

SECTION **BCS**

BODY CONTROL SYSTEM

A
B
C
D
E
F
G
H
I
J
K
L

CONTENTS

| | |
|--|--|
| PRECAUTION | COMMON ITEM : CONSULT Function (BCM - COMMON ITEM) |
| 3 | 15 |
| PRECAUTIONS | DOOR LOCK |
| 3 | 16 |
| Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER" | DOOR LOCK : CONSULT Function (BCM - DOOR LOCK) |
| 3 | 16 |
| SYSTEM DESCRIPTION | REAR WINDOW DEFOGGER |
| 4 | 17 |
| COMPONENT PARTS | REAR WINDOW DEFOGGER : CONSULT Function (BCM - REAR DEFOGGER) |
| 4 | 18 |
| BODY CONTROL SYSTEM | BUZZER |
| 4 | 18 |
| BODY CONTROL SYSTEM : Component Parts Location | BUZZER : CONSULT Function (BCM - BUZZER) ... |
| 4 | 18 |
| POWER CONSUMPTION CONTROL SYSTEM | INT LAMP |
| 4 | 19 |
| POWER CONSUMPTION CONTROL SYSTEM : Component Parts Location | INT LAMP : CONSULT Function (BCM - INT LAMP) |
| 4 | 19 |
| SYSTEM | HEADLAMP |
| 6 | 20 |
| BODY CONTROL SYSTEM | HEADLAMP : CONSULT Function (BCM - HEAD LAMP) |
| 6 | 20 |
| BODY CONTROL SYSTEM : System Description | WIPER |
| 6 | 23 |
| BODY CONTROL SYSTEM : Fail-safe | WIPER : CONSULT Function (BCM - WIPER) |
| 7 | 23 |
| COMBINATION SWITCH READING SYSTEM | FLASHER |
| 8 | 24 |
| COMBINATION SWITCH READING SYSTEM : System Diagram | FLASHER : CONSULT Function (BCM - FLASHER) |
| 8 | 24 |
| COMBINATION SWITCH READING SYSTEM : System Description | INTELLIGENT KEY |
| 8 | 25 |
| SIGNAL BUFFER SYSTEM | INTELLIGENT KEY : CONSULT Function (BCM - INTELLIGENT KEY) |
| 11 | 25 |
| SIGNAL BUFFER SYSTEM : System Diagram | COMB SW |
| 12 | 29 |
| SIGNAL BUFFER SYSTEM : System Description ... | COMB SW : CONSULT Function (BCM - COMB SW) |
| 12 | 29 |
| POWER CONSUMPTION CONTROL SYSTEM | BCM |
| 13 | 30 |
| POWER CONSUMPTION CONTROL SYSTEM : System Diagram | BCM : CONSULT Function (BCM - BCM) |
| 13 | 30 |
| POWER CONSUMPTION CONTROL SYSTEM : System Description | IMMU |
| 13 | 30 |
| DIAGNOSIS SYSTEM (BCM) | IMMU : CONSULT Function (BCM - IMMU) |
| 15 | 30 |
| COMMON ITEM | BATTERY SAVER |
| 15 | 30 |

BCS

N
O
P

| | | | |
|---|-----------|---|-----------|
| BATTERY SAVER : CONSULT Function (BCM - BATTERY SAVER) | 30 | DTC/CIRCUIT DIAGNOSIS | 70 |
| TRUNK | 32 | U1000 CAN COMM | 70 |
| TRUNK : CONSULT Function (BCM - TRUNK) | 32 | Description | 70 |
| THEFT ALM | 32 | DTC Logic | 70 |
| THEFT ALM : CONSULT Function (BCM - THEFT) | 32 | Diagnosis Procedure | 70 |
| RETAINED PWR | 33 | U1010 CONTROL UNIT (CAN) | 71 |
| RETAINED PWR : CONSULT Function (BCM - RETAINED PWR) | 33 | DTC Logic | 71 |
| SIGNAL BUFFER | 33 | Diagnosis Procedure | 71 |
| SIGNAL BUFFER : CONSULT Function (BCM - SIGNAL BUFFER) | 33 | U0415 VEHICLE SPEED | 72 |
| ECU DIAGNOSIS INFORMATION | 35 | Description | 72 |
| BCM | 35 | DTC Logic | 72 |
| Reference Value | 35 | Diagnosis Procedure | 72 |
| Fail-safe | 56 | B2562 LOW VOLTAGE | 73 |
| DTC Inspection Priority Chart | 57 | DTC Logic | 73 |
| DTC Index | 57 | Diagnosis Procedure | 73 |
| WIRING DIAGRAM | 60 | B26E7 TPMS CAN COMM | 74 |
| BCM | 60 | DTC Logic | 74 |
| Wiring Diagram | 60 | Diagnosis Procedure | 74 |
| BASIC INSPECTION | 66 | POWER SUPPLY AND GROUND CIRCUIT | 75 |
| INSPECTION AND ADJUSTMENT | 66 | Diagnosis Procedure | 75 |
| ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) | 66 | COMBINATION SWITCH OUTPUT CIRCUIT ... | 76 |
| ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Description | 66 | Diagnosis Procedure | 76 |
| ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Work Procedure | 66 | COMBINATION SWITCH INPUT CIRCUIT | 78 |
| CONFIGURATION (BCM) | 66 | Diagnosis Procedure | 78 |
| CONFIGURATION (BCM) : Description | 67 | SYMPTOM DIAGNOSIS | 80 |
| CONFIGURATION (BCM) : Work Procedure | 67 | COMBINATION SWITCH SYSTEM SYMPTOMS | 80 |
| CONFIGURATION (BCM) : Configuration list | 68 | Symptom Table | 80 |
| SHIPPING MODE CANCEL OPERATION | 69 | NORMAL OPERATING CONDITION | 81 |
| Description | 69 | Description | 81 |
| Work Procedure | 69 | REMOVAL AND INSTALLATION | 82 |
| | | BCM | 82 |
| | | Removal and Installation | 82 |
| | | COMBINATION SWITCH | 83 |
| | | Exploded View | 83 |
| | | Removal and Installation | 83 |

PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

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

INFOID:000000009010734

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the "SRS AIR BAG" and "SEAT BELT" of this Service Manual.

WARNING:

Always observe the following items for preventing accidental activation.

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

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

WARNING:

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.

A
B
C
D
E
F
G
H
I
J
K
L
N
O
P

BCS

COMPONENT PARTS

< SYSTEM DESCRIPTION >

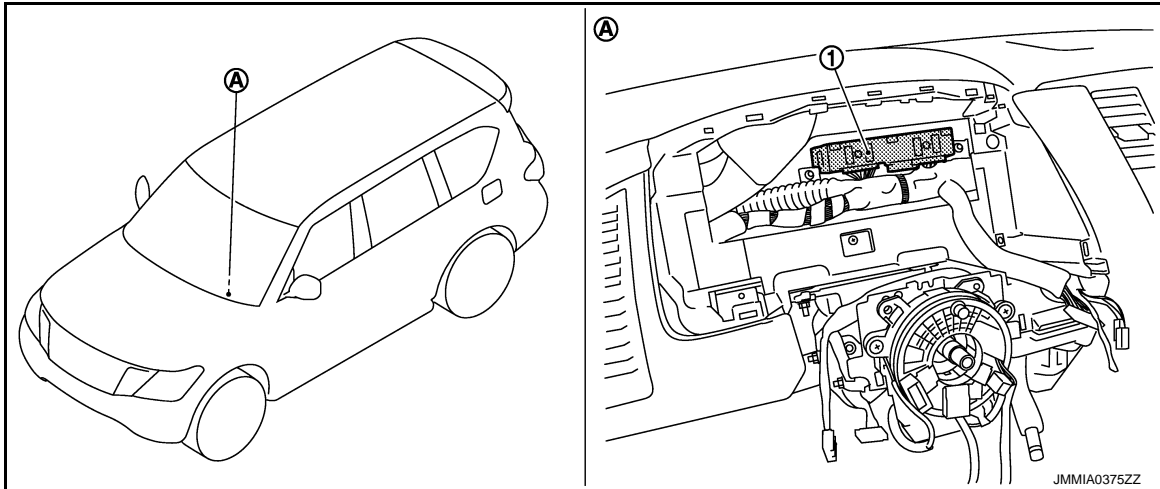
SYSTEM DESCRIPTION

COMPONENT PARTS

BODY CONTROL SYSTEM

BODY CONTROL SYSTEM : Component Parts Location

INFOID:000000009010735



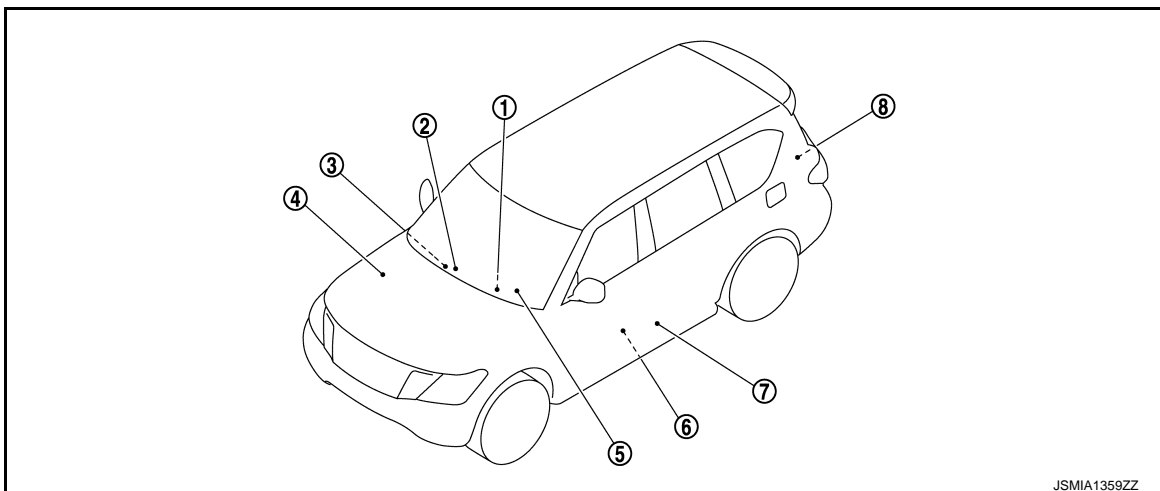
1. BCM

A. Behind of combination meter

POWER CONSUMPTION CONTROL SYSTEM

POWER CONSUMPTION CONTROL SYSTEM : Component Parts Location

INFOID:000000009010736



1. BCM

Refer to [BCS-4, "BODY CONTROL SYSTEM : Component Parts Location"](#).

2. TCU

Refer to [AV-292, "Component Parts Location"](#).

3. CAN gateway

Refer to [LAN-96, "Component Parts Location"](#).

COMPONENT PARTS

< SYSTEM DESCRIPTION >

| | | | | | | |
|----|--|----|--|----|--|------------|
| 4. | IPDM E/R Refer to PCS-4, "Component Parts Location" . | 5. | Combination meter | 6. | Driver seat control unit Refer to ADP-7, "Component Parts Location" . | A |
| 7. | Pre-crash seat belt control unit Refer to SBC-5, "Component Parts Location" . | 8. | Automatic back door control module Refer to DLK-13, "AUTOMATIC BACK DOOR SYSTEM : Component Parts Location" . | | | B |
| | | | | | | C |
| | | | | | | D |
| | | | | | | E |
| | | | | | | F |
| | | | | | | G |
| | | | | | | H |
| | | | | | | I |
| | | | | | | J |
| | | | | | | K |
| | | | | | | L |
| | | | | | | BCS |
| | | | | | | N |
| | | | | | | O |
| | | | | | | P |

SYSTEM

< SYSTEM DESCRIPTION >

SYSTEM

BODY CONTROL SYSTEM

BODY CONTROL SYSTEM : System Description

INFOID:000000009010737

OUTLINE

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

BCM CONTROL FUNCTION LIST

| System | Reference |
|---|---|
| Combination switch reading system | BCS-8, "COMBINATION SWITCH READING SYSTEM : System 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-11, "AUTO LIGHT SYSTEM : System Diagram" |
| Turn signal and hazard warning lamp system | EXL-17, "TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM : System Diagram" |
| Headlamp system | EXL-10, "HEADLAMP SYSTEM : System Diagram" |
| Daytime running light system | EXL-13, "DAYTIME RUNNING LIGHT SYSTEM : System Diagram" |
| Parking, license plate, side marker and tail lamps system | EXL-18, "PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMP SYSTEM : System Diagram" |
| Front fog lamp system | EXL-19, "FRONT FOG LAMP SYSTEM : System Diagram" |
| Exterior lamp battery saver system | EXL-20, "EXTERIOR LAMP BATTERY SAVER SYSTEM : System Diagram" |
| Interior room lamp control system | INL-6, "INTERIOR ROOM LAMP CONTROL SYSTEM : System Diagram" |
| Interior room lamp battery saver system | INL-9, "INTERIOR ROOM LAMP BATTERY SAVER SYSTEM : System Diagram" |
| Illumination control system | INL-10, "ILLUMINATION CONTROL SYSTEM : System Diagram" |
| Auto light adjustment system | INL-11, "AUTO LIGHT ADJUSTMENT 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" |
| Headlamp washer system | WW-11, "HEADLAMP WASHER SYSTEM : System Diagram" |
| Warning chime system | WCS-6, "WARNING CHIME SYSTEM : System Diagram" |
| Power door lock system | DLK-15, "System Diagram" |
| Infiniti Vehicle immobilizer System (IVIS) | SEC-13, "INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS : System Diagram" |
| Vehicle security system | Theft warning alarm |
| | Panic alarm |
| | SEC-15, "VEHICLE SECURITY SYSTEM : System Diagram" |

SYSTEM

< SYSTEM DESCRIPTION >

| System | Reference |
|--|---|
| Rear window defogger system | DEF-5, "System Diagram" |
| Intelligent Key system/engine start system | DLK-17, "INTELLIGENT KEY SYSTEM : System Diagram" |
| Power window system | PWC-8, "System Diagram" |
| Retained accessory power (RAP) system | PWC-8, "System Description" |

BODY CONTROL SYSTEM : Fail-safe

INFOID:000000009325335

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 |
| 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 <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> Power position changes to ACC Receives engine status signal (CAN) |
| B261B: RES ENG RUN STUCK MALFUNC | Fuel cut | When engine status signal (CAN) is received normally |
| B26F1: IGN RELAY OFF | Inhibit engine cranking | When the following conditions are fulfilled <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> 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 |
| B26FE: HOOD SW CAN DIAG ERROR | Inhibit remote engine start | When the following conditions are fulfilled <ul style="list-style-type: none"> Power position ON Hood switch signal (CAN) is received normally |

FAIL-SAFE CONTROL BY RAIN SENSOR MALFUNCTION

BCM detects the light and rain sensor serial link error and the rain sensor malfunction.

BCM controls the following fail-safe when rain sensor has a malfunction.

- Front wiper switch AUTO and sensing rain drop: The condition just before the activation of fail-safe is maintained until the front wiper switch is turned OFF.
- Front wiper switch AUTO and not sensing rain drop: Front wiper is LO operation until the front wiper switch is turned off.

REAR WIPER MOTOR PROTECTION

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

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

SYSTEM

< SYSTEM DESCRIPTION >

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.

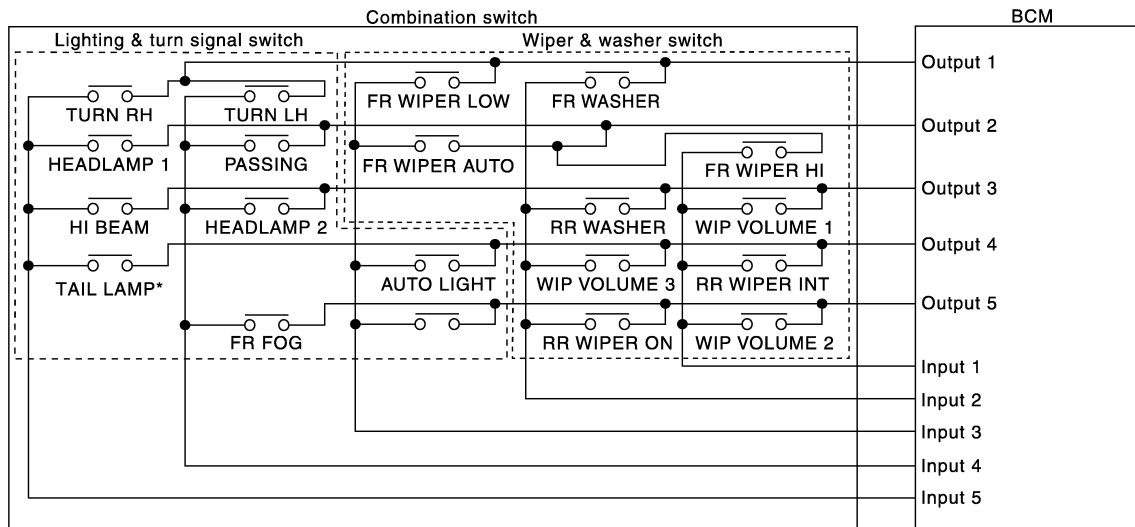
NOTE:

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

INFOID:000000009010739



NOTE:

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

COMBINATION SWITCH READING SYSTEM : System Description

INFOID:000000009010740

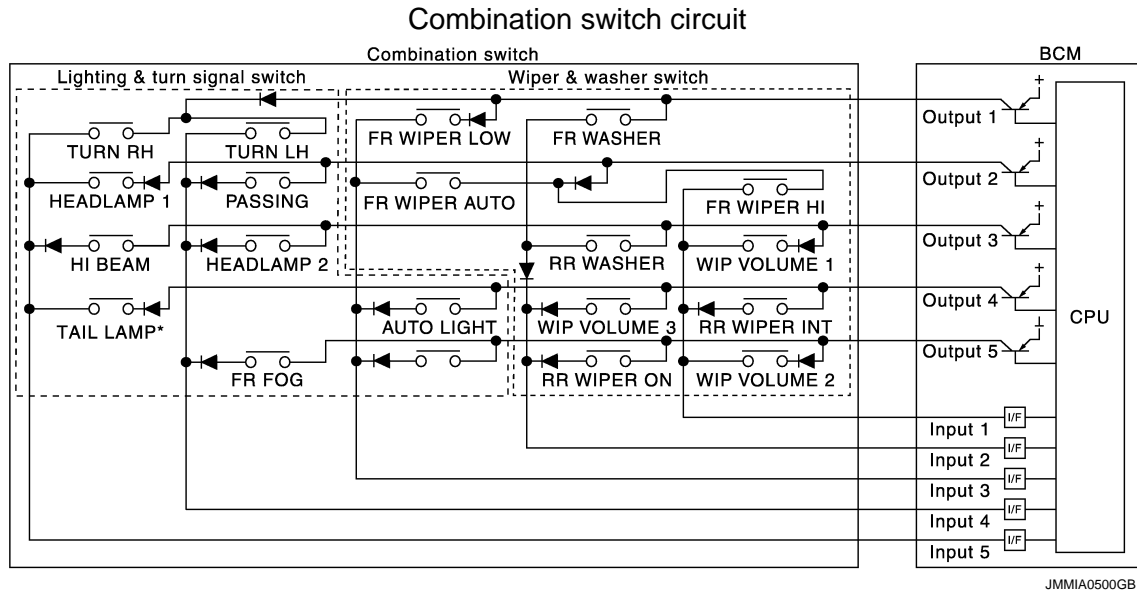
OUTLINE

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

COMBINATION SWITCH MATRIX

SYSTEM

< SYSTEM DESCRIPTION >



NOTE:

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

Combination switch INPUT-OUTPUT system list

| System | INPUT 1 | INPUT 2 | INPUT 3 | INPUT 4 | INPUT 5 |
|----------|--------------|--------------|---------------|------------|------------|
| OUTPUT 1 | — | FR WASHER | FR WIPER LOW | TURN LH | TURN RH |
| OUTPUT 2 | FR WIPER HI | — | FR WIPER AUTO | PASSING | HEADLAMP 1 |
| OUTPUT 3 | WIP VOLUME 1 | RR WASHER | — | HEADLAMP 2 | HI BEAM |
| OUTPUT 4 | RR WIPER INT | WIP VOLUME 3 | AUTO LIGHT | — | TAIL LAMP |
| OUTPUT 5 | WIP VOLUME 2 | RR WIPER ON | — | FR FOG | — |

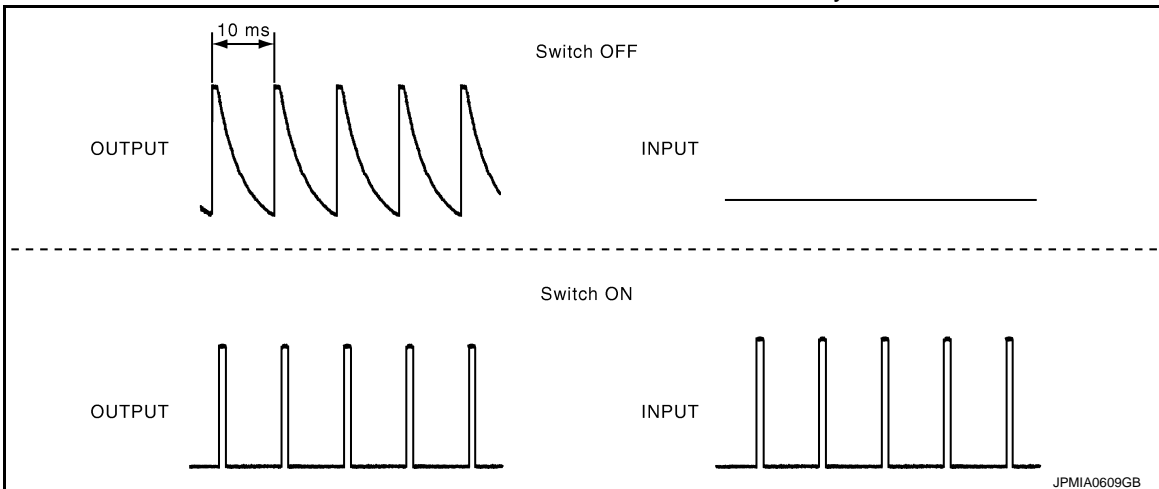
NOTE:

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:

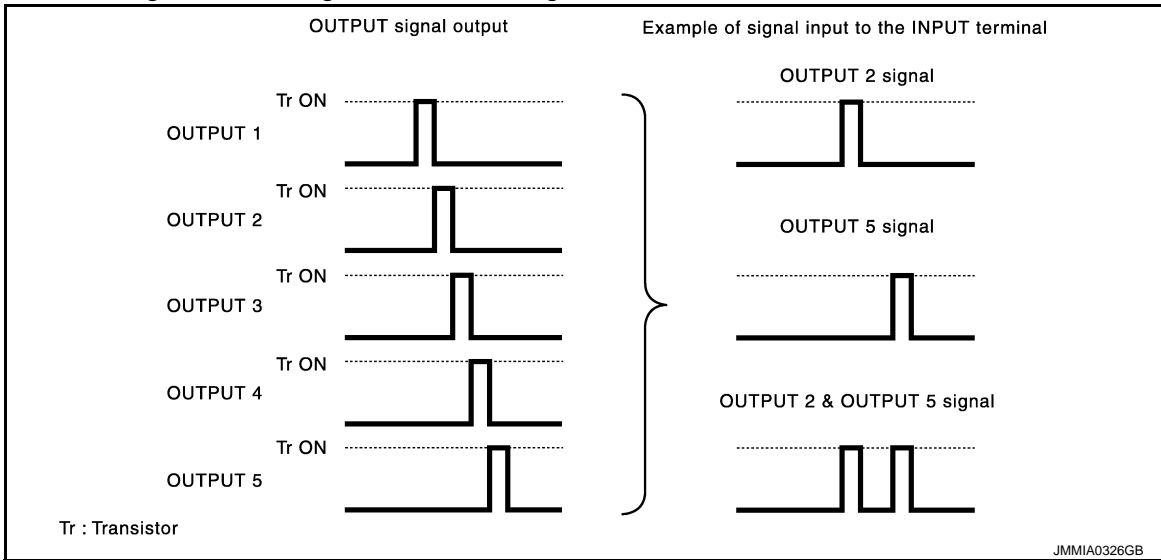
BCM reads the status of the combination switch at 60 ms interval when BCM is controlled at low power consumption control mode.

- 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.

SYSTEM

< SYSTEM DESCRIPTION >

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

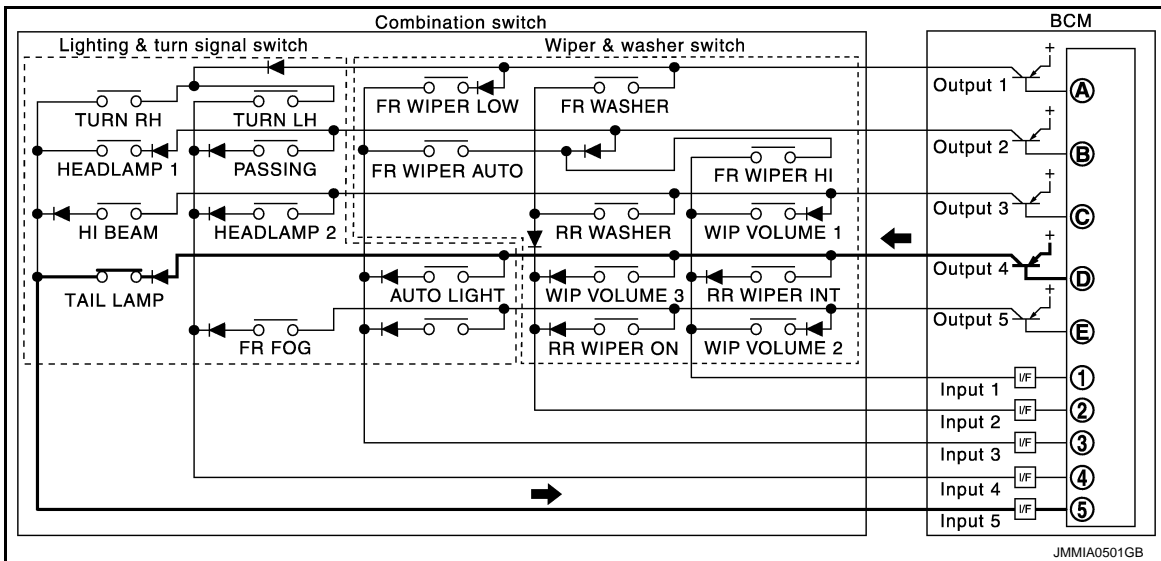


Operation Example

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

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

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



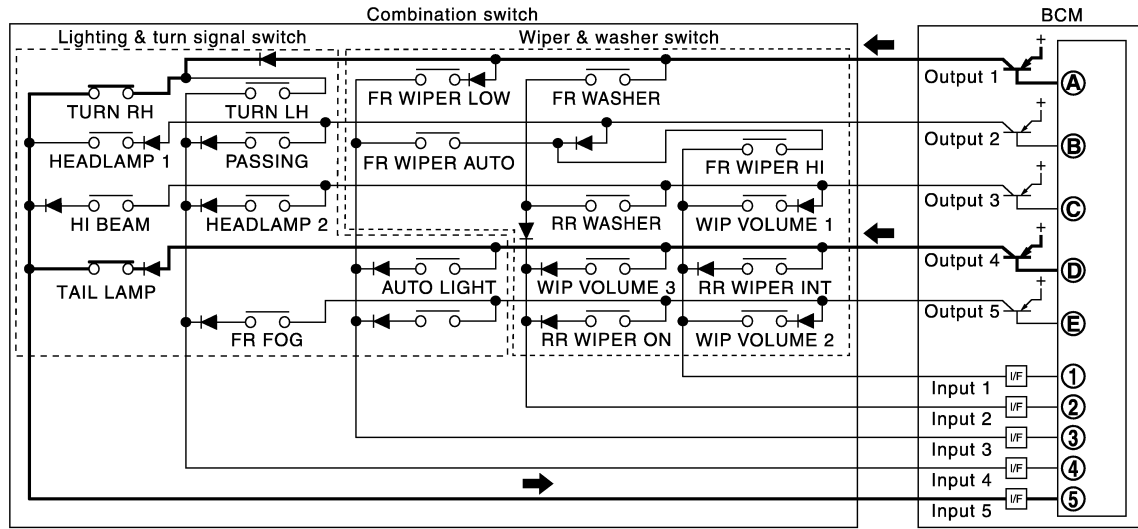
- BCM detects the combination switch status signal "5D" when the signal of OUTPUT 4 is input to INPUT 5.
- BCM judges that the TAIL LAMP switch is ON when the signal "5D" is detected.

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

SYSTEM

< SYSTEM DESCRIPTION >

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



JMMIA0502GB

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

WIPER VOLUME DIAL POSITION

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

| Wiper volume dial position | Switch status | | |
|----------------------------|---------------|--------------|--------------|
| | WIP VOLUME 1 | WIP VOLUME 2 | WIP VOLUME 3 |
| 1 | ON | ON | ON |
| 2 | ON | ON | OFF |
| 3 | ON | OFF | OFF |
| 4 | OFF | OFF | OFF |
| 5 | OFF | OFF | ON |
| 6 | OFF | ON | ON |
| 7 | OFF | ON | OFF |

NOTE:

For details of wiper volume dial position, refer to [WW-6. "FRONT WIPER AND WASHER SYSTEM : System Description"](#).

SIGNAL BUFFER SYSTEM

A
B
C
D
E
F
G
H
I
J
K
L
N
O
P

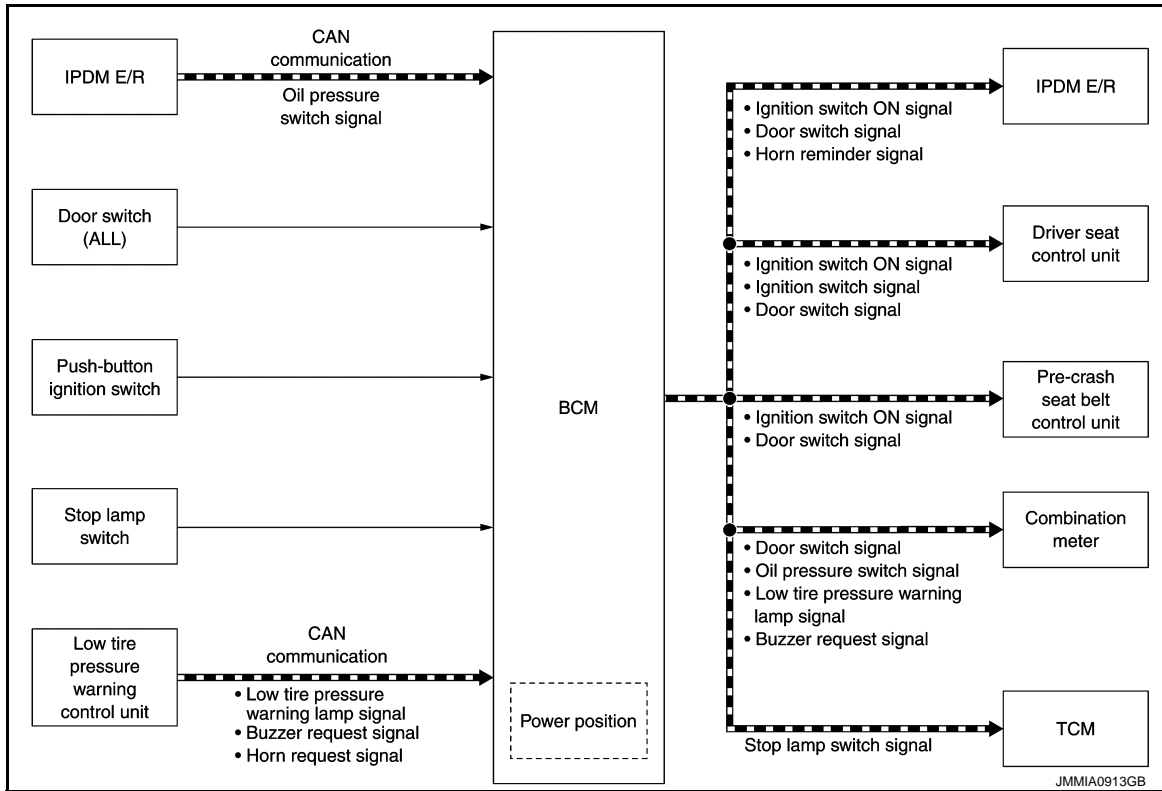
BCS

SYSTEM

< SYSTEM DESCRIPTION >

SIGNAL BUFFER SYSTEM : System Diagram

INFOID:000000009010741



SIGNAL BUFFER SYSTEM : System Description

INFOID:000000009010742

OUTLINE

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

Signal transmission function list

| Signal name | Input | Output | Description |
|---|---|---|---|
| <ul style="list-style-type: none"> Ignition switch ON signal Ignition switch signal | Push-button ignition switch (Push switch) | <ul style="list-style-type: none"> IPDM E/R (CAN) Driver seat control unit (CAN) Pre-crash seat belt control unit (CAN) | Inputs the push-button ignition switch (push switch) signal and transmits the ignition switch status judged with BCM via CAN communication. |
| Door switch signal | Any door switch | <ul style="list-style-type: none"> Combination meter (CAN) IPDM E/R (CAN) Driver seat control unit (CAN) Pre-crash seat belt control unit (CAN) | Inputs the door switch signal and transmits it via CAN communication. |
| Oil pressure switch signal | IPDM E/R (CAN) | Combination meter (CAN) | Transmits the received oil pressure switch signal via CAN communication. |
| Stop lamp switch signal | Stop lamp switch | TCM (CAN) | Inputs the stop lamp switch 1 signal and stop lamp switch 2 signal, and transmits it via CAN communication. |
| Low tire pressure warning lamp signal | Low tire pressure warning control unit | Combination meter (CAN) | Transmits the received low tire pressure warning signal via CAN communication. |

SYSTEM

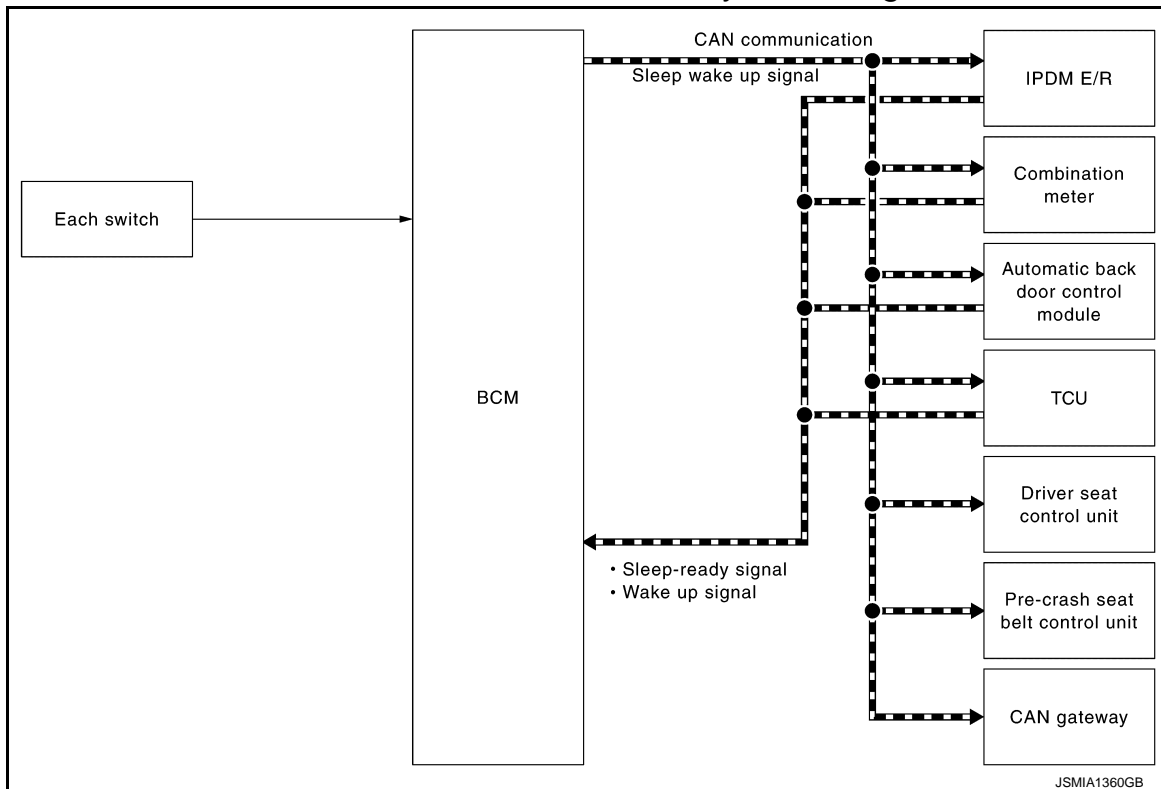
< SYSTEM DESCRIPTION >

| Signal name | Input | Output | Description |
|-----------------------|--|-------------------------|---|
| Buzzer request signal | Low tire pressure warning control unit | Combination meter (CAN) | Transmits the received buzzer request signal via CAN communication. |
| Horn request signal | Low tire pressure warning control unit | IPDM E/R (CAN) | Received the horn request signal, transmits the horn reminder signal via CAN communication. |

POWER CONSUMPTION CONTROL SYSTEM

POWER CONSUMPTION CONTROL SYSTEM : System Diagram

INFOID:000000009010743



POWER CONSUMPTION CONTROL SYSTEM : System Description

INFOID:000000009010744

OUTLINE

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

Normal mode (wake-up)

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

CAN communication sleep mode (CAN sleep)

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

Low power consumption mode (BCM sleep)

- Low power consumption control is active
- CAN transmission is stopped

LOW POWER CONSUMPTION CONTROL WITH BCM

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

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

A
B
C
D
E
F
G
H
I
J
K
L

BCS

N
O
P

SYSTEM

< SYSTEM DESCRIPTION >

Sleep mode activation

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

Sleep condition

| CAN sleep condition | BCM sleep condition |
|---|---|
| <ul style="list-style-type: none"> • Receiving the sleep-ready signal (ready) from all units • Ignition switch: OFF • Vehicle security system: Not operation • Warning chime: Not operation • Intelligent Key system buzzer: Not operation • Stop lamp switch: OFF • Turn signal indicator lamp: Not operation • Exterior lamp: OFF • Door lock status: No change • CONSULT communication status: Not communication • Meter display signal: Non-transmission • Door switch status: No change • Rear window defogger: OFF | <ul style="list-style-type: none"> • Interior room lamp battery saver: Time out • RAP system: OFF • IVIS: Not operation • Remote keyless entry receiver communication status: No communication • LOCK indicator lamp: Not operation • ACC indicator lamp: Not operation • ON indicator lamp: Not operation |

Wake-up operation

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

Wake-up condition

| BCM wake-up condition | CAN wake-up condition |
|--|---|
| <p>Back door opener switch: OFF → ON</p> | <ul style="list-style-type: none"> • 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 • TURN LH: OFF → ON • 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 • 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)

< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:000000009010745

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. Refer to BCS-57, "DTC Index" . |
| CAN Diag Support Monitor | Monitors the reception status of CAN communication viewed from BCM. |
| Data Monitor | The BCM input/output signals are displayed. |
| Active Test | The signals used to activate each device are forcibly supplied from BCM. |
| Ecu Identification | The BCM part number is displayed. |
| Configuration | <ul style="list-style-type: none"> 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.

x: Applicable item

| System | Sub system selection item | Diagnosis mode | | |
|---|---------------------------|----------------|--------------|-------------|
| | | Work Support | Data Monitor | Active Test |
| Door lock | DOOR LOCK | x | x | x |
| Rear window defogger | REAR DEFOGGER | | x | x |
| Warning chime | BUZZER | | x | x |
| Interior room lamp timer | INT LAMP | x | x | x |
| Exterior lamp | HEAD LAMP | x | x | x |
| Wiper and washer | WIPER | x | x | x |
| Turn signal and hazard warning lamps | FLASHER | x | x | x |
| — | AIR CONDITONER* | | x | x |
| <ul style="list-style-type: none"> Intelligent Key system Engine start system | INTELLIGENT KEY | x | x | x |
| Combination switch | COMB SW | | x | |
| Body control system | BCM | x | | |
| IVIS | IMMU | x | x | x |
| Interior room lamp battery saver | BATTERY SAVER | x | x | x |
| Back door | TRUNK | | x | |
| Vehicle security system | THEFT ALM | x | x | x |
| RAP system | RETAINED PWR | | x | |
| Signal buffer system | SIGNAL BUFFER | | x | x |
| — | AIR PRESSURE MONITOR* | x | x | x |

*: This item is indicated, but not used.

FREEZE FRAME DATA (FFD)

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

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

| CONSULT screen item | Indication/Unit | Description | |
|---------------------|--|---|--|
| Vehicle Speed | km/h | Vehicle speed of the moment a particular DTC is detected | |
| Odo/Trip Meter | km | Total mileage (Odometer value) of the moment a particular DTC is detected | |
| Vehicle Condition | SLEEP>LOCK | Power position status of the moment a particular DTC is detected | While turning BCM status from low power consumption mode to normal mode (Power supply position is "LOCK") |
| | SLEEP>OFF | | While turning BCM status from low power consumption mode to normal mode (Power supply position is "OFF".) |
| | LOCK>ACC | | While turning power supply position from "LOCK" to "ACC" |
| | ACC>ON | | While turning power supply position from "ACC" to "IGN" |
| | RUN>ACC | | While turning power supply position from "RUN" to "ACC" (Vehicle is stopping and selector lever is except P position.) |
| | CRANK>RUN | | While turning power supply position from "CRANKING" to "RUN" (From cranking up the engine to run it) |
| | RUN>URGENT | | While turning power supply position from "RUN" to "ACC" (Emergency stop operation) |
| | ACC>OFF | | While turning power supply position from "ACC" to "OFF" |
| | OFF>LOCK | | While turning power supply position from "OFF" to "LOCK" |
| | OFF>ACC | | While turning power supply position from "OFF" to "ACC" |
| | ON>CRANK | | While turning power supply position from "IGN" to "CRANKING" |
| | OFF>SLEEP | | While turning BCM status from normal mode (Power supply position is "OFF".) to low power consumption mode |
| | LOCK>SLEEP | | While turning BCM status from normal mode (Power supply position is "LOCK".) to low power consumption mode |
| | LOCK | | Power supply position is "LOCK" (Ignition switch OFF with steering is locked.) |
| | OFF | | Power supply position is "OFF" (Ignition switch OFF with steering is unlocked.) |
| | ACC | | Power supply position is "ACC" (Ignition switch ACC) |
| | ON | | Power supply position is "IGN" (Ignition switch ON with engine stopped) |
| | ENGINE RUN | | Power supply position is "RUN" (Ignition switch ON with engine running) |
| CRANKING | Power supply position is "CRANKING" (At engine cranking) | | |
| IGN Counter | 0 - 39 | <p>The number of times that ignition switch is turned ON after DTC is detected</p> <ul style="list-style-type: none"> • The number is 0 when a malfunction is detected now. • The number increases like 1 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. • The number is fixed to 39 until the self-diagnosis results are erased if it is over 39. | |

DOOR LOCK

DOOR LOCK : CONSULT Function (BCM - DOOR LOCK)

INFOID:000000009325311

BCM CONSULT FUNCTION

CONSULT performs the following functions via CAN communication with BCM.

WORK SUPPORT

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

| Monitor item | Description |
|------------------------------|--|
| DOOR LOCK-UNLOCK SET | Selective unlock function mode can be changed to operation with this mode <ul style="list-style-type: none"> • On: Operate • Off: Non-operation |
| AUTOMATIC DOOR LOCK SELECT | Automatic door lock function mode can be selected from the following in this mode <ul style="list-style-type: none"> • VH SPD: All doors are locked when vehicle speed more than 24 km/h (15 MPH) • P RANGE: All doors are locked when shifting the selector lever from P position to other than the P position |
| AUTOMATIC DOOR UNLOCK SELECT | Automatic door unlock function mode can be selected from the following in this mode <ul style="list-style-type: none"> • MODE 1: All doors are unlocked when the power supply position is changed from ON to OFF • MODE 2: All doors are unlocked when shifting the selector lever from any position other than the P to P position • MODE 3: Driver side door is unlocked when the power supply position is changed from ON to OFF • MODE 4: Driver side door is unlocked when shifting the selector lever from any position other than the P to P position • MODE 5: This item is displayed, but cannot be used • MODE 6: This item is displayed, but cannot be used |
| AUTOMATIC LOCK/UNLOCK SET | Automatic door lock/unlock function mode can be selected from the following in this mode <ul style="list-style-type: none"> • Off: Non-operation • Unlock Only: Door unlock operation only • Lock Only: Door lock operation only • Lock/Unlock: Lock and unlock operation |

DATA MONITOR

NOTE:

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

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

ACTIVE TEST

| Test item | Description |
|-----------|---|
| DOOR LOCK | This test is able to check door lock/unlock operation <ul style="list-style-type: none"> • 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 front door lock actuator (driver side) is unlocked when "DR UNLK" on CONSULT screen is touched • The front 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

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

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

INFOID:000000009325323

DATA MONITOR

NOTE:

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

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

ACTIVE TEST

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

BUZZER

BUZZER : CONSULT Function (BCM - BUZZER)

INFOID:000000009325324

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

NOTE:

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

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

ACTIVE TEST

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

DIAGNOSIS SYSTEM (BCM)

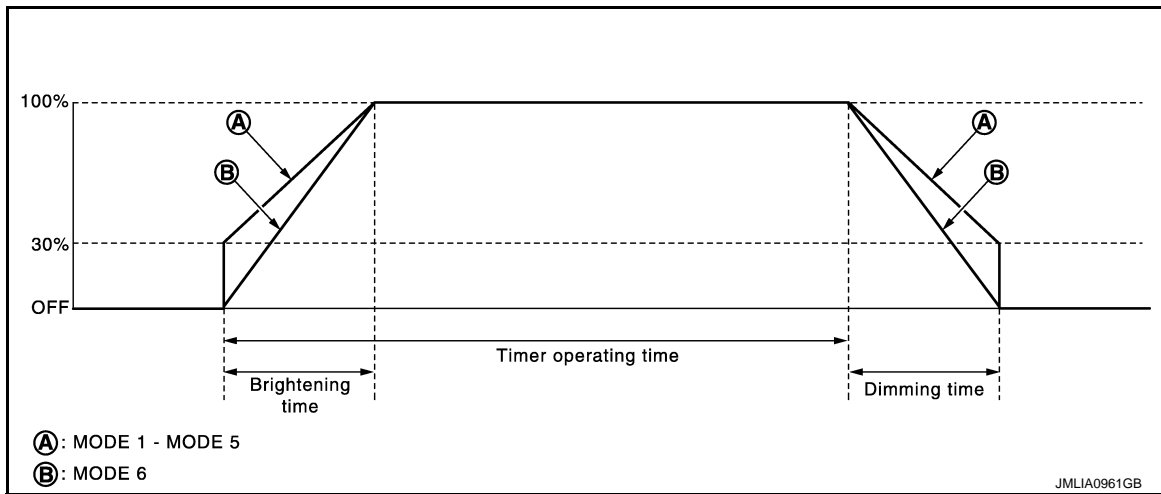
< SYSTEM DESCRIPTION >

INT LAMP

INT LAMP : CONSULT Function (BCM - INT LAMP)

INFOID:000000009325320

WORK SUPPORT



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

DATA MONITOR

NOTE:

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

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

| Monitor item [Unit] | Description |
|---------------------------|---|
| REQ SW-DR [On/Off] | Indicated [On/Off] condition of door request switch (driver side) |
| REQ SW-AS [On/Off] | Indicated [On/Off] condition of door request switch (passenger side) |
| REQ SW-RR [On/Off] | NOTE: This item is displayed, but cannot be monitored |
| REQ SW-RL [On/Off] | NOTE: This item is displayed, but cannot be monitored |
| PUSH SW [On/Off] | Indicates [On/Off] condition of push-button ignition switch |
| UNLK SEN -DR [On/Off] | Indicates [On/Off] condition of driver door UNLOCK status |
| DOOR SW-DR [On/Off] | Indicated [On/Off] condition of front door switch (driver side) |
| DOOR SW-AS [On/Off] | Indicated [On/Off] condition of front door switch (passenger side) |
| DOOR SW-RR [On/Off] | Indicated [On/Off] condition of rear door switch RH |
| DOOR SW- RL [On/Off] | Indicated [On/Off] condition of rear door switch LH |
| DOOR SW- BK [On/Off] | Indicated [On/Off] condition of back door switch |
| CDL LOCK SW [On/Off] | Indicated [On/Off] condition of lock signal from door lock unlock switch |
| CDL UNLOCK SW [On/Off] | Indicated [On/Off] condition of unlock signal from door lock unlock switch |
| KEY CYL LK-SW [On/Off] | Indicated [On/Off] condition of lock signal from door key cylinder switch |
| KEY CYL UN-SW [On/Off] | Indicated [On/Off] condition of unlock signal from door key cylinder switch |
| TRNK/HAT MNTR [On/Off] | NOTE: This item is displayed, but cannot be monitored |
| RKE-LOCK [On/Off] | Indicates [On/Off] condition of LOCK signal from Intelligent Key |
| RKE-UNLOCK [On/Off] | Indicates [On/Off] condition of UNLOCK signal from Intelligent Key |

ACTIVE TEST

| Test item | Operation | Description |
|----------------|-----------|--|
| INT LAMP | On | Outputs the interior room lamp control signal. |
| | Off | Stops the interior room lamp control signal. |
| STEP LAMP TEST | On | Outputs the step lamp control signal. |
| | Off | Stops the step lamp control signal. |

HEADLAMP

HEADLAMP : CONSULT Function (BCM - HEAD LAMP)

INFOID:000000009325317

WORK SUPPORT

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

| Service item | Setting item | Setting |
|------------------------------------|----------------------|---|
| CUSTOM A/LIGHT SETTING | MODE 1* ¹ | Normal |
| | MODE 2 | More sensitive setting than normal setting (Turns ON earlier than normal operation) |
| | MODE 3 | More sensitive setting than MODE 2 (Turns ON earlier than MODE 2) |
| | MODE 4 | Less sensitive setting than normal setting (Turns ON later than normal operation) |
| BATTERY SAVER SET | On* ¹ | With the exterior lamp battery saver function |
| | Off | Without the exterior lamp battery saver function |
| ILL DELAY SET | MODE 1* ¹ | 45 sec. |
| | 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. |
| | | Sets delay timer function timer operation time (All doors closed) |
| AUTO LIGHT LOGIC SET* ² | MODE 1* ¹ | With twilight ON custom & with wiper INT, LO and HI |
| | MODE 2 | With twilight ON custom & with wiper LO and HI |
| | MODE 3 | With twilight ON custom & without |
| | MODE 4 | Without twilight ON custom & with wiper INT, LO and HI |
| | MODE 5 | Without twilight ON custom & with wiper LO and HI |
| | MODE 6 | Without twilight ON custom & without |

*¹: Factory setting

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

DATA MONITOR

NOTE:

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

| Monitor item [Unit] | Description |
|--|--|
| PUSH SW [On/Off] | Indicates [On/Off] condition of push-button ignition switch |
| ENGINE STATE [Stop/Stall/Crank/Run] | Indicates [Stop/Stall/Crank/Run] condition of engine states |
| VEH SPEED 1 [km/h] | Display the vehicle speed signal received from combination meter by numerical value [Km/h] |

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

| 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 [On/Off] | |
| FR FOG SW [On/Off] | |
| RR FOG SW [Off] | |
| DOOR SW-DR [On/Off] | Indicated [On/Off] condition of front door switch (driver side) |
| DOOR SW-AS [On/Off] | Indicated [On/Off] condition of front door switch (passenger side) |
| DOOR SW-RR [On/Off] | Indicated [On/Off] condition of rear door switch RH |
| DOOR SW- RL [On/Off] | Indicated [On/Off] condition of rear door switch LH |
| DOOR SW-BK [On/Off] | Indicated [On/Off] condition of back door switch |
| OPTICAL SENSOR [Off] | NOTE: This item is displayed, but cannot be monitored |
| OPTI SEN (DTCT) [V] | The value of outside brightness voltage input from the optical sensor |
| OPTI SEN (FILT) [V] | The value of outside brightness voltage filtered by BCM |

ACTIVE TEST

| Test item | Operation | Description |
|-------------|-----------|---|
| TAIL LAMP | On | Transmits the position light request signal to IPDM E/R via CAN communication to turn the tail lamp ON |
| | Off | Stops the tail lamp request signal transmission |
| HEAD LAMP | Hi | Transmits the high beam request signal via CAN communication to turn the headlamp (HI) |
| | Lo | Transmits the low beam request signal via CAN communication to turn the headlamp (LO) |
| | Off | Stops the high & low beam request signal transmission |
| FR FOG LAMP | On | Transmits the front fog lights request signal to IPDM E/R via CAN communication to turn the front fog lamp ON |
| | Off | Stops the front light request signal transmission |

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

| Test item | Operation | Description |
|------------------------|-----------|--|
| RR FOG LAMP | On | NOTE: This item is indicated, but can not tested |
| | Off | |
| DAYTIME RUNNING LIGHT* | On | Transmits the front fog lights request signal to IPDM E/R via CAN communication to turn the front fog lamp ON (daytime running light system) |
| | Off | Stops the front light request signal transmission (daytime running light system) |
| ILL DIM SIGNAL | On | <ul style="list-style-type: none"> Transmits the dimmer signal to combination meter via CAN communication and dims combination meter Transmits the dimmer signal to AV control unit and dims display |
| | Off | Stops the dimmer signal transmission |

*: Only models for Canada display this item.

WIPER

WIPER : CONSULT Function (BCM - WIPER)

INFOID:000000009325322

WORK SUPPORT

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

*:Factory setting

DATA MONITOR

NOTE:

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

| Monitor Item [Unit] | Description |
|---------------------------|---|
| PUSH SW [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 |

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

| Monitor Item [Unit] | Description |
|---|---|
| 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 WSR SW [Off/On] | NOTE: This item is indicated, but not monitored |
| RAIN SENSOR [OFF/LOW/HIGH/SPLASH/NG] | Request signal from rain sensor detected by BCM is displayed |

ACTIVE TEST

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

*: The item is displayed but not operated on models without headlamp washer.

FLASHER

FLASHER : CONSULT Function (BCM - FLASHER)

INFOID:000000009325319

WORK SUPPORT

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

*: Factory setting

DATA MONITOR

NOTE:

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

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

| Monitor item [Unit] | Description |
|---------------------------|--|
| REQ SW-DR [On/Off] | Indicates [On/Off] condition of door request switch (driver side) |
| REQ SW-AS [On/Off] | Indicates [On/Off] condition of door request switch (passenger side) |
| PUSH SW [On/Off] | Indicates [On/Off] condition of 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] | Indicates [On/Off] condition of LOCK signal from Intelligent Key |
| RKE-UNLOCK [On/Off] | Indicates [On/Off] condition of UNLOCK signal from Intelligent Key |
| RKE-PANIC [On/Off] | Indicates [On/Off] condition of PANIC button of Intelligent Key |

ACTIVE TEST

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

INTELLIGENT KEY

INTELLIGENT KEY : CONSULT Function (BCM - INTELLIGENT KEY)

INFOID:000000009325312

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 <ul style="list-style-type: none"> On: Operate Off: Non-operation |
| ENGINE START BY I-KEY | Engine start function mode can be changed to operation with this mode <ul style="list-style-type: none"> On: Operate Off: Non-operation |
| TRUNK/GLASS HATCH OPEN | Buzzer reminder function mode by back door opener switch can be changed to operation with this mode <ul style="list-style-type: none"> On: Operate Off: Non-operation |
| PANIC ALARM SET | Panic alarm button pressing time on Intelligent Key button can be selected from the following with this mode <ul style="list-style-type: none"> MODE 1: 0.5 sec. MODE 2: Non-operation MODE 3: 1.5 sec. |

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

| Monitor item | Description |
|--------------------------|--|
| TRUNK OPEN DELAY | Back door open button pressing to Intelligent Key button can be selected as per the following in this mode <ul style="list-style-type: none"> • MODE 1: Press and hold • MODE 2: Press twice • MODE 3: Press and hold, or press twice |
| LO- BATT OF KEY FOB WARN | Intelligent Key low battery warning mode can be changed to operation with this mode <ul style="list-style-type: none"> • On: Operate • Off: Non-operation |
| ANTI KEY LOCK IN FUNCTI | Key reminder function mode can be changed to operation with this mode <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • Horn Chirp: Sound horn • Buzzer: Sound Intelligent Key warning buzzer • Off: Non-operation |
| ANS BACK I-KEY UNLOCK | Buzzer reminder function (unlock operation) mode by door request switch can be changed to operation with this mode <ul style="list-style-type: none"> • On: Operate • Off: Non-operation |
| SHORT CRANKING OUTPUT | Starter motor can operate during the times below <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • MODE 1: OFF • MODE 2: 30 sec. • MODE 3: 1 minute • MODE 4: 2 minutes • MODE 5: 3 minutes • MODE 6: 4 minutes • MODE 7: 5 minutes |
| HORN WITH KEYLESS LOCK | Horn reminder function mode by Intelligent Key button can be selected from the following with this mode <ul style="list-style-type: none"> • On: Operate • Off: Non-operation |
| PW DOWN SET | Unlock button pressing time on Intelligent Key button can be selected from the following with this mode <ul style="list-style-type: none"> • MODE 1: 3 sec. • MODE 2: Non-operation • MODE 3: 5 sec. |
| WELCOME LIGHT SELECT | Welcome light function mode can be selected from the following with this mode <ul style="list-style-type: none"> • Puddle/Outside Handle • Room lamp • Head & Tail Lamps (this item is displayed, but cannot be used) • Heart Beat |
| WELCOME LIGHT OP SET | Welcome light function mode can be changed to operation with this mode <ul style="list-style-type: none"> • On: Operate • Off: Non-operation |

SELF-DIAG RESULT

Refer to [BCS-57, "DTC Index"](#).

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

DATA MONITOR

NOTE:

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

| Monitor Item | Condition |
|----------------|--|
| REQ SW -DR | Indicates [On/Off] condition of door request switch (driver side) |
| REQ SW -AS | Indicates [On/Off] condition of door request switch (passenger side) |
| REQ SW -BD/TR | Indicates [On/Off] condition of back door request switch |
| PUSH SW | Indicates [On/Off] condition of push-button ignition switch |
| CLUTCH SW | NOTE: This item is displayed, but cannot be monitored |
| BRAKE SW 1 | Indicates [On/Off]* condition of stop lamp switch power supply |
| BRAKE SW 2 | Indicates [On/Off] condition of stop lamp switch |
| DETE/CANCL SW | Indicates [On/Off] condition of P position |
| SFT PN/N SW | Indicates [On/Off] condition of P or N position |
| S/L -LOCK | NOTE: This item is displayed, but cannot be monitored |
| S/L -UNLOCK | NOTE: This item is displayed, but cannot be monitored |
| S/L RELAY -F/B | NOTE: This item is displayed, but cannot be monitored |
| UNLK SEN -DR | Indicates [On/Off] condition of driver door UNLOCK status |
| PUSH SW -IPDM | Indicates [On/Off] condition of push-button ignition switch |
| 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 unlock sensor |
| DOOR STAT-AS | Indicates [LOCK/READY/UNLK] condition of passenger side door status |
| ID OK FLAG | Indicates [Set/Reset] condition of key ID |
| PRMT ENG STRT | Indicates [Set/Reset] condition of engine start possibility |
| PRMT RKE STRT | NOTE: This item is displayed, but cannot be monitored |
| TRNK/HAT MNTR | NOTE: This item is displayed, but cannot be monitored |
| RKE-LOCK | Indicates [On/Off] condition of LOCK signal from Intelligent Key |
| RKE-UNLOCK | Indicates [On/Off] condition of UNLOCK signal from Intelligent Key |
| RKE-TR/BD | NOTE: This item is displayed, but cannot be monitored |

A

B

C

D

E

F

G

H

I

J

K

L

BCS

N

O

P

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

| Monitor Item | Condition |
|------------------------|---|
| 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 |
| SHFTLCK SLNID PWR SPLY | Indicates [On/Off] condition of shift lock solenoid |

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

ACTIVE TEST

| Test item | Description |
|------------------|--|
| BATTERY SAVER | This test is able to check interior room lamp operation <ul style="list-style-type: none"> • On: Operate • Off: Non-operation |
| OUTSIDE BUZZER | This test is able to check Intelligent Key warning buzzer operation <ul style="list-style-type: none"> • On: Operate • Off: Non-operation |
| INSIDE BUZZER | This test is able to check warning chime in combination meter operation <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • On: Operate • Off: Non-operation |
| LCD | This test is able to check meter display information <ul style="list-style-type: none"> • Engine start information displays when "BP N" on CONSULT screen is touched • Engine start information displays when "BP I" on CONSULT screen is touched • Key ID warning displays when "ID NG" on CONSULT screen is touched • ROTAT: This item is displayed, but cannot be monitored • P position warning displays when "SFT P" on CONSULT screen is touched • INSR: This item is displayed, but cannot be monitored • BATT: This item is displayed, but cannot be monitored • Take away through window warning displays when "NO KY" on CONSULT screen is touched • Take away warning display when "OUTKEY" on CONSULT screen is touched • OFF position warning display when "LK WN" on 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 |
| P RANGE | This test is able to check A/T shift selector power supply <ul style="list-style-type: none"> • On: Operate • Off: Non-operation |
| ENGINE SW ILLUMI | This test is able to check push-button ignition switch illumination operation Push-ignition switch illumination illuminates when "ON" on CONSULT screen is touched |
| LOCK INDICATOR | This test is able to check LOCK indicator (push-button ignition switch) operation <ul style="list-style-type: none"> • On: Operate • Off: Non-operation |
| ACC INDICATOR | This test is able to check ACC indicator (push-button ignition switch) operation <ul style="list-style-type: none"> • On: Operate • Off: Non-operation |

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

| Test item | Description |
|-----------------|---|
| IGNITION ON IND | This test is able to check ON indicator (push-button ignition switch) operation <ul style="list-style-type: none"> • On: Operate • Off: Non-operation |
| HORN | This test is able to check horn operation <ul style="list-style-type: none"> • On: Operate • Off: Non-operation |
| TRUNK/BACK DOOR | NOTE: This item is displayed, but cannot be used |

COMB SW

COMB SW : CONSULT Function (BCM - COMB SW)

INFOID:000000009010754

DATA MONITOR

NOTE:

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

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

A

B

C

D

E

F

G

H

I

J

K

L

BCS

N

O

P

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

| Monitor item [UNIT] | Description |
|-----------------------|--|
| FR FOG SW [Off/On] | Displays the status of the FR FOG switch in combination switch judged by BCM with the combination switch reading function. |
| RR FOG SW [Off/On] | NOTE: The item is indicated, but not monitored. |

BCM

BCM : CONSULT Function (BCM - BCM)

INFOID:000000009010755

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:000000009325315

DATA MONITOR

NOTE:

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

| Monitor item | Content |
|----------------|---|
| CONFIRM 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 touched. |

WORK SUPPORT

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

BATTERY SAVER

BATTERY SAVER : CONSULT Function (BCM - BATTERY SAVER)

INFOID:000000009325321

WORK SUPPORT

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

| 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 | |

*:Factory setting

DATA MONITOR

NOTE:

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

| Monitor item [Unit] | Description |
|---------------------------|---|
| REQ SW-DR [On/Off] | Indicated [On/Off] condition of door request switch (driver side) |
| REQ SW-AS [On/Off] | Indicated [On/Off] condition of door request switch (passenger side) |
| REQ SW-RR [On/Off] | NOTE: This item is displayed, but cannot be monitored |
| REQ SW-RL [On/Off] | NOTE: This item is displayed, but cannot be monitored |
| PUSH SW [On/Off] | Indicates [On/Off] condition of push-button ignition switch |
| UNLK SEN -DR [On/Off] | Indicates [On/Off] condition of driver door UNLOCK status |
| DOOR SW-DR [On/Off] | Indicated [On/Off] condition of front door switch (driver side) |
| DOOR SW-AS [On/Off] | Indicated [On/Off] condition of front door switch (passenger side) |
| DOOR SW-RR [On/Off] | Indicated [On/Off] condition of rear door switch RH |
| DOOR SW- RL [On/Off] | Indicated [On/Off] condition of rear door switch LH |
| DOOR SW- BK [On/Off] | Indicated [On/Off] condition of back door switch |
| CDL LOCK SW [On/Off] | Indicated [On/Off] condition of lock signal from door lock unlock switch |
| CDL UNLOCK SW [On/Off] | Indicated [On/Off] condition of unlock signal from door lock unlock switch |
| KEY CYL LK-SW [On/Off] | Indicated [On/Off] condition of lock signal from door key cylinder switch |
| KEY CYL UN-SW [On/Off] | Indicated [On/Off] condition of unlock signal from door key cylinder switch |
| TRNK/HAT MNTR [On/Off] | NOTE: This item is displayed, but cannot be monitored |
| RKE-LOCK [On/Off] | Indicates [On/Off] condition of LOCK signal from Intelligent Key |
| RKE-UNLOCK [On/Off] | Indicates [On/Off] condition of UNLOCK signal from Intelligent Key |

ACTIVE TEST

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

| Test item | Operation | Description |
|---------------|-----------|--|
| BATTERY SAVER | Off | Cuts the interior room lamp power supply. |
| | On | Outputs the interior room lamp power supply. |

TRUNK

TRUNK : CONSULT Function (BCM - TRUNK)

INFOID:000000009325313

DATA MONITOR

NOTE:

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

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

THEFT ALM

THEFT ALM : CONSULT Function (BCM - THEFT)

INFOID:000000009325314

DATA MONITOR

NOTE:

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

| Monitored Item | Description |
|----------------|---|
| REQ SW -DR | Indicates [ON/OFF] condition of door request switch (driver side). |
| REQ SW -AS | Indicates [ON/OFF] condition of door request switch (passenger side). |
| REQ SW -RR | NOTE: This item is displayed, but cannot be monitored. |
| REQ SW -RL | NOTE: This item is displayed, but cannot be monitored. |
| REQ SW -BD/TR | Indicates [ON/OFF] condition of back door request switch. |
| PUSH SW | Indicates [ON/OFF] condition of push-button ignition switch |
| UNLK SEN -DR | Indicates [ON/OFF] condition of driver door UNLOCK status. |
| DOOR SW-DR | Indicates [ON/OFF] condition of front door switch (driver side). |
| DOOR SW-AS | Indicates [ON/OFF] condition of front door switch (passenger side). |
| DOOR SW-RR | Indicates [ON/OFF] condition of rear door switch RH. |
| DOOR SW-RL | Indicates [ON/OFF] condition of rear door switch LH. |
| DOOR SW-BK | Indicates [ON/OFF] condition of back door switch. |
| CDL LOCK SW | Indicates [ON/OFF] condition of lock signal from door lock/unlock switch LH and RH. |
| CDL UNLOCK SW | Indicates [ON/OFF] condition of unlock signal from door lock/unlock switch LH and RH. |
| KEY CYL LK-SW | Indicates [ON/OFF] condition of lock signal from door key cylinder. |
| KEY CYL UN-SW | Indicates [ON/OFF] condition of unlock signal from door key cylinder. |
| TR/BD OPEN SW | Indicates [ON/OFF] condition of back door opener switch. |

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

| Monitored Item | Description |
|----------------|---|
| TRNK/HAT MNTR | NOTE: This item is displayed, but cannot be monitored. |
| RKE-LOCK | Indicates [ON/OFF] condition of LOCK signal from Intelligent Key. |
| RKE-UNLOCK | Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key. |
| RKE-TR/BD | NOTE: This item is displayed, but cannot be monitored. |

WORK SUPPORT

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

ACTIVE TEST

| Test Item | Description |
|-----------------------|--|
| THEFT IND | This test is able to check security indicator lamp operation. Security indicator lamp is turned on when "ON" on CONSULT screen is touched. |
| VEHICLE SECURITY HORN | This test is able to check horn operation. Horn is activated for 0.5 seconds after "ON" on CONSULT 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. |

RETAINED PWR

RETAINED PWR : CONSULT Function (BCM - RETAINED PWR)

INFOID:000000009325316

Data monitor

NOTE:

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

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

BCS

SIGNAL BUFFER

SIGNAL BUFFER : CONSULT Function (BCM - SIGNAL BUFFER)

INFOID:000000009010761

DATA MONITOR

NOTE:

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

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

ACTIVE TEST

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

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

BCM

< ECU DIAGNOSIS INFORMATION >

ECU DIAGNOSIS INFORMATION

BCM

Reference Value

INFOID:000000009010762

VALUES ON THE DIAGNOSIS TOOL

NOTE:

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

CONSULT MONITOR ITEM

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

A
B
C
D
E
F
G
H
I
J
K
L
N
O
P

BCS

BCM

< ECU DIAGNOSIS INFORMATION >

| Monitor Item | Condition | Value/Status |
|---------------|--|--------------|
| FR FOG SW | Front fog lamp switch OFF | Off |
| | Front fog lamp switch ON | On |
| RR FOG SW | NOTE: The item is indicated, but not monitored. | Off |
| DOOR SW-DR | Driver door closed | Off |
| | Driver door opened | On |
| DOOR SW-AS | Passenger door closed | Off |
| | Passenger door opened | On |
| DOOR SW-RR | Rear RH door closed | Off |
| | Rear RH door opened | On |
| DOOR SW-RL | Rear LH door closed | Off |
| | Rear LH door opened | On |
| DOOR SW-BK | Back door closed | Off |
| | Back door opened | On |
| CDL LOCK SW | Other than power door lock switch LOCK | Off |
| | Power door lock switch LOCK | On |
| CDL UNLOCK SW | Other than power door lock switch UNLOCK | Off |
| | Power door lock switch UNLOCK | On |
| KEY CYL LK-SW | Other than driver door key cylinder LOCK position | Off |
| | Driver door key cylinder LOCK position | On |
| KEY CYL UN-SW | Other than driver door key cylinder UNLOCK position | Off |
| | Driver door key cylinder UNLOCK position | On |
| HAZARD SW | Hazard switch is OFF | Off |
| | Hazard switch is ON | On |
| REAR DEF SW | Rear window defogger switch OFF | Off |
| | Rear window defogger switch ON | On |
| H/L WASH SW | NOTE: The item is indicated, but not monitored. | Off |
| TR/BD OPEN SW | Back door opener switch OFF | Off |
| | While the back door opener switch is turned ON | On |
| TRNK/HAT MNTR | NOTE: The item is indicated, but not monitored. | Off |
| FAN ON SIG | NOTE: The item is indicated, but not monitored. | Off |
| AIR COND SW | NOTE: The item is indicated, but not monitored. | Off |
| RKE-LOCK | LOCK button of the key is not pressed | Off |
| | LOCK button of the key is pressed | On |
| RKE-UNLOCK | UNLOCK button of the key is not pressed | Off |
| | UNLOCK button of the key is pressed | On |
| RKE-TR/BD | 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 |

BCM

< ECU DIAGNOSIS INFORMATION >

| Monitor Item | Condition | Value/Status | |
|-----------------|--|-----------------|-----|
| OPTI SEN (DTCT) | Bright outside of the vehicle | Close to 5 V | A |
| | Dark outside of the vehicle | Close to 0 V | |
| OPTI SEN (FILT) | Bright outside of the vehicle (Lighting switch AUTO) | Close to 5 V | B |
| | Dark outside of the vehicle (Lighting switch AUTO) | Close to 1.50 V | |
| OPTICAL SENSOR | NOTE: The item is indicated, but not monitored. | Off | C |
| RAIN SENSOR | No rain (or very light rain) | Off | |
| | Light rain | LOW | D |
| | Heavy rain | HIGH | |
| | When liquid is splashed on the front window | SPLSH | |
| | Rain sensor internal error | NG | E |
| 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 | F |
| | Passenger door request switch is pressed | On | |
| REQ SW -RR | NOTE: The item is indicated, but not monitored. | Off | G |
| REQ SW -RL | NOTE: The item is indicated, but not monitored. | Off | |
| REQ SW -BD/TR | Back door request switch is not pressed | Off | H |
| | Back door request switch is pressed | On | |
| PUSH SW | Push-button ignition switch (push switch) is not pressed | Off | I |
| | Push-button ignition switch (push switch) is pressed | On | |
| CLUCH SW | NOTE: The item is indicated, but not monitored. | Off | J |
| BRAKE SW 1 | The brake pedal is not depressed | Off | |
| | The brake pedal is depressed | On | |
| BRAKE SW 2 | The brake pedal is depressed when No. 7 fuse is blown | Off | K |
| | The brake pedal is not depressed when No. 7 fuse is blown, or No. 7 fuse is normal | On | |
| DETE/CANCL SW | Selector lever in P position | Off | L |
| | Selector lever in any position other than P | On | |
| SFT PN/N SW | Selector lever in any position other than P and N | Off | BCS |
| | Selector lever in P or N position | On | |
| S/L -LOCK | NOTE: The item is indicated, but not monitored. | Off | N |
| 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 | O |
| UNLK SEN -DR | Driver door is locked | Off | |
| | Driver door is unlocked | On | P |
| 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 | |

BCM

< ECU DIAGNOSIS INFORMATION >

| Monitor Item | Condition | Value/Status |
|----------------|--|-----------------------------------|
| DETE SW -IPDM | Selector lever in any position other than P | Off |
| | Selector lever in P position | On |
| SFT PN -IPDM | Selector lever in any position other than P and N | Off |
| | Selector lever in P or N position | On |
| SFT P -MET | Selector lever in any position other than P | Off |
| | Selector lever in P position | On |
| SFT N -MET | Selector lever in any position other than N | Off |
| | Selector lever in N position | On |
| ENGINE STATE | Engine stopped | Stop |
| | While the engine stalls | Stall |
| | At engine cranking | Crank |
| | Engine running | Run |
| S/L LOCK-IPDM | 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 speedometer reading |
| VEH SPEED 2 | While driving | Equivalent to speedometer 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. | — |
| CONFIRM ID ALL | The key ID that the NATS antenna amp. receives is not recognized by any key ID registered to BCM. | Yet |
| | The key ID that the NATS antenna amp. receives is recognized by any key ID registered to BCM. | Done |
| CONFIRM ID4 | The key ID that the NATS antenna amp. receives is not recognized by the fourth key ID registered to BCM. | Yet |
| | The key ID that the NATS antenna amp. receives is recognized by the fourth key ID registered to BCM. | Done |

BCM

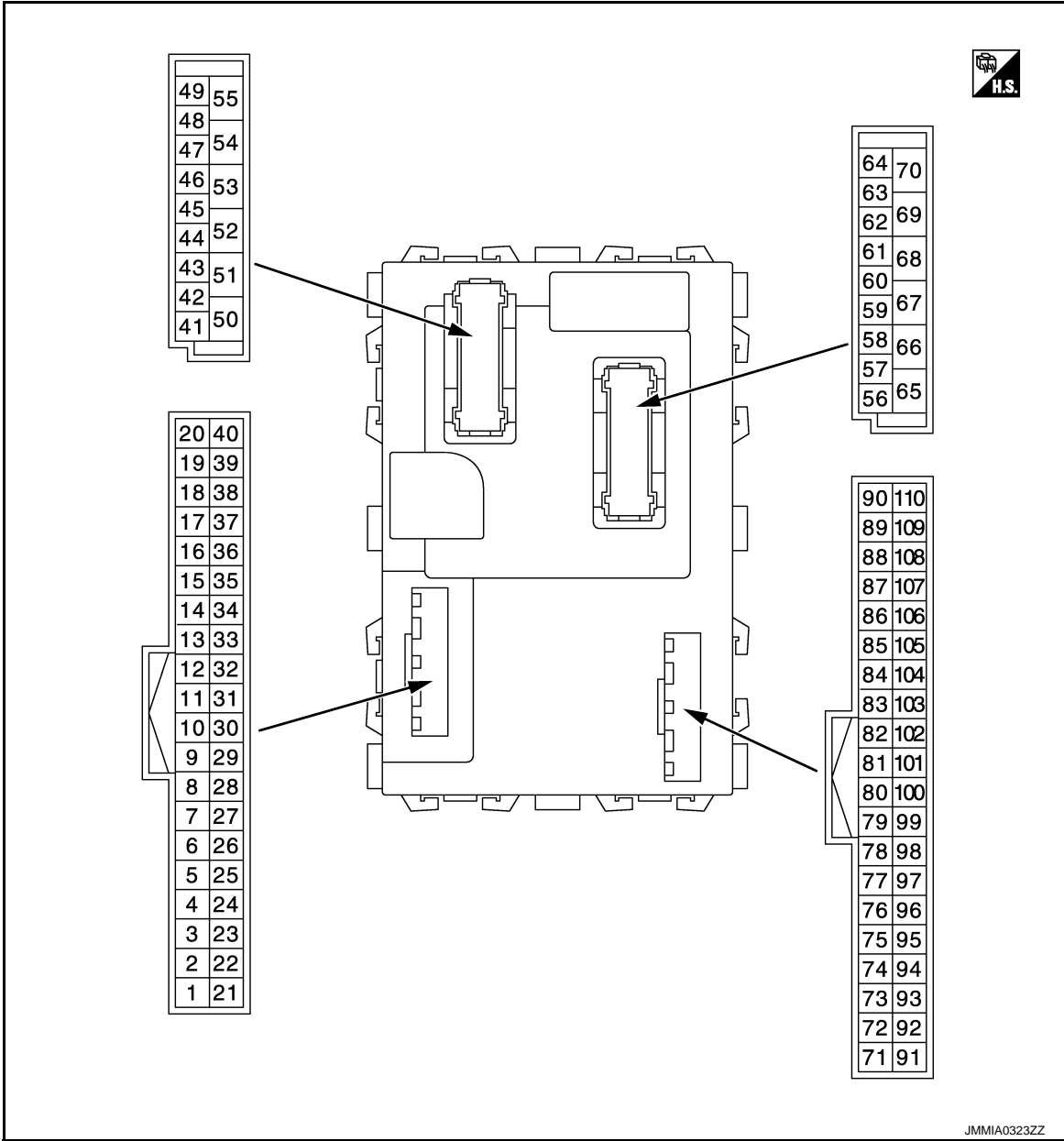
< ECU DIAGNOSIS INFORMATION >

| Monitor Item | Condition | Value/Status | |
|------------------------|---|--------------|-----|
| CONFIRM ID3 | The key ID that the NATS antenna amp. receives is not recognized by the third key ID registered to BCM. | Yet | A |
| | The key ID that the NATS antenna amp. receives is recognized by the third key ID registered to BCM. | Done | B |
| CONFIRM ID2 | The key ID that the NATS antenna amp. receives is not recognized by the second key ID registered to BCM. | Yet | C |
| | The key ID that the NATS antenna amp. receives is recognized by the second key ID registered to BCM. | Done | D |
| CONFIRM ID1 | The key ID that the NATS antenna amp. receives is not recognized by the first key ID registered to BCM. | Yet | E |
| | The key ID that the NATS antenna amp. receives is recognized by the first key ID registered to BCM. | Done | F |
| NOT REGISTERED | BCM detects registered key ID, or BCM does not detect key ID. | ID OK | G |
| | BCM detects non-registration key ID. | ID NG | H |
| TP 4 | The ID of fourth key is not registered to BCM | Yet | I |
| | The ID of fourth key is registered to BCM | Done | J |
| TP 3 | The ID of third key is not registered to BCM | Yet | K |
| | The ID of third key is registered to BCM | Done | L |
| TP 2 | The ID of second key is not registered to BCM | Yet | M |
| | The ID of second key is registered to BCM | Done | N |
| TP 1 | The ID of first key is not registered to BCM | Yet | O |
| | The ID of first key is registered to BCM | Done | P |
| AIR PRESS FL | NOTE: The item is indicated, but not used. | 0kPa | |
| AIR PRESS FR | NOTE: The item is indicated, but not used. | 0kPa | |
| AIR PRESS RR | NOTE: The item is indicated, but not used. | 0kPa | |
| AIR PRESS RL | NOTE: The item is indicated, but not used. | 0kPa | |
| ID REGST FL1 | NOTE: The item is indicated, but not used. | Done | |
| ID REGST FR1 | NOTE: The item is indicated, but not used. | Done | |
| ID REGST RR1 | NOTE: The item is indicated, but not used. | Done | BCS |
| WARNING LAMP | NOTE: The item is indicated, but not used. | Off | |
| BUZZER | NOTE: The item is indicated, but not used. | Off | |
| SHFTLCK SLNID PWR SPLY | Normal engine run mode (brake pedal is depressed) | On | |
| | <ul style="list-style-type: none"> • Normal engine run mode (brake pedal is not depressed) • Remote engine run mode | Off | |

BCM

< ECU DIAGNOSIS INFORMATION >

TERMINAL LAYOUT



PHYSICAL VALUES

BCM

< ECU DIAGNOSIS INFORMATION >

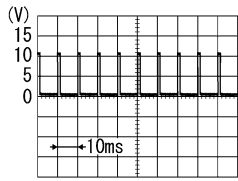
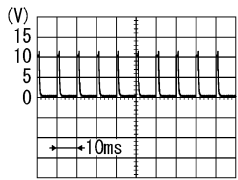
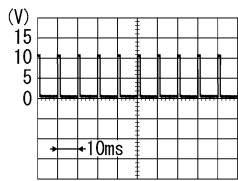
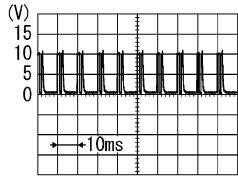
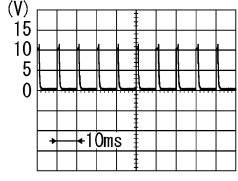
| Terminal No. (Wire color) | | Description | | Condition | Value (Approx.) | |
|------------------------------|--------|-------------------------------|------------------|---|--------------------------|---|
| + | - | Signal name | Input/ Output | | | |
| 2 (BR/Y) | Ground | Combination switch INPUT 5 | Input | Combination switch (Wiper volume dial 4) | All switches OFF | 0 V |
| | | | | | Turn signal switch RH | <p style="text-align: right; font-size: small;">PKIB4958J</p> |
| | | | | | Lighting switch HI | |
| | | | | | Lighting switch 1ST | |
| | | | | | Lighting switch 2ND | |
| 3 (GR) | Ground | Combination switch INPUT 4 | Input | Combination switch (Wiper volume dial 4) | All switches OFF | 0 V |
| | | | | | Turn signal switch LH | <p style="text-align: right; font-size: small;">PKIB4958J</p> |
| | | | | | Lighting switch PASS | |
| | | | | | Lighting switch 2ND | |
| | | | | | Front fog lamp switch ON | |
| 4 (L) | Ground | Combination switch INPUT 3 | Input | Combination switch (Wiper volume dial 4) | All switches OFF | 0 V |
| | | | | | Front wiper switch LO | <p style="text-align: right; font-size: small;">PKIB4958J</p> |
| | | | | | Front wiper switch MIST | |
| | | | | | Front wiper switch AUTO | |
| | | | | | Lighting switch AUTO | |

A
B
C
D
E
F
G
H
I
J
K
L
N
O
P

BCS

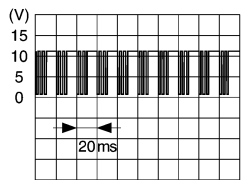
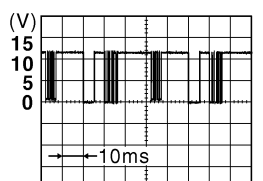
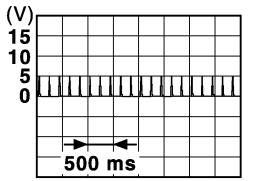
BCM

< ECU DIAGNOSIS INFORMATION >

| Terminal No. (Wire color) | | Description | | Condition | Value (Approx.) | |
|--|---|-------------------------------|------------------|-----------------------|---|--|
| + | - | Signal name | Input/ Output | | | |
| 5 (G) | Ground | Combination switch INPUT 2 | Input | Combination switch | All switches OFF (Wiper volume dial 4) | 0 V |
| | | | | | Front washer switch ON (Wiper volume dial 4) |  |
| | | | | | Rear washer switch ON (Wiper volume dial 4) | |
| | | | | | Any of the condition below with all switches OFF <ul style="list-style-type: none"> • Wiper volume dial 1 • Wiper volume dial 5 • Wiper volume dial 6 | |
| Rear wiper switch ON (Wiper volume dial 4) |  | 0.8 V | | | | |
| 6 (V) | Ground | Combination switch INPUT 1 | Input | Combination switch | All switches OFF (Wiper volume dial 4) | 0 V |
| | | | | | Front wiper switch HI (Wiper volume dial 4) |  |
| | | | | | Rear wiper switch INT (Wiper volume dial 4) | |
| | | | | | Wiper volume dial 3 (All switches OFF) | 1.0 V |
| Any of the condition below with all switches OFF <ul style="list-style-type: none"> • Wiper volume dial 1 • Wiper volume dial 2 |  | 1.9 V | | | | |
| Any of the condition below with all switches OFF <ul style="list-style-type: none"> • Wiper volume dial 6 • Wiper volume dial 7 |  | 0.8 V | | | | |

BCM

< ECU DIAGNOSIS INFORMATION >

| Terminal No. (Wire color) | | Description | | Condition | Value (Approx.) | |
|------------------------------|--------|--|------------------|---------------------|--|---|
| + | - | Signal name | Input/ Output | | | |
| 8 (V) | Ground | Power window switch communication | Input/ Output | Ignition switch ON |  <p style="text-align: center;">9.0 - 10 V</p> | |
| 9 (R) | Ground | Stop lamp switch 1 | Input | Stop lamp switch | OFF (Brake pedal is not depressed) | 0 V |
| | | | | | ON (Brake pedal is depressed) | Battery voltage |
| 11 (R) | Ground | Rain sensor serial link | Input/ Output | Ignition switch OFF | | 12 V |
| | | | | Ignition switch ON |  <p style="text-align: center;">8.0 - 9.0 V</p> | |
| 14 (P/B) | Ground | Optical sensor | Input | Ignition switch ON | When bright outside of the vehicle | Close to 5 V |
| | | | | | When dark outside of the vehicle | Close to 0 V |
| 16 (L/O) | Ground | Dimmer signal | Output | Ignition switch ON | Either of the following conditions | 0 V |
| | | | | | | The area around the vehicle is dark (Block the light from the optical sensor) |
| 17 (Y/G) | Ground | Sensor power supply | Output | Ignition switch | OFF, ACC | 0 V |
| | | | | | | ON |
| 18 (B/Y) | Ground | Receiver and sensor ground | Input | Ignition switch ON | 0 V | |
| 19 (BR) | Ground | Remote keyless entry receiver power supply | Output | Ignition switch OFF |  | |

A
B
C
D
E
F
G
H
I
J
K
L
N
O
P

BCS

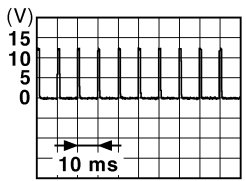
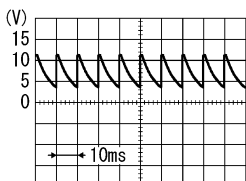
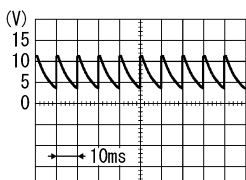
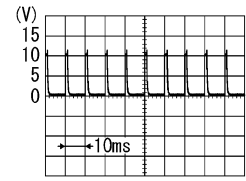
BCM

< ECU DIAGNOSIS INFORMATION >

| Terminal No. (Wire color) | | Description | | Condition | | Value (Approx.) |
|------------------------------|--------|---|------------------|-------------------------|--|--|
| + | - | Signal name | Input/ Output | | | |
| 20 (G/R) | Ground | Remote keyless entry receiver communication | Input | Ignition switch OFF | Waiting | <p style="text-align: right; font-size: small;">JMKIA3838GB</p> |
| | | | | | When operating either button on Intelligent Key | <p style="text-align: right; font-size: small;">JMKIA3841GB</p> |
| 21 (P) | Ground | NATS antenna amp. | Input/ Output | During waiting | Intelligent Key backside is contacted to push-button ignition switch, turn ignition switch ON. | Just after pressing push-button ignition switch. Pointer of tester should move. |
| 22 (W/B) | Ground | Remote keyless entry receiver RSSI | Input | Ignition switch OFF | Waiting | <p style="text-align: right; font-size: small;">JMKIA5952GB</p> |
| | | | | | When pressing and holding either button on Intelligent Key | <p style="text-align: right; font-size: small;">JMKIA5953GB</p> |
| 23 (GR/R) | Ground | Security indicator lamp | Output | Security indicator lamp | ON | 0 V |
| | | | | | Blinking (Ignition switch OFF) | <p style="text-align: right; font-size: small;">JPMIA0590GB</p> <p style="text-align: center;">11.0 - 12.0 V</p> |
| | | | | OFF | | Battery voltage |
| 24* (SB) | Ground | Dongle link | Input/ Output | Ignition switch OFF | | 5 V |
| 25 (LG/R) | Ground | NATS antenna amp. | Input/ Output | During waiting | Intelligent Key backside is contacted to push-button ignition switch, turn ignition switch ON. | Just after pressing push-button ignition switch. Pointer of tester should move. |

BCM

< ECU DIAGNOSIS INFORMATION >

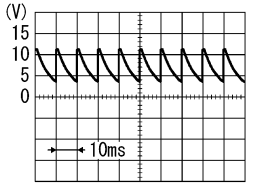
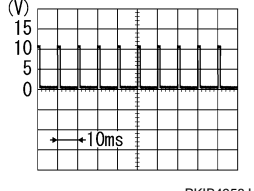
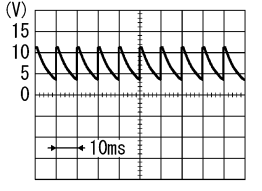
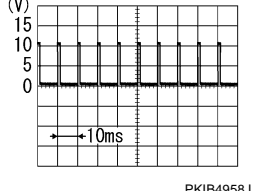
| Terminal No. (Wire color) | | Description | | Condition | Value (Approx.) |
|------------------------------|--------|--|------------------|---|--|
| + | - | Signal name | Input/ Output | | |
| 26 (O) | Ground | Intelligent Key identification | Output | Ignition switch OFF → ON, after unlocking door by 1st key registered to BCM | 5 V |
| | | | | Ignition switch OFF → ON, after unlocking door by 2nd key registered to BCM | 0 V |
| 29 (W) | Ground | Hazard switch | Input | Hazard switch | OFF 12 V ON 0 V |
| | | | | Pressed | 0 V |
| 30 (W/L) | Ground | Back door opener switch | Input | Back door opener switch | Not pressed  1.0 - 1.5 V |
| | | | | LOCK status (Unlock sensor switch OFF) |  7.0 - 8.0 V |
| 31 (W/G) | Ground | Front door lock assembly driver side (Unlock sensor) | Input | Driver door | UNLOCK status (Unlock sensor switch ON) 0 V |
| | | | | Combination switch | UNLOCK status (Unlock sensor switch ON) 0 V |
| 32 (LG) | Ground | Combination switch OUTPUT 5 | Output | Combination switch | All switches OFF (Wiper volume dial 4)  7.0 - 8.0 V |
| | | | | Front fog lamp switch ON (Wiper volume dial 4) |  1.0 V |
| | | | | Rear wiper switch ON (Wiper volume dial 4) | |
| | | | | Any of the condition below with all switches OFF | <ul style="list-style-type: none"> • Wiper volume dial 1 • Wiper volume dial 2 • Wiper volume dial 6 • Wiper volume dial 7 |

A
B
C
D
E
F
G
H
I
J
K
L
N
O
P

BCS

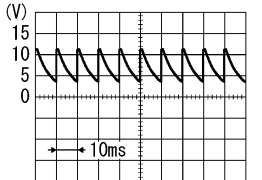
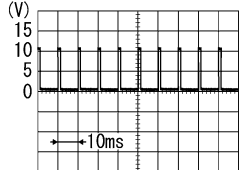
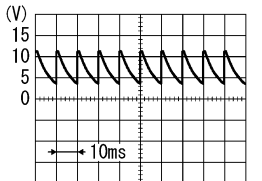
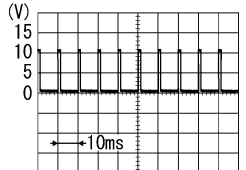
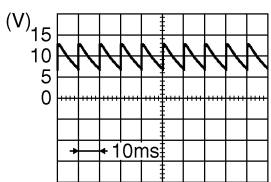
BCM

< ECU DIAGNOSIS INFORMATION >

| Terminal No. (Wire color) | | Description | | Condition | Value (Approx.) | |
|---|--------|--------------------------------|------------------|-----------------------|--|---|
| + | - | Signal name | Input/ Output | | | |
| 33 (Y) | Ground | Combination switch OUTPUT 4 | Output | Combination switch | All switches OFF (Wiper volume dial 4) |  7.0 - 8.0 V |
| | | | | | Lighting switch 1ST (Wiper volume dial 4) |  1.2 V |
| | | | | | Lighting switch AUTO (Wiper volume dial 4) | |
| | | | | | Rear wiper switch INT (Wiper volume dial 4) | |
| Any of the condition below with all switches OFF <ul style="list-style-type: none"> • Wiper volume dial 1 • Wiper volume dial 5 • Wiper volume dial 6 | | | | | | |
| 34 (W) | Ground | Combination switch OUTPUT 3 | Output | Combination switch | All switches OFF (Wiper volume dial 4) |  7.0 - 8.0 V |
| | | | | | Lighting switch 2ND (Wiper volume dial 4) |  1.2 V |
| | | | | | Lighting switch HI (Wiper volume dial 4) | |
| | | | | | Rear washer switch ON (Wiper volume dial 4) | |
| Any of the condition below with all switches OFF <ul style="list-style-type: none"> • Wiper volume dial 1 • Wiper volume dial 2 • Wiper volume dial 3 | | | | | | |

BCM

< ECU DIAGNOSIS INFORMATION >

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

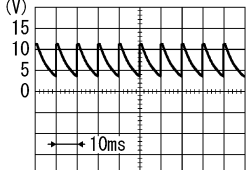
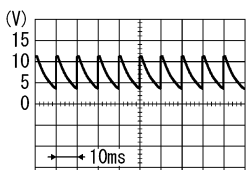
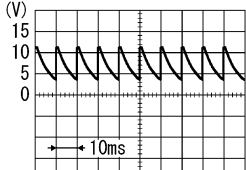
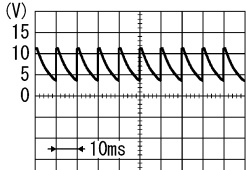
A
B
C
D
E
F
G
H
I
J
K
L

BCS

N
O
P

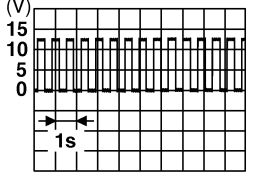
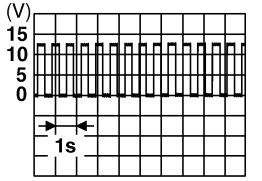
BCM

< ECU DIAGNOSIS INFORMATION >

| Terminal No. (Wire color) | | Description | | Condition | | Value (Approx.) |
|------------------------------|--------|--------------------------|------------------|---|--|--|
| + | - | Signal name | Input/ Output | | | |
| 44 (G/W) | Ground | Rear wiper stop position | Input | Ignition switch ON | Rear wiper stop position | 12 V |
| | | | | | Any position other than rear wiper stop position | 0 V |
| 45 (W) | Ground | Passenger door switch | Input | Passenger door switch | OFF (When passenger door closed) |  <p style="text-align: right; font-size: small;">PKIB4960J</p> <p style="text-align: center;">7.0 - 8.0 V</p> |
| | | | | | ON (When passenger door opened) | 0 V |
| 46 (GR) | Ground | Rear RH door switch | Input | Rear RH door switch | OFF (When rear RH door closed) |  <p style="text-align: right; font-size: small;">PKIB4960J</p> <p style="text-align: center;">7.0 - 8.0 V</p> |
| | | | | | ON (When rear RH door opened) | 0 V |
| 47 (GR/R) | Ground | Driver door switch | Input | Driver door switch | OFF (When driver door closed) |  <p style="text-align: right; font-size: small;">PKIB4960J</p> <p style="text-align: center;">7.0 - 8.0 V</p> |
| | | | | | ON (When driver door opened) | 0 V |
| 48 (O) | Ground | Rear LH door switch | Input | Rear LH door switch | OFF (When rear LH door closed) |  <p style="text-align: right; font-size: small;">PKIB4960J</p> <p style="text-align: center;">7.0 - 8.0 V</p> |
| | | | | | ON (When rear door LH opened) | 0 V |
| 49 (BR/Y) | Ground | Luggage room lamp | Output | Luggage room lamp | OFF | 12 V |
| | | | | | ON | 0 V |
| 50 (B/Y) | Ground | Remote engine start | Output | Normal engine run mode (Brake pedal is depressed) | 0 V | |
| | | | | <ul style="list-style-type: none"> • Normal engine run mode (Brake pedal is not depressed) • Remote engine run mode | Battery voltage | |

BCM

< ECU DIAGNOSIS INFORMATION >

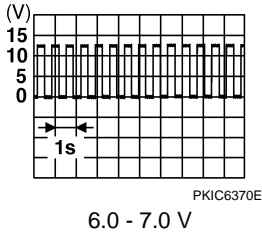
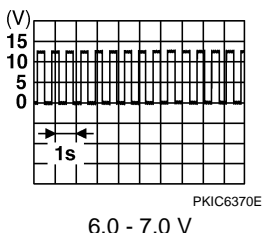
| Terminal No. (Wire color) | | Description | | Condition | | Value (Approx.) |
|------------------------------|--------|---------------------------------|------------------|--------------------------|---|--|
| + | - | Signal name | Input/ Output | | | |
| 51 (W/R) | Ground | Back door request switch | Input | Back door request switch | ON (Pressed) | 0 V |
| | | | | | OFF (Not pressed) | 12 V |
| 54 (L) | Ground | Rear wiper | Output | Rear wiper | OFF (Stopped) | 0 V |
| | | | | | ON (Activated) | 12 V |
| 55 (G) | Ground | Rear door UNLOCK | Output | Rear door | UNLOCK (Actuator is activated) | 12 V |
| | | | | | Other than UNLOCK (Actuator is not activated) | 0 V |
| 56 (W/R) | Ground | Interior room lamp power supply | Output | | Interior room lamp battery saver is activated. (Cuts the interior room lamp power supply) | 0 V |
| | | | | | Interior room lamp battery saver is not activated. (Outputs the interior room lamp power supply) | 12 V |
| 57 (LG) | Ground | Battery power supply | Input | Ignition switch OFF | | Battery voltage |
| 58 (R/W) | Ground | Air bag signal | Input | — | | — |
| 59 (G) | Ground | Passenger door UNLOCK | Output | Passenger door | UNLOCK (Actuator is activated) | 12 V |
| | | | | | Other than UNLOCK (Actuator is not activated) | 0 V |
| 60 (G) | Ground | Turn signal LH | Output | Ignition switch ON | Turn signal switch OFF | 0 V |
| | | | | | Turn signal switch LH |  <p style="text-align: center;">6.0 - 7.0 V</p> |
| 61 (G/Y) | Ground | Turn signal RH | Output | Ignition switch ON | Turn signal switch OFF | 0 V |
| | | | | | Turn signal switch RH |  <p style="text-align: center;">6.0 - 7.0 V</p> |
| 62 (R) | Ground | Step lamp | Output | Step lamp | ON | 0 V |
| | | | | | OFF | 12 V |
| 63 (BR) | Ground | Interior room lamp control | Output | Interior room lamp | OFF | 12 V |
| | | | | | ON | 0 V |

A
B
C
D
E
F
G
H
I
J
K
L
N
O
P

BCS

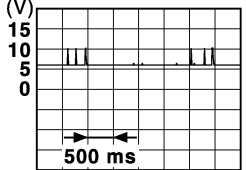
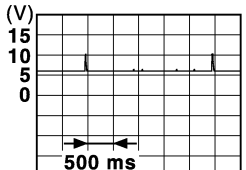
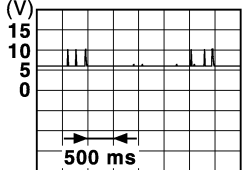
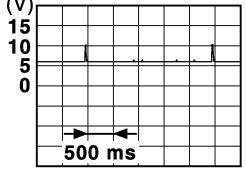
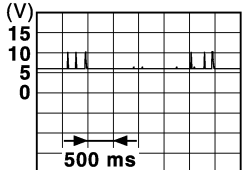
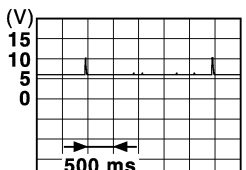
BCM

< ECU DIAGNOSIS INFORMATION >

| Terminal No. (Wire color) | | Description | | Condition | | Value (Approx.) |
|------------------------------|--------|---|------------------|---|--|---|
| + | - | Signal name | Input/ Output | | | |
| 64 (GR/R) | Ground | Cranking request | input | Ignition switch ON | Engine stopped (Selector lever is in P position) | 0 V |
| | | | | | Engine stopped (Selector lever is not in P position) | 12 V |
| | | | | | Engine running | 12 V |
| 65 (R) | Ground | All doors, fuel lid LOCK | Output | All doors, fuel lid | LOCK (Actuator is activated) | 12 V |
| | | | | | Other than LOCK (Actuator is not activated) | 0 V |
| 66 (V) | Ground | Driver door, fuel lid UNLOCK | Output | Driver door, fuel lid | UNLOCK (Actuator is activated) | 12 V |
| | | | | | Other than UNLOCK (Actuator is not activated) | 0 V |
| 67 (B) | Ground | Ground | Output | Ignition switch ON | | 0 V |
| 68 (Y) | Ground | P/W power supply (IGN) | Output | Ignition switch ON | | 12 V |
| 69 (W) | Ground | P/W power supply (BAT) | Output | Ignition switch OFF | | 12 V |
| 70 (Y) | Ground | Battery power supply | Input | Ignition switch OFF | | Battery voltage |
| 72 (P) | Ground | Puddle lamp control | Output | Puddle lamp | OFF | 12 V |
| | | | | | ON | 0 V |
| 73 (W) | Ground | ON indicator lamp | Output | Ignition switch | OFF (LOCK indicator is not illuminated) | Battery voltage |
| | | | | | ON | 0 V |
| 74 (Y/B) | Ground | Trailer turn signal RH control | Output | Ignition switch ON | Turn signal switch OFF | Battery voltage |
| | | | | | Turn signal switch RH |  |
| 75 (LG/R) | Ground | Driver door request switch | Input | Driver door request switch | ON (Pressed) | 0 V |
| | | | | | OFF (Not pressed) | 12 V |
| 76 (SB) | Ground | Push-button ignition switch (push switch) | Input | Push-button ignition switch (push switch) | Pressed | 0 V |
| | | | | | Not pressed | 12 V |
| 77 (O/L) | Ground | Trailer turn signal LH control | Output | Ignition switch ON | Turn signal switch OFF | Battery voltage |
| | | | | | Turn signal switch LH |  |

BCM

< ECU DIAGNOSIS INFORMATION >

| Terminal No. (Wire color) | | Description | | Condition | Value (Approx.) |
|------------------------------|--------|-------------------------------|------------------|--|--|
| | | Signal name | Input/ Output | | |
| + | - | | | | |
| 78 (P/B) | Ground | Driver door antenna (+) | Output | When the driver door request switch is operated with ignition switch ON | <p>When Intelligent Key is not in the antenna detection area (The distance between Intelligent Key and antenna: Approx. 2 m)</p>  <p style="text-align: right; font-size: small;">JMKIA5954GB</p> |
| | | | | When the driver door request switch is operated with ignition switch ON | <p>When Intelligent Key is in the antenna detection area (The distance between Intelligent Key and antenna: 80 cm or less)</p>  <p style="text-align: right; font-size: small;">JMKIA5955GB</p> |
| 79 (V) | Ground | Driver door antenna (-) | Output | When the driver door request switch is operated with ignition switch ON | <p>When Intelligent Key is not in the antenna detection area (The distance between Intelligent Key and antenna: Approx. 2 m)</p>  <p style="text-align: right; font-size: small;">JMKIA5954GB</p> |
| | | | | When the driver door request switch is operated with ignition switch ON | <p>When Intelligent Key is in the antenna detection area (The distance between Intelligent Key and antenna: 80 cm or less)</p>  <p style="text-align: right; font-size: small;">JMKIA5955GB</p> |
| 80 (LG/B) | Ground | Passenger door antenna (+) | Output | When the passenger door request switch is operated with ignition switch ON | <p>When Intelligent Key is not in the antenna detection area (The distance between Intelligent Key and antenna: Approx. 2 m)</p>  <p style="text-align: right; font-size: small;">JMKIA5954GB</p> |
| | | | | When the passenger door request switch is operated with ignition switch ON | <p>When Intelligent Key is in the antenna detection area (The distance between Intelligent Key and antenna: 80 cm or less)</p>  <p style="text-align: right; font-size: small;">JMKIA5955GB</p> |

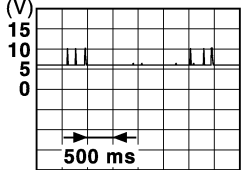
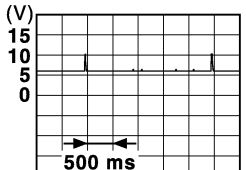
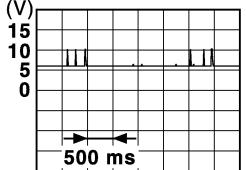
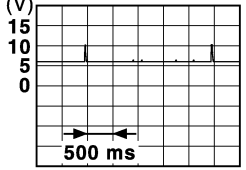
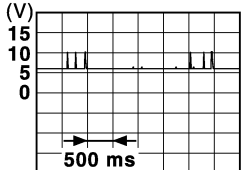
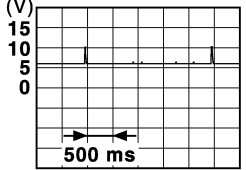
A
B
C
D
E
F
G
H
I
J
K
L

BCS

N
O
P

BCM

< ECU DIAGNOSIS INFORMATION >

| Terminal No. (Wire color) | | Description | | Condition | Value (Approx.) |
|------------------------------|--------|----------------------------|------------------|--|---|
| + | - | Signal name | Input/ Output | | |
| 81 (Y/R) | Ground | Passenger door antenna (-) | Output | When the Intelligent Key is not in the antenna detection area (The distance between Intelligent Key and antenna: Approx. 2 m) |  <p style="text-align: right; font-size: small;">JMkia5954GB</p> |
| | | | | When the passenger door request switch is operated with ignition switch ON |  <p style="text-align: right; font-size: small;">JMkia5955GB</p> |
| 82 (W/G) | Ground | Back door antenna (+) | Output | When the Intelligent Key is not in the antenna detection area (The distance between Intelligent Key and antenna: Approx. 2 m) |  <p style="text-align: right; font-size: small;">JMkia5954GB</p> |
| | | | | When the back door request switch is operated with ignition switch ON |  <p style="text-align: right; font-size: small;">JMkia5955GB</p> |
| 83 (B/W) | Ground | Back door antenna (-) | Output | When the Intelligent Key is not in the antenna detection area (The distance between Intelligent Key and antenna: Approx. 2 m) |  <p style="text-align: right; font-size: small;">JMkia5954GB</p> |
| | | | | When the back door request switch is operated with ignition switch ON |  <p style="text-align: right; font-size: small;">JMkia5955GB</p> |

BCM

< ECU DIAGNOSIS INFORMATION >

| Terminal No. (Wire color) | | Description | | Condition | Value (Approx.) |
|------------------------------|--------|---|------------------|--------------------|---|
| + | - | Signal name | Input/ Output | | |
| 84 (BR) | Ground | Room antenna 1 (+) (Instrument center) | Output | Ignition switch ON | <p style="text-align: right; font-size: small;">JMKIA5951GB</p> |
| | | | | Ignition switch ON | <p style="text-align: right; font-size: small;">JMKIA3839GB</p> |
| 85 (Y) | Ground | Room antenna 1 (-) (Instrument center) | Output | Ignition switch ON | <p style="text-align: right; font-size: small;">JMKIA5951GB</p> |
| | | | | Ignition switch ON | <p style="text-align: right; font-size: small;">JMKIA3839GB</p> |
| 86 (W) | Ground | Room antenna 2 (+) (Console) | Output | Ignition switch ON | <p style="text-align: right; font-size: small;">JMKIA5951GB</p> |
| | | | | Ignition switch ON | <p style="text-align: right; font-size: small;">JMKIA3839GB</p> |

A
B
C
D
E
F
G
H
I
J
K
L

BCS

N
O
P

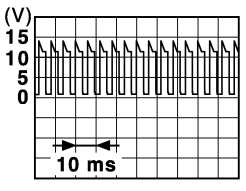
BCM

< ECU DIAGNOSIS INFORMATION >

| Terminal No. (Wire color) | | Description | | Condition | Value (Approx.) |
|------------------------------|--------|---------------------------------|------------------|--------------------|---|
| + | - | Signal name | Input/ Output | | |
| 87 (B) | Ground | Room antenna 2 (-) (Console) | Output | Ignition switch ON | <p style="text-align: right; font-size: small;">JMKIA5951GB</p> |
| | | | | Ignition switch ON | <p style="text-align: right; font-size: small;">JMKIA3839GB</p> |
| 88 (V) | Ground | Luggage room antenna (+) | Output | Ignition switch ON | <p style="text-align: right; font-size: small;">JMKIA5951GB</p> |
| | | | | Ignition switch ON | <p style="text-align: right; font-size: small;">JMKIA3839GB</p> |
| 89 (G) | Ground | Luggage room antenna (-) | Output | Ignition switch ON | <p style="text-align: right; font-size: small;">JMKIA5951GB</p> |
| | | | | Ignition switch ON | <p style="text-align: right; font-size: small;">JMKIA3839GB</p> |

BCM

< ECU DIAGNOSIS INFORMATION >

| Terminal No. (Wire color) | | Description | | Condition | | Value (Approx.) |
|------------------------------|--------|--|------------------|--|---|--|
| + | - | Signal name | Input/ Output | | | |
| 90 (Y) | Ground | Push-button ignition switch illumination | Output | Push-button ignition switch illumination | ON | 12 V |
| | | | | | OFF | 0 V |
| 91 (O) | Ground | LOCK indicator lamp | Output | LOCK indicator lamp | OFF (Ignition switch OFF) | Battery voltage |
| | | | | | ON | 0 V |
| 92 (L) | Ground | Push-button ignition switch illumination ground | Output | Tail lamp | OFF | 0 V |
| | | | | | ON | NOTE: When the illumination brightening/dimming level is in the neutral position  6.0 - 7.0 V |
| 93 (GR/R) | Ground | Intelligent Key warning buzzer | Output | Intelligent Key warning buzzer | Sounding | 0 V |
| | | | | | Not sounding | 12 V |
| 96 (BR) | Ground | ACC relay control | Output | Ignition switch | OFF | 0 V |
| | | | | | ACC or ON | 12 V |
| 97 (R/W) | Ground | Starter relay control | Output | Ignition switch ON | When selector lever is in P or N position | 12 V |
| | | | | | When selector lever is not in P or N position | 0 V |
| 98 (O) | Ground | Ignition relay (IPDM E/R) control | Output | Ignition switch | OFF or ACC | 12 V |
| | | | | | ON | 0 V |
| 99 (R) | Ground | Ignition relay-1 control | Output | Ignition switch | OFF or ACC | 0 V |
| | | | | | ON | 12 V |
| 100 (P/L) | Ground | Passenger door request switch | Input | Passenger door request switch | ON (Pressed) | 0 V |
| | | | | | OFF (Not pressed) | 12 V |
| 101 (W/B) | Ground | Ignition power supply No. 2 | Output | Ignition switch | OFF or ACC | 0 V |
| | | | | | ON | 12 V |
| 102 (BR) | Ground | P/N position | Input | Selector lever | P or N position | 12 V |
| | | | | | Except P and N positions | 0 V |
| 104 (R/B) | Ground | A/T shift selector (detention switch) power supply | Output | Ignition switch ON | | 12 V |
| 105 (O/L) | Ground | Stop lamp switch 2 | Input | Ignition switch OFF | | Battery voltage |
| 106 (Y/G) | Ground | Blower fan motor relay control | Output | Ignition switch | OFF or ACC | 0 V |
| | | | | | ON | 12 V |
| 109 (L/W) | Ground | ACC indicator lamp | Output | Ignition switch | OFF (LOCK indicator is not illuminated) | Battery voltage |
| | | | | | ACC | 0 V |

*: For Canada

BCM

< ECU DIAGNOSIS INFORMATION >

Fail-safe

INFOID:000000009010763

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 |
| 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) |
| B261B: RES ENG RUN STUCK MALFUNC | Fuel cut | When engine status signal (CAN) is received normally |
| 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 |
| B26FE: HOOD SW CAN DIAG ERROR | Inhibit remote engine start | When the following conditions are fulfilled • Power position ON • Hood switch signal (CAN) is received normally |

FAIL-SAFE CONTROL BY RAIN SENSOR MALFUNCTION

BCM detects the light and rain sensor serial link error and the rain sensor malfunction.

BCM controls the following fail-safe when rain sensor has a malfunction.

- Front wiper switch AUTO and sensing rain drop: The condition just before the activation of fail-safe is maintained until the front wiper switch is turned OFF.
- Front wiper switch AUTO and not sensing rain drop: Front wiper is LO operation until the front wiper switch is turned off.

REAR WIPER MOTOR PROTECTION

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

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

Condition of cancellation

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

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

BCM

< ECU DIAGNOSIS INFORMATION >

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:000000009010764

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 | <ul style="list-style-type: none"> U1000: CAN COMM U1010: CONTROL UNIT (CAN) |
| 3 | <ul style="list-style-type: none"> B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM B2195: ANTI-SCANNING B2196: DONGLE NG B2198: NATS ANTENNA AMP |
| 4 | <ul style="list-style-type: none"> 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 B261B: RES ENG RUN STUCK MALFUNC 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 B26FC: KEY REGISTRATION B26FE: HOOD SW CAN DIAG ERROR U0415: VEHICLE SPEED |
| 5 | <ul style="list-style-type: none"> B2621: INSIDE ANTENNA B2622: INSIDE ANTENNA B2623: INSIDE ANTENNA |
| 6 | <ul style="list-style-type: none"> B2626: OUTSIDE ANTENNA B2627: OUTSIDE ANTENNA B2628: OUTSIDE ANTENNA |
| 7 | B26E7: TPMS CAN COMM |

DTC Index

INFOID:000000009010765

NOTE:

The details of time display are as follows.

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

BCM

< ECU DIAGNOSIS INFORMATION >

IGN counter is displayed on Freeze Frame Data. For details of Freeze Frame Data, refer to [BCS-15, "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 | Reference page |
|--|-----------|--|---------------------------------|------------------------|
| No DTC is detected. further testing may be required. | — | — | — | — |
| U1000: CAN COMM | — | — | — | BCS-70 |
| U1010: CONTROL UNIT (CAN) | — | — | — | BCS-71 |
| U0415: VEHICLE SPEED | × | — | × | BCS-72 |
| B2192: ID DISCORD BCM-ECM | × | — | — | SEC-45 |
| B2193: CHAIN OF BCM-ECM | × | — | — | SEC-46 |
| B2195: ANTI-SCANNING | × | — | — | SEC-47 |
| B2196: DONGLE NG | × | — | — | SEC-48 |
| B2198: NATS ANTENNA AMP | × | — | — | SEC-50 |
| B2555: STOP LAMP | — | × | × | SEC-54 |
| B2556: PUSH-BTN IGN SW | — | × | × | SEC-57 |
| B2557: VEHICLE SPEED | × | × | × | SEC-59 |
| B2562: LOW VOLTAGE | — | × | — | BCS-73 |
| B2601: SHIFT POSITION | × | × | × | SEC-60 |
| B2602: SHIFT POSITION | × | × | × | SEC-63 |
| B2603: SHIFT POSI STATUS | × | × | × | SEC-66 |
| B2604: PNP/CLUTCH SW | × | × | × | SEC-70 |
| B2605: PNP/CLUTCH SW | × | × | × | SEC-72 |
| B2608: STARTER RELAY | × | × | × | SEC-74 |
| B260F: ENG STATE SIG LOST | × | × | × | SEC-76 |
| B2614: BCM | — | × | × | PCS-48 |
| B2615: BCM | — | × | × | PCS-51 |
| B2616: BCM | — | × | × | PCS-53 |
| B2618: BCM | — | × | × | PCS-55 |
| B261A: PUSH-BTN IGN SW | — | × | × | PCS-56 |
| B261B: RES ENG RUN STUCK MAL-FUNC | × | × | × | SEC-77 |
| B2621: INSIDE ANTENNA | — | × | — | DLK-85 |
| B2622: INSIDE ANTENNA | — | × | — | DLK-87 |
| B2623: INSIDE ANTENNA | — | × | — | DLK-89 |
| B2626: OUTSIDE ANTENNA | — | × | — | DLK-91 |
| B2627: OUTSIDE ANTENNA | — | × | — | DLK-93 |
| B2628: OUTSIDE ANTENNA | — | × | — | DLK-95 |
| B26E7: TPMS CAN COMM | — | — | — | BCS-74 |
| B26F1: IGN RELAY OFF | × | × | × | PCS-58 |
| B26F2: IGN RELAY ON | × | × | × | PCS-60 |
| B26F3: START CONT RLY ON | × | × | × | SEC-78 |
| B26F4: START CONT RLY OFF | × | × | × | SEC-79 |
| B26F6: BCM | — | × | × | PCS-62 |

BCM

< ECU DIAGNOSIS INFORMATION >

| CONSULT display | Fail-safe | Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition | Intelligent Key warn- ing lamp ON | Reference page |
|-------------------------------|-----------|--|--------------------------------------|------------------------|
| B26F7: BCM | × | × | × | SEC-80 |
| B26F8: BCM | — | × | × | SEC-81 |
| B26F9: CRANK REQ CIR SHORT | — | × | × | SEC-82 |
| B26FA: CRANK REQ CIR OPEN | — | × | × | SEC-84 |
| B26FC: KEY REGISTRATION | — | × | × | SEC-86 |
| B26FE: HOOD SW CAN DIAG ERROR | × | × | × | SEC-87 |

A
B
C
D
E
F
G
H
I
J
K
L

BCS


N
O
P

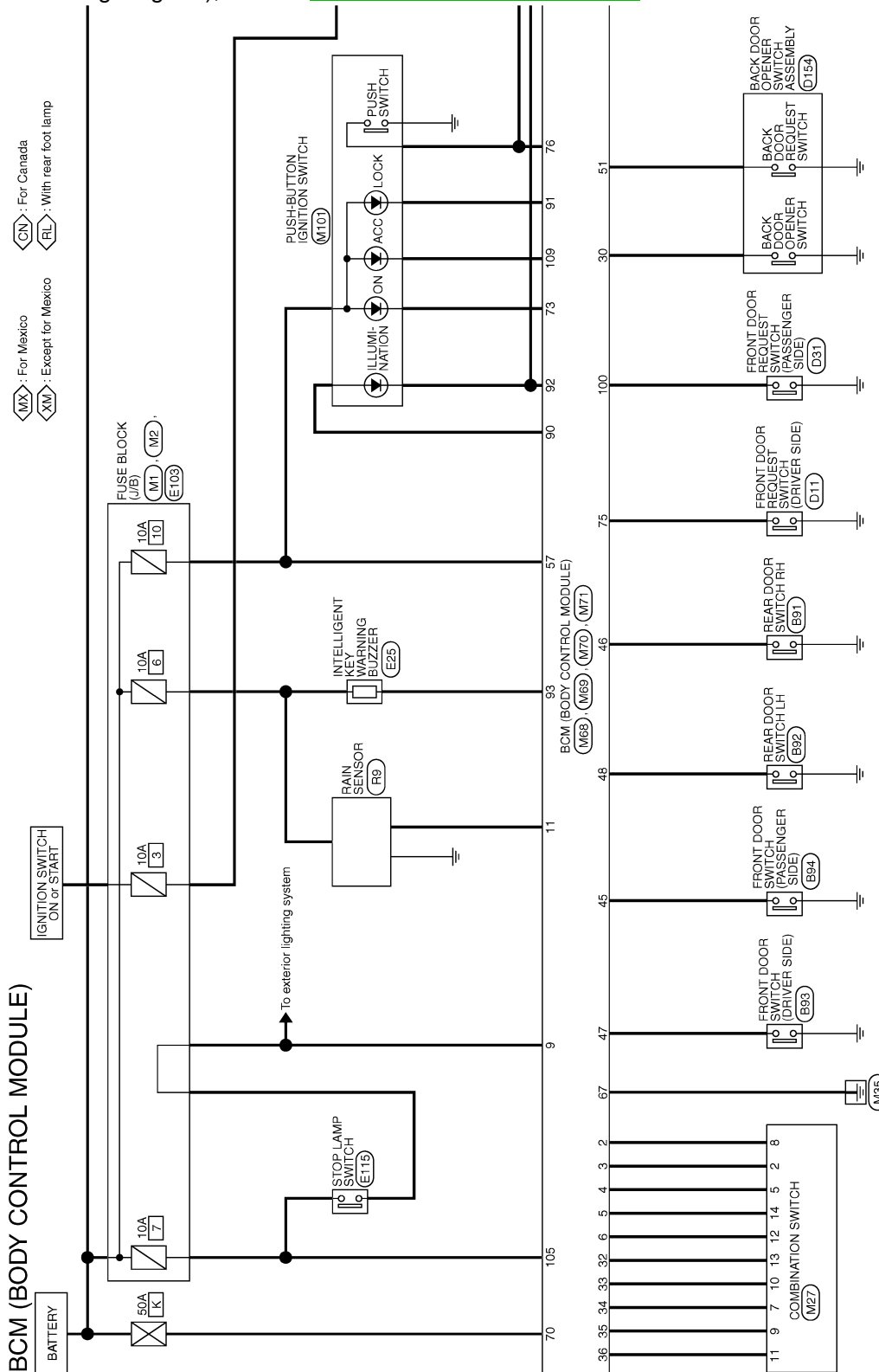
WIRING DIAGRAM

BCM

Wiring Diagram

INFOID:000000009010766

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



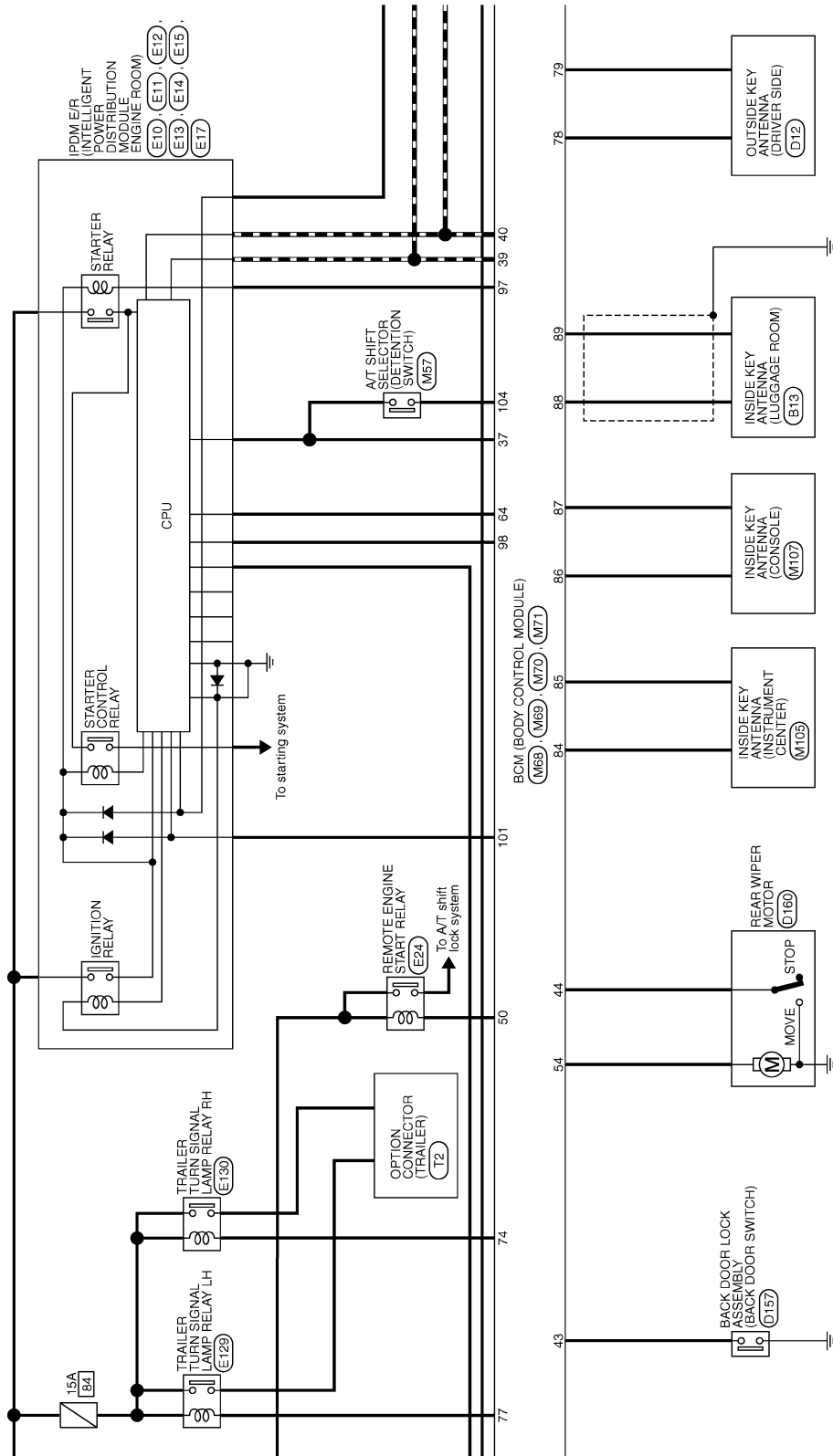
*: This connector is not shown in "Harness Layout".

2013/01/30

JRMWD7257GB

BCM

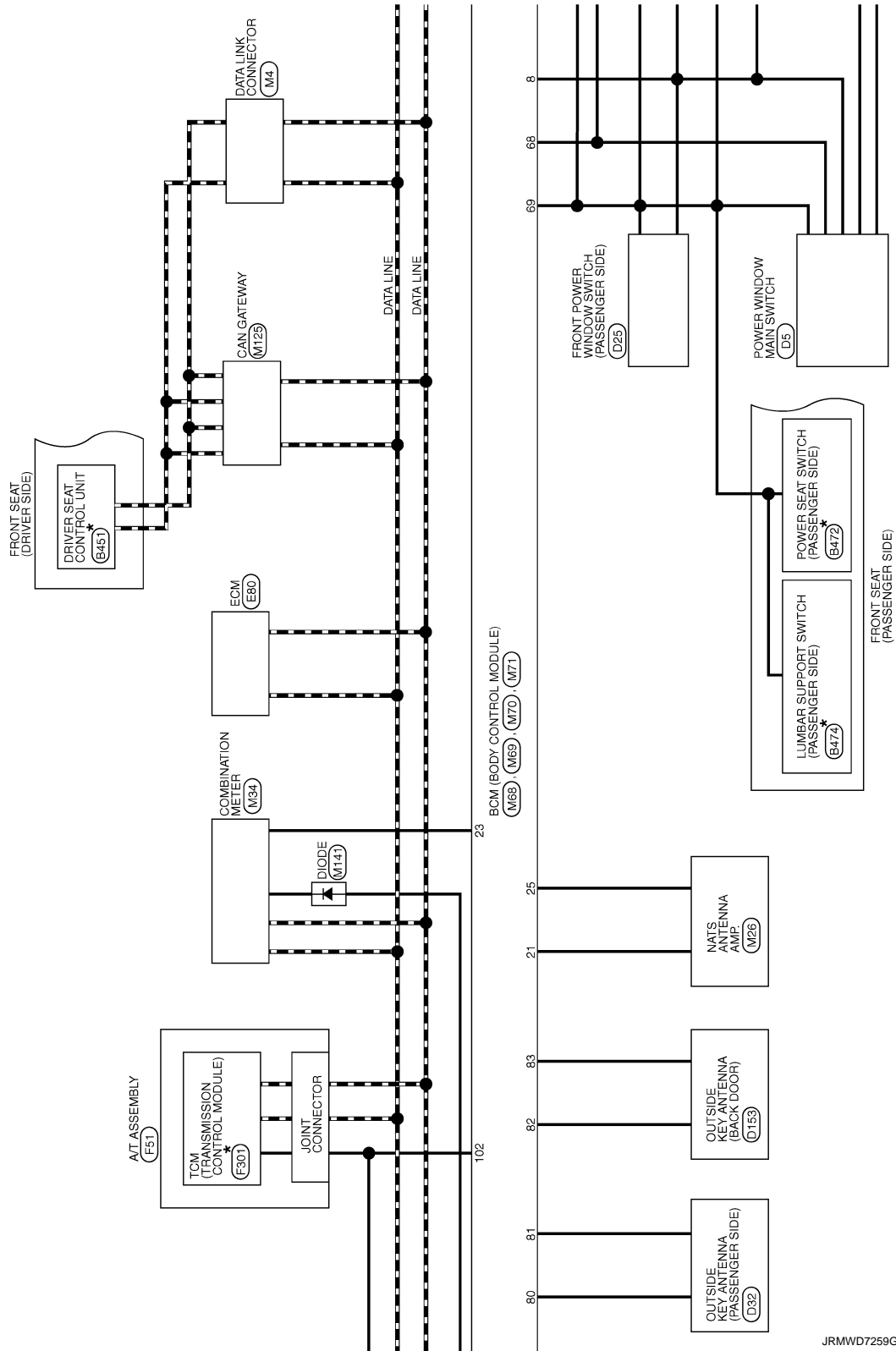
< WIRING DIAGRAM >



JRMWD7258GB

A
B
C
D
E
F
G
H
I
J
K
L
N
O
P

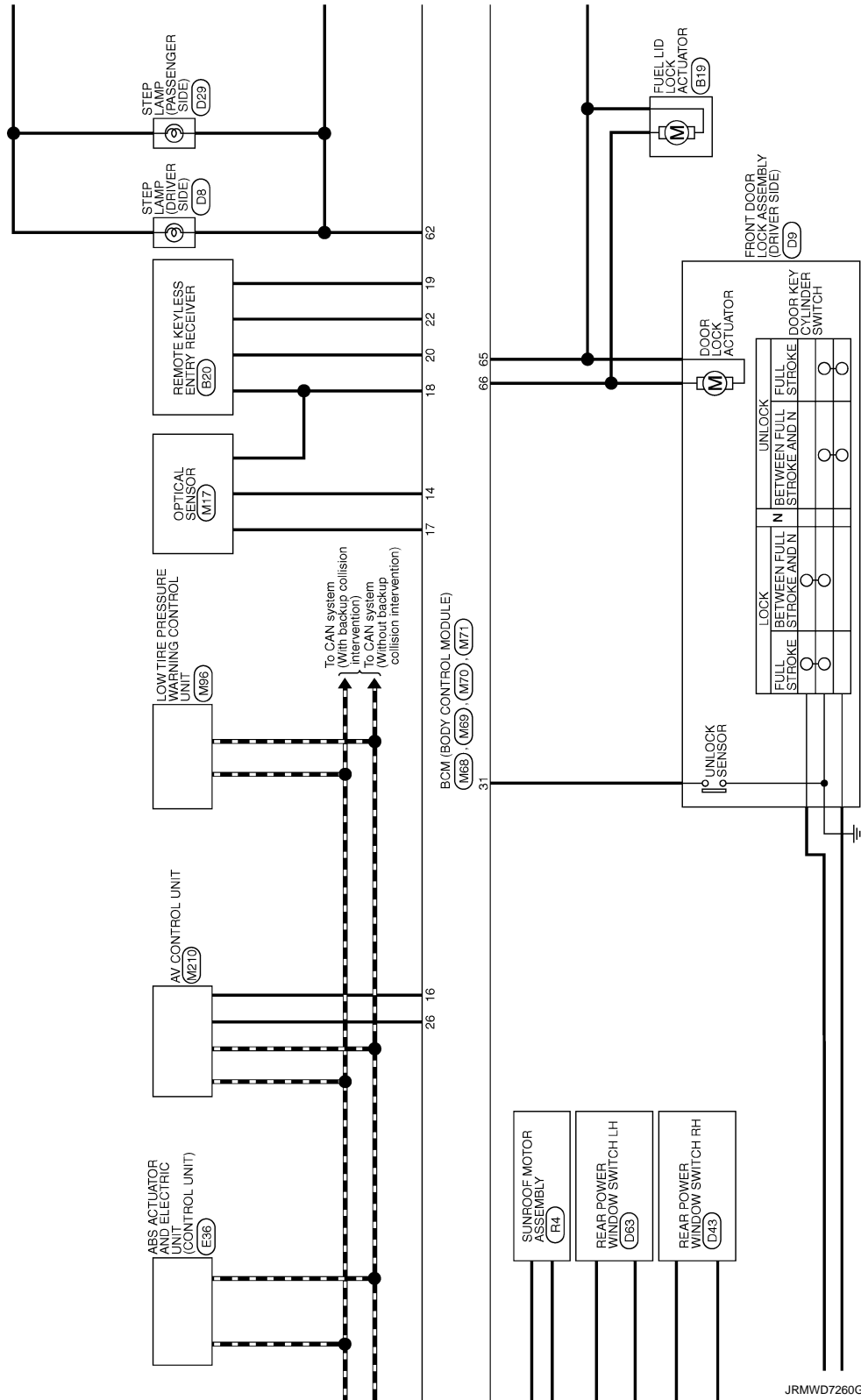
BCS



JRMWD7259GB

BCM

< WIRING DIAGRAM >



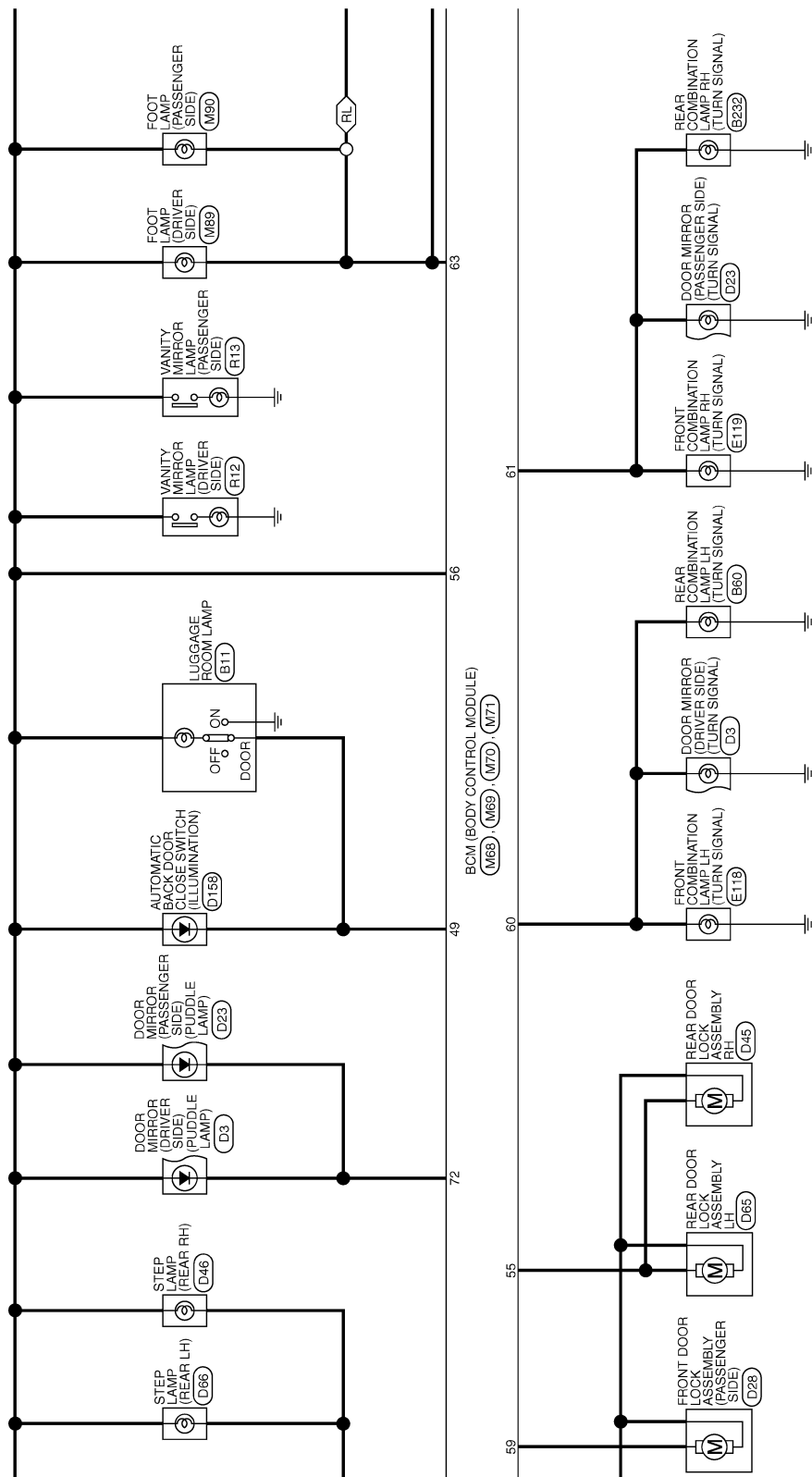
A
B
C
D
E
F
G
H
I
J
K
L
N
O
P

BCS

JRMWD7260GB

BCM

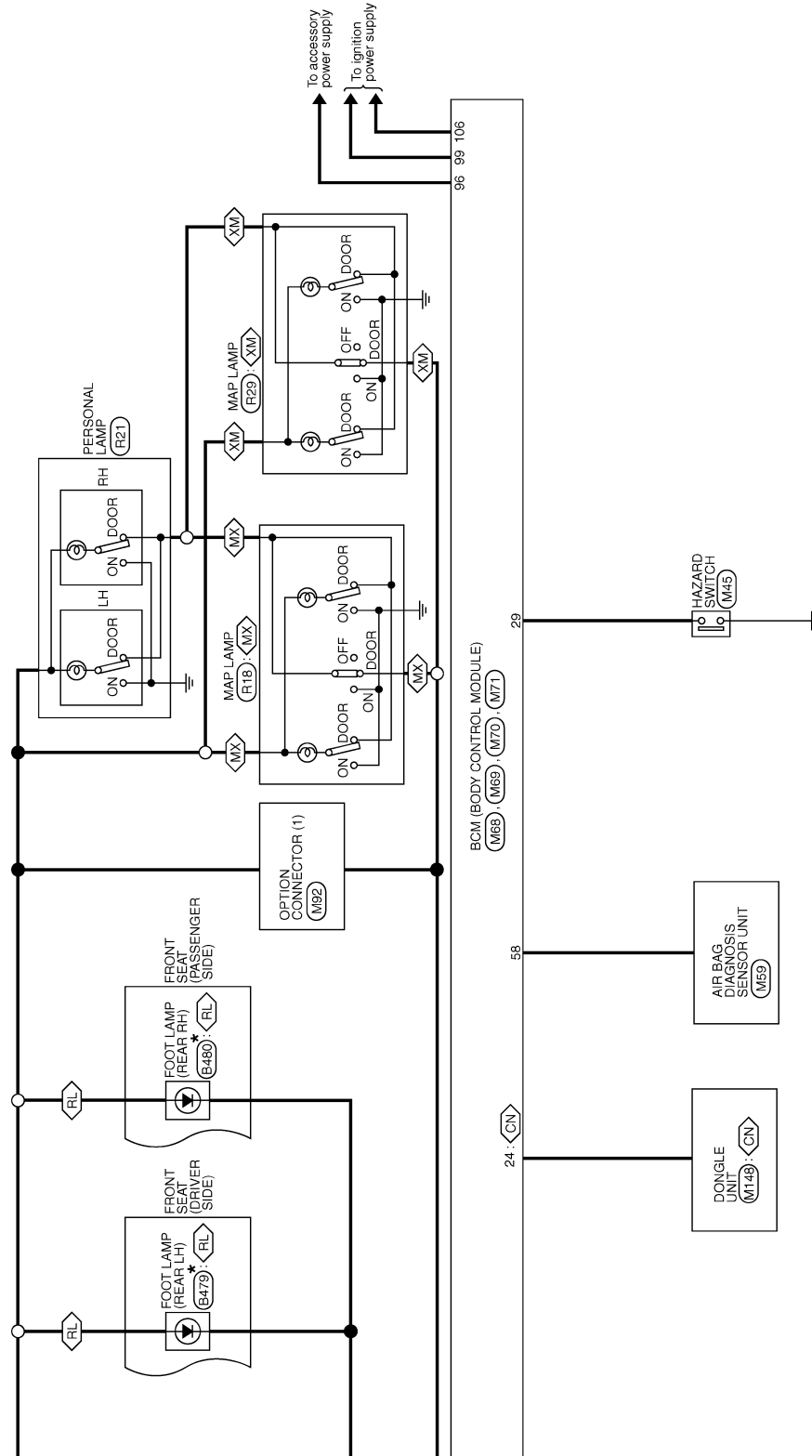
< WIRING DIAGRAM >



JRMWD7261 GB

BCM

< WIRING DIAGRAM >



JRMWD7262GB

A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P

BCS

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

BASIC INSPECTION

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM)

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Description

INFOID:000000009010767

BEFORE REPLACEMENT

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

NOTE:

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

AFTER REPLACEMENT

CAUTION:

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

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

NOTE:

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

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

INFOID:000000009010768

1. SAVING VEHICLE SPECIFICATION

CONSULT Configuration

Perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to [BCS-67, "CONFIGURATION \(BCM\) : Description"](#).

NOTE:

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

>> GO TO 2.

2. REPLACE BCM

Replace BCM. Refer to [BCS-82, "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-67, "CONFIGURATION \(BCM\) : Work Procedure"](#).

>> GO TO 4.

4. INITIALIZE BCM (NATS) (IF EQUIPPED)

Perform BCM initialization. (NATS)

>> WORK END

CONFIGURATION (BCM)

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

CONFIGURATION (BCM) : Description

INFOID:000000009010769

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

| Function | Description |
|--|---|
| READ CONFIGURATION | <ul style="list-style-type: none">• Reads the vehicle configuration of current BCM.• Saves the read vehicle configuration. |
| WRITE CONFIGURATION - Manual selection | Writes the vehicle configuration with manual selection. |
| WRITE CONFIGURATION - Config file | Writes the vehicle configuration with saved data. |

NOTE:

Manual setting item: Items which need selection by vehicle specifications

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

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

CAUTION:

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

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

CONFIGURATION (BCM) : Work Procedure

INFOID:000000009010770

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-68. "CONFIGURATION \(BCM\) : 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-68. "CONFIGURATION \(BCM\) : Configuration list"](#) for written items and setting value.
 4. Select "SETTING".
CAUTION:
Make sure to select "SETTING" even if the indicated configuration of brand new BCM is same as the desirable configuration. If not, configuration which is set automatically by selecting vehicle model can not be memorized.
 5. When "COMMAND FINISHED", select "END".

>> GO TO 4.

A
B
C
D
E
F
G
H
I
J
K
L

BCS

N
O
P

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

4. OPERATION CHECK

Confirm that each function controlled by BCM operates normally.

>> WORK END

CONFIGURATION (BCM) : Configuration list

INFOID:000000009010771

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 | |
| UNLOCK WITH SHOCK | WITHOUT | — |
| CAN CONNECTION UNIT | MODE1 ⇔ MODE18 | <ul style="list-style-type: none">• MODE1: Without telematics system• MODE18: With telematics system |
| RAIN SENSOR CONFIG | WITH | — |
| A/LIGHT LOGIC | MODE2 ⇔ MODE4 | <ul style="list-style-type: none">• MODE2: For Canada• MODE4: Except for Canada |

⇔: Items which confirm vehicle specifications

SHIPPING MODE CANCEL OPERATION

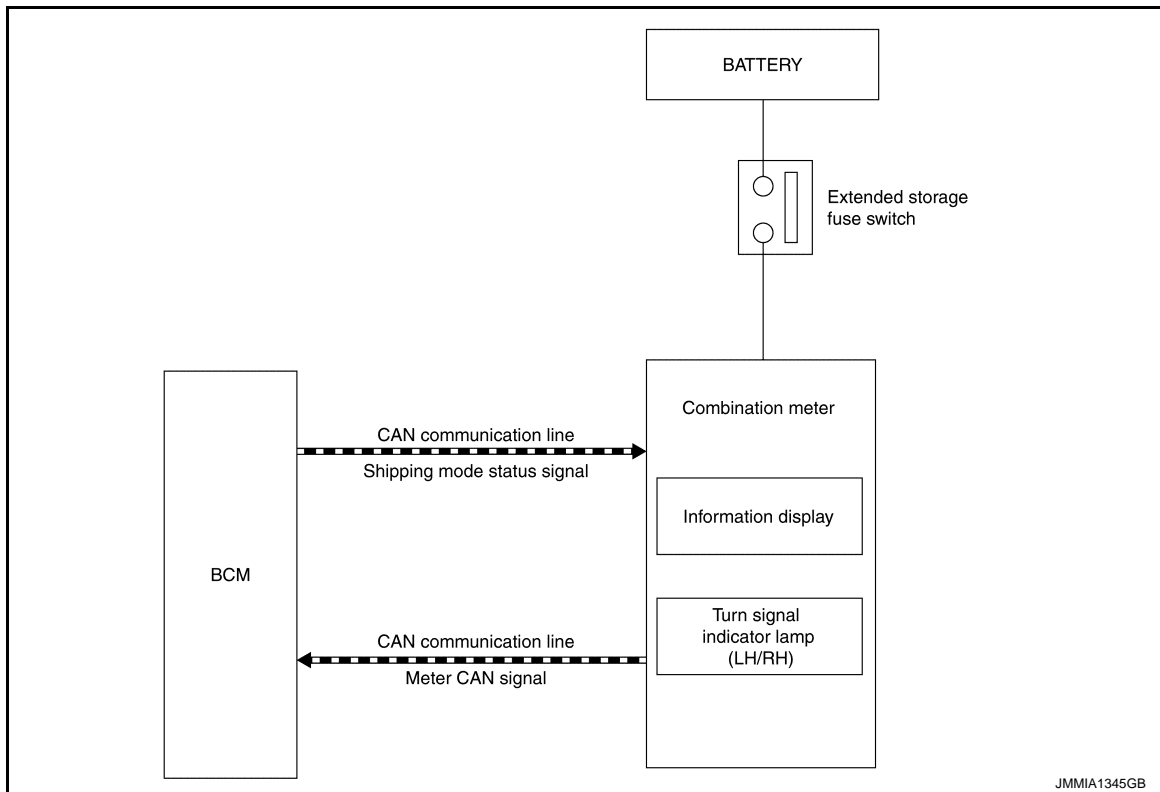
< BASIC INSPECTION >

SHIPPING MODE CANCEL OPERATION

Description

INFOID:000000009298780

SYSTEM DIAGRAM



DESCRIPTION

- The combination meter transmits meter CAN signal*¹ to BCM via CAN communication, when the extended storage fuse switch is ON.
- BCM switches the status (shipping mode or normal mode) by itself according to the meter CAN signal*¹ from combination meter, and transmits shipping mode status signal to combination meter via CAN communication.
- The combination meter displays extended storage fuse warning message*² on the information display, and turns the turn signal indicator lamp (LH/RH) ON, when BCM is in shipping mode.
- BCM control function is limited in shipping mode. Refer to [BCS-81. "Description"](#).

*1: Odometer signal, wake up signal and each signal.

*2: When shipping mode function operates, "SHIPPING MODE ON PUSH STORAGE FUSE" is displayed.

Work Procedure

INFOID:000000009298781

1. SHIPPING MODE CANCEL OPERATION

1. Turn ignition switch OFF.
2. Push in (switch on) the extended storage fuse switch. Refer to [PG-143. "How To Check"](#).
3. Turn ignition switch ON.
4. Turn ignition switch OFF and wait at least 2 seconds.

>> GO TO 2.

2. SHIPPING MODE CANCEL CHECK

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

>> WORK END

A
B
C
D
E
F
G
H
I
J
K
L
N
O
P

BCS

U1000 CAN COMM

< DTC/CIRCUIT DIAGNOSIS >

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM

Description

INFOID:000000009010774

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-32, "CAN COMMUNICATION SYSTEM : CAN Communication Signal Chart"](#).

DTC Logic

INFOID:000000009010775

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:000000009010776

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-22, "Trouble Diagnosis Flow Chart"](#).
NO >> Refer to [GI-43, "Intermittent Incident"](#).

U1010 CONTROL UNIT (CAN)

< DTC/CIRCUIT DIAGNOSIS >

U1010 CONTROL UNIT (CAN)

DTC Logic

INFOID:000000009010777

DTC DETECTION LOGIC

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

Diagnosis Procedure

INFOID:000000009010778

1. REPLACE BCM

When DTC "U1010" is detected, replace BCM.

>> Replace BCM. Refer to [BCS-82. "Removal and Installation"](#).

A
B
C
D
E
F
G
H
I
J
K
L

BCS

N
O
P

U0415 VEHICLE SPEED

< DTC/CIRCUIT DIAGNOSIS >

U0415 VEHICLE SPEED

Description

INFOID:000000009010779

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:000000009010780

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. | <ul style="list-style-type: none">• 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-72, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000009010781

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-39, "CONSULT Function"](#).

Is any DTC detected?

- YES >> Repair or replace the malfunctioning part.
NO >> Replace BCM. Refer to [BCS-82, "Removal and Installation"](#).

B2562 LOW VOLTAGE

< DTC/CIRCUIT DIAGNOSIS >

B2562 LOW VOLTAGE

DTC Logic

INFOID:000000009010782

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-73, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000009010783

1. CHECK POWER SUPPLY CIRCUIT

Check BCM power supply circuit. Refer to [BCS-75, "Diagnosis Procedure"](#).

Is the circuit normal?

- YES >> Replace BCM. Refer to [BCS-82, "Removal and Installation"](#).
NO >> Repair the malfunctioning part.

A
B
C
D
E
F
G
H
I
J
K
L

BCS

N
O
P

B26E7 TPMS CAN COMM

< DTC/CIRCUIT DIAGNOSIS >

B26E7 TPMS CAN COMM

DTC Logic

INFOID:000000009010784

DTC DETECTION LOGIC

| DTC | CONSULT display description | DTC Detection Condition | Probable cause |
|-------|-----------------------------|---|---|
| B26E7 | TPMS CAN COMM | When ignition switch is ON, BCM cannot received CAN communication signal from low tire pressure warning control unit. | <ul style="list-style-type: none">• CAN communication system• Low tire pressure warning control unit• BCM |

DTC CONFIRMATION PROCEDURE

1. DTC CONFIRMATION

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

Is any DTC detected?

- YES >> Refer to [BCS-74, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000009010785

NOTE:

If DTC "B26E7" detected along with DTC "U1000", first diagnose the DTC "U1000". Refer to [BCS-70, "Diagnosis Procedure"](#).

1. LOW TIRE PRESSURE WARNING CONTROL UNIT SELF DIAGNOSTIC RESULT

Perform "Self Diagnostic Result" of low tire pressure warning control unit with CONSULT. Refer to [WT-12, "CONSULT Function"](#).

Is any DTC detected?

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

2. LOW TIRE PRESSURE WARNING CONTROL UNIT DIAGNOSIS

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

>> GO TO 3.

3. BCM SELF DIAGNOSTIC RESULT

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

Is DTC "B26E7" detected?

- YES >> Replace BCM. Refer to [BCS-82, "Removal and Installation"](#).
NO >> INSPECTION END

4. REPLACE LOW TIRE PRESSURE WARNING CONTROL UNIT TEMPORARILY

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

>> GO TO 5.

5. BCM SELF-DIAGNOSTIC RESULT

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

Is DTC "B26E7" detected?

- YES >> Replace BCM. Refer to [BCS-82, "Removal and Installation"](#).
NO >> Replace low tire pressure warning control unit. Refer to [WT-60, "Removal and Installation"](#).

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

POWER SUPPLY AND GROUND CIRCUIT

Diagnosis Procedure

INFOID:000000009010786

1. CHECK FUSE AND FUSIBLE LINK

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

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

Is the fuse fusing?

YES >> Replace the blown fuse or fusible link after repairing the affected circuit if a fuse or fusible link is blown.

NO >> GO TO 2.

2. CHECK POWER SUPPLY CIRCUIT

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

| Terminals | | Voltage (Approx.) |
|-----------|----------|----------------------|
| (+) | (-) | |
| BCM | | Ground |
| Connector | Terminal | |
| M70 | 70 | |
| | 57 | |
| | | 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 | | |
| M70 | 67 | | Existed |

Does continuity exist?

YES >> INSPECTION END

NO >> Repair harness or connector.

A
B
C
D
E
F
G
H
I
J
K
L
N
O
P

BCS

COMBINATION SWITCH OUTPUT CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

COMBINATION SWITCH OUTPUT CIRCUIT

Diagnosis Procedure

INFOID:000000009010787

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 | | |

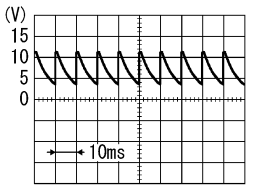
Does continuity exist?

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

Is the measurement value normal?

COMBINATION SWITCH OUTPUT CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

YES >> Replace combination switch.

NO >> Replace BCM. Refer to [BCS-82, "Removal and Installation"](#).

A

B

C

D

E

F

G

H

I

J

K

L

BCS

N

O

P

COMBINATION SWITCH INPUT CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

COMBINATION SWITCH INPUT CIRCUIT

Diagnosis Procedure

INFOID:000000009010788

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 |
| INPUT 2 | | 5 | |
| INPUT 3 | | 4 | |
| INPUT 4 | | 3 | |
| INPUT 5 | | 2 | |

Is the measurement value normal?

Yes >> Replace BCM. Refer to [BCS-82. "Removal and Installation"](#).

Refer to [BCS-35. "Reference Value"](#).

COMBINATION SWITCH INPUT CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

No >> Replace combination switch.

A

B

C

D

E

F

G

H

I

J

K

L

BCS

N

O

P

COMBINATION SWITCH SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

COMBINATION SWITCH SYSTEM SYMPTOMS

Symptom Table

INFOID:000000009010789

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-76, "Diagnosis Procedure" . |
| B | Combination switch OUTPUT 2 circuit | |
| C | Combination switch OUTPUT 3 circuit | |
| D | Combination switch OUTPUT 4 circuit | |
| E | Combination switch OUTPUT 5 circuit | |
| F | Combination switch INPUT 1 circuit | Inspect the combination switch input circuit applicable to the malfunctioning part. Refer to BCS-78, "Diagnosis Procedure" . |
| G | Combination switch INPUT 2 circuit | |
| H | Combination switch INPUT 3 circuit | |
| I | Combination switch INPUT 4 circuit | |
| J | Combination switch INPUT 5 circuit | |
| K | BCM | Replace BCM. Refer to BCS-82, "Removal and Installation" . |
| L | Combination switch | Replace combination switch. |

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

NORMAL OPERATING CONDITION

Description

INFOID:000000009298784

SHIPPING MODE

- Shipping mode inhibits battery power consumption during transportation or storage of the vehicle. Vehicle is set to shipping mode before being shipped from the factory.
- When ignition switch is OFF, BCM operates shipping mode.
- BCM control functions are limited in shipping mode. The limited items that are not operated during the shipping mode are as follows.
 - Door lock and unlock switch function
 - Remote keyless entry function
 - Theft warning alarm function
 - Lighting & turn signal switch function
 - Interior room lamp timer control function
- For shipping mode cancel operation, refer to [BCS-69, "Description"](#).

NOTE:

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

A
B
C
D
E
F
G
H
I
J
K
L

BCS

N
O
P

BCM

< REMOVAL AND INSTALLATION >

REMOVAL AND INSTALLATION

BCM

Removal and Installation

INFOID:000000009010791

CAUTION:

Before replacing BCM, perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to [BCS-67, "CONFIGURATION \(BCM\) : Description"](#).

REMOVAL

1. Remove combination meter. Refer to [MWI-78, "Removal and Installation"](#).
2. Remove bolts.
3. Remove BCM and disconnect the connectors.

INSTALLATION

Install in the reverse order of removal.

CAUTION:

- Be sure to perform "WRITE CONFIGURATION" when replacing BCM.
- Be sure to perform the system initialization (IVIS) when replacing BCM. Refer to [BCS-67, "CONFIGURATION \(BCM\) : Work Procedure"](#).

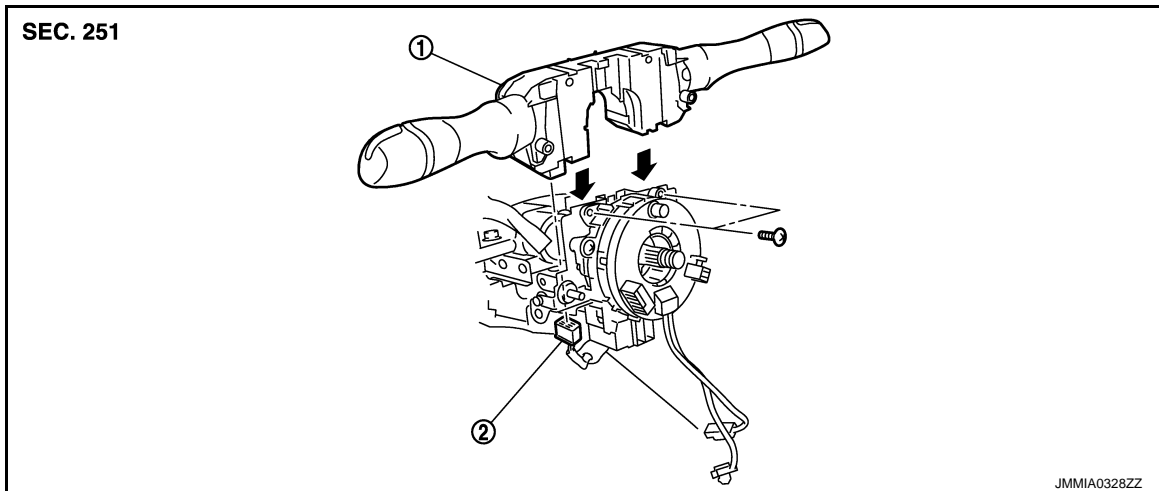
COMBINATION SWITCH

< REMOVAL AND INSTALLATION >

COMBINATION SWITCH

Exploded View

INFOID:000000009010792



1. Combination switch

2. Combination switch connector

Removal and Installation

INFOID:000000009010793

REMOVAL

1. Remove steering column cover. Refer to [IP-12. "Exploded View"](#).
2. Remove screws.
3. Disconnect the connector.
4. Pull up the combination switch to remove it.

INSTALLATION

Install in the reverse order of removal.

A
B
C
D
E
F
G
H
I
J
K
L

BCS

N
O
P