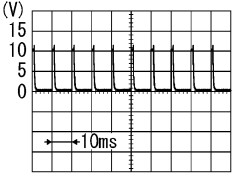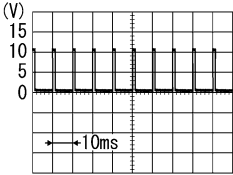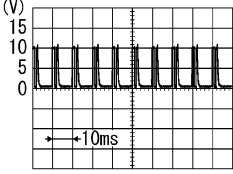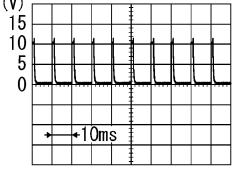
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PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	−	Signal name	Input/Output			
2 (BR/Y)	Ground	Combination switch INPUT 5	Input	Combination switch (Wiper volume dial 4)	All switches OFF	0 V
					Turn signal switch RH	
					Lighting switch HI	
					Lighting switch 1ST	PKIB4958J 1.0 V
					Lighting switch 2ND	JPMIA0342JP 2.0 V
3 (GR)	Ground	Combination switch INPUT 4	Input	Combination switch (Wiper volume dial 4)	All switches OFF	0 V
					Turn signal switch LH	
					Lighting switch PASS	
					Lighting switch 2ND	PKIB4958J 1.0 V
					Front fog lamp switch ON	PKIB4956J 0.8 V
4 (L)	Ground	Combination switch INPUT 3	Input	Combination switch (Wiper volume dial 4)	All switches OFF	0 V
					Front wiper switch LO	
					Front wiper switch MIST	
					Front wiper switch AUTO	
					Lighting switch AUTO	PKIB4958J 1.0 V
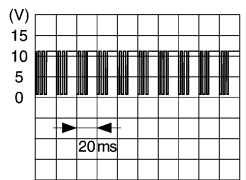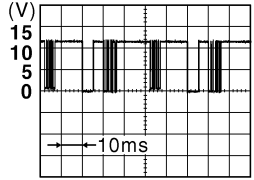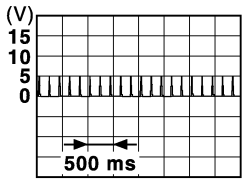
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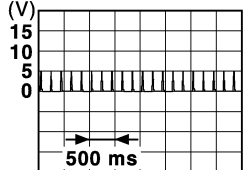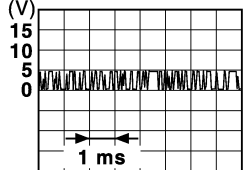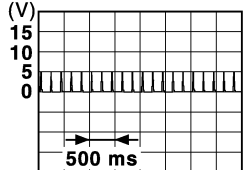| Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	−	Signal name	Input/Output			
5 (G)	Ground	Combination switch INPUT 2	Input	Combination switch	All switches OFF (Wiper volume dial 4)	0 V
					Front washer switch ON (Wiper volume dial 4)	(V) 15 10 5 0 ←→10ms PKIB4958J 1.0 V
					Rear washer switch ON (Wiper volume dial 4)	
					Any of the condition below with all switches OFF • Wiper volume dial 1 • Wiper volume dial 5 • Wiper volume dial 6	
					Rear wiper switch ON (Wiper volume dial 4)	(V) 15 10 5 0 ←→10ms PKIB4956J 0.8 V
6 (V)	Ground	Combination switch INPUT 1	Input	Combination switch	All switches OFF (Wiper volume dial 4)	0 V
					Front wiper switch HI (Wiper volume dial 4)	(V) 15 10 5 0 ←→10ms PKIB4958J 1.0 V
					Rear wiper switch INT (Wiper volume dial 4)	
					Wiper volume dial 3 (All switches OFF)	
					Any of the condition below with all switches OFF • Wiper volume dial 1 • Wiper volume dial 2	(V) 15 10 5 0 ←→10ms PKIB4952J 1.9 V
					Any of the condition below with all switches OFF • Wiper volume dial 6 • Wiper volume dial 7	(V) 15 10 5 0 ←→10ms PKIB4956J 0.8 V

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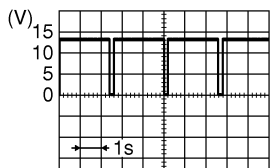
Terminal No. (Wire color) +	−	Description Signal name	Input/ Output	Condition		Value (Approx.)
8 (V)	Ground	Power window switch communication	Input/ Output	Ignition switch ON		(V) 15 10 5 0 ◀20ms▶ PKIA7023E 9.0 - 10 V
9 (R)	Ground	Stop lamp switch 1	Input	Stop lamp switch	OFF (Brake pedal is not depressed)	0 V
					ON (Brake pedal is depressed)	Battery voltage
11 (R)	Ground	Light and rain sensor serial link	Input/ Output	Ignition switch OFF		12 V
				Ignition switch ON		(V) 15 10 5 0 ←10ms→ JPMIA0156GB 8.0 - 9.0 V
14 (P/B)	Ground	Optical sensor	Input	Ignition switch ON	When bright outside of the vehicle	Close to 5 V
					When dark outside of the vehicle	Close to 0 V
16 (L/O)	Ground	Dimmer signal	Output	Ignition switch ON	Either of the following conditions • Lighting switch OFF • The area around the vehicle is bright (Shine a light on the optical sensor)	0 V
					The area around the vehicle is dark (Block the light from the optical sensor)	12 V
17 (Y/G)	Ground	Sensor power supply	Output	Ignition switch	OFF, ACC	0 V
					ON	5 V
18 (B/Y)	Ground	Receiver and sensor ground	Input	Ignition switch ON		0 V
19 (BR)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OFF		(V) 15 10 5 0 ◀500 ms▶ JMKIA3838GB
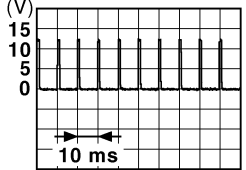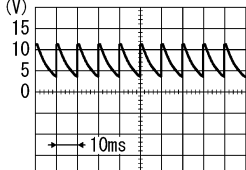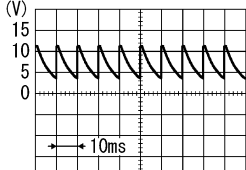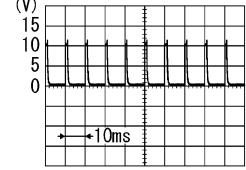
BCS-41

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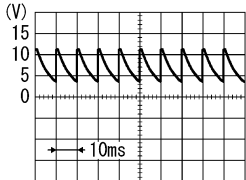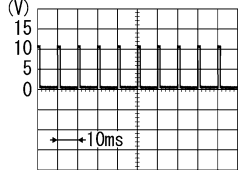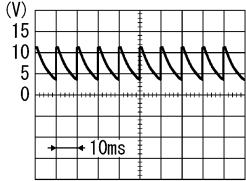| Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	−	Signal name	Input/ Output			
20 (G/R)	Ground	Remote keyless entry receiver communication	Input	Waiting		JMKIA3838GB
				Signal receiving		JMKIA3841GB
21 (P)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
22 (W/B)	Ground	Remote keyless entry receiver RSSI	Input	Waiting		0 V
				Signal receiving		JMKIA3838GB
23 (GR/R)	Ground	Security indicator lamp	Output	Security indicator lamp	ON	0 V
					Blinking (Ignition switch OFF)	JPMIA0590GB 11.0 - 12.0 V
					OFF	Battery voltage
24* (SB)	Ground	Dongle link	Input/ Output	Ignition switch OFF		5 V
25 (LG/R)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
29 (W)	Ground	Hazard switch	Input	Hazard switch	OFF	12 V
					ON	0 V

BCM

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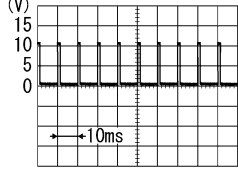
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	−	Signal name	Input/ Output			
30 (W/L)	Ground	Back door opener switch	Input	Back door opener switch	Pressed	0 V
					Not pressed	(V) 15 10 5 0 ←10 ms→ JPMIA0012GB 1.0 - 1.5 V
31 (W/G)	Ground	Front door lock assembly driver side (Unlock sensor)	Input	Driver door	LOCK status (Unlock sensor switch OFF)	(V) 15 10 5 0 ←10ms→ PKIB4960J 7.0 - 8.0 V
					UNLOCK status (Unlock sensor switch ON)	0 V
32 (LG)	Ground	Combination switch OUTPUT 5	Output	Combination switch	All switches OFF (Wiper volume dial 4)	(V) 15 10 5 0 ←10ms→ PKIB4960J 7.0 - 8.0 V
					Front fog lamp switch ON (Wiper volume dial 4)	(V) 15 10 5 0 ←10ms→ PKIB4956J 1.0 V
					Rear wiper switch ON (Wiper volume dial 4)	
					Any of the condition below with all switches OFF • Wiper volume dial 1 • Wiper volume dial 2 • Wiper volume dial 6 • Wiper volume dial 7	

BCM

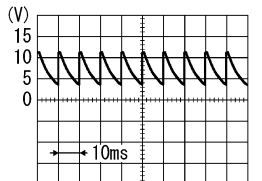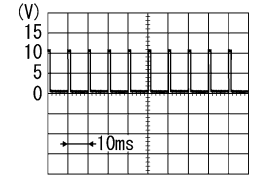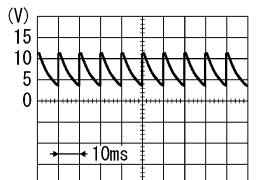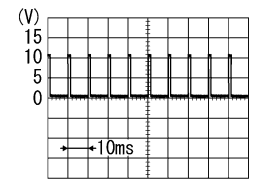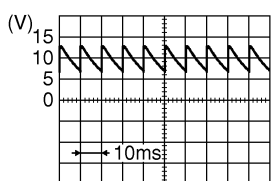< ECU DIAGNOSIS INFORMATION >

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

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< ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	−	Signal name	Input/ Output			
35 (R/W)	Ground	Combination switch OUTPUT 2	Output	Combination switch (Wiper volume dial 4)	All switches OFF	(V) 15 10 5 0 ⟵10ms⟶ PKIB4960J 7.0 - 8.0 V
					Lighting switch 2ND	(V) 15 10 5 0 ⟵10ms⟶ PKIB4958J 1.2 V
					Lighting switch PASS	
					Front wiper switch AUTO	
					Front wiper switch HI	
36 (SB)	Ground	Combination switch OUTPUT 1	Output	Combination switch (Wiper volume dial 4)	All switches OFF	(V) 15 10 5 0 ⟵10ms⟶ PKIB4960J 7.0 - 8.0 V
					Turn signal switch RH	(V) 15 10 5 0 ⟵10ms⟶ PKIB4958J 1.2 V
					Turn signal switch LH	
					Front wiper switch LO	
					Front wiper switch MIST	
					Front washer switch ON	
37 (G/Y)	Ground	P position	Input	Selector lever	P position	0 V
					Any position other than P	12 V
39 (L)	Ground	CAN-H	Input/ Output	—		—
40 (P)	Ground	CAN-L	Input/ Output	—		—
43 (Y/L)	Ground	Back door switch	Input	Back door switch	OFF (When back door closed)	(V) 15 10 5 0 ⟵10ms⟶ JPMIA0593GB 9.0 - 10.0 V
					ON (When back door opened)	0 V
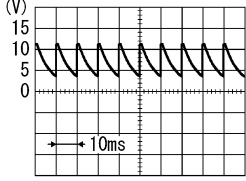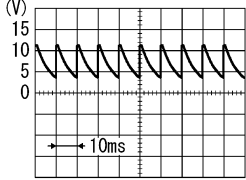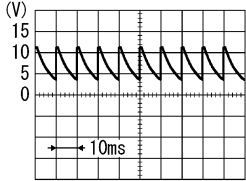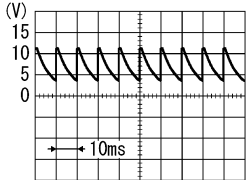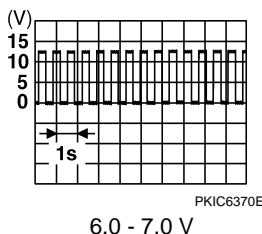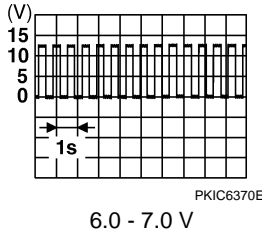
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< ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color) +	−	Description Signal name	Input/ Output	Condition		Value (Approx.)
44 (G/W)	Ground	Rear wiper stop position	Input	Ignition switch ON	Rear wiper stop position	12 V
					Any position other than rear wiper stop position	0 V
45 (W)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closed)	PKIB4960J 7.0 - 8.0 V
					ON (When passenger door opened)	0 V
46 (GR)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (When rear RH door closed)	PKIB4960J 7.0 - 8.0 V
					ON (When rear RH door opened)	0 V
47 (GR/R)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closed)	PKIB4960J 7.0 - 8.0 V
					ON (When driver door opened)	0 V
48 (O)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (When rear LH door closed)	PKIB4960J 7.0 - 8.0 V
					ON (When rear door LH opened)	0 V
49 (BR/Y)	Ground	Luggage room lamp	Output	Luggage room lamp	OFF	12 V
					ON	0 V
51 (W/R)	Ground	Back door request switch	Input	Back door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	12 V
54 (L)	Ground	Rear wiper	Output	Rear wiper	OFF (Stopped)	0 V
					ON (Activated)	12 V
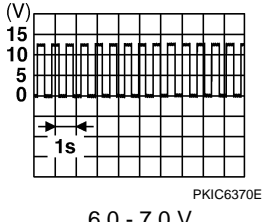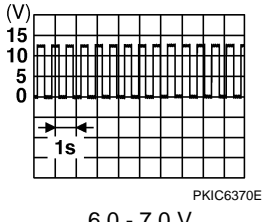
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< ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	−	Signal name	Input/Output			
55 (G)	Ground	Rear door UNLOCK	Output	Rear door	UNLOCK (Actuator is activated)	12 V
					Other then UNLOCK (Actuator is not activated)	0 V
56 (W/R)	Ground	Interior room lamp power supply	Output		Interior room lamp battery saver is activated. (Cuts the interior room lamp power supply)	0 V
					Interior room lamp battery saver is not activated. (Outputs the interior room lamp power supply)	12 V
57 (LG)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
59 (G)	Ground	Passenger door UNLOCK	Output	Passenger door	UNLOCK (Actuator is activated)	12 V
					Other then UNLOCK (Actuator is not activated)	0 V
60 (G)	Ground	Turn signal LH	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	PKIC6370E 6.0 - 7.0 V
61 (G/Y)	Ground	Turn signal RH	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch RH	PKIC6370E 6.0 - 7.0 V
62 (R)	Ground	Step lamp	Output	Step lamp	ON	0 V
					OFF	12 V
63 (BR)	Ground	Interior room lamp timer control	Output	Interior room lamp	OFF	12 V
					ON	0 V
64 (GR/R)	Ground	Cranking request	input	Ignition switch ON	Engine stopped (Selector lever is in P position)	0 V
					Engine stopped (Selector lever is not in P position)	12 V
					Engine running	12 V
65 (R)	Ground	All doors, fuel lid LOCK	Output	All doors, fuel lid	LOCK (Actuator is activated)	12 V
					Other then LOCK (Actuator is not activated)	0 V
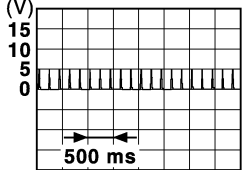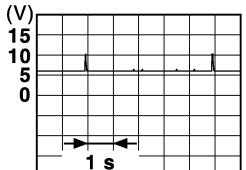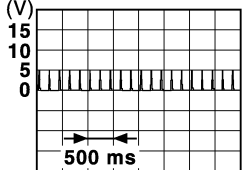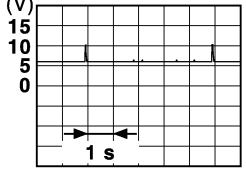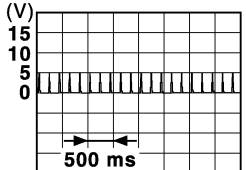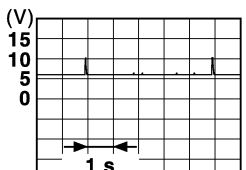
BCS-47

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	−	Signal name	Input/ Output			
66 (V)	Ground	Driver door, fuel lid UNLOCK	Output	Driver door, fuel lid	UNLOCK (Actuator is activated)	12 V
					Other then UNLOCK (Actuator is not activated)	0 V
67 (B)	Ground	Ground	Output	Ignition switch ON		0 V
68 (Y)	Ground	P/W power supply (IGN)	Output	Ignition switch ON		12 V
69 (W)	Ground	P/W power supply (BAT)	Output	Ignition switch OFF		12 V
70 (Y)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
72 (P)	Ground	Puddle lamp control	Output	Puddle lamp	OFF	12 V
					ON	0 V
73 (W)	Ground	ON indicator lamp	Output	Ignition switch	OFF (LOCK indicator is not illuminated)	Battery voltage
					ON	0 V
74 (Y/B)	Ground	Trailer turn signal RH control	Output	Ignition switch ON	Turn signal switch OFF	Battery voltage
					Turn signal switch RH	PKIC6370E 6.0 - 7.0 V
75 (LG/R)	Ground	Driver door request switch	Input	Driver door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	12 V
76 (P/L)	Ground	Passenger door request switch	Input	Passenger door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	12 V
77 (O/L)	Ground	Trailer turn signal LH control	Output	Ignition switch ON	Turn signal switch OFF	Battery voltage
					Turn signal switch LH	PKIC6370E 6.0 - 7.0 V

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< ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	−	Signal name	Input/ Output			
78 (P/B)	Ground	Driver door antenna (+)	Output	When the driver door request switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 ⟶⟵ 500 ms JMKIA3838GB
					When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 ⟶⟵ 1 s JMKIA3839GB
79 (V)	Ground	Driver door antenna (-)	Output	When the driver door request switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 ⟶⟵ 500 ms JMKIA3838GB
					When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 ⟶⟵ 1 s JMKIA3839GB
80 (LG/B)	Ground	Passenger door antenna (+)	Output	When the passenger door request switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 ⟶⟵ 500 ms JMKIA3838GB
					When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 ⟶⟵ 1 s JMKIA3839GB

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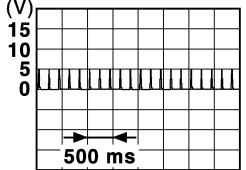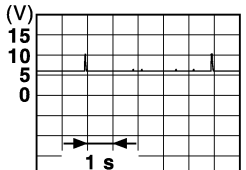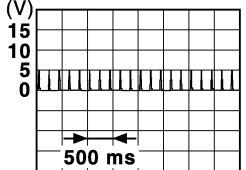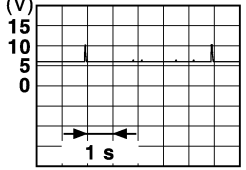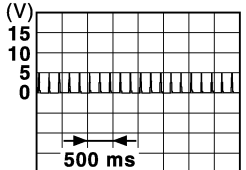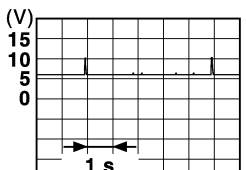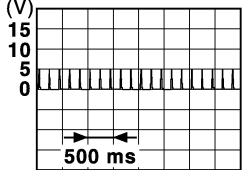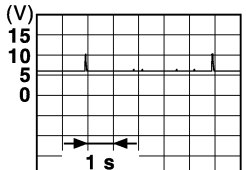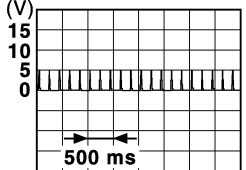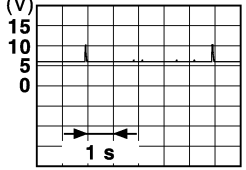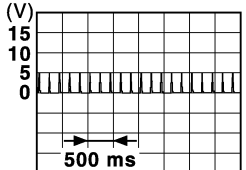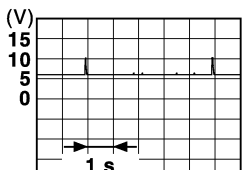
< ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	−	Signal name	Input/ Output		
81 (Y/R)	Ground	Passenger door antenna (-)	Output	When the passenger door request switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area (V) 15 10 5 0 — 500 ms — JMKIA3838GB When Intelligent Key is in the antenna detection area (V) 15 10 5 0 — 1 s — JMKIA3839GB
82 (W/G)	Ground	Back door antenna (+)	Output	When the back door request switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area (V) 15 10 5 0 — 500 ms — JMKIA3838GB When Intelligent Key is in the antenna detection area (V) 15 10 5 0 — 1 s — JMKIA3839GB
83 (B/W)	Ground	Back door antenna (-)	Output	When the back door request switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area (V) 15 10 5 0 — 500 ms — JMKIA3838GB When Intelligent Key is in the antenna detection area (V) 15 10 5 0 — 1 s — JMKIA3839GB

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< ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	−	Signal name	Input/Output			
84 (BR)	Ground	Room antenna 1 (+) (Instrument center)	Output	Ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 500 ms JMKIA3838GB
					When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA3839GB
85 (Y)	Ground	Room antenna 1 (-) (Instrument center)	Output	Ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 500 ms JMKIA3838GB
					When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA3839GB
86 (W)	Ground	Room antenna 2 (+) (Console)	Output	Ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 500 ms JMKIA3838GB
					When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA3839GB

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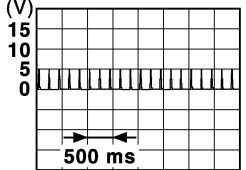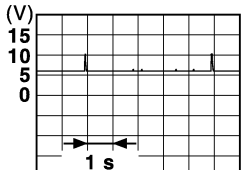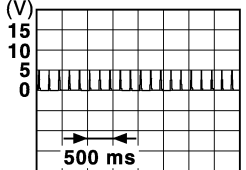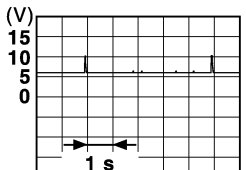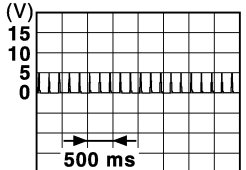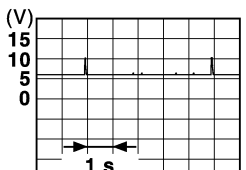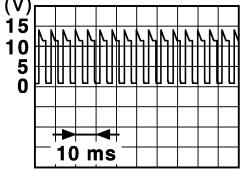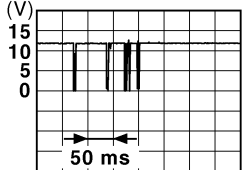
< ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	−	Signal name	Input/ Output			
87 (B)	Ground	Room antenna 2 (−) (Console)	Output	Ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 ← 500 ms → JMKIA3838GB
					When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 ← 1 s → JMKIA3839GB
88 (V)	Ground	Luggage room antenna (+)	Output	Ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 ← 500 ms → JMKIA3838GB
					When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 ← 1 s → JMKIA3839GB
89 (G)	Ground	Luggage room antenna (-)	Output	Ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 ← 500 ms → JMKIA3838GB
					When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 ← 1 s → JMKIA3839GB

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	−	Signal name	Input/Output			
90 (Y)	Ground	Push-button ignition switch illumination	Output	Push-button ignition switch illumination	ON	12 V
					OFF	0 V
91 (O)	Ground	LOCK indicator lamp	Output	LOCK indicator lamp	OFF (Ignition switch OFF)	Battery voltage
					ON	0 V
92 (L)	Ground	Push-button ignition switch illumination ground	Output	Tail lamp	OFF	0 V
					ON	**NOTE:** When the illumination brightening/dimming level is in the neutral position JPMIA1554GB 6.0 - 7.0 V
93 (GR/R)	Ground	Intelligent Key warning buzzer	Output	Intelligent Key warning buzzer	Sounding	0 V
					Not sounding	12 V
94 (Y/G)	Ground	Steering lock unit communication	Input/Output	Steering lock	LOCK status	12 V
					LOCK or UNLOCK	JMKIA0066GB
					For 15 seconds after UNLOCK	12 V
					15 seconds or later after UNLOCK	0 V
95 (W)	Ground	Steering lock unit power supply	Output	Ignition switch	OFF or ACC	12 V
					ON	0 V
96 (BR)	Ground	ACC relay control	Output	Ignition switch	OFF	0 V
					ACC or ON	12 V
97 (R/W)	Ground	Starter relay control	Output	Ignition switch ON	When selector lever is in P or N position	12 V
					When selector lever is not in P or N position	0 V
98 (O)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC	12 V
					ON	0 V
99 (R)	Ground	Ignition relay-1 control	Output	Ignition switch	OFF or ACC	0 V
					ON	12 V
100 (SB)	Ground	Push-button ignition switch (push switch)	Input	Push-button ignition switch (push switch)	Pressed	0 V
					Not pressed	12 V
101 (W/B)	Ground	Ignition power supply No. 2	Output	Ignition switch	OFF or ACC	0 V
					ON	12 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	−	Signal name	Input/ Output			
102 (BR)	Ground	P/N position	Input	Selector lever	P or N position	12 V
					Except P and N positions	0 V
104 (R/B)	Ground	A/T shift selector (detention switch) power supply	Output	Ignition switch ON		12 V
105 (O/L)	Ground	Stop lamp switch 2	Input	Ignition switch OFF		Battery voltage
106 (Y/G)	Ground	Blower fan motor relay control	Output	Ignition switch	OFF or ACC	0 V
					ON	12 V
107 (L)	Ground	Steering lock condition No. 1	Input	Steering lock	LOCK status	0 V
					UNLOCK status	12 V
108 (P)	Ground	Steering lock condition No. 2	Input	Steering lock	LOCK status	12 V
					UNLOCK status	0 V
109 (L/W)	Ground	ACC indicator lamp	Output	Ignition switch	OFF (LOCK indicator is not illuminated)	Battery voltage
					ACC	0 V

*: For Canada

Fail-safe

INFOID:0000000006274820

FAIL-SAFE CONTROL BY DTC
BCM performs fail-safe control when any DTC are detected.

Display contents of CONSULT	Fail-safe	Cancellation
B2013: ID DISCORD BCM-S/L	Inhibit engine cranking	When communication between BCM and steering lock unit are communicated normally.
B2014: CHAIN OF S/L-BCM	Inhibit engine cranking	When communication between BCM and steering lock unit are communicated normally.
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI-SCANNING	Inhibit engine cranking	Ignition switch ON → OFF
B2198: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC
B2557: VEHICLE SPEED	Inhibit steering lock	When the following CAN signal status (vehicle speed signal) becomes consistent • Vehicle speed signal (ABS) • Vehicle speed signal (Meter)
B2601: SHIFT POSITION	Inhibit steering lock	500 ms after the following signal reception status becomes consistent • Selector lever P position switch signal • P range signal (CAN)
B2602: SHIFT POSITION	Inhibit steering lock	5 seconds after the following BCM recognition conditions are fulfilled • Ignition switch is in the ON position • Selector lever P position switch signal: Except P position (battery voltage) • Vehicle speed: 4 km/h (2.5 MPH) or more

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< ECU DIAGNOSIS INFORMATION >

Display contents of CONSULT	Fail-safe	Cancellation
B2603: SHIFT POSI STATUS	Inhibit steering lock	500 ms after any of the following BCM recognition conditions are fulfilled • Status 1 - Ignition switch is in the ON position - Selector lever P position switch signal: Except P position (12 V) - Selector lever P/N position signal: Except P and N positions (0 V) • Status 2 - Ignition switch is in the ON position - Selector lever P position switch signal: P position (0 V) - Selector lever P/N position signal: P or N positions (12 V)
B2604: PNP/CLUTCH SW	Inhibit steering lock	500 ms after any of the following BCM recognition conditions are fulfilled • Status 1 - Ignition switch is in the ON position - Selector lever P/N position signal: P or N position (12 V) - Shift position signal (CAN): P or N position • Status 2 - Ignition switch is in the ON position - Selector lever P/N position signal: Except P and N positions (0 V) - Shift position signal (CAN): Except P and N position
B2605: PNP/CLUTCH SW	Inhibit steering lock	500 ms after any of the following BCM recognition conditions are fulfilled • Status 1 - Power position: IGN - Selector lever P/N position signal: Except P and N positions (0 V) - Interlock/PNP switch signal (CAN): OFF • Status 2 - Ignition switch is in the ON position - Selector lever P/N position signal: P or N position (12 V) - Interlock/PNP switch signal (CAN): ON
B2608: STARTER RELAY	Inhibit engine cranking	500 ms after the following signal communication status becomes consistent • Starter motor relay control signal • Starter relay status signal (CAN)
B2609: S/L STATUS	• Inhibit engine cranking • Inhibit steering lock	When the following steering lock conditions agree • BCM steering lock control status • Steering lock condition No. 1 signal status • Steering lock condition No. 2 signal status
B260B: STEERING LOCK UNIT	Inhibit steering lock	Erase DTC
B260D: STEERING LOCK UNIT	Inhibit steering lock	Erase DTC
B260F: ENG STATE SIG LOST	Inhibit engine cranking	When any of the following conditions are fulfilled • Power position changes to ACC • Receives engine status signal (CAN)
B2612: S/L STATUS	• Inhibit engine cranking • Inhibit steering lock	When any of the following conditions are fulfilled • Steering lock unit status signal (CAN) is received normally • The BCM steering lock control status matches the steering lock status recognized by the steering lock unit status signal (CAN from IPDM E/R)
B2619: BCM	Inhibit engine cranking	1 second after the steering lock unit power supply output control inside BCM becomes normal
B26EF: STRG LCK RELAY OFF	Inhibit engine cranking	When the following conditions are fulfilled • Steering lock relay signal (CAN): ON • Steering lock unit status signal (CAN): ON
B26F0: STRG LCK RELAY ON	Inhibit engine cranking	When the following conditions are fulfilled • Steering lock relay signal (CAN): OFF • Steering lock unit status signal (CAN): OFF
B26F1: IGN RELAY OFF	Inhibit engine cranking	When the following conditions are fulfilled • Ignition switch ON signal (CAN: Transmitted from BCM): ON • Ignition switch ON signal (CAN: Transmitted from IPDM E/R): ON
B26F2: IGN RELAY ON	Inhibit engine cranking	When the following conditions are fulfilled • Ignition switch ON signal (CAN: Transmitted from BCM): OFF • Ignition switch ON signal (CAN: Transmitted from IPDM E/R): OFF

Display contents of CONSULT	Fail-safe	Cancellation
B26F3: START CONT RLY ON	Inhibit engine cranking	When the following conditions are fulfilled • Starter control relay signal (CAN: Transmitted from BCM): OFF • Starter control relay signal (CAN: Transmitted from IPDM E/R): OFF
B26F4: START CONT RLY OFF	Inhibit engine cranking	When the following conditions are fulfilled • Starter control relay signal (CAN: Transmitted from BCM): ON • Starter control relay signal (CAN: Transmitted from IPDM E/R): ON
B26F7: BCM	Inhibit engine cranking by Intelligent Key system	When room antenna and luggage room antenna functions normally
U0415: VEHICLE SPEED	Inhibit steering lock	When vehicle speed signal (Meter) (CAN) is received normally

FAIL-SAFE CONTROL BY RAIN SENSOR MALFUNCTION

BCM detects the light and rain sensor serial link error and the rain sensor malfunction.
BCM controls the following fail-safe when rain sensor has a malfunction.
• Front wiper switch AUTO and sensing rain drop: The condition just before the activation of fail-safe is maintained until the front wiper switch is turned OFF.
• Front wiper switch AUTO and not sensing rain drop: Front wiper is LO operation until the front wiper switch is turned off.

REAR WIPER MOTOR PROTECTION

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

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

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

If voltage of battery power supply lower, BCM maintains combination switch reading to the status when input voltage is less than approximately 9 V.
NOTE:
When voltage of battery power supply is approximately 9 V or more, combination switch reading function returns to normal operation.

DTC Inspection Priority Chart

INFOID:0000000006274821

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

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

Priority	DTC
4	• B2013: ID DISCORD BCM-S/L • B2014: CHAIN OF S/L-BCM • B2555: STOP LAMP • B2556: PUSH-BTN IGN SW • B2557: VEHICLE SPEED • B2601: SHIFT POSITION • B2602: SHIFT POSITION • B2603: SHIFT POSI STATUS • B2604: PNP/CLUTCH SW • B2605: PNP/CLUTCH SW • B2608: STARTER RELAY • B2609: S/L STATUS • B260B: STEERING LOCK UNIT • B260C: STEERING LOCK UNIT • B260D: STEERING LOCK UNIT • B260F: ENG STATE SIG LOST • B2612: S/L STATUS • B2614: BCM • B2615: BCM • B2616: BCM • B2618: BCM • B2619: BCM • B261A: PUSH-BTN IGN SW • B26E9: LOCK MALFUNCTION • B26EF: STRG LCK RELAY OFF • B26F0: STRG LCK RELAY ON • B26F1: IGN RELAY OFF • B26F2: IGN RELAY ON • B26F3: START CONT RLY ON • B26F4: START CONT RLY OFF • B26F5: STRG LCK STS SW • B26F6: BCM • B26F7: BCM • B26F8: BCM • B26F9: CRANK REQ CIR SHORT • B26FA: CRANK REQ CIR OPEN • B26FC: KEY REGISTRATION • U0415: VEHICLE SPEED
5	• B2621: INSIDE ANTENNA • B2622: INSIDE ANTENNA • B2623: INSIDE ANTENNA
6	• B2626: OUTSIDE ANTENNA • B2627: OUTSIDE ANTENNA • B2628: OUTSIDE ANTENNA
7	B26E7: TPMS CAN COMM

DTC Index

INFOID:0000000006274822

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 BCS-14, "COMMON ITEM : CONSULT-III Function (BCM - COMMON ITEM)".

BCM

< ECU DIAGNOSIS INFORMATION >

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning lamp ON	Reference page
No DTC is detected. further testing may be required.	—	—	—	—
U1000: CAN COMM	—	—	—	BCS-70
U1010: CONTROL UNIT (CAN)	—	—	—	BCS-71
U0415: VEHICLE SPEED	×	—	×	BCS-72
B2013: ID DISCORD BCM-S/L	×	×	×	SEC-69
B2014: CHAIN OF S/L-BCM	×	×	×	SEC-70
B2192: ID DISCORD BCM-ECM	×	—	—	SEC-60
B2193: CHAIN OF BCM-ECM	×	—	—	SEC-61
B2195: ANTI-SCANNING	×	—	—	SEC-62
B2196: DONGLE NG	×	—	—	SEC-63
B2198: NATS ANTENNA AMP	×	—	—	SEC-65
B2555: STOP LAMP	—	×	×	SEC-73
B2556: PUSH-BTN IGN SW	—	×	×	SEC-76
B2557: VEHICLE SPEED	×	×	×	SEC-78
B2562: LOW VOLTAGE	—	×	—	BCS-73
B2601: SHIFT POSITION	×	×	×	SEC-79
B2602: SHIFT POSITION	×	×	×	SEC-82
B2603: SHIFT POSI STATUS	×	×	×	SEC-85
B2604: PNP/CLUTCH SW	×	×	×	SEC-89
B2605: PNP/CLUTCH SW	×	×	×	SEC-91
B2608: STARTER RELAY	×	×	×	SEC-93
B2609: S/L STATUS	×	×	×	SEC-95
B260B: STEERING LOCK UNIT	×	×	×	SEC-98
B260C: STEERING LOCK UNIT	—	×	×	SEC-99
B260D: STEERING LOCK UNIT	×	×	×	SEC-100
B260F: ENG STATE SIG LOST	×	×	×	SEC-101
B2612: S/L STATUS	×	×	×	SEC-102
B2614: BCM	—	×	×	PCS-56
B2615: BCM	—	×	×	PCS-59
B2616: BCM	—	×	×	PCS-61
B2618: BCM	—	×	×	PCS-63
B2619: BCM	×	×	×	SEC-105
B261A: PUSH-BTN IGN SW	—	×	×	PCS-64
B2621: INSIDE ANTENNA	—	×	—	DLK-104
B2622: INSIDE ANTENNA	—	×	—	DLK-106
B2623: INSIDE ANTENNA	—	×	—	DLK-108
B2626: OUTSIDE ANTENNA	—	×	—	DLK-110
B2627: OUTSIDE ANTENNA	—	×	—	DLK-112
B2628: OUTSIDE ANTENNA	—	×	—	DLK-114
B26E7: TPMS CAN COMM	—	—	—	BCS-74

BCM

< ECU DIAGNOSIS INFORMATION >

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning lamp ON	Reference page
B26E9: LOCK MALFUNCTION	—	×	× (Turn ON for 15 seconds)	SEC-106
B26EF: STRG LCK RELAY OFF	×	×	×	SEC-107
B26F0: STRG LCK RELAY ON	×	×	×	SEC-109
B26F1: IGN RELAY OFF	×	×	×	PCS-66
B26F2: IGN RELAY ON	×	×	×	PCS-68
B26F3: START CONT RLY ON	×	×	×	SEC-111
B26F4: START CONT RLY OFF	×	×	×	SEC-112
B26F5: STRG LCK STS SW	—	×	×	SEC-113
B26F6: BCM	—	×	×	PCS-70
B26F7: BCM	×	×	×	SEC-116
B26F8: BCM	—	×	×	SEC-117
B26F9: CRANK REQ CIR SHORT	—	×	×	SEC-118
B26FA: CRANK REQ CIR OPEN	—	×	×	SEC-120
B26FC: KEY REGISTRATION	—	×	×	SEC-122

WIRING DIAGRAM

BCM

Wiring Diagram

INFOID:0000000006274823

CN : For Canada
IC : With ICC
OI : Without ICC

RL : With rear foot lamp

PUSH SWITCH

PUSH-BUTTON
IGNITION SWITCH
(M101)

LOCK
ACC
ON
ILLUMI-
NATION

BACK DOOR
OPENER
SWITCH
ASSEMBLY (D154)

BACK
DOOR
REQUEST
SWITCH

BACK
DOOR
OPENER
SWITCH

FUSE BLOCK
(J/B) (M1), (M2),
(E103)

10A 10

10A 6

INTELLIGENT
KEY
WARNING
BUZZER
(E25)

LIGHT &
RAIN
SENSOR
(R9)

To exterior lighting system

STOP LAMP
SWITCH
(E115)

10A 7

BATTERY

50A K

BCM (BODY CONTROL MODULE)

BCM (BODY CONTROL MODULE)
(M68), (M69), (M70), (M71)

100
91
109
73
92
90
57
93
11
9
67
105
70

51
30
76
75
46
48
45
47

2
3
4
5
6
32
33
34
35

8
5
14
12
13
10
9

FRONT DOOR
REQUEST
SWITCH
(PASSENGER
SIDE) (D31)

FRONT DOOR
REQUEST
SWITCH
(DRIVER SIDE) (D11)

REAR DOOR
SWITCH RH
(B221)

REAR DOOR
SWITCH LH
(B71)

FRONT DOOR
SWITCH
(PASSENGER
SIDE) (B220)

FRONT DOOR
SWITCH
(DRIVER SIDE) (B34)

(M35)

COMBINATION SWITCH
(M27)

36 11

7
1

* : This connector is not shown in "Harness Layout".

2010/05/13

JCMWM8293GB

JCMWM8294GB

JCMWM8295GB

BCM
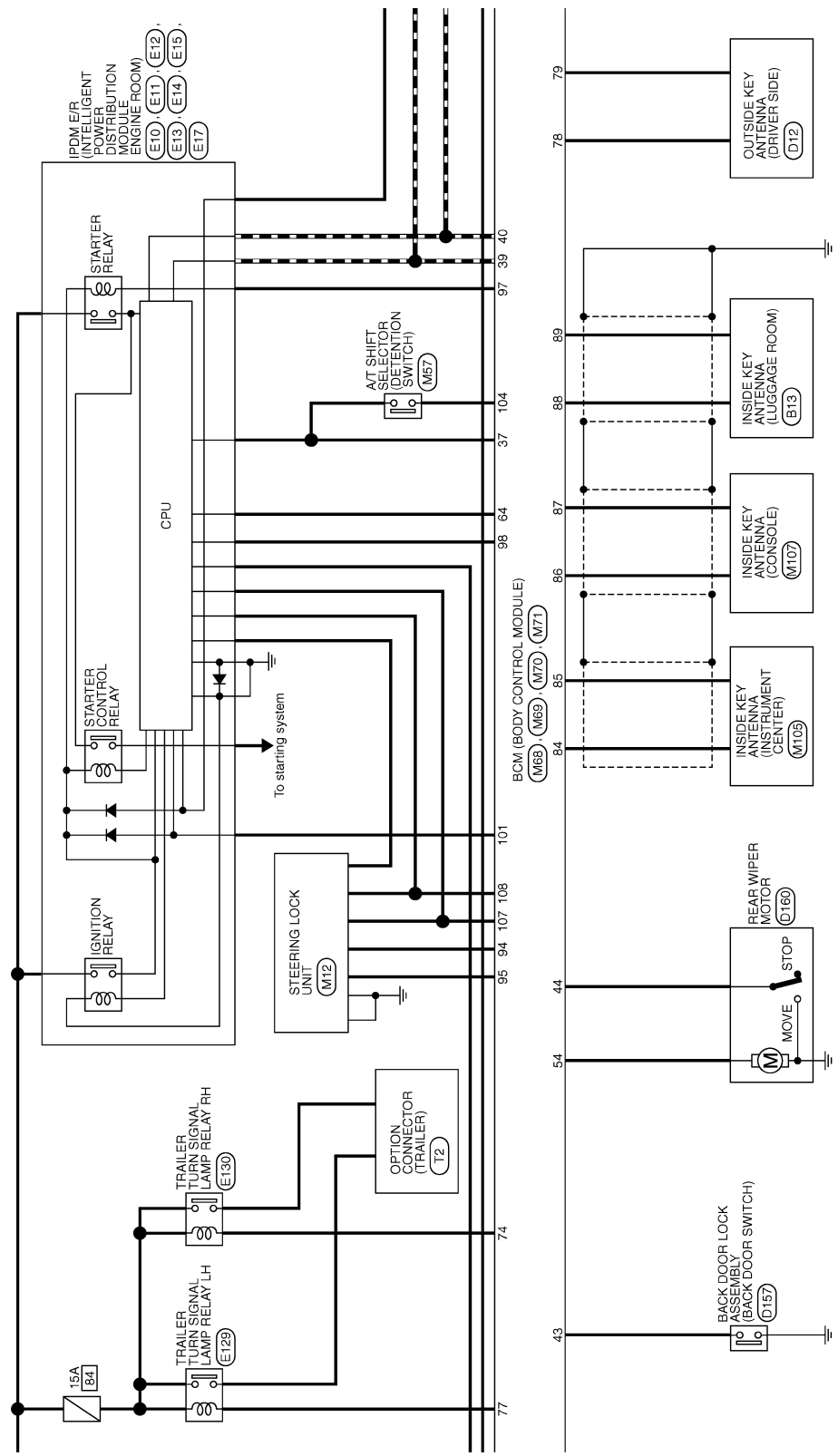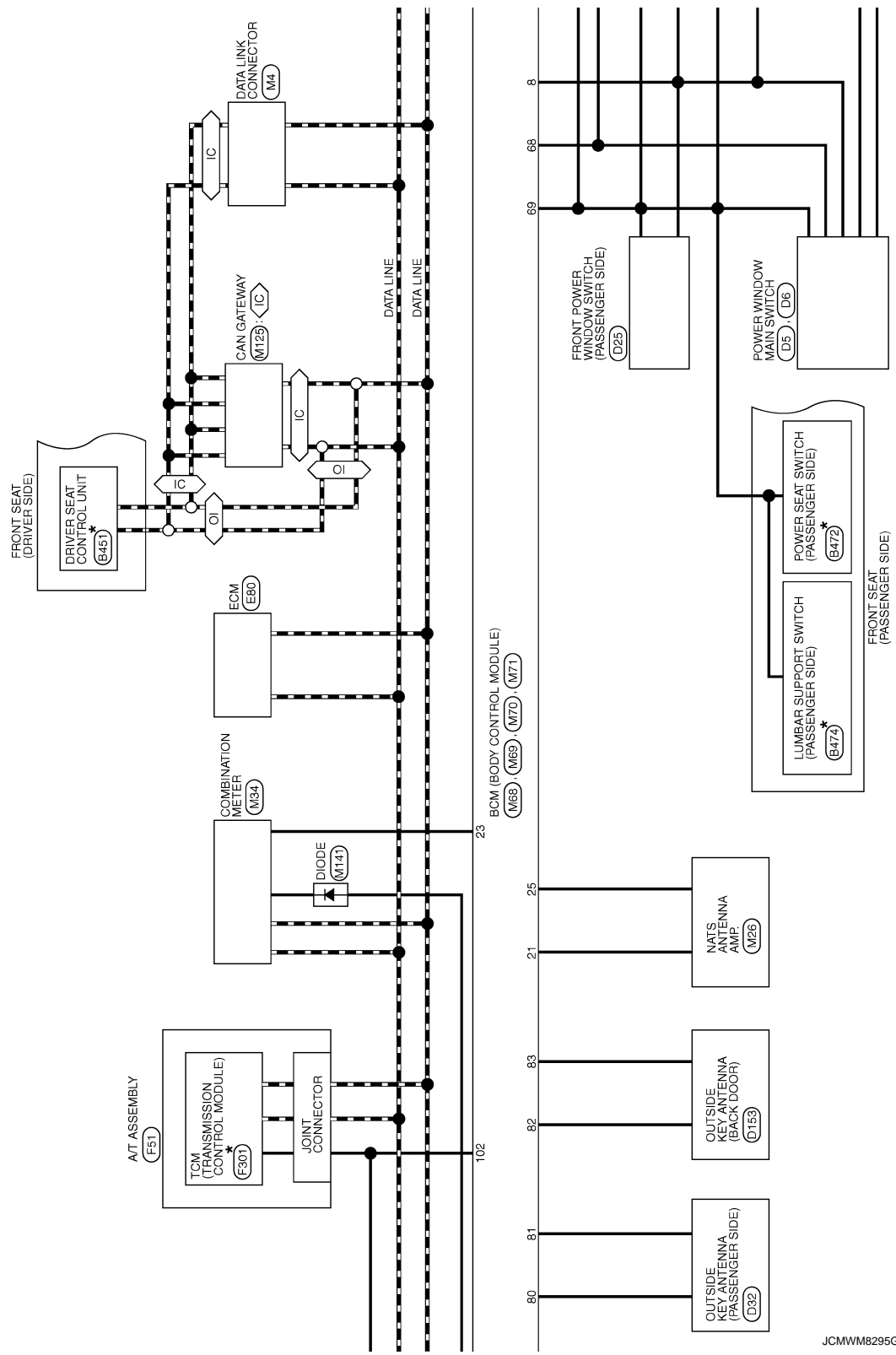
< WIRING DIAGRAM >

JCMWM8296GB

A

B

C

D

E

F

G

H

I

J

K

L

BCS

N

O

P

BCM

< WIRING DIAGRAM >

VANITY MIRROR LAMP (PASSENGER SIDE) (R13)

VANITY MIRROR LAMP (DRIVER SIDE) (R12)

LUGGAGE ROOM LAMP (B11)

ON
OFF
DOOR

AUTOMATIC BACK DOOR CLOSE SWITCH (ILLUMINATION) (D158)

DOOR MIRROR (PASSENGER SIDE) (PUDDLE LAMP) (D23)

DOOR MIRROR (DRIVER SIDE) (PUDDLE LAMP) (D3)

STEP LAMP (REAR RH) (D46)

STEP LAMP (REAR LH) (D66)

STEP LAMP (PASSENGER SIDE) (D29)

STEP LAMP (DRIVER SIDE) (D8)

BCM (BODY CONTROL MODULE)
(M68) , (M69) , (M70) , (M71)

56

49

72

62

REAR COMBINATION LAMP RH (TURN SIGNAL) (B332)

DOOR MIRROR (PASSENGER SIDE) (TURN SIGNAL) (D23)

FRONT COMBINATION LAMP RH (TURN SIGNAL) (E119)

REAR COMBINATION LAMP LH (TURN SIGNAL) (B60)

DOOR MIRROR (DRIVER SIDE) (TURN SIGNAL) (D3)

FRONT COMBINATION LAMP LH (TURN SIGNAL) (E118)

REAR DOOR LOCK ASSEMBLY RH (D45)

REAR DOOR LOCK ASSEMBLY LH (D65)

FRONT DOOR LOCK ASSEMBLY (PASSENGER SIDE) (D28)

61

60

55

59

JCMWM8297GB

BCM

< WIRING DIAGRAM >

BCM (BODY CONTROL MODULE)

Connector No.	M27
Connector Name	COMBINATION SWITCH
Connector Type	TH16FW-NH

Box: 1 2 3 4 5 6 / 7 8 9 10 11 12 13 14

Terminal No.	Color of Wire	Signal Name [Specification]
1	W/B	RR
2	GR	OUTPUT 4
3	L/R	FR
4	W	IGN
5	L	OUTPUT 3
6	B	GND
7	W	INPUT 3
8	BR/Y	OUTPUT 5
9	R/W	INPUT 2
10	Y	INPUT 4
11	SB	INPUT 1
12	V	OUTPUT 1
13	LG	INPUT 5
14	G	OUTPUT 2

Connector No.	M69
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FEA09FB-FHA6-SA

Terminal No.	Color of Wire	Signal Name [Specification]
14	P/B	OPTICAL SENSOR
16	L/O	DIMMER SIGNAL
17	Y/G	SENSOR PWR SPLY
18	B/Y	RECEIVER/SENSOR GND
19	BR	RECEIVER PWR SPLY
20	G/R	KYLS ENT RECEIVER COMM
21	P	NATS ANT AMP
22	W/B	KYLS ENT RECEIVER RSSI
23	GR/R	SECURITY IND CONT
24	SB	DONGLE LINK
25	LG/R	NATS ANT AMP
29	W	HAZARD SW
30	W/L	BK DOOR OPNR SW
31	W/G	DR DOOR UNLOCK SENSOR
32	LG	COMBI SW OUTPUT 5
33	Y	COMBI SW OUTPUT 4
34	W	COMBI SW OUTPUT 3
35	R/W	COMBI SW OUTPUT 2
36	SB	COMBI SW OUTPUT 1
37	G/Y	SHIFT P
39	L	CAN-H
40	P	CAN-L

Box: 41 42 43 44 45 46 47 48 49 / 50 51 52 53 54 55

Terminal No.	Color of Wire	Signal Name [Specification]
43	Y/L	BK DOOR SW
44	G/W	REAR WIPER STOP POSITION
45	W	PASSENGER DOOR SW
46	GR	REAR RH DOOR SW
47	GR/R	DRIVER DOOR SW
48	O	REAR LH DOOR SW
49	BR/Y	LUGGAGE ROOM LAMP CONT
51	W/R	BACK DOOR REQ SW
54	L	REAR WIPER OUTPUT
55	G	PASS. REAR DOOR UNLK OUTPUT

Connector No.	M68
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH

Terminal No.	Color of Wire	Signal Name [Specification]
2	BR/Y	COMBI SW INPUT 5
3	GR	COMBI SW INPUT 4
4	L	COMBI SW INPUT 3
5	G	COMBI SW INPUT 2
6	V	COMBI SW INPUT 1
8	V	POWER WINDOW SW COMM
9	R	STOP LAMP SW I
11	R	L&R SENSOR SERIAL LINK

Connector No.	M70
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FEA09FW-FHA6-SA

Box: 56 57 58 59 60 61 62 63 64 / 65 66 67 68 69 70

Terminal No.	Color of Wire	Signal Name [Specification]
56	W/R	INT ROOM LAMP PWR SPLY
57	LG	BAT (FUSE)
59	B/Y	PASSENGER DOOR UNLK OUTPUT
60	G	TURN SIGNAL LH OUTPUT
61	G/Y	TURN SIGNAL RH OUTPUT
62	R	STEP LAMP CONT
63	BR	ROOM LAMP TIMER CONT
64	GR/R	CRANKING REQUEST
65	R	ALL DOOR LOCK OUTPUT
66	V	DR DOOR, FUEL LID UNLK OUTPUT
67	B	GND
68	Y	PW PWR SPLY (IGN)
69	W	PW PWR SPLY (BAT)
70	Y	BAT (F/L)

Terminal No.	Color of Wire	Signal Name [Specification]
80	LG/B	PASSENGER DOOR ANT+
81	Y/R	PASSENGER DOOR ANT-
82	W/G	BACK DOOR ANT+
83	B/W	BACK DOOR ANT-
84	BR	ROOM ANT1+
85	Y	ROOM ANT1-
86	W	ROOM ANT2+
87	B	ROOM ANT2-
88	V	LAGGAGE ROOM ANT+
89	G	LAGGAGE ROOM ANT-
90	Y	PUSH-BTN IGN SW ILL PWR
91	O	LOCK IND
92	L	LOW SIDE PUSH LED
93	GR/R	I-KEY WARN BUZZER
94	Y/G	S/L UNIT COMM
95	W	S/L UNIT PWR SPLY
96	BR	ACC RELAY CONT
97	R/W	STARTER RELAY CONT
98	O	IGN RELAY (IPDM E/R) CONT
99	R	IGN RELAY (F/B) CONT
100	SB	PUSH SW
101	W/B	IGN PWR SPLY 2
102	BR	SHIFT N/P
104	R/B	A-T SHIFT SELECT PWR SPLY
105	O/L	STOP LAMP SW 2
106	Y/G	BLWR FAN MTR RELAY CONT
107	L	S/L CONDITION1
108	P	S/L CONDITION2
109	L/W	ACC IND

Connector No.	M71
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
72	P	PUDDLE LAMP CONT
73	W	ON IND
74	Y/B	TRAILER TURN SIG RH CONT
75	LG/R	DRIVER DOOR REQUEST SW
76	B/Y	PASSENGER DOOR REQUEST SW
77	O/L	TRAILER TURN SIG LH CONT
78	P/B	DRIVER DOOR ANT+
79	V	DRIVER DOOR ANT-

JCMWM8299GB

BASIC INSPECTION

INSPECTION AND ADJUSTMENT
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM)

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Description
INFOID:0000000006324908

BEFORE REPLACEMENT
When replacing BCM, save or print current vehicle specification with CONSULT-III configuration before replacement.
NOTE:
If "READ CONFIGURATION" can not be used, use the "WRITE CONFIGURATION - Manual selection" after replacing BCM.

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

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Work Procedure
INFOID:0000000006324909

1. SAVING VEHICLE SPECIFICATION

Ⓑ CONSULT-III Configuration
Perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to BCS-67, "CONFIGURATION (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-81, "Removal and Installation".

>> GO TO 3.
3. WRITING VEHICLE SPECIFICATION

Ⓑ CONSULT-III Configuration
Perform "WRITE CONFIGURATION - Config file" or "WRITE CONFIGURATION - Manual selection" to write vehicle specification. Refer to BCS-68, "CONFIGURATION (BCM) : Work Procedure".

>> GO TO 4.
4. INITIALIZE BCM (NATS)

Perform BCM initialization. (NATS)

>> WORK END
CONFIGURATION (BCM)

CONFIGURATION (BCM) : Description
INFOID:0000000006324910

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

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

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)

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

CONFIGURATION (BCM) : Work Procedure

INFOID:0000000006324911

1.WRITING MODE SELECTION

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

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

2.PERFORM "WRITE CONFIGURATION - CONFIG FILE"

▣CONSULT-III Configuration
Perform "WRITE CONFIGURATION - Config file".

>> WORK END

3.PERFORM "WRITE CONFIGURATION - MANUAL SELECTION"

▣CONSULT-III Configuration
1. Select "WRITE CONFIGURATION - Manual selection".
2. Identify the correct model and configuration list. Refer to BCS-69, "CONFIGURATION (BCM) : Configuration list".
3. Confirm and/or change setting value for each item.
   CAUTION:
   - **Thoroughly read and understand the vehicle specification. Incorrect settings may result in abnormal control of ECU.**
   - **If items are not displayed, touch "SETTING". Refer to BCS-69, "CONFIGURATION (BCM) : Configuration list" 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.

4.OPERATION CHECK

Confirm that each function controlled by BCM operates normally.

>> WORK END

CONFIGURATION (BCM) : Configuration list

INFOID:0000000006274828

Items and setting value that are written in BCM by the write configuration can be checked by "READ CONFIG-URATION" as shown in the following table.

SETTING ITEM		NOTE
Items	Setting value	
HZRD (SHCK DTCT ULK) FUNC	WITH	—
UNLOCK WITH SHOCK	WITHOUT	—
CAN CONNECTION UNIT	MODE1	—
NISSAN/INFINITI SETTING	INFINITI	—
AUTO LIGHT	WITH	—
RAIN SENSOR CONFIG	WITH	—
THEFT ALM AREA	MODE2	—
AT DOOR LK VHCL SPED SET	MODE2	—
TPMS	TPMS SBF	—

< DTC/CIRCUIT DIAGNOSIS >

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM

Description

INFOID:0000000006274829

CAN (Controller Area Network) is a serial communication line for real time applications. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Modern vehicle is equipped with many electronic control unit, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H-line, CAN L-line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.
CAN Communication Signal Chart. Refer to LAN-28, "CAN COMMUNICATION SYSTEM : CAN Communication Signal Chart".

DTC Logic

INFOID:0000000006274830

DTC DETECTION LOGIC

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

Diagnosis Procedure

INFOID:0000000006274831

1.PERFORM SELF DIAGNOSTIC

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

Is DTC "U1000" displayed?

YES >> Refer to LAN-18, "Trouble Diagnosis Flow Chart".
NO >> Refer to GI-40, "Intermittent Incident".

< DTC/CIRCUIT DIAGNOSIS >

U1010 CONTROL UNIT (CAN)

DTC Logic

INFOID:000000006274832

DTC DETECTION LOGIC

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

Diagnosis Procedure

INFOID:000000006274833

1.REPLACE BCM

When DTC "U1010" is detected, replace BCM.

>> Replace BCM. Refer to BCS-81, "Removal and Installation".

U0415 VEHICLE SPEED

Description
INFOID:000000006274834

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

DTC Logic
INFOID:000000006274835

DTC DETECTION LOGIC

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

DTC CONFIRMATION PROCEDURE

1.DTC CONFIRMATION

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

<u>Is any DTC detected?</u>

 YES >> Refer to BCS-72, "Diagnosis Procedure".
 NO >> INSPECTION END

Diagnosis Procedure
INFOID:000000006274836

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

Perform "Self-Diagnostic Result" of ABS actuator and electric unit (control unit) with CONSULT-III. Refer to BRC-40, "CONSULT-III Function".

<u>Is any DTC detected?</u>

 YES >> Repair or replace the malfunctioning part.
 NO >> Replace BCM. Refer to BCS-81, "Removal and Installation".

B2562 LOW VOLTAGE

DTC Logic

INFOID:000000006274837

DTC DETECTION LOGIC

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

DTC CONFIRMATION PROCEDURE

1.DTC CONFIRMATION

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

Is any DTC detected?

  YES   >> Refer to BCS-73, "Diagnosis Procedure".
  NO   >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006274838

1.CHECK POWER SUPPLY CIRCUIT

Check BCM power supply circuit. Refer to BCS-75, "Diagnosis Procedure".

Is the circuit normal?

  YES   >> Replace BCM. Refer to BCS-81, "Removal and Installation".
  NO   >> Repair the malfunctioning part.

< DTC/CIRCUIT DIAGNOSIS >

B26E7 TPMS CAN COMM

DTC Logic

DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC Detection Condition	Probable cause
B26E7	TPMS CAN COMM	When ignition switch is ON, BCM cannot received CAN communication signal from low tire pressure warning control unit.	• CAN communication system • Low tire pressure warning control unit • BCM

DTC CONFIRMATION PROCEDURE

1.DTC CONFIRMATION

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

Is any DTC detected?

  YES   >> Refer to BCS-74, "Diagnosis Procedure".
  NO   >> INSPECTION END

Diagnosis Procedure

NOTE:
If DTC "B26E7" detected along with DTC "U1000", first diagnose the DTC "U1000". Refer to BCS-70, "Diagnosis Procedure".

1.LOW TIRE PRESSURE WARNING CONTROL UNIT SELF DIAGNOSTIC RESULT

Perform "Self Diagnostic Result" of low tire pressure warning control unit with CONSULT-III. Refer to WT-12, "CONSULT-III Function".

Is any DTC detected?

  YES   >> GO TO 2.
  NO   >> GO TO 4.

2.LOW TIRE PRESSURE WARNING CONTROL UNIT DIAGNOSIS

Perform low tire pressure warning control unit component diagnosis of detected DTC. Refer to WT-18, "DTC Index".

      >> GO TO 3.

3.BCM SELF DIAGNOSTIC RESULT

Erase DTC of BCM, and perform "Self Diagnostic Result" again.

Is DTC "B26E7" detected?

  YES   >> Replace BCM. Refer to BCS-81, "Removal and Installation".
  NO   >> INSPECTION END

4.REPLACE LOW TIRE PRESSURE WARNING CONTROL UNIT TEMPORARILY

Remove low tire pressure warning control unit, and install normal low tire pressure warning control unit.

      >> GO TO 5.

5.BCM SELF-DIAGNOSTIC RESULT

Erase DTC of BCM, and perform "Self Diagnostic Result" of BCM again.

Is DTC "B26E7" detected?

  YES   >> Replace BCM. Refer to BCS-81, "Removal and Installation".
  NO   >> Replace low tire pressure warning control unit. Refer to WT-65, "Removal and Installation".

POWER SUPPLY AND GROUND CIRCUIT

Diagnosis Procedure

INFOID:000000006274841

1.CHECK FUSE AND FUSIBLE LINK

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

Signal name	Fuse and fusible link No.
Battery power supply	K
	10

Is the fuse fusing?

YES >> Replace the blown fuse or fusible link after repairing the affected circuit if a fuse or fusible link is blown.
NO >> GO TO 2.

2.CHECK POWER SUPPLY CIRCUIT

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

Terminals			Voltage (Approx.)
(+)		(−)	
BCM			
Connector	Terminal	Ground	
M70	70		Battery voltage
	57		

Is the measurement value normal?

YES >> GO TO 3.
NO >> Repair harness or connector.

3.CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M70	67		Existed

Does continuity exist?

YES >> INSPECTION END
NO >> Repair harness or connector.

A

B

C

D

E

F

G

H

I

J

K

L

BCS

N

O

P

< DTC/CIRCUIT DIAGNOSIS >

COMBINATION SWITCH OUTPUT CIRCUIT

Diagnosis Procedure

INFOID:000000006274842

1.CHECK OUTPUT 1 - 5 CIRCUIT FOR OPEN

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

System	BCM		Combination switch		Continuity
	Connector	Terminal	Connector	Terminal	
OUTPUT 1		36		11	
OUTPUT 2		35		9	
OUTPUT 3	M68	34	M27	7	Existed
OUTPUT 4		33		10	
OUTPUT 5		32		13	

Does continuity exist?

YES >> GO TO 2.
NO >> Repair harnesses or connectors.

2.CHECK OUTPUT 1 - 5 CIRCUIT FOR SHORT

Check for continuity between BCM harness connector and ground.

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

Does continuity exist?
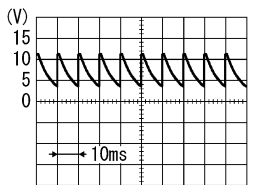
YES >> Repair harnesses or connectors.
NO >> GO TO 3.

3.CHECK BCM OUTPUT VOLTAGE

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

System	Terminals			Voltage (Approx.)
	(+)		(−)	
	BCM			
	Connector	Terminal		
OUTPUT 1		36		
OUTPUT 2		35		
OUTPUT 3	M68	34	Ground	
OUTPUT 4		33		
OUTPUT 5		32		

7.0 - 8.0 V

Is the measurement value normal?

YES >> Replace combination switch.
NO >> Replace BCM. Refer to BCS-81, "Removal and Installation".

A

B

C

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H

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BCS

N

O

P

COMBINATION SWITCH INPUT CIRCUIT

Diagnosis Procedure

INFOID:000000006274843

1.CHECK INPUT 1 - 5 CIRCUIT FOR OPEN

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

System	BCM		Combination switch		Continuity
	Connector	Terminal	Connector	Terminal	
INPUT 1		6		12	
INPUT 2		5		14	
INPUT 3	M68	4	M27	5	Existed
INPUT 4		3		2	
INPUT 5		2		8	

Does continuity exist?

  YES   >> GO TO 2.
  NO   >> Repair harnesses or connectors.

2.CHECK INPUT 1 - 5 CIRCUIT FOR SHORT

Check for continuity between BCM harness connector and ground.

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

Does continuity exist?

  YES   >> Repair harnesses or connectors.
  NO   >> GO TO 3.

3.CHECK BCM INPUT SIGNAL

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

System	Terminals		(−)	Voltage (Approx.)
	(+)			
	BCM			
	Connector	Terminal		
INPUT 1		6		
INPUT 2		5		
INPUT 3	M68	4	Ground	Refer to BCS-33, "Reference Value".
INPUT 4		3		
INPUT 5		2		

Is the measurement value normal?

  Yes   >> Replace BCM. Refer to BCS-81, "Removal and Installation".

No   >> Replace combination switch.

SYMPTOM DIAGNOSIS

COMBINATION SWITCH SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000006274844

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

Malfunction item: ×

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

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

Malfunction combination	Malfunctioning part	Repair or replace
A	Combination switch OUTPUT 1 circuit	Inspect the combination switch output circuit applicable to the malfunctioning part. Refer to BCS-76, "Diagnosis Procedure".
B	Combination switch OUTPUT 2 circuit	
C	Combination switch OUTPUT 3 circuit	
D	Combination switch OUTPUT 4 circuit	
E	Combination switch OUTPUT 5 circuit	
F	Combination switch INPUT 1 circuit	Inspect the combination switch input circuit applicable to the malfunctioning part. Refer to BCS-78, "Diagnosis Procedure".
G	Combination switch INPUT 2 circuit	
H	Combination switch INPUT 3 circuit	
I	Combination switch INPUT 4 circuit	
J	Combination switch INPUT 5 circuit	
K	BCM	Replace BCM. Refer to BCS-81, "Removal and Installation".
L	Combination switch	Replace combination switch.

REMOVAL AND INSTALLATION

BCM

Removal and Installation

INFOID:0000000006274845

CAUTION:
Before replacing BCM, perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to <u>BCS-67, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Description"</u>.

REMOVAL

1. Remove combination meter. Refer to <u>MWI-85, "Removal and Installation"</u>.
2. Remove bolts.
3. Remove BCM and disconnect the connectors.

INSTALLATION
Install in the reverse order of removal.
CAUTION:
• **Be sure to perform "WRITE CONFIGURATION" when replacing BCM.**
• **Be sure to perform the system initialization (IVIS) when replacing BCM. Refer to <u>BCS-67, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Work Procedure"</u>.**

COMBINATION SWITCH

Exploded View
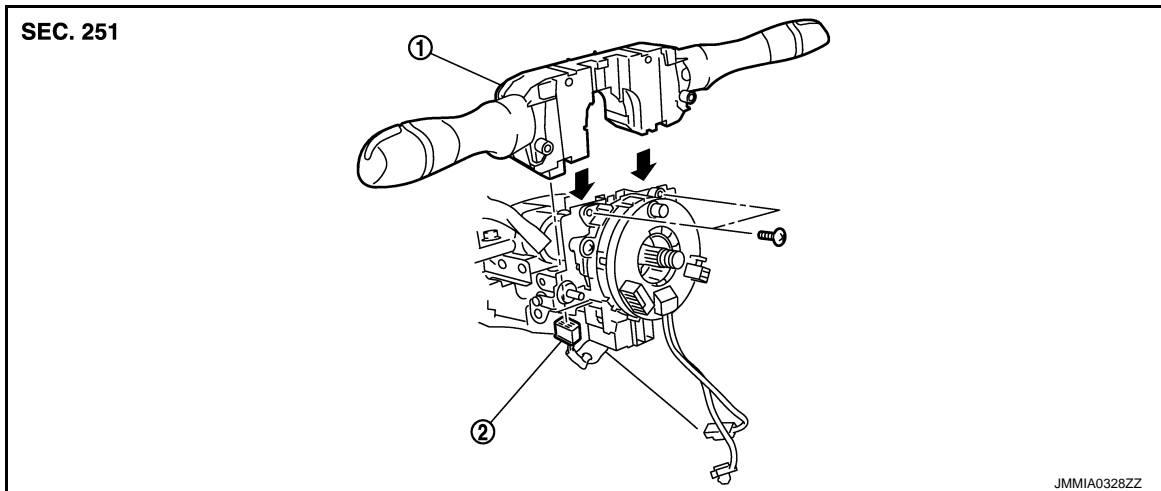
1. Combination switch
2. Combination switch connector

Removal and Installation

REMOVAL

1. Remove steering column cover. Refer to IP-13, "Exploded View".
2. Remove screws.
3. Disconnect the connector.
4. Pull up the combination switch to remove it.

INSTALLATION

Install in the reverse order of removal.