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BODY CONTROL SYSTEM

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PRECAUTION

PRECAUTIONS

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

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

WARNING:

Always observe the following items for preventing accidental activation.

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

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

WARNING:

Always observe the following items for preventing accidental activation.

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

SYSTEM DESCRIPTION

COMPONENT PARTS

BODY CONTROL SYSTEM

BODY CONTROL SYSTEM : Component Parts Location

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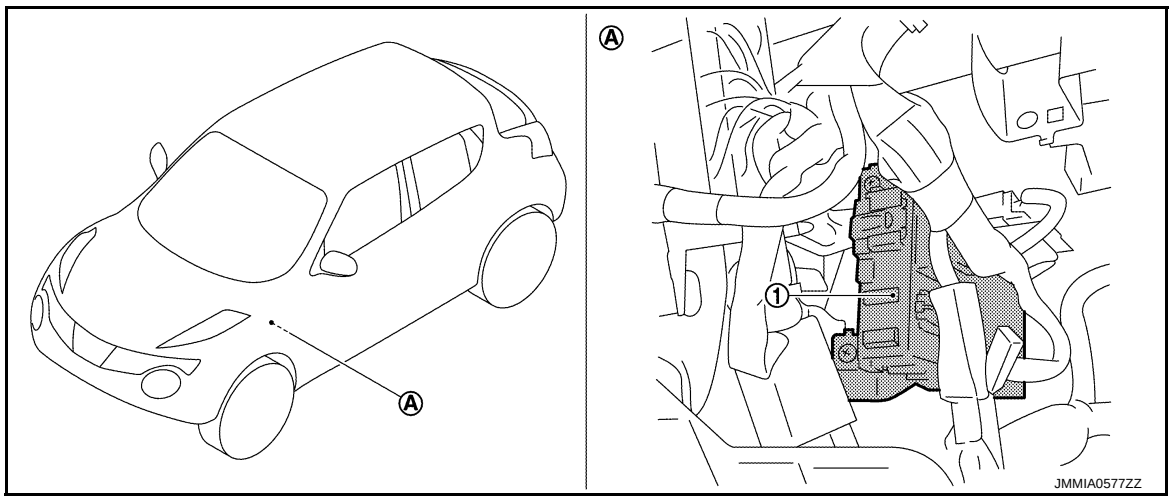

1. BCM
A. Behind of instrument lower panel LH (Left side)

POWER CONSUMPTION CONTROL SYSTEM

POWER CONSUMPTION CONTROL SYSTEM : Component Parts Location

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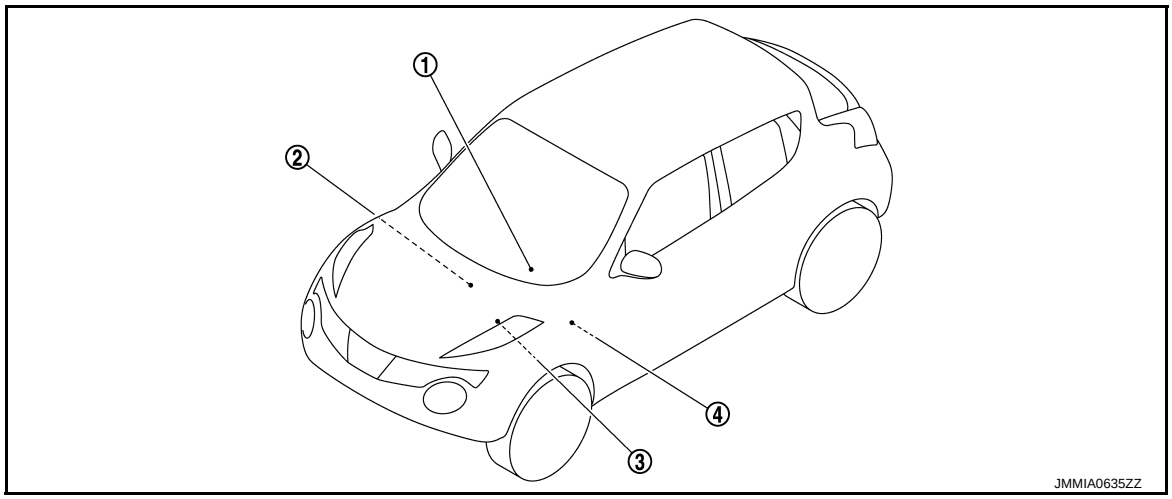

1. Combination meter
2. Multi display unit
   Refer to DMS-3, "Component Parts Location".
3. IPDM E/R
   Refer to PCS-5, "Component Parts Location".
4. BCM
   Refer to BCS-6, "BODY CONTROL SYSTEM : Component Parts Location".

SYSTEM
BODY CONTROL SYSTEM
BODY CONTROL SYSTEM : System Description

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OUTLINE

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

BCM CONTROL FUNCTION LIST

System		Reference
Combination switch reading system		BCS-9, "COMBINATION SWITCH READING SYSTEM : System Diagram"
Signal buffer system		BCS-12, "SIGNAL BUFFER SYSTEM : System Diagram"
Power consumption control system		BCS-13, "POWER CONSUMPTION CONTROL SYSTEM : System Diagram"
Auto light system		EXL-8, "AUTO LIGHT SYSTEM : System Diagram"
Turn signal and hazard warning lamp system		EXL-11, "TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM : System Diagram"
Headlamp system		EXL-7, "HEADLAMP SYSTEM : System Diagram"
Parking, license plate, side maker and tail lamps system		EXL-12, "PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMP SYSTEM : System Diagram"
Front fog lamp system		EXL-11, "FRONT FOG LAMP SYSTEM : System Diagram"
Exterior lamp battery saver system		EXL-13, "EXTERIOR LAMP BATTERY SAVER SYSTEM : System Diagram"
Daytime running light system		EXL-10, "DAYTIME RUNNING LIGHT SYSTEM : System Diagram"
Interior room lamp control system		INL-6, "INTERIOR ROOM LAMP CONTROL SYSTEM : System Diagram"
Interior room lamp battery saver system		INL-8, "INTERIOR ROOM LAMP BATTERY SAVER SYSTEM : System Diagram"
Illumination control system		INL-9, "ILLUMINATION CONTROL SYSTEM : System Diagram"
Front wiper and washer system		WW-6, "FRONT WIPER AND WASHER SYSTEM : System Diagram"
Rear wiper and washer system		WW-9, "REAR WIPER AND WASHER SYSTEM : System Diagram"
Warning chime system		WCS-6, "WARNING CHIME SYSTEM : System Diagram"
Power door lock system		DLK-13, "System Diagram"
Nissan Vehicle Immobilizer System (NVIS) - NATS		SEC-15, "NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS : System Diagram"
Vehicle security system	Theft warning alarm	SEC-18, "VEHICLE SECURITY SYSTEM : System Diagram"
	Panic alarm	
Rear window defogger system		• DEF-6, "WITH AUTO A/C : System Diagram" (With automatic A/C) • DEF-6, "WITHOUT AUTO A/C : System Diagram" (Without automatic A/C)
Intelligent Key system/engine start system		DLK-15, "INTELLIGENT KEY SYSTEM : System Diagram"

System		Reference
Back door opener system		DLK-26, "System Diagram"
Air conditioning control system	Automatic A/C	HAC-11, "System Diagram"
	Manual A/C	HAC-99, "System Diagram"
Power window system		PWC-7, "POWER WINDOW SYSTEM : System Diagram"
Retained accessory power (Retain power operation)		PWC-7, "POWER WINDOW SYSTEM : System Description"
Tire pressure monitoring system (TPMS)		WT-8, "System Description"

BODY CONTROL SYSTEM : Fail-safe

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FAIL-SAFE CONTROL BY DTC

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

Display contents of CONSULT	Fail-safe	Cancellation
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI-SCANNING	Inhibit engine cranking	Ignition switch ON → OFF
B2196: DONGLE NG	Inhibit engine cranking	Erase DTC
B2198: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC
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)
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)
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
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

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.

COMBINATION SWITCH READING SYSTEM

COMBINATION SWITCH READING SYSTEM : System Diagram

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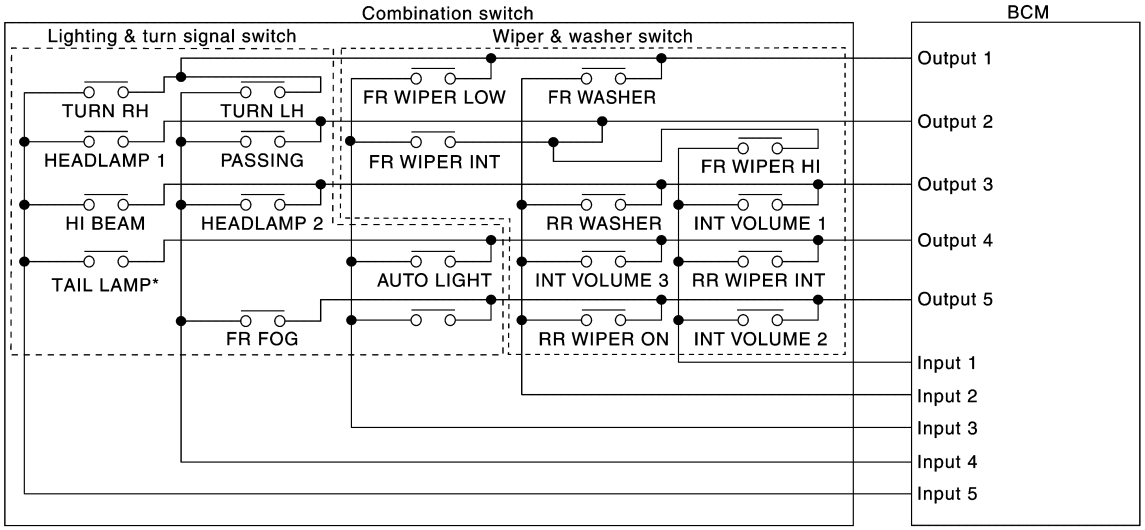

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NOTE:
*: TAIL LAMP switch links lighting switch 1ST and 2ND positions.

COMBINATION SWITCH READING SYSTEM : System Description

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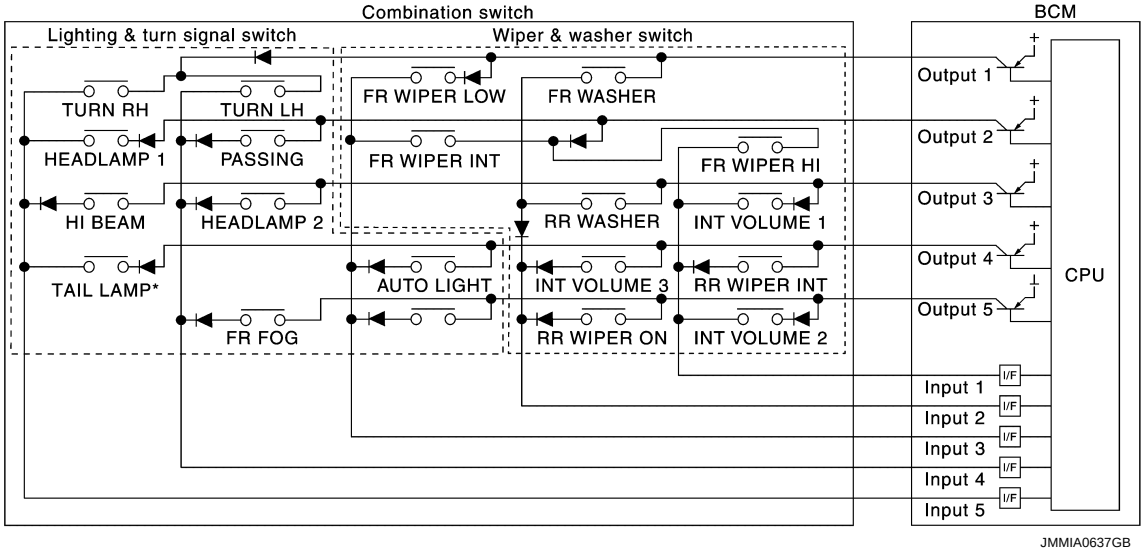
OUTLINE

- BCM reads the status of the combination switch (light, turn signal, wiper and washer) and recognizes the status of each switch.
- BCM 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



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

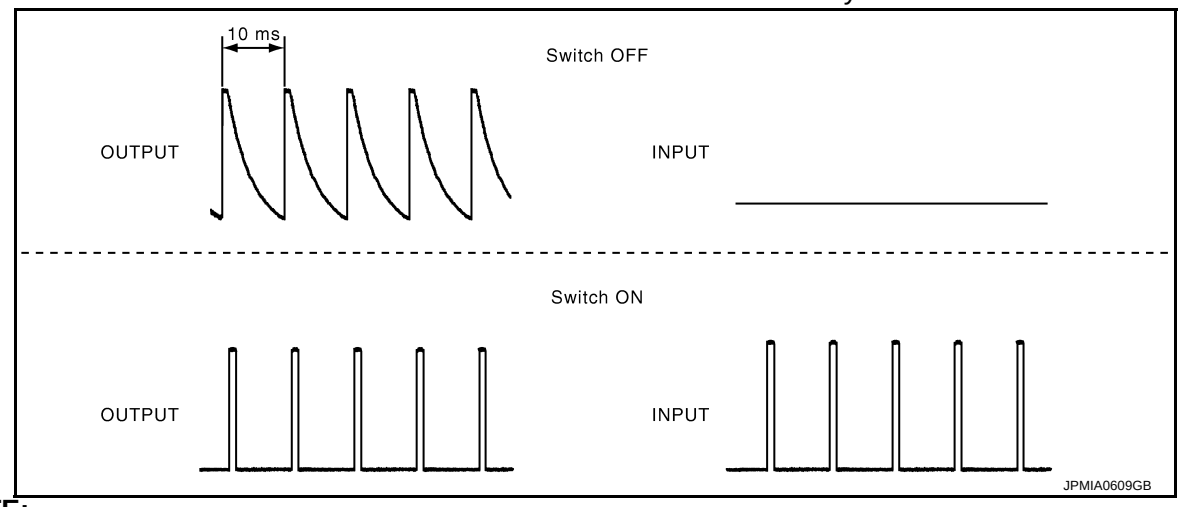
NOTE:

Headlamp has a dual system switch.

COMBINATION SWITCH READING FUNCTION

Description

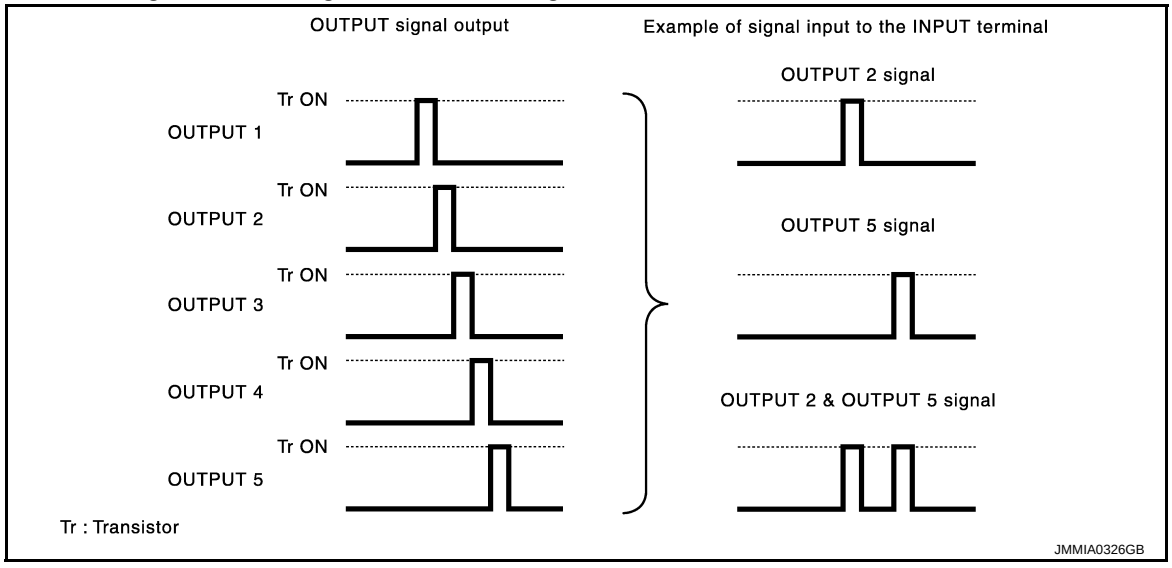
- BCM reads the status of the combination switch at 10 ms interval normally.



NOTE:

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

- BCM operates as follows and judges the status of the combination switch.
- It operates the transistor on OUTPUT side in the following order: OUTPUT 1 → 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.

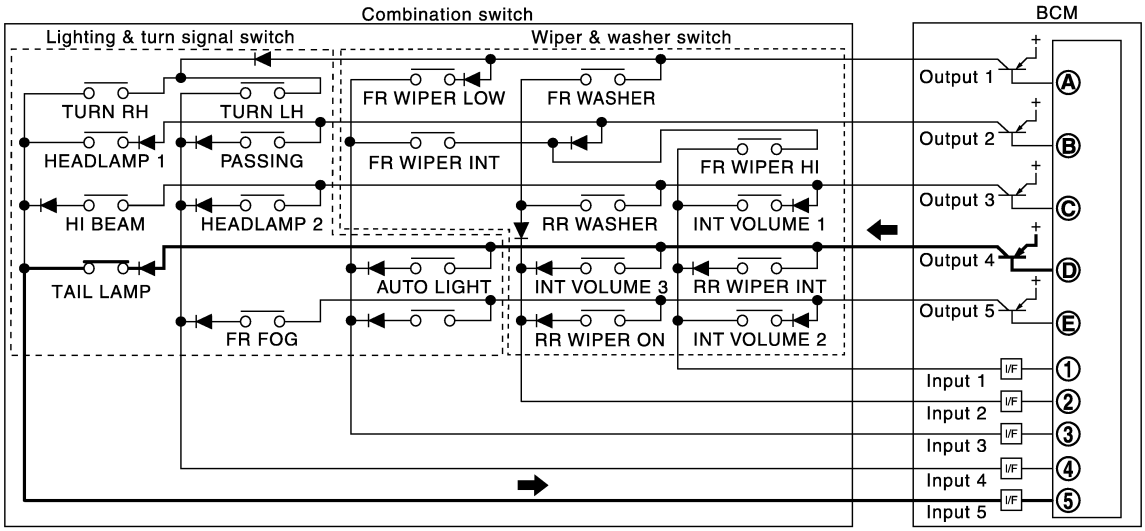


Operation Example

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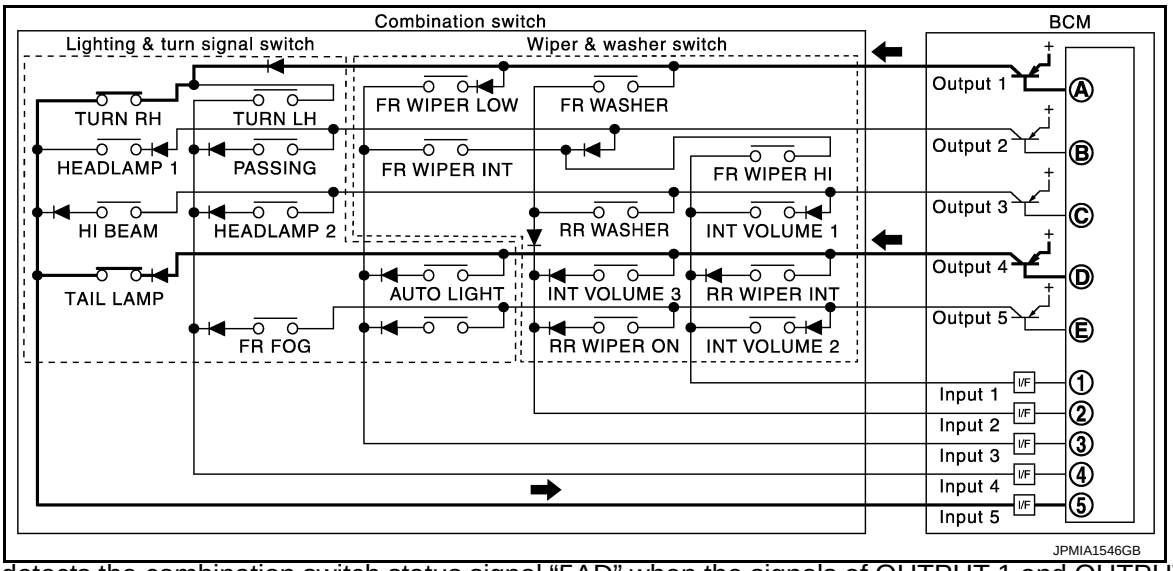
- BCM detects the combination switch status signal “5D” when the signal of OUTPUT 4 is input to INPUT 5.
- BCM judges that the TAIL LAMP switch is ON when the signal “5D” is detected.

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 INTERMITTENT DIAL POSITION

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

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

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

NOTE:

For details of wiper intermittent dial position, refer to WW-6, "FRONT WIPER AND WASHER SYSTEM : System Description".

SIGNAL BUFFER SYSTEM

SIGNAL BUFFER SYSTEM : System Diagram

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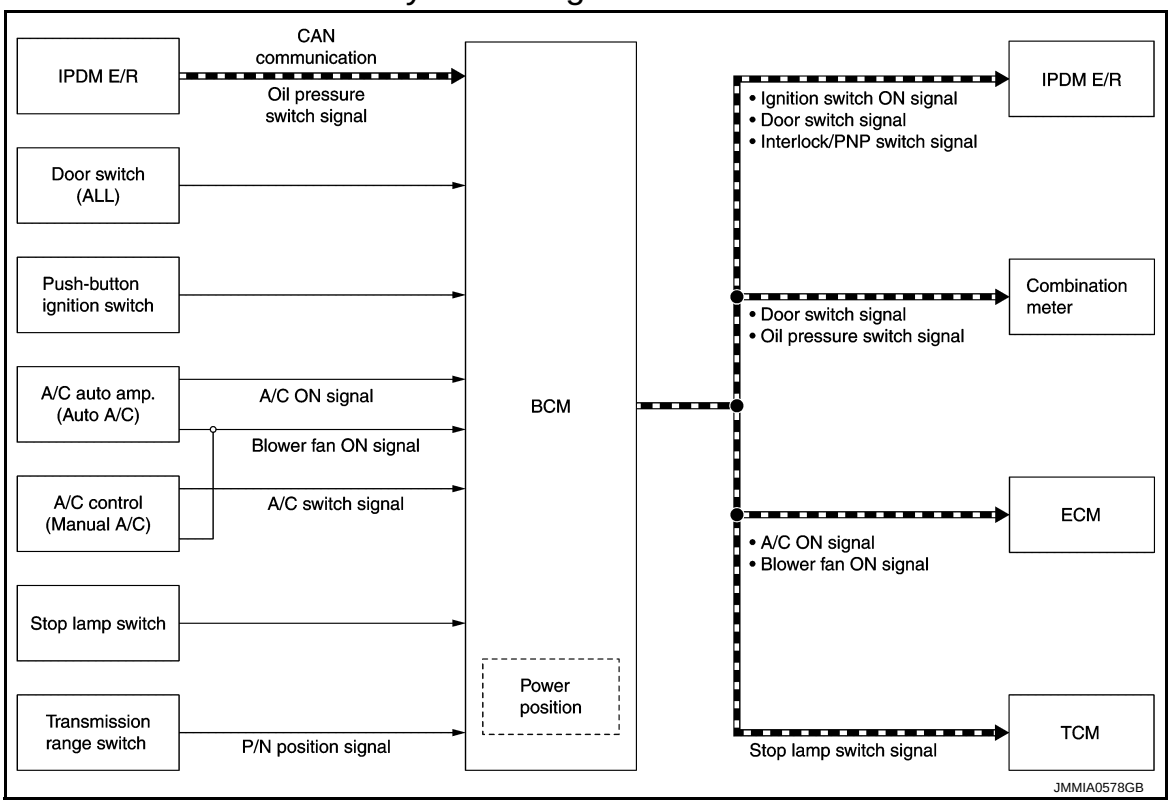

NOTE:

If vehicle models is gasoline engine models, oil pressure switch is not applied.

SIGNAL BUFFER SYSTEM : System Description

INFOID:0000000007576640

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	Push-button ignition switch (Push switch)	IPDM E/R (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)	Inputs the door switch signal and transmits it via CAN communication.
Blower fan ON signal	• A/C auto amp. (Auto A/C) • A/C control (Manual A/C)	ECM (CAN)	Input blower fan switch signal, and transmit the blower fan ON signal via CAN communication.

Signal name	Input	Output	Description
A/C ON signal	• A/C auto amp. (Auto A/C) • A/C control (Manual A/C)	ECM (CAN)	Input A/C ON signal (automatic A/C) or A/C switch signal (manual A/C), and transmit the A/C ON signal via CAN communication.
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.
Interlock/PNP switch signal	Transmission range switch	IPDM E/R (CAN)	Inputs the P/N position signal, and transmits the interlock/PNP switch signal via CAN communication.

POWER CONSUMPTION CONTROL SYSTEM

POWER CONSUMPTION CONTROL SYSTEM : System Diagram

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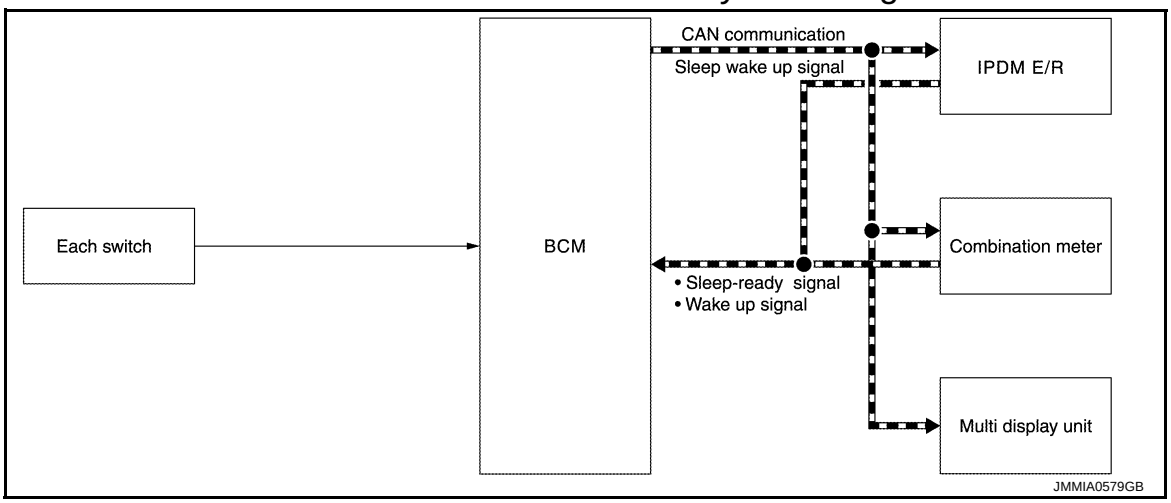


POWER CONSUMPTION CONTROL SYSTEM : System Description

INFOID:0000000007576642

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 and multi display unit) that operates with the ignition switch OFF.

Normal mode (wake-up)
- CAN communication is normally performed with other units
- Each control with BCM is operating properly

CAN communication sleep mode (CAN sleep)
- CAN transmission is stopped
- Control with BCM only is operating

Low power consumption mode (BCM sleep)
- Low power consumption control is active
- CAN transmission is stopped

LOW POWER CONSUMPTION CONTROL WITH BCM

BCM reduces the power consumption with the following operation in the low power consumption mode.
- The reading interval of the each switches changes from 10 ms interval to 60 ms interval.

Sleep mode activation

- BCM receives the sleep-ready signal (ready) from IPDM E/R and combination meter via CAN communication.
- BCM transmits the sleep wake up signal (sleep) to each unit when all of the CAN sleep conditions are fulfilled.
- Each unit stops the transmission of CAN communication with the sleep wake up signal. BCM is in CAN communication sleep mode.
- BCM is in the low power consumption mode and perform the low power consumption control when all of the BCM sleep conditions are fulfilled with CAN sleep condition.

Sleep condition

CAN sleep condition	BCM sleep condition
• Receiving the sleep-ready signal (ready) from all units • 1 minute after turning ignition switch OFF • Theft warning alarm and panic alarm: 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 communication status: Not communication • Meter display signal: Non-transmission • Door switch status: No change	• Interior room lamp battery saver: Time out* • RAP system: No communication • Nissan Vehicle Immobilizer System (NVIS) - NATS: Not operation • Remote keyless entry receiver communication status: No communication • Tire pressure monitoring system (TPMS): Stop • ACC/ON indicator lamp: Not operation

NOTE:
*: Refer to INL-8, "INTERIOR ROOM LAMP BATTERY SAVER SYSTEM : System Description" for details of the interior room lamp battery saver time.

Wake-up operation

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

Wake-up condition

BCM wake-up condition	CAN wake-up condition
Back door opener switch: OFF → ON	• 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 • 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

DIAGNOSIS SYSTEM (BCM)
COMMON ITEM
COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000007576643

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

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

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

×: Applicable item

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 conditioning system	AIR CONDITONER		×	×*
• Intelligent Key system • Engine start system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
NVIS - NATS	IMMU	×	×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door open	TRUNK		×	
Theft warning alarm	THEFT ALM	×	×	×
RAP	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	AIR PRESSURE MONITOR	×	×	×

NOTE:
*: For models with automatic A/C, this diagnosis mode is not used.

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

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 position is “LOCK”*.)
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power position is “OFF”.)
	LOCK>ACC		While turning power position from “LOCK”* *to “ACC”
	ACC>ON		While turning power position from “ACC” to “IGN”
	RUN>ACC		While turning power position from “RUN” to “ACC” (Vehicle is stopping and selector lever is except P position.)
	CRANK>RUN		While turning power position from “CRANKING” to “RUN” (From cranking up the engine to run it)
	RUN>URGENT		While turning power position from “RUN“ to “ACC” (Emergency stop operation)
	ACC>OFF		While turning power position from “ACC” to “OFF”
	OFF>LOCK		While turning power position from “OFF” to “LOCK”*
	OFF>ACC		While turning power position from “OFF” to “ACC”
	ON>CRANK		While turning power position from “IGN” to “CRANKING”
	OFF>SLEEP		While turning BCM status from normal mode (Power position is “OFF”.) to low power consumption mode
	LOCK>SLEEP		While turning BCM status from normal mode (Power position is “LOCK”*.) to low power consumption mode
	LOCK		Power position is “LOCK”*
	OFF		Power position is “OFF” (Ignition switch OFF)
	ACC		Power position is “ACC” (Ignition switch ACC)
	ON		Power position is “IGN” (Ignition switch ON with engine stopped)
	ENGINE RUN		Power position is “RUN” (Ignition switch ON with engine running)
	CRANKING		Power 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.	

NOTE:

*: Power position shifts to “LOCK” from “OFF”, when ignition switch is in the OFF position, selector lever is in the P position (A/T models and CVT models), and any of the following conditions are met.

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

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

DOOR LOCK

DOOR LOCK : CONSULT Function (BCM - DOOR LOCK)

INFOID:0000000007829415

BCM CONSULT FUNCTION

CONSULT performs the following functions via CAN communication with BCM.

WORK SUPPORT

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

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

DATA MONITOR

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

ACTIVE TEST

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

REAR WINDOW DEFOGGER

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

INFOID:0000000007829436

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	Rear window defogger operates when “ON” on CONSULT screen is touched.

BUZZER

BUZZER : CONSULT Function (BCM - BUZZER)

INFOID:0000000007829445

CONSULT APPLICATION ITEMS

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

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

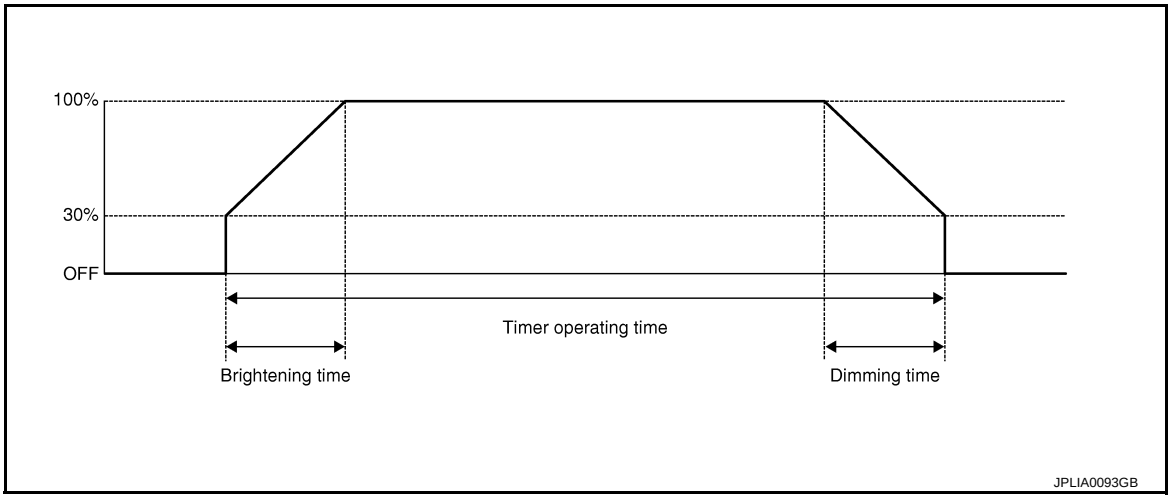
Display item [Unit]	Description
SEAT BELT WARN TEST	The seat belt warning chime operation can be checked by operating the relevant function (On/Off).
KEY REMINDER WARN	The key warning chime operation can be checked by operating the relevant function (On/Off).
LIGHT WARN ALM	The light warning chime operation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

INT LAMP

INT LAMP : CONSULT Function (BCM - INT LAMP)

INFOID:0000000007829430

WORK SUPPORT



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

*: Factory setting

DATA MONITOR

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

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

ACTIVE TEST

Test item	Operation	Description
INT LAMP	On	Outputs the interior room lamp control signal to turn the interior room lamps ON. [Map lamp, room lamp (when applicable lamps switch is in DOOR position.)]
	Off	Stops the interior room lamp control signal to turn the interior room lamps.
STEP LAMP TEST	On	**NOTE:** This item is indicated, but can not tested
	Off	

HEADLAMP

HEADLAMP : CONSULT Function (BCM - HEAD LAMP)

INFOID:0000000007829426

WORK SUPPORT

Service item	Setting item	Setting
CUSTOM A/LIGHT SETTING*1	MODE 1*2	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)

Service item	Setting item	Setting	
BATTERY SAVER SET	On*2	With the exterior lamp battery saver function	
	Off	Without the exterior lamp battery saver function	
ILL DELAY SET*1	MODE 1*2	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.	
HEAD LIGHT TIMER	MODE 1	10 sec.	Sets follow me home function activating time
	MODE 2*2	30 sec.	
AUTO LIGHT LOGIC SET*1	MODE 1*2	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: For models without auto light system, this item is displayed but is not operated.

*2: Factory setting

DATA MONITOR

Monitor item [Unit]	Description
PUSH SW [On/Off]	The switch status input from push-button ignition switch
ENGINE STATE [Stop/Stall/Crank/Run]	The engine status received from ECM via CAN communication
VEH SPEED 1 [km/h]	The value of the vehicle speed received from combination meter via CAN communication

Monitor item [Unit]	Description
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*1 [On/Off]	
FR FOG SW*2 [On/Off]	
DOOR SW-DR [On/Off]	The switch status input from front door switch (driver side)
DOOR SW-AS [On/Off]	The switch status input from front door switch (passenger side)
DOOR SW-RR [On/Off]	The switch status input from 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/NG]	**NOTE:** This item is indicated, but can not monitored
OPTI SEN (DTCT)*1 [V]	The value of outside brightness voltage input from the optical sensor
OPTI SEN (FILT)*1 [V]	The value of outside brightness voltage filtered by BCM

*1: For models without auto light system, this item is not displayed.

*2: For models without front fog lamp, this item is displayed but is not monitored.

ACTIVE TEST

Test item	Operation	Description
TAIL LAMP	On	Transmits the position light request signal to IPDM E/R via CAN 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*1	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

Test item	Operation	Description
DAYTIME RUNNING LIGHT*2	On	Transmits the daytime running light request signal via CAN communication to IPDM E/R
	Off	Stop the daytime running light request signal transmission
ILL DIM SIGNAL	On	**NOTE:** This item is indicated, but can not tested
	Off	

*1: For models without front fog lamp, this item is displayed but is not tested.

*2: For models without daytime running light system, this item is not displayed.

WIPER

WIPER : CONSULT Function - WIPER

INFOID:0000000007829434

WORK SUPPORT

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

*:Factory setting

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:** The item is indicated, but not monitored

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.

FLASHER

FLASHER : CONSULT Function (BCM - FLASHER)

INFOID:0000000007829427

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 Intelligent Key.
	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

AIR CONDITIONER

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

INFOID:0000000007829438

DATA MONITOR

Display Item List

Monitor Item [Unit]		Contents
FAN ON SIG	[On/Off]	Displays the blower fan status as jugged from the A/C auto amp.
AIR COND SW	[On/Off]	Displays [COMP (On)/COMP (Off)] status as judged from the A/C auto amp.

INTELLIGENT KEY

INTELLIGENT KEY : CONSULT Function (BCM - INTELLIGENT KEY)

INFOID:0000000007829416

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	**NOTE:** This item is displayed, but cannot be monitored
HORN WITH KEYLESS LOCK	Horn reminder function mode by Intelligent Key button can be changed to operate (ON) or not operate (OFF) with this mode • On: Operate • Off: Non-operation
PANIC ALARM SET	Panic alarm button pressing time on Intelligent Key remote control button can be selected from the following with this mode • MODE 1: 0.5 sec • MODE 2: Non-operation • MODE 3: 1.5 sec
TRUNK OPEN DELAY	**NOTE:** This item is displayed, but cannot be monitored
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

Monitor item	Description
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
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

SELF-DIAG RESULT

Refer to BCS-58, "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*1	Indicates [On/Off] condition of clutch interlock switch
BRAKE SW 1	Indicates [On/Off]*2 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
UNLK SEN -DR	Indicates [On/Off] condition of driver door UNLOCK status
PUSH SW -IPDM	Indicates [On/Off] condition of push-button ignition switch
IGN RLY1 -F/B	Indicates [On/Off] condition of ignition relay 1
DETE SW -IPDM	Indicates [On/Off] condition of P position
SFT PN -IPDM	Indicates [On/Off] condition of P or N position
SFT P -MET	Indicates [On/Off] condition of P position
SFT N -MET	Indicates [On/Off] condition of N position
ENGINE STATE	Indicates [Stop/Stall/Crank/Run] condition of engine states
S/L LOCK-IPDM	**NOTE:** This item is displayed, but cannot be monitored
S/L UNLK-IPDM	**NOTE:** This item is displayed, but cannot be monitored
S/L RELAY-REQ	**NOTE:** This item is displayed, but cannot be monitored
VEH SPEED 1	Display the vehicle speed signal received from combination meter by numerical value [Km/h]
VEH SPEED 2	Display the vehicle speed signal received from ABS or VDC or TCM by numerical value [Km/h]
DOOR STAT-DR	Indicates [LOCK/READY/UNLK] condition of driver side door status
DOOR STAT-AS	Indicates [LOCK/READY/UNLK] condition of passenger side door status

Monitor Item	Condition
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

*1: It is displayed but does not operate on CVT models.

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

ACTIVE TEST

Test item	Description
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 screen is touched • Key: Key warning chime sounds when CONSULT screen is touched • Knob: OFF position warning chime sounds when CONSULT screen is touched • Off: Non-operation
INDICATOR	This test is able to check warning lamp operation • KEY ON: “KEY” Warning lamp illuminates when CONSULT screen is touched • KEY IND: “KEY” Warning lamp blinks when CONSULT screen is touched • Off: Non-operation
INT LAMP	This test is able to check interior room lamp operation • On: Operate • Off: Non-operation
LCD	This test is able to check meter display information • BP N: Engine start operation indicator lamp indicate when CONSULT screen is touched • BP I: Engine start operation indicator lamp indicate when CONSULT screen is touched • ID NG: This item is displayed, but cannot be monitored • ROTAT: This item is displayed, but cannot be monitored • SFT P: Shift P warning lamp indicate when CONSULT screen is touched • INSRT: This item is displayed, but cannot be monitored • BATT: Key warning lamp indicator when CONSULT screen is touched • NO KY: Key warning lamp indicator when CONSULT screen is touched • OUTKEY: Engine start operation indicator lamp indicate when CONSULT screen is touched • LK WN: Engine start operation indicator lamp indicate when CONSULT 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 screen is touched
HORN	This test is able to check horn operation The horn is activated after “ON” on CONSULT screen is touched
P RANGE	This test is able to check CVT shift selector power supply • On: Operate • Off: Non-operation

Test item	Description
ENGINE SW ILLUMI	This test is able to check push-ignition switch illumination operation Push-ignition switch illumination illuminates when “ON” on CONSULT screen is touched
PUSH SWITCH INDICATOR	This test is able to check LOCK indicator in push-ignition switch operation LOCK indicator in push-ignition switch illuminates when “ON” on CONSULT screen is touched
BATTERY SAVER	This test is able to check interior room lamp operation. The interior room lamp will be activated after “ON” on CONSULT screen is touched.
TRUNK/BACK DOOR	This test is able to check back door opener actuator open operation. This actuator opens when “Open” on CONSULT screen is touched.

COMB SW

COMB SW : CONSULT Function (BCM - COMB SW)

INFOID:0000000007576654

DATA MONITOR

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

BCM

BCM : CONSULT Function (BCM - BCM)

INFOID:0000000007576655

WORK SUPPORT

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

IMMU

IMMU : CONSULT Function (BCM - IMMU)

INFOID:0000000007829419

WORK SUPPORT

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

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

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

BATTERY SAVER

BATTERY SAVER : CONSULT Function (BCM - BATTERY SAVER)

INFOID:0000000007829431

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.	
	MODE 3*	15 min.	
BATTERY SAVER SET	On*	With the exterior lamp battery saver function	
	Off	Without the exterior lamp battery saver function	
ROOM LAMP BAT SAV SET	On*	With the interior room lamp battery saver function	
	Off	Without the interior room lamp battery saver function	

*:Factory setting

DATA MONITOR

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

ACTIVE TEST

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

*: Each lamp switch is in ON position.

TRUNK

TRUNK : CONSULT Function (BCM - TRUNK)

INFOID:0000000007829417

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 Function (BCM - THEFT)

INFOID:0000000007829418

WORK SUPPORT

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

DATA MONITOR

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

ACTIVE TEST

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

RETAIND PWR

RETAIND PWR : CONSULT Function (BCM - RETAINED PWR)

INFOID:0000000007829420

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 Function (BCM - SIGNAL BUFFER)

INFOID:0000000007576661

DATA MONITOR

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

ACTIVE TEST

Test item	Opera-tion	Description
OIL PRESSURE SW	Off	**NOTE:** This item is indicated, but not tested.
	On	

AIR PRESSURE MONITOR

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

INFOID:0000000007829440

APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

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

SELF DIAGNOSTIC RESULT

Refer to BCS-58, "DTC Index".

DATA MONITOR MODE

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

ACTIVE TEST MODE

NOTE:

After completing the work below, perform an active test.

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

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

WORK SUPPORT

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

ECU DIAGNOSIS INFORMATION

BCM

Reference Value

INFOID:0000000007576663

VALUES ON THE DIAGNOSIS TOOL

CONSULT 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 INT	Off
	Front wiper switch INT	On
FR WIPER STOP	Front wiper is not in STOP position	Off
	Front wiper is in STOP position	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	Wiper intermittent dial position
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

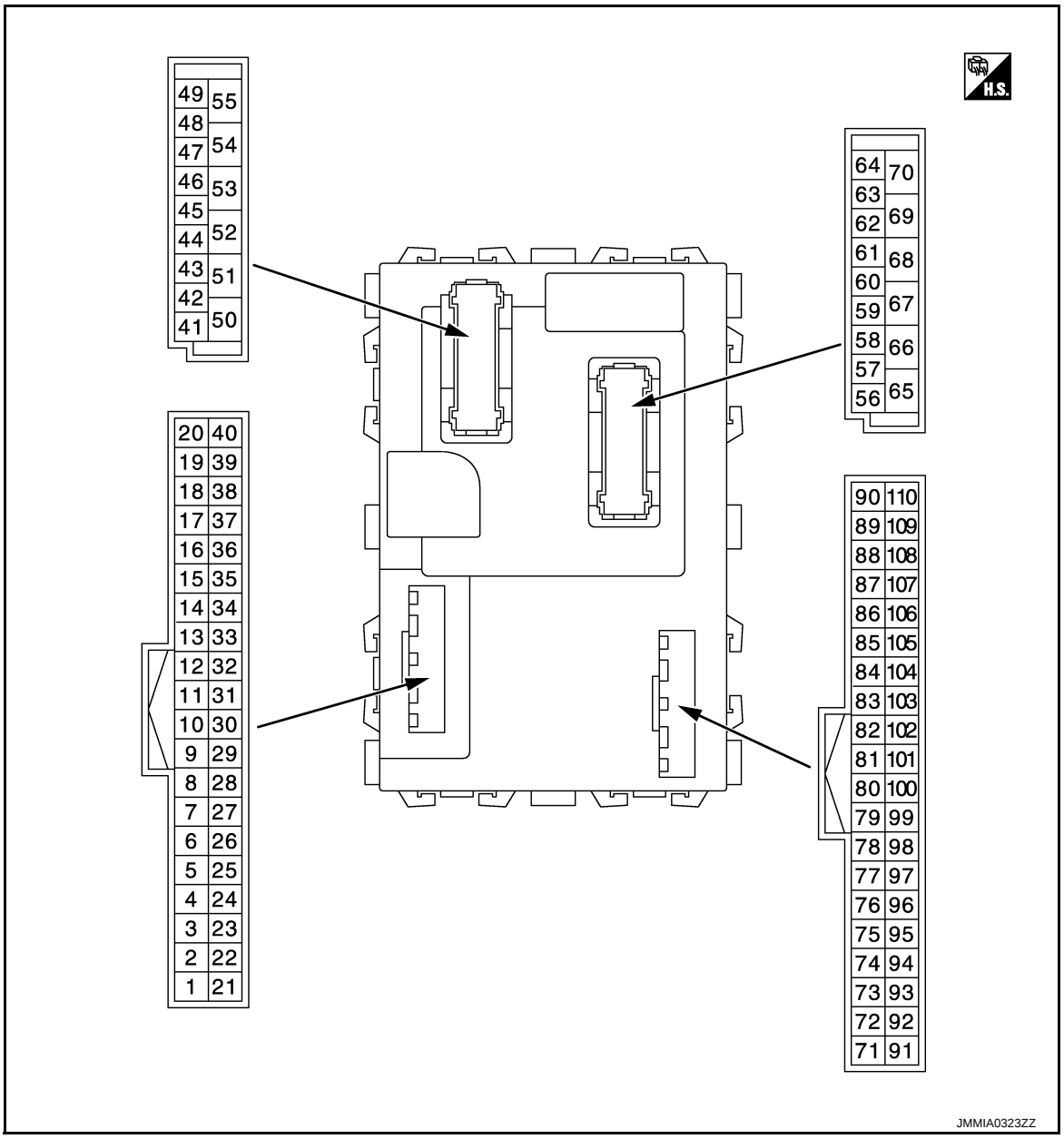
Monitor Item	Condition	Value/Status
DOOR SW-DR	Driver door closed	Off
	Driver door opened	On
DOOR SW-AS	Passenger door closed	Off
	Passenger door opened	On
DOOR SW-RR	Rear RH door closed	Off
	Rear RH door opened	On
DOOR SW-RL	Rear LH door closed	Off
	Rear LH door opened	On
DOOR SW-BK	Back door closed	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	Blower fan OFF	Off
	Blower fan ON	On
AIR COND SW	Air conditioner OFF (A/C switch indicator OFF)	Off
	Air conditioner ON (A/C switch indicator ON)	On
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	**NOTE:** The item is indicated, but not monitored.	Off
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

Monitor Item	Condition		Value/Status
OPTICAL SENSOR	**NOTE:** The item is indicated, but not monitored.		Off
RAIN SENSOR	**NOTE:** The item is indicated, but not monitored.		Off
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	The clutch pedal is not depressed.		Off
	The clutch pedal is depressed		On
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. 38 fuse is blown		Off
	The brake pedal is not depressed when No. 38 fuse is blown, or No. 38 fuse is normal		On
DETE/CANCL SW **NOTE:** For M/T models this item is not used.	Selector lever in P position	Release selector button	Off
		Push selector button	On
	Selector lever in any position other than P		
SFT PN/N SW	• Selector lever in any position other than P and N (CVT models) • Control lever in any position other than neutral (M/T models)		Off
	• Selector lever in P or N position (CVT models) • Control lever in neutral position (M/T models)		On
S/L -LOCK	**NOTE:** The item is indicated, but not monitored.		Off
S/L -UNLOCK	**NOTE:** The item is indicated, but not monitored.		Off
S/L RELAY-F/B	**NOTE:** The item is indicated, but not monitored.		Off
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 **NOTE:** For M/T models this item is not used.	Selector lever in any position other than P		Off
	Selector lever in P position	Push selector button	
		Release selector button	On

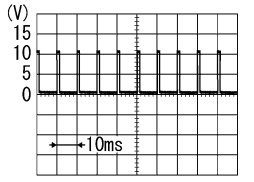
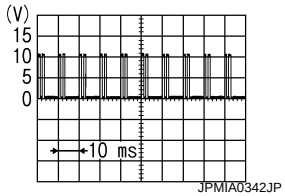
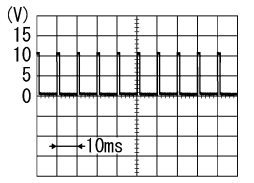
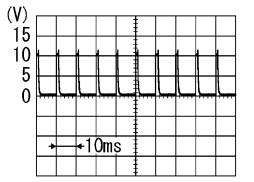
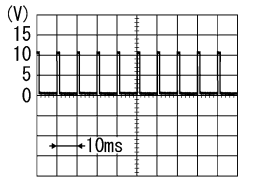
Monitor Item	Condition	Value/Status
SFT PN -IPDM **NOTE:** For M/T models this item is not used.	Selector lever in any position other than P and N	Off
	Selector lever in P or N position	On
SFT P -MET **NOTE:** For M/T models this item is not used.	Selector lever in any position other than P	Off
	Selector lever in P position	On
SFT N -MET **NOTE:** For M/T models this item is not used.	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	**NOTE:** The item is indicated, but not monitored.	Off
S/L UNLK-IPDM	**NOTE:** The item is indicated, but not monitored.	Off
S/L RELAY-REQ	**NOTE:** The item is indicated, but not monitored.	Off
VEH SPEED 1	While driving	Equivalent to speed-ometer reading
VEH SPEED 2	While driving	Equivalent to speed-ometer reading
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	Driver side door is open after ignition switch is turned OFF (Shift position is in the P position)	Reset
	Ignition switch ON	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

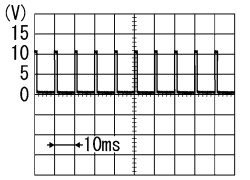
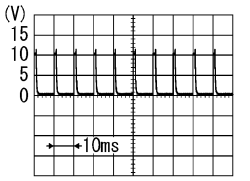
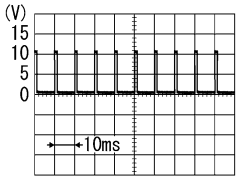
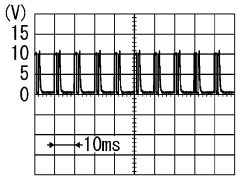
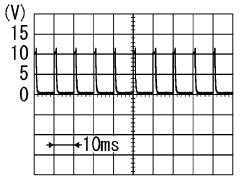
Monitor Item	Condition	Value/Status
CONFIRM ID3	The key ID that the key slot receives is not recognized by the third key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by the third key ID registered to BCM.	Done
CONFIRM ID2	The key ID that the key slot receives is not recognized by the second key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by the second key ID registered to BCM.	Done
CONFIRM ID1	The key ID that the key slot receives is not recognized by the first key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by the first key ID 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
AIR PRESS FL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front LH tire
AIR PRESS FR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front RH tire
AIR PRESS RR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear RH tire
AIR PRESS RL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear LH tire
ID REGST FL1	ID of front LH tire transmitter is registered	Done
	ID of front LH tire transmitter is not registered	Yet
ID REGST FR1	ID of front RH tire transmitter is registered	Done
	ID of front RH tire transmitter is not registered	Yet
ID REGST RR1	ID of rear RH tire transmitter is registered	Done
	ID of rear RH tire transmitter is not registered	Yet
ID REGST RL1	ID of rear LH tire transmitter is registered	Done
	ID of rear LH tire transmitter is not registered	Yet
WARNING LAMP	Tire pressure indicator OFF	Off
	Tire pressure indicator ON	On
BUZZER	Tire pressure warning alarm is not sounding	Off
	Tire pressure warning alarm is sounding	On

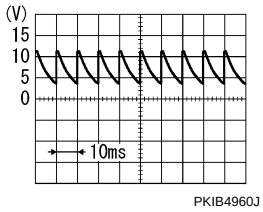
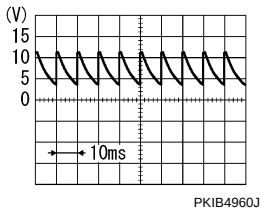
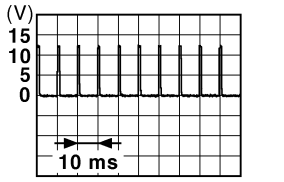
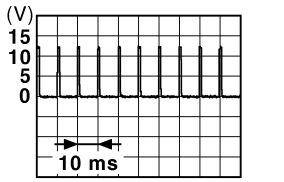
TERMINAL LAYOUT

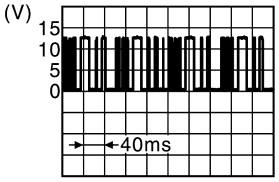
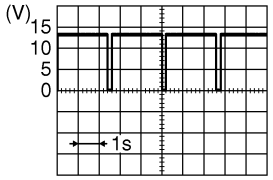
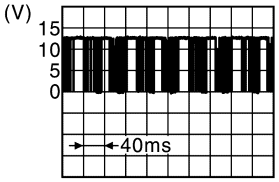
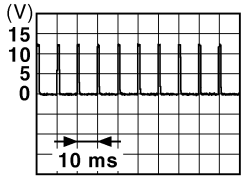


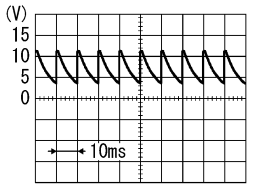
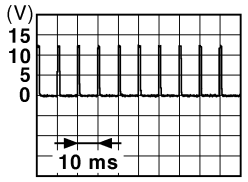
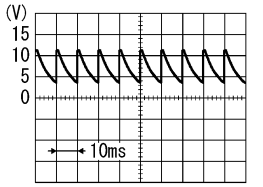
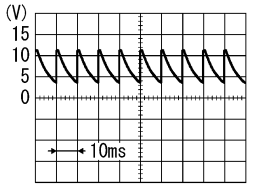
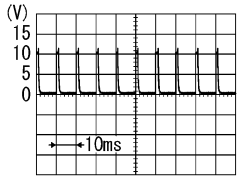
PHYSICAL VALUES

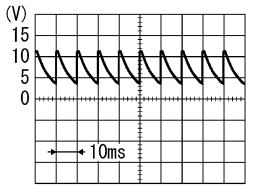
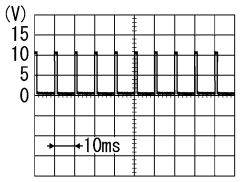
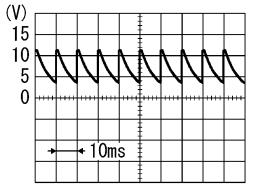
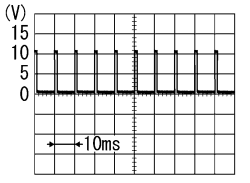
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
2 (L)	Ground	Combination switch INPUT 5	Input	Combination switch (Wiper intermittent dial 4)	All switches OFF	0 V
					Turn signal switch RH Lighting switch HI Lighting switch 1ST	 PKIB4958J 1.0 V
					Lighting switch 2ND	 JPMIA0342JP 2.0 V
3 (GR)	Ground	Combination switch INPUT 4	Input	Combination switch (Wiper intermittent 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 (BR)	Ground	Combination switch INPUT 3	Input	Combination switch (Wiper intermittent dial 4)	All switches OFF	0 V
					Front wiper switch LO Front wiper switch MIST Front wiper switch INT Lighting switch AUTO	 PKIB4958J 1.0 V

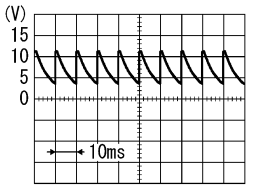
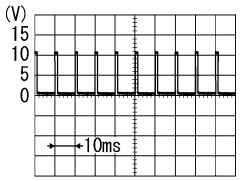
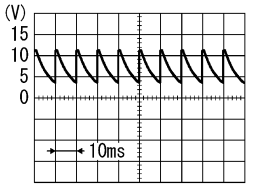
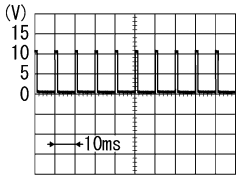
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
5 (G)	Ground	Combination switch INPUT 2	Input	Combination switch	All switches OFF (Wiper intermittent dial 4)	0 V
					Front washer switch ON (Wiper intermittent dial 4)	 PKIB4958J 1.0 V
					Rear washer switch ON (Wiper intermittent dial 4)	
					Any of the condition below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	
					Rear wiper switch ON (Wiper intermittent dial 4)	 PKIB4956J 0.8 V
6 (W)	Ground	Combination switch INPUT 1	Input	Combination switch	All switches OFF (Wiper intermittent dial 4)	0 V
					Front wiper switch HI (Wiper intermittent dial 4)	 PKIB4958J 1.0 V
					Rear wiper switch INT (Wiper intermittent dial 4)	
					Wiper intermittent dial 3 (All switches OFF)	
					Any of the condition below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2	 PKIB4952J 1.9 V
					Any of the condition below with all switches OFF • Wiper intermittent dial 6 • Wiper intermittent dial 7	 PKIB4956J 0.8 V

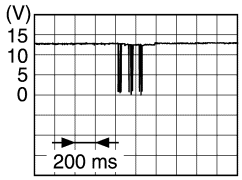
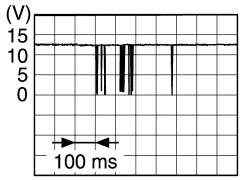
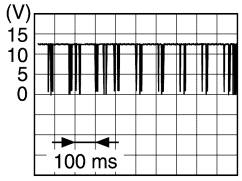
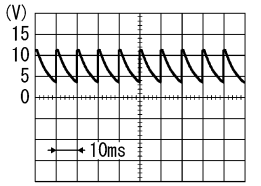
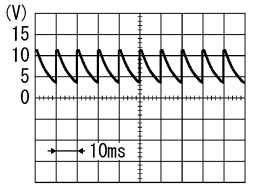
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
7 (L)	Ground	Door key cylinder switch UNLOCK	Input	Door key cylinder switch	NEUTRAL position	 PKIB4960J 7.0 - 8.0 V
					UNLOCK position	0 V
8 (R)	Ground	Door key cylinder switch LOCK	Input	Door key cylinder switch	NEUTRAL position	 PKIB4960J 7.0 - 8.0 V
					LOCK position	0 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
10*1 (W)	—	—	—	—		—
12 (Y)	Ground	Door lock and unlock switch LOCK	Input	Door lock and unlock switch	NEUTRAL position	 JPMIA0012GB 1.0 - 1.5 V
					LOCK position	0 V
13 (BR)	Ground	Door lock and unlock switch UNLOCK	Input	Door lock and unlock switch	NEUTRAL position	 JPMIA0012GB 1.0 - 1.5 V
					UNLOCK position	0 V
14 (P)	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
17 (R)	Ground	Sensor power supply	Output	Ignition switch	OFF, ACC	0 V
					ON	5 V

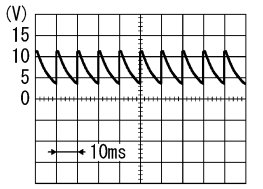
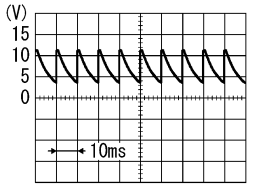
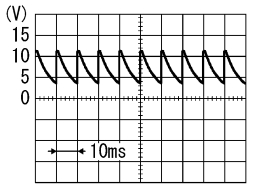
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
18 (V)	Ground	Receiver ground	Input	Ignition switch ON		0 V
21 (P)	Ground	NATS antenna amp.	Input/ Output	Intelligent Key: Intelligent Key battery is removed	Brake pedal: Depressed **NOTE:** Waveform varies each time when brake pedal is depressed	 JMKIA6232JP
					Brake pedal: Not depressed	12 V
23 (R)	Ground	Security indicator lamp	Output	Security indicator lamp	ON	0 V
					Blinking (Ignition switch OFF)	 JPMIA0590GB 12.0 V
					OFF	Battery voltage
24*2 (SB)	Ground	Dongle link	Input/ Output	Ignition switch OFF		5 V
25 (LG)	Ground	NATS antenna amp.	Input/ Output	During waiting	Brake pedal: Depressed **NOTE:** Waveform varies each time when brake pedal is depressed	 JMKIA6233JP
					Brake pedal: Not depressed	12 V
27 (W)	Ground	A/C ON	Input	A/C	OFF (A/C switch indicator: OFF)	 JPMIA0012GB 1.0 - 1.5 V
					ON (A/C switch indicator: ON)	0 V

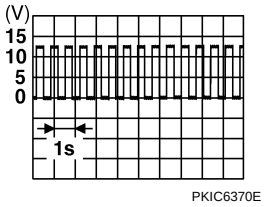
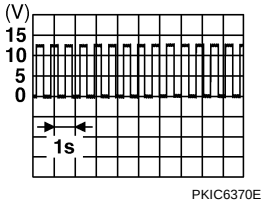
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
28 (O)	Ground	Blower fan switch	Input	Fan switch	Blower fan switch OFF	0 V
					Blower fan switch ON	 PKIB4960J 7.0 - 8.0 V
29 (L)	Ground	Hazard switch	Input	Hazard switch	OFF	12 V
					ON	0 V
30 (L)	Ground	Back door opener switch	Input	Back door opener switch	Pressed	0 V
					Not pressed	 JPMIA0012GB 1.0 - 1.5 V
31 (GR)	Ground	Front door lock assembly driver side (Unlock sensor)	Input	Driver door	LOCK status (Unlock sensor switch OFF)	 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 intermittent dial 4)	 PKIB4960J 7.0 - 8.0 V
					Front fog lamp switch ON (Wiper intermittent dial 4)	 PKIB4956J 1.0 V
					Rear wiper switch ON (Wiper intermittent dial 4)	
					Any of the condition below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7	

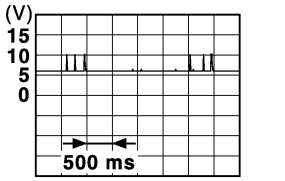
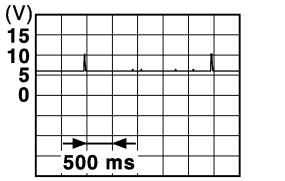
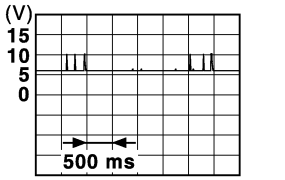
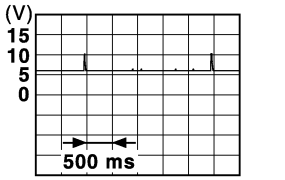
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
33 (Y)	Ground	Combination switch OUTPUT 4	Output	Combination switch	All switches OFF (Wiper intermittent dial 4)	 PKIB4960J 7.0 - 8.0 V
					Lighting switch 1ST (Wiper intermittent dial 4) Lighting switch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

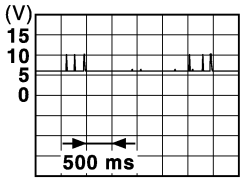
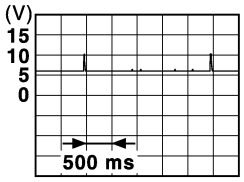
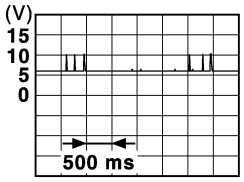
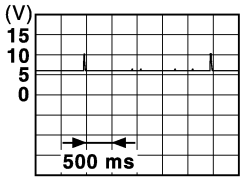
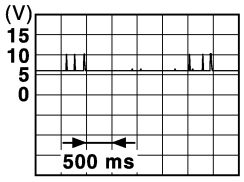
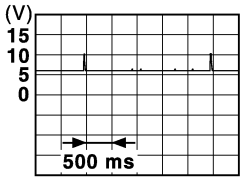
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
35 (R)	Ground	Combination switch OUTPUT 2	Output	Combination switch (Wiper intermittent dial 4)	All switches OFF	 PKIB4960J 7.0 - 8.0 V
					Lighting switch 2ND	 PKIB4958J 1.2 V
					Lighting switch PASS	
					Front wiper switch INT	
					Front wiper switch HI	
36 (P)	Ground	Combination switch OUTPUT 1	Output	Combination switch (Wiper intermittent dial 4)	All switches OFF	 PKIB4960J 7.0 - 8.0 V
					Turn signal switch RH	 PKIB4958J 1.2 V
					Turn signal switch LH	
					Front wiper switch LO	
					Front wiper switch MIST	
					Front washer switch ON	
37 (G)	Ground	Detention switch	Input	Selector lever	P position (Release selector button)	0 V
					P position (Push selector button)	12 V
					Any position other than P	

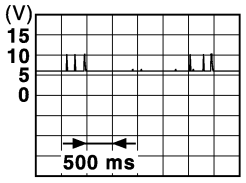
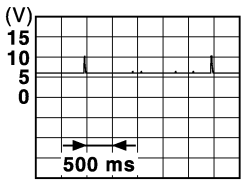
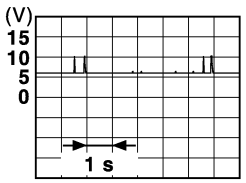
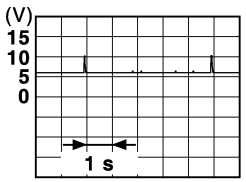
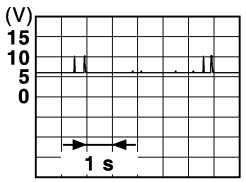
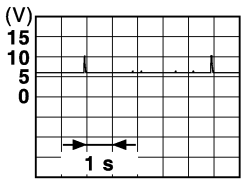
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
38 (SB)	Ground	Receiver communication	Input/ Output	Ignition switch OFF (Remote keyless entry communication)	Waiting	ñÒ12 V
					When operating either button on Intelligent Key	 JMMIA0572GB
				Ignition switch ON (TPMS communication)	Waiting	 JMMIA0573GB
					When receiving signal from tire pressure sensor	 JMMIA0574GB
39 (L)	Ground	CAN-H	Input/ Output	—		—
40 (P)	Ground	CAN-L	Input/ Output	—		—
43 (P)	Ground	Back door switch	Input	Back door switch	OFF (When back door closed)	 PKIB4960J 7.0 - 8.0 V
					ON (When back door opened)	0 V
44 (LG)	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 (R)	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

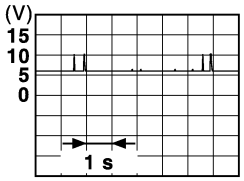
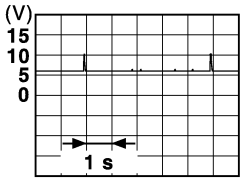
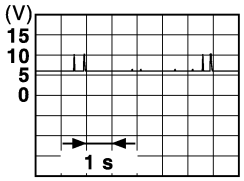
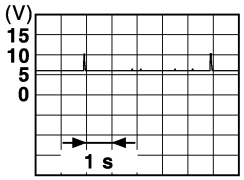
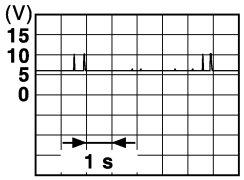
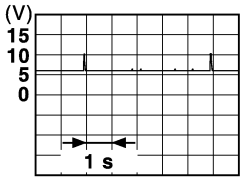
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
46 (LG)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (When rear RH door closed)	 PKIB4960J 7.0 - 8.0 V
					ON (When rear RH door opened)	0 V
47 (SB)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closed)	 PKIB4960J 7.0 - 8.0 V
					ON (When driver door opened)	0 V
48 (BR)	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 (L)	Ground	Luggage room lamp	Output	Luggage room lamp	OFF	12 V
					ON	0 V
51 (Y)	Ground	Back door request switch	Input	Back door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	12 V
53 (GR)	Ground	Back door open	Output	Back door	OFF (Actuator is not activated)	0 V
					OPEN (Actuator is activated)	12 V
54 (P)	Ground	Rear wiper	Output	Rear wiper	OFF (Stopped)	0 V
					ON (Activated)	12 V
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 (LG)	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

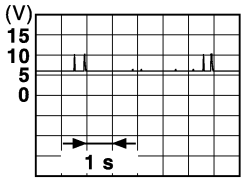
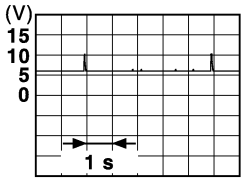
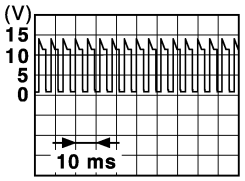
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
57 (L)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
59 (SB)	Ground	Passenger door UNLOCK	Output	Passenger door	UNLOCK (Actuator is activated)	12 V
					Other then UNLOCK (Actuator is not activated)	0 V
60 (V)	Ground	Turn signal LH	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	 PKIC6370E 6.0 V
61 (W)	Ground	Turn signal RH	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch RH	 PKIC6370E 6.0 V
63 (BR)	Ground	Interior room lamp control	Output	Interior room lamp	OFF	12 V
					ON	0 V
64*3 (R)	Ground	Cranking request	input	Ignition switch OFF		3.6 V
				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 (V)	Ground	All doors LOCK	Output	All doors	LOCK (Actuator is activated)	12 V
					Other then LOCK (Actuator is not activated)	0 V
66 (W)	Ground	Driver door UNLOCK	Output	Driver door	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 (L)	Ground	P/W power supply (IGN)	Output	Ignition switch ON		12 V
69 (P)	Ground	P/W power supply (BAT)	Output	Ignition switch OFF		12 V
70 (Y)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
75 (LG)	Ground	Driver door request switch	Input	Driver door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	12 V
76 (LG)	Ground	Push-button ignition switch (push switch)	Input	Push-button ignition switch (push switch)	Pressed	0 V
					Not pressed	12 V
78 (P)	Ground	Driver door antenna (+)	Output	When the driver door request switch is operated with ignition switch ON	When Intelligent Key is not in the antenna detection area (The distance between Intelligent Key and antenna: Approx. 2 m)	 JMKIA5954GB
					When Intelligent Key is in the antenna detection area (The distance between Intelligent Key and antenna: 80 cm or less)	 JMKIA5955GB
79 (V)	Ground	Driver door antenna (-)	Output	When the driver door request switch is operated with ignition switch ON	When Intelligent Key is not in the antenna detection area (The distance between Intelligent Key and antenna: Approx. 2 m)	 JMKIA5954GB
					When Intelligent Key is in the antenna detection area (The distance between Intelligent Key and antenna: 80 cm or less)	 JMKIA5955GB

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
80 (LG)	Ground	Passenger door antenna (+)	Output	When the passenger door request switch is operated with ignition switch ON	When Intelligent Key is not in the antenna detection area (The distance between Intelligent Key and antenna: Approx. 2 m)	 JMKIA5954GB
					When Intelligent Key is in the antenna detection area (The distance between Intelligent Key and antenna: 80 cm or less)	 JMKIA5955GB
81 (Y)	Ground	Passenger door antenna (-)	Output	When the passenger door request switch is operated with ignition switch ON	When Intelligent Key is not in the antenna detection area (The distance between Intelligent Key and antenna: Approx. 2 m)	 JMKIA5954GB
					When Intelligent Key is in the antenna detection area (The distance between Intelligent Key and antenna: 80 cm or less)	 JMKIA5955GB
82 (W)	Ground	Rear bumper antenna (+)	Output	When the back door request switch is operated with ignition switch ON	When Intelligent Key is not in the antenna detection area (The distance between Intelligent Key and antenna: Approx. 2 m)	 JMKIA5954GB
					When Intelligent Key is in the antenna detection area (The distance between Intelligent Key and antenna: 80 cm or less)	 JMKIA5955GB

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
83 (LG)	Ground	Rear bumper antenna (-)	Output	When the back door request switch is operated with ignition switch ON	When Intelligent Key is not in the antenna detection area (The distance between Intelligent Key and antenna: Approx. 2 m)	 JMKIA5954GB
					When Intelligent Key is in the antenna detection area (The distance between Intelligent Key and antenna: 80 cm or less)	 JMKIA5955GB
84 (BR)	Ground	Room antenna 1 (+) (Instrument center)	Output	Ignition switch ON	When Intelligent Key is not in the antenna detection area	 JMKIA5951GB
					When Intelligent Key is in the antenna detection area	 JMKIA3839GB
85 (GR)	Ground	Room antenna 1 (-) (Instrument center)	Output	Ignition switch ON	When Intelligent Key is not in the antenna detection area	 JMKIA5951GB
					When Intelligent Key is in the antenna detection area	 JMKIA3839GB

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
86 (G)	Ground	Room antenna 2 (+) (Console)	Output	Ignition switch ON	When Intelligent Key is not in the antenna detection area	 JMKIA5951GB
					When Intelligent Key is in the antenna detection area	 JMKIA3839GB
87 (R)	Ground	Room antenna 2 (–) (Console)	Output	Ignition switch ON	When Intelligent Key is not in the antenna detection area	 JMKIA5951GB
					When Intelligent Key is in the antenna detection area	 JMKIA3839GB
88 (V)	Ground	Luggage room antenna (+)	Output	Ignition switch ON	When Intelligent Key is not in the antenna detection area	 JMKIA5951GB
					When Intelligent Key is in the antenna detection area	 JMKIA3839GB

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
89 (LG)	Ground	Luggage room antenna (-)	Output	Ignition switch ON	When Intelligent Key is not in the antenna detection area	 JMKIA5951GB
					When Intelligent Key is in the antenna detection area	 JMKIA3839GB
90 (W)	Ground	Push-button ignition switch illumination power supply	Output	Push-button ignition switch illumination	ON	12 V
					OFF	0 V
91 (V)	Ground	ACC/ON indicator lamp	Output	Ignition switch	OFF	Battery voltage
					ACC or ON	0 V
92 (R)	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)	Ground	Intelligent Key warning buzzer	Output	Intelligent Key warning buzzer	Sounding	0 V
					Not sounding	12 V
96 (BR)	Ground	Accessory relay control	Output	Ignition switch	OFF	0 V
					ACC or ON	12 V
97 (SB)	Ground	Starter relay control (CVT models)	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
		Starter relay control (M/T models)	Output	Ignition switch ON	Clutch pedal is depressed	12 V
					Clutch pedal is not depressed	0 V
98 (P)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC	12 V
					ON	0 V
99 (R)	Ground	Ignition relay (F/B) control	Output	Ignition switch	OFF or ACC	0 V
					ON	12 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
		Signal name	Input/ Output			
+	–					
100 (P)	Ground	Passenger door request switch	Input	Passenger door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	12 V
101 (Y)	Ground	Clutch interlock switch (M/T models)	Input	Clutch interlock switch	OFF (Clutch pedal is not depressed)	0 V
					ON (Clutch pedal is depressed)	Battery voltage
		Ignition power supply No.2 (Except M/T models)	Output	Ignition switch	OFF	0 V
					ON	12 V
102 (L)	Ground	P/N position (Except M/T models)	Input	Selector lever	P or N position	12 V
					Except P and N positions	0 V
		Neutral switch (M/T models)		Ignition switch ON	Control lever NEUTRAL position	Battery voltage
					Control lever except NEUTRAL position	0 V
104 (SB)	Ground	CVT shift selector (detention switch) power supply	Output	Ignition switch ON		12 V
105 (V)	Ground	Stop lamp switch 2	Input	Ignition switch OFF		Battery voltage
106 (Y)	Ground	Blower relay control	Output	Ignition switch	OFF or ACC	0 V
					ON	12 V

*1: This terminal is not used.
*2: For Canada
*3: With CVT

Fail-safe

INFOID:0000000007576664

FAIL-SAFE CONTROL BY DTC

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

Display contents of CONSULT	Fail-safe	Cancellation
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI-SCANNING	Inhibit engine cranking	Ignition switch ON → OFF
B2196: DONGLE NG	Inhibit engine cranking	Erase DTC
B2198: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC
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)
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)
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

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:0000000007576665

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 • B2196: DONGLE NG • B2198: NATS ANTENNA AMP

Priority	DTC
4	• 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 • B260F: ENG STATE SIG LOST • B2614: BCM • B2615: BCM • B2616: BCM • B2618: BCM • B261A: PUSH-BTN IGN SW • B261F: ASCD CNCL/CLTCH SW • B2620: NEUTRAL SW • B26E8: CLUTCH SW • B26F1: IGN RELAY OFF • B26F2: IGN RELAY ON • B26F3: START CONT RLY ON • B26F4: START CONT RLY OFF • B26F6: BCM • B26F7: BCM • B26F8: BCM • B26F9: CRANK REQ CIR SHORT • B26FA: CRANK REQ CIR OPEN • B26FB: CLUTCH SWITCH • B26FC: KEY REGISTRATION • C1729: VHCL SPEED SIG ERR • U0415: VEHICLE SPEED
5	• C1704: LOW PRESSURE FL • C1705: LOW PRESSURE FR • C1706: LOW PRESSURE RR • C1707: LOW PRESSURE RL • C1708: [NO DATA] FL • C1709: [NO DATA] FR • C1710: [NO DATA] RR • C1711: [NO DATA] RL • C1716: [PRESSDATA ERR] FL • C1717: [PRESSDATA ERR] FR • C1718: [PRESSDATA ERR] RR • C1719: [PRESSDATA ERR] RL
5	• B2621: INSIDE ANTENNA • B2622: INSIDE ANTENNA • B2623: INSIDE ANTENNA
6	• B2626: OUTSIDE ANTENNA • B2627: OUTSIDE ANTENNA • B2628: OUTSIDE ANTENNA

DTC Index

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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-16, "COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)".

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	—	—	—	—	—
U1000: CAN COMM	—	—	—	—	BCS-69
U1010: CONTROL UNIT (CAN)	—	—	—	—	BCS-70
U0415: VEHICLE SPEED	—	—	×	—	BCS-71
B2192: ID DISCORD BCM-ECM	×	—	—	—	SEC-42
B2193: CHAIN OF BCM-ECM	×	—	—	—	SEC-43
B2195: ANTI-SCANNING	×	—	—	—	SEC-44
B2196: DONGLE NG	×	—	—	—	SEC-45
B2198: NATS ANTENNA AMP	×	—	—	—	SEC-47
B2555: STOP LAMP	—	×	×	—	SEC-50
B2556: PUSH-BTN IGN SW	—	×	×	—	SEC-52
B2557: VEHICLE SPEED	—	×	×	—	SEC-54
B2562: LOW VOLTAGE	—	×	—	—	BCS-72
B2601: SHIFT POSITION	—	×	×	—	SEC-55
B2602: SHIFT POSITION	—	×	×	—	SEC-57
B2603: SHIFT POSI STATUS	—	×	×	—	SEC-60
B2604: PNP/CLUTCH SW	—	×	×	—	SEC-64
B2605: PNP/CLUTCH SW	—	×	×	—	SEC-66
B2608: STARTER RELAY	×	×	×	—	SEC-67
B260F: ENG STATE SIG LOST	×	×	×	—	SEC-69
B2614: BCM	—	×	×	—	PCS-78
B2615: BCM	—	×	×	—	PCS-81
B2616: BCM	—	×	×	—	PCS-83
B2618: BCM	—	×	×	—	PCS-85
B261A: PUSH-BTN IGN SW	—	×	×	—	PCS-86
B261F: ASCD CNCL/CLTCH SW	—	×	×	—	SEC-72
B2620: NEUTRAL SW	—	×	×	—	SEC-74
B2621: INSIDE ANTENNA	—	×	—	—	DLK-41
B2622: INSIDE ANTENNA	—	×	—	—	DLK-43
B2623: INSIDE ANTENNA	—	×	—	—	DLK-45
B2626: OUTSIDE ANTENNA	—	×	—	—	DLK-49
B2627: OUTSIDE ANTENNA	—	×	—	—	DLK-47
B2628: OUTSIDE ANTENNA	—	×	—	—	DLK-51
B26E8: CLUTCH W	—	×	×	—	SEC-77
B26F1: IGN RELAY OFF	×	×	×	—	PCS-88
B26F2: IGN RELAY ON	×	×	×	—	PCS-90
B26F3: START CONT RLY ON	×	×	×	—	SEC-80
B26F4: START CONT RLY OFF	×	×	×	—	SEC-81
B26F6: BCM	—	×	×	—	PCS-92
B26F7: BCM	×	×	×	—	SEC-82

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
B26F8: BCM	—	×	×	—	SEC-83
B26F9: CRANK REQ CIR SHORT	—	×	×	—	SEC-84
B26FA: CRANK REQ CIR OPEN	—	×	×	—	SEC-86
B26FB: CLUTCH SWITCH	—	×	×	—	SEC-88
B26FC: KEY REGISTRATION	—	×	×	—	SEC-89
C1704: LOW PRESSURE FL	—	—	—	×	WT-23
C1705: LOW PRESSURE FR	—	—	—	×	
C1706: LOW PRESSURE RR	—	—	—	×	
C1707: LOW PRESSURE RL	—	—	—	×	
C1708: [NO DATA] FL	—	—	—	×	WT-25
C1709: [NO DATA] FR	—	—	—	×	
C1710: [NO DATA] RR	—	—	—	×	
C1711: [NO DATA] RL	—	—	—	×	
C1716: [PRESSDATA ERR] FL	—	—	—	×	WT-28
C1717: [PRESSDATA ERR] FR	—	—	—	×	
C1718: [PRESSDATA ERR] RR	—	—	—	×	
C1719: [PRESSDATA ERR] RL	—	—	—	×	
C1729: VHCL SPEED SIG ERR	—	—	—	×	WT-30

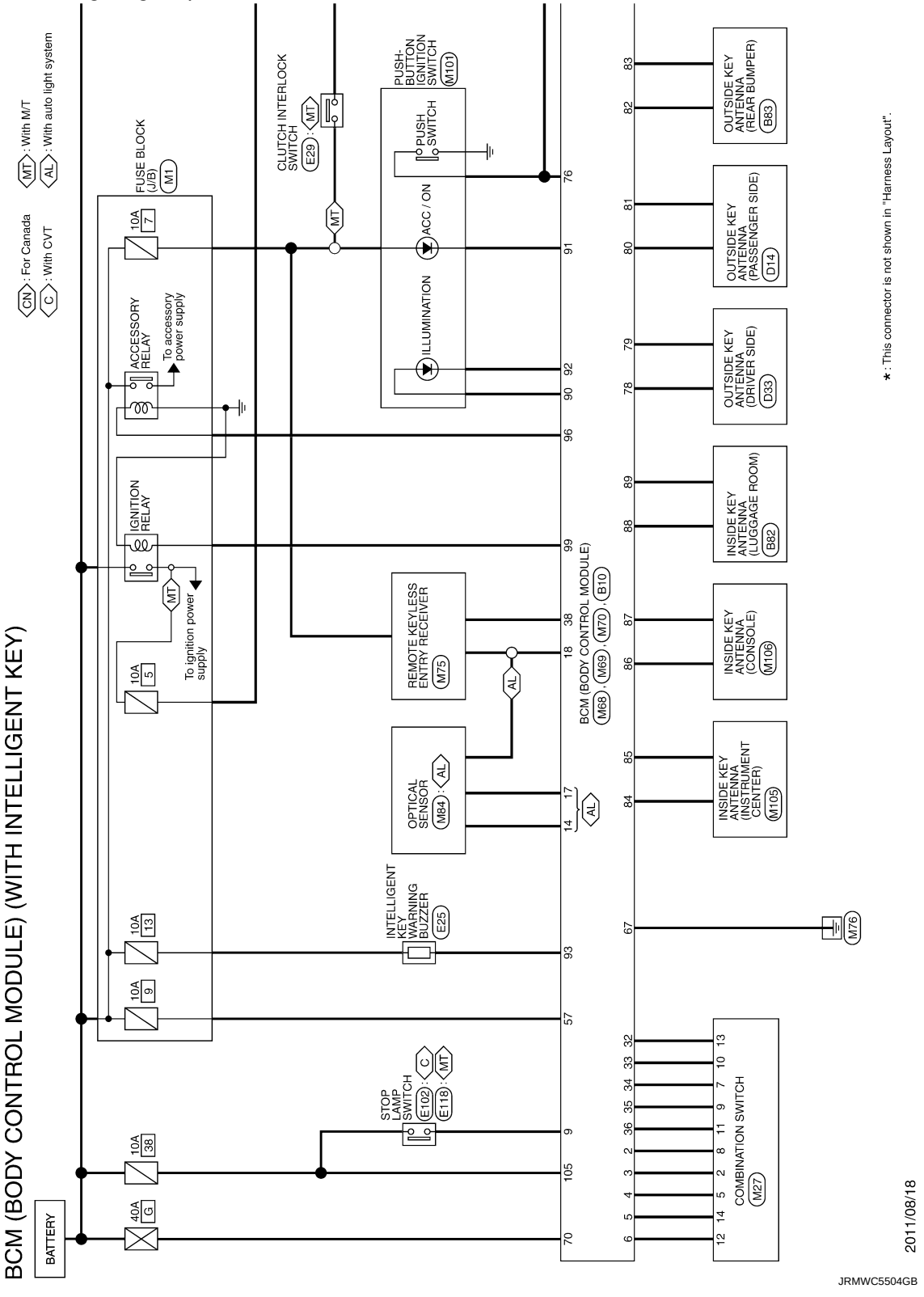
WIRING DIAGRAM

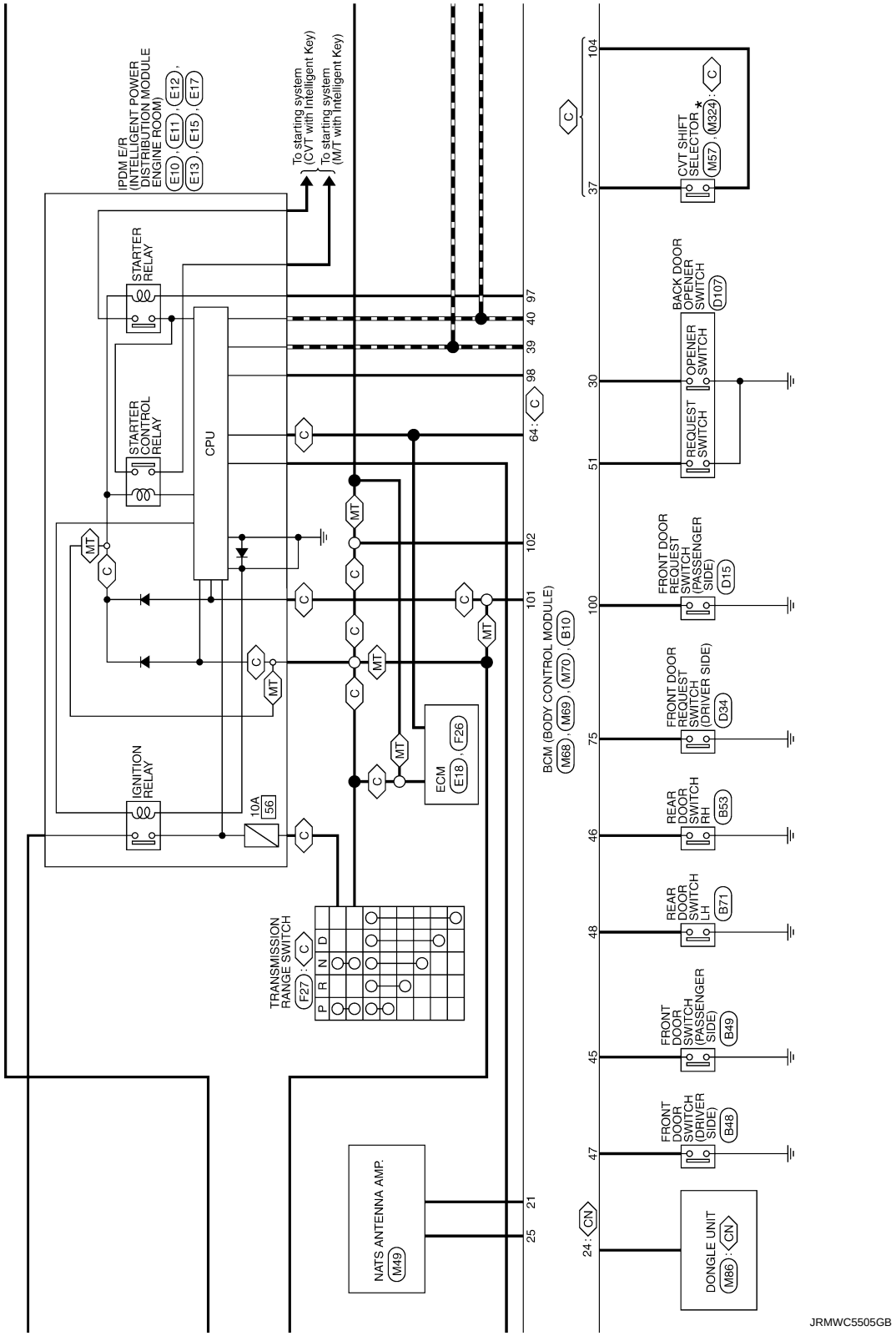
BCM

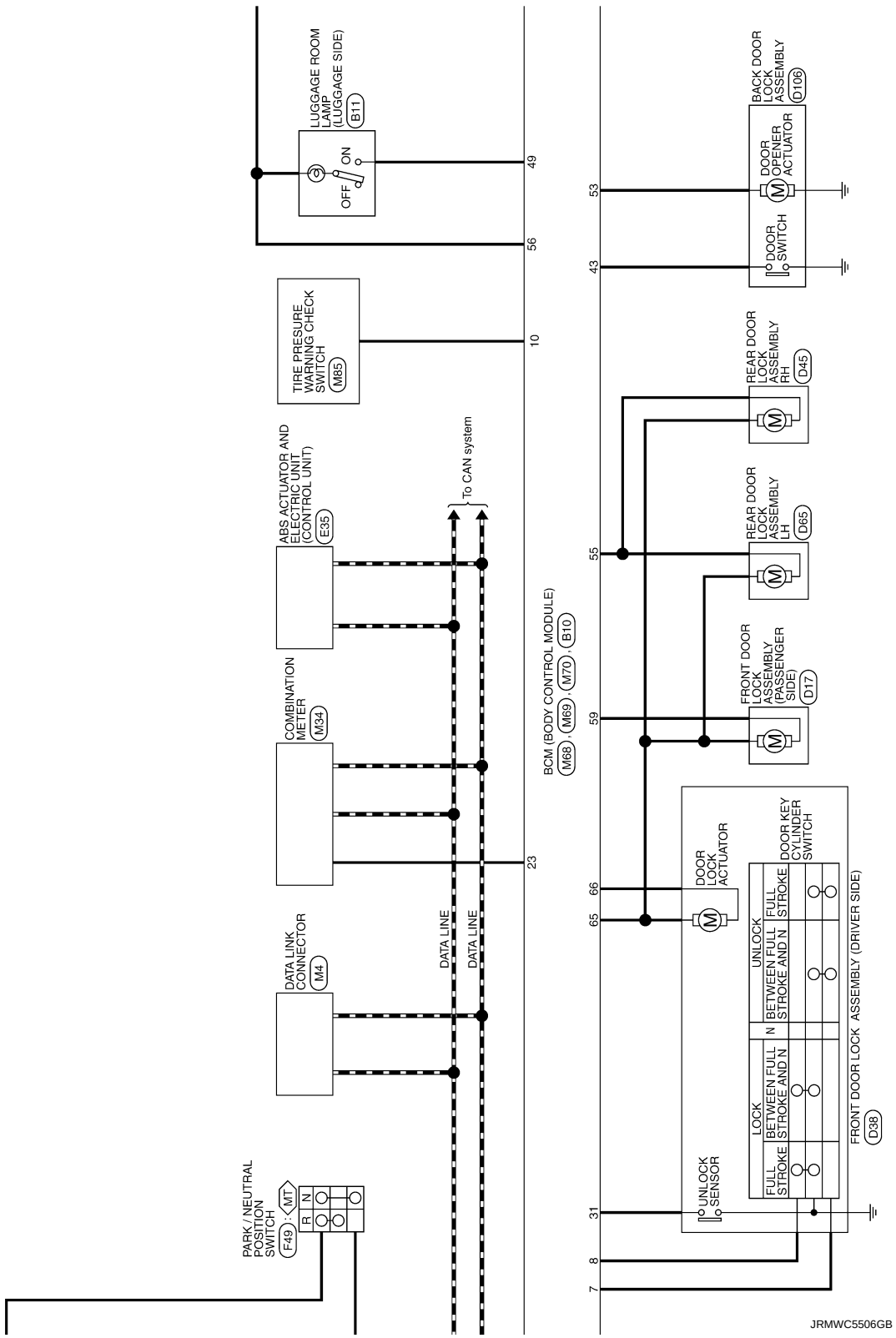
Wiring Diagram

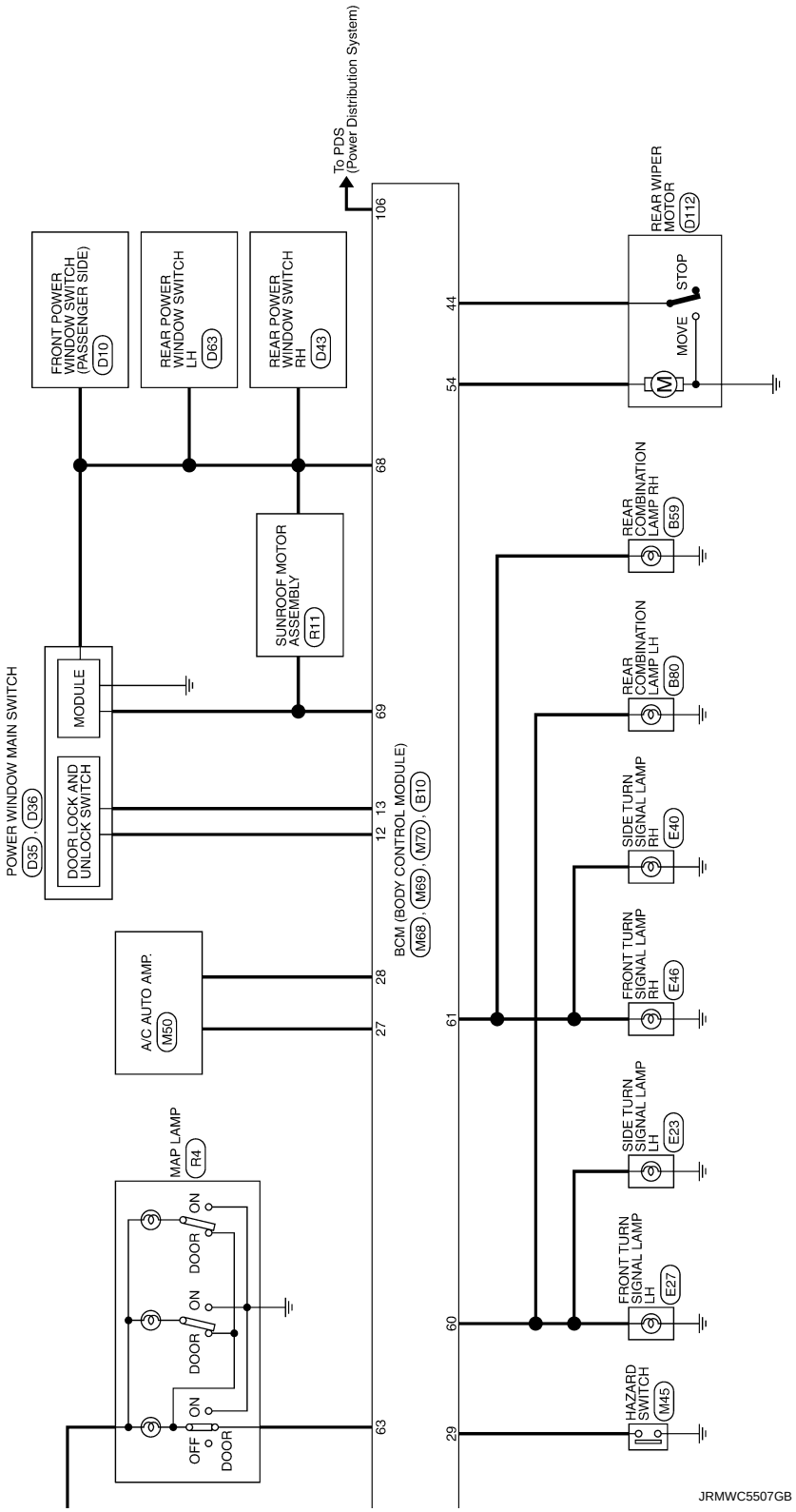
INFOID:0000000007576667

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




IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) E10, E11, E12, E13, E15, E17
To starting system (CVT with Intelligent Key)
To starting system (M/T with Intelligent Key)
STARTER RELAY
STARTER CONTROL RELAY
CPU
IGNITION RELAY
10A 56
TRANSMISSION RANGE SWITCH F27
P R N D
ECM E18, F26
NATS ANTENNA AMP. M49
BCM (BODY CONTROL MODULE) M68, M69, M70, B10
DONGLE UNIT M86, CN
CVT SHIFT SELECTOR* M57, M324
BACK DOOR OPENER SWITCH D107
OPENER SWITCH
REQUEST SWITCH
FRONT DOOR REQUEST SWITCH (PASSENGER SIDE) D15
FRONT DOOR REQUEST SWITCH (DRIVER SIDE) D34
REAR DOOR SWITCH RH B53
REAR DOOR SWITCH LH B71
FRONT DOOR SWITCH (PASSENGER SIDE) B49
FRONT DOOR SWITCH (DRIVER SIDE) B48
JRMWC5505GB


LUGGAGE ROOM LAMP (LUGGAGE SIDE) B11
OFF
ON
TIRE PRESURE WARNING CHECK SWITCH M85
ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) E35
COMBINATION METER M34
DATA LINK CONNECTOR M4
PARK / NEUTRAL POSITION SWITCH F49
MT
R
N
To CAN system
DATA LINE
DATA LINE
BCM (BODY CONTROL MODULE) M68, M69, M70, B10
49
56
10
23
59
55
66
65
31
8
7
53
43
BACK DOOR LOCK ASSEMBLY D106
DOOR OPENER ACTUATOR
DOOR SWITCH
REAR DOOR LOCK ASSEMBLY RH D45
REAR DOOR LOCK ASSEMBLY LH D65
FRONT DOOR LOCK ASSEMBLY (PASSENGER SIDE) D17
DOOR LOCK ACTUATOR
DOOR KEY CYLINDER SWITCH
UNLOCK
FULL STROKE
BETWEEN FULL STROKE AND N
N
LOCK
FULL STROKE
BETWEEN FULL STROKE AND N
UNLOCK SENSOR
FRONT DOOR LOCK ASSEMBLY (DRIVER SIDE) D38
JRMWC5506GB


To PDS
(Power Distribution System)
106
FRONT POWER WINDOW SWITCH (PASSENGER SIDE) D10
REAR POWER WINDOW SWITCH LH D63
REAR POWER WINDOW SWITCH RH D43
SUNROOF MOTOR ASSEMBLY R11
POWER WINDOW MAIN SWITCH D35, D36
MODULE
DOOR LOCK AND UNLOCK SWITCH
68
69
12
13
BCM (BODY CONTROL MODULE) M68, M69, M70, B10
A/C AUTO AMP. M50
28
27
MAP LAMP R4
OFF
DOOR
ON
63
44
54
REAR WIPER MOTOR D112
STOP
MOVE
REAR COMBINATION LAMP RH B59
REAR COMBINATION LAMP LH B80
SIDE TURN SIGNAL LAMP RH E40
FRONT TURN SIGNAL LAMP RH E46
SIDE TURN SIGNAL LAMP LH E23
FRONT TURN SIGNAL LAMP LH E27
HAZARD SWITCH M45
61
60
29
JRMWC5507GB

BASIC INSPECTION

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

Description

INFOID:0000000007806803

BEFORE REPLACEMENT

When replacing BCM, save or print current vehicle specification with CONSULT configuration before replacement.

NOTE:

If “READ CONFIGURATION” can not be used, use the “WRITE CONFIGURATION - Manual selection” after replacing BCM.

AFTER REPLACEMENT

CAUTION:

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

- **Complete the procedure of “WRITE CONFIGURATION” in order.**
- **Configuration is different for each vehicle model. Confirm configuration of each vehicle model.**
- **If you set incorrect “WRITE CONFIGURATION”, incidents might occur.**

NOTE:

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

Work Procedure

INFOID:0000000007806804

1. SAVING VEHICLE SPECIFICATION

CONSULT Configuration

Perform “READ CONFIGURATION” to save or print current vehicle specification. Refer to BCS-66, "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-80, "Removal and Installation".

>> GO TO 3.

3. WRITING VEHICLE SPECIFICATION

CONSULT Configuration

Perform “WRITE CONFIGURATION - Config file” or “WRITE CONFIGURATION - Manual selection” to write vehicle specification. Refer to BCS-66, "Work Procedure".

>> GO TO 4.

4. INITIALIZE BCM (NATS) (IF EQUIPPED)

Perform BCM initialization. (NATS)

>> WORK END

CONFIGURATION (BCM)

Description

INFOID:0000000007806805

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

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

NOTE:

Manual setting item: Items which need selection by vehicle specifications

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

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

CAUTION:

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

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

Work Procedure

INFOID:0000000007806806

1. WRITING MODE SELECTION

CONSULT Configuration

Select “CONFIGURATION” of BCM.

When writing saved data>>GO TO 2.

When writing manually>>GO TO 3.

2. PERFORM “WRITE CONFIGURATION - CONFIG FILE”

CONSULT Configuration

Perform “WRITE CONFIGURATION - Config file”.

>> WORK END

3. PERFORM “WRITE CONFIGURATION - MANUAL SELECTION”

CONSULT Configuration

1. Select "WRITE CONFIGURATION - Manual selection".
2. Identify the correct model and configuration list. Refer to BCS-67, "Configuration list".
3. Confirm and/or change setting value for each item.
   CAUTION:
   Thoroughly read and understand the vehicle specification. ECU control may not operate normally if the setting is not correct.
   NOTE:
   If items are not displayed, touch “SETTING”. Refer to BCS-67, "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 list

INFOID:0000000007576672

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

SETTING ITEM		NOTE
Items	Setting value	
AUTO LIGHT	WITH ⇔ WITHOUT	—
DTRL	WITH ⇔ WITHOUT	• WITH: With daytime running light system • WITHOUT: Without daytime running light system
TRANSMISSION	AT with ABS ⇔ MT with ABS	• AT with ABS: Except M/T models • MT with ABS: M/T models
TIRE PRESSURE	230kPa ⇔ 240kPa ⇔ 250kPa	• 230kPa: 2WD M/T models • 240kPa: AWD models • 250kPa: 2WD except M/T models

⇔: Items which confirm vehicle specifications

TRANSIT MODE CANCEL OPERATION

Description

INFOID:0000000007814137

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

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

Work Procedure

INFOID:0000000007814138

1. TRANSIT MODE CANCEL OPERATION

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

>> GO TO 2.

2. TRANSIT MODE CANCEL CHECK

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

>> WORK END

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM

Description

INFOID:0000000007576673

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:0000000007576674

DTC DETECTION LOGIC

DTC	CONSULT 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:0000000007576675

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-15, "Trouble Diagnosis Flow Chart".
NO >> Refer to GI-43, "Intermittent Incident".

U1010 CONTROL UNIT (CAN)

DTC Logic

INFOID:0000000007576676

DTC DETECTION LOGIC

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

Diagnosis Procedure

INFOID:0000000007576677

1.REPLACE BCM

When DTC “U1010” is detected, replace BCM.

>> Replace BCM. Refer to BCS-80, "Removal and Installation".

U0415 VEHICLE SPEED

Description

INFOID:0000000007576678

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:0000000007576679

DTC DETECTION LOGIC

DTC	CONSULT 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, when passed 2 seconds or more after the ignition switch is turned ON.

Is any DTC detected?

YES >> Refer to BCS-71, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000007576680

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

Perform “Self-Diagnostic Result” of ABS actuator and electric unit (control unit) with CONSULT. Refer to BRC-38, "CONSULT Function" (without EPS), BRC-38, "CONSULT Function" (with EPS).

Is any DTC detected?

YES >> Repair or replace the malfunctioning part.
NO >> Replace BCM. Refer to BCS-80, "Removal and Installation".

B2562 LOW VOLTAGE

DTC Logic

INFOID:0000000007576681

DTC DETECTION LOGIC

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

Is any DTC detected?

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

Diagnosis Procedure

INFOID:0000000007576682

1.CHECK POWER SUPPLY CIRCUIT

Check BCM power supply circuit. Refer to BCS-73, "Diagnosis Procedure".

Is the circuit normal?

YES >> Replace BCM. Refer to BCS-80, "Removal and Installation".
NO >> Repair the malfunctioning part.

POWER SUPPLY AND GROUND CIRCUIT

Diagnosis Procedure

INFOID:0000000007576683

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	G
	9

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		Ground	
Connector	Terminal		
M69	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		
M69	67		Existed

Does continuity exist?

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

COMBINATION SWITCH OUTPUT CIRCUIT

Diagnosis Procedure

INFOID:0000000007576684

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	M68	36	M27	11	Existed
OUTPUT 2		35		9	
OUTPUT 3		34		7	
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.

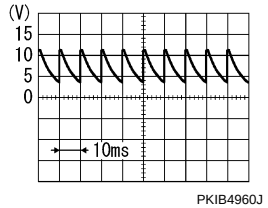
System	BCM		Ground	Continuity
	Connector	Terminal		
OUTPUT 1	M68	36	Ground	Not existed
OUTPUT 2		35		
OUTPUT 3		34		
OUTPUT 4		33		
OUTPUT 5		32		

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	M68	36	Ground	 7.0 - 8.0 V
OUTPUT 2		35		
OUTPUT 3		34		
OUTPUT 4		33		
OUTPUT 5		32		

Is the measurement value normal?

YES >> Replace combination switch.
NO >> Replace BCM. Refer to BCS-80, "Removal and Installation".

COMBINATION SWITCH INPUT CIRCUIT

Diagnosis Procedure

INFOID:0000000007576685

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	M68	6	M27	12	Existed
INPUT 2		5		14	
INPUT 3		4		5	
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		Ground	Continuity
	Connector	Terminal		
INPUT 1	M68	6	Ground	Not existed
INPUT 2		5		
INPUT 3		4		
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	M68	6	Ground	Refer to BCS-35, "Reference Value".
INPUT 2		5		
INPUT 3		4		
INPUT 4		3		
INPUT 5		2		

Is the measurement value normal?

Yes >> Replace BCM. Refer to BCS-80, "Removal and Installation".

No >> Replace combination switch.

SYMPTOM DIAGNOSIS

COMBINATION SWITCH SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000007576686

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

Malfunction item: ×

Data monitor item																	Malfunction combination
FR WIPER HI	FR WIPER LOW	FR WASHER SW	FR WIPER INT	RR WIPER ON	RR WIPER INT	RR WASHER SW	INT VOLUME	TURN SIGNAL R	TURN SIGNAL L	TAIL LAMP SW	HI BEAM SW	HEAD LAMP SW 1	HEAD LAMP SW 2	PASSING SW	AUTO LIGHT SW	FR FOG SW	
	×	×						×	×								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-74, "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-76, "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-80, "Removal and Installation".
L	Combination switch	Replace combination switch.

NORMAL OPERATING CONDITION

Description

INFOID:0000000007814139

TRANSIT MODE

- Transit mode inhibits battery power consumption during transportation or storage of the vehicle.
- BCM is set to transit mode before delivery.
- In transit mode, remote keyless entry function, headlamp ON/OFF function, theft warning alarm function, and other BCM control functions do not operate normally.
- Therefore, cancel operation must be performed so that the vehicle is used in normal status.
- For transit mode cancel operation, refer to BCS-68, "Description".

NOTE:

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

REMOVAL AND INSTALLATION

BCM

Removal and Installation

INFOID:0000000007576687

NOTE:
Before replacing BCM, perform “READ CONFIGURATION” to save or print current vehicle specification. Refer to BCS-66, "Description".

REMOVAL

1. Remove instrument lower panel. Refer to IP-12, "Removal and Installation".
2. Remove harness clip.
3. Remove BCM mounting screws.
4. Remove BCM and disconnect the connectors.
5. Remove relays and relay mounting bracket from BCM.

INSTALLATION

Install in the reverse order of removal.

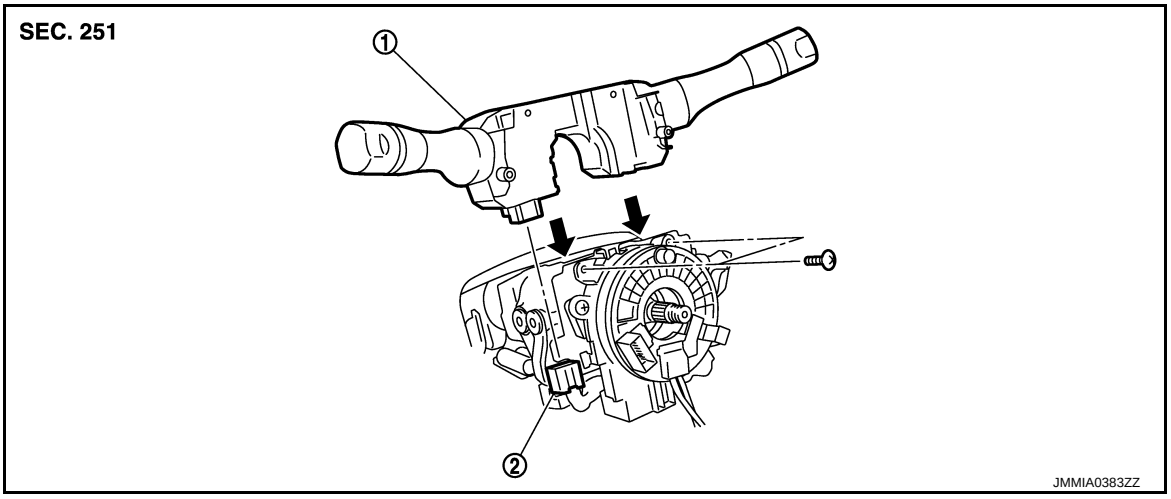
CAUTION:
Be sure to perform “WRITE CONFIGURATION” when replacing BCM. Or not doing so, BCM control function does not operate normally.

NOTE:
Be sure to perform the system initialization (NATS) when replacing BCM. Refer to BCS-65, "Work Procedure".

COMBINATION SWITCH

Exploded View

INFOID:0000000007576688



1. Combination switch
2. Combination switch connector

Removal and Installation

INFOID:0000000007576689

REMOVAL

1. Remove steering column cover. Refer to IP-12, "Removal and Installation".
2. Remove screws.
3. Disconnect the connector.
4. Pull up the combination switch to remove it.

INSTALLATION

Install in the reverse order of removal.

PRECAUTION

PRECAUTIONS

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

INFOID:0000000007576690

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

WARNING:

Always observe the following items for preventing accidental activation.

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

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

WARNING:

Always observe the following items for preventing accidental activation.

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

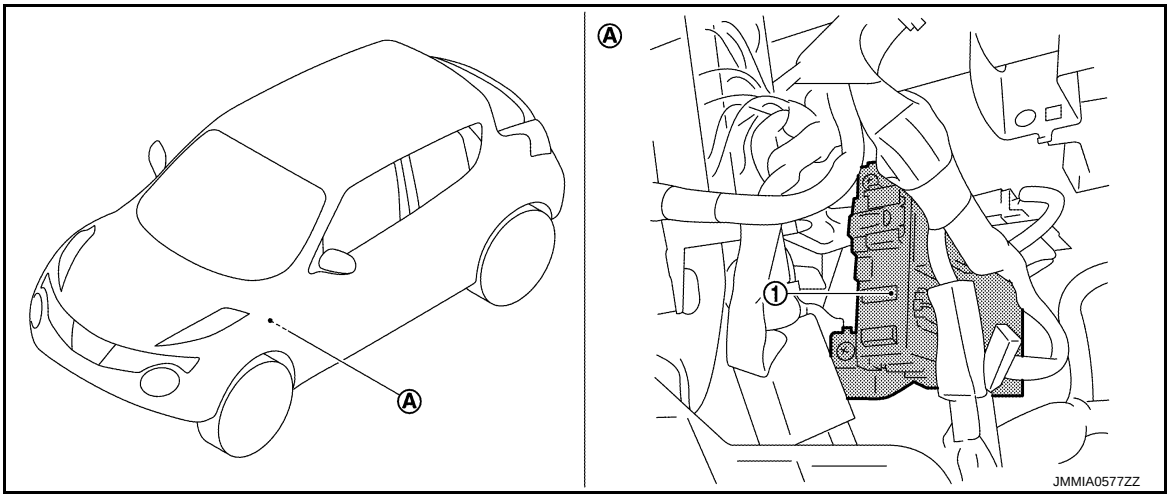
SYSTEM DESCRIPTION

COMPONENT PARTS

BODY CONTROL SYSTEM

BODY CONTROL SYSTEM : Component Parts Location

INFOID:0000000007576691

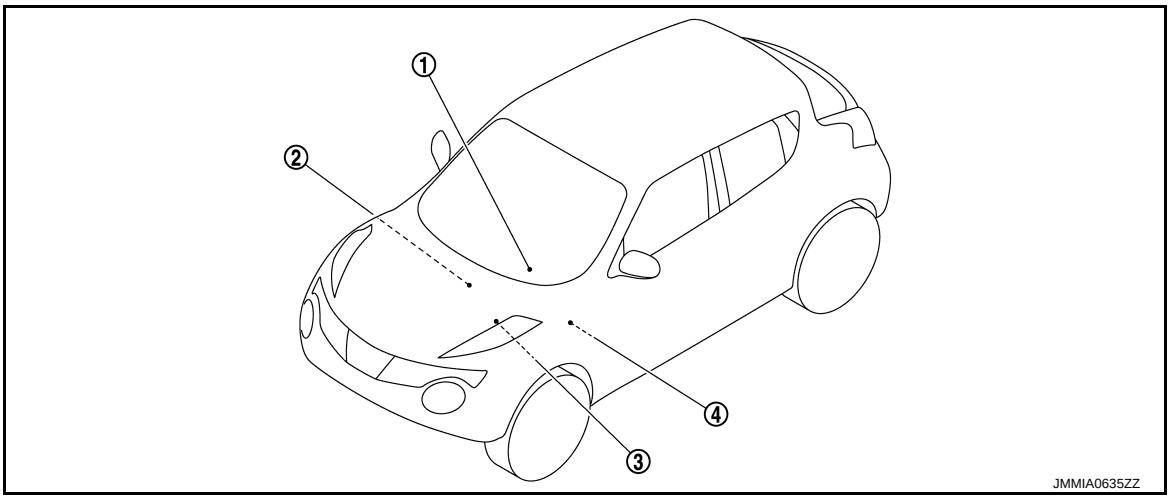


1. BCM
A. Behind of instrument lower panel LH (Left side)

POWER CONSUMPTION CONTROL SYSTEM

POWER CONSUMPTION CONTROL SYSTEM : Component Parts Location

INFOID:0000000007576692



1. Combination meter
2. Multi display unit
   Refer to DMS-3, "Component Parts Location".
3. IPDM E/R
   Refer to PCS-34, "Component Parts Location".
4. BCM
   Refer to BCS-83, "BODY CONTROL SYSTEM : Component Parts Location".

SYSTEM
BODY CONTROL SYSTEM
BODY CONTROL SYSTEM : System Description

INFOID:0000000007576693

OUTLINE

- BCM (Body Control Module) controls various electrical components.It receives the information required from CAN communication and the signals received from each switch and sensor.
- BCM has a combination switch reading function for reading the status of combination switches (light, turn signal, wiper and washer) in addition to functions for controlling the operation of various electrical components. It also has a signal transmission function, for other systems, and a power consumption control function that reduces the power consumption with the ignition switch OFF.
- BCM is equipped with a diagnosis function that operates with CONSULT and allows for various settings to be changed.

BCM FUNCTION LIST

System		Reference page
Combination switch reading system		BCS-85, "COMBINATION SWITCH READING SYSTEM : System Diagram"
Signal buffer system		BCS-89, "SIGNAL BUFFER SYSTEM : System Diagram"
Power consumption control system		BCS-90, "POWER CONSUMPTION CONTROL SYSTEM : System Diagram"
Headlamp system		EXL-7, "HEADLAMP SYSTEM : System Diagram"
Daytime running light system		EXL-10, "DAYTIME RUNNING LIGHT SYSTEM : System Diagram"
Front fog lamp system		EXL-11, "FRONT FOG LAMP SYSTEM : System Diagram"
Turn signal and hazard warning lamp system		EXL-11, "TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM : System Diagram"
Parking, license plate, side maker and tail lamps system		EXL-12, "PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMP SYSTEM : System Diagram"
Exterior lamp battery saver system		EXL-13, "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-8, "INTERIOR ROOM LAMP BATTERY SAVER SYSTEM : System Diagram"
Illumination control system		INL-9, "ILLUMINATION CONTROL SYSTEM : System Diagram"
Front wiper and washer system		WW-6, "FRONT WIPER AND WASHER SYSTEM : System Diagram"
Rear wiper and washer system		WW-9, "REAR WIPER AND WASHER SYSTEM : System Diagram"
Rear window defogger system		DEF-6, "WITHOUT AUTO A/C : System Diagram"
Air conditioning control system (Manual A/C)		HAC-99, "System Diagram"
Warning chime system		WCS-6, "WARNING CHIME SYSTEM : System Diagram"
Power door lock system		DLK-172, "System Diagram"
Remote keyless entry system		DLK-174, "System Diagram"
Back door opener system		DLK-176, "System Diagram"
Nissan anti-theft system (NATS)		SEC-122, "NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS : System Diagram"
Vehicle security system	Theft warning alarm	SEC-123, "VEHICLE SECURITY SYSTEM : System Diagram"
	Panic alarm	
Power window system		PWC-7, "POWER WINDOW SYSTEM : System Diagram"

System	Reference page
Retained power operation [Retained accessory power (RAP)]	PWC-7, "POWER WINDOW SYSTEM : System Description"
Tire pressure monitoring system (TPMS)	WT-8, "System Description"

BODY CONTROL SYSTEM : Fail-safe

INFOID:0000000007576694

FAIL-SAFE CONTROL BY DTC

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

Display contents of CONSULT	Fail-safe	Cancellation
B2190: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI SCANNING	Inhibit engine cranking	Ignition switch ON → OFF
B2196: DONGLE NG	Inhibit engine cranking	Erase DTC

REAR WIPER MOTOR PROTECTION

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

Condition of cancellation
1. Pass more than 1 minute 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

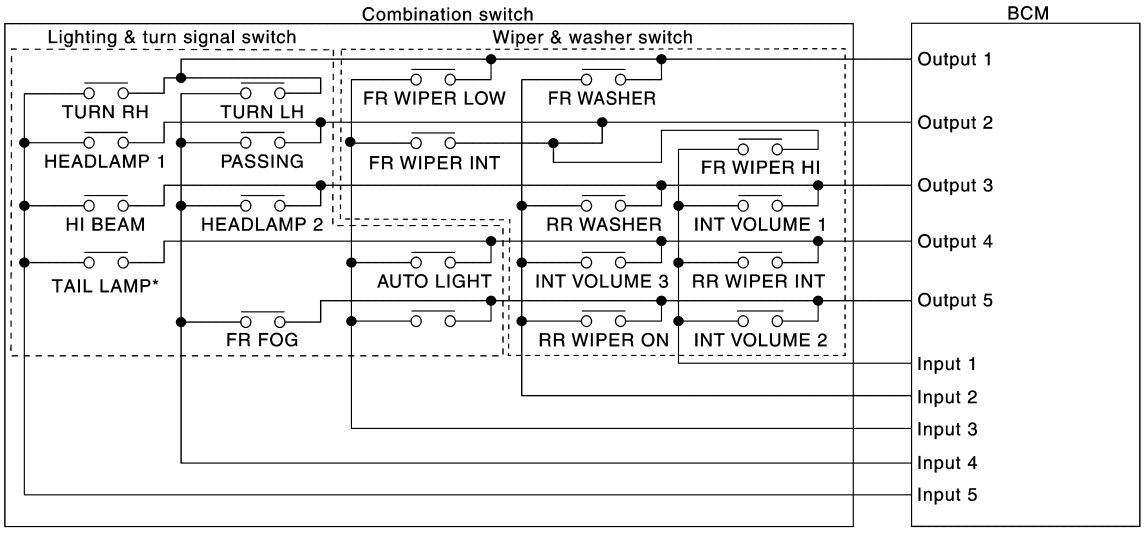
If voltage of battery power supply lower, BCM maintains combination switch reading to the status when input voltage is less than approximately 9 V.

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

COMBINATION SWITCH READING SYSTEM

COMBINATION SWITCH READING SYSTEM : System Diagram

INFOID:0000000007576695



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

COMBINATION SWITCH READING SYSTEM : System Description

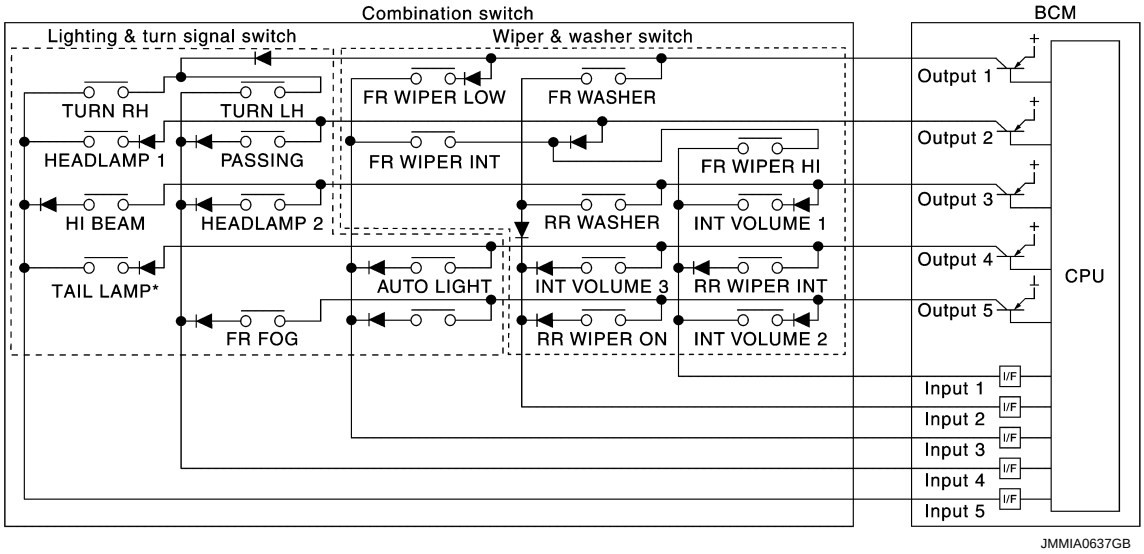
INFOID:0000000007576696

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



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

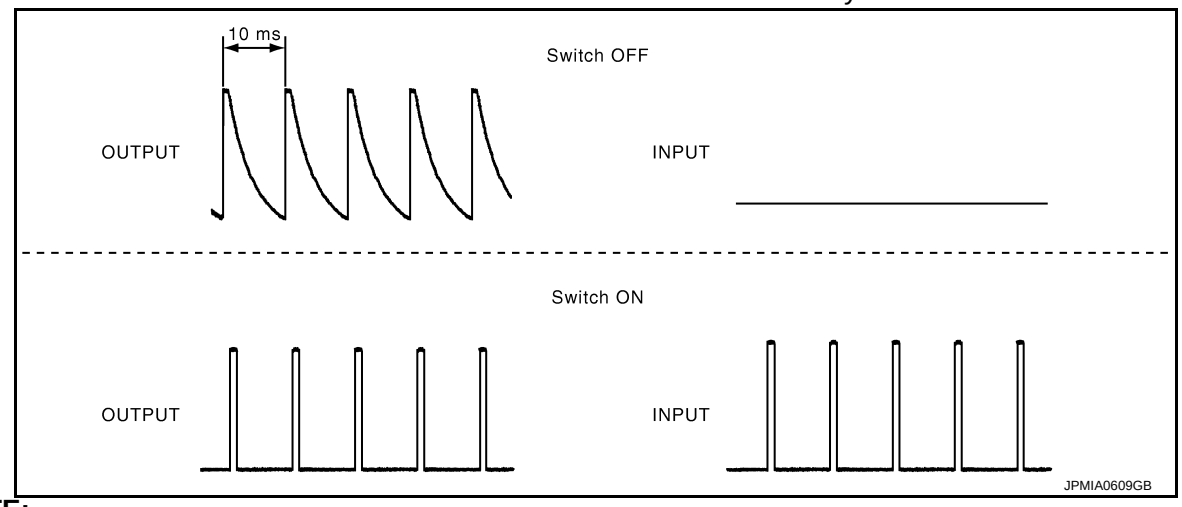
NOTE:

Headlamp has a dual system switch.

COMBINATION SWITCH READING FUNCTION

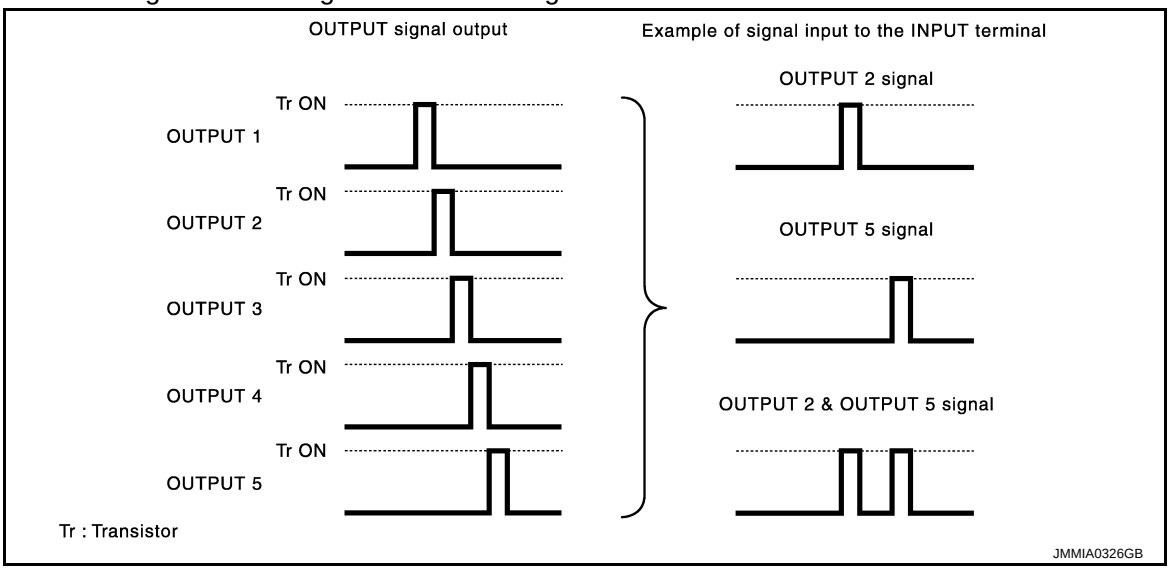
Description

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



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

- BCM operates as follows and judges the status of the combination switch.
- It operates the transistor on OUTPUT side in the following order: OUTPUT 1 → 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.

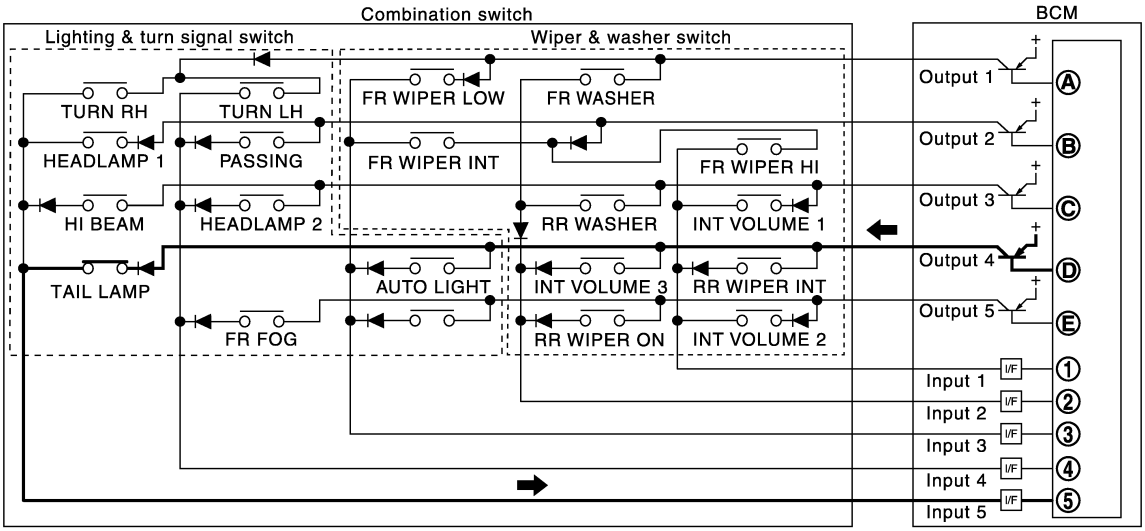


Operation Example

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

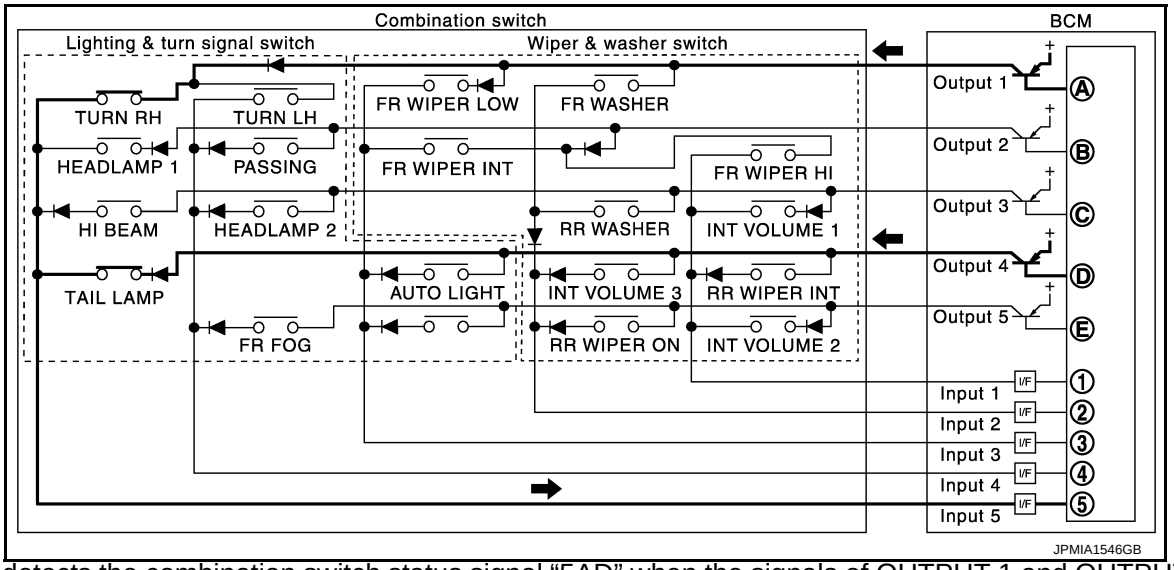
- The circuit between OUTPUT 4 and INPUT 5 is formed when the TAIL LAMP switch is turned ON.



- 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.



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

WIPER INTERMITTENT DIAL POSITION

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

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

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

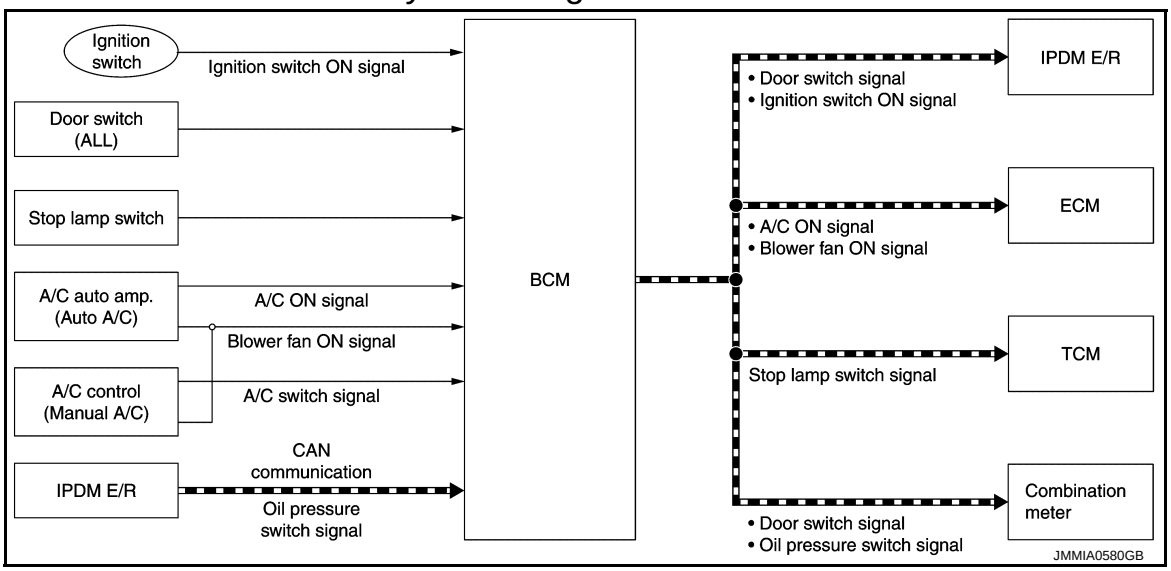
NOTE:

For details of wiper intermittent dial position, refer to WW-6, "FRONT WIPER AND WASHER SYSTEM : System Description".

SIGNAL BUFFER SYSTEM

SIGNAL BUFFER SYSTEM : System Diagram

INFOID:0000000007576697



NOTE:

If vehicle models is gasoline engine models, oil pressure switch is not applied.

SIGNAL BUFFER SYSTEM : System Description

INFOID:0000000007576698

OUTLINE

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

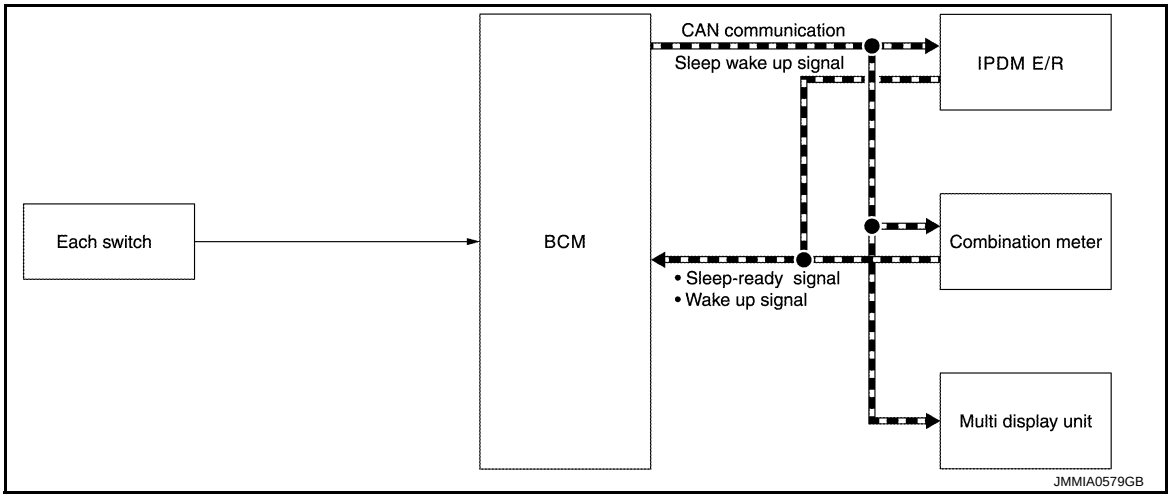
SIGNAL TRANSMISSION FUNCTION LIST

Signal name	Input	Output	Description
Ignition switch ON signal	Ignition switch	IPDM E/R (CAN)	Inputs the ignition switch signal and transmits it with CAN communication.
Door switch signal	Any door switch	• Combination meter (CAN) • IPDM E/R (CAN)	Inputs the door switch signal and transmits it with CAN communication.
Blower fan ON signal	A/C control	ECM (CAN)	Input blower fan switch signal, and transmit the blower fan ON signal via CAN communication.
A/C ON signal	A/C control	ECM (CAN)	Input A/C switch signal, and transmit the A/C ON signal via CAN communication.
Stop lamp switch signal	Stop lamp switch	TCM (CAN)	Inputs the stop lamp switch signal, and transmits it via CAN communication.

POWER CONSUMPTION CONTROL SYSTEM

POWER CONSUMPTION CONTROL SYSTEM : System Diagram

INFOID:0000000007576699



POWER CONSUMPTION CONTROL SYSTEM : System Description

INFOID:0000000007576700

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 and multi control unit) that operates with the ignition switch OFF.

Normal mode (wake-up)
- CAN communication is normally performed with other units
- Each control with BCM is operating properly

CAN communication sleep mode (CAN sleep)
- CAN transmission is stopped
- Control with BCM only is operating

Low power consumption mode (BCM sleep)
- Low power consumption control is active
- CAN transmission is stopped

LOW POWER CONSUMPTION CONTROL WITH BCM

BCM reduces the power consumption with the following operation in the low power consumption mode.
- The reading interval of the each switches changes from 10 ms interval to 60 ms interval.

Sleep mode activation

- BCM receives the sleep-ready signal (ready) from IPDM E/R and combination meter via CAN communication.
- BCM transmits the sleep wake up signal (sleep) to each unit when all of the CAN sleep conditions are fulfilled.
- Each unit stops the transmission of CAN communication with the sleep wake up signal. BCM is in CAN communication sleep mode.
- BCM is in the low power consumption mode and perform the low power consumption control when all of the BCM sleep conditions are fulfilled with CAN sleep condition.

Sleep condition

CAN sleep condition	BCM sleep condition
• Receiving the sleep-ready signal (ready) from all units • 1 minute after turning ignition switch OFF • Theft warning alarm and panic alarm: Not operation • Warning chime: Not operation • Stop lamp switch: OFF • Turn signal indicator lamp: Not operation • Exterior lamp: OFF • Door lock status: No change • CONSULT communication status: Not communication • Door switch status: No change • Key switch status: No change	• Interior room lamp battery saver: Time out* • RAP system: No communication • Nissan anti-theft system (NATS): Not operation • Remote keyless entry receiver communication status: No communication • Tire pressure monitoring system (TPMS): Stop

NOTE:
*: Refer to INL-8, "INTERIOR ROOM LAMP BATTERY SAVER SYSTEM : System Description" for details of the interior room lamp battery saver time.

Wake-up operation

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

Wake-up condition

BCM wake-up condition	CAN wake-up condition
Back door opener switch: OFF → ON	• Receiving the sleep-ready signal (Not-ready) from any units • Ignition switch: OFF → ACC, ON • Key switch: OFF → ON, ON → OFF • 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 • Stop lamp switch: ON • Door lock and unlock switch: NEUTRAL → LOCK, NEUTRAL → UNLOCK • Front door lock assembly (driver side) (unlock sensor): OFF → ON, ON → OFF • Front door lock assembly (driver side) (door key cylinder switch): NEUTRAL → LOCK, NEUTRAL → UNLOCK • Remote keyless entry receiver communication: Receiving

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000007576701

APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

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

SYSTEM APPLICATION

BCM can perform the following functions for each system.

NOTE:

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

×: Applicable item

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 control	INT LAMP	×	×	×
Remote keyless entry system	MULTI REMOTE ENT	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER		×	×
Air conditioning system	AIR CONDITONER		×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
NATS	IMMU	×		×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door open	TRUNK		×	
Theft warning alarm	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	×
Signal buffer system	SIGNAL BUFFER		×	×
Panic alarm	PANIC ALARM			×
TPMS	AIR PRESSUE MONITOR	×	×	×

DOOR LOCK

DOOR LOCK : CONSULT Function (BCM - DOOR LOCK)

INFOID:0000000007829421

WORK SUPPORT

Monitor item	Description
DOOR LOCK-UNLOCK SET	Anti-hijack function can be changed to operate with this mode • On: Operate • Off: Non-operation
AUTOMATIC DOOR LOCK SELECT	Automatic door lock function can be selected from the following in this mode • VH SPD: All doors are locked when vehicle speed more than 24km/h (15MPH) • P RANGE*: All doors are locked when shifting the selector lever from P position to other than the P position
AUTOMATIC DOOR UNLOCK SELECT	Automatic door unlock function can be selected from the following in the mode • MODE 1: All doors are unlocked when the power supply position is changed from ON to OFF • MODE 2*: All doors are unlocked when shifting the selector lever from any position other than the P to P position • MODE 3: Driver side door is unlocked when the power supply position is changed from ON to OFF • MODE 4*: Driver side door is unlocked when shifting the selector lever from any position other than the P to P position • MODE 5: Driver side door is unlocked when key out of key switch • MODE 6: All doors are unlocked when key out of key switch
AUTOMATIC LOCK/UNLOCK SET	Automatic door lock/unlock function 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: Door lock and unlock operation

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

DATA MONITOR

Monitor Item	Contents
IGN ON SW	Indicated [On/Off] condition of ignition switch in ON position
KEY ON SW	Indicated [On/Off] condition of key 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
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
BACK DOOR SW	Indicated [On/Off] condition of back door switch
LOCK STATUS	Indicated [On/Off] condition of front door driver side
ACC ON SW	Indicated [On/Off] condition of ignition switch in ACC position
KEYLESS LOCK	Indicated [On/Off] condition of lock signal from key fob
KEYLESS UNLOCK	Indicated [On/Off] condition of unlock signal from key fob
KEY CYL LK-SW	Indicated [On/Off] condition of lock signal from door key cylinder
KEY CYL UN-SW	Indicated [On/Off] condition of unlock signal from door key cylinder
VEHICLE SPEED	Display the vehicle speed signal received from combination meter by numerical value [Km/h]

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 LCK” on CONSULT screen is touched • The all door lock actuators are unlocked when “ALL UNLK” on CONSULT screen is touched • The door lock actuator (driver side) is unlocked when “DR UNLK” on CONSULT screen is touched • The back door lock actuator is unlocked when “BD ULK” on CONSULT screen is touched • The door lock actuator (other) is unlocked when “OTR ULK” on CONSULT screen is touched

REAR WINDOW DEFOGGER

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

INFOID:0000000007829437

Data monitor

Monitor Item	Description
REAR DEF SW	Displays “Press (ON)/other (OFF)” status determined with the rear window defogger switch.
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.
ACC ON SW	Indicates [ON/OFF] condition of ignition switch ACC position.

ACTIVE TEST

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

BUZZER

BUZZER : CONSULT Function (BCM - BUZZER)

INFOID:0000000007829446

CONSULT APPLICATION ITEMS

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

DATA MONITOR

Display item [Unit]	Description
IGN ON SW [On/Off]	Status of ignition switch judged by BCM.
KEY ON SW [On/Off]	Status of key switch judged by BCM.
DOOR SW-DR [km/h]	Status of driver side door switch judged by BCM.
REVERSE SW CAN [On/Off]	This item is displayed, but cannot be monitored.
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.

Display item [Unit]	Description
BUCKLE SW [On/Off]	Status of seat belt buckle switch (driver side) received from combination meter with CAN communication line.
VEHICLE SPEED [km/h]	Value of vehicle speed signal received from combination meter with CAN communication line.

ACTIVE TEST

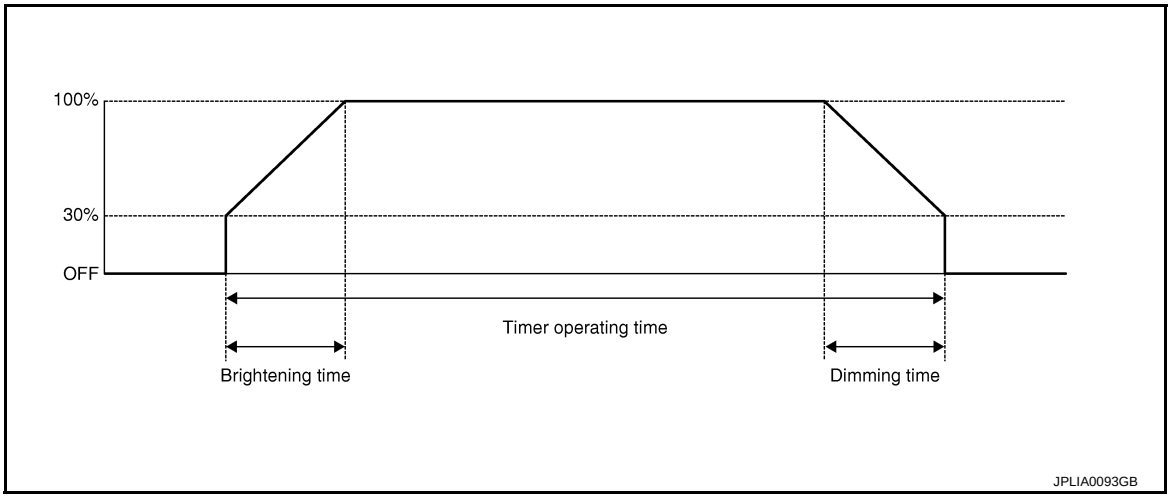
Display item [Unit]	Description
SEAT BELT WARN TEST	The seat belt warning chime operation can be checked by operating the relevant function (On/Off).
IGN KEY WARN ALM	The key warning chime operation can be checked by operating the relevant function (On/Off).
LIGHT WARN ALM	The light warning chime operation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

INT LAMP

INT LAMP : CONSULT Function (BCM - INT LAMP)

INFOID:0000000007829432

WORK SUPPORT



Service item	Setting item	Setting	
ROOM LAMP TIMER SET	MODE 1	0 sec.	Sets the interior room lamp ON time. (Timer operating time)
	MODE 2	7.5 sec.	
	MODE 3*	15 sec.	
	MODE 4	30 sec.	
SET I/L D-UNLCK INTCON	On*	With the interior room lamp timer function	
	Off	Without the interior room lamp timer function	
ROOM LAMP ON TIME SET	MODE 1	0.5 sec.	Sets the interior room lamp gradual brightening time.
	MODE 2*	1 sec.	
	MODE 3	2 sec.	
	MODE 4	3 sec.	
	MODE 5	4 sec.	
	MODE 6	5 sec.	
	MODE 7	0 sec.	

Service item	Setting item	Setting	
ROOM LAMP OFF TIME SET	MODE 1	0.5 sec.	Sets the interior room lamp gradual dimming time.
	MODE 2*	1 sec.	
	MODE 3	2 sec.	
	MODE 4	3 sec.	
	MODE 5	4 sec.	
	MODE 6	5 sec.	
	MODE 7	0 sec.	
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.	

*: Factory setting

DATA MONITOR

Monitor item [Unit]	Description
IGN ON SW [On/Off]	Ignition switch (ON) status judeges from IGN signal (ignition power supply)
KEY ON SW [On/Off]	The switch status input from key switch
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
BACK DOOR SW [On/Off]	The switch status input from back door switch
LOCK STATUS [On/Off]	The switch status input from door lock status switch (driver side)
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
KEYLESS LOCK [On/Off]	Lock signal status received from remote keyless entry receiver
KEYLESS UNLOCK [On/Off]	Unlock signal status received from remote keyless entry receiver
TRNK/HAT MNTR [On/Off]	**NOTE:** The item is indicated, but not monitored
KEY CYL LK-SW [On/Off]	Lock switch status received from key cylinder switch
KEY CYL UN-SW [On/Off]	Unlock switch status received from key cylinder switch
ACC ON SW [On/Off]	Ignition switch (ACC) status judges from ACC signal (ACC power supply)

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, room lamp (when applicable lamps switch is in DOOR position.)]
	Off	Stops the interior room lamp control signal to turn the interior room lamps.

MULTI REMOTE ENT

MULTI REMOTE ENT : CONSULT Function (BCM - MULTI REMOTE ENT)

INFOID:0000000007829422

DATA MONITOR

Monitor Item	Condition
IGN ON SW	Indicates [On/Off] condition of ignition switch in ON position
KEY ON SW	Indicates [On/Off] condition of key switch
ACC ON SW	Indicates [On/Off] condition of ignition switch in ACC position
KEYLESS LOCK	Indicates [On/Off] condition of lock signal from keyfob
KEYLESS UNLOCK	Indicates [On/Off] condition of unlock signal from keyfob
KYLS TRNK/HAT	**NOTE:** This item is displayed, but cannot be tested
DOOR SW-DR	Indicates [On/Off] condition of front door switch (driver side)
DOOR SW-AS	Indicates [On/Off] condition of front door switch (passenger side)
DOOR SW-RR	Indicates [On/Off] condition of rear door switch RH
DOOR SW-RL	Indicates [On/Off] condition of rear door switch LH
BACK DOOR SW	Indicates [On/Off] condition of back door switch
TRNK/HAT MNTR	**NOTE:** This item is displayed, but cannot be tested
CDL LOCK SW	Indicates [On/Off] condition of door lock and unlock switch
CDL UNLOCK SW	Indicates [On/Off] condition of door lock and unlock switch
KEYLESS PANIC	Indicates [On/Off] condition of PANIC button of keyfob

ACTIVE TEST

Test item	Description
INT LAMP	This test is able to check interior room lamp operation • On: Operate • Off: Non-operation
FLASHER	This test is able to check flasher operation [LH/RH/Off]
HORN	This test is able to check horn operation • On: Operate

WORK SUPPORT

Test item	Description
REMO CONT IN REGIST	Keyfob ID code can be registered
REMO CONT IN ERASUR	Keyfob ID code can be erased
REMO CONT IN CONFIR	It can be checked whether Intelligent Key ID code is registered or not in this mode
HORN CHIRP SET	Hazard and horn reminder function (horn operation) mode can be changed in this mode • On: Operate • Off: Non-operation

Test item	Description
HAZARD LAMP SET	Hazard and horn reminder function (hazard operation) mode can be changed in this mode • MODE1: Non-operation • MODE2: Unlock operation only • MODE3: Lock operation only • MODE4: Lock and unlock operation
AUTO LOCK SET	Auto door lock time can be changed in this mode • MODE 1: Non-operation • MODE 2: 30 sec • MODE 3: 1 minute • MODE 4: 2 minute • MODE 5: 3 minute • MODE 6: 4 minute • MODE 7: 5 minute
PANIC ALARM SET	Panic alarm button pressing time on keyfob remote control button can be selected from the following with this mode • MODE1: 0.5 sec • MODE2: Non-operation • MODE3: 1.5 sec
TRUNK OPEN SET	**NOTE:** This item is displayed, but cannot be tested

HEADLAMP

HEADLAMP : CONSULT Function (BCM - HEAD LAMP)

INFOID:0000000007829428

WORK SUPPORT

Service item	Setting item	Setting	
CUSTOM A/LIGHT SETTING*1	MODE 1*2	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)	
BATTERY SAVER SET	On*2	With the exterior lamp battery saver function	
	Off	Without the exterior lamp battery saver function	
ILL DELAY SET*1	MODE 1*2	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.	
HEAD LIGHT TIMER	MODE 1	10 sec.	Sets follow me home function activating time
	MODE 2*2	30 sec.	

Service item	Setting item	Setting
AUTO LIGHT LOGIC SET*1	MODE 1*2	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: For models without auto light system, this item is displayed but is not operated.

*2: Factory setting

DATA MONITOR

Monitor item [Unit]	Description
PUSH SW [On/Off]	The switch status input from push-button ignition switch
ENGINE STATE [Stop/Stall/Crank/Run]	The engine status received from ECM 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*1 [On/Off]	
FR FOG SW*2 [On/Off]	
DOOR SW-DR [On/Off]	The switch status input from front door switch (driver side)
DOOR SW-AS [On/Off]	The switch status input from front door switch (passenger side)
DOOR SW-RR [On/Off]	The switch status input from 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/NG]	**NOTE:** This item is indicated, but can not monitored

Monitor item [Unit]	Description
OPTI SEN (DTCT)*1 [V]	The value of outside brightness voltage input from the optical sensor
OPTI SEN (FILT)*1 [V]	The value of outside brightness voltage filtered by BCM

*1: For models without auto light system, this item is not displayed.

*2: For models without front fog lamp, this item is displayed but is not monitored.

ACTIVE TEST

Test item	Operation	Description
TAIL LAMP	On	Transmits the position light request signal to IPDM E/R via CAN 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*1	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
DAYTIME RUNNING LIGHT*2	On	Transmits the daytime running light request signal via CAN communication to IPDM E/R
	Off	Stop the daytime running light request signal transmission
ILL DIM SIGNAL	On	**NOTE:** This item is indicated, but can not tested
	Off	

*1: For models without front fog lamp, this item is displayed but is not tested.

*2: For models without daytime running light system, this item is not displayed.

WIPER

WIPER : CONSULT Function (BCM - WIPER)

INFOID:0000000007829435

WORK SUPPORT

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

*: Factory setting

DATA MONITOR

Monitor Item [Unit]	Description
IGN ON SW [On/Off]	Ignition switch ON status judged from ignition power supply.
IGN SW CAN [On/Off]	Ignition switch ON status received from IPDM E/R with CAN communication.

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

ACTIVE TEST

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

FLASHER

FLASHER : CONSULT Function (BCM - FLASHER)

INFOID:0000000007829429

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 Intelligent Key.
	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

AIR CONDITIONER

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

INFOID:0000000007829439

DATA MONITOR

Display item list

Monitor Item [Unit]		Contents
FAN ON SIG	[On/Off]	Displays blower motor status as judged from blower fan ON signal.
AIR COND SW	[On/Off]	Displays A/C switch status as judged from A/C switch signal.
THERMO AMP	[On/Off]	Displays thermo control amp. status as judged from thermo control amp. signal.
IGN SW	[On/Off]	Displays ignition switch position status as judged form ignition switch signal.
FR DEF SW	[On/Off]	Displays the D/F or DEF status as judged from defroster position signal.

ACTIVE TEST

Test item	Operation	Description
A/C INDICATOR	On	A/C indicator is turned ON.
	Off	A/C indicator is turned OFF.

COMB SW

COMB SW : CONSULT Function (BCM - COMB SW)

INFOID:0000000007576711

DATA MONITOR

Monitor item [UNIT]	Description
TURN SIGNAL R [Off/On]	Displays the status of TURN RH switch in combination switch judged by the combination switch reading function.
TURN SIGNAL L [Off/On]	Displays the status of the TURN LH switch in combination switch judged by the combination switch reading function.
HI BEAM SW [Off/On]	Displays the status of HI BEAM switch in combination switch judged by the combination switch reading function.
HEAD LAMP SW 1 [Off/On]	Displays the status of HEADLAMP 1 switch in combination switch judged by the combination switch reading function.
HEAD LAMP SW 2 [Off/On]	Displays the status of HEADLAMP 2 switch in combination switch judged by the combination switch reading function.
TAIL LAMP SW [Off/On]	Displays the status of TAIL LAMP switch in combination switch judged by the combination switch reading function.
PASSING SW [Off/On]	Displays the status of PASSING switch in combination switch judged by the combination switch reading function.
AUTO LIGHT SW [Off/On]	**NOTE:** This item is indicated, but not monitored.
FR FOG SW [Off/On]	Displays the status of FR FOG switch in combination switch judged by the combination switch reading function.
RR FOG SW [Off/On]	**NOTE:** This item is indicated, but not monitored.
FR WIPER HI [Off/On]	Displays the status of FR WIPER HI switch in combination switch judged by the combination switch reading function.
FR WIPER LOW [Off/On]	Displays the status of FR WIPER LOW switch in combination switch judged by the combination switch reading function.
FR WIPER INT [Off/On]	Displays the status of FR WIPER INT switch in combination switch judged by the combination switch reading function.
FR WASHER SW [Off/On]	Displays the status of FR WASHER switch in combination switch judged by the combination switch reading function.
INT VOLUME [1 - 7]	Displays the status of wiper intermittent dial position judged by the combination switch reading function.
RR WIPER ON [Off/On]	Displays the status of RR WIPER switch in combination switch judged by the combination switch reading function.
RR WIPER INT [Off/On]	Displays the status of RR WIPER INT switch in combination switch judged by the combination switch reading function.
RR WASHER SW [Off/On]	Displays the status of RR WASHER switch in combination switch judged by the combination switch reading function.

BCM

BCM : CONSULT Function (BCM - BCM)

INFOID:0000000007576712

WORK SUPPORT

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

IMMU

IMMU : CONSULT Function (BCM - IMMU)

INFOID:0000000007829443

WORK SUPPORT

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

ACTIVE TEST

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

BATTERY SAVER

BATTERY SAVER : CONSULT Function (BCM - BATTERY SAVER)

INFOID:0000000007829433

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.	
	MODE 3*	15 min.	
ROOM LAMP BAT SAV SET	On*	With the interior room lamp battery saver function	
	Off	Without the interior room lamp battery saver function	

*:Factory setting

DATA MONITOR

Monitor item [Unit]	Description
IGN ON SW [On/Off]	Ignition switch (ON) status judeges from IGN signal (ignition power supply)
KEY ON SW [On/Off]	The switch status input from key switch
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
BACK DOOR SW [On/Off]	The switch status input from back door switch
LOCK STATUS [On/Off]	The switch status input from door lock status switch (driver side)
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
KEYLESS LOCK [On/Off]	Lock signal status received from remote keyless entry receiver
KEYLESS UNLOCK [On/Off]	Unlock signal status received from remote keyless entry receiver
TRNK/HAT MNTR [On/Off]	**NOTE:** The item is indicated, but not monitored

Monitor item [Unit]	Description
KEY CYL LK-SW [On/Off]	Lock switch status received from key cylinder switch
KEY CYL UN-SW [On/Off]	Unlock switch status received from key cylinder switch
ACC ON SW [On/Off]	Ignition switch (ACC) status judges from ACC signal (ACC power supply)

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 Function (BCM - TRUNK)

INFOID:0000000007829423

DATA MONITOR

Monitor Item	Contents
KEY ON SW	Indicates [On/Off] condition of key switch.
LOCK STATUS	**NOTE:** This item is displayed, but cannot be monitored.
VEHICLE SPEED	Indicates [Km/h] condition of vehicle speed signal from combination meter.
IGN ON SW	Indicates [On/Off] condition of ignition switch.
TRNK OPNR SW	**NOTE:** This item is displayed, but cannot be monitored.
KYLS TRNK/HAT	**NOTE:** This item is displayed, but cannot be monitored.

THEFT ALM

THEFT ALM : CONSULT Function (BCM - THEFT)

INFOID:0000000007829444

WORK SUPPORT

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

ACTIVE TEST

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

RETAIND PWR

RETAIND PWR : CONSULT Function (BCM - RETAINED PWR)

INFOID:0000000007829425

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 Function (BCM - SIGNAL BUFFER)

INFOID:0000000007576718

DATA MONITOR

Monitor item [UNIT]	Description
OIL PRESS SW [Off/On]	**NOTE:** This item is indicated, but not monitored.
BRAKE SW [Off/On]	Displays the switch status input from stop lamp switch.

ACTIVE TEST

Test item	Operation	Description
OIL PRESSURE SW	Off	**NOTE:** This item is indicated, but not tested.
	On	

PANIC ALARM

PANIC ALARM : CONSULT Function (BCM - PANIC ALARM)

INFOID:0000000007829442

ACTIVE TEST

Test item	Description
VEHICLE SECURITY HORN	This test is able to check horn operation. Horn is activated for 0.5 seconds after “ON” on CONSULT screen touched.
HEAD LAMP (HI)	This test is able to check headlamp (HI) operation. Headlamps (HI) will be activated after “ON” on CONSULT screen touched.

AIR PRESSURE MONITOR

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

INFOID:0000000007829441

APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

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

SELF DIAGNOSTIC RESULT

Refer to BCS-122, "DTC Index".

DATA MONITOR MODE

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

ACTIVE TEST MODE

NOTE:

After completing the work below, perform an active test.

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

Item	Description
WARNING LAMP	Low tire pressure warning lamp can be turned ON arbitrarily.
ID REGIST WARNING	**NOTE:** Displayed but not used in TPMS.
RUN FLAT TIRE W/L	**NOTE:** Displayed but not used in TPMS.
FLASHER	Turn signal lamps can be turned ON arbitrarily.
RUN FLAT TIRE W/R	**NOTE:** Displayed but not used in TPMS.

WORK SUPPORT

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

ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:0000000007576721

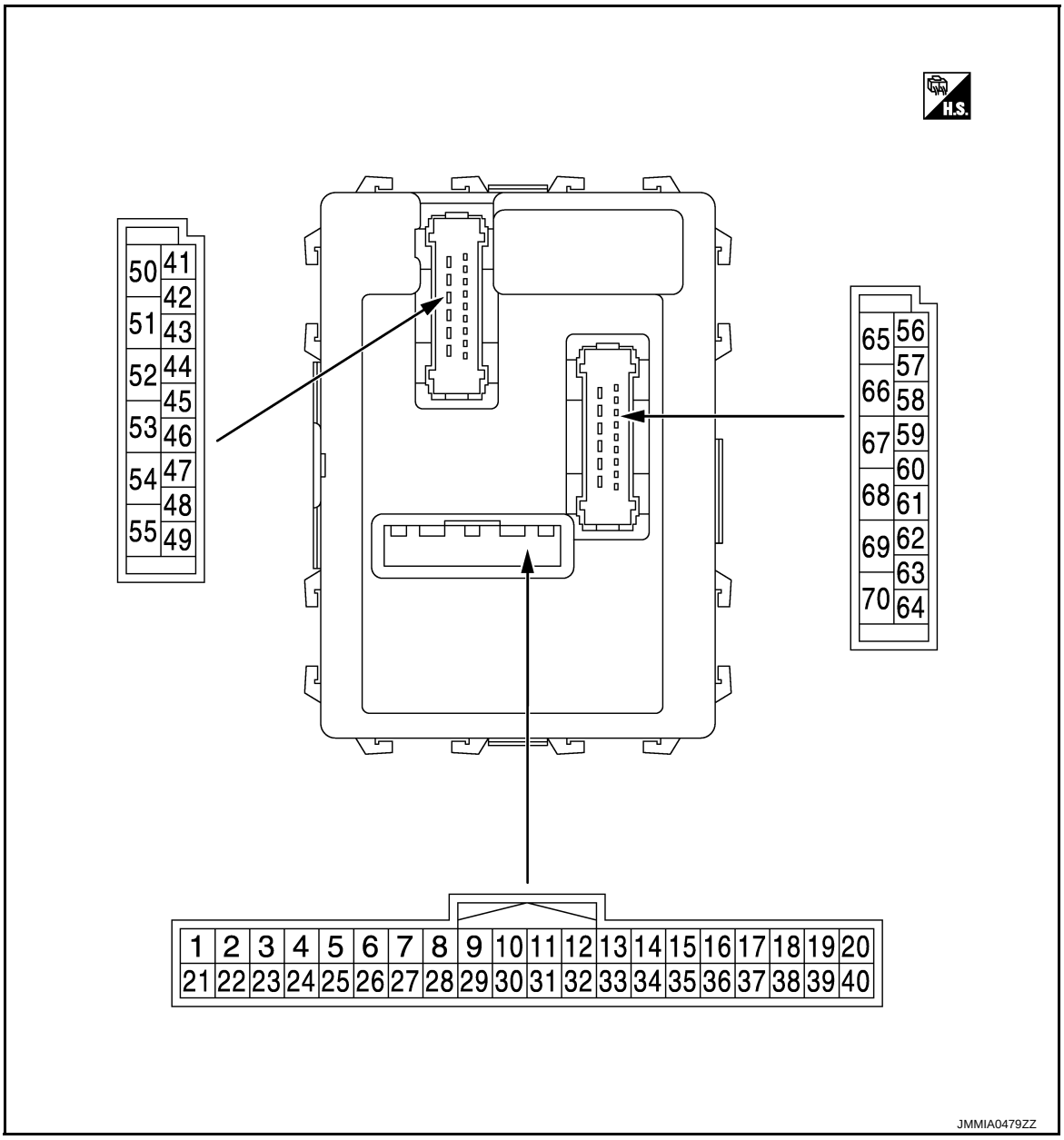
VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
IGN ON SW	Ignition switch OFF or ACC	Off
	Ignition switch ON	On
KEY ON SW	Mechanical key is removed from key cylinder	Off
	Mechanical key is inserted to key cylinder	On
CDL LOCK SW	Door lock/unlock switch does not operate	Off
	Press door lock/unlock switch to the lock side	On
CDL UNLOCK SW	Door lock/unlock switch does not operate	Off
	Press door lock/unlock switch to the unlock side	On
DOOR SW-DR	Driver's door closed	Off
	Driver's 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
BACK DOOR SW	Back door closed	Off
	Back door opened	On
LOCK STATUS	Driver door is locked	Off
	Driver door is unlocked	On
ACC ON SW	Ignition switch OFF	Off
	Ignition switch ACC or ON	On
KEYLESS LOCK	“LOCK” button of key fob is not pressed	Off
	“LOCK” button of key fob is pressed	On
KEYLESS UNLOCK	“UNLOCK” button of key fob is not pressed	Off
	“UNLOCK” button of key fob is pressed	On
SHOCK SENSOR	**NOTE:** The item is indicated, but not monitored.	NORMAL
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
VEHICLE SPEED	While driving	Equivalent to speed-ometer reading
REAR DEF SW	Rear window defogger switch OFF	Off
	Rear window defogger switch ON	On
REVERSE SW CAN	**NOTE:** The item is indicated, but not used.	Off
		On

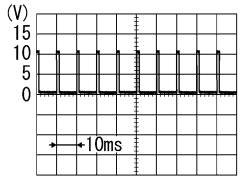
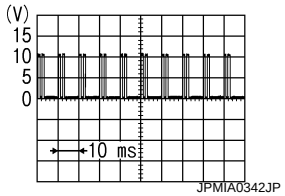
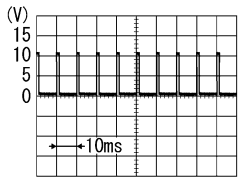
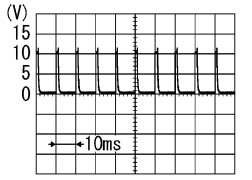
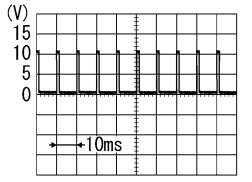
Monitor Item	Condition	Value/Status
TAIL LAMP SW	Lighting switch OFF	Off
	Lighting switch 1ST	On
FR FOG SW	Front fog lamp switch OFF	Off
	Front fog lamp switch ON	On
BUCKLE SW	The seat belt (driver side) is fastened. [Seat belt switch (driver side) OFF]	Off
	The seat belt (driver side) is unfastened. [Seat belt switch (driver side) ON]	On
TRNK/HAT MNTR	**NOTE:** The item is indicated, but not monitored.	Off
ACC SW	Ignition switch OFF	Off
	Ignition switch ACC or ON	On
KYLS TRNK/HAT	**NOTE:** The item is indicated, but not monitored.	Off
KEYLESS PANIC	**NOTE:** The item is indicated, but not monitored.	Off
HI BEAM SW	Lighting switch OFF	Off
	Lighting switch HI	On
HEAD LAMP SW 1	Lighting switch OFF	Off
	Lighting switch 2ND	On
HEAD LAMP SW 2	Lighting switch OFF	Off
	Lighting switch 2ND	On
AUTO LIGHT SW	**NOTE:** The item is indicated, but not monitored.	Off
PASSING SW	Other than lighting switch PASS	Off
	Lighting switch PASS	On
RR FOG SW	**NOTE:** The item is indicated, but not monitored.	Off
TURN SIGNAL R	Turn signal switch OFF	Off
	Turn signal switch RH	On
TURN SIGNAL L	Turn signal switch OFF	Off
	Turn signal switch LH	On
PKB SW	Parking brake switch is OFF	Off
	Parking brake switch is ON	On
ENGINE RUN	Engine stopped	Off
	Engine running	On
OPTI SEN (DTCT)	**NOTE:** The item is indicated, but not monitored.	0 V
OPTI SEN (FILT)	**NOTE:** The item is indicated, but not monitored.	0 V
LIG SEN COND	**NOTE:** The item is indicated, but not monitored.	OFF
IGN SW CAN	Ignition switch OFF or ACC	Off
	Ignition switch ON	On
FR WIPER HI	Front wiper switch OFF	Off
	Front wiper switch HI	On
FR WIPER LOW	Front wiper switch OFF	Off
	Front wiper switch LO	On

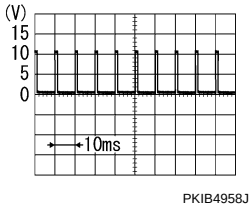
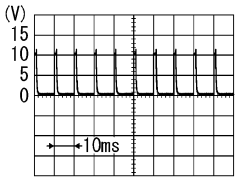
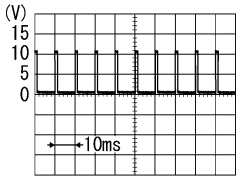
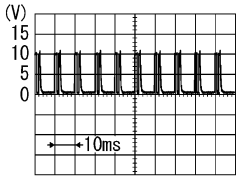
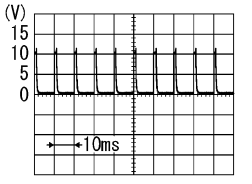
Monitor Item	Condition	Value/Status
FR WIPER INT	Front wiper switch OFF	Off
	Front wiper switch INT	On
FR WASHER SW	Front washer switch OFF	Off
	Front washer switch ON	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7
FR WIPER STOP	Any position other than front wiper stop position	Off
	Front wiper stop position	On
RR WIPER ON	Rear wiper switch OFF	Off
	Rear wiper switch ON	On
RR WIPER INT	Rear wiper switch OFF	Off
	Rear wiper switch INT	On
RR WASHER SW	Rear washer switch OFF	Off
	Rear washer switch ON	On
RR WIPER STOP	Rear wiper stop position	Off
	Other than rear wiper stop position	On
RAIN SENSOR	**NOTE:** The item is indicated, but not monitored.	Off
HAZARD SW	Hazard switch OFF	Off
	Hazard switch ON	On
FAN ON SIG	Blower control dial OFF	Off
	Other than blower control dial OFF	On
AIR COND SW	A/C switch OFF	Off
	A/C switch ON	On
THERMO AMP	Ignition switch ON	Off
	Evaporator is extremely low temperature	On
FR DEF SW	Other than A/C mode defroster ON position	Off
	A/C mode defroster ON position	On
KEYLESS TRUNK	**NOTE:** The item is indicated, but not monitored.	Off
TRNK OPNR SW	**NOTE:** The item is indicated, but not monitored.	Off
TRNK OPN MNTR	**NOTE:** The item is indicated, but not monitored.	Off
HOOD SW	Close the hood	Off
	Open the hood	On
TRANSPONDER	Other than the ignition switch is ON by key registered to BCM.	Off
	The ignition switch is ON by key registered to BCM.	On
INTELLI KEY	**NOTE:** The item is indicated, but not used.	Off
AUTO RELOCK	**NOTE:** The item is indicated, but not monitored.	Off
OIL PRESS SW	**NOTE:** The item is indicated, but not monitored.	Off
BRAKE SW	Brake pedal is not depressed	Off
	Brake pedal is depressed	On

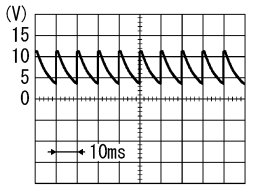
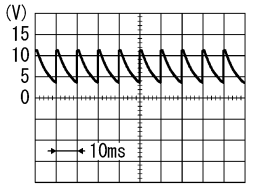
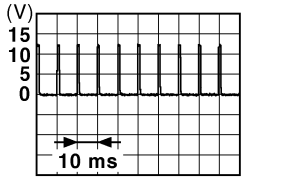
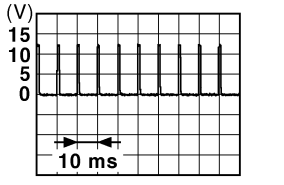
TERMINAL LAYOUT

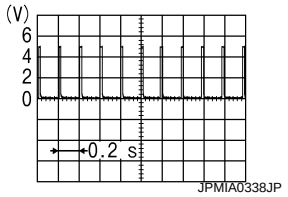
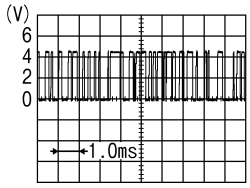
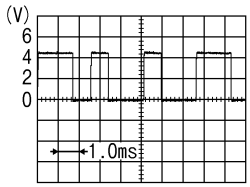
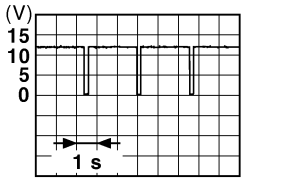


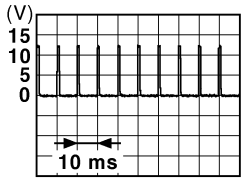
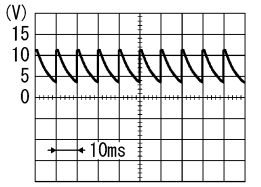
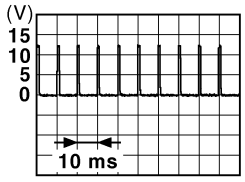
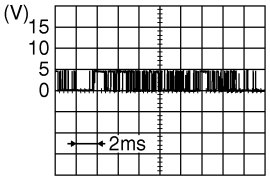
PHYSICAL VALUES

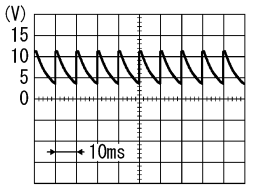
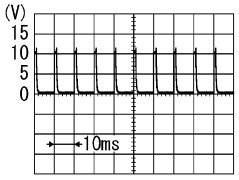
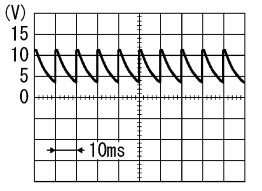
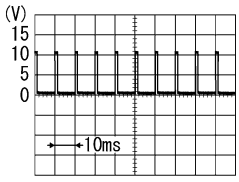
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
		Signal name	Input/ Output			
+	–					
2 (L)	Ground	Combination switch INPUT 5	Input	Combination switch (Wiper intermittent dial 4)	All switches OFF	0 V
					Turn signal switch RH Lighting switch HI Lighting switch 1ST	 PKIB4958J 1.0 V
					Lighting switch 2ND	 JPMIA0342JP 2.0 V
3 (GR)	Ground	Combination switch INPUT 4	Input	Combination switch (Wiper intermittent 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 (BR)	Ground	Combination switch INPUT 3	Input	Combination switch (Wiper intermittent dial 4)	All switches OFF	0 V
					Front wiper switch LO Front wiper switch MIST Front wiper switch INT	 PKIB4958J 1.0 V

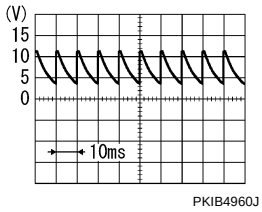
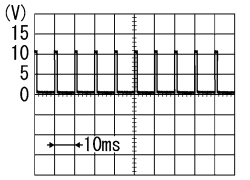
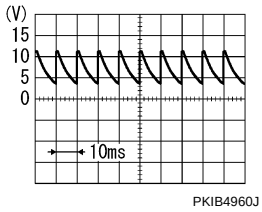
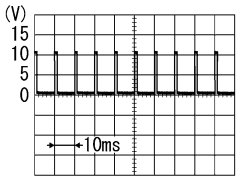
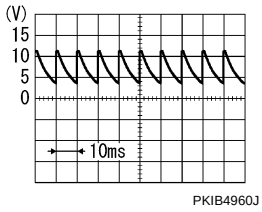
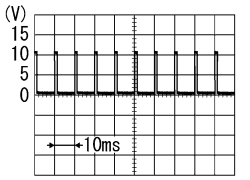
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
5 (G)	Ground	Combination switch INPUT 2	Input	Combination switch	All switches OFF (Wiper intermittent dial 4)	0 V
					Front washer switch ON (Wiper intermittent dial 4)	 PKIB4958J 1.0 V
					Rear washer switch ON (Wiper intermittent dial 4)	
					Any of the condition below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	
					Rear wiper switch ON (Wiper intermittent dial 4)	 PKIB4956J 0.8 V
6 (W)	Ground	Combination switch INPUT 1	Input	Combination switch	All switches OFF (Wiper intermittent dial 4)	0 V
					Front wiper switch HI (Wiper intermittent dial 4)	 PKIB4958J 1.0 V
					Rear wiper switch INT (Wiper intermittent dial 4)	
					Wiper intermittent dial 3 (All switches OFF)	
					Any of the condition below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2	 PKIB4952J 1.9 V
					Any of the condition below with all switches OFF • Wiper intermittent dial 6 • Wiper intermittent dial 7	 PKIB4956J 0.8 V

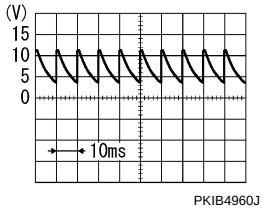
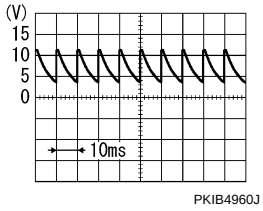
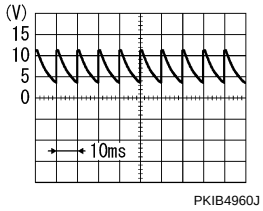
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
7 (L)	Ground	Door key cylinder switch UNLOCK	Input	Door key cylinder switch	NEUTRAL position	 PKIB4960J 7.0 - 8.0 V
					UNLOCK position	0 V
8 (R)	Ground	Door key cylinder switch LOCK	Input	Door key cylinder switch	NEUTRAL position	 PKIB4960J 7.0 - 8.0 V
					LOCK position	0 V
9 (R)	Ground	Stop lamp switch	Input	Stop lamp switch	OFF (Brake pedal is not depressed)	0 V
					ON (Brake pedal is depressed)	Battery voltage
10 (W)	Ground	Rear window defogger switch	Input	Rear window defogger switch	OFF (Not pressed)	12 V
					ON (Pressed)	0 V
11 (L)	Ground	Ignition switch ACC	Input	Ignition switch OFF		0 V
				Ignition switch ACC or ON		Battery voltage
12 (Y)	Ground	Door lock and unlock switch LOCK	Input	Door lock and unlock switch	NEUTRAL position	 JPMIA0012GB 1.0 - 1.5 V
					LOCK position	0 V
13 (BR)	Ground	Door lock and unlock switch UNLOCK	Input	Door lock and unlock switch	NEUTRAL position	 JPMIA0012GB 1.0 - 1.5 V
					UNLOCK position	0 V
15*1 (W)	—	—	—	—		—
18 (V)	Ground	Receiver ground	Input	Ignition switch ON		0 V

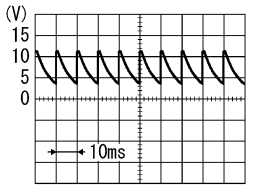
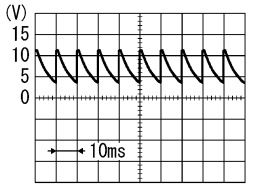
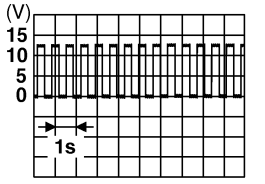
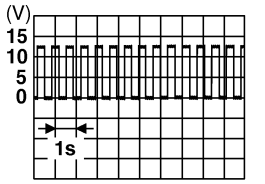
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
19 (BR)	Ground	Remote keyless entry receiver power supply	Input	Ignition switch OFF	Insert mechanical key into ignition key cylinder	0 V
					Remove mechanical key from ignition key cylinder (Any door opened)	5 V
					Remove mechanical key from ignition key cylinder (Any door closed)	 JPMIA0338JP
20 (G)	Ground	Remote keyless entry receiver communication	Input	Ignition switch OFF	Insert mechanical key into ignition key cylinder	0 V
					Waiting	 PIIB7728J
					Signal receiving	 PIIB7729J
21 (P)	Ground	NATS antenna amp.	Input/ Output	Just after inserting ignition key in key cylinder		Pointer of tester should move
				Other than above		0 V
23 (R)	Ground	Security indicator lamp	Input	Security indicator lamp	ON	0 V
					Blinking (Ignition switch OFF)	 JPMIA0014GB 11.3 V
					OFF	12 V
24*2 (SB)	Ground	Dongle link	Input/ Output	—		—
25 (LG)	Ground	NATS antenna amp.	Input/ Output	Just after inserting ignition key in key cylinder		Pointer of tester should move
				Other than above		0 V
26 (B)	Ground	Thermo control amp.	Input	Ignition switch ON		0 V
				Evaporator is extremely low temperature		12 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
27 (W)	Ground	A/C switch	Input	A/C switch	OFF	 JPMIA0012GB 1.0 - 1.5 V
					ON	0 V
28 (O)	Ground	Blower fan switch	Input	Fan switch	Blower fan switch OFF	0 V
					Blower fan switch ON	 PKIB4960J 7.0 - 8.0 V
29 (L)	Ground	Hazard switch	Input	Hazard switch	OFF	12 V
					ON	0 V
30 (L)	Ground	Back door opener switch	Input	Back door opener switch	Pressed	0 V
					Not pressed	 JPMIA0012GB 1.0 - 1.5 V
31 (G)	Ground	Front defroster switch	Input	Ignition switch ON	A/C mode defroster ON position	0 V
					Other than A/C mode defroster ON position	 JPMIA0589GB 8.0 - 9.0 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
32 (LG)	Ground	Combination switch OUTPUT 5	Output	Combination switch	All switches OFF (Wiper intermittent dial 4)	 PKIB4960J 7.0 - 8.0 V
					Front fog lamp switch ON (Wiper intermittent dial 4) Rear wiper switch ON (Wiper intermittent dial 4) Any of the condition below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7	 PKIB4956J 1.0 V
33 (Y)	Ground	Combination switch OUTPUT 4	Output	Combination switch	All switches OFF (Wiper intermittent dial 4)	 PKIB4960J 7.0 - 8.0 V
					Lighting switch 1ST (Wiper intermittent dial 4) Rear wiper switch INT (Wiper intermittent dial 4) Any of the condition below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	 PKIB4958J 1.2 V

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

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
37 (GR)	Ground	Key switch	Input	Insert mechanical key into ignition key cylinder		Battery voltage
				Remove mechanical key from ignition key cylinder		0 V
38 (R)	Ground	Ignition switch ON	Input	Ignition switch OFF or ACC		0 V
				Ignition switch ON		Battery voltage
39 (L)	Ground	CAN-H	Input/ Output	—		—
40 (P)	Ground	CAN-L	Input/ Output	—		—
41 (LG)	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
42 (LG)	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
43 (BR)	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 LH door opened)	0 V
44 (SB)	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

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
45 (R)	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
47 (P)	Ground	Back door switch	Input	Back door switch	OFF (When back door closed)	 PKIB4960J 7.0 - 8.0 V
					ON (When back door opened)	0 V
48 (W)	Ground	Turn signal RH	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch RH	 PKIC6370E 6.0 V
49 (V)	Ground	Turn signal LH	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	 PKIC6370E 6.0 V
50 (GR)	Ground	Back door open	Output	Back door	OFF (Actuator is not activated)	0 V
					OPEN (Actuator is activated)	12 V
53 (P)	Ground	Rear wiper	Output	Ignition switch ON	Rear wiper switch OFF	0 V
					Rear wiper switch ON	12 V
55 (L)	Ground	Luggage room lamp	Output	Luggage room lamp	OFF	12 V
					ON	0 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
56 (W)	Ground	Driver door UNLOCK	Output	Driver door	UNLOCK (Actuator is activated)	12 V
					Other then UNLOCK (Actuator is not activated)	0 V
57 (L)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
58 (LG)	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
60 (BR)	Ground	Interior room lamp control	Output	Interior room lamp	OFF	12 V
					ON	0 V
63 (SB)	Ground	A/C indicator	Output	A/C indicator	OFF	12 V
					ON	0 V
65 (Y)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
66 (P)	Ground	P/W power supply (BAT)	Output	Ignition switch OFF		12 V
67 (L)	Ground	P/W power supply (IGN)	Output	Ignition switch ON		12 V
68 (SB)	Ground	Passenger door and rear door UNLOCK	Output	Passenger door and rear door	UNLOCK (Actuator is activated)	12 V
					Other then UNLOCK (Actuator is not activated)	0 V
69 (V)	Ground	All doors LOCK	Output	All doors	LOCK (Actuator is activated)	12 V
					Other then LOCK (Actuator is not activated)	0 V
70 (B)	Ground	Ground	Output	Ignition switch ON		0 V

*1: This terminal is not used

*2: For Canada

Fail-safe

INFOID:0000000007576722

FAIL-SAFE CONTROL BY DTC

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

Display contents of CONSULT	Fail-safe	Cancellation
B2190: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI SCANNING	Inhibit engine cranking	Ignition switch ON → OFF
B2196: DONGLE NG	Inhibit engine cranking	Erase DTC

REAR WIPER MOTOR PROTECTION

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

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

Condition of cancellation
1. Pass more than 1 minute 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:0000000007576723

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

Priority	DTC
1	• U1000: CAN COMM • U1010: CONTROL UNIT (CAN)
2	C1735: IGN CIRCUIT OPEN
3	• B2190: NATS ANTENNA AMP • B2191: DIFFERENCE OF KEY • B2192: ID DISCORD BCM-ECM • B2193: CHAIN OF BCM-ECM • B2195: ANTI SCANNING • B2196: DONGLE NG
4	• C1704: LOW PRESSURE FL • C1705: LOW PRESSURE FR • C1706: LOW PRESSURE RR • C1707: LOW PRESSURE RL • C1708: [NO DATA] FL • C1709: [NO DATA] FR • C1710: [NO DATA] RR • C1711: [NO DATA] RL • C1716: [PRESS DATA ERR] FL • C1717: [PRESS DATA ERR] FR • C1718: [PRESS DATA ERR] RR • C1719: [PRESS DATA ERR] RL • C1729: VHCL SPEED SIG ERR

DTC Index

INFOID:0000000007576724

NOTE:
Details of time display
- CRNT: Displays when there is a malfunction now or after returning to the normal condition until turning ignition switch OFF → ON again.
- 1 - 39: Displayed if any previous malfunction is present when current condition is normal. It increases like 1 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. The counter remains at 39 even if the number of cycles exceeds it. It is counted from 1 again when turning ignition switch OFF → ON after returning to the normal condition if the malfunction is detected again.

CONSULT display	Fail-safe	Tire pressure monitor warning lamp ON	Reference
U1000: CAN COMM	—	—	BCS-131
U1010: CONTROL UNIT (CAN)	—	—	BCS-132
B2190: NATS ANTENNA AMP	×	—	SEC-146

CONSULT display	Fail-safe	Tire pressure monitor warning lamp ON	Reference
B2191: DIFFERENCE OF KEY	×	—	SEC-149
B2192: ID DISCORD BCM-ECM	×	—	SEC-150
B2193: CHAIN OF BCM-ECM	×	—	SEC-151
B2195: ANTI SCANNING	×	—	SEC-152
B2196: DONGLE NG	×	—	SEC-153
C1704: LOW PRESSURE FL	—	×	WT-23
C1705: LOW PRESSURE FR	—	×	
C1706: LOW PRESSURE RR	—	×	
C1707: LOW PRESSURE RL	—	×	
C1708: [NO DATA] FL	—	×	WT-25
C1709: [NO DATA] FR	—	×	
C1710: [NO DATA] RR	—	×	
C1711: [NO DATA] RL	—	×	
C1716: [PRESS DATA ERR] FL	—	×	WT-28
C1717: [PRESS DATA ERR] FR	—	×	
C1718: [PRESS DATA ERR] RR	—	×	
C1719: [PRESS DATA ERR] RL	—	×	
C1729: VHCL SPEED SIG ERR	—	×	WT-30
C1735: IGN CIRCUIT OPEN	—	—	BCS-133

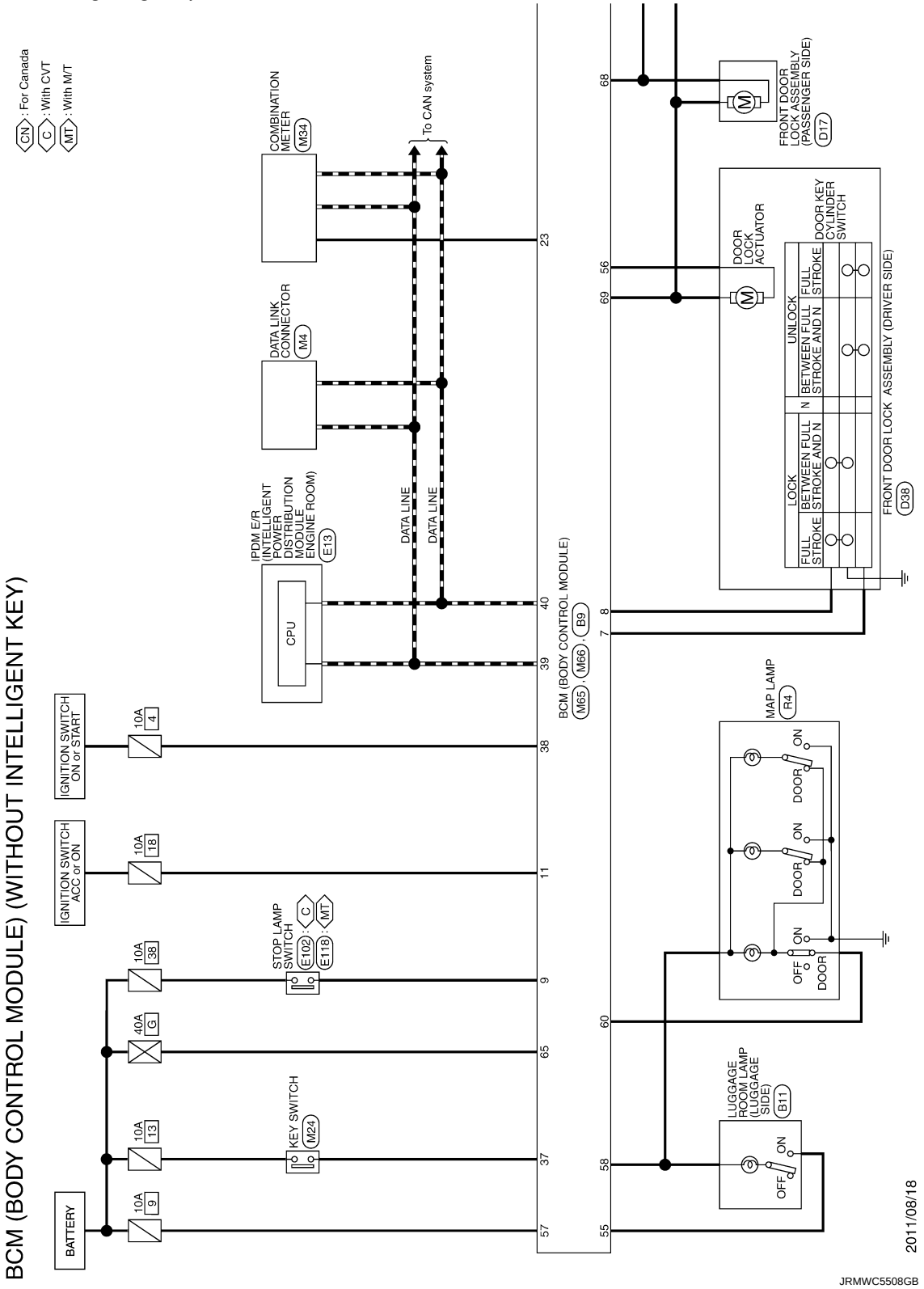
WIRING DIAGRAM

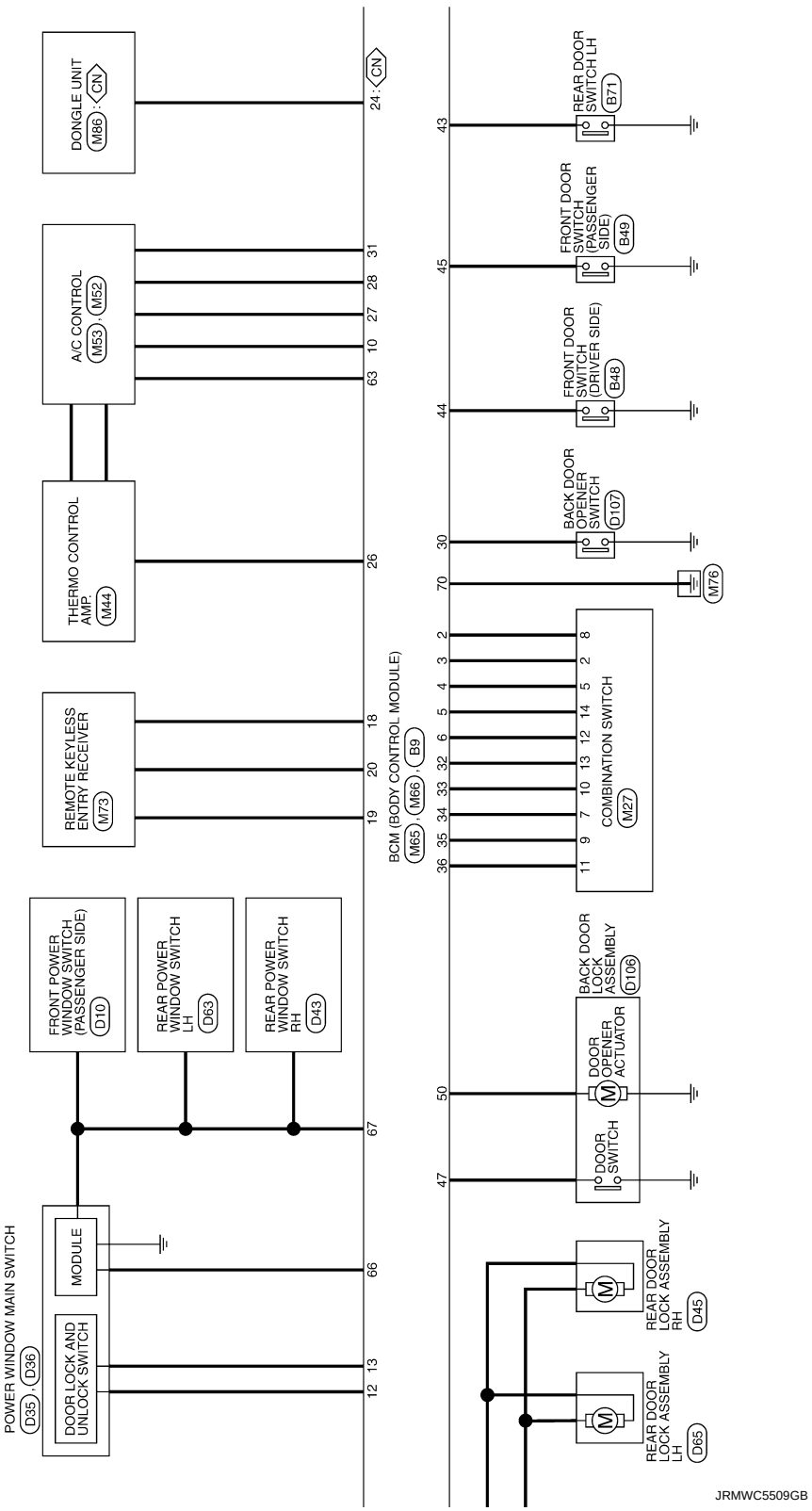
BCM

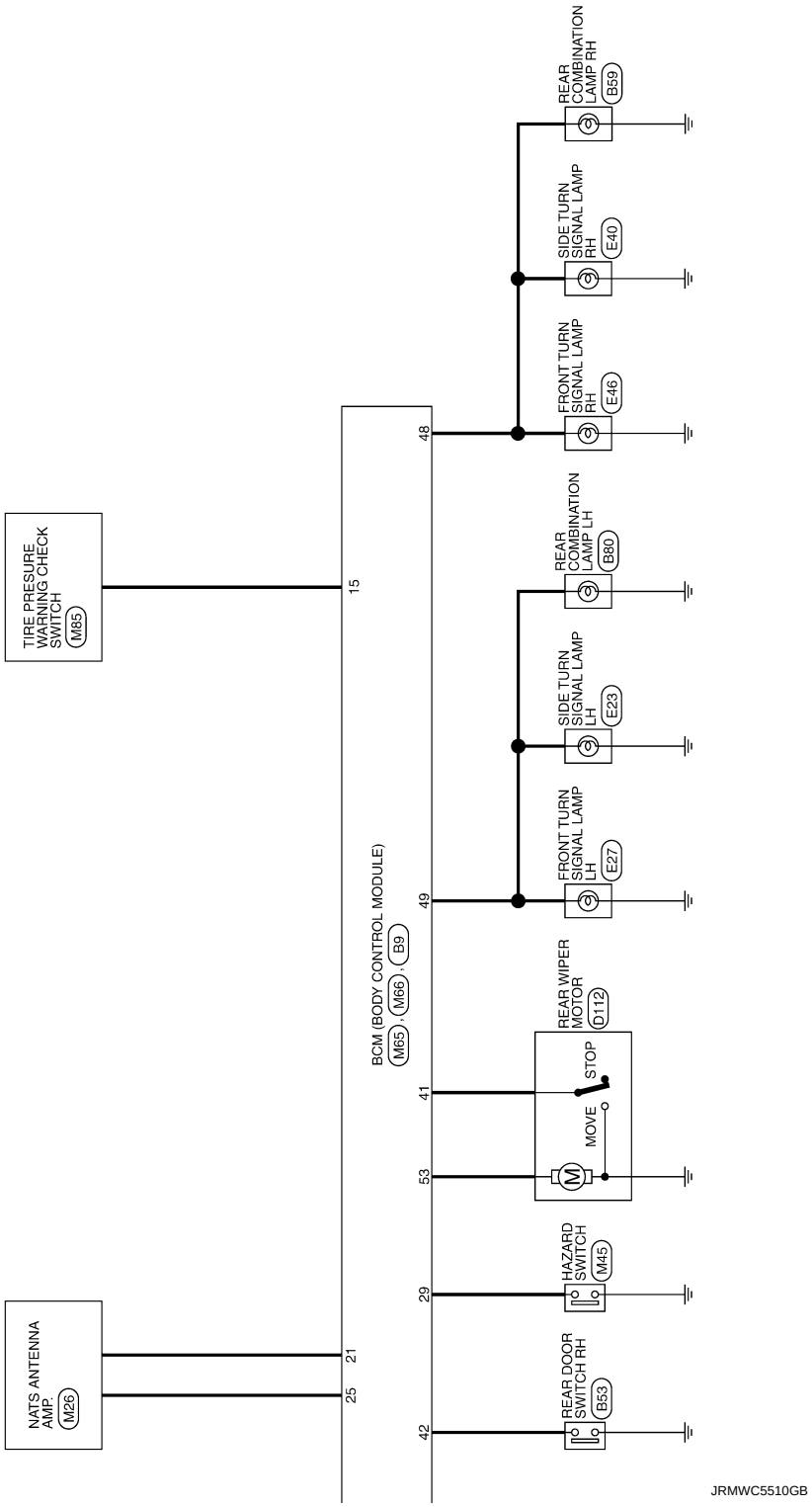
Wiring Diagram

INFOID:0000000007576725

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




DONGLE UNIT
M86
CN
24
A/C CONTROL
M53
M52
31
28
27
10
63
THERMO CONTROL AMP.
M44
26
REMOTE KEYLESS ENTRY RECEIVER
M73
18
20
19
FRONT POWER WINDOW SWITCH (PASSENGER SIDE)
D10
REAR POWER WINDOW SWITCH LH
D63
REAR POWER WINDOW SWITCH RH
D43
67
POWER WINDOW MAIN SWITCH
D35
D36
MODULE
DOOR LOCK AND UNLOCK SWITCH
66
13
12
BCM (BODY CONTROL MODULE)
M65
M66
B9
2
3
4
5
6
32
33
34
35
36
COMBINATION SWITCH
M27
8
2
5
14
12
13
10
7
9
11
70
M76
30
BACK DOOR OPENER SWITCH
D107
44
FRONT DOOR SWITCH (DRIVER SIDE)
B48
45
FRONT DOOR SWITCH (PASSENGER SIDE)
B49
43
REAR DOOR SWITCH LH
B71
50
BACK DOOR LOCK ASSEMBLY
D106
DOOR OPENER ACTUATOR
DOOR SWITCH
47
REAR DOOR LOCK ASSEMBLY RH
D45
REAR DOOR LOCK ASSEMBLY LH
D65
JRMWC5509GB


REAR COMBINATION LAMP RH B59
SIDE TURN SIGNAL LAMP RH E40
FRONT TURN SIGNAL LAMP RH E46
REAR COMBINATION LAMP LH B80
SIDE TURN SIGNAL LAMP LH E23
FRONT TURN SIGNAL LAMP LH E27
REAR WIPER MOTOR D112
STOP
MOVE
HAZARD SWITCH M45
REAR DOOR SWITCH RH B53
TIRE PRESURE WARNING CHECK SWITCH M85
NATS ANTENNA AMP M26
BCM (BODY CONTROL MODULE) M65, M66, B9
48
49
41
53
29
42
15
21
25
JRMWC5510GB

BASIC INSPECTION

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

Description

INFOID:0000000007807355

BEFORE REPLACEMENT

When replacing BCM, save or print current vehicle specification with CONSULT configuration before replacement.

NOTE:

If “READ CONFIGURATION” can not be used, use the “WRITE CONFIGURATION - Manual selection” after replacing BCM.

AFTER REPLACEMENT

CAUTION:

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

- **Complete the procedure of “WRITE CONFIGURATION” in order.**
- **Configuration is different for each vehicle model. Confirm configuration of each vehicle model.**
- **If you set incorrect “WRITE CONFIGURATION”, incidents might occur.**

NOTE:

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

Work Procedure

INFOID:0000000007807356

1. SAVING VEHICLE SPECIFICATION

CONSULT Configuration

Perform “READ CONFIGURATION” to save or print current vehicle specification. Refer to BCS-128, "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-141, "Removal and Installation".

>> GO TO 3.

3. WRITING VEHICLE SPECIFICATION

CONSULT Configuration

Perform “WRITE CONFIGURATION - Config file” or “WRITE CONFIGURATION - Manual selection” to write vehicle specification. Refer to BCS-128, "Work Procedure".

>> GO TO 4.

4. INITIALIZE BCM (NATS) (IF EQUIPPED)

Perform BCM initialization. (NATS)

>> WORK END

CONFIGURATION (BCM)

Description

INFOID:0000000007807357

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

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

NOTE:

Manual setting item: Items which need selection by vehicle specifications

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

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

CAUTION:

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

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

Work Procedure

INFOID:0000000007807358

1. WRITING MODE SELECTION

CONSULT Configuration

Select “CONFIGURATION” of BCM.

When writing saved data>>GO TO 2.

When writing manually>>GO TO 3.

2. PERFORM “WRITE CONFIGURATION - CONFIG FILE”

CONSULT Configuration

Perform “WRITE CONFIGURATION - Config file”.

>> WORK END

3. PERFORM “WRITE CONFIGURATION - MANUAL SELECTION”

CONSULT Configuration

1. Select "WRITE CONFIGURATION - Manual selection".
2. Identify the correct model and configuration list. Refer to BCS-129, "Configuration list".
3. Confirm and/or change setting value for each item.
   CAUTION:
   Thoroughly read and understand the vehicle specification. ECU control may not operate normally if the setting is not correct.
   NOTE:
   If items are not displayed, touch “SETTING”. Refer to BCS-129, "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 list

INFOID:0000000007576730

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

SETTING ITEM		NOTE
Items	Setting value	
DTRL	WITH ⇔ WITHOUT	• WITH: With daytime running light system • WITHOUT: Without daytime running light system
TIRE PRESSURE	230kPa ⇔ 240kPa ⇔ 250kPa	• 230kPa: 2WD M/T models • 240kPa: 4WD models • 250kPa: 2WD except M/T models

⇔: Items which confirm vehicle specifications

TRANSIT MODE CANCEL OPERATION

Description

INFOID:0000000007814140

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

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

Work Procedure

INFOID:0000000007814141

1. TRANSIT MODE CANCEL OPERATION

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

>> GO TO 2.

2. TRANSIT MODE CANCEL CHECK

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

>> WORK END

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM

Description

INFOID:0000000007576731

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:0000000007576732

DTC DETECTION LOGIC

DTC	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:0000000007576733

1.PERFORM SELF DIAGNOSTIC

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

Is “CAN COMM CIRCUIT” displayed?

YES >> Refer to LAN-15, "Trouble Diagnosis Flow Chart".
NO >> Refer to GI-43, "Intermittent Incident".

U1010 CONTROL UNIT (CAN)

DTC Logic

INFOID:0000000007576734

DTC DETECTION LOGIC

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

Diagnosis Procedure

INFOID:0000000007576735

1.REPLACE BCM

When DTC “U1010” is detected, replace BCM.

>> Replace BCM. Refer to BCS-141, "Removal and Installation".

C1735 IGN CIRCUIT OPEN

DTC Logic

INFOID:0000000007576736

DTC DETECTION LOGIC

DTC	CONSULT display description	DTC Detection Condition	Possible cause
C1735	IGN CIRCUIT OPEN	Detected following signals are different for 60 seconds; • Ignition switch ON signal inputted from ignition switch • Ignition relay status signal received from IPDM E/R with CAN communication	• Harness or connector (Ignition power supply circuit) • BCM • IPDM E/R

NOTE:

BCM may detect that ignition switch is OFF when IGN power supply voltage is low.

DTC CONFIRMATION PROCEDURE

1.DTC CONFIRMATION

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

Is any DTC detected?

YES >> Refer to BCS-133, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000007576737

1.CHECK BCM IGNITION POWER SUPPLY CIRCUIT

Check BCM ignition power supply circuit. Refer to BCS-134, "Diagnosis Procedure".

Is the circuit normal?

YES >> GO TO 2
NO >> Repair the malfunctioning part.

2.CHECK IPDM E/R POWER SUPPLY CIRCUIT

Check IPDM E/R power supply circuit. Refer to PCS-58, "Diagnosis Procedure".

Is the circuit normal?

YES >> GO TO 3.
NO >> Repair the malfunctioning part.

3.CHECK IPDM E/R IGNITION RELAY STATUS

CONSULT DATA MONITOR
1. Select “IGN RLY” of IPDM E/R data monitor item.
2. With operating the ignition switch, check the monitor status.

Monitor item	Condition		Monitor status
IGN RLY	Ignition switch	OFF	Off
		ON	On

Is the item status normal?

YES >> Replace BCM. Refer to BCS-141, "Removal and Installation".
NO >> Replace IPDM E/R. Refer to PCS-59, "Removal and Installation".

POWER SUPPLY AND GROUND CIRCUIT

Diagnosis Procedure

INFOID:0000000007576738

1.CHECK FUSES AND FUSIBLE LINK

Check that the following fuses and fusible link are not fusing.

Signal name	Fuses and fusible link No.
Battery power supply	9
	G
ACC power supply	18
Ignition power supply	4

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			Ignition switch position		
(+)		(–)			
BCM			OFF	ACC	ON
Connector	Terminal				
M66	65	Ground	Battery voltage	Battery voltage	Battery voltage
	57				
M65	11		Approx. 0 V	Battery voltage	Battery voltage
	38		Approx. 0 V	Approx. 0 V	Battery voltage

Is the measurement value normal?

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

3.CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M66	70		Existed

Does continuity exist?

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

COMBINATION SWITCH OUTPUT CIRCUIT

Diagnosis Procedure

INFOID:0000000007576739

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	M65	36	M27	11	Existed
OUTPUT 2		35		9	
OUTPUT 3		34		7	
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.

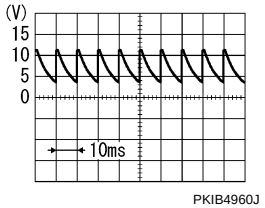
System	BCM		Ground	Continuity
	Connector	Terminal		
OUTPUT 1	M65	36	Ground	Not existed
OUTPUT 2		35		
OUTPUT 3		34		
OUTPUT 4		33		
OUTPUT 5		32		

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	M65	36	Ground	 7.0 - 8.0 V
OUTPUT 2		35		
OUTPUT 3		34		
OUTPUT 4		33		
OUTPUT 5		32		

Is the measurement value normal?

YES >> Replace combination switch.
NO >> Replace BCM. Refer to BCS-141, "Removal and Installation".

COMBINATION SWITCH INPUT CIRCUIT

Diagnosis Procedure

INFOID:0000000007576740

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	M65	6	M27	12	Existed
INPUT 2		5		14	
INPUT 3		4		5	
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		Ground	Continuity
	Connector	Terminal		
INPUT 1	M65	6	Ground	Not existed
INPUT 2		5		
INPUT 3		4		
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	M65	6	Ground	Refer to BCS-108, "Reference Value".
INPUT 2		5		
INPUT 3		4		
INPUT 4		3		
INPUT 5		2		

Is the measurement value normal?

Yes >> Replace BCM. Refer to BCS-141, "Removal and Installation".

No >> Replace combination switch.

SYMPTOM DIAGNOSIS

COMBINATION SWITCH SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000007576741

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

Malfunction item: ×

Data monitor item																Malfunction combination
FR WIPER HI	FR WIPER LOW	FR WASHER SW	FR WIPER INT	RR WIPER ON	RR WIPER INT	RR WASHER SW	INT VOLUME	TURN SIGNAL R	TURN SIGNAL L	TAIL LAMP SW	HI BEAM SW	HEAD LAMP SW 1	HEAD LAMP SW 2	PASSING SW	FR FOG SW	
	×	×						×	×							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-135, "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-137, "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-141, "Removal and Installation".
L	Combination switch	Replace combination switch.

NORMAL OPERATING CONDITION

Description

INFOID:0000000007814142

TRANSIT MODE

- Transit mode inhibits battery power consumption during transportation or storage of the vehicle.
- BCM is set to transit mode before delivery.
- In transit mode, remote keyless entry function, headlamp ON/OFF function, theft warning alarm function, and other BCM control functions do not operate normally.
- Therefore, cancel operation must be performed so that the vehicle is used in normal status.
- For transit mode cancel operation, refer to BCS-130, "Description".

NOTE:

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

REMOVAL AND INSTALLATION

BCM (BODY CONTROL MODULE)

Removal and Installation

INFOID:0000000007576742

NOTE:
Before replacing BCM, perform “READ CONFIGURATION” to save or print current vehicle specification. Refer to BCS-127, "Description".

REMOVAL

1. Remove instrument lower panel. Refer to IP-12, "Removal and Installation".
2. Remove harness clip.
3. Remove BCM mounting screws.
4. Remove BCM and disconnect the connectors.
5. Remove relays and relay mounting bracket from BCM.

INSTALLATION

Install in the reverse order of removal.

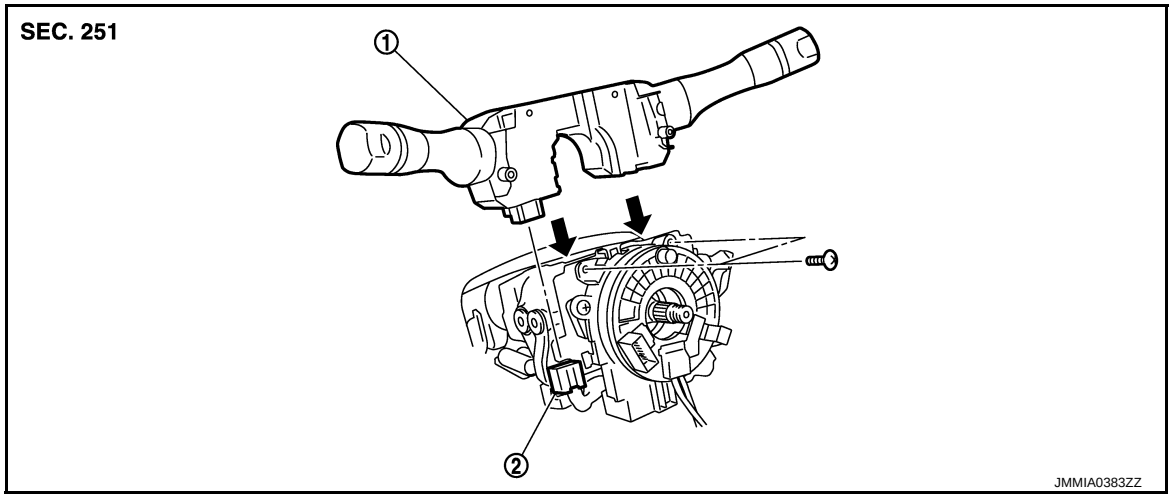
CAUTION:
Be sure to perform “WRITE CONFIGURATION” when replacing BCM. Or not doing so, BCM control function does not operate normally.

NOTE:
Be sure to perform the system initialization (NATS) when replacing BCM. Refer to BCS-128, "Work Procedure".

COMBINATION SWITCH

Exploded View

INFOID:0000000007576743



1. Combination switch
2. Combination switch connector

Removal and Installation

INFOID:0000000007576744

REMOVAL

1. Remove steering column cover. Refer to IP-12, "Removal and Installation".
2. Remove screws.
3. Disconnect the connector.
4. Pull up the combination switch to remove it.

INSTALLATION

Install in the reverse order of removal.