

SECTION **DLK**  
DOOR & LOCK

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# DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

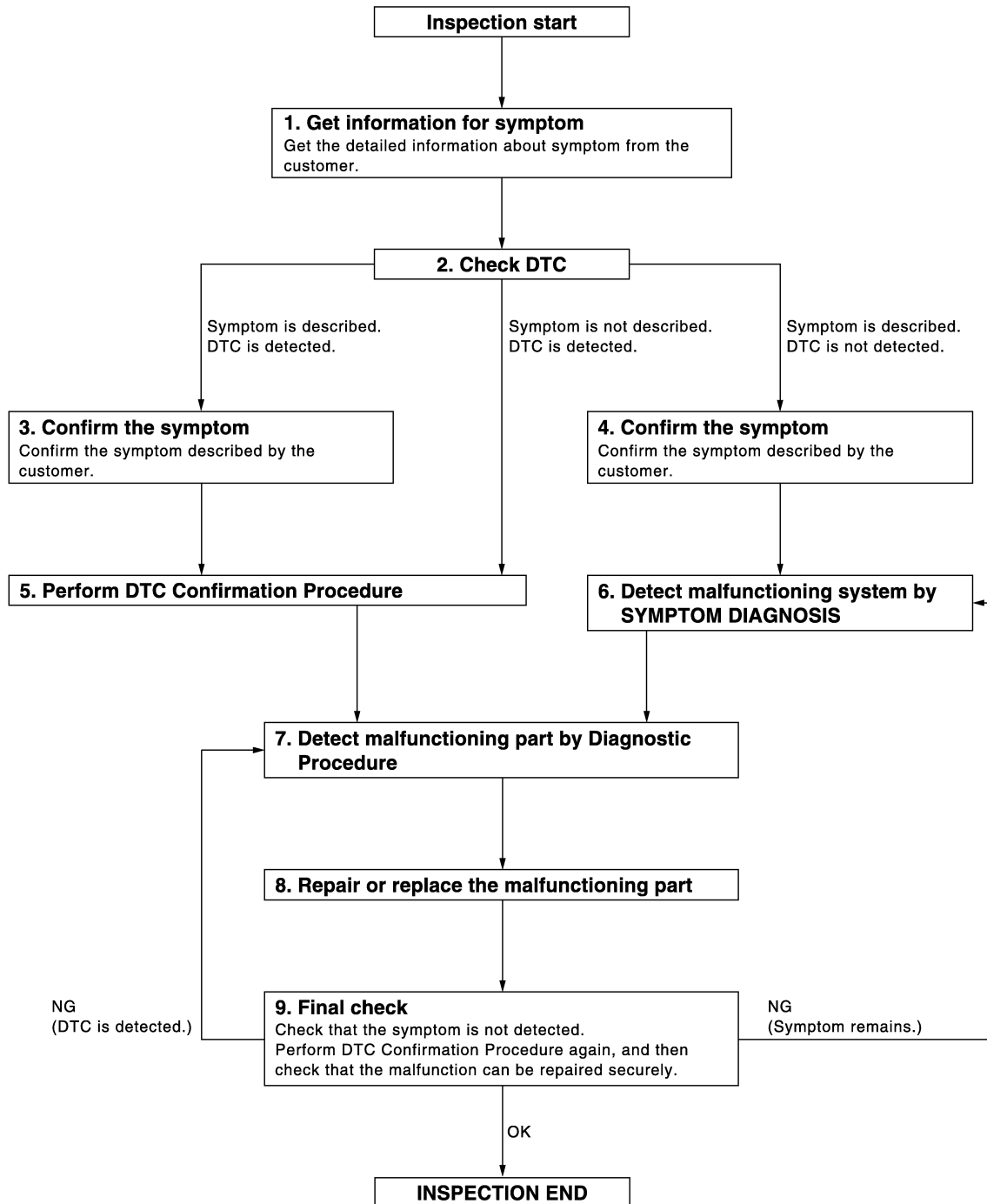
## BASIC INSPECTION

### DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000005268039

OVERALL SEQUENCE



DETAILED FLOW

JMKIA2270GB

# DIAGNOSIS AND REPAIR WORKFLOW

## < BASIC INSPECTION >

### 1. GET INFORMATION FOR SYMPTOM

Get the detailed information from the customer about the symptom (the condition and the environment when the incident/malfunction occurred).

>> GO TO 2

### 2. CHECK DTC

1. Check DTC.
2. Perform the following procedure if DTC is displayed.
  - Record DTC and freeze frame data (Print them out with CONSULT-III.)
  - Erase DTC.
  - Study the relationship between the cause detected by DTC and the symptom described by the customer.
3. Check related service bulletins for information.

Is any symptom described and any DTC detected?

Symptom is described, DTC is displayed>>GO TO 3

Symptom is described, DTC is not displayed>>GO TO 4

Symptom is not described, DTC is displayed>>GO TO 5

### 3. CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.  
Connect CONSULT-III to the vehicle in "DATA MONITOR" mode and check real time diagnosis results.  
Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 5

### 4. CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.  
Connect CONSULT-III to the vehicle in "DATA MONITOR" mode and check real time diagnosis results.  
Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 6

### 5. PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC Confirmation Procedure for the displayed DTC, and then check that DTC is detected again.  
At this time, always connect CONSULT-III to the vehicle, and check diagnostic results in real time.  
If two or more DTCs are detected, refer to [DLK-87. "DTC Inspection Priority Chart"](#) and determine trouble diagnosis order.

#### NOTE:

- Freeze frame data is useful if the DTC is not detected.
- Perform Component Function Check if DTC Confirmation Procedure is not included in Service Manual. This simplified check procedure is an effective alternative though DTC cannot be detected during this check.  
If the result of Component Function Check is NG, it is the same as the detection of DTC by DTC Confirmation Procedure.

Is DTC detected?

YES >> GO TO 7

NO >> Refer to [GI-37. "Intermittent Incident"](#).

### 6. DETECT MALFUNCTIONING SYSTEM BY SYMPTOM TABLE

Detect malfunctioning system according to SYMPTOM DIAGNOSIS based on the confirmed symptom in step 4, and determine the trouble diagnosis order based on possible causes and symptom.

>> GO TO 7

### 7. DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

#### NOTE:

## DIAGNOSIS AND REPAIR WORKFLOW

### < BASIC INSPECTION >

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The Diagnostic Procedure described based on open circuit inspection. A short circuit inspection is also required for the circuit check in the Diagnostic Procedure.

#### Is malfunctioning part detected?

YES >> GO TO 8

NO >> Check voltage of related BCM terminals using CONSULT-III.

### 8. REPAIR OR REPLACE THE MALFUNCTIONING PART

---

1. Repair or replace the malfunctioning part.
2. Reconnect parts or connectors disconnected during Diagnostic Procedure again after repair and replacement.
3. Check DTC. If DTC is displayed, erase it.

>> GO TO 9

### 9. FINAL CHECK

---

When DTC was detected in step 2, perform DTC Confirmation Procedure or Component Function Check again, and then check that the malfunction have been repaired securely.

When symptom was described from the customer, refer to confirmed symptom in step 3 or 4, and check that the symptom is not detected.

#### Is the inspection result normal?

NO (DTC is detected)>>GO TO 7

NO (Symptom remains)>>GO TO 6

YES >> Inspection End.

# INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

## INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

A

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description

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B

Perform the system initialization when replacing BCM, replacing a keyfob or registering an additional keyfob.

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement

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Refer to the CONSULT-III Operation Manual for the initialization procedure.

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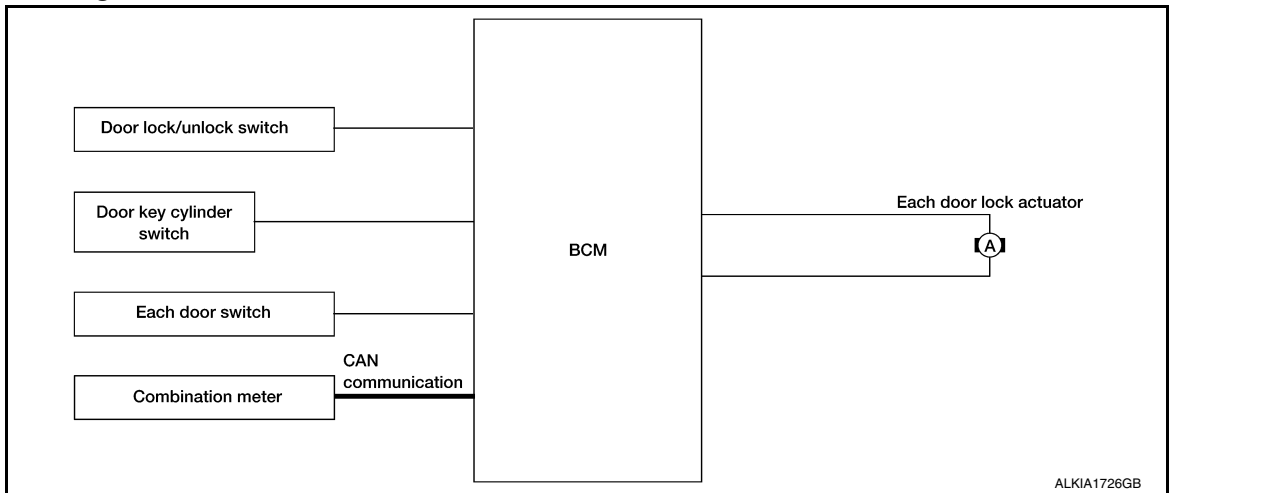
# AUTOMATIC DOOR LOCKS

< FUNCTION DIAGNOSIS >

## FUNCTION DIAGNOSIS

### AUTOMATIC DOOR LOCKS

#### System Diagram



#### System Description

INFOID:000000005268043

| Input                    | Single                  | Function                            | Actuator                |
|--------------------------|-------------------------|-------------------------------------|-------------------------|
| Door lock/unlock switch  | Door lock/unlock signal | Door lock function                  | Each door lock actuator |
| Door key cylinder switch |                         |                                     |                         |
| Each door switch         | Door open/close signal  | Key reminder function               |                         |
| Combination meter        | Warning buzzer signal   |                                     |                         |
|                          | Vehicle speed signal    | Automatic door lock/unlock function |                         |

#### DOOR LOCK FUNCTION

Functions Available by Operating the Door Lock and Unlock Switches on Driver Door and Passenger Door

- Interlocked with the locking operation of door lock and unlock switch, door lock actuators of all door lock actuators are locked.
- Interlocked with the unlocking operation of door lock and unlock switch, door lock actuators of all door lock actuators are unlocked.

Functions Available by Operating the Key Cylinder Switch on Driver Door or Back Door

- Interlocked with the locking operation of door key cylinder, door lock actuators of all door lock actuators are locked.

Selective Unlock Operation

- When driver door key cylinder is unlocked, door lock actuator driver side is unlocked.
- When driver door key cylinder is unlocked for the second time within 5 seconds after the first operation, door lock actuators on all doors are unlocked.
- When back door key cylinder is unlocked, back door lock actuator is unlocked.
- When back door key cylinder is unlocked for the second time within 5 seconds after the first operation, door lock actuators on all doors are unlocked.

Select unlock operation mode can be changed using DOOR LOCK-UNLOCK SET mode in "WORK SUPPORT". Refer to [DLK-17, "DOOR LOCK : CONSULT-III Function \(BCM - DOOR LOCK\)"](#).

#### AUTOMATIC DOOR LOCKS (LOCK OPERATION)

The interlock door lock function is the function that locks all doors linked with the vehicle speed.

Vehicle Speed Sensing Auto Door Lock\*1

All doors are locked when the vehicle speed reaches 24 km/h (15 MPH) or more.



# AUTOMATIC DOOR LOCKS

## < FUNCTION DIAGNOSIS >

BCM outputs the lock signal to all door lock actuators when it detects that the ignition switch is turned ON, all doors are closed and the vehicle speed received from the combination meter via CAN communication becomes 15 MPH (24 km/h) or more.

If a door is opened and closed at any time during one ignition cycle (OFF → ON), even after initial auto door lock has taken place, the BCM will relock all doors when the vehicle speed reaches 15 MPH (24 km/h) or more again.

Setting change of Automatic Door Locks (LOCK) Function

The lock operation setting of the automatic door locks function can be changed.

### **With CONSULT-III**

The ON/OFF switching of the automatic door locks (LOCK) function and the type selection of the automatic door locks (LOCK) function can be performed at the WORK SUPPORT setting of CONSULT-III. Refer to [DLK-17, "DOOR LOCK : CONSULT-III Function \(BCM - DOOR LOCK\)"](#).

### **Without CONSULT- III**

The automatic door locks (LOCK) function can be switched ON/OFF by performing the following operation.

1. Close all doors (door switch OFF).
2. Turn ignition switch ON.
3. Within 20 seconds of turning the ignition switch ON, press and hold the door lock and unlock switch to the LOCK position for more than 5 seconds.
4. The switching is completed when the hazard lamps blink.

OFF → ON : 2 blinks

ON → OFF : 1 blink

5. The ignition switch must be turned OFF and ON again between each setting change.

## AUTOMATIC DOOR LOCKS (UNLOCK OPERATION)

The automatic door locks (UNLOCK) function is the function that unlocks all doors linked with the key position.

IGN OFF Interlock Door Unlock\*1

All doors are unlocked when the power supply position is changed from ON to OFF.

BCM outputs the unlock signal to all door lock actuators when it detects that the power supply position is changed from ignition switch ON to OFF.

Setting change of Automatic Door Locks (UNLOCK) Function

The lock operation setting of the automatic door locks function can be changed.

### **With CONSULT-III**

The ON/OFF switching of the automatic door locks (UNLOCK) function and the type selection of the automatic door locks (UNLOCK) function can be performed at the WORK SUPPORT setting of CONSULT-III. Refer to [DLK-17, "DOOR LOCK : CONSULT-III Function \(BCM - DOOR LOCK\)"](#).

### **Without CONSULT- III**

The automatic door locks (UNLOCK) function can be switched ON/OFF by performing the following operation.

1. Close all doors (door switch OFF).
2. Turn ignition switch ON.
3. Within 20 seconds of turning the ignition switch ON, press and hold the door lock and unlock switch to the UNLOCK position for more than 5 seconds.
4. The switching is completed when the hazard lamps blink.

OFF → ON : 2 blinks

ON → OFF : 1 blink

5. The ignition switch must be turned OFF and ON again between each setting change.

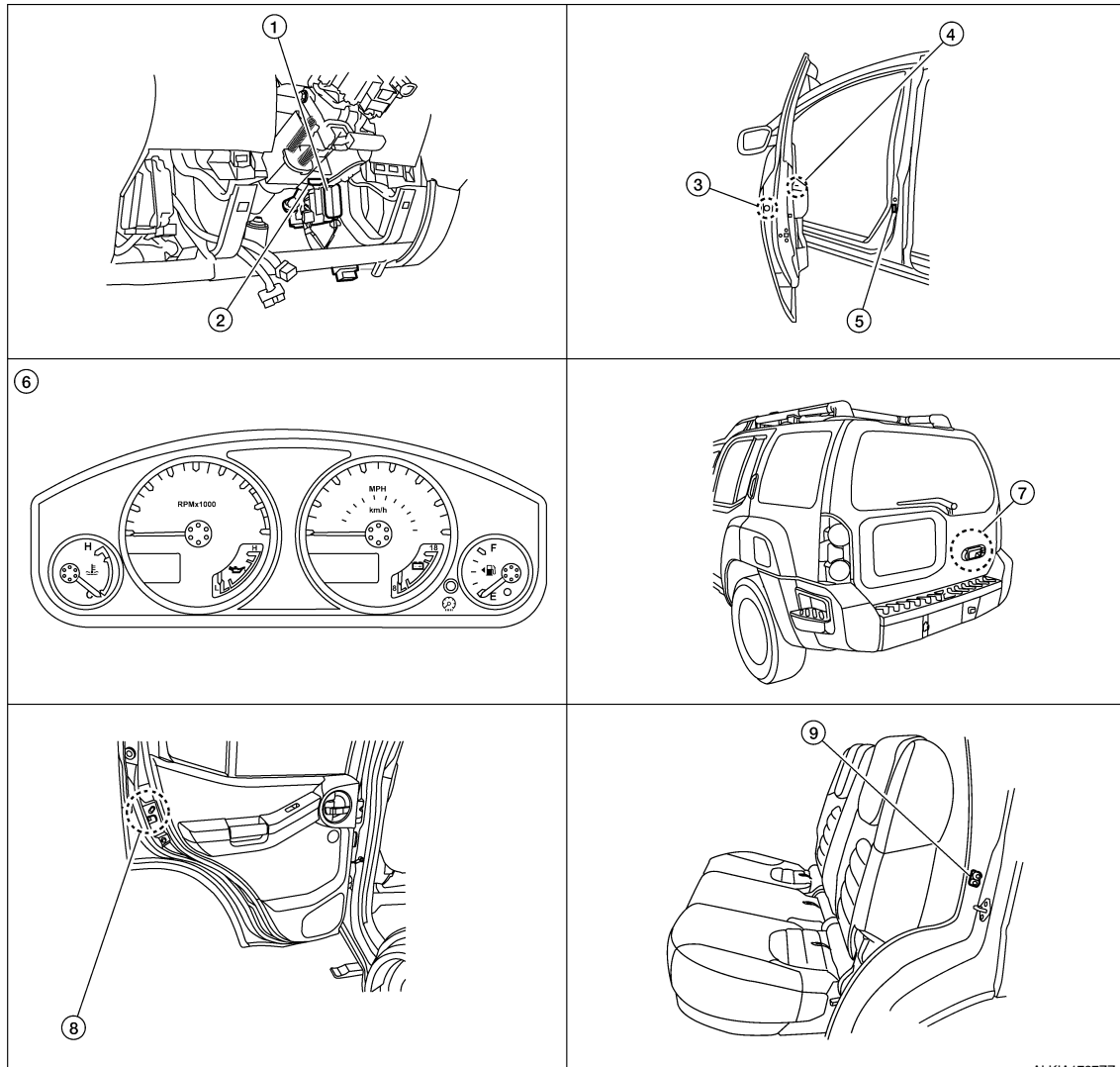
\*1: This function is set to ON before delivery.

# AUTOMATIC DOOR LOCKS

< FUNCTION DIAGNOSIS >

## Component Parts Location

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|---|--|--|
| 1. BCM M18, M19, M20<br>(view with lower instrument panel LH removed)                                   | 2. Key switch M27                                | 3. Front door lock assembly LH (key cylinder switch) D14<br>Front door lock actuator RH D114 |
| 4. Main power window and door lock/unlock switch D7<br>Power window and door lock/unlock switch RH D105 | 5. Front door switch<br>LH B8<br>RH B108         | 6. Combination meter M24   |
| 7. Back door switch D502<br>Back door key cylinder switch D505<br>Back door lock actuator D508          | 8. Rear door lock actuator<br>LH D205<br>RH D305 | 9. Rear door switch<br>LH B18<br>RH B116   |

## Component Description

INFOID:000000005268045

| Item                        | Function  |
|-----------------------------|---|
| BCM                         | Controls the door lock function and room lamp function.         |
| Door lock and unlock switch | Input lock or unlock signal to BCM.                             |
| Door lock actuator          | Output lock/unlock signal from BCM and locks/unlocks each door. |
| Door switch                 | Input door open/close condition to BCM.                         |

# AUTOMATIC DOOR LOCKS

## < FUNCTION DIAGNOSIS >

| Item                     | Function  |
|--------------------------|---|
| Door key cylinder switch | <ul style="list-style-type: none"><li>• Input lock or unlock signal to main power window and door lock/unlock switch.</li><li>• Main power window and door lock/unlock switch transmits door lock/unlock signal to BCM.</li></ul> |
| Combination meter        | Transmits shift position signal to BCM via CAN communication line.  |

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# DOOR LOCK FUNCTION

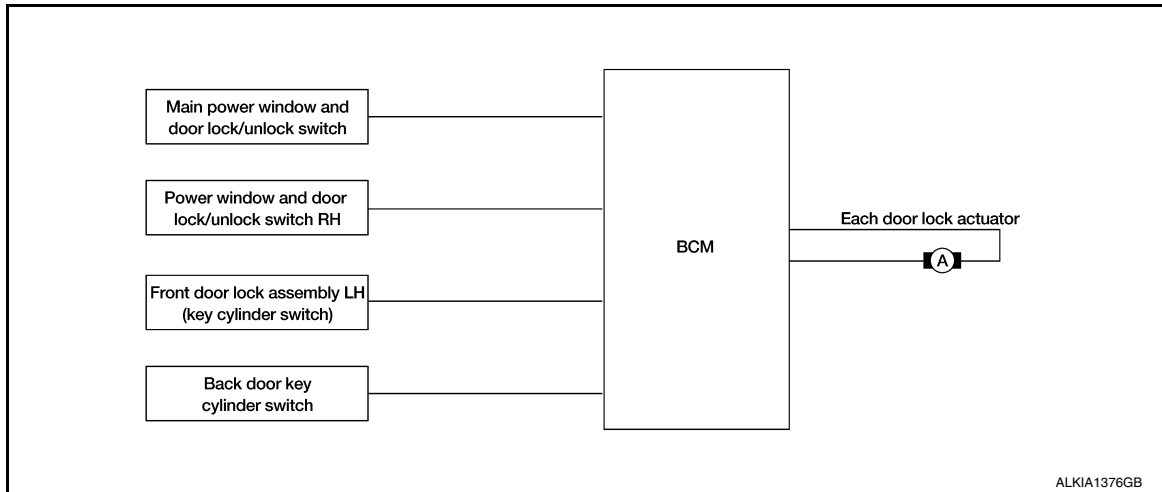
< FUNCTION DIAGNOSIS >

## DOOR LOCK FUNCTION

### DOOR LOCK AND UNLOCK SWITCH

#### DOOR LOCK AND UNLOCK SWITCH : System Diagram

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#### DOOR LOCK AND UNLOCK SWITCH : System Description

INFOID:000000005268047

| Switch  | Input/output signal to BCM | BCM function             | Actuator           |
|---|----------------------------|--------------------------|--------------------|
| Main power window and door lock/unlock switch | Door lock/unlock signal    | Door lock/unlock control | Door lock actuator |
| Power window and door lock/unlock switch      |                            |                          |                    |
| Front door key cylinder switch                |                            |                          |                    |
| Back door key cylinder switch                 |                            |                          |                    |

#### DOOR LOCK FUNCTION

Functions Available by Operating the Door Lock and Unlock Switches on Driver Door and Passenger Door

- Interlocked with the locking operation of door lock and unlock switch, door lock actuators of all door lock actuators are locked.
- Interlocked with the unlocking operation of door lock and unlock switch, door lock actuators of all door lock actuators are unlocked.

Functions Available by Operating the Key Cylinder Switch on Driver Door or Back Door

- Interlocked with the locking operation of door key cylinder, door lock actuators of all door lock actuators are locked.

Selective Unlock Operation

- When driver door key cylinder is unlocked, door lock actuator driver side is unlocked.
- When driver door key cylinder is unlocked for the second time within 5 seconds after the first operation, door lock actuators on all doors are unlocked.
- When back door key cylinder is unlocked, back door lock actuator is unlocked.
- When back door key cylinder is unlocked for the second time within 5 seconds after the first operation, door lock actuators on all doors are unlocked.

Select unlock operation mode can be changed using DOOR LOCK-UNLOCK SET mode in "WORK SUPPORT". Refer to [DLK-17, "DOOR LOCK : CONSULT-III Function \(BCM - DOOR LOCK\)"](#).

Key Reminder System

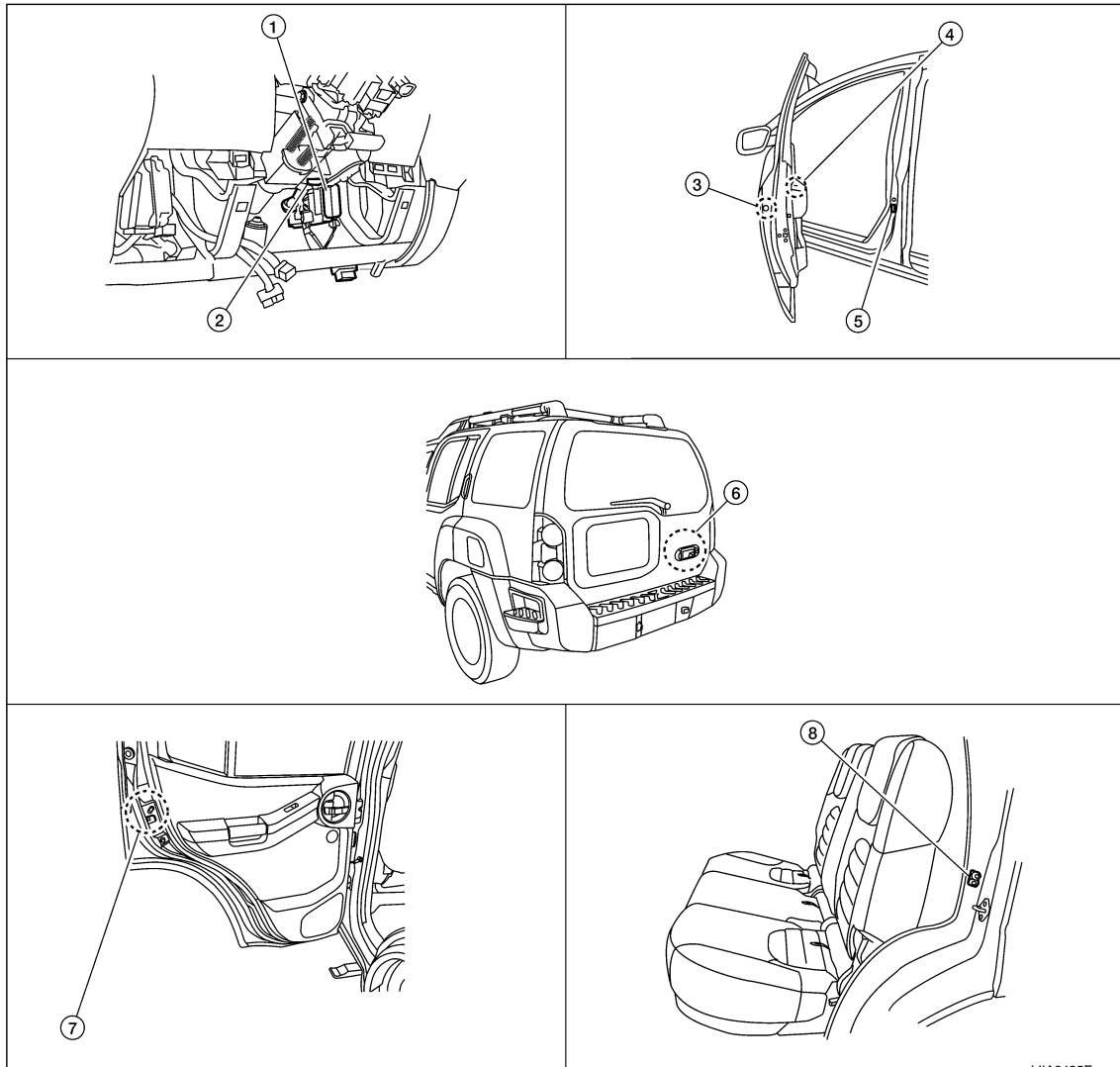
Refer to [DLK-51, "Diagnosis Procedure"](#).

# DOOR LOCK FUNCTION

< FUNCTION DIAGNOSIS >

## DOOR LOCK AND UNLOCK SWITCH : Component Parts Location

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|---|--|--|
| 1. BCM M18, M19, M20<br>(view with lower instrument panel LH removed)                                   | 2. Key switch M27                        | 3. Front door lock assembly LH (key cylinder switch) D14<br>Front door lock actuator RH D114   |
| 4. Main power window and door lock/unlock switch D7<br>Power window and door lock/unlock switch RH D105 | 5. Front door switch<br>LH B8<br>RH B108 | 6. Back door switch D502<br>Back door key cylinder switch D505<br>Back door lock actuator D508 |
| 7. Rear door lock actuator<br>LH D205<br>RH D305  | 8. Rear door switch<br>LH B18<br>RH B116 |  |

## DOOR LOCK AND UNLOCK SWITCH : Component Description

INFOID:000000005268049

| Item                        | Function  |
|-----------------------------|---|
| BCM                         | Controls the door lock function and room lamp function.           |
| Door lock and unlock switch | Transmits lock or unlock signal to BCM.                           |
| Door lock actuator          | Receives lock/unlock signal from BCM and locks/unlocks each door. |
| Door switch                 | Transmits door open/close condition to BCM.                       |

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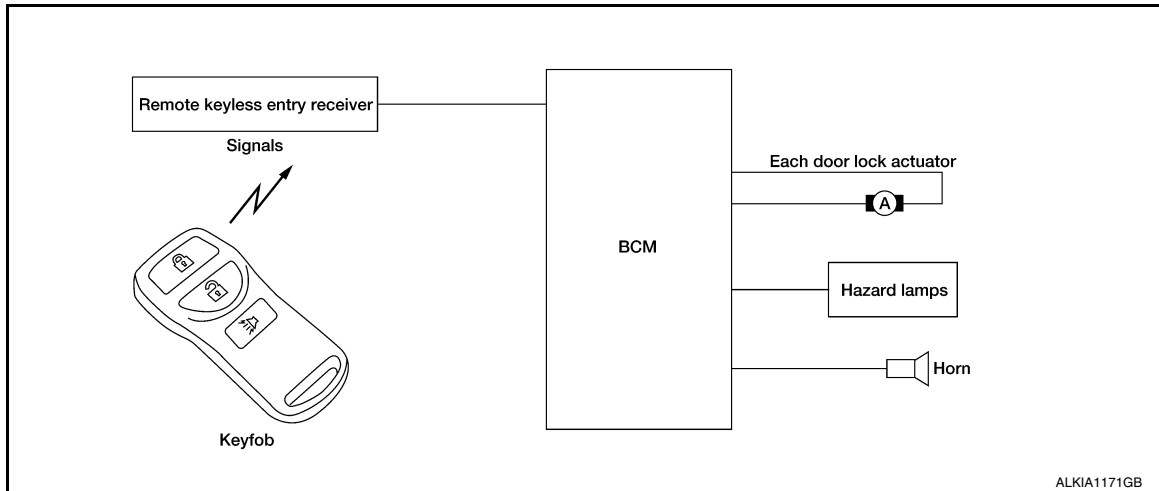
# DOOR LOCK FUNCTION

< FUNCTION DIAGNOSIS >

## REMOTE KEYLESS ENTRY

### REMOTE KEYLESS ENTRY : System Diagram

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### REMOTE KEYLESS ENTRY : System Description

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#### OPERATED PROCEDURE

- When the keyfob is operated, the signal from the keyfob is sent and the remote keyless entry receiver receives the signal and sends it to the BCM. The BCM only locks/unlocks the doors if the ID number matches. (Remote control entry functions)
- Using the keyfob, the transmitter sends radio waves to the remote keyless entry receiver, which then sends the received waves to the BCM. Only if the ID number matches does the BCM lock/unlock the doors. (Remote control door function)
- Unless the key is inserted into the ignition key cylinder or one of the doors is opened within 1 minute after the UNLOCK switch on the keyfob is pressed, all the doors are automatically locked. (Auto lock function)
- When a door is locked or unlocked, the vehicle turn signal lamps flash and the horn sounds to verify operation. (Active check function)
- When the key is in the ignition key cylinder (when the key switch is ON) and one of the doors is open, the door lock function does not work even when the door lock is operated with the keyfob.
- Keyfob ID set up is available.
- If a keyfob is lost, a new keyfob can be set up. A maximum of 5 IDs can be set up simultaneously.

#### REMOTE CONTROL ENTRY FUNCTIONS

- When a button on the keyfob is operated, the signal is sent from the keyfob and received by the remote keyless entry receiver.
- The received signal is sent to the BCM and compared with the registered ID number.
- If the ID number matches, the BCM sends the lock/unlock signal to each door lock actuator.
- When the door lock actuators receive this signal, each operates to lock/unlock its door.
- BCM locks all doors with input of LOCK signal from keyfob.
- When an UNLOCK signal is sent from keyfob once, driver's door will be unlocked.
- Then, if an UNLOCK signal is sent from keyfob again within 5 seconds, all other doors will be unlocked.

#### REMOTE CONTROL ENTRY OPERATION CONDITIONS

| Keyfob operation                | Operation condition  |
|---------------------------------|--|
| Door lock operation (locking)   | <ul style="list-style-type: none"> <li>• With key removed (key switch: OFF)</li> <li>• Closing all doors (door switch: OFF)</li> </ul> |
| Door lock operation (unlocking) | With key removed (key switch: OFF)   |

#### AUTO LOCK FUNCTION

##### Operation Description

- Unless the key is inserted into the ignition key cylinder, one of the doors is opened, or the keyfob is operated within 1 minute after a door lock is unlocked by keyfob operation, all the doors are automatically locked.

# DOOR LOCK FUNCTION

## < FUNCTION DIAGNOSIS >

The 1 minute timer count is executed by the BCM and after 1 minute, the BCM sends the lock signal to all doors.

Lock operations are the same as for the remote control entry function.

## ACTIVE CHECK FUNCTION

### Operation Description

When a door is locked or unlocked by keyfob operation, the vehicle turn signals flash and the horn sounds to verify operation.

- When a button on the keyfob is operated, the signal is sent from the remote controller and received by the keyless remote entry receiver.
- The received signal is sent to the BCM and compared with the registered ID number.
- If the ID number matches, the BCM uses communication to send the turn signal flashing and horn signal to the IPDM E/R.
- The IPDM E/R flashes the turn signal lamps and sounds the horn for each keyfob operation.

### Operating function of hazard and horn reminder

|                           | C mode |        | S mode |        |
|---------------------------|--------|--------|--------|--------|
|                           | Lock   | Unlock | Lock   | Unlock |
| Keyfob operation          |        |        |        |        |
| Hazard warning lamp flash | Twice  | Once   | Twice  | —      |
| Horn sound                | Once   | —      | —      | —      |

## HAZARD AND HORN REMINDER

BCM output to IPDM E/R for horn reminder signal as DATA LINE (CAN-H line and CAN-L line).

The hazard and horn reminder has C mode (horn chirp mode) and S mode (non-horn chirp mode).

### How to change hazard and horn reminder mode

 With CONSULT-III

Hazard and horn reminder can be changed using "WORK SUPPORT" mode in "MULTI ANSWER BACK SET".

 Without CONSULT-III

Refer to Owner's Manual for instructions.

## INTERIOR LAMP OPERATION

When the following input signals are both supplied:

- all door switches are in the OFF position. (when all the doors are closed);
- interior lamp switch is in DOOR position.

Remote keyless entry system turns on interior lamp and ignition keyhole illumination (for 30 seconds) with input of UNLOCK signal from keyfob.

## PANIC ALARM OPERATION

When key switch is OFF (when ignition key is not inserted in key cylinder), remote keyless entry system turns on and off horn and headlamp intermittently with input of PANIC ALARM signal from keyfob.

The alarm automatically turns off after 25 seconds or when BCM receives any signal from keyfob.

## KEYLESS POWER WINDOW DOWN (OPEN) OPERATION

When keyfob unlock switch is turned ON with ignition switch OFF, and the switch is detected to be ON continuously for more than 1 second, the driver's door and passenger's door power windows are simultaneously opened.

Power window is operated to open and the operation continues as long as the keyfob unlock switch is pressed.

A  
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O  
P

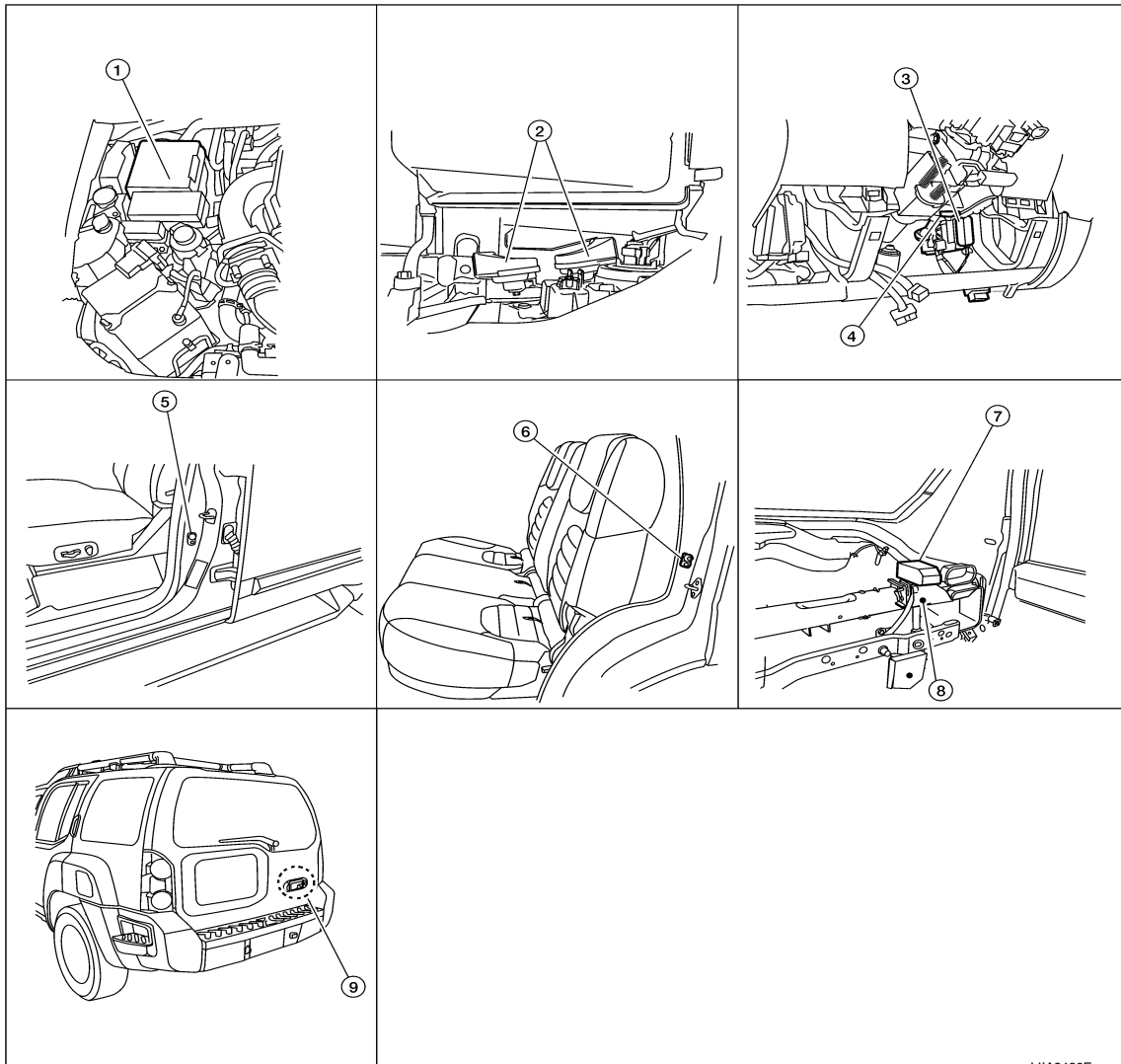
DLK

# DOOR LOCK FUNCTION

< FUNCTION DIAGNOSIS >

## REMOTE KEYLESS ENTRY : Component Parts Location

INFOID:000000005268052



LIIA2426E

- |  |   |   |
|--|---|---|
| 1. IPDM E/R E122, E124   | 2. Horns E6<br>(behind front combination lamp LH) | 3. BCM M18, M19, M20<br>(view with lower instrument panel LH removed) |
| 4. Key switch M27  | 5. Front door switch<br>LH B8<br>RH B108          | 6. Rear door switch<br>LH B18<br>RH B116                              |
| 7. Remote keyless entry receiver M120<br>(view with instrument panel RH removed) | 8. Steering member                                | 9. Back door switch D502  |

## REMOTE KEYLESS ENTRY : Component Description

INFOID:000000005268053

| Item                          | Function  |
|-------------------------------|---|
| BCM                           | Controls the door lock function and room lamp function.                 |
| Door lock and unlock switch   | Transmits lock or unlock signal to BCM.                                 |
| Door switch                   | Transmits door open/close condition to BCM.                             |
| Remote keyless entry receiver | Receives lock/unlock signal from the keyfob, and then transmits to BCM. |



## DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

### DIAGNOSIS SYSTEM (BCM)

#### COMMON ITEM

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

INFOID:000000005568008

#### APPLICATION ITEM

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

| Diagnosis mode         | Function Description  |
|------------------------|---|
| WORK SUPPORT           | Changes the setting for each system function.   |
| SELF DIAGNOSTIC RESULT | Displays the diagnosis results judged by BCM. Refer to <a href="#">DLK-87, "DTC Index"</a> .  |
| CAN DIAG SUPPORT MNTR  | 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"> <li>• Enables to read and save the vehicle specification.</li> <li>• Enables to write the vehicle specification when replacing BCM.</li> </ul> |

#### SYSTEM APPLICATION

BCM can perform the following functions for each system.

#### NOTE:

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

| System                                 | Sub system selection item | Diagnosis mode |              |             |
|--|---------------------------|----------------|--------------|-------------|
|  |                           | WORK SUPPORT   | DATA MONITOR | ACTIVE TEST |
| BCM                                    | BCM                       | ×              |              |             |
| Door lock                              | DOOR LOCK                 | ×              | ×            | ×           |
| Rear window defogger                   | REAR DEFOGGER             |                | ×            | ×           |
| Warning chime                          | BUZZER                    |                | ×            | ×           |
| Interior room lamp timer               | INT LAMP                  | ×              | ×            | ×           |
| Remote keyless entry system            | MULTI REMOTE ENT          | ×              | ×            | ×           |
| Exterior lamp                          | HEAD LAMP                 | ×              | ×            | ×           |
| Wiper and washer                       | WIPER                     | ×              | ×            | ×           |
| Turn signal and hazard warning lamps   | FLASHER                   |                | ×            | ×           |
| Air conditioner                        | AIR CONDITONER            |                | ×            |             |
| Combination switch                     | COMB SW                   |                | ×            |             |
| Immobilizer                            | IMMU                      |                | ×            | ×           |
| Interior room lamp battery saver       | BATTERY SAVER             | ×              | ×            | ×           |
| Back door open                         | TRUNK                     |                | ×            | ×           |
| Vehicle security system                | THEFT ALM                 | ×              | ×            | ×           |
| RAP (retained accessory power)         | RETAINED PWR              | ×              | ×            | ×           |
| Signal buffer system                   | SIGNAL BUFFER             |                | ×            | ×           |
| TPMS (tire pressure monitoring system) | AIR PRESSURE MONITOR      | ×              | ×            | ×           |
| Panic alarm system                     | PANIC ALARM               |                |              | ×           |

#### DOOR LOCK

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

INFOID:000000005568009

#### WORK SUPPORT

# DIAGNOSIS SYSTEM (BCM)

## < FUNCTION DIAGNOSIS >

| Work Item                    | Description  |
|------------------------------|--|
| DOOR LOCK-UNLOCK SET         | <ul style="list-style-type: none"> <li>• ON</li> <li>• OFF</li> </ul>  |
| AUTOMATIC DOOR LOCK SELECT   | <ul style="list-style-type: none"> <li>• SHIFT OUT OF P</li> <li>• VH SPD</li> </ul>   |
| ANTI-LOCK OUT SET            | <ul style="list-style-type: none"> <li>• ON</li> <li>• OFF</li> </ul>  |
| AUTOMATIC DOOR UNLOCK SELECT | <ul style="list-style-type: none"> <li>• MODE1: Unlock all door when IGN OFF</li> <li>• MODE2: Unlock all door when out of P range</li> <li>• MODE3: Unlock all door when key out</li> <li>• MODE4: Unlock driver door only when IGN OFF</li> <li>• MODE5: Unlock driver door only when out of P range</li> <li>• MODE6: Unlock driver door only when key out</li> </ul> |
| AUTOMATIC LOCK/UNLOCK SELECT | <ul style="list-style-type: none"> <li>• ON</li> <li>• OFF</li> </ul>  |

## DATA MONITOR

| Monitor Item<br>[Unit]  | Description  |
|-------------------------|--|
| IGN ON SW [ON/OFF]      | Indicates condition of ignition switch in ON position              |
| KEY ON SW [ON/OFF]      | Indicates condition of key switch                                  |
| CDL LOCK SW [ON/OFF]    | Indicates condition of door lock and unlock switch                 |
| CDL UNLOCK SW [ON/OFF]  | Indicates condition of door lock and unlock switch                 |
| DOOR SW-DR [ON/OFF]     | Indicates condition of front door switch LH                        |
| DOOR SW-AS [ON/OFF]     | Indicates condition of front door switch RH                        |
| DOOR SW-RR [ON/OFF]     | Indicates condition of rear door switch RH                         |
| DOOR SW-RL [ON/OFF]     | Indicates condition of rear door switch LH                         |
| BACK DOOR SW [ON/OFF]   | Indicates condition of back door switch                            |
| KEY CYL LK-SW [ON/OFF]  | Indicates condition of lock signal from door key cylinder switch   |
| KEY CYL UN-SW [ON/OFF]  | Indicates condition of unlock signal from door key cylinder switch |
| KEYLESS LOCK [ON/OFF]   | Indicates condition of lock signal from keyfob                     |
| KEYLESS UNLOCK [ON/OFF] | Indicates condition of unlock signal from keyfob                   |

## ACTIVE TEST

| Test Item | Description   |
|-----------|---|
| DOOR LOCK | This test is able to check door lock operation [ALL LCK/ALL ULK/DR UNLK/OTR ULK]. |

## MULTIREMOTE ENT

### MULTIREMOTE ENT : CONSULT-III Function (BCM - MULTIREMOTE ENT)

INFOID:000000005568010

## WORK SUPPORT

| Work Item             | Description  |
|-----------------------|--|
| HORN CHIRP SET        | Horn chirp function mode can be changed in this mode. The function mode will be changed when "ON" or "OFF" on CONSULT-III screen is touched.                   |
| HAZARD LAMP SET       | <ul style="list-style-type: none"> <li>• MODE1: Nothing</li> <li>• MODE2: Unlock only</li> <li>• MODE3: Lock only</li> <li>• MODE4: Lock and unlock</li> </ul> |
| MULTI ANSWER BACK SET | Hazard and horn reminder mode can be changed in this mode. See table below for details.  |

# DIAGNOSIS SYSTEM (BCM)

## < FUNCTION DIAGNOSIS >

| Work Item           | Description  |
|---------------------|--|
| AUTO LOCK SET       | <ul style="list-style-type: none"> <li>• MODE1: 5 minutes</li> <li>• MODE2: Nothing</li> <li>• MODE3: 1 minute</li> </ul>      |
| PANIC ALARM SET     | <ul style="list-style-type: none"> <li>• MODE1: 0.5 seconds</li> <li>• MODE2: Nothing</li> <li>• MODE3: 1.5 seconds</li> </ul> |
| PW DOWN SET         | <ul style="list-style-type: none"> <li>• MODE1: 2 seconds</li> <li>• MODE2: Nothing</li> <li>• MODE3: 5 seconds</li> </ul>     |
| REMO CONT ID REGIST | Keyfob ID code can be registered.  |
| REMO CONT ID ERASUR | Keyfob ID code can be erased.  |
| REMO CONT ID CONFIR | It can be checked whether keyfob ID code is registered or not in this mode.  |

### Hazard and horn reminder mode

|                           | MODE 1<br>(C mode) |        | MODE 2<br>(S mode) |        |
|---------------------------|--------------------|--------|--------------------|--------|
|                           | Lock               | Unlock | Lock               | Unlock |
| Keyfob operation          | Lock               | Unlock | Lock               | Unlock |
| Hazard warning lamp flash | Twice              | Once   | Twice              | —      |
| Horn sound                | Once               | —      | —                  | —      |

## DATA MONITOR

| Monitor Item<br>[Unit]  | Condition  |
|-------------------------|--|
| IGN ON SW [ON/OFF]      | Indicates condition of ignition switch in ON position  |
| KEY ON SW [ON/OFF]      | Indicates condition of key switch                      |
| ACC ON SW [ON/OFF]      | Indicates condition of ignition switch in ACC position |
| KEYLESS LOCK [ON/OFF]   | Indicates condition of lock signal from keyfob         |
| KEYLESS UNLOCK [ON/OFF] | Indicates condition of unlock signal from keyfob       |
| KEYLESS PANIC [ON/OFF]  | Indicates condition of panic signal from keyfob        |
| DOOR SW-DR [ON/OFF]     | Indicates condition of front door switch LH            |
| DOOR SW-AS [ON/OFF]     | Indicates condition of front door switch RH            |
| DOOR SW-RR [ON/OFF]     | Indicates condition of rear door switch RH             |
| DOOR SW-RL [ON/OFF]     | Indicates condition of rear door switch LH             |
| BACK DOOR SW [ON/OFF]   | Indicates condition of back door switch                |
| CDL LOCK SW [ON/OFF]    | Indicates condition of door lock and unlock switch     |
| CDL UNLOCK SW [ON/OFF]  | Indicates condition of door lock and unlock switch     |

## ACTIVE TEST

| Test Item          | Description  |
|--------------------|--|
| DOOR LOCK          | This test is able to check door lock operation [ALL LCK/ALL ULK/DR UNLK/OTR ULK].  |
| PW REMOTO DOWN SET | This test is able to check power window down operation. The windows are lowered when "ON" on CONSULT-III screen is touched.  |
| FLASHER            | This test is able to check right and left hazard reminder operation. The right hazard lamp turns on when "RH" on CONSULT-III screen is touched and the left hazard lamp turns on when "LH" on CONSULT-III screen is touched. |
| HORN               | This test is able to check panic alarm and horn reminder operations. The alarm activate for 0.5 seconds after "ON" on CONSULT-III screen is touched.   |

# U1000 CAN COMM CIRCUIT

< COMPONENT DIAGNOSIS >

## COMPONENT DIAGNOSIS

### U1000 CAN COMM CIRCUIT

#### Description

INFOID:000000005268057

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-46. "CAN Communication Signal Chart"](#).

#### DTC Logic

INFOID:000000005268058

#### DTC DETECTION LOGIC

| DTC   | CONSULT-III display description | DTC Detection Condition  | Possible cause   |
|-------|---------------------------------|--|--|
| U1000 | CAN COMM CIRCUIT                | When BCM cannot communicate CAN communication signal continuously for 2 seconds or more. | In CAN communication system, any item (or items) of the following listed below is malfunctioning. <ul style="list-style-type: none"><li>• Transmission</li><li>• Receiving (ECM)</li><li>• Receiving (VDC/TCS/ABS)</li><li>• Receiving (METER/M&amp;A)</li><li>• Receiving (TCM)</li></ul> |

#### Diagnosis Procedure

INFOID:000000005268059

#### 1. PERFORM SELF DIAGNOSTIC

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

Is "CAN COMM CIRCUIT" displayed?

- YES >> Refer to [LAN-5. "CAN Communication Control Circuit"](#).  
NO >> Refer to [GI-37. "Intermittent Incident"](#).

# U1010 CONTROL UNIT (CAN)

< COMPONENT DIAGNOSIS >

## U1010 CONTROL UNIT (CAN)

### DTC Logic

INFOID:000000005268060

### DTC DETECTION LOGIC

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

### Diagnosis Procedure

INFOID:000000005268061

#### 1. REPLACE BCM

When DTC [U1010] is detected, replace BCM. Refer to [BCS-56. "Removal and Installation"](#).

>> Replace BCM.

### Special Repair Requirement

INFOID:000000005268062

#### 1. REQUIRED WORK WHEN REPLACING BCM

The BCM must be initialized when replaced. Refer to [BCS-56. "Removal and Installation"](#) for BCM configuration.

Initialize NVIS by CONSULT-III. For the details of initialization refer to CONSULT-III Operation Manual.

>> Work End.

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P

DLK

# POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

## POWER SUPPLY AND GROUND CIRCUIT

### BCM (BODY CONTROL MODULE)

### BCM (BODY CONTROL MODULE) : Diagnosis Procedure

INFOID:000000005568011

Regarding Wiring Diagram information, refer to [BCS-48. "Wiring Diagram"](#).

## 1. CHECK FUSES AND FUSIBLE LINK

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

| Terminal No. | Signal name          | Fuses and fusible link No. |
|--------------|----------------------|----------------------------|
| 57           | Battery power supply | 18 (10A)                   |
| 70           |                      | G (50A)                    |
| 11           | Ignition ACC or ON   | 4 (10A)                    |
| 38           | Ignition ON or START | 1 (10A)                    |

### Is the fuse blown?

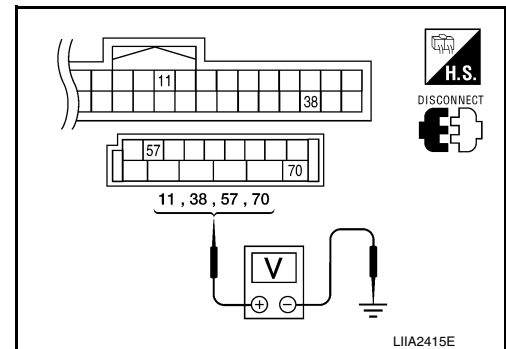
YES >> Replace the blown fuse or fusible link after repairing the affected circuit.

NO >> GO TO 2

## 2. CHECK POWER SUPPLY CIRCUIT

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

| Connector | Terminals |        | Power source          | Condition                   | Voltage (V) (Approx.) |
|-----------|-----------|--------|-----------------------|-----------------------------|-----------------------|
|           | (+)       | (-)    |                       |                             |                       |
| M18       | 11        | Ground | ACC power supply      | Ignition switch ACC or ON   | Battery voltage       |
|           | 38        | Ground | Ignition power supply | Ignition switch ON or START | Battery voltage       |
| M20       | 57        | Ground | Battery power supply  | Ignition switch OFF         | Battery voltage       |
|           | 70        | Ground | Battery power supply  | Ignition switch OFF         | Battery voltage       |



### Is the measurement value normal?

YES >> GO TO 3

NO >> Repair or replace harness.

## 3. CHECK GROUND CIRCUIT

# POWER SUPPLY AND GROUND CIRCUIT

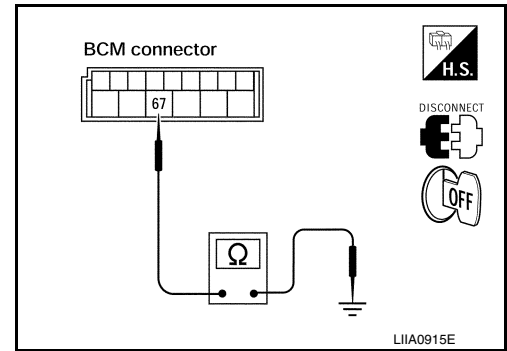
## < COMPONENT DIAGNOSIS >

Check continuity between BCM harness connector and ground.

| BCM       |          | Ground | Continuity |
|-----------|----------|--------|------------|
| Connector | Terminal |        |            |
| M20       | 67       |        | Yes        |

### Does continuity exist?

- YES >> Inspection End.
- NO >> Repair or replace harness.



A  
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**DLK**

# DOOR SWITCH

< COMPONENT DIAGNOSIS >

## DOOR SWITCH

### Description

INFOID:000000005268064

Detects door open/close condition.

### Component Function Check

INFOID:000000005268065

#### 1.CHECK FUNCTION

##### With CONSULT-III

Check door switches in data monitor mode with CONSULT-III.

| Monitor item | Condition              |
|--------------|------------------------|
| DOOR SW-DR   | CLOSE → OPEN: OFF → ON |
| DOOR SW-AS   |                        |
| DOOR SW-RL   |                        |
| DOOR SW-RR   |                        |
| BACK DOOR SW |                        |

Is the inspection result normal?

- YES >> Door switch is OK.
- NO >> Refer to [DLK-24, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000005268066

Regarding Wiring Diagram information, refer to [DLK-66, "Wiring Diagram — POWER DOOR LOCK SYSTEM"](#).

#### 1.CHECK DOOR SWITCHES INPUT SIGNAL

##### With CONSULT-III

Check door switches ("DOOR SW-DR", "DOOR SW-AS", "DOOR SW-RL", "DOOR SW-RR", "BACK DOOR SW") in DATA MONITOR mode with CONSULT-III.

- When doors are open:

**DOOR SW-DR** :ON  
**DOOR SW-AS** :ON  
**DOOR SW-RL** :ON  
**DOOR SW-RR** :ON  
**BACK DOOR SW** :ON

- When doors are closed:

**DOOR SW-DR** :OFF  
**DOOR SW-AS** :OFF  
**DOOR SW-RL** :OFF  
**DOOR SW-RR** :OFF  
**BACK DOOR SW** :OFF

##### Without CONSULT-III

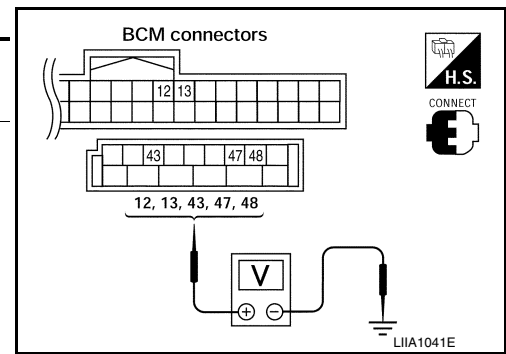
Check voltage between BCM connector M18 or M19 terminals 12, 13, 43, 47, 48 and ground.



# DOOR SWITCH

## < COMPONENT DIAGNOSIS >

| Connector | Item                   | Terminals |        | Condition           | Voltage (V)<br>(Approx.)  |
|-----------|------------------------|-----------|--------|---------------------|---------------------------|
|           |                        | (+)       | (-)    |                     |                           |
| M19       | Back door switch/latch | 43        | Ground | Open<br>↓<br>Closed | 0<br>↓<br>Battery voltage |
|           | Front door switch LH   | 47        |        |                     |                           |
|           | Rear door switch LH    | 48        |        |                     |                           |
| M18       | Front door switch RH   | 12        |        |                     |                           |
|           | Rear door switch RH    | 13        |        |                     |                           |



Is the inspection result normal?

- YES >> Door switch circuit is OK.
- NO >> GO TO 2

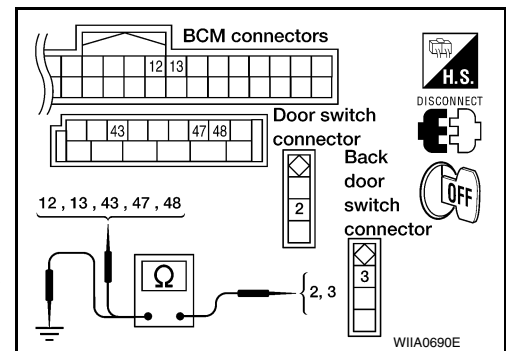
## 2. CHECK DOOR SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect door switch and BCM.
3. Check continuity between BCM connector M18, M19 terminals 12, 13, 43, 47, 48 and door switch connector B8 (Front LH), B108 (Front RH), B18 (Rear LH), B116 (Rear RH) terminal 2 or back door latch connector D502 terminal 3.

- 2 - 47** :Continuity should exist
- 2 - 12** :Continuity should exist
- 2 - 48** :Continuity should exist
- 2 - 13** :Continuity should exist
- 3 - 43** :Continuity should exist

4. Check continuity between door switch connector B8 (Front LH), B108 (Front RH), B18 (Rear LH), B116 (Rear RH) terminal 2 or back door latch connector (C) D502 terminal 3 and ground.

- 2 - Ground** :Continuity should not exist
- 3 - Ground** :Continuity should not exist



Is the inspection result normal?

- YES >> GO TO 3 (front and rear door).
- YES >> GO TO 4 (back door).
- NO >> Repair or replace harness.

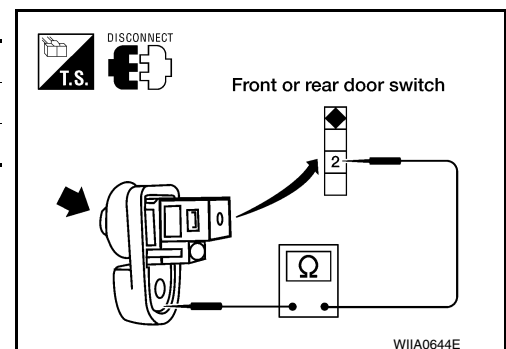
## 3. CHECK FRONT AND REAR DOOR SWITCHES

Check continuity between door switch terminal 2 and exposed metal of switch while pressing and releasing switch.

| Switch                          | Terminals  | Condition | Continuity |
|---------------------------------|------------|-----------|------------|
| Door switch<br>(front and rear) | 2 - Ground | Released  | Yes        |
|                                 |            | Pressed   | No         |

Is the inspection result normal?

- YES >> Door switch circuit is OK.
- NO >> Replace door switch.



# DOOR SWITCH

## < COMPONENT DIAGNOSIS >

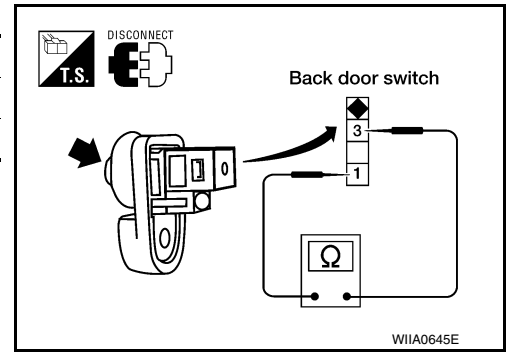
### 4. CHECK BACK DOOR SWITCH

Check continuity between door switch terminals.

| Switch           | Terminals | Condition | Continuity |
|------------------|-----------|-----------|------------|
| Back door switch | 1 – 3     | Released  | Yes        |
|                  |           | Pressed   | No         |

Is the inspection result normal?

- YES >> Repair or replace back door switch ground circuit.
- NO >> Replace back door switch.



# DOOR LOCK AND UNLOCK SWITCH

< COMPONENT DIAGNOSIS >

## DOOR LOCK AND UNLOCK SWITCH

### Description

INFOID:000000005268067

Transmits door lock/unlock operation to BCM.

### Component Function Check

INFOID:000000005268068

### 1. CHECK FUNCTION

#### With CONSULT-III

Check CDL LOCK SW, CDL UNLOCK SW in Data Monitor mode with CONSULT-III.

| Monitor item  | Condition    |
|---------------|--------------|
| CDL LOCK SW   | LOCK : ON    |
|               | UNLOCK : OFF |
| CDL UNLOCK SW | LOCK : OFF   |
|               | UNLOCK : ON  |

Is the inspection result normal?

- YES >> Door lock and unlock switch is OK.
- NO >> refer to [DLK-27. "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000005268069

Regarding Wiring Diagram information, refer to [DLK-66. "Wiring Diagram — POWER DOOR LOCK SYSTEM"](#).

### 1. CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL

#### With CONSULT-III

Check door lock/unlock switch ("CDL LOCK SW", "CDL UNLOCK SW") in DATA MONITOR mode in CONSULT-III. Refer to [DLK-17. "DOOR LOCK : CONSULT-III Function \(BCM - DOOR LOCK\)"](#).

- When door lock/unlock switch is turned to LOCK:

**CDL LOCK SW : ON**

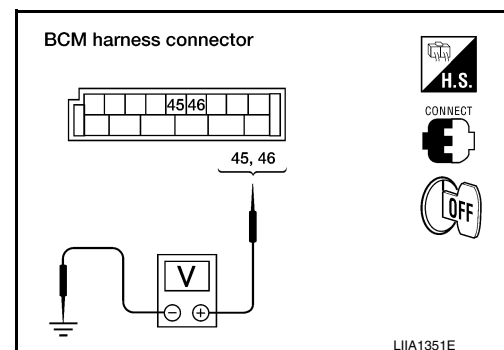
- When door lock/unlock switch is turned to UNLOCK:

**CDL UNLOCK SW : ON**

#### Without CONSULT-III

Check voltage between BCM connector M19 terminals 45, 46 and ground.

| Connector | Terminals |        | Condition                                    | Voltage (V)<br>(Approx.) |
|-----------|-----------|--------|--|--------------------------|
|           | (+)       | (-)    |  |                          |
| M19       | 46        | Ground | Door lock/unlock switch is neutral.          | Battery voltage          |
|           |           |        | Door lock/unlock switch is turned to UNLOCK. | 0                        |
|           | 45        | Ground | Door lock/unlock switch is neutral.          | Battery voltage          |
|           |           |        | Door lock/unlock switch is turned to LOCK.   | 0                        |



Is the inspection result normal?

# DOOR LOCK AND UNLOCK SWITCH

## < COMPONENT DIAGNOSIS >

- YES >> Door lock/unlock switch circuit is OK.  
 NO >> GO TO 2

### 2. CHECK DOOR LOCK/UNLOCK SWITCH

1. Turn ignition switch OFF.
2. Disconnect door lock/unlock switch.
3. Check continuity between main power window and door lock/unlock switch terminals 10, 11 and 14.

| Terminal | Condition      | Continuity |
|----------|----------------|------------|
| 10       | Lock           | Yes        |
|          | Unlock/Neutral | No         |
| 11       | Unlock         | Yes        |
|          | Lock/Neutral   | No         |

4. Check continuity between power window and door lock/unlock switch RH terminals 1, 2 and 3.

| Terminal | Condition      | Continuity |
|----------|----------------|------------|
| 1        | Lock           | Yes        |
|          | Unlock/Neutral | No         |
| 2        | Unlock         | Yes        |
|          | Lock/Neutral   | No         |

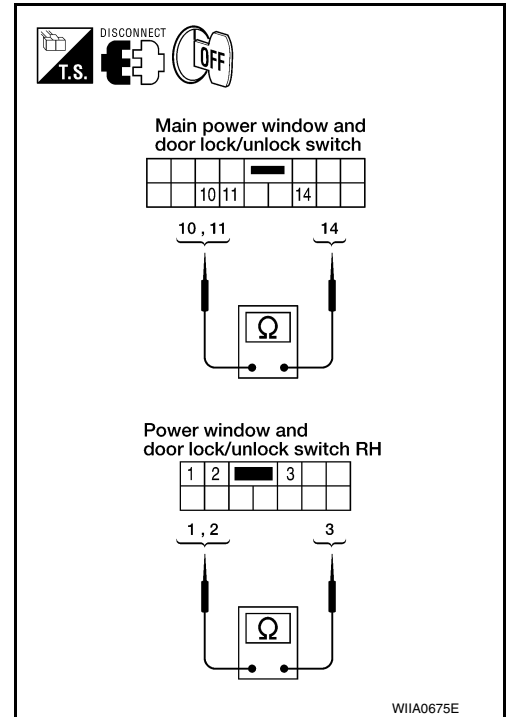
Is the inspection result normal?

- YES >> GO TO 3  
 NO >> Replace door lock/unlock switch.

### 3. CHECK DOOR LOCK/UNLOCK SWITCH GROUND HARNESS

1. Disconnect main power window and door lock/unlock switch or power window and door lock/unlock switch RH.
2. Check continuity between main power window and door lock/unlock switch connector D7 terminal 14 and ground.

**14 - Ground : Continuity should exist.**



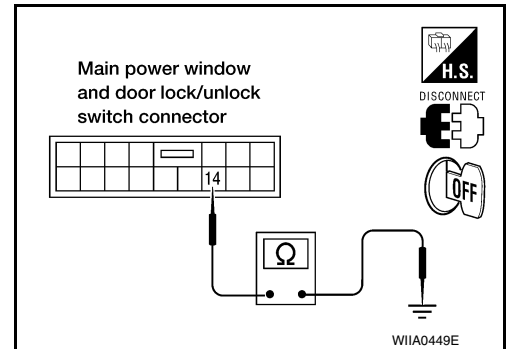
WIIA0675E

3. Check continuity between power window and door lock/unlock switch RH connector D105 terminal 3 and ground

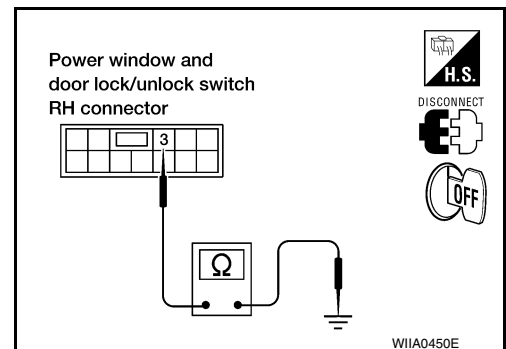
**3 - Ground : Continuity should exist.**

Is the inspection result normal?

- YES >> GO TO 4  
 NO >> Repair or replace harness.



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### 4. CHECK DOOR LOCK SWITCH CIRCUIT

1. Disconnect BCM.

# DOOR LOCK AND UNLOCK SWITCH

## < COMPONENT DIAGNOSIS >

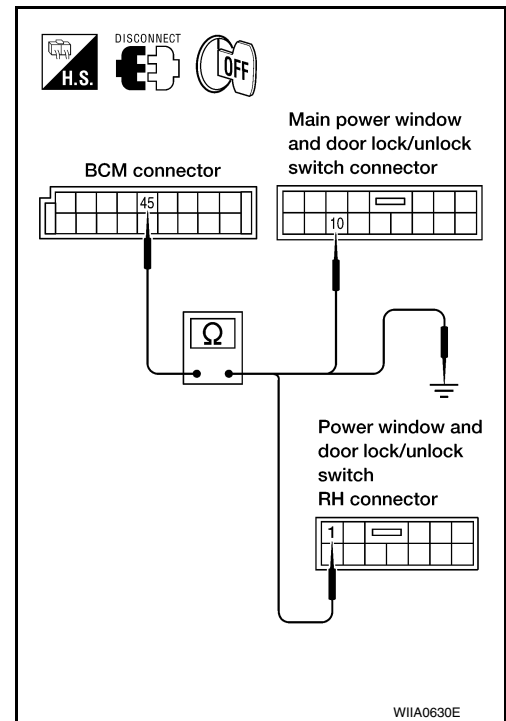
- Check continuity between BCM connector M19 terminal 45 and main power window and door lock/unlock switch connector D7 terminal 10 or power window and door lock/unlock switch RH connector D105 terminal 1.

**1 - 45** : Continuity should exist.

**10 - 45** : Continuity should exist.

- Check continuity between BCM connector M19 terminal 45 and ground.

**45 - Ground** : Continuity should not exist.



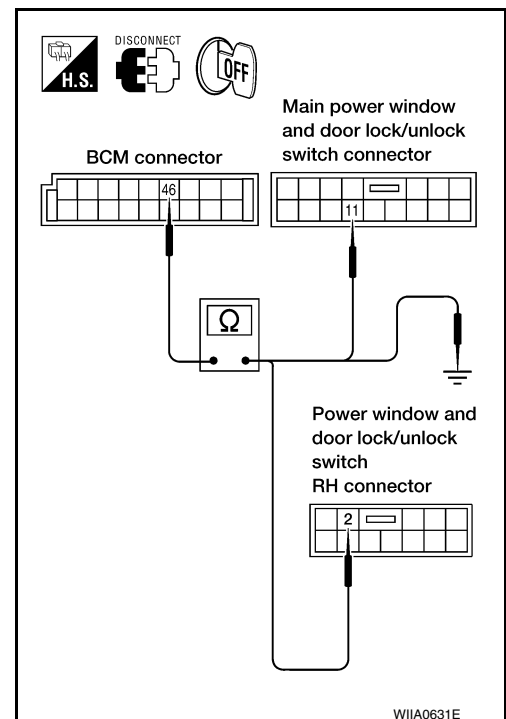
- Check continuity between BCM connector M19 terminal 46 and main power window and door lock/unlock switch LH connector D7 terminal 11 or power window and door lock/unlock switch RH connector D105 terminal 2.

**2 - 46** : Continuity should exist.

**11 - 46** : Continuity should exist.

- Check continuity between BCM connector M19 terminal 46 and ground.

**46 - Ground** : Continuity should not exist.



Is the inspection result normal?

YES >> GO TO 5

NO >> Repair or replace harness.

## 5. CHECK BCM OUTPUT VOLTAGE

- Connect BCM.

## DOOR LOCK AND UNLOCK SWITCH

### < COMPONENT DIAGNOSIS >

2. Check voltage between BCM connector M19 terminals 45, 46 and ground.

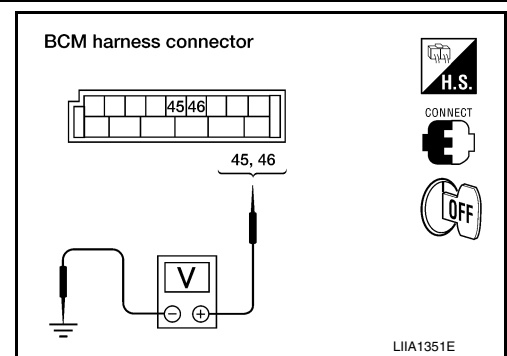
**45 - Ground : Battery voltage**

**46 - Ground : Battery voltage**

#### Is the inspection result normal?

YES >> Check condition of the harness and connector.

NO >> Replace BCM. Refer to [BCS-56, "Removal and Installation"](#).



# KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

## KEY CYLINDER SWITCH DRIVER SIDE

### DRIVER SIDE : Description

INFOID:000000005268070

The main power window and door lock/unlock switch detects condition of the door key cylinder switch and transmits to BCM as the LOCK or UNLOCK signal.

### DRIVER SIDE : Component Function Check

INFOID:000000005268071

## 1.CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

Check "KEY CYL LK-SW" AND "KEY CYL UN-SW" in DATA MONITOR mode for "POWER DOOR LOCK SYSTEM" with CONSULT-III.

| Monitor item  | Condition              |
|---------------|------------------------|
| KEY CYL LK-SW | Lock : ON              |
|               | Neutral / Unlock : OFF |
| KEY CYL UN-SW | Unlock : ON            |
|               | Neutral / Lock : OFF   |

Is the inspection result normal?

YES >> Key cylinder switch is OK.

NO >> Refer to [DLK-31, "DRIVER SIDE : Diagnosis Procedure"](#).

### DRIVER SIDE : Diagnosis Procedure

INFOID:000000005268072

Regarding Wiring Diagram information, refer to [DLK-66, "Wiring Diagram — POWER DOOR LOCK SYSTEM"](#).

## 1.CHECK DOOR KEY CYLINDER SWITCH LH

With CONSULT-III

Check front door lock assembly LH (key cylinder switch) ("KEY CYL LK-SW") and ("KEY CYL UN-SW) in DATA MONITOR mode in CONSULT-III. Refer to [DLK-17, "DOOR LOCK : CONSULT-III Function \(BCM - DOOR LOCK\)"](#).

- When key inserted in front key cylinder is turned to LOCK:

**KEY CYL LK-SW : ON**

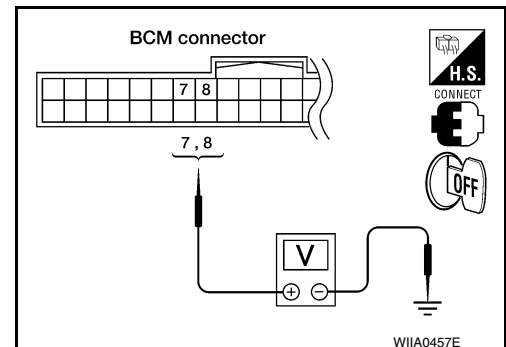
- When key inserted in front key cylinder is turned to UNLOCK:

**KEY CYL UN-SW : ON**

Without CONSULT-III

Check voltage between BCM connector M18 terminals 7, 8 and ground.

| Connector | Terminals |        | Condition      | Voltage (V)<br>(Approx.) |
|-----------|-----------|--------|----------------|--------------------------|
|           | (+)       | (-)    |                |                          |
| M18       | 7         | Ground | Neutral/Lock   | 5                        |
|           |           |        | Unlock         | 0                        |
|           | 8         |        | Neutral/Unlock | 5                        |
|           |           |        | Lock           | 0                        |



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# KEY CYLINDER SWITCH

## < COMPONENT DIAGNOSIS >

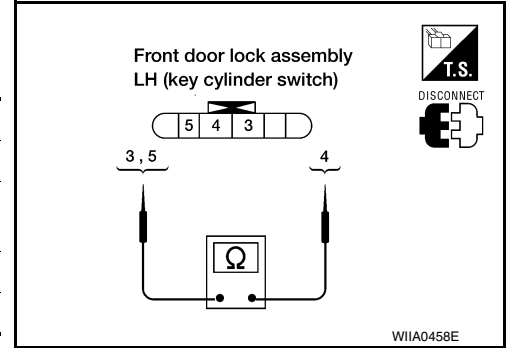
Is the inspection result normal?

- YES >> Front door lock assembly LH (key cylinder switch) signal is OK.
- NO >> GO TO 2

### 2.CHECK FRONT DOOR LOCK ASSEMBLY LH (KEY CYLINDER SWITCH)

1. Turn ignition switch OFF.
2. Disconnect front door lock assembly LH (key cylinder switch).
3. Check continuity between front door lock assembly LH (key cylinder switch) connector terminals 3, 4 and 5.

| Terminals | Condition                                | Continuity |
|-----------|--|------------|
| 4 - 5     | Key is turned to LOCK.                   | Yes        |
|           | Key is in N position or turned to UNLOCK | No         |
| 3 - 4     | Key is turned to UNLOCK.                 | Yes        |
|           | Key is in N position or turned to LOCK   | No         |



Is the inspection result normal?

- YES >> GO TO 3
- NO >> Replace front door lock assembly LH (key cylinder switch). Refer to [DLK-110, "Removal and Installation"](#).

### 3.CHECK FRONT DOOR LOCK ASSEMBLY LH HARNESS

1. Disconnect BCM.
2. Check continuity between BCM connector M18 terminals 7, 8 and front door lock assembly LH connector D14 terminals 3, 5.

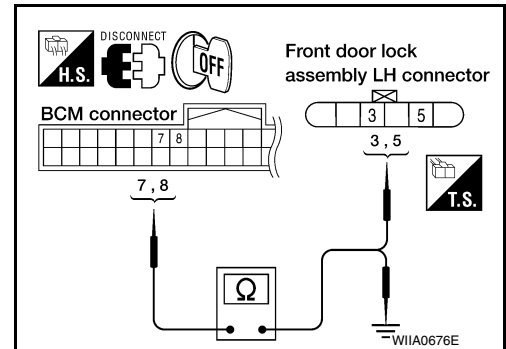
**7 - 3 : Continuity should exist.**

**8 - 5 : Continuity should exist.**

3. Check continuity between BCM connector M18 terminals 7, 8 and ground.

**7 - Ground : Continuity should not exist.**

**8 - Ground : Continuity should not exist.**



Is the inspection result normal?

- YES >> GO TO 4
- NO >> Repair or replace harness.

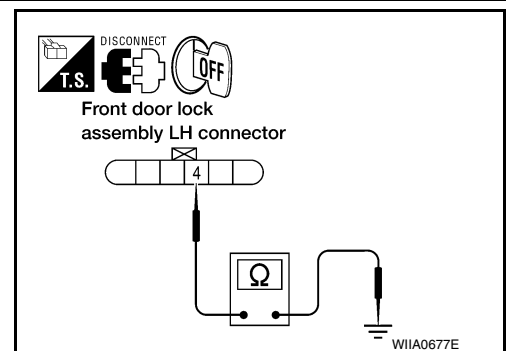
### 4.CHECK FRONT DOOR LOCK ASSEMBLY LH GROUND

Check continuity between front door lock assembly LH connector D14 terminal 4 and ground.

**4 - Ground : Continuity should exist.**

Is the inspection result normal?

- YES >> GO TO 5
- NO >> Repair or replace harness.



### 5.CHECK BCM OUTPUT VOLTAGE

1. Connect BCM.



# KEY CYLINDER SWITCH

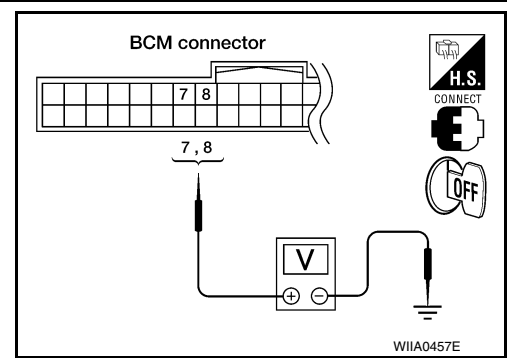
## < COMPONENT DIAGNOSIS >

- Check voltage between BCM connector M18 terminals 7, 8 and ground.

**7 - Ground : Approx. 5V**  
**8 - Ground : Approx. 5V**

Is the inspection result normal?

- YES >> Check condition of the harness and connector.  
 NO >> Replace BCM. Refer to [BCS-56, "Removal and Installation"](#).



## BACK DOOR

### BACK DOOR : Description

INFOID:000000005268073

The main power window and door lock/unlock switch detects condition of the door key cylinder switch and transmits to BCM as the LOCK or UNLOCK signal.

### BACK DOOR : Component Function Check

INFOID:000000005268074

## 1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

Check "KEY CYL LK-SW" AND "KEY CYL UN-SW" in DATA MONITOR mode for "POWER DOOR LOCK SYSTEM" with CONSULT-III.

| Monitor item  | Condition              |
|---------------|------------------------|
| KEY CYL LK-SW | Lock : ON              |
|               | Neutral / Unlock : OFF |
| KEY CYL UN-SW | Unlock : ON            |
|               | Neutral / Lock : OFF   |

Is the inspection result normal?

- YES >> Key cylinder switch is OK.  
 NO >> Refer to [DLK-33, "BACK DOOR : Diagnosis Procedure"](#).

### BACK DOOR : Diagnosis Procedure

INFOID:000000005268075

Regarding Wiring Diagram information, refer to [DLK-66, "Wiring Diagram — POWER DOOR LOCK SYSTEM"](#).

## 1. CHECK BACK DOOR KEY CYLINDER SWITCH

Ⓜ With CONSULT-III

Check back door key cylinder switch ("KEY CYL LK-SW") and ("KEY CYL UN-SW") in DATA MONITOR mode in CONSULT-III. Refer to [DLK-17, "DOOR LOCK : CONSULT-III Function \(BCM - DOOR LOCK\)"](#).

- When key inserted in back door key cylinder is turned to LOCK:

**KEY CYL LK-SW : ON**

- When key inserted in back door key cylinder is turned to UNLOCK:

**KEY CYL UN-SW : ON**

ⓧ Without CONSULT-III

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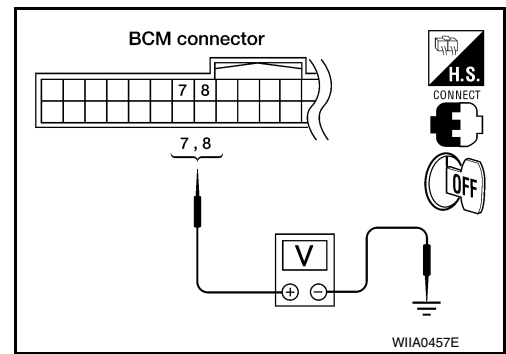
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# KEY CYLINDER SWITCH

## < COMPONENT DIAGNOSIS >

Check voltage between BCM connector M18 terminals 7, 8 and ground.

| Connector | Terminals |        | Condition      | Voltage (V)<br>(Approx.) |
|-----------|-----------|--------|----------------|--------------------------|
|           | (+)       | (-)    |                |                          |
| M18       | 7         | Ground | Neutral/Lock   | 5                        |
|           |           |        | Unlock         | 0                        |
|           | 8         |        | Neutral/Unlock | 5                        |
|           |           |        | Lock           | 0                        |



Is the inspection result normal?

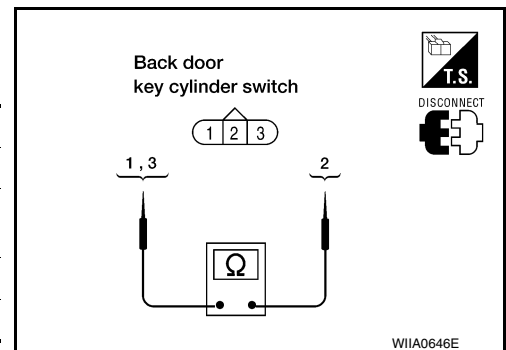
YES >> Back door key cylinder switch signal is OK.

NO >> GO TO 2

## 2. CHECK BACK DOOR KEY CYLINDER SWITCH

1. Turn ignition switch OFF.
2. Disconnect back door key cylinder switch.
3. Check continuity between back door key cylinder switch terminals 1, 2 and 3.

| Terminals | Condition                                | Continuity |
|-----------|--|------------|
| 1 - 2     | Key is turned to LOCK.                   | Yes        |
|           | Key is in N position or turned to UNLOCK | No         |
| 3 - 2     | Key is turned to UNLOCK.                 | Yes        |
|           | Key is in N position or turned to LOCK   | No         |



Is the inspection result normal?

YES >> GO TO 3

NO >> Replace back door key cylinder switch.

## 3. CHECK BACK DOOR KEY CYLINDER SWITCH HARNESS

1. Disconnect BCM.
2. Check continuity between BCM connector M18 terminals 7, 8 and back door key cylinder switch connector D505 terminals 3, 1.

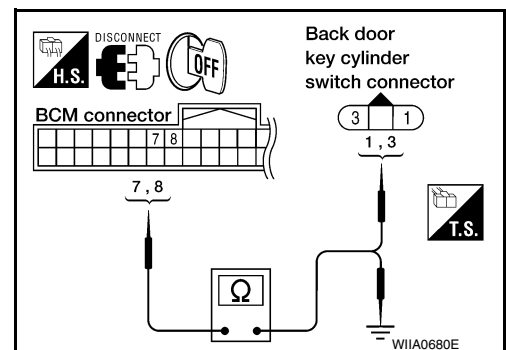
**7 - 3 : Continuity should exist.**

**8 - 1 : Continuity should exist.**

3. Check continuity between BCM connector M18 terminals 7, 8 and ground.

**7 - Ground : Continuity should not exist.**

**8 - Ground : Continuity should not exist.**



Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

## 4. CHECK BACK DOOR KEY CYLINDER SWITCH GROUND

# KEY CYLINDER SWITCH

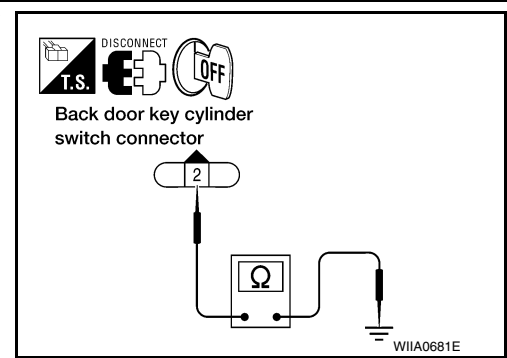
## < COMPONENT DIAGNOSIS >

Check continuity between back door key cylinder switch connector D505 terminal 2 and ground.

**2 - Ground : Continuity should exist.**

Is the inspection result normal?

- YES >> GO TO 5
- NO >> Repair or replace harness.



## 5. CHECK BCM OUTPUT VOLTAGE

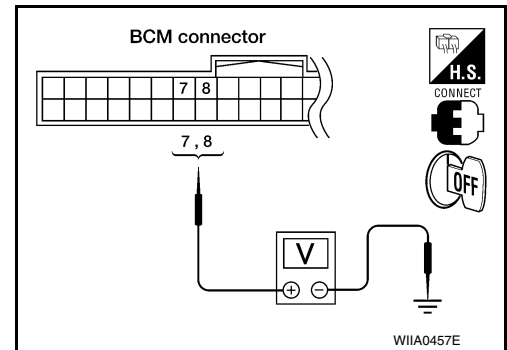
1. Connect BCM.
2. Check voltage between BCM connector M18 terminals 7, 8 and ground.

**7 - Ground : Approx. 5V**

**8 - Ground : Approx. 5V**

Is the inspection result normal?

- YES >> Check condition of the harness and connector.
- NO >> Replace BCM. Refer to [BCS-56. "Removal and Installation"](#).



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# DOOR LOCK ACTUATOR

< COMPONENT DIAGNOSIS >

## DOOR LOCK ACTUATOR DRIVER SIDE

### DRIVER SIDE : Description

INFOID:000000005268076

Locks/unlocks the door with the signal from BCM.

### DRIVER SIDE : Component Function Check

INFOID:000000005268077

#### 1. CHECK FUNCTION

1. Use CONSULT-III to perform Active Test "DOOR LOCK".
2. Touch "ALL LOCK" or "ALL UNLOCK" to check that it works normally.

Is the inspection result normal?

- YES >> Door lock actuator is OK.  
NO >> Refer to [DLK-36, "DRIVER SIDE : Diagnosis Procedure"](#).

### DRIVER SIDE : Diagnosis Procedure

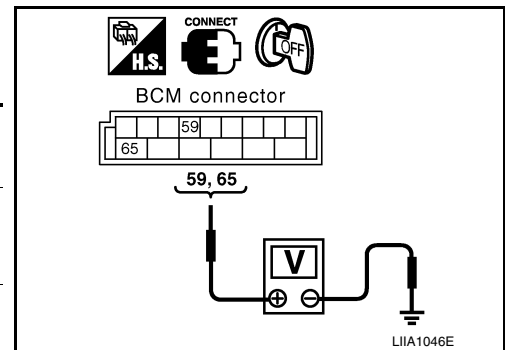
INFOID:000000005268078

Regarding Wiring Diagram information, refer to [DLK-66, "Wiring Diagram — POWER DOOR LOCK SYSTEM"](#).

#### 1. CHECK DOOR LOCK ACTUATOR SIGNAL

1. Turn ignition switch OFF.
2. Check voltage between BCM connector M20 terminals 59, 65 and ground.

| Connector | Terminals |        | Condition   | Voltage (V)<br>(Approx.) |
|-----------|-----------|--------|---|--------------------------|
|           | (+)       | (-)    |   |                          |
| M20       | 59        | Ground | Driver door lock/unlock switch is turned to UN-LOCK | 0 → Battery voltage      |
|           | 65        |        | Driver door lock/unlock switch is turned to LOCK    | 0 → Battery voltage      |



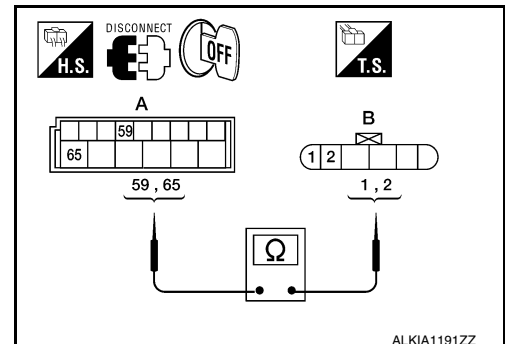
Is the inspection result normal?

- YES >> GO TO 2  
NO >> GO TO 3

#### 2. CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and front door lock assembly LH (actuator).
2. Check continuity between BCM connector (A) M20 terminals 59, 65 and front door lock assembly LH (actuator) connector (B) D14 terminals 1, 2.

| Connector | Terminals | Connector | Terminals | Continuity |
|-----------|-----------|-----------|-----------|------------|
| M20       | 59        | D14       | 2         | Yes        |
|           | 65        |           | 1         |            |



Is the inspection result normal?

- YES >> Replace front door lock assembly LH (actuator).

# DOOR LOCK ACTUATOR

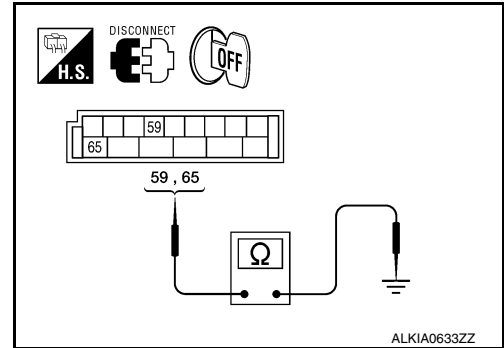
## < COMPONENT DIAGNOSIS >

NO >> Repair or replace harness.

### 3. CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and front door lock assembly LH (actuator).
2. Check continuity between BCM connector M20 terminals 59, 65 and ground.

| Connector | Terminals |        | Continuity |
|-----------|-----------|--------|------------|
| M20       | 59        | Ground | No         |
|           | 65        |        |            |



Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-56. "Removal and Installation"](#).

NO >> Repair or replace harness.

## PASSENGER SIDE

### PASSENGER SIDE : Description

INFOID:000000005268079

Locks/unlocks the door with the signal from BCM.

### PASSENGER SIDE : Component Function Check

INFOID:000000005268080

### 1. CHECK FUNCTION

1. Use CONSULT-III to perform Active Test DOOR LOCK.
2. Touch "ALL LOCK" or "ALL UNLOCK" to check that it works normally.

Is the inspection result normal?

YES >> Door lock actuator is OK.

NO >> Refer to [DLK-37. "PASSENGER SIDE : Diagnosis Procedure"](#).

### PASSENGER SIDE : Diagnosis Procedure

INFOID:000000005268081

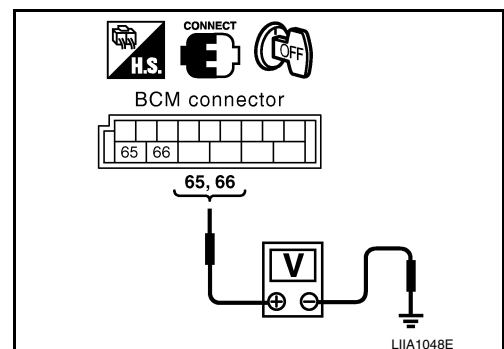
DLK

Regarding Wiring Diagram information, refer to [DLK-66. "Wiring Diagram — POWER DOOR LOCK SYSTEM"](#).

### 1. CHECK FRONT DOOR LOCK ACTUATOR RH SIGNAL

1. Turn ignition switch OFF.
2. Check voltage between BCM connector M20 terminals 65, 66 and ground.

| Connector | Terminals |        | Condition                                   | Voltage (V)<br>(Approx.)       |
|-----------|-----------|--------|---|--------------------------------|
|           | (+)       | (-)    |   |                                |
| M20       | 65        | Ground | Door lock/unlock switch is turned to LOCK   | 0 → Battery voltage for 300 ms |
|           | 66        |        | Door lock/unlock switch is turned to UNLOCK |                                |



Is the inspection result normal?

YES >> GO TO 2

# DOOR LOCK ACTUATOR

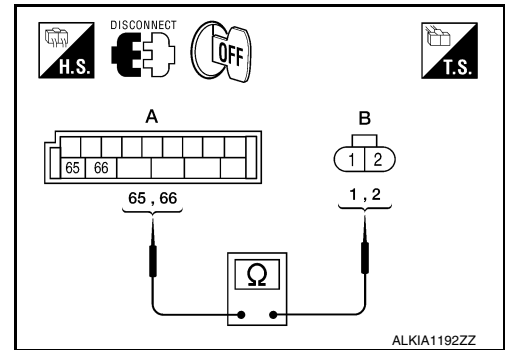
## < COMPONENT DIAGNOSIS >

NO >> GO TO 3

### 2.CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and front door lock actuator RH.
2. Check continuity between BCM connector (A) M20 terminals 65, 66 and front door lock actuator RH (B) D114 terminals 1, 2.

| Terminal |   | Continuity |
|----------|---|------------|
| 65       | 2 | Yes        |
| 66       | 1 |            |



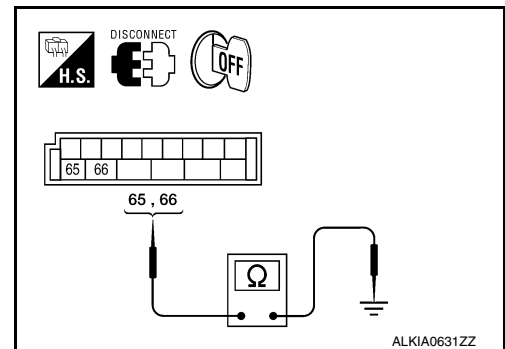
Is the inspection result normal?

- YES >> Replace front door lock actuator RH. Refer to [DLK-110. "Removal and Installation"](#).  
 NO >> Repair or replace harness.

### 3.CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and front door lock actuator RH.
2. Check continuity between BCM connector M19 terminals 65, 66 and ground.

| Terminals |        | Continuity |
|-----------|--------|------------|
| 65        | Ground | No         |
| 66        |        |            |



Is the inspection result normal?

- YES >> Replace BCM. Refer to [BCS-56. "Removal and Installation"](#).  
 NO >> Repair or replace harness.

## REAR LH

### REAR LH : Description

INFOID:000000005268082

Locks/unlocks the door with the signal from BCM.

### REAR LH : Component Function Check

INFOID:000000005268083

### 1.CHECK FUNCTION

1. Use CONSULT-III to perform Active Test "DOOR LOCK".
2. Touch "ALL LOCK" or "ALL UNLOCK" to check that it works normally.

Is the inspection result normal?

- YES >> Door lock actuator is OK.  
 NO >> Refer to [DLK-38. "REAR LH : Diagnosis Procedure"](#).

### REAR LH : Diagnosis Procedure

INFOID:000000005268084

Regarding Wiring Diagram information, refer to [DLK-66. "Wiring Diagram — POWER DOOR LOCK SYSTEM"](#).

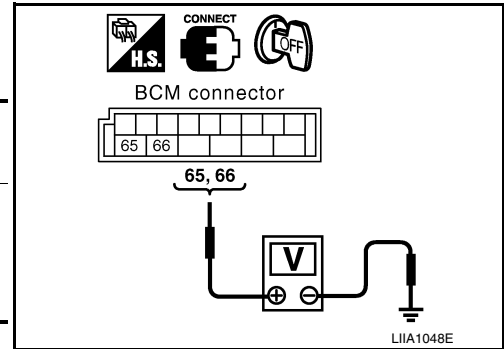
# DOOR LOCK ACTUATOR

## < COMPONENT DIAGNOSIS >

### 1. CHECK DOOR LOCK ACTUATOR SIGNAL

1. Turn ignition switch OFF.
2. Check voltage between BCM connector M20 terminals 65, 66 and ground.

| Connector | Terminals |        | Condition                                   | Voltage (V)<br>(Approx.)       |
|-----------|-----------|--------|---|--------------------------------|
|           | (+)       | (-)    |   |                                |
| M20       | 65        | Ground | Door lock/unlock switch is turned to LOCK   | 0 → Battery voltage for 300 ms |
|           | 66        |        | Door lock/unlock switch is turned to UNLOCK |                                |



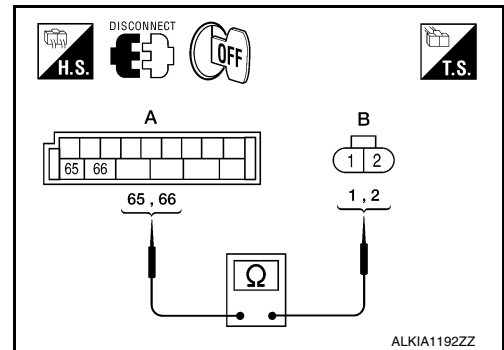
Is the inspection result normal?

- YES >> GO TO 2  
NO >> GO TO 3

### 2. CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and rear door lock actuator LH.
2. Check continuity between BCM connector (A) M20 terminals 65, 66 and rear door lock actuator LH connector (B) D205 terminals 1, 2.

| Terminals |     | Continuity |
|-----------|-----|------------|
| (+)       | (-) |            |
| 65        | 2   | Yes        |
| 66        | 1   |            |



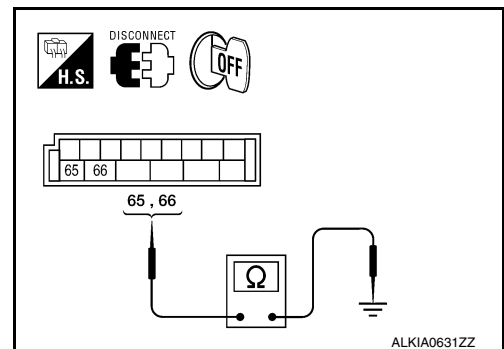
Is the inspection result normal?

- YES >> Replace rear door lock actuator LH.  
NO >> Repair or replace harness.

### 3. CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and each door lock actuator.
2. Check continuity between BCM connector M20 terminals 65, 66 and ground.

| Terminals |        | Continuity |
|-----------|--------|------------|
| (+)       | (-)    |            |
| 65        | Ground | No         |
| 66        |        | No         |



Is the inspection result normal?

- YES >> Replace BCM. Refer to [BCS-56. "Removal and Installation"](#).  
NO >> Repair or replace harness.

## REAR RH

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# DOOR LOCK ACTUATOR

< COMPONENT DIAGNOSIS >

## REAR RH : Description

INFOID:000000005268086

Locks/unlocks the door with the signal from BCM.

## REAR RH : Component Function Check

INFOID:000000005268086

### 1.CHECK FUNCTION

1. Use CONSULT-III to perform Active Test "DOOR LOCK".
2. Touch "ALL LOCK" or "ALL UNLOCK" to check that it works normally.

Is the inspection result normal?

- YES >> Door lock actuator is OK.  
 NO >> Refer to [DLK-40, "REAR RH : Diagnosis Procedure"](#).

## REAR RH : Diagnosis Procedure

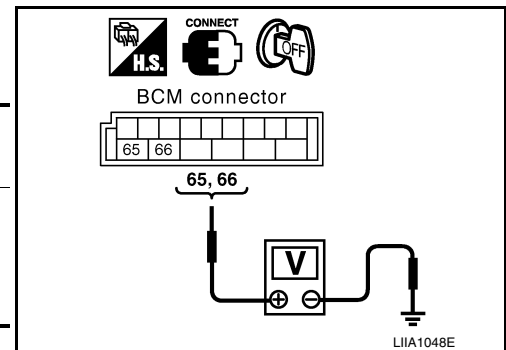
INFOID:000000005268087

Regarding Wiring Diagram information, refer to [DLK-66, "Wiring Diagram — POWER DOOR LOCK SYSTEM"](#).

### 1.CHECK DOOR LOCK ACTUATOR SIGNAL

1. Turn ignition switch OFF.
2. Check voltage between BCM connector M20 terminals 65, 66 and ground.

| Connector | Terminals |        | Condition                                   | Voltage (V)<br>(Approx.)       |
|-----------|-----------|--------|---|--------------------------------|
|           | (+)       | (-)    |   |                                |
| M20       | 65        | Ground | Door lock/unlock switch is turned to LOCK   | 0 → Battery voltage for 300 ms |
|           | 66        |        | Door lock/unlock switch is turned to UNLOCK |                                |



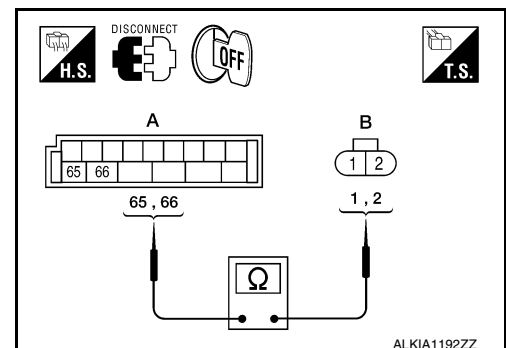
Is the inspection result normal?

- YES >> GO TO 2  
 NO >> GO TO 3

### 2.CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and rear door lock actuator RH.
2. Check continuity between BCM connector (A) M20 terminals 65, 66 and rear door lock actuator RH connector (B) D305 terminals 1, 2.

| Terminals |     | Continuity |
|-----------|-----|------------|
| (+)       | (-) |            |
| 65        | 2   | Yes        |
| 66        | 1   |            |



Is the inspection result normal?

- YES >> Replace rear door lock actuator RH.  
 NO >> Repair or replace harness.

### 3.CHECK DOOR LOCK ACTUATOR HARNESS

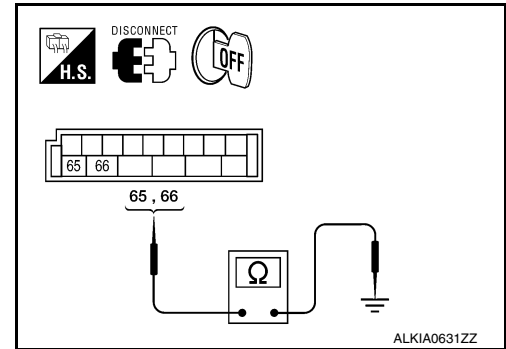


# DOOR LOCK ACTUATOR

## < COMPONENT DIAGNOSIS >

1. Disconnect BCM and rear door lock actuator RH.
2. Check continuity between BCM connector (A) M20 terminals 65, 66 and ground.

| Terminals |        | Continuity |
|-----------|--------|------------|
| 65        | Ground | No         |
| 66        |        |            |



### Is the inspection result normal?

- YES >> Replace BCM. Refer to [BCS-56, "Removal and Installation"](#).  
 NO >> Repair or replace harness.

## BACK DOOR

### BACK DOOR : Description

INFOID:000000005268088

Locks/unlocks the door with the signal from BCM.

### BACK DOOR : Component Function Check

INFOID:000000005268089

## 1.CHECK FUNCTION

1. Use CONSULT-III to perform Active Test DOOR LOCK.
2. Touch "ALL LOCK" or "ALL UNLOCK" to check that it works normally.

### Is the inspection result normal?

- YES >> Door lock actuator is OK.  
 NO >> Refer to [DLK-41, "BACK DOOR : Diagnosis Procedure"](#).

## BACK DOOR : Diagnosis Procedure

INFOID:000000005268090

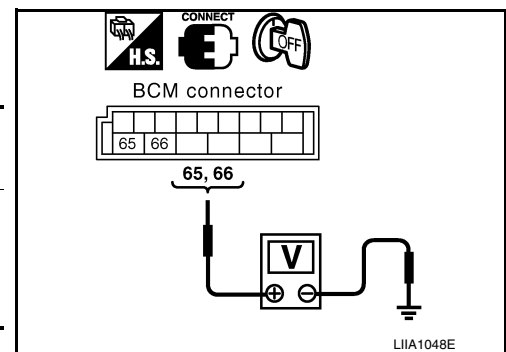
Regarding Wiring Diagram information, refer to [DLK-66, "Wiring Diagram — POWER DOOR LOCK SYSTEM"](#).

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## 1.CHECK DOOR LOCK ACTUATOR SIGNAL

1. Turn ignition switch OFF.
2. Check voltage between BCM connector M20 terminals 65, 66 and ground.

| Connector | Terminals |        | Condition                                   | Voltage (V)<br>(Approx.)       |
|-----------|-----------|--------|---|--------------------------------|
|           | (+)       | (-)    |   |                                |
| M20       | 65        | Ground | Door lock/unlock switch is turned to LOCK   | 0 → Battery voltage for 300 ms |
|           | 66        |        | Door lock/unlock switch is turned to UNLOCK |                                |



### Is the inspection result normal?

- YES >> GO TO 2  
 NO >> GO TO 3

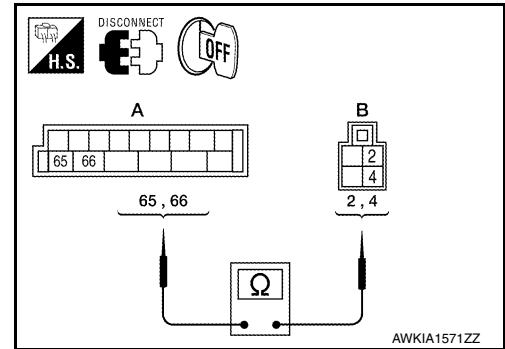
## 2.CHECK DOOR LOCK ACTUATOR HARNESS

# DOOR LOCK ACTUATOR

## < COMPONENT DIAGNOSIS >

1. Disconnect BCM and back door lock actuator.
2. Check continuity between BCM connector (A) M20 terminals 65, 66 and back door lock actuator connector (B) D508 terminals 2, 4.

| Terminals |   | Continuity |
|-----------|---|------------|
| 65        | 2 | Yes        |
| 66        | 4 |            |



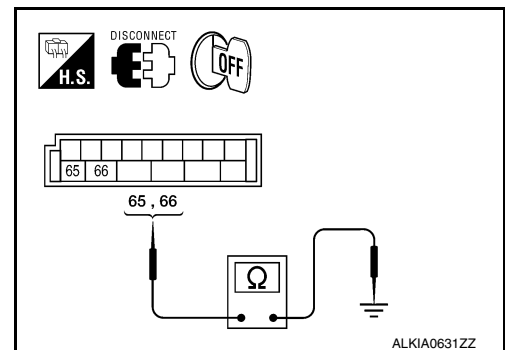
### Is the inspection result normal?

- YES >> Replace door lock actuator.  
 NO >> Repair or replace harness.

## 3. CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and back door lock actuator.
2. Check continuity between BCM connector M20 terminals 65, 66 and ground.

| Terminals |        | Continuity |
|-----------|--------|------------|
| 65        | Ground | No         |
| 66        |        |            |



### Is the inspection result normal?

- YES >> Replace BCM. Refer to [BCS-56. "Removal and Installation"](#).  
 NO >> Repair or replace harness.

# REMOTE KEYLESS ENTRY RECEIVER

< COMPONENT DIAGNOSIS >

## REMOTE KEYLESS ENTRY RECEIVER

### Description

INFOID:000000005268091

Receives keyfob operation and transmits to BCM.

### Component Function Check

INFOID:000000005268092

#### 1. CHECK FUNCTION

##### With CONSULT-III

Check remote keyless entry receiver "RKE OPE COUN1" in Data Monitor mode with CONSULT-III.

| Monitor item  | Condition  |
|---------------|--|
| RKE OPE COUN1 | Checks whether value changes when operating key fob. |

##### Is the inspection result normal?

- YES >> Remote keyless entry receiver is OK.
- NO >> Refer to [DLK-43, "Diagnosis Procedure"](#).

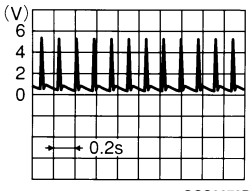
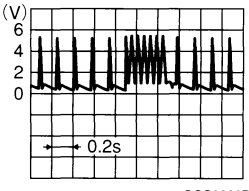
### Diagnosis Procedure

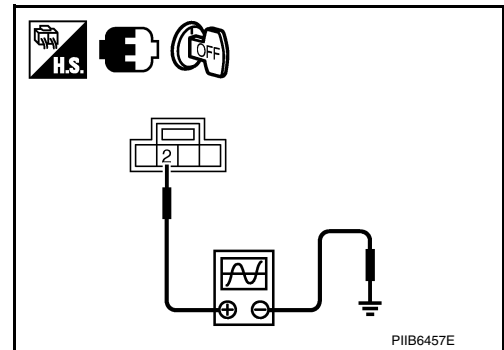
INFOID:000000005268093

Regarding Wiring Diagram information, refer to [DLK-77, "Wiring Diagram — REMOTE KEYLESS ENTRY SYSTEM —"](#).

#### 1. CHECK REMOTE KEYLESS ENTRY RECEIVER OUTPUT SIGNAL

1. Turn ignition switch OFF.
2. Check remote keyless entry receiver signal with an oscilloscope.

| Terminals                               |          | Keyfob condition      | Signal<br>(Reference value)   |
|---|----------|-----------------------|---|
| (+)                                     | (-)      |                       |   |
| Remote keyless entry receiver connector | Terminal |                       |   |
| M120                                    | 2        | Ground                |  |
|   |          | Any button is pressed |  |



##### Is the inspection result normal?

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

#### 2. REMOTE KEYLESS ENTRY RECEIVER 5-VOLT CIRCUIT INSPECTION

## REMOTE KEYLESS ENTRY RECEIVER

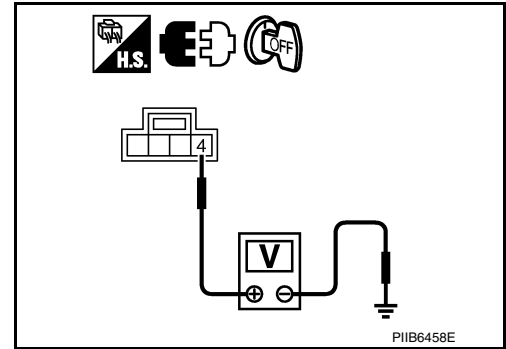
### < COMPONENT DIAGNOSIS >

Check voltage between remote keyless entry receiver connector M120 terminal 4 and ground.

**4 - Ground : Approx. 5 volt.**

Is the inspection result normal?

YES >> GO TO 3  
NO >> GO TO 4



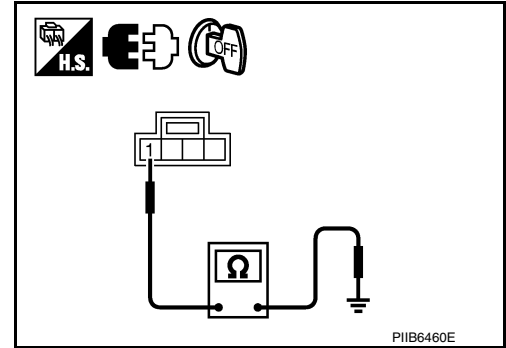
### 3. REMOTE KEYLESS ENTRY RECEIVER GROUND CIRCUIT INSPECTION

Check continuity between remote keyless entry receiver connector M120 terminal 1 and ground.

**1 - Ground : Continuity should exist.**

Is the inspection result normal?

YES >> Replace remote keyless entry receiver.  
NO >> GO TO 4



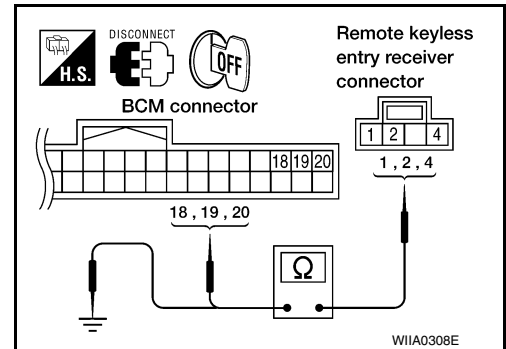
### 4. HARNESS INSPECTION BETWEEN BCM AND RKE RECEIVER

1. Disconnect remote keyless entry receiver and BCM connectors.
2. Check continuity between BCM connector M18 terminals 18, 19, 20 and remote keyless entry receiver connector M120 terminals 1, 2, 4.

**1 - 18 : Continuity should exist.**  
**2 - 20 : Continuity should exist.**  
**4 - 19 : Continuity should exist.**

3. Check continuity between remote keyless entry receiver connector M120 terminals 1, 2, 4 and ground.

**1 - Ground : Continuity should not exist.**  
**2 - Ground : Continuity should not exist.**  
**4 - Ground : Continuity should not exist.**



Is the inspection result normal?

YES >> Replace remote keyless entry receiver.  
NO >> Repair or replace the harness between the remote keyless entry receiver and BCM.

# KEYFOB BATTERY AND FUNCTION

< COMPONENT DIAGNOSIS >

## KEYFOB BATTERY AND FUNCTION

### Description

INFOID:000000005268094

The following functions are available when having and carrying electronic ID.

- Door lock/unlock
- Panic alarm

Remote control entry function and panic alarm function are available when operating the remote buttons.

### Component Function Check

INFOID:000000005268095

#### 1. CHECK FUNCTION

##### With CONSULT-III

Check remote keyless entry receiver "RKE OPE COUN1" in DATA MONITOR mode with CONSULT-III.

| Monitor item  | Condition   |
|---------------|---|
| RKE OPE COUN1 | Check that the numerical value is changing while operating the key fob. |

Is the inspection result normal?

- YES >> Key fob is OK.  
NO >> Refer to [DLK-45, "Diagnosis Procedure"](#).

### Diagnosis Procedure

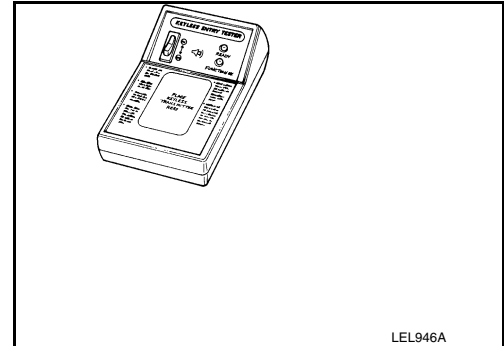
INFOID:000000005268096

#### 1. CHECK KEYFOB FUNCTION

Check keyfob function using Remote Keyless Entry Tester J-43241.

Does the test pass?

- YES >> Key fob is OK.  
NO >> GO TO 2



#### 2. CHECK KEY FOB COMPONENTS

1. Open the lid using a coin.

**CAUTION:**

- Do not touch the circuit board or battery terminal.
- The keyfob is water-resistant. However, if it does get wet, immediately wipe it dry.

2. Remove the key fob battery.

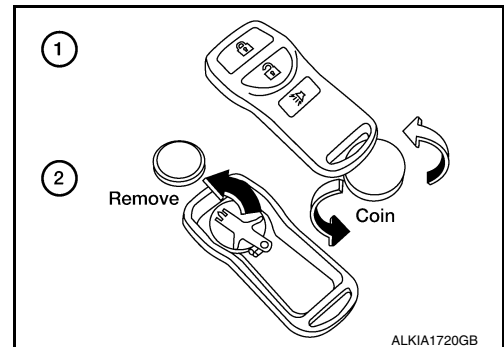
**CAUTION:**

- Keep dirt, grease, and other foreign materials off the electrode contact area.

3. Visually inspect keyfob internal components.

Is the inspection result normal?

- YES >> GO TO 3  
NO >> Repair or replace malfunctioning parts.



#### 3. CHECK KEY FOB BATTERY

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# KEYFOB BATTERY AND FUNCTION

## < COMPONENT DIAGNOSIS >

Check by connecting a resistance (approximately 300Ω) so that the current value becomes about 10 mA.

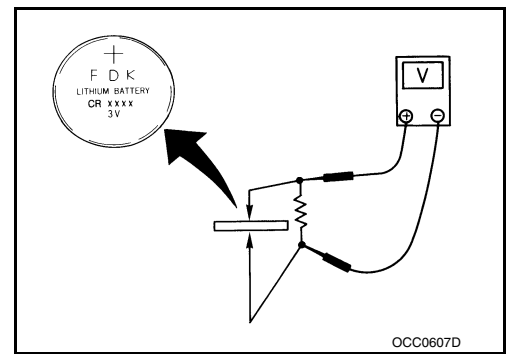
**Standard : Approx. 2.5 - 3.0V**

Is the measurement value within specification?

YES >> Key fob battery is OK. Check remote keyless entry receiver. Refer to [DLK-43](#).

["Component Function Check"](#).

NO >> GO TO 4



## 4. REPLACE KEY FOB BATTERY

1. Replace the key fob battery, positive side down.
2. Align the tips of the upper and lower parts, and then push them together until it is securely closed.

### **CAUTION:**

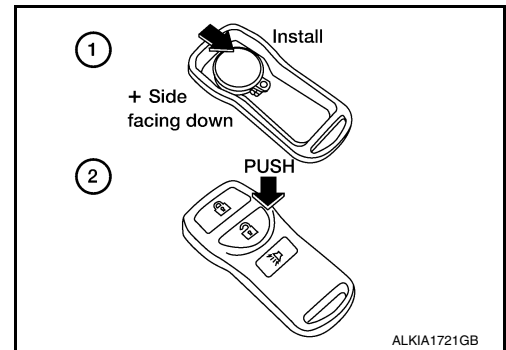
- **When replacing battery, keep dirt, grease, and other foreign materials off the electrode contact area.**

3. After replacing the battery, check that all key fob functions work properly.

Is the inspection result normal?

YES >> Key fob is OK.

NO >> Check remote keyless entry receiver. Refer to [DLK-43](#).  
["Component Function Check"](#).



# HORN FUNCTION

< COMPONENT DIAGNOSIS >

## HORN FUNCTION

### Description

INFOID:000000005268097

Perform answer-back for each operation with horn.

### Component Function Check

INFOID:000000005268098

#### 1.CHECK FUNCTION

1. Select "HORN" in "ACTIVE TEST" mode with CONSULT-III.
2. Check the horn (high/low) operation.

| Test item |    | Description |                |
|-----------|----|-------------|----------------|
| HORN      | ON | Horn relay  | ON (for 20 ms) |

Is the operation normal?

- YES >> Inspection End.  
 NO >> Refer to [DLK-47, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000005268099

Regarding Wiring Diagram information, refer to [DLK-77, "Wiring Diagram — REMOTE KEYLESS ENTRY SYSTEM —"](#).

#### 1.CHECK HORN FUNCTION

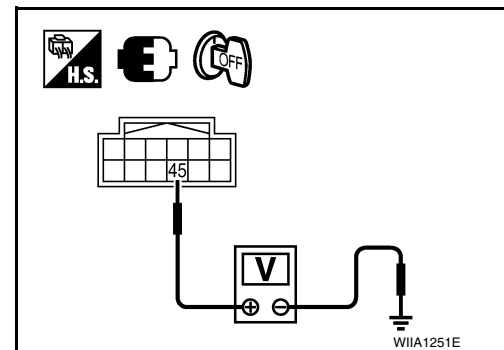
Check horn function with horn switch.

Does the horn sound?

- YES >> GO TO 2  
 NO >> Refer to [HRN-3, "Wiring Diagram"](#).

#### 2.CHECK HORN RELAY POWER SUPPLY

1. Turn ignition switch ON.
2. Perform "ACTIVE TEST", "HORN" with CONSULT-III.
3. Using an oscilloscope or analog voltmeter, check voltage between IPDM E/R connector E122 terminal 45 and ground.



| IPDM E/R  |          | Ground | Test item | Voltage (V)<br>(Approx.)              |
|-----------|----------|--------|-----------|---------------------------------------|
| Connector | Terminal |        |           |                                       |
| E122      | 45       | Ground | HORN      | OFF → ON → OFF                        |
|           |          |        |           | Other than above                      |
|           |          |        |           | Battery voltage → 0 → Battery voltage |
|           |          |        |           | Battery voltage                       |

Is the inspection result normal?

- YES >> Repair harness for open between IPDM E/R and horn relay.  
 NO >> GO TO 3

#### 3.CHECK HORN RELAY CIRCUIT

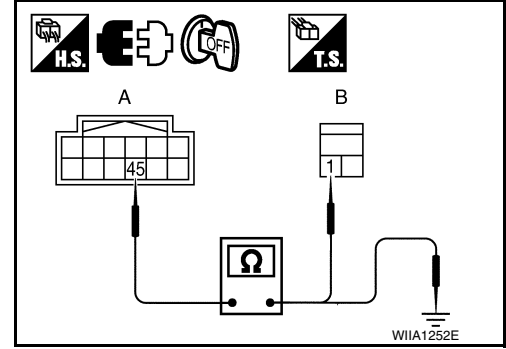
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# HORN FUNCTION

## < COMPONENT DIAGNOSIS >

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R and horn relay connector.
3. Check continuity between IPDM E/R harness connector and horn relay harness connector.



| IPDM E/R  |          | Horn relay |          | Continuity |
|-----------|----------|------------|----------|------------|
| Connector | Terminal | Connector  | Terminal |            |
| A: E122   | 45       | B: H-1     | 1        | Yes        |

4. Check continuity between IPDM E/R harness connector and ground.

| IPDM E/R  |          | Ground | Continuity |
|-----------|----------|--------|------------|
| Connector | Terminal |        |            |
| E122      | 45       | Ground | No         |

Is the inspection result normal?

- YES >> GO TO 4  
 NO >> Repair or replace harness.

## 4. CHECK INTERMITTENT INCIDENT

Refer to [GI-37. "Intermittent Incident"](#).

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to [PCS-33. "Removal and Installation of IPDM E/R"](#).  
 NO >> Repair or replace the malfunctioning part.



# WARNING CHIME FUNCTION

< COMPONENT DIAGNOSIS >

## WARNING CHIME FUNCTION

### Description

INFOID:000000005268100

Performs operation method guide and warning with buzzer.

### Component Function Check

INFOID:000000005268101

#### 1.CHECK FUNCTION

##### With CONSULT-III

Check the operation of "INSIDE BUZZER" in the Active Test. Refer to [MWI-3, "Work Flow"](#).

Is the inspection result normal?

Yes >> Warning buzzer into combination meter is OK.

No >> Refer to [DLK-49, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000005268102

#### 1.CHECK METER BUZZER CIRCUIT

The inoperative warning chime is contained inside the combination meter. Replace combination meter. Refer to [MWI-91, "Removal and Installation"](#).

>> Inspection End.

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# HAZARD FUNCTION

< COMPONENT DIAGNOSIS >

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## HAZARD FUNCTION

### Description

INFOID:000000005268103

Perform answer-back for each operation with number of blinks.

### Component Function Check

INFOID:000000005268104

#### 1.CHECK FUNCTION

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Check hazard warning lamp "FLASHER" in ACTIVE TEST.

Is the inspection result normal?

- YES >> Hazard warning lamp circuit is OK.
- NO >> Refer to [DLK-50, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000005268105

#### 1.CHECK HAZARD SWITCH CIRCUIT

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Operate the hazard lights by turning ON the hazard warning switch.

Do the lights operate normally?

- YES >> Replace the BCM. Refer to [BCS-56, "Removal and Installation"](#).
- NO >> Repair or replace hazard warning switch circuit. Refer to [EXL-79, "Wiring Diagram"](#).

# KEY SWITCH (BCM INPUT)

< COMPONENT DIAGNOSIS >

## KEY SWITCH (BCM INPUT)

### Diagnosis Procedure

INFOID:000000005268106

Regarding Wiring Diagram information, refer to [DLK-66. "Wiring Diagram — POWER DOOR LOCK SYSTEM"](#).

### 1. CHECK KEY SWITCH INPUT SIGNAL

With CONSULT-III

Check key switch "KEY ON SW" in DATA MONITOR mode with CONSULT-III. Refer to [DLK-17. "DOOR LOCK : CONSULT-III Function \(BCM - DOOR LOCK\)"](#).

- When key is inserted to ignition key cylinder:

**KEY ON SW : ON**

- When key is removed from ignition key cylinder:

**KEY ON SW : OFF**

Without CONSULT-III

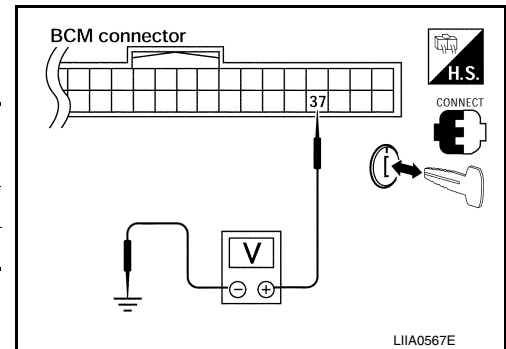
Check voltage between BCM connector M18 terminal 37 and ground.

| Connector | Terminal |        | Condition        | Voltage (V)     |
|-----------|----------|--------|------------------|-----------------|
|           | (+)      | (-)    |                  |                 |
| M18       | 37       | Ground | Key is inserted. | Battery voltage |
|           |          |        | Key is removed.  | 0               |

Is the inspection result normal?

YES >> Key switch (insert) circuit is OK.

NO >> GO TO 2



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### 2. CHECK KEY SWITCH (INSERT)

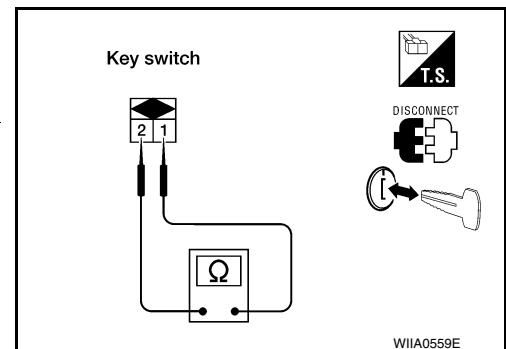
- Turn ignition switch OFF.
- Disconnect key switch connector.
- Check continuity between key switch terminals.

| Terminals | Condition        | Continuity |
|-----------|------------------|------------|
| 1 - 2     | Key is inserted. | Yes        |
|           | Key is removed.  | No         |

Is the inspection result normal?

YES >> Repair or replace harness or fuse.

NO >> Replace key switch.



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# HEADLAMP FUNCTION

< COMPONENT DIAGNOSIS >

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## HEADLAMP FUNCTION

### Diagnosis Procedure

INFOID:000000005268107

#### 1. CHECK HEADLAMP OPERATION

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Do headlamps operate with headlamp switch?

YES or NO

YES >> Headlamp circuit is OK.

NO >> Check headlamp circuit. Refer to [EXL-4, "Work Flow"](#).

# MAP LAMP AND IGNITION KEYHOLE ILLUMINATION FUNCTION

< COMPONENT DIAGNOSIS >

## MAP LAMP AND IGNITION KEYHOLE ILLUMINATION FUNCTION

### Diagnosis Procedure

INFOID:000000005268108

#### 1.CHECK MAP LAMP OPERATION

When room lamp switch is in "DOOR" position, open the driver or passenger door.  
Map lamp and ignition keyhole illumination should illuminate.

Is the inspection result normal?

YES >> Map lamp circuit is OK.

NO >> Check map lamp circuit. Refer to [INL-3, "Work Flow"](#).

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# KEYFOB ID SET UP WITH CONSULT-III

< COMPONENT DIAGNOSIS >

## KEYFOB ID SET UP WITH CONSULT-III

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### ID Code Entry Procedure

INFOID:000000005268109

#### KEYFOB ID SET UP WITH CONSULT-III

**NOTE:**

- If a keyfob is lost, the ID code of the lost keyfob must be erased to prevent unauthorized use. A specific ID code can be erased with CONSULT-III. However, when the ID code of a lost keyfob is not known, all controller ID codes should be erased. After all ID codes are erased, the ID codes of all remaining and/or new keyfobs must be re-registered.
- When registering an additional keyfob, the existing ID codes in memory may or may not be erased. If five ID codes are stored in memory when an additional code is registered, only the oldest code is erased. If less than five codes are stored in memory when an additional code is registered, the new ID code is added and no ID codes are erased.
- Entry of a maximum of five ID codes is allowed. When more than five codes are entered, the oldest ID code will be erased.
- Even if the same ID code that is already in memory is input, the same ID code can be entered. The code is counted as an additional code.

1. Turn ignition switch ON.
2. Select "BCM".
3. Select "MULTI REMOTE ENT".
4. Select "WORK SUPPORT".
5. You can register, erase or confirm a keyfob ID code. To register a new code, select the following option and follow CONSULT-III instructions:
  - "REMO CONT ID REGIST"  
Use this mode to register a keyfob ID code.

**NOTE:**

**Register the ID code when keyfob or BCM is replaced, or when additional keyfob is required.**

- "REMO CONT ID ERASUR"  
Use this mode to erase a keyfob ID code.
- "REMO CONT ID CONFIR"  
Use this mode to confirm if a keyfob ID code is registered or not.

# KEYFOB ID SET UP WITHOUT CONSULT-III

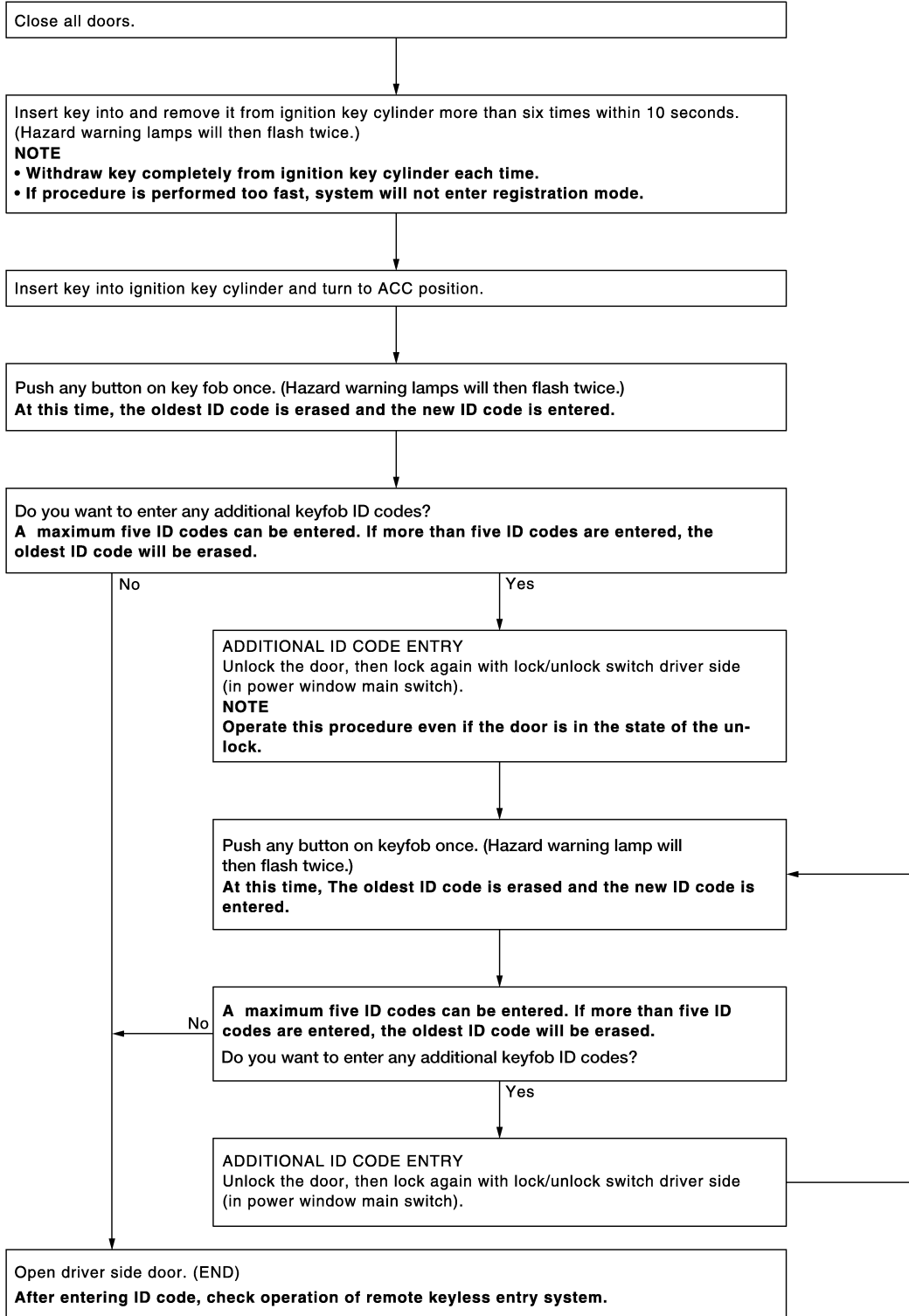
< COMPONENT DIAGNOSIS >

## KEYFOB ID SET UP WITHOUT CONSULT-III

### ID Code Entry Procedure

INFOID:000000005268110

#### KEYFOB ID SET UP WITHOUT CONSULT-III



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#### NOTE:

- If a keyfob is lost, the ID code of the lost keyfob must be erased to prevent unauthorized use. A specific ID code can be erased with CONSULT-III. However, when the ID code of a lost keyfob is not known, all control-

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## KEYFOB ID SET UP WITHOUT CONSULT-III

### < COMPONENT DIAGNOSIS >

---

ler ID codes should be erased. After all ID codes are erased, the ID codes of all remaining and/or new keyfobs must be re-registered.

To erase all ID codes in memory, register one ID code (keyfob) five times. After all ID codes are erased, the ID codes of all remaining and/or new keyfobs must be re-registered.

- When registering an additional keyfob, the existing ID codes in memory may or may not be erased. If five ID codes are stored in memory, when an additional code is registered, only the oldest code is erased. If less than five ID codes are stored in memory, when an additional ID code is registered, the new ID code is added and no ID codes are erased.
- If you need to activate more than two additional new keyfobs, repeat the procedure “Additional ID code entry” for each new keyfob.
- Entry of maximum five ID codes is allowed. When more than five ID codes are entered, the oldest ID code will be erased.
- Even if same ID code that is already in the memory is input, the same ID code can be entered. The code is counted as an additional code.



# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

## ECU DIAGNOSIS

### BCM (BODY CONTROL MODULE)

Reference Value

INFOID:000000005568012

#### VALUES ON THE DIAGNOSIS TOOL

| Monitor Item   | Condition   | Value/Status |
|----------------|---|--------------|
| IGN ON SW      | Ignition switch OFF or ACC  | OFF          |
|                | Ignition switch ON  | ON           |
| KEY ON SW      | Mechanical key is removed from key cylinder                                     | OFF          |
|                | Mechanical key is inserted to key cylinder                                      | ON           |
| CDL LOCK SW    | Door lock/unlock switch does not operate  | OFF          |
|                | Press door lock/unlock switch to the lock side                                  | ON           |
| CDL UNLOCK SW  | Door lock/unlock switch does not operate  | OFF          |
|                | Press door lock/unlock switch to the unlock side                                | ON           |
| DOOR SW-DR     | Driver's door closed  | OFF          |
|                | Driver's door opened  | ON           |
| DOOR SW-AS     | Passenger door closed   | OFF          |
|                | Passenger door opened   | ON           |
| DOOR SW-RR     | Rear RH door closed   | OFF          |
|                | Rear RH door opened   | ON           |
| DOOR SW-RL     | Rear LH door closed   | OFF          |
|                | Rear LH door opened   | ON           |
| BACK DOOR SW   | Back door closed  | OFF          |
|                | Back door opened  | ON           |
| 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           |
| KEYLESS LOCK   | "LOCK" button of key fob is not pressed   | OFF          |
|                | "LOCK" button of key fob is pressed   | ON           |
| KEYLESS UNLOCK | "UNLOCK" button of key fob is not pressed                                       | OFF          |
|                | "UNLOCK" button of key fob is pressed   | ON           |
| ACC ON SW      | Ignition switch OFF   | OFF          |
|                | Ignition switch ACC or ON   | ON           |
| REAR DEF SW    | Rear window defogger switch OFF   | OFF          |
|                | Rear window defogger switch ON  | ON           |
| LIGHT SW 1ST   | Lighting switch OFF   | OFF          |
|                | Lighting switch 1ST   | ON           |
| BUCKLE SW      | The seat belt (driver side) is unfastened. [Seat belt switch (driver side) OFF] | OFF          |
|                | The seat belt (driver side) is fastened. [Seat belt switch (driver side) ON]    | ON           |
| KEYLESS PANIC  | PANIC button of key fob is not pressed  | OFF          |
|                | PANIC button of key fob is pressed  | ON           |

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## BCM (BODY CONTROL MODULE)

### < ECU DIAGNOSIS >

| Monitor Item   | Condition   | Value/Status                      |
|----------------|---|-----------------------------------|
| HI BEAM SW     | Lighting switch OFF                                 | OFF                               |
|                | Lighting switch HI                                  | ON                                |
| HEAD LAMP SW 1 | Lighting switch OFF                                 | OFF                               |
|                | Lighting switch 2ND                                 | ON                                |
| HEAD LAMP SW 2 | Lighting switch OFF                                 | OFF                               |
|                | Lighting switch 2ND                                 | ON                                |
| PASSING SW     | Other than lighting switch PASS                     | OFF                               |
|                | Lighting switch PASS                                | ON                                |
| FR FOG SW      | Front fog lamp switch OFF                           | OFF                               |
|                | Front fog lamp switch ON                            | ON                                |
| TURN SIGNAL R  | Turn signal switch OFF                              | OFF                               |
|                | Turn signal switch RH                               | ON                                |
| TURN SIGNAL L  | Turn signal switch OFF                              | OFF                               |
|                | Turn signal switch LH                               | ON                                |
| CARGO LAMP SW  | Cargo lamp switch OFF                               | OFF                               |
|                | Cargo lamp switch ON                                | ON                                |
| IGN SW CAN     | Ignition switch OFF or ACC                          | OFF                               |
|                | Ignition switch ON                                  | ON                                |
| FR WIPER HI    | Front wiper switch OFF                              | OFF                               |
|                | Front wiper switch HI                               | ON                                |
| FR WIPER LOW   | Front wiper switch OFF                              | OFF                               |
|                | Front wiper switch LO                               | ON                                |
| FR WIPER INT   | Front wiper switch OFF                              | OFF                               |
|                | Front wiper switch INT                              | ON                                |
| FR WASHER SW   | Front washer switch OFF                             | OFF                               |
|                | Front washer switch ON                              | ON                                |
| INT VOLUME     | Wiper intermittent dial is in a dial position 1 - 7 | 1 - 7                             |
| FR WIPER STOP  | Any position other than front wiper stop position   | OFF                               |
|                | Front wiper stop position                           | ON                                |
| VEHICLE SPEED  | While driving                                       | Equivalent to speedometer reading |
| RR WIPER ON    | Rear wiper switch OFF                               | OFF                               |
|                | Rear wiper switch ON                                | ON                                |
| RR WIPER INT   | Rear wiper switch OFF                               | OFF                               |
|                | Rear wiper switch INT                               | ON                                |
| RR WASHER SW   | Rear washer switch OFF                              | OFF                               |
|                | Rear washer switch ON                               | ON                                |
| RR WIPER STOP  | Any position other than rear wiper stop position    | OFF                               |
|                | Rear wiper stop position                            | ON                                |
| HAZARD SW      | Hazard switch OFF                                   | OFF                               |
|                | Hazard switch ON                                    | ON                                |
| BRAKE SW       | Brake pedal is not depressed                        | OFF                               |
|                | Brake pedal is depressed                            | ON                                |
| FAN ON SIG     | Blower fan motor switch OFF                         | OFF                               |
|                | Blower fan motor switch ON (other than OFF)         | ON                                |

## BCM (BODY CONTROL MODULE)

### < ECU DIAGNOSIS >

| Monitor Item | Condition   | Value/Status                  |   |
|--------------|---|-------------------------------|---|
| AIR COND SW  | Compressor ON is not requested from auto amp.<br>(A/C indicator OFF, blower fan motor switch OFF or etc.) | OFF                           | A |
|              | Compressor ON is requested from auto amp.<br>(A/C indicator ON and blower fan motor switch ON).           | ON                            | B |
| OIL PRESS SW | <ul style="list-style-type: none"> <li>• Ignition switch OFF or ACC</li> <li>• Engine running</li> </ul>  | OFF                           | C |
|              | Ignition switch ON  | ON                            |   |
| AIR PRESS FL | Ignition switch ON (Only when the signal from the transmitter is received)                                | Air pressure of front LH tire | D |
| AIR PRESS FR | Ignition switch ON (Only when the signal from the transmitter is received)                                | Air pressure of front RH tire | E |
| AIR PRESS RR | Ignition switch ON (Only when the signal from the transmitter is received)                                | Air pressure of rear RH tire  | F |
| AIR PRESS RL | Ignition switch ON (Only when the signal from the transmitter is received)                                | Air pressure of rear LH tire  | G |
| ID REGST FL1 | ID of front LH tire transmitter is registered   | DONE                          | H |
|              | ID of front LH tire transmitter is not registered   | YET                           |   |
| ID REGST FR1 | ID of front RH tire transmitter is registered   | DONE                          | I |
|              | ID of front RH tire transmitter is not registered   | YET                           |   |
| ID REGST RR1 | ID of rear RH tire transmitter is registered  | DONE                          | J |
|              | ID of rear RH tire transmitter is not registered  | YET                           |   |
| ID REGST RL1 | ID of rear LH tire transmitter is registered  | DONE                          | K |
|              | ID of rear LH tire transmitter is not registered  | YET                           |   |
| WARNING LAMP | Tire pressure indicator OFF   | OFF                           | L |
|              | Tire pressure indicator ON  | ON                            |   |
| BUZZER       | Tire pressure warning alarm is not sounding   | OFF                           | M |
|              | Tire pressure warning alarm is sounding   | ON                            |   |

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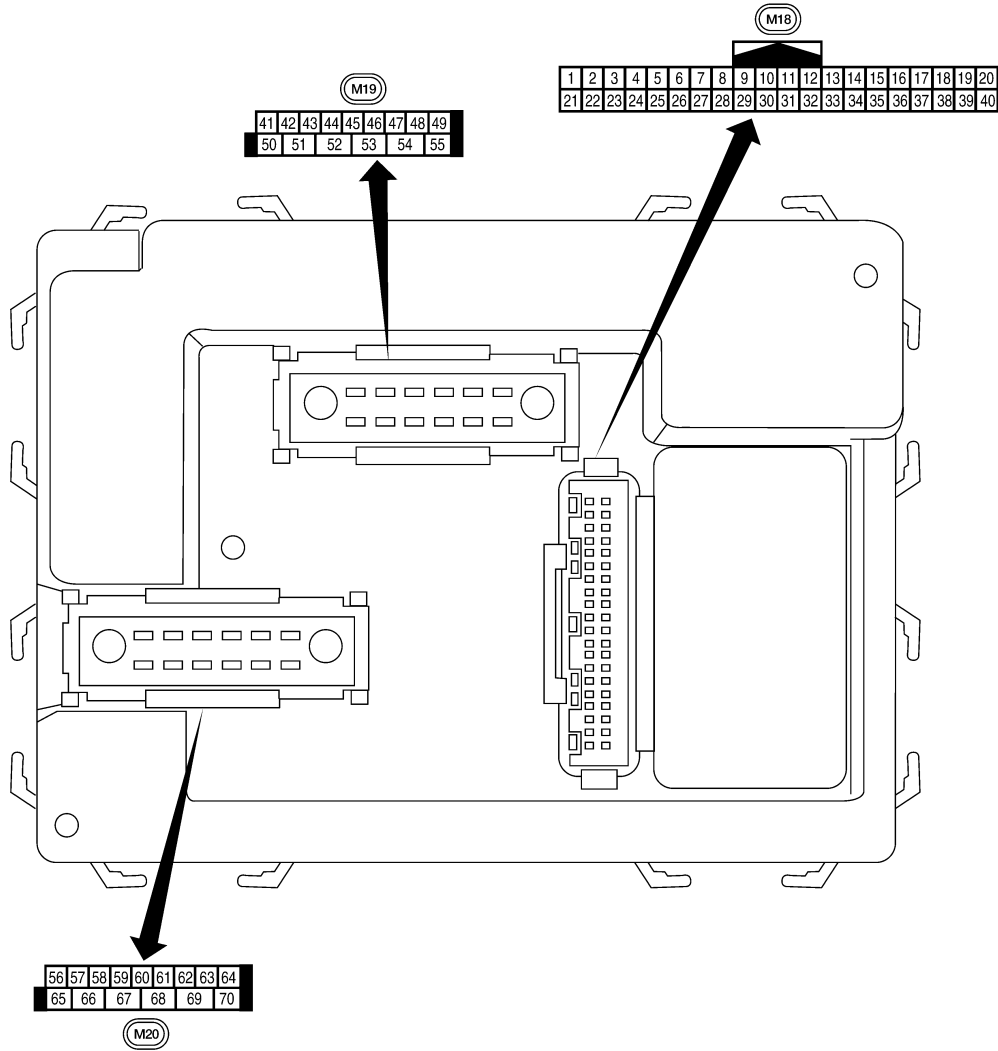
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# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

## Terminal Layout

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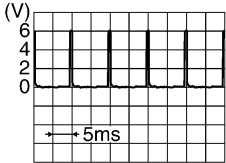

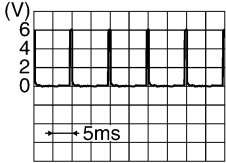
## Physical Values

LIIA2443E

INFOID:000000005568014

# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

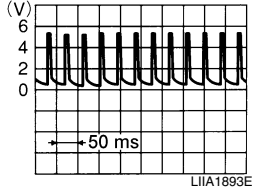
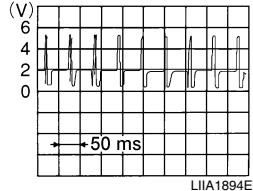
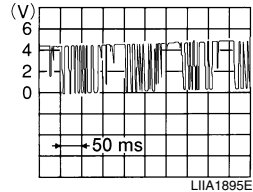
| Terminal | Wire color | Signal name  | Signal input/output | Measuring condition |  | Reference value or waveform (Approx.)   |
|----------|------------|--|---------------------|---------------------|--|---|
|          |            |  |                     | Ignition switch     | Operation or condition                             |   |
| 1        | BR         | Ignition keyhole illumination  | Output              | OFF                 | Door is locked (SW OFF)                            | Battery voltage   |
|          |            |  |                     |                     | Door is unlocked (SW ON)                           | 0V  |
| 2        | P          | Combination switch input 5   | Input               | ON                  | Lighting, turn, wiper OFF<br>Wiper dial position 4 |  <p style="text-align: right; font-size: small;">SKIA5291E</p>   |
| 3        | SB         | Combination switch input 4   | Input               | ON                  | Lighting, turn, wiper OFF<br>Wiper dial position 4 |  <p style="text-align: right; font-size: small;">SKIA5292E</p>   |
| 4        | V          | Combination switch input 3   | Input               | ON                  | Lighting, turn, wiper OFF<br>Wiper dial position 4 |  <p style="text-align: right; font-size: small;">SKIA5291E</p>  |
| 5        | L          | Combination switch input 2   | Input               | ON                  | Lighting, turn, wiper OFF<br>Wiper dial position 4 |  <p style="text-align: right; font-size: small;">SKIA5292E</p> |
| 6        | R          | Combination switch input 1   |                     |                     |  |   |
| 7        | GR         | Front door lock assembly LH (key cylinder switch) and back door key cylinder switch (unlock) | Input               | OFF                 | ON (open, 2nd turn)                                | Momentary 1.5V  |
|          |            |  |                     |                     | OFF (closed)                                       | 0V  |
| 8        | SB         | Front door lock assembly LH (key cylinder switch) and back door key cylinder switch (lock)   | Input               | OFF                 | ON (open)  | Momentary 1.5V  |
|          |            |  |                     |                     | OFF (closed)                                       | 0V  |
| 9        | Y          | Rear window defogger switch  | Input               | ON                  | Rear window defogger switch ON                     | 0V  |
|          |            |  |                     |                     | Rear window defogger switch OFF                    | 5V  |
| 11       | G/B        | Ignition switch (ACC or ON)  | Input               | ACC or ON           | Ignition switch ACC or ON                          | Battery voltage   |
| 12       | LG         | Front door switch RH   | Input               | OFF                 | ON (open)  | 0V  |
|          |            |  |                     |                     | OFF (closed)                                       | Battery voltage   |

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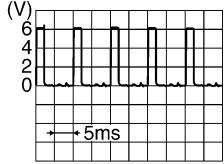

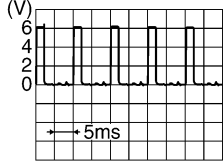
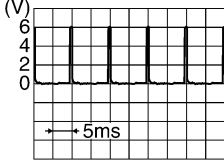
# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

| Terminal | Wire color | Signal name                                  | Signal input/output | Measuring condition |   | Reference value or waveform (Approx.)  |
|----------|------------|--|---------------------|---------------------|---|--|
|          |            |  |                     | Ignition switch     | Operation or condition  |  |
| 13       | L          | Rear door switch RH                          | Input               | OFF                 | ON (open)   | 0V   |
|          |            |  |                     |                     | OFF (closed)  | Battery voltage  |
| 15       | W          | Tire pressure warning check connector        | Input               | OFF                 | —   | 5V   |
| 18       | BR         | Remote keyless entry receiver (ground)       | Output              | OFF                 | —   | 0V   |
| 19       | V          | Remote keyless entry receiver (power supply) | Output              | OFF                 | Ignition switch OFF   |   |
| 20       | G          | Remote keyless entry receiver (signal)       | Input               | OFF                 | Stand-by (keyfob buttons released)  |   |
|          |            |  |                     |                     | When remote keyless entry receiver receives signal from keyfob (keyfob buttons pressed) |                                       |
| 21       | GR         | NATS antenna amp.                            | Input               | OFF → ON            | Ignition switch (OFF → ON)  | Just after turning ignition switch ON: Pointer of tester should move for approx. 1 second, then return to battery voltage. |
| 23       | G          | Security indicator lamp                      | Output              | OFF                 | Goes OFF → illuminates (Every 2.4 seconds)  | Battery voltage → 0V   |
| 25       | BR         | NATS antenna amp.                            | Input               | OFF → ON            | Ignition switch (OFF → ON)  | Just after turning ignition switch ON: Pointer of tester should move for approx. 1 second, then return to battery voltage. |
| 27       | W          | Compressor ON signal                         | Input               | ON                  | A/C switch OFF  | 5V   |
|          |            |  |                     |                     | A/C switch ON   | 0V   |
| 28       | R          | Front blower monitor                         | Input               | ON                  | Front blower motor OFF  | Battery voltage  |
|          |            |  |                     |                     | Front blower motor ON   | 0V   |
| 29       | G          | Hazard switch                                | Input               | OFF                 | ON  | 0V   |
|          |            |  |                     |                     | OFF   | 5V   |
| 31       | R          | Off-road lamps switch                        | Input               | ON                  | ON  | 0V   |
|          |            |  |                     |                     | OFF   | 5V   |

# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

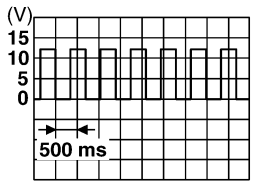
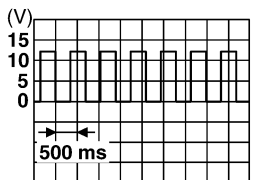
| Terminal | Wire color | Signal name                      | Signal input/output | Measuring condition |  | Reference value or waveform (Approx.)   |
|----------|------------|----------------------------------|---------------------|---------------------|--|---|
|          |            |                                  |                     | Ignition switch     | Operation or condition                             |   |
| 32       | O          | Combination switch output 5      | Output              | ON                  | Lighting, turn, wiper OFF<br>Wiper dial position 4 |  <p style="text-align: right; font-size: small;">SKIA5291E</p>   |
| 33       | GR         | Combination switch output 4      | Output              | ON                  | Lighting, turn, wiper OFF<br>Wiper dial position 4 |  <p style="text-align: right; font-size: small;">SKIA5292E</p>   |
| 34       | G          | Combination switch output 3      | Output              | ON                  | Lighting, turn, wiper OFF<br>Wiper dial position 4 |  <p style="text-align: right; font-size: small;">SKIA5291E</p>   |
| 35       | BR         | Combination switch output 2      | Output              | ON                  | Lighting, turn, wiper OFF<br>Wiper dial position 4 |  <p style="text-align: right; font-size: small;">SKIA5292E</p> |
| 36       | LG         | Combination switch output 1      |                     |                     |  |   |
| 37       | B          | Key switch and key lock solenoid | Input               | OFF                 | Key inserted                                       | Battery voltage   |
|          |            |                                  |                     |                     | Key inserted                                       | 0V  |
| 38       | W/R        | Ignition switch (ON)             | Input               | ON                  | —  | Battery voltage   |
| 39       | L          | CAN-H                            | —                   | —                   | —  | —   |
| 40       | P          | CAN-L                            | —                   | —                   | —  | —   |
| 42       | L          | Off-road lamps                   | Output              | ON                  | Off-road lamps switch                              | ON: 0V<br>OFF: Battery voltage  |
| 43       | Y          | Back door switch                 | Input               | OFF                 | ON (open)  | 0V  |
|          |            |                                  |                     |                     | OFF (closed)                                       | Battery voltage   |
| 44       | O          | Rear wiper auto stop switch      | Input               | ON                  | Rise up position (rear wiper arm on stopper)       | 0V  |
|          |            |                                  |                     |                     | A Position (full clockwise stop position)          | Battery voltage   |
|          |            |                                  |                     |                     | Forward sweep (counterclockwise direction)         | Fluctuating   |
|          |            |                                  |                     |                     | B Position (full counterclockwise stop position)   | 0V  |
|          |            |                                  |                     |                     | Reverse sweep (clockwise direction)                | Fluctuating   |

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# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

| Terminal | Wire color | Signal name                                   | Signal input/output | Measuring condition |  | Reference value or waveform (Approx.)   |
|----------|------------|---|---------------------|---------------------|--|---|
|          |            |   |                     | Ignition switch     | Operation or condition                         |   |
| 45       | V          | Lock switch                                   | Input               | OFF                 | ON (lock)                                      | 0V  |
|          |            |   |                     |                     | OFF  | Battery voltage   |
| 46       | LG         | Unlock switch                                 | Input               | OFF                 | ON (unlock)                                    | 0V  |
|          |            |   |                     |                     | OFF  | Battery voltage   |
| 47       | GR         | Front door switch LH                          | Input               | OFF                 | ON (open)                                      | 0V  |
|          |            |   |                     |                     | OFF (closed)                                   | Battery voltage   |
| 48       | P          | Rear door switch LH                           | Input               | OFF                 | ON (open)                                      | 0V  |
|          |            |   |                     |                     | OFF (closed)                                   | Battery voltage   |
| 49       | L          | Cargo lamp                                    | Output              | OFF                 | Any door open (ON)                             | 0V  |
|          |            |   |                     |                     | All doors closed (OFF)                         | Battery voltage   |
| 50       | W          | Off-road lamps relay                          | Output              | ON                  | Off-road lamps switch ON                       | 0V  |
|          |            |   |                     |                     | Off-road lamps switch OFF                      | Battery voltage   |
| 51       | O          | Trailer turn signal (right)                   | Output              | ON                  | Turn right ON                                  |  <p style="text-align: right; font-size: small;">SKIA3009J</p>   |
| 52       | LG         | Trailer turn signal (left)                    | Output              | ON                  | Turn left ON                                   |  <p style="text-align: right; font-size: small;">SKIA3009J</p> |
| 55       | W          | Rear wiper output circuit 1                   | Output              | ON                  | OFF  | 0   |
|          |            |   |                     |                     | ON   | Battery voltage   |
| 56       | R/Y        | Battery saver output                          | Output              | OFF                 | 30 minutes after ignition switch is turned OFF | 0V  |
|          |            |   |                     | ON                  | —  | Battery voltage   |
| 57       | R/Y        | Battery power supply                          | Input               | OFF                 | —  | Battery voltage   |
| 59       | GR         | Front door lock assembly LH actuator (unlock) | Output              | OFF                 | OFF (neutral)                                  | 0V  |
|          |            |   |                     |                     | ON (unlock)                                    | Battery voltage   |
| 60       | LG         | Turn signal (left)                            | Output              | ON                  | Turn left ON                                   |  <p style="text-align: right; font-size: small;">SKIA3009J</p> |



# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

| Terminal | Wire color | Signal name  | Signal input/output | Measuring condition |   | Reference value or waveform (Approx.) |
|----------|------------|--|---------------------|---------------------|---|---------------------------------------|
|          |            |  |                     | Ignition switch     | Operation or condition  |                                       |
| 61       | G          | Turn signal (right)  | Output              | ON                  | Turn right ON   |                                       |
| 63       | BR         | Interior room/map lamp   | Output              | OFF                 | Any door switch   | ON (open)<br>0V                       |
|          |            |  |                     |                     |   | OFF (closed)<br>Battery voltage       |
| 65       | V          | All door lock actuators (lock)   | Output              | OFF                 | OFF (neutral)   | 0V                                    |
|          |            |  |                     |                     | ON (lock)   | Battery voltage                       |
| 66       | L          | Front door lock actuator RH, rear door lock actuators LH/RH and back door lock actuator (unlock) | Output              | OFF                 | OFF (neutral)   | 0V                                    |
|          |            |  |                     |                     | ON (unlock)   | Battery voltage                       |
| 67       | B          | Ground   | Input               | ON                  | —   | 0V                                    |
| 68       | O          | Power window power supply (RAP)  | Output              | —                   | Ignition switch ON  | Battery voltage                       |
|          |            |  |                     |                     | Within 45 seconds after ignition switch OFF                     | Battery voltage                       |
|          |            |  |                     |                     | More than 45 seconds after ignition switch OFF                  | 0V                                    |
|          |            |  |                     |                     | When front door LH or RH is open or power window timer operates | 0V                                    |
| 70       | W          | Battery power supply   | Input               | OFF                 | —   | Battery voltage                       |

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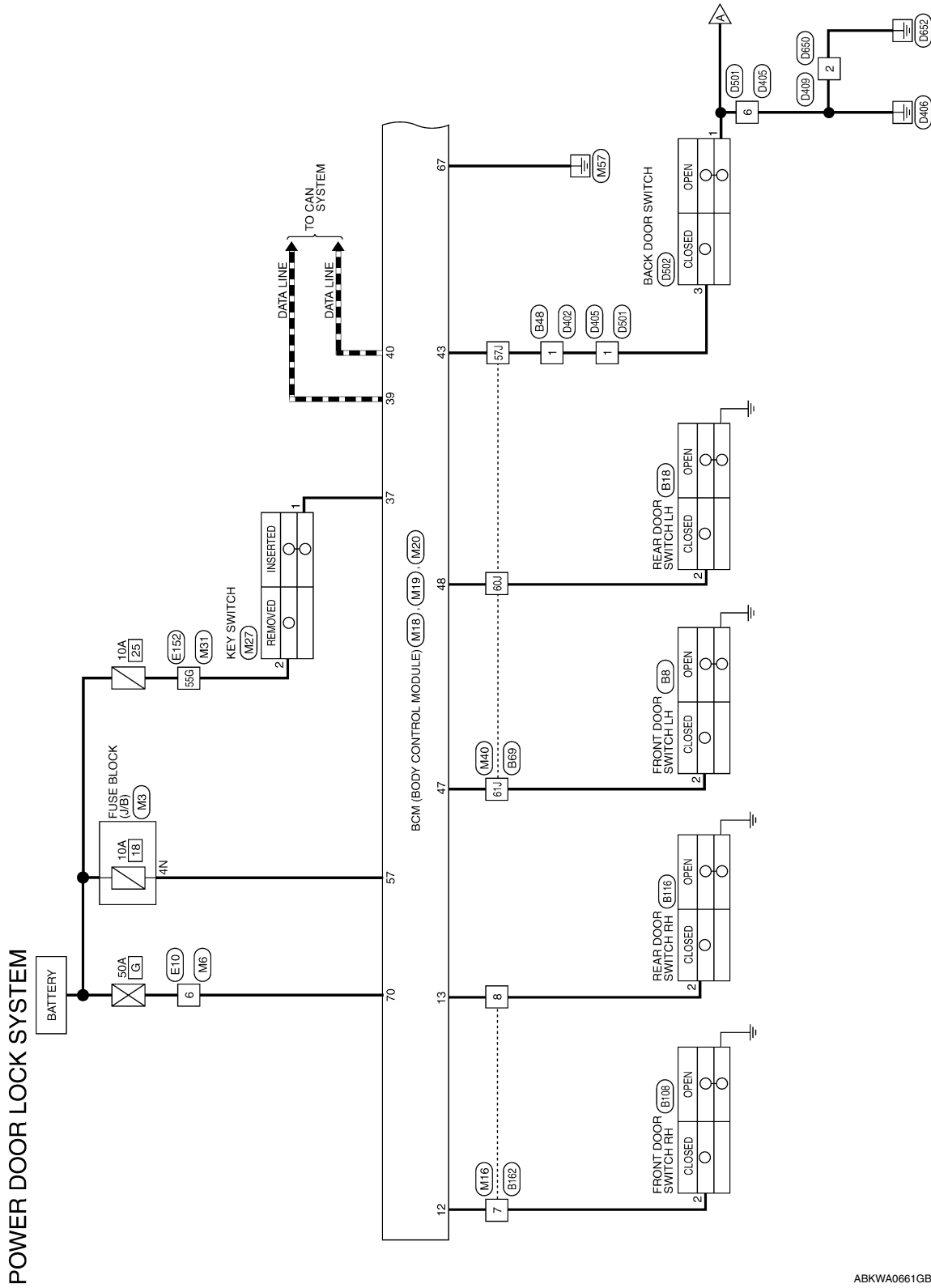
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# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

## Wiring Diagram — POWER DOOR LOCK SYSTEM —

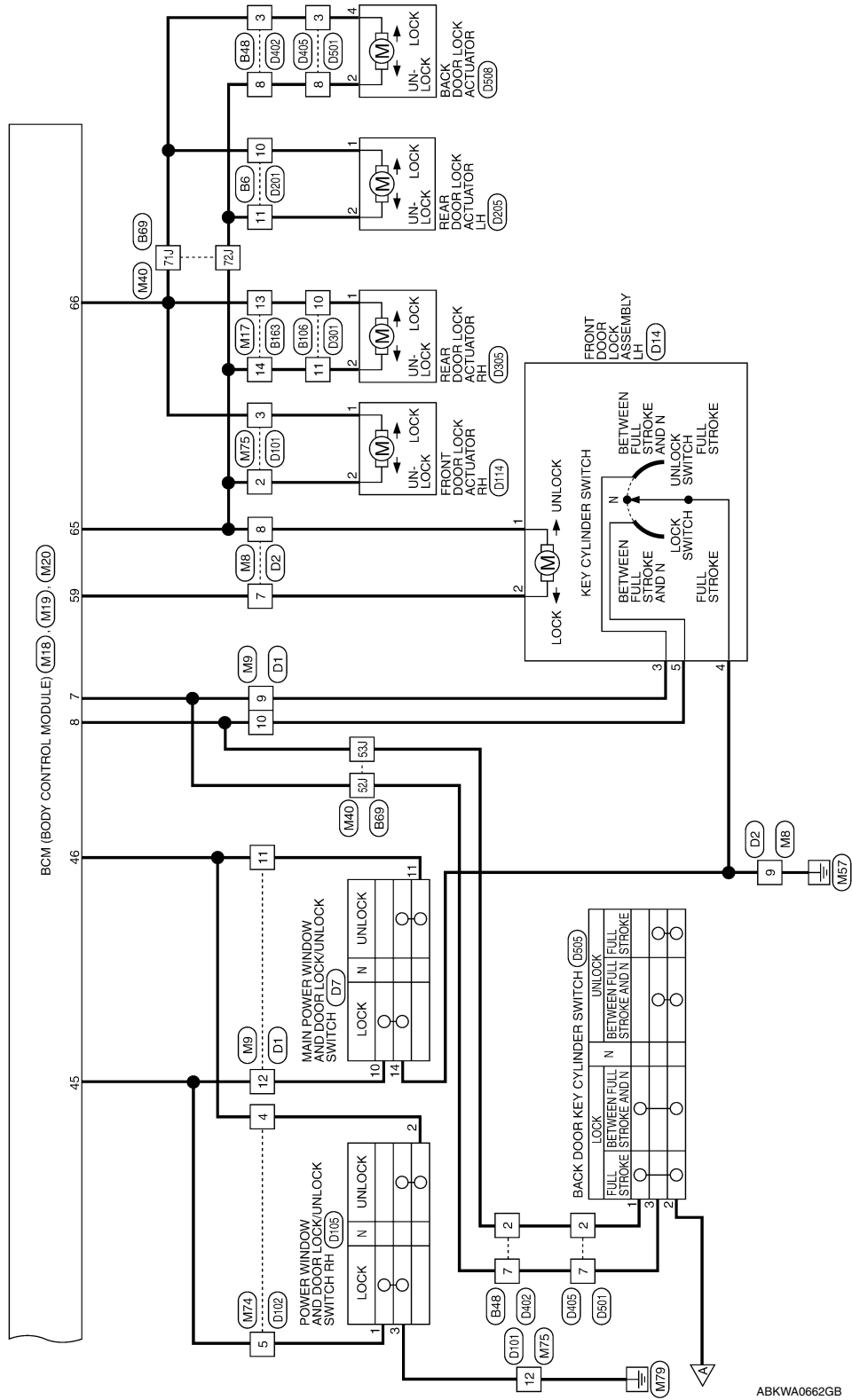
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# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >



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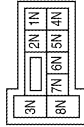
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# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

## POWER DOOR LOCK SYSTEM CONNECTORS

|                 |                  |
|-----------------|------------------|
| Connector No.   | M3               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |



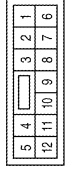
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 4N           | R/Y           | --          |

|                 |              |
|-----------------|--------------|
| Connector No.   | M6           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



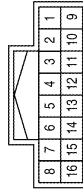
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 6            | W             | --          |

|                 |              |
|-----------------|--------------|
| Connector No.   | M8           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | BROWN        |



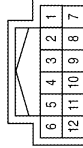
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 7            | GR            | --          |
| 8            | V             | --          |
| 9            | B             | --          |

|                 |              |
|-----------------|--------------|
| Connector No.   | M9           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



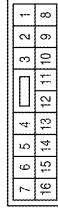
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 9            | GR            | --          |
| 10           | SB            | --          |
| 11           | LG            | --          |
| 12           | V             | --          |

|                 |              |
|-----------------|--------------|
| Connector No.   | M16          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 7            | LG            | --          |
| 8            | L             | --          |

|                 |              |
|-----------------|--------------|
| Connector No.   | M17          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |

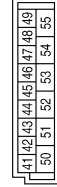


| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 13           | SB            | --          |
| 14           | V             | --          |

# BCM (BODY CONTROL MODULE)

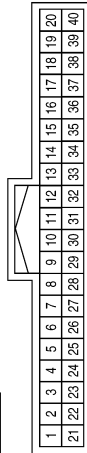
< ECU DIAGNOSIS >

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M19                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | WHITE                     |



| Terminal No. | Color of Wire | Signal Name   |
|--------------|---------------|---------------|
| 43           | Y             | BACK DOOR SW  |
| 45           | V             | CDL LOCK SW   |
| 46           | LG            | CDL UNLOCK SW |
| 47           | GR            | DOOR SW (DR)  |
| 48           | P             | DOOR SW (RL)  |

| Terminal No. | Color of Wire | Signal Name            |
|--------------|---------------|------------------------|
| 7            | GR            | KEY CYLINDER UNLOCK SW |
| 8            | SB            | KEY CYLINDER UNLOCK SW |
| 12           | LG            | DOOR SW (AS)           |
| 13           | L             | DOOR SW (RR)           |
| 37           | B             | KEY SW                 |
| 39           | L             | CAN-H                  |
| 40           | P             | CAN-L                  |



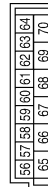
|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M18                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | WHITE                     |

|                 |              |
|-----------------|--------------|
| Connector No.   | M31          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



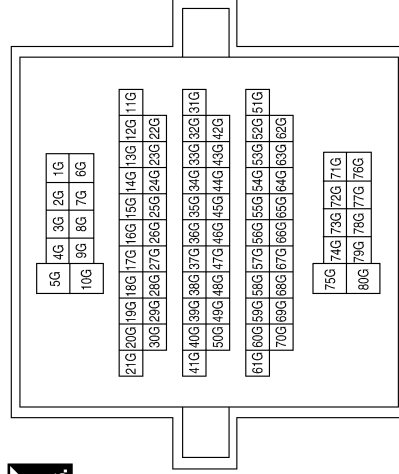
|                 |            |
|-----------------|------------|
| Connector No.   | M27        |
| Connector Name  | KEY SWITCH |
| Connector Color | WHITE      |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | B             | -           |
| 2            | Y             | -           |



|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M20                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | BLACK                     |

| Terminal No. | Color of Wire | Signal Name                |
|--------------|---------------|----------------------------|
| 57           | R/Y           | BAT (FUSE)                 |
| 59           | GR            | DOOR UNLOCK OUTPUT (DR)    |
| 65           | V             | DOOR LOCK OUTPUT (ALL)     |
| 66           | L             | DOOR UNLOCK OUTPUT (OTHER) |
| 67           | B             | GND (POWER)                |
| 70           | W             | BAT (F/L)                  |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 55G          | Y             | -           |

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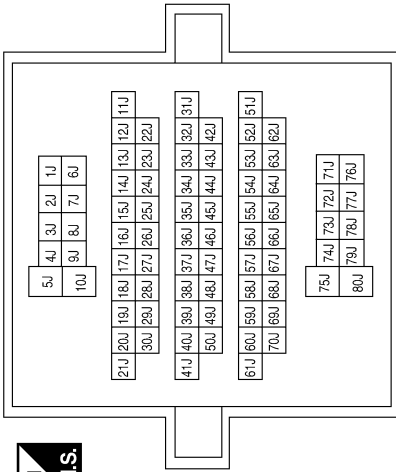
A B C D E F G H I J L M N O P

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# BCM (BODY CONTROL MODULE)

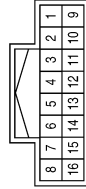
< ECU DIAGNOSIS >

|                 |              |
|-----------------|--------------|
| Connector No.   | M40          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



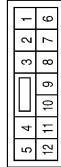
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 52J          | GR            | -           |
| 53J          | SB            | -           |
| 57J          | Y             | -           |
| 60J          | P             | -           |
| 61J          | GR            | -           |
| 71J          | L             | -           |
| 72J          | V             | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | M74          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 4            | LG            | -           |
| 5            | P             | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | M75          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |

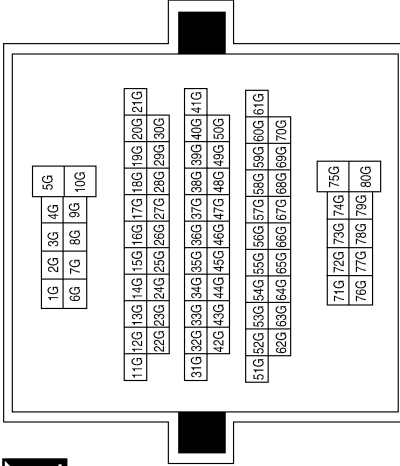


|                 |              |
|-----------------|--------------|
| Connector No.   | E10          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | V             | -           |
| 3            | L             | -           |
| 12           | B             | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | E152         |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |

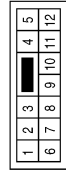


| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 55G          | Y             | -           |

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

|                 |              |
|-----------------|--------------|
| Connector No.   | B6           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 10           | L             | -           |
| 11           | V             | -           |

|                 |                      |
|-----------------|----------------------|
| Connector No.   | B8                   |
| Connector Name  | FRONT DOOR SWITCH LH |
| Connector Color | WHITE                |



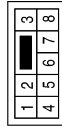
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | GR            | -           |

|                 |                     |
|-----------------|---------------------|
| Connector No.   | B18                 |
| Connector Name  | REAR DOOR SWITCH LH |
| Connector Color | WHITE               |



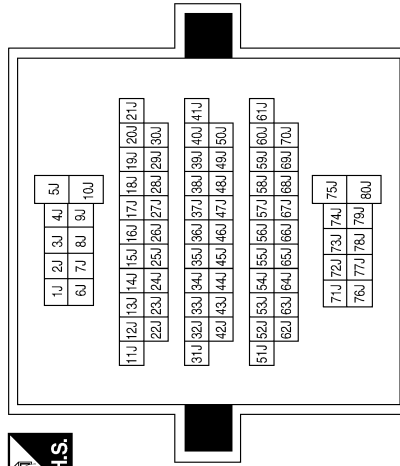
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | P             | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | B48          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | Y             | -           |
| 2            | SB            | -           |
| 3            | G             | -           |
| 7            | GR            | -           |
| 8            | V             | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | B69          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 52J          | GR            | -           |
| 53J          | SB            | -           |
| 57J          | Y             | -           |
| 60J          | P             | -           |
| 61J          | GR            | -           |
| 71J          | L             | -           |
| 72J          | V             | -           |

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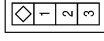
A B C D E F G H I J L M N O P

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# BCM (BODY CONTROL MODULE)

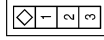
< ECU DIAGNOSIS >

|                 |                     |
|-----------------|---------------------|
| Connector No.   | B116                |
| Connector Name  | REAR DOOR SWITCH RH |
| Connector Color | WHITE               |



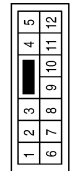
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | L             | -           |

|                 |                      |
|-----------------|----------------------|
| Connector No.   | B108                 |
| Connector Name  | FRONT DOOR SWITCH RH |
| Connector Color | WHITE                |



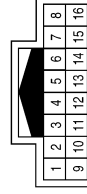
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | LG            | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | B106         |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



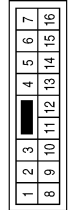
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 10           | SB            | -           |
| 11           | V             | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | D1           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



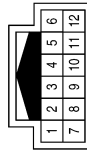
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 9            | R/W           | -           |
| 10           | SB            | -           |
| 11           | W             | -           |
| 12           | LG            | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | B163         |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 13           | SB            | -           |
| 14           | V             | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | B162         |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 7            | LG            | -           |
| 8            | L             | -           |

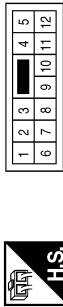
ABKIA1920GB



# BCM (BODY CONTROL MODULE)

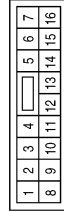
< ECU DIAGNOSIS >

|                 |              |
|-----------------|--------------|
| Connector No.   | D2           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | BROWN        |



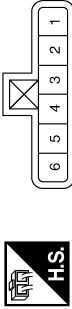
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 7            | G             | -           |
| 8            | V             | -           |
| 9            | B             | -           |

|                 |   |
|-----------------|---|
| Connector No.   | D7  |
| Connector Name  | MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH |
| Connector Color | WHITE   |



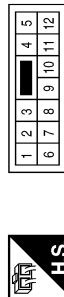
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 10           | LG            | -           |
| 11           | W             | -           |
| 14           | B             | -           |

|                 |                             |
|-----------------|-----------------------------|
| Connector No.   | D14                         |
| Connector Name  | FRONT DOOR LOCK ASSEMBLY LH |
| Connector Color | GRAY                        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | V             | -           |
| 2            | G             | -           |
| 3            | R/W           | -           |
| 4            | B             | -           |
| 5            | SB            | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | D101         |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



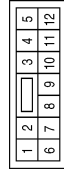
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | V             | -           |
| 3            | G/Y           | -           |
| 12           | B             | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | D102         |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 4            | W             | -           |
| 5            | LG            | -           |

|                 |   |
|-----------------|---|
| Connector No.   | D105  |
| Connector Name  | POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH |
| Connector Color | WHITE                                       |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | LG            | -           |
| 2            | W             | -           |
| 3            | B             | -           |

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# BCM (BODY CONTROL MODULE)

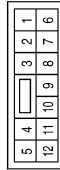
< ECU DIAGNOSIS >

|                 |                             |
|-----------------|-----------------------------|
| Connector No.   | D114                        |
| Connector Name  | FRONT DOOR LOCK ACTUATOR RH |
| Connector Color | WHITE                       |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | G/Y           | -           |
| 2            | V             | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | D201         |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



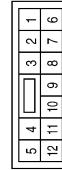
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 10           | G             | -           |
| 11           | V             | -           |

|                 |                            |
|-----------------|----------------------------|
| Connector No.   | D205                       |
| Connector Name  | REAR DOOR LOCK ACTUATOR LH |
| Connector Color | WHITE                      |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | G             | -           |
| 2            | V             | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | D301         |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



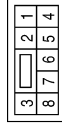
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 10           | G             | -           |
| 11           | V             | -           |

|                 |                            |
|-----------------|----------------------------|
| Connector No.   | D305                       |
| Connector Name  | REAR DOOR LOCK ACTUATOR RH |
| Connector Color | WHITE                      |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | G             | -           |
| 2            | V             | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | D402         |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



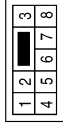
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | Y             | -           |
| 2            | SB            | -           |
| 3            | G             | -           |
| 7            | GR            | -           |
| 8            | V             | -           |

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# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

|                 |              |
|-----------------|--------------|
| Connector No.   | D501         |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



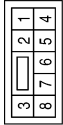
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | Y             | -           |
| 2            | SB            | -           |
| 3            | G             | -           |
| 6            | B             | -           |
| 7            | GR            | -           |
| 8            | V             | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | D409         |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | B             | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | D405         |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | Y             | -           |
| 2            | SB            | -           |
| 3            | G             | -           |
| 6            | B             | -           |
| 7            | GR            | -           |
| 8            | V             | -           |

|                 |                         |
|-----------------|-------------------------|
| Connector No.   | D508                    |
| Connector Name  | BACK DOOR LOCK ACTUATOR |
| Connector Color | WHITE                   |



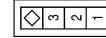
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | V             | -           |
| 4            | G             | -           |

|                 |                               |
|-----------------|-------------------------------|
| Connector No.   | D505                          |
| Connector Name  | BACK DOOR KEY CYLINDER SWITCH |
| Connector Color | BROWN                         |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | SB            | -           |
| 2            | B             | -           |
| 3            | GR            | -           |

|                 |                  |
|-----------------|------------------|
| Connector No.   | D502             |
| Connector Name  | BACK DOOR SWITCH |
| Connector Color | WHITE            |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | B             | -           |
| 3            | Y             | -           |

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# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

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|                 |              |
|-----------------|--------------|
| Connector No.   | D650         |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | B             | -           |

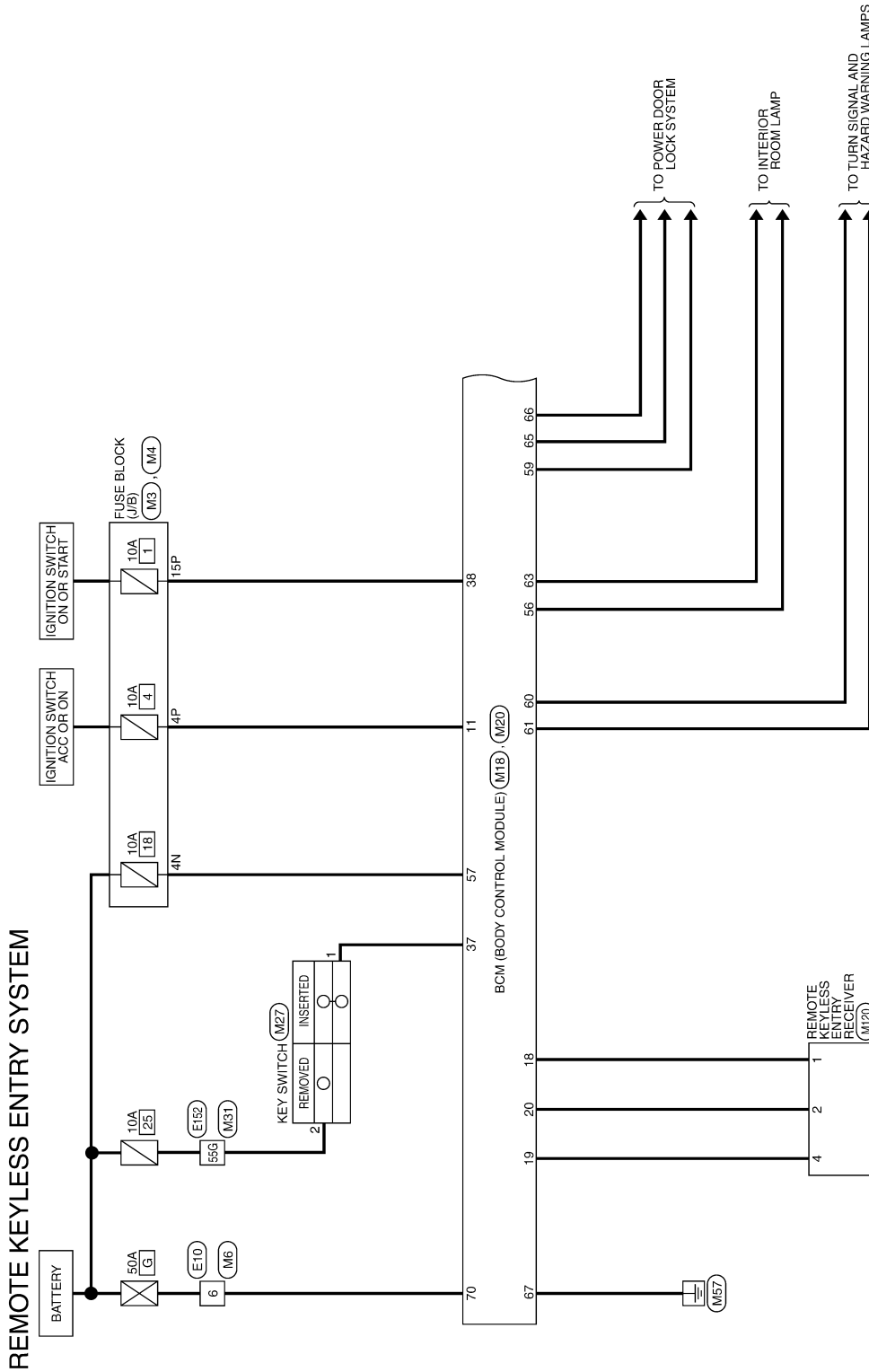
ABKIA1924GB

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

## Wiring Diagram — REMOTE KEYLESS ENTRY SYSTEM —

INFOID:000000005268115

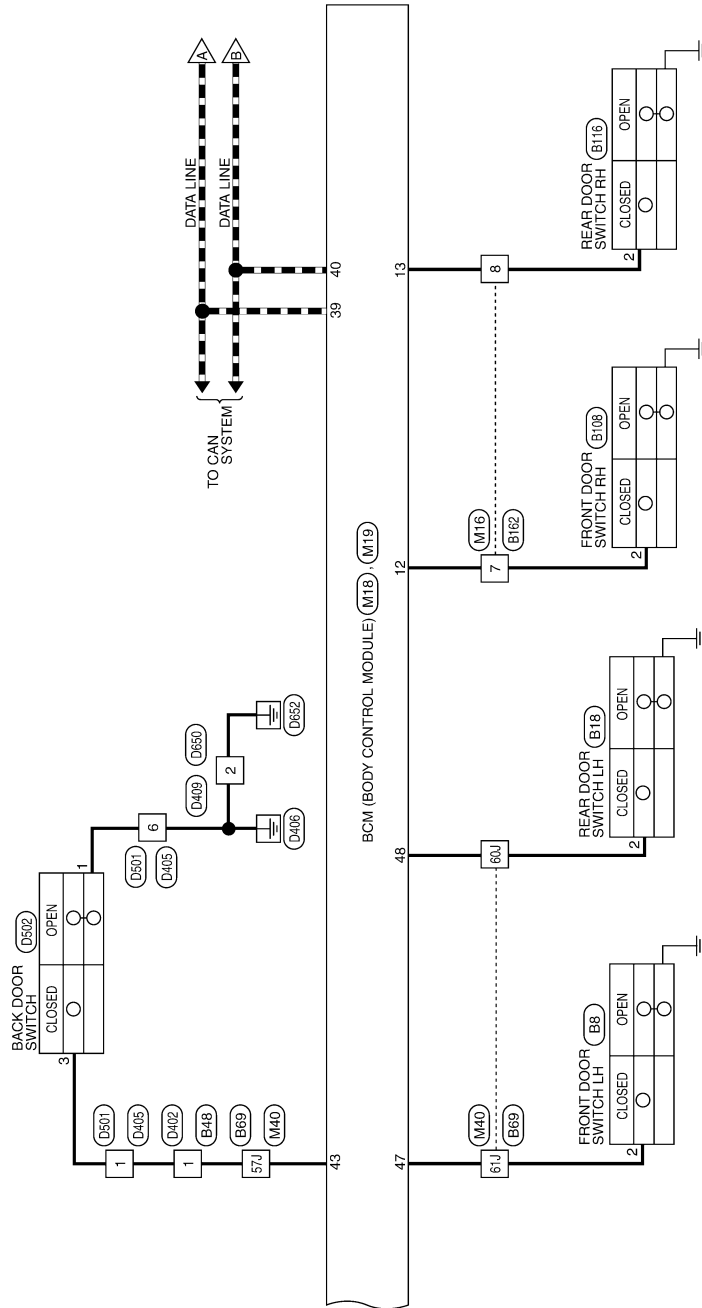


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ABKWA0663GB

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

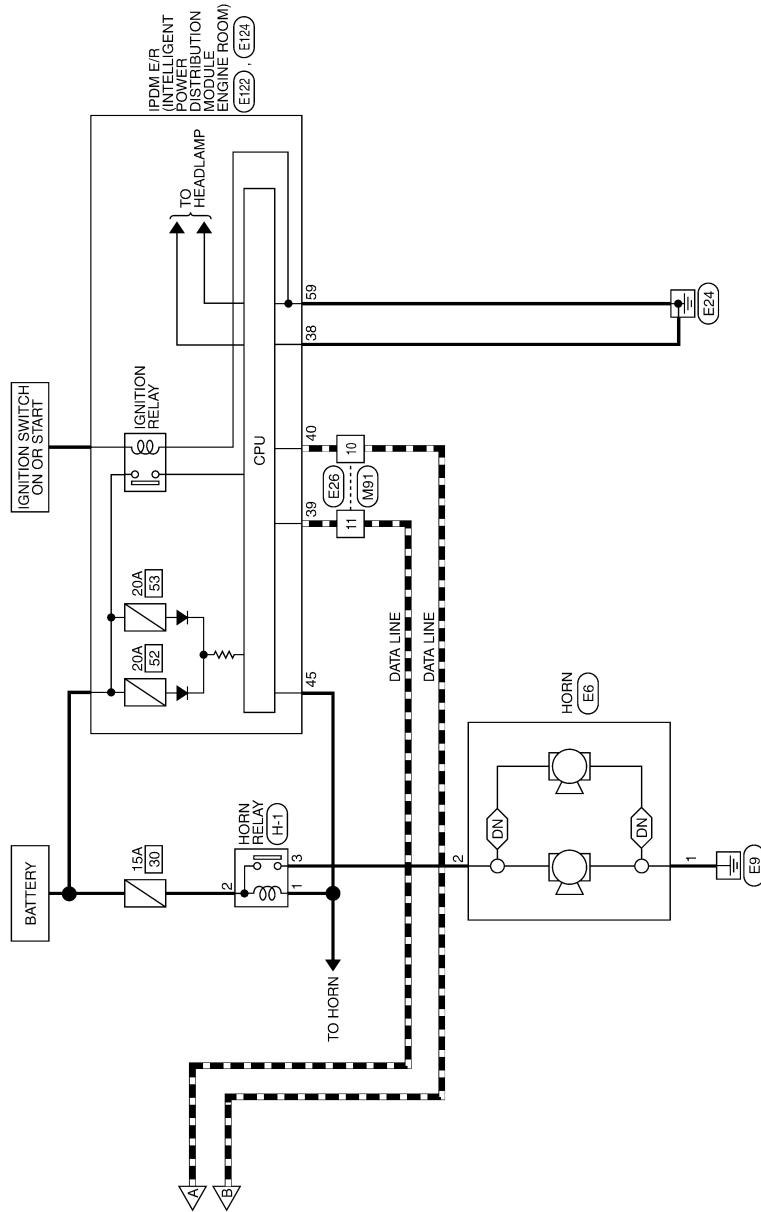


ABKWA0664GB

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Ⓛ: WITH DUAL NOTE HORN



ABKWA0665GB

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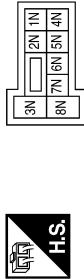
DLK

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

## REMOTE KEYLESS ENTRY SYSTEM CONNECTORS

|                 |                  |
|-----------------|------------------|
| Connector No.   | M3               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |



|              |    |               |     |             |   |
|--------------|----|---------------|-----|-------------|---|
| Terminal No. | 4N | Color of Wire | R/Y | Signal Name | - |
|--------------|----|---------------|-----|-------------|---|

|                 |                  |
|-----------------|------------------|
| Connector No.   | M4               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |



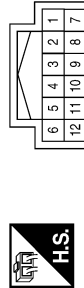
|              |     |               |     |             |   |
|--------------|-----|---------------|-----|-------------|---|
| Terminal No. | 4P  | Color of Wire | G/B | Signal Name | - |
| Terminal No. | 15P | Color of Wire | W/R | Signal Name | - |

|                 |              |
|-----------------|--------------|
| Connector No.   | M6           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



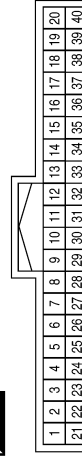
|              |   |               |   |             |   |
|--------------|---|---------------|---|-------------|---|
| Terminal No. | 6 | Color of Wire | W | Signal Name | - |
|--------------|---|---------------|---|-------------|---|

|                 |              |
|-----------------|--------------|
| Connector No.   | M16          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



|              |   |               |    |             |   |
|--------------|---|---------------|----|-------------|---|
| Terminal No. | 7 | Color of Wire | LG | Signal Name | - |
| Terminal No. | 8 | Color of Wire | L  | Signal Name | - |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M18                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | WHITE                     |



|              |    |               |     |             |                                   |
|--------------|----|---------------|-----|-------------|-----------------------------------|
| Terminal No. | 11 | Color of Wire | G/B | Signal Name | ACC SW                            |
| Terminal No. | 12 | Color of Wire | LG  | Signal Name | DOOR SW (AS)                      |
| Terminal No. | 13 | Color of Wire | L   | Signal Name | DOOR SW (RR)                      |
| Terminal No. | 18 | Color of Wire | BR  | Signal Name | KEYLESS & AUTO LIGHT SENSOR GND   |
| Terminal No. | 19 | Color of Wire | V   | Signal Name | KEYLESS TUNER POWER SUPPLY OUTPUT |
| Terminal No. | 20 | Color of Wire | G   | Signal Name | KEYLESS TUNER SIGNAL              |
| Terminal No. | 37 | Color of Wire | B   | Signal Name | KEY SW                            |
| Terminal No. | 38 | Color of Wire | W/R | Signal Name | IGN SW                            |
| Terminal No. | 39 | Color of Wire | L   | Signal Name | CAN-H                             |
| Terminal No. | 40 | Color of Wire | P   | Signal Name | CAN-L                             |



# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

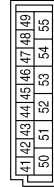
| Terminal No. | Color of Wire | Signal Name                |
|--------------|---------------|----------------------------|
| 60           | LG            | FLASHER OUTPUT (LEFT)      |
| 61           | G             | FLASHER OUTPUT (RIGHT)     |
| 63           | BR            | ROOM LAMP OUTPUT           |
| 65           | V             | DOOR LOCK OUTPUT (ALL)     |
| 66           | L             | DOOR UNLOCK OUTPUT (OTHER) |
| 67           | B             | GND (POWER)                |
| 70           | W             | BAT (F/L)                  |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M20                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | BLACK                     |



| Terminal No. | Color of Wire | Signal Name             |
|--------------|---------------|-------------------------|
| 56           | R/Y           | BATTERY SAVER OUTPUT    |
| 57           | R/Y           | BAT (FUSE)              |
| 59           | GR            | DOOR UNLOCK OUTPUT (DR) |

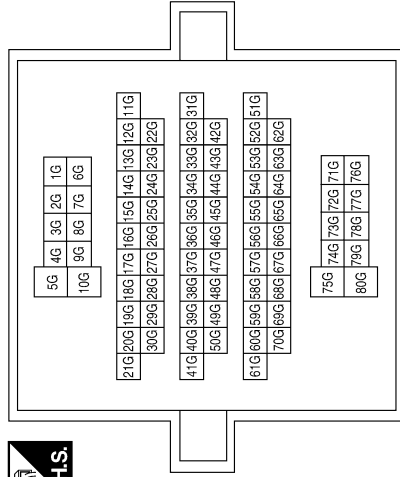
|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M19                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | WHITE                     |



| Terminal No. | Color of Wire | Signal Name  |
|--------------|---------------|--------------|
| 43           | Y             | BACK DOOR SW |
| 47           | GR            | DOOR SW (DR) |
| 48           | P             | DOOR SW (RL) |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 55G          | Y             | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | M31          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



|                 |            |
|-----------------|------------|
| Connector No.   | M27        |
| Connector Name  | KEY SWITCH |
| Connector Color | WHITE      |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | B             | -           |
| 2            | Y             | -           |

ABKIA1925GB

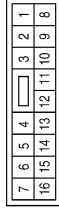
A B C D E F G H I J L M N O P

DLK

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

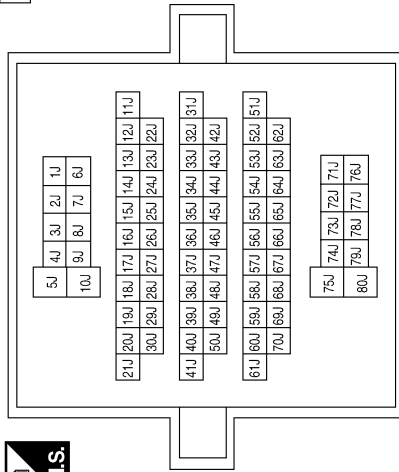
|                 |              |
|-----------------|--------------|
| Connector No.   | M91          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 10           | P             | -           |
| 11           | L             | -           |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 57J          | Y             | -           |
| 60J          | P             | -           |
| 61J          | GR            | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | M40          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



|                 |              |
|-----------------|--------------|
| Connector No.   | E10          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



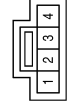
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 6            | W             | -           |

|                 |       |
|-----------------|-------|
| Connector No.   | E6    |
| Connector Name  | HORN  |
| Connector Color | BLACK |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | B             | -           |
| 2            | G             | -           |

|                 |                               |
|-----------------|-------------------------------|
| Connector No.   | M120                          |
| Connector Name  | REMOTE KEYLESS ENTRY RECEIVER |
| Connector Color | WHITE                         |



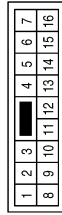
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | BR            | GND         |
| 2            | G             | SIGNAL      |
| 4            | V             | POWER       |

ABK1A1941GB

# BCM (BODY CONTROL MODULE)

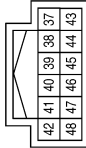
< ECU DIAGNOSIS >

|                 |              |
|-----------------|--------------|
| Connector No.   | E26          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 10           | P             | -           |
| 11           | L             | -           |

|                 |  |
|-----------------|--|
| Connector No.   | E122   |
| Connector Name  | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | WHITE  |



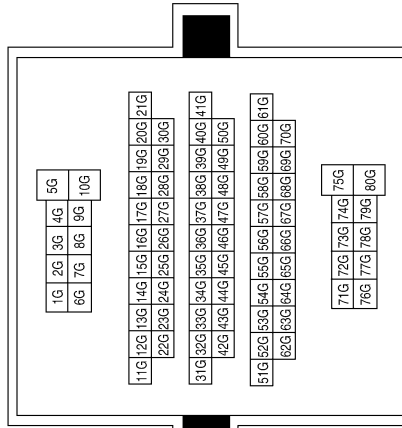
| Terminal No. | Color of Wire | Signal Name    |
|--------------|---------------|----------------|
| 38           | B             | GND (SIGNAL)   |
| 39           | L             | CAN-H          |
| 40           | P             | CAN-L          |
| 45           | LG            | ANT THEFT HORN |

|                 |  |
|-----------------|--|
| Connector No.   | E124   |
| Connector Name  | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | BLACK  |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 59           | B             | GND (POWER) |

|                 |              |
|-----------------|--------------|
| Connector No.   | E152         |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 55G          | Y             | -           |

|                 |                      |
|-----------------|----------------------|
| Connector No.   | B8                   |
| Connector Name  | FRONT DOOR SWITCH LH |
| Connector Color | WHITE                |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | GR            | -           |

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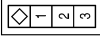
A B C D E F G H I J L M N O P

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# BCM (BODY CONTROL MODULE)

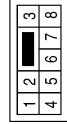
< ECU DIAGNOSIS >

|                 |                     |
|-----------------|---------------------|
| Connector No.   | B18                 |
| Connector Name  | REAR DOOR SWITCH LH |
| Connector Color | WHITE               |



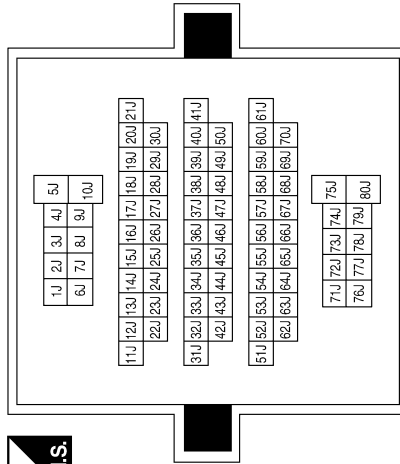
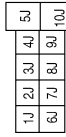
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | P             | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | B48          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



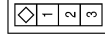
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | Y             | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | B69          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 57J          | Y             | -           |
| 60J          | P             | -           |
| 61J          | GR            | -           |

|                 |                      |
|-----------------|----------------------|
| Connector No.   | B108                 |
| Connector Name  | FRONT DOOR SWITCH RH |
| Connector Color | WHITE                |



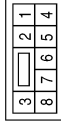
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | LG            | -           |

ABKIA1943GB

# BCM (BODY CONTROL MODULE)

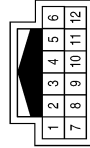
< ECU DIAGNOSIS >

|                 |              |
|-----------------|--------------|
| Connector No.   | D402         |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



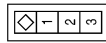
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | Y             | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | B162         |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 7            | LG            | -           |
| 8            | L             | -           |

|                 |                     |
|-----------------|---------------------|
| Connector No.   | B116                |
| Connector Name  | REAR DOOR SWITCH RH |
| Connector Color | WHITE               |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | L             | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | D501         |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



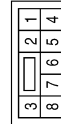
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | Y             | -           |
| 6            | B             | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | D409         |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | B             | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | D405         |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | Y             | -           |
| 6            | B             | -           |

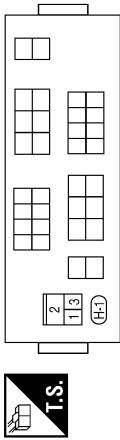
ABKIA1944GB

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# BCM (BODY CONTROL MODULE)


## < ECU DIAGNOSIS >

|                 |  |
|-----------------|--|
| Connector No.   | H-1                                    |
| Connector Name  | FUSE AND FUSIBLE LINK BOX (HORN RELAY) |
| Connector Color | -                                      |



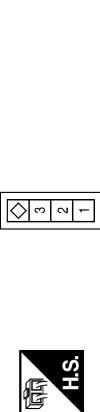
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | BR            | -           |
| 2            | O             | -           |
| 3            | G             | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | D650         |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | B             | -           |

|                 |                  |
|-----------------|------------------|
| Connector No.   | D502             |
| Connector Name  | BACK DOOR SWITCH |
| Connector Color | WHITE            |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | B             | -           |
| 3            | Y             | -           |

ABKIA1926GB

## Fail Safe

INFOID:000000005568015

### Fail-safe index

BCM performs fail-safe control when any DTC listed below is detected.

# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

| Display contents of CONSULT | Fail-safe               | Cancellation  |
|-----------------------------|-------------------------|---|
| U1000: CAN COMM CIRCUIT     | Inhibit engine cranking | When the BCM re-establishes communication with the other modules. |

## DTC Inspection Priority Chart

INFOID:000000005568016

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

| Priority | DTC  |
|----------|--|
| 1        | <ul style="list-style-type: none"> <li>U1000: CAN COMM CIRCUIT</li> </ul>  |
| 2        | <ul style="list-style-type: none"> <li>B2190: NATS ANTENNA AMP</li> <li>B2191: DIFFERENCE OF KEY</li> <li>B2192: ID DISCORD BCM-ECM</li> <li>B2193: CHAIN OF BCM-ECM</li> </ul>  |
| 3        | <ul style="list-style-type: none"> <li>C1729: VHCL SPEED SIG ERR</li> <li>C1735: IGNITION SIGNAL</li> </ul>  |
| 4        | <ul style="list-style-type: none"> <li>C1704: LOW PRESSURE FL</li> <li>C1705: LOW PRESSURE FR</li> <li>C1706: LOW PRESSURE RR</li> <li>C1707: LOW PRESSURE RL</li> <li>C1708: [NO DATA] FL</li> <li>C1709: [NO DATA] FR</li> <li>C1710: [NO DATA] RR</li> <li>C1711: [NO DATA] RL</li> <li>C1712: [CHECKSUM ERR] FL</li> <li>C1713: [CHECKSUM ERR] FR</li> <li>C1714: [CHECKSUM ERR] RR</li> <li>C1715: [CHECKSUM ERR] RL</li> <li>C1716: [PRESSDATA ERR] FL</li> <li>C1717: [PRESSDATA ERR] FR</li> <li>C1718: [PRESSDATA ERR] RR</li> <li>C1719: [PRESSDATA ERR] RL</li> <li>C1720: [CODE ERR] FL</li> <li>C1721: [CODE ERR] FR</li> <li>C1722: [CODE ERR] RR</li> <li>C1723: [CODE ERR] RL</li> <li>C1724: [BATT VOLT LOW] FL</li> <li>C1725: [BATT VOLT LOW] FR</li> <li>C1726: [BATT VOLT LOW] RR</li> <li>C1727: [BATT VOLT LOW] RL</li> </ul> |

## DTC Index

INFOID:000000005568017

### NOTE:

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

| CONSULT display                                      | Fail-safe | Tire pressure monitor warning lamp ON | Reference page         |
|--|-----------|---------------------------------------|------------------------|
| No DTC is detected. further testing may be required. | —         | —                                     | —                      |
| U1000: CAN COMM CIRCUIT                              | —         | —                                     | <a href="#">BCS-30</a> |

## BCM (BODY CONTROL MODULE)

### < ECU DIAGNOSIS >

| CONSULT display           | Fail-safe | Tire pressure<br>monitor warning<br>lamp ON | Reference page         |
|---------------------------|-----------|---|------------------------|
| B2190: NATS ANTENNA AMP   | —         | —   | <a href="#">SEC-18</a> |
| B2191: DIFFERENCE OF KEY  | —         | —   | <a href="#">SEC-21</a> |
| B2192: ID DISCORD BCM-ECM | —         | —   | <a href="#">SEC-22</a> |
| B2193: CHAIN OF BCM-ECM   | —         | —   | <a href="#">SEC-24</a> |
| C1708: [NO DATA] FL       | —         | —   | <a href="#">WT-14</a>  |
| C1709: [NO DATA] FR       | —         | —   | <a href="#">WT-14</a>  |
| C1710: [NO DATA] RR       | —         | —   | <a href="#">WT-14</a>  |
| C1711: [NO DATA] RL       | —         | —   | <a href="#">WT-14</a>  |
| C1712: [CHECKSUM ERR] FL  | —         | —   | <a href="#">WT-16</a>  |
| C1713: [CHECKSUM ERR] FR  | —         | —   | <a href="#">WT-16</a>  |
| C1714: [CHECKSUM ERR] RR  | —         | —   | <a href="#">WT-16</a>  |
| C1715: [CHECKSUM ERR] RL  | —         | —   | <a href="#">WT-16</a>  |
| C1716: [PRESSDATA ERR] FL | —         | —   | <a href="#">WT-18</a>  |
| C1717: [PRESSDATA ERR] FR | —         | —   | <a href="#">WT-18</a>  |
| C1718: [PRESSDATA ERR] RR | —         | —   | <a href="#">WT-18</a>  |
| C1719: [PRESSDATA ERR] RL | —         | —   | <a href="#">WT-18</a>  |
| C1720: [CODE ERR] FL      | —         | —   | <a href="#">WT-16</a>  |
| C1721: [CODE ERR] FR      | —         | —   | <a href="#">WT-16</a>  |
| C1722: [CODE ERR] RR      | —         | —   | <a href="#">WT-16</a>  |
| C1723: [CODE ERR] RL      | —         | —   | <a href="#">WT-16</a>  |
| C1724: [BATT VOLT LOW] FL | —         | —   | <a href="#">WT-16</a>  |
| C1725: [BATT VOLT LOW] FR | —         | —   | <a href="#">WT-16</a>  |
| C1726: [BATT VOLT LOW] RR | —         | —   | <a href="#">WT-16</a>  |
| C1727: [BATT VOLT LOW] RL | —         | —   | <a href="#">WT-16</a>  |
| C1729: VHCL SPEED SIG ERR | —         | —   | <a href="#">WT-19</a>  |
| C1735: IGNITION SIGNAL    | —         | —   | —                      |



# DOOR LOCK

< SYMPTOM DIAGNOSIS >

## SYMPTOM DIAGNOSIS

### DOOR LOCK

#### Symptom Table

INFOID:000000005268118

#### DOOR LOCK SYSTEM

##### NOTE:

- Before performing the diagnosis in the following table, check “Work flow”. Refer to [DLK-4, "Work Flow"](#).
- If the following symptoms are detected, check systems shown in the “Diagnosis/service procedure” column in this order.

| Symptom  | Repair order   | Refer to page          |
|--|--|------------------------|
| Key reminder door function does not operate properly.  | 1. Door switch check   | <a href="#">DLK-24</a> |
|  | 2. Key switch (Insert) check   | <a href="#">DLK-51</a> |
|  | 3. Replace BCM.  | <a href="#">BCS-56</a> |
| Power door lock does not operate with door lock and unlock switch on main power window and door lock/unlock switch or power window and door lock/unlock switch RH. | 1. Door lock/unlock switch check (driver side)                               | <a href="#">DLK-27</a> |
|  | 2. Door lock/unlock switch check (passenger side)                            | <a href="#">DLK-27</a> |
| Specific door lock actuator does not operate.  | 1. Door lock actuator check (Front LH)                                       | <a href="#">DLK-36</a> |
|  | 2. Door lock actuator check (Front RH)                                       | <a href="#">DLK-37</a> |
|  | 3. Door lock actuator check (Rear LH)  | <a href="#">DLK-38</a> |
|  | 4. Door lock actuator check (Rear RH)  | <a href="#">DLK-40</a> |
|  | 5. Back door   | <a href="#">DLK-41</a> |
| Power door lock does not operate with front door key cylinder LH or back door key cylinder operation.  | 1. Front door lock assembly LH (key cylinder switch) check                   | <a href="#">DLK-31</a> |
|  | 2. Back door key cylinder switch check                                       | <a href="#">DLK-33</a> |
|  | 3. Replace BCM.  | <a href="#">BCS-56</a> |
| Power door lock does not operate.  | 1. BCM power supply and ground circuit check                                 | <a href="#">BCS-31</a> |
|  | 2. Door lock/unlock switch check (driver)                                    | <a href="#">DLK-27</a> |
|  | 3. Door lock/unlock switch check (passenger)                                 | <a href="#">DLK-27</a> |
| Vehicle speed sensing auto LOCK operation does not operate.  | 1. Ensure automatic door lock/unlock function (lock operation) is enabled.   | <a href="#">DLK-17</a> |
|  | 2. Check combination meter vehicle speed signal.                             | <a href="#">MWI-28</a> |
|  | 3. Check intermittent incident.  | <a href="#">GI-37</a>  |
| Ignition OFF interlock door UNLOCK function does not operate.  | 1. Ensure automatic door lock/unlock function (unlock operation) is enabled. | <a href="#">DLK-17</a> |
|  | 2. Check BCM for DTCs.   | <a href="#">DLK-87</a> |
|  | 3. Check intermittent incident.  | <a href="#">GI-37</a>  |

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# REMOTE KEYLESS ENTRY SYSTEM

< SYMPTOM DIAGNOSIS >

## REMOTE KEYLESS ENTRY SYSTEM

### Symptom Table

INFOID:000000005268119

### REMOTE KEYLESS ENTRY SYSTEM

| Symptom   | Diagnoses/service procedure  | Reference page         |
|---|--|------------------------|
| All functions of remote keyless entry system do not operate.  | 1. Keyfob battery and function check (use Remote Keyless Entry Tester J-43241)<br><b>NOTE:</b><br>If the result of keyfob function check is OK, keyfob is not malfunctioning.      | <a href="#">DLK-45</a> |
|   | 2. Check BCM and remote keyless entry receiver.  | <a href="#">DLK-43</a> |
| The new ID of keyfob cannot be entered.   | 1. Keyfob battery and function check (use Remote Keyless Entry Tester J-43241)<br><b>NOTE:</b><br>If the result of keyfob function check is OK, keyfob is not malfunctioning.      | <a href="#">DLK-45</a> |
|   | 2. Key switch (insert) check   | <a href="#">DLK-51</a> |
|   | 3. Door switch check   | <a href="#">DLK-24</a> |
|   | 4. ACC power check   | <a href="#">BCS-31</a> |
|   | 5. Replace BCM.  | <a href="#">BCS-56</a> |
| Door lock or unlock does not function.<br>(If the power door lock system does not operate manually, check power door lock system) | 1. Keyfob battery and function check (use Remote Keyless Entry Tester J-43241)<br><b>NOTE:</b><br>If the result of keyfob function check is OK, keyfob is not malfunctioning.      | <a href="#">DLK-14</a> |
|   | 2. Replace BCM.  | <a href="#">BCS-56</a> |
| Hazard and horn reminder does not activate properly when pressing lock or unlock button of keyfob.                                | 1. Check hazard and horn reminder mode with CONSULT-III<br><b>NOTE:</b><br>Hazard and horn reminder mode can be changed.<br>First check the hazard and horn reminder mode setting. | <a href="#">DLK-14</a> |
|   | 2. Door switch check   | <a href="#">DLK-24</a> |
|   | 3. Replace BCM.  | <a href="#">BCS-56</a> |
| Hazard reminder does not activate properly when pressing lock or unlock button of keyfob.<br>(Horn reminder OK)                   | 1. Check hazard reminder mode with CONSULT-III<br><b>NOTE:</b><br>Hazard reminder mode can be changed.<br>First check the hazard reminder mode setting.                            | <a href="#">DLK-14</a> |
|   | 2. Check hazard function with hazard switch  | —                      |
|   | 3. Replace BCM.  | <a href="#">BCS-56</a> |
| Horn reminder does not activate properly when pressing lock or unlock button of keyfob.<br>(Hazard reminder OK)                   | 1. Check horn reminder mode with CONSULT-III<br><b>NOTE:</b><br>Horn reminder mode can be changed.<br>First check the horn reminder mode setting.                                  | <a href="#">DLK-14</a> |
|   | 2. Check horn function with horn switch  | —                      |
|   | 3. IPDM E/R operation check  | <a href="#">DLK-47</a> |
|   | 4. Replace BCM.  | <a href="#">BCS-56</a> |
| Room lamp and ignition keyhole illumination do not operate properly.  | 1. Room lamp operation check   | <a href="#">INL-3</a>  |
|   | 2. Ignition keyhole illumination operation check   | <a href="#">INL-3</a>  |
|   | 3. Door switch check   | <a href="#">DLK-24</a> |
|   | 4. Replace BCM.  | <a href="#">BCS-56</a> |

# REMOTE KEYLESS ENTRY SYSTEM

## < SYMPTOM DIAGNOSIS >

| Symptom  | Diagnoses/service procedure  | Reference page         |
|--|--|------------------------|
| Panic alarm (horn and headlamp) does not activate when panic alarm button is continuously pressed.     | 1. Keyfob battery and function check (use Remote Keyless Entry Tester J-43241)<br><b>NOTE:</b><br>If the result of keyfob function check is OK, keyfob is not malfunctioning.      | <a href="#">DLK-45</a> |
|  | 2. Key switch (insert) check   | <a href="#">DLK-51</a> |
|  | 3. Replace BCM.  | <a href="#">BCS-56</a> |
| Auto door lock operation does not activate properly.<br>(All other remote keyless entry functions OK.) | 1. Check auto door lock operation mode with CONSULT-III<br><b>NOTE:</b><br>Auto door lock operation mode can be changed.<br>First check the auto door lock operation mode setting. | <a href="#">DLK-12</a> |
|  | 2. Replace BCM.  | <a href="#">BCS-56</a> |

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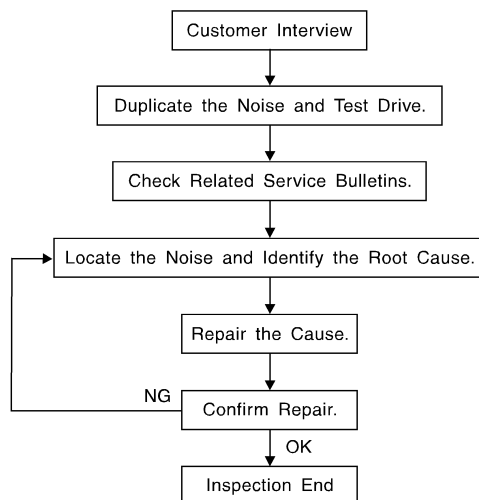
# SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

## SQUEAK AND RATTLE TROUBLE DIAGNOSES

### Work Flow

INFOID:000000005268120



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### CUSTOMER INTERVIEW

Interview the customer if possible, to determine the conditions that exist when the noise occurs. Use the Diagnostic Worksheet during the interview to document the facts and conditions when the noise occurs and any customer's comments; refer to [DLK-96, "Diagnostic Worksheet"](#). This information is necessary to duplicate the conditions that exist when the noise occurs.

- The customer may not be able to provide a detailed description or the location of the noise. Attempt to obtain all the facts and conditions that exist when the noise occurs (or does not occur).
- If there is more than one noise in the vehicle, be sure to diagnose and repair the noise that the customer is concerned about. This can be accomplished by test driving the vehicle with the customer.
- After identifying the type of noise, isolate the noise in terms of its characteristics. The noise characteristics are provided so the customer, service adviser and technician are all speaking the same language when defining the noise.
- Squeak —(Like tennis shoes on a clean floor)  
Squeak characteristics include the light contact/fast movement/brought on by road conditions/hard surfaces = higher pitch noise/softer surfaces = lower pitch noises/edge to surface = chirping.
- Creak—(Like walking on an old wooden floor)  
Creak characteristics include firm contact/slow movement/twisting with a rotational movement/pitch dependent on materials/often brought on by activity.
- Rattle—(Like shaking a baby rattle)  
Rattle characteristics include the fast repeated contact/vibration or similar movement/loose parts/missing clip or fastener/incorrect clearance.
- Knock —(Like a knock on a door)  
Knock characteristics include hollow sounding/sometimes repeating/often brought on by driver action.
- Tick—(Like a clock second hand)  
Tick characteristics include gentle contacting of light materials/loose components/can be caused by driver action or road conditions.
- Thump—(Heavy, muffled knock noise)  
Thump characteristics include softer knock/dead sound often brought on by activity.
- Buzz—(Like a bumble bee)  
Buzz characteristics include high frequency rattle/firm contact.
- Often the degree of acceptable noise level will vary depending upon the person. A noise that you may judge as acceptable may be very irritating to the customer.
- Weather conditions, especially humidity and temperature, may have a great effect on noise level.

### DUPLICATE THE NOISE AND TEST DRIVE

If possible, drive the vehicle with the customer until the noise is duplicated. Note any additional information on the Diagnostic Worksheet regarding the conditions or location of the noise. This information can be used to duplicate the same conditions when you confirm the repair.

# SQUEAK AND RATTLE TROUBLE DIAGNOSES

## < SYMPTOM DIAGNOSIS >

If the noise can be duplicated easily during the test drive, to help identify the source of the noise, try to duplicate the noise with the vehicle stopped by doing one or all of the following:

- 1) Close a door.
  - 2) Tap or push/pull around the area where the noise appears to be coming from.
  - 3) Rev the engine.
  - 4) Use a floor jack to recreate vehicle "twist".
  - 5) At idle, apply engine load (electrical load, half-clutch on M/T model, drive position on A/T model).
  - 6) Raise the vehicle on a hoist and hit a tire with a rubber hammer.
- Drive the vehicle and attempt to duplicate the conditions the customer states exist when the noise occurs.
  - If it is difficult to duplicate the noise, drive the vehicle slowly on an undulating or rough road to stress the vehicle body.

## CHECK RELATED SERVICE BULLETINS

After verifying the customer concern or symptom, check ASIST for Technical Service Bulletins (TSBs) related to that concern or symptom.

If a TSB relates to the symptom, follow the procedure to repair the noise.

## LOCATE THE NOISE AND IDENTIFY THE ROOT CAUSE

1. Narrow down the noise to a general area. To help pinpoint the source of the noise, use a listening tool (Chassis Ear: J-39570, Engine Ear: J-39565 and mechanic's stethoscope).
2. Narrow down the noise to a more specific area and identify the cause of the noise by:
  - removing the components in the area that you suspect the noise is coming from.  
Do not use too much force when removing clips and fasteners, otherwise clips and fasteners can be broken or lost during the repair, resulting in the creation of new noise.
  - tapping or pushing/pulling the component that you suspect is causing the noise.  
Do not tap or push/pull the component with excessive force, otherwise the noise will be eliminated only temporarily.
  - feeling for a vibration with your hand by touching the component(s) that you suspect is (are) causing the noise.
  - placing a piece of paper between components that you suspect are causing the noise.
  - looking for loose components and contact marks.Refer to [DLK-94. "Generic Squeak and Rattle Troubleshooting"](#).

## REPAIR THE CAUSE

- If the cause is a loose component, tighten the component securely.
- If the cause is insufficient clearance between components:
  - separate components by repositioning or loosening and retightening the component, if possible.
  - insulate components with a suitable insulator such as urethane pads, foam blocks, felt cloth tape or urethane tape. A NISSAN Squeak and Rattle Kit (J-43980) is available through your authorized NISSAN Parts Department.

### **CAUTION:**

**Do not use excessive force as many components are constructed of plastic and may be damaged.**

**Always check with the Parts Department for the latest parts information.**

**The following materials are contained in the NISSAN Squeak and Rattle Kit (J-43980). Each item can be ordered separately as needed.**

**URETHANE PADS [1.5 mm (0.059 in) thick]**

**Insulates connectors, harness, etc.**

**76268-9E005: 100×135 mm (3.94×5.31 in)/76884-71L01: 60×85 mm (2.36×3.35 in)/76884-71L02: 15×25 mm (0.59×0.98 in)**

**INSULATOR (Foam blocks)**

**Insulates components from contact. Can be used to fill space behind a panel.**

**73982-9E000: 45 mm (1.77 in) thick, 50×50 mm (1.97×1.97 in)/73982-50Y00: 10 mm (0.39 in) thick, 50×50 mm (1.97×1.97 in)**

**INSULATOR (Light foam block)**

**80845-71L00: 30 mm (1.18 in) thick, 30×50 mm (1.18×1.97 in)**

**FELT CLOTH TAPE**

**Used to insulate where movement does not occur. Ideal for instrument panel applications.**

**68370-4B000: 15×25 mm (0.59×0.98 in) pad/68239-13E00: 5 mm (0.20 in) wide tape roll. The following materials not found in the kit can also be used to repair squeaks and rattles.**

**UHMW (TEFLON) TAPE**

**Insulates where slight movement is present. Ideal for instrument panel applications.**

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# SQUEAK AND RATTLE TROUBLE DIAGNOSES

## < SYMPTOM DIAGNOSIS >

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### SILICONE GREASE

Used instead of UHMW tape that will be visible or not fit.

Note: Will only last a few months.

### SILICONE SPRAY

Use when grease cannot be applied.

### DUCT TAPE

Use to eliminate movement.

### CONFIRM THE REPAIR

Confirm that the cause of a noise is repaired by test driving the vehicle. Operate the vehicle under the same conditions as when the noise originally occurred. Refer to the notes on the Diagnostic Worksheet.

## Generic Squeak and Rattle Troubleshooting

INFOID:000000005268121

Refer to Table of Contents for specific component removal and installation information.

### INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

1. The cluster lid A and instrument panel
2. Acrylic lens and combination meter housing
3. Instrument panel to front pillar garnish
4. Instrument panel to windshield
5. Instrument panel mounting pins
6. Wiring harnesses behind the combination meter
7. A/C defroster duct and duct joint

These incidents can usually be located by tapping or moving the components to duplicate the noise or by pressing on the components while driving to stop the noise. Most of these incidents can be repaired by applying felt cloth tape or silicone spray (in hard to reach areas). Urethane pads can be used to insulate wiring harness.

### CAUTION:

**Do not use silicone spray to isolate a squeak or rattle. If you saturate the area with silicone, you will not be able to recheck the repair.**

### CENTER CONSOLE

Components to pay attention to include:

1. Shifter assembly cover to finisher
2. A/C control unit and cluster lid C
3. Wiring harnesses behind audio and A/C control unit

The instrument panel repair and isolation procedures also apply to the center console.

### DOORS

Pay attention to the:

1. Finisher and inner panel making a slapping noise
2. Inside handle escutcheon to door finisher
3. Wiring harnesses tapping
4. Door striker out of alignment causing a popping noise on starts and stops

Tapping or moving the components or pressing on them while driving to duplicate the conditions can isolate many of these incidents. You can usually insulate the areas with felt cloth tape or insulator foam blocks from the NISSAN Squeak and Rattle Kit (J-43980) to repair the noise.

### TRUNK

Trunk noises are often caused by a loose jack or loose items put into the trunk by the owner.

In addition look for:

1. Trunk lid bumpers out of adjustment
2. Trunk lid striker out of adjustment
3. The trunk lid torsion bars knocking together
4. A loose license plate or bracket

# SQUEAK AND RATTLE TROUBLE DIAGNOSES

## < SYMPTOM DIAGNOSIS >

Most of these incidents can be repaired by adjusting, securing or insulating the item(s) or component(s) causing the noise.

### SUNROOF/HEADLINING

Noises in the sunroof/headlining area can often be traced to one of the following:

1. Sunroof lid, rail, linkage or seals making a rattle or light knocking noise
2. Sun visor shaft shaking in the holder
3. Front or rear windshield touching headliner and squeaking

Again, pressing on the components to stop the noise while duplicating the conditions can isolate most of these incidents. Repairs usually consist of insulating with felt cloth tape.

### OVERHEAD CONSOLE (FRONT AND REAR)

Overhead console noises are often caused by the console panel clips not being engaged correctly. Most of these incidents are repaired by pushing up on the console at the clip locations until the clips engage.

In addition look for:

1. Loose harness or harness connectors.
2. Front console map/reading lamp lense loose.
3. Loose screws at console attachment points.

### SEATS

When isolating seat noise it's important to note the position the seat is in and the load placed on the seat when the noise is present. These conditions should be duplicated when verifying and isolating the cause of the noise.

Cause of seat noise include:

1. Headrest rods and holder
2. A squeak between the seat pad cushion and frame
3. The rear seatback lock and bracket

These noises can be isolated by moving or pressing on the suspected components while duplicating the conditions under which the noise occurs. Most of these incidents can be repaired by repositioning the component or applying urethane tape to the contact area.

### UNDERHOOD

Some interior noise may be caused by components under the hood or on the engine wall. The noise is then transmitted into the passenger compartment.

Causes of transmitted underhood noise include:

1. Any component mounted to the engine wall
2. Components that pass through the engine wall
3. Engine wall mounts and connectors
4. Loose radiator mounting pins
5. Hood bumpers out of adjustment
6. Hood striker out of adjustment

These noises can be difficult to isolate since they cannot be reached from the interior of the vehicle. The best method is to secure, move or insulate one component at a time and test drive the vehicle. Also, engine RPM or load can be changed to isolate the noise. Repairs can usually be made by moving, adjusting, securing, or insulating the component causing the noise.

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# SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

## Diagnostic Worksheet

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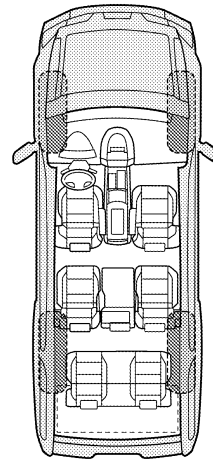
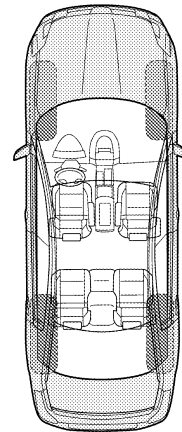
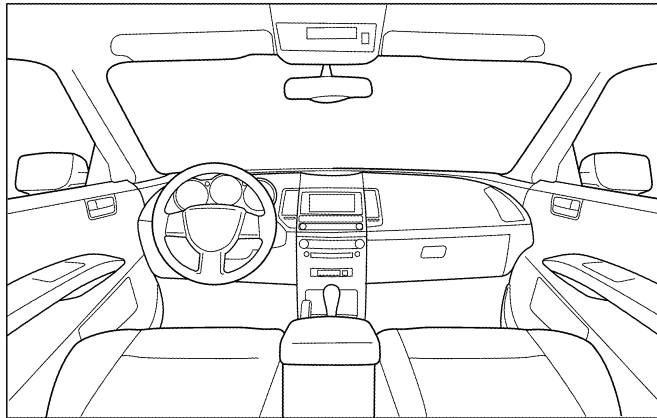
Dear Customer:

We are concerned about your satisfaction with your vehicle. Repairing a squeak or rattle sometimes can be very difficult. To help us fix your vehicle right the first time, please take a moment to note the area of the vehicle where the squeak or rattle occurs and under what conditions. You may be asked to take a test drive with a service advisor or technician to ensure we confirm the noise you are hearing.

### SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

#### I. WHERE DOES THE NOISE COME FROM? (circle the area of the vehicle)

The illustrations are for reference only, and may not reflect the actual configuration of your vehicle.



Continue to page 2 of the worksheet and briefly describe the location of the noise or rattle. In addition, please indicate the conditions which are present when the noise occurs.



# SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

## SQUEAK & RATTLE DIAGNOSTIC WORKSHEET - page 2

Briefly describe the location where the noise occurs:

\_\_\_\_\_  
\_\_\_\_\_

### II. WHEN DOES IT OCCUR? (please check the boxes that apply)

- |   |  |
|---|--|
| <input type="checkbox"/> Anytime                      | <input type="checkbox"/> After sitting out in the rain |
| <input type="checkbox"/> 1st time in the morning      | <input type="checkbox"/> When it is raining or wet     |
| <input type="checkbox"/> Only when it is cold outside | <input type="checkbox"/> Dry or dusty conditions       |
| <input type="checkbox"/> Only when it is hot outside  | <input type="checkbox"/> Other:                        |

### III. WHEN DRIVING:

- Through driveways
- Over rough roads
- Over speed bumps
- Only about \_\_\_\_ mph
- On acceleration
- Coming to a stop
- On turns: left, right or either (circle)
- With passengers or cargo
- Other: \_\_\_\_\_
- After driving \_\_\_\_ miles or \_\_\_\_ minutes

### IV. WHAT TYPE OF NOISE

- Squeak (like tennis shoes on a clean floor)
- Creak (like walking on an old wooden floor)
- Rattle (like shaking a baby rattle)
- Knock (like a knock at the door)
- Tick (like a clock second hand)
- Thump (heavy muffled knock noise)
- Buzz (like a bumble bee)

### TO BE COMPLETED BY DEALERSHIP PERSONNEL

Test Drive Notes:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

|  | YES                      | NO                       | Initials of person performing |
|--|--------------------------|--------------------------|-------------------------------|
| Vehicle test driven with customer                  | <input type="checkbox"/> | <input type="checkbox"/> | _____                         |
| - Noise verified on test drive                     | <input type="checkbox"/> | <input type="checkbox"/> | _____                         |
| - Noise source located and repaired                | <input type="checkbox"/> | <input type="checkbox"/> | _____                         |
| - Follow up test drive performed to confirm repair | <input type="checkbox"/> | <input type="checkbox"/> | _____                         |

VIN: \_\_\_\_\_ Customer Name \_\_\_\_\_  
W.O.# \_\_\_\_\_ Date: \_\_\_\_\_

This form must be attached to Work Order

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# PRECAUTIONS

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## PRECAUTION

### PRECAUTIONS

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

INFOID:000000005520627

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

#### **WARNING:**

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SR section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

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

#### **WARNING:**

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

#### Precaution for work

INFOID:000000005268124

- After removing and installing the opening/closing parts, be sure to carry out fitting adjustments to check their operation.
- Check the lubrication level, damage, and wear of each part. If necessary, grease or replace it.

# PREPARATION

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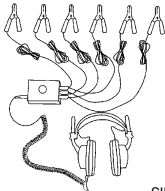

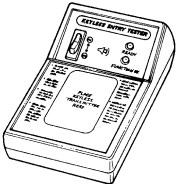
## PREPARATION

### PREPARATION

#### Special Service Tool

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The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

| Tool number<br>(Kent-Moore No.)<br>Tool name   | Description                         |
|--|-------------------------------------|
| <p>—<br/>(J-39570)<br/>Chassis ear</p> <div style="text-align: center;">  <p>SIIA0993E</p> </div>                   | <p>Locating the noise</p>           |
| <p>—<br/>(J-43980)<br/>NISSAN Squeak and Rattle Kit</p> <div style="text-align: center;">  <p>SIIA0994E</p> </div> | <p>Repairing the cause of noise</p> |
| <p>—<br/>(J-43241)<br/>Remote Keyless Entry Tester</p> <div style="text-align: center;">  <p>LEL946A</p> </div>   | <p>Used to test keyfobs</p>         |

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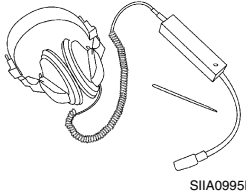
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# PREPARATION

< PREPARATION >

## Commercial Service Tool

INFOID:000000005268126

| (Kent-Moore No.)<br>Tool name  | Description        |
|--|--------------------|
| <p data-bbox="191 317 293 373">(J-39565)<br/>Engine ear</p>  <p data-bbox="776 533 846 552">SIIA0995E</p> | Locating the noise |

# HOOD

< ON-VEHICLE REPAIR >

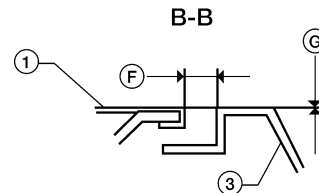
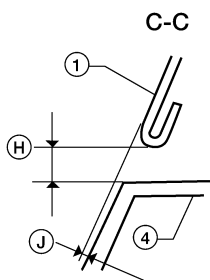
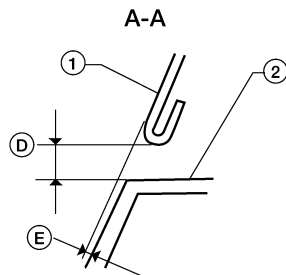
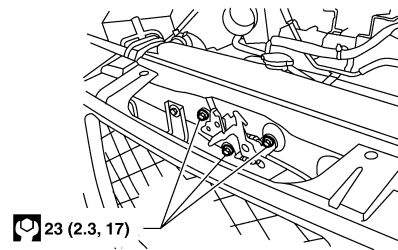
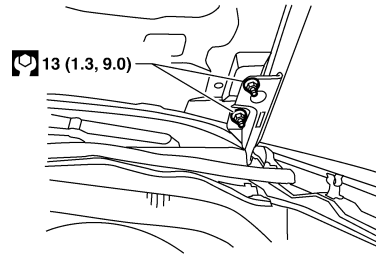
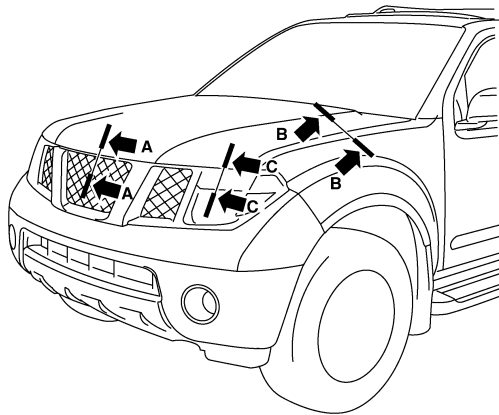
## ON-VEHICLE REPAIR

### HOOD

#### Fitting Adjustment

INFOID:000000005268127

SEC.650



- |                      |                     |                     |
|----------------------|---------------------|---------------------|
| 1. Hood              | 2. Front grille     | 3. Front fender     |
| 4. Headlamp assembly | D. 6.0 mm (0.24 in) | E. 0.7 mm (0.03 in) |
| F. 4.5 mm (0.18 in)  | G. 0.0 mm (0.0 in)  | H. 6.0 mm (0.24 in) |
| J. 0.7 mm (0.03 in)  |                     |                     |

#### CLEARANCE AND SURFACE HEIGHT ADJUSTMENT

1. Remove the front grille. Refer to [EXT-16, "Removal and Installation"](#).
2. Loosen the hood lock assembly and adjust the rubber bumpers until the surface height of the hood becomes 1 mm (0.04 in) lower than the fender.
3. Engage the hood striker and temporarily tighten.
4. Check the lock and striker for looseness.

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# HOOD

## < ON-VEHICLE REPAIR >

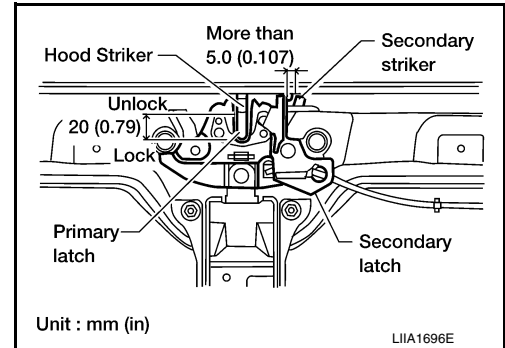
5. Tighten the bolts to specification.
6. Adjust the surface height of the hood according to the fitting standard dimension by rotating right and left rubber bumpers.
7. Install the front grille. Refer to [EXT-16. "Removal and Installation"](#).

## HOOD LOCK ADJUSTMENT

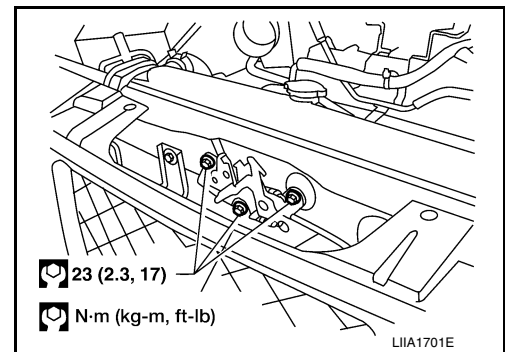
1. Remove the front grille. Refer to [EXT-16. "Removal and Installation"](#).
2. Move the hood lock to the left or right so that striker center is vertically aligned with hood lock center (when viewed from vehicle front).
3. Make sure the secondary latch is properly engaged with the secondary striker with hood's own weight by dropping it from approx. 200 mm (7.87 in) height or by pressing it lightly approx. 3 kg (29 N, 7lb).

### CAUTION:

Do not drop the hood from 300 mm (11.81 in) height or higher.



4. After adjusting hood lock, tighten the lock bolts to the specified torque.

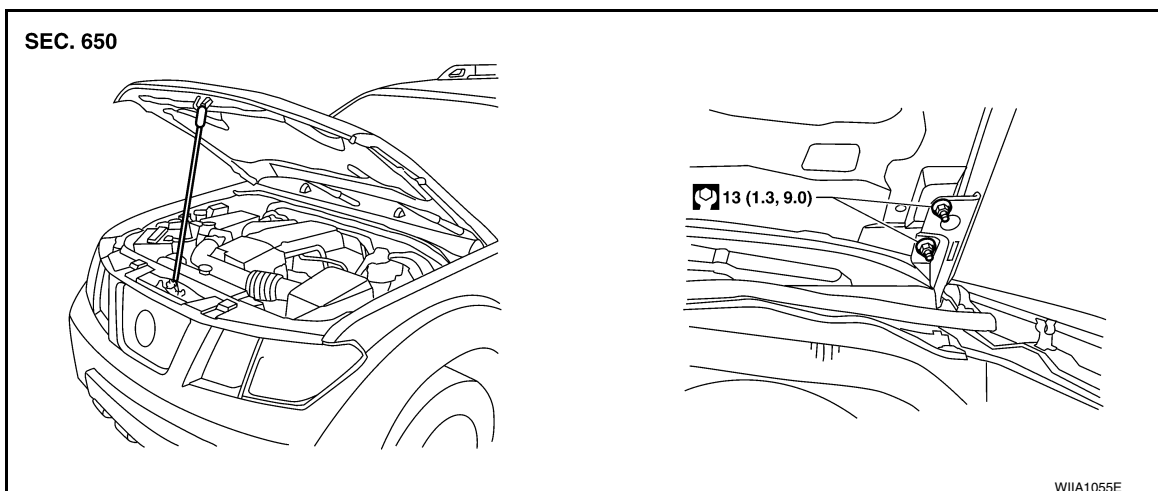


5. Install the front grille. Refer to [EXT-16. "Removal and Installation"](#).

## Removal and Installation of Hood Assembly

INFOID:000000005268128

## REMOVAL



1. Support the hood striker with suitable tool to prevent it from falling.
2. Remove the hinge nuts from the hood to remove the hood assembly.

### CAUTION:

Operate with two workers, because of its heavy weight.

# HOOD

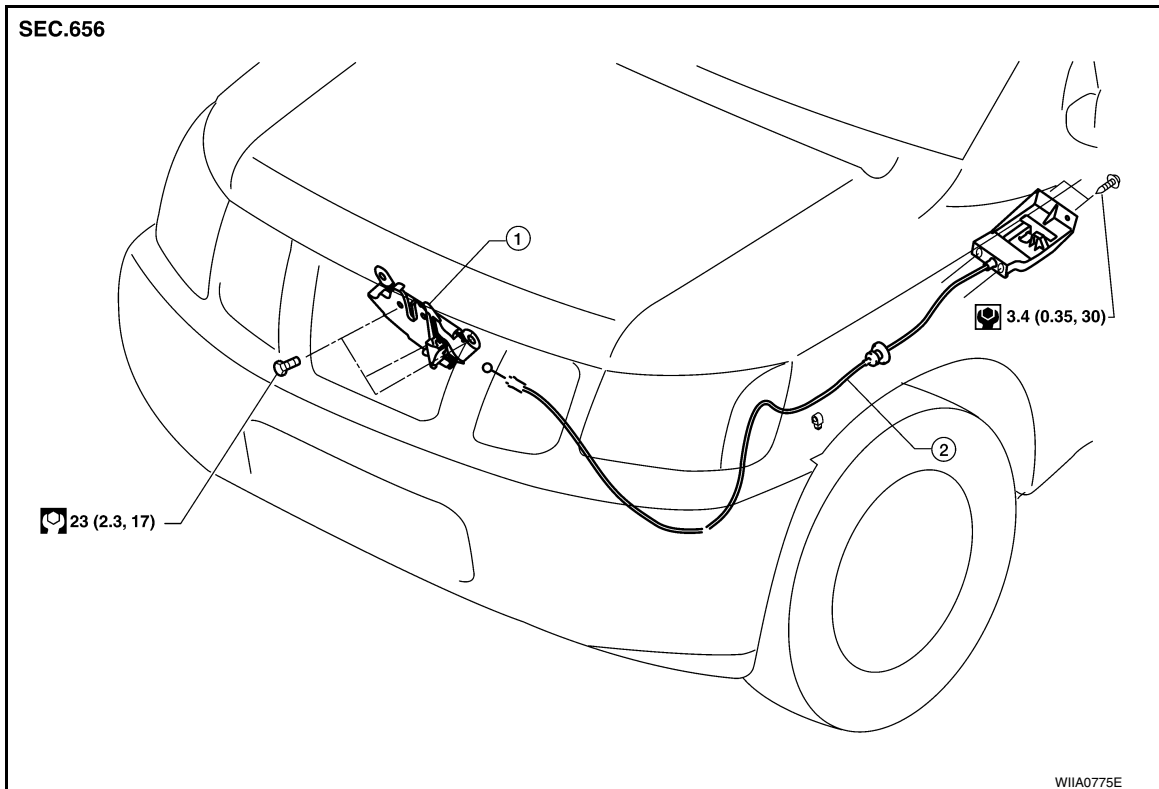
< ON-VEHICLE REPAIR >

## INSTALLATION

Installation is in the reverse order of removal.

### Removal and Installation of Hood Lock Control

INFOID:000000005268129



1. Hood lock assembly                      2. Hood lock cable

## REMOVAL

1. Remove the front grille. Refer to [EXT-16, "Removal and Installation"](#).
2. Remove the front fender protector (LH). Refer to [EXT-19, "Removal and Installation"](#).
3. Disconnect the hood lock cable from the hood lock, and unclip it from the radiator core support upper and hoodledge.
4. Remove the bolts, and the hood release handle.
5. Separate the grommet from the lower dash panel. Pull the hood lock cable out through the passenger compartment.

### CAUTION:

**While pulling, be careful not to damage the outside of the hood lock cable.**

## INSTALLATION

1. Pull the hood lock cable through the lower dash panel hole into the engine room.

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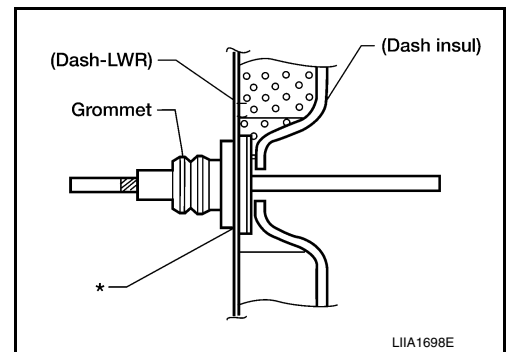
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# HOOD

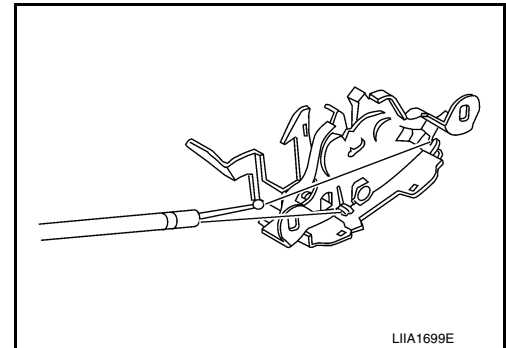
## < ON-VEHICLE REPAIR >

Be careful not to bend the cable too much, keep the radius 100mm (3.94 in) or more.

2. Make sure the cable is not offset from the grommet, and push the grommet into the lower dash panel hole securely.
3. Apply sealant around the grommet at \* mark.



4. Install the cable securely to the lock.
5. Adjust the hood lock. Refer to [DLK-104, "Hood Lock Control Inspection"](#).



6. Install the front grille. Refer to [EXT-16, "Removal and Installation"](#).

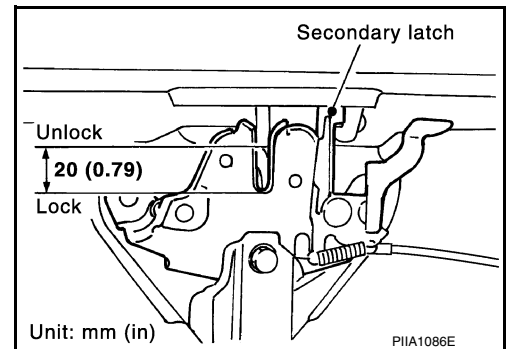
## Hood Lock Control Inspection

INFOID:000000005268130

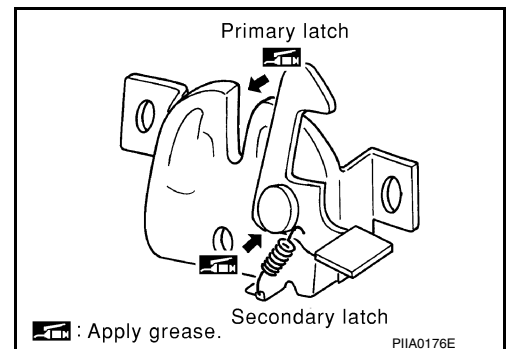
### CAUTION:

If the hood lock cable is bent or deformed, replace it.

1. Remove the front grille. Refer to [EXT-16, "Removal and Installation"](#).
2. Make sure the secondary latch is properly engaged with the secondary striker with hood's own weight by dropping it from approx. 200 mm (7.87 in) height.
3. While operating the hood opener, carefully make sure the front end of the hood is raised by approx. 20 mm (0.79 in). Also make sure the hood opener returns to the original position.



4. Check the hood lock lubrication condition. If necessary, apply "body grease" to the points shown.



5. Install the front grille. Refer to [EXT-16, "Removal and Installation"](#).



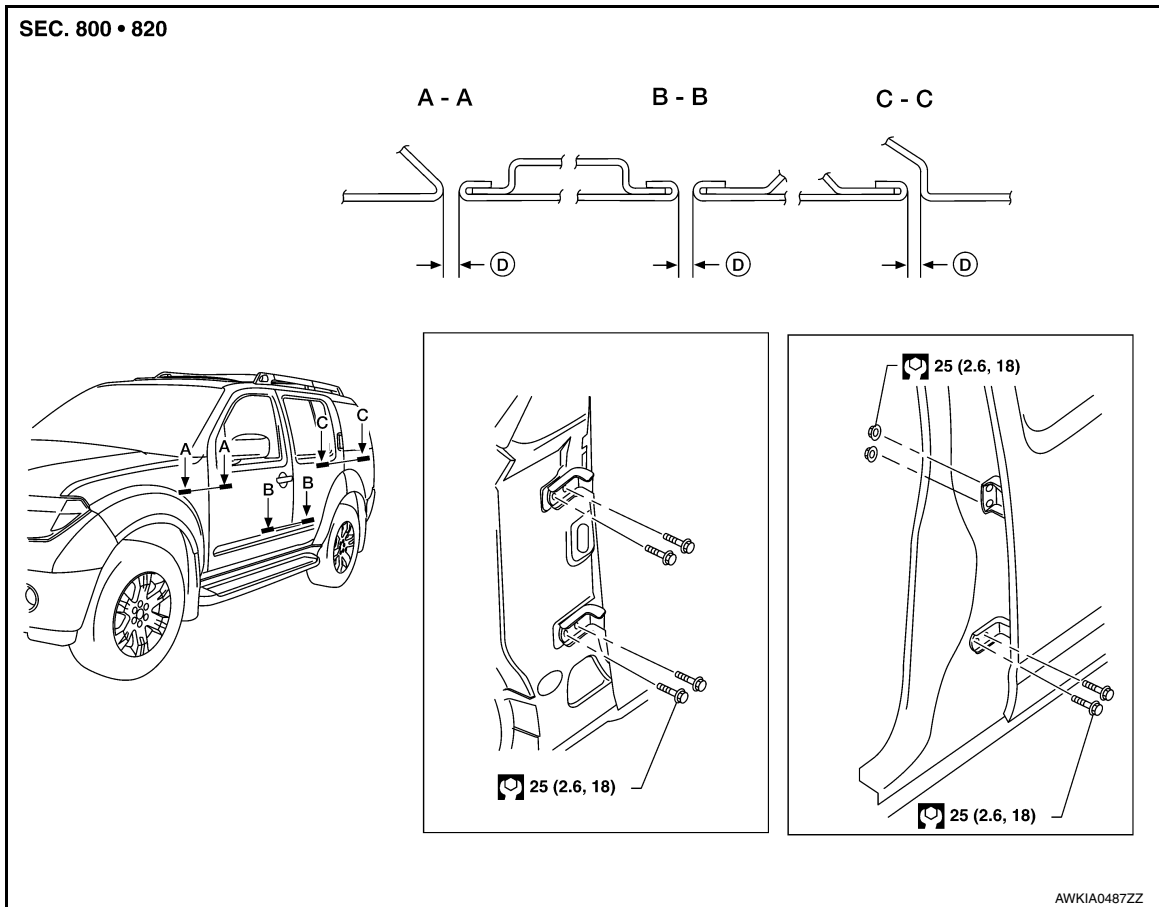
# DOOR

< ON-VEHICLE REPAIR >

## DOOR

### Fitting Adjustment

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D.  $4.5 \pm 1.0 \text{ mm}$  ( $0.177 \pm 0.039 \text{ in}$ )

### FRONT DOOR

Longitudinal clearance and surface height adjustment at front end

1. Remove the fender. Refer to [EXT-18. "Removal and Installation"](#).
2. Loosen the hinge bolts. Raise or lower the front door at rear end to adjust.
3. Install the fender. Refer to [EXT-18. "Removal and Installation"](#).

### REAR DOOR

Longitudinal clearance and surface height adjustment at front end

1. Remove the center pillar upper finisher. Refer to [INT-17. "Removal and Installation"](#).
2. Loosen the lower hinge bolts.
3. From inside the vehicle, loosen the upper hinge nuts. Open the door, and raise or lower the rear end of the door to adjust.
4. Install the center pillar lower finisher. Refer to [INT-17. "Removal and Installation"](#).

### BACK DOOR

Longitudinal clearance and surface height adjustment

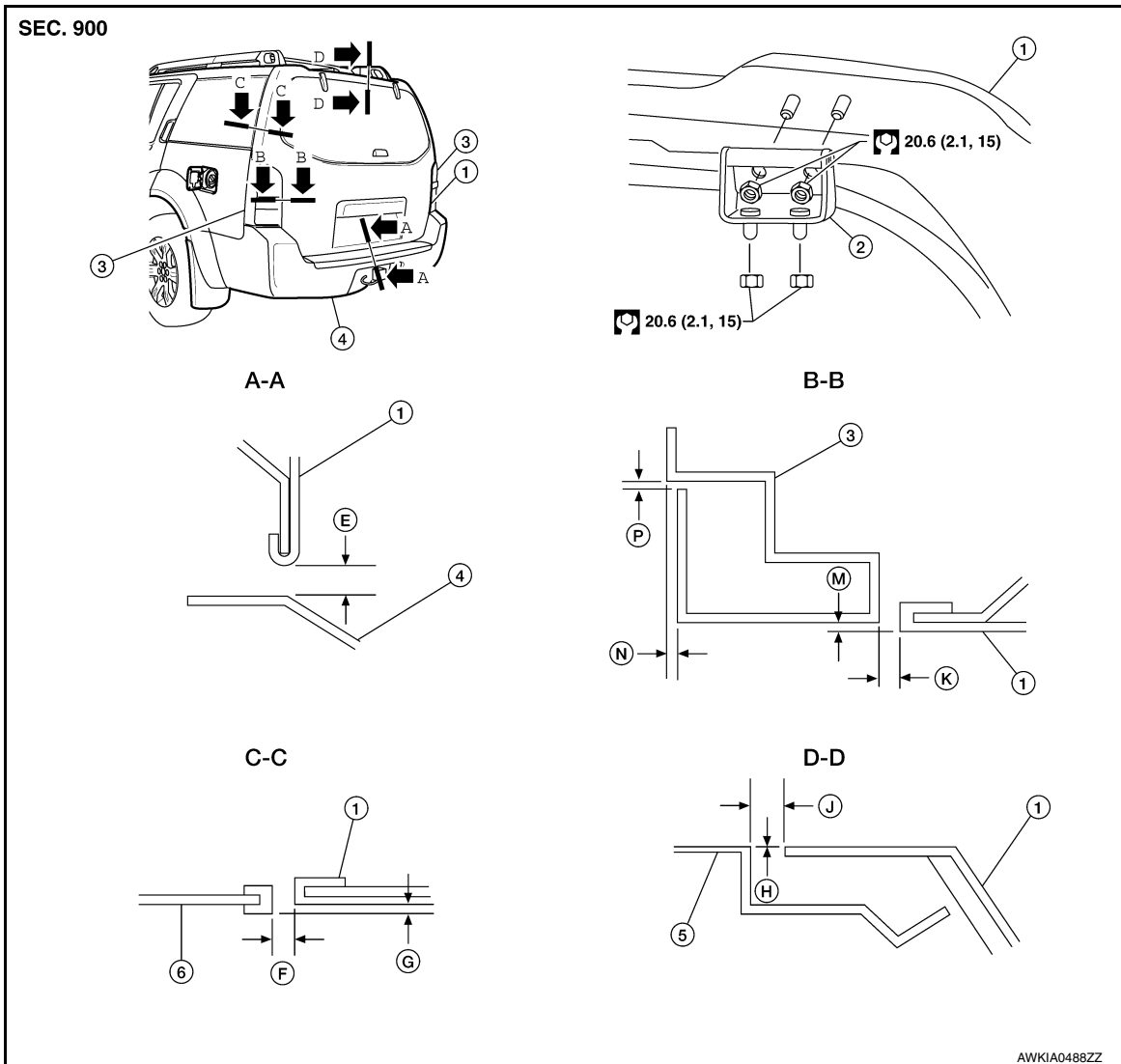
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# DOOR

< ON-VEHICLE REPAIR >



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|--|--|--|
| 1. Back door assembly                    | 2. Back door hinge                       | 3. Tail lamp assembly                    |
| 4. Rear bumper fascia                    | 5. Roof                                  | 6. Side window glass                     |
| E. $7.2 \pm 2.0$ mm (0.28 $\pm$ 0.06 in) | F. $6.0 \pm 1.5$ mm (0.24 $\pm$ 0.06 in) | G. $2.0 \pm 2.0$ mm (0.08 $\pm$ 0.08 in) |
| H. $1.0 \pm 1.5$ mm (0.04 $\pm$ 0.06 in) | J. $8.0 \pm 1.5$ mm (0.31 $\pm$ 0.06 in) | K. $5.3 \pm 2.0$ mm (0.21 $\pm$ 0.08 in) |
| M. $0.8 \pm 2.0$ mm (0.03 $\pm$ 0.08 in) | N. $0.8 \pm 1.0$ mm (0.03 $\pm$ 0.04 in) | P. $2.0 \pm 1.0$ mm (0.08 $\pm$ 0.04 in) |

1. Open and support the back door.
2. Slightly loosen the hinge nuts.
3. Reposition the door as necessary and tighten the nuts.
4. Confirm the adjustment. Repeat as necessary to obtain the desired fit.

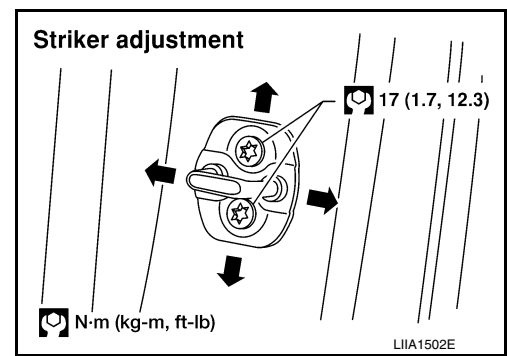
## STRIKER ADJUSTMENT

Body Side Doors

# DOOR

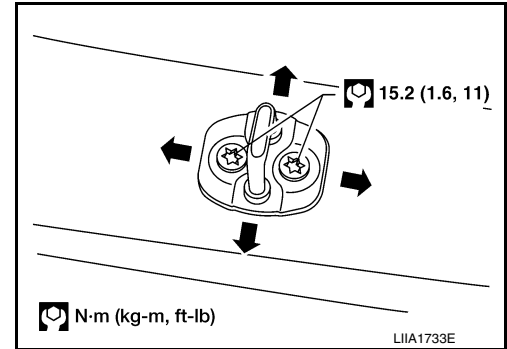
## < ON-VEHICLE REPAIR >

1. Adjust the striker so that it becomes parallel with the lock insertion direction.



### Back Door

1. Adjust the striker so that it becomes parallel with the lock insertion direction.



## Removal and Installation

INFOID:000000005268132

### FRONT DOOR

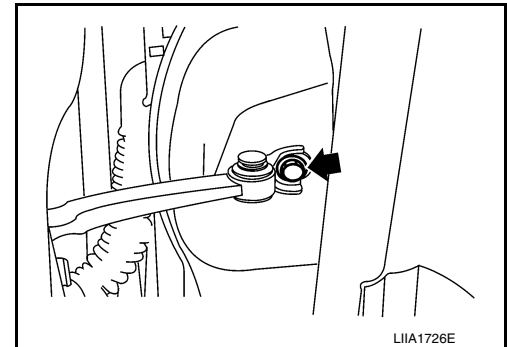
#### CAUTION:

- When removing and installing the door assembly, support the door with a jack and shop cloth to protect the door and body.
- When removing and installing door assembly, be sure to carry out the fitting adjustment.
- Check the hinge rotating part for poor lubrication. If necessary, apply "body grease".

#### Removal

1. Remove the front door glass and regulator. Refer to [GW-14. "Front Door Glass Regulator"](#).
2. Remove the door harness.
3. Remove the check link bolt from the hinge pillar.

**Check link to hinge pillar bolt** 14.7 N·m (1.5 kg-m, 11 ft-lb)



4. Remove the door-side hinge nuts, and the door assembly.

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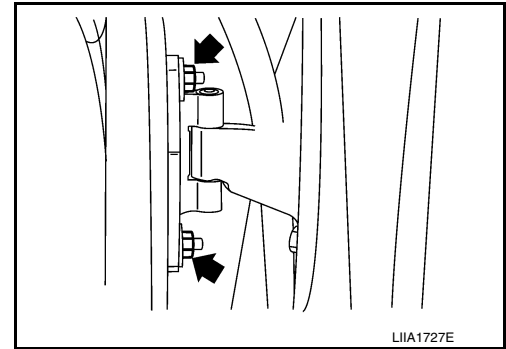
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# DOOR

< ON-VEHICLE REPAIR >

**Door hinge nuts**

**24.5 N·m (2.5 kg-m, 18 ft-lb)**



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Installation

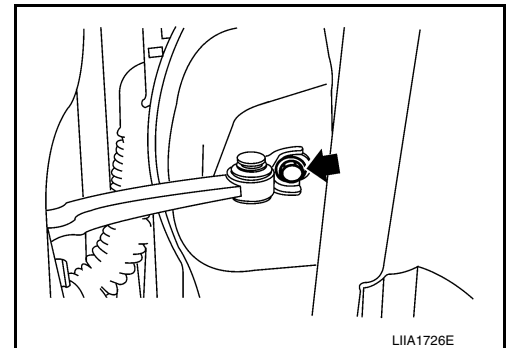
Installation is in the reverse order of removal.

## REAR DOOR

Removal

1. Remove the door finisher. Refer to [INT-13, "Removal and Installation"](#).
2. Remove the inner seal.
3. Remove the rear door glass and regulator. Refer to [GW-18, "Rear Door Glass Regulator"](#).
4. Remove the door harness.
5. Remove the check link bolt from the hinge pillar.

**Check link to hinge pillar bolt**    **14.7 N·m (1.5 kg-m, 11 ft-lb)**

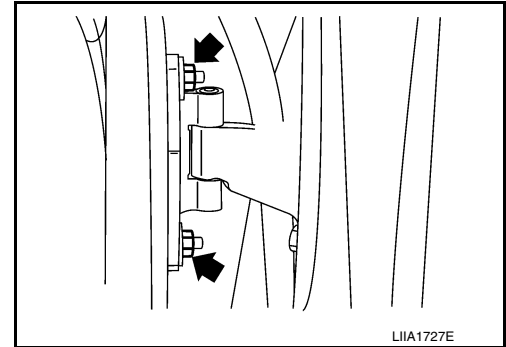


LIIA1726E

6. Remove the door-side hinge nuts, and remove the door assembly.

**Door hinge nuts**

**24.5 N·m (2.5 kg-m, 18 ft-lb)**



LIIA1727E

Installation

Installation is in the reverse order of removal.

## BACK DOOR

Removal

1. Remove the glass hatch.
2. Remove the back door lock assembly. Refer to [DLK-114, "Component Structure"](#).
3. Remove the back door wire harness.
4. Remove the rear washer nozzle and hose from the back door. Refer to [WW-83, "Removal and Installation"](#)

### CAUTION:

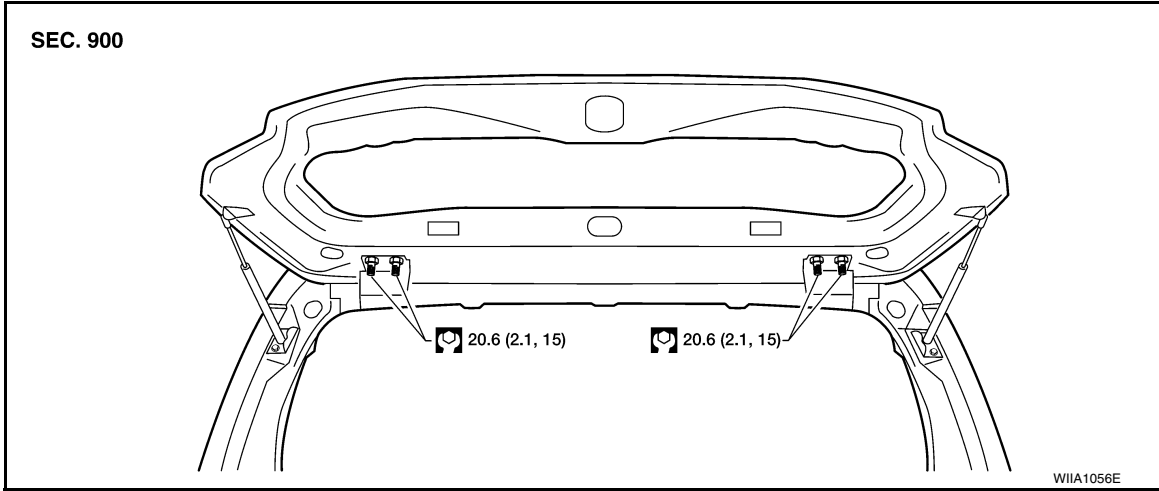
**Two technicians should be used to avoid damaging the back door during removal.**

# DOOR

## < ON-VEHICLE REPAIR >

5. Support the back door.
6. Remove the back door stays.
7. Remove the door side nuts and the back door assembly.

### Installation



Installation is in the reverse order of removal.

- Align the back door. Refer to [DLK-105. "Fitting Adjustment"](#).

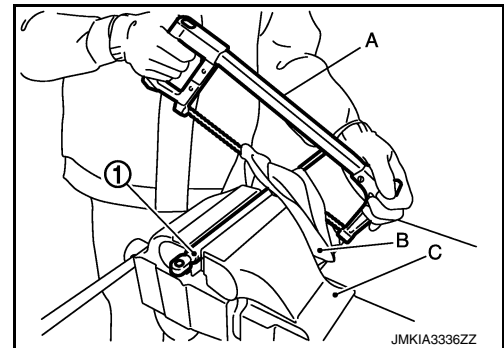
### Back Door Stay Disposal

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1. Fix back door stay (1) using a vise (C).
2. Using hacksaw (A) slowly make 2 holes in the back door stay, in numerical order as shown in the figure.

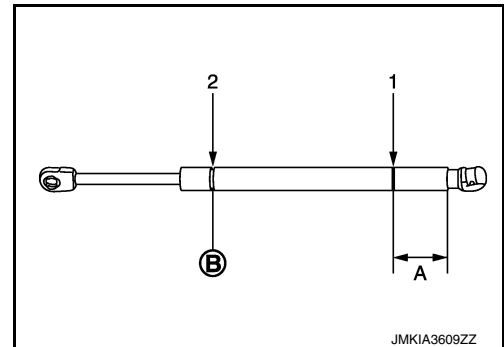
#### CAUTION:

- When cutting a hole on back door stay, always cover a hacksaw using a shop cloth (B) to avoid scattering metal fragments or oil.
- Wear eye protection (safety glasses).
- Wear gloves.



A: 20 mm (0.787 in)

B: Cut at the groove.



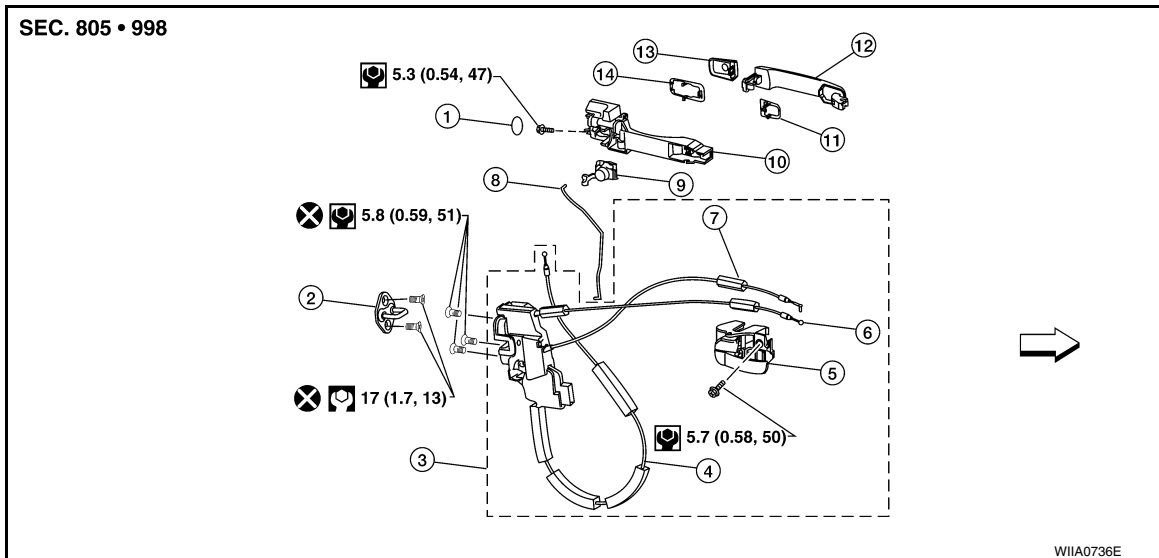
# FRONT DOOR LOCK

< ON-VEHICLE REPAIR >

## FRONT DOOR LOCK

### Component Structure

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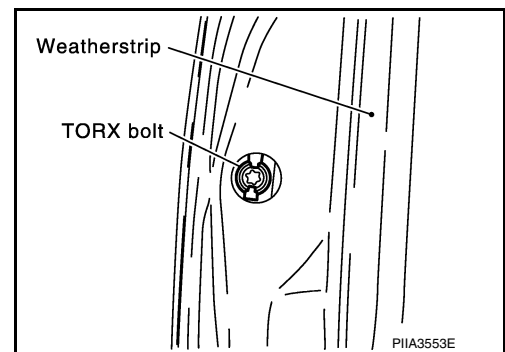
- |  |  |                        |
|--|--|------------------------|
| 1. Grommet   | 2. Front door striker                  | 3. Door lock assembly  |
| 4. Outside handle cable  | 5. Inside handle assembly              | 6. Inside handle cable |
| 7. Door lock cable   | 8. Key cylinder rod (Driver side only) | 9. Door key cylinder   |
| 10. Outside handle bracket   | 11. Front gasket                       | 12. Outside handle     |
| 13. Door key cylinder assembly (Driver side)<br>Outside handle escutcheon (Passenger side) | 14. Rear gasket                        | ← Vehicle front        |

### Removal and Installation

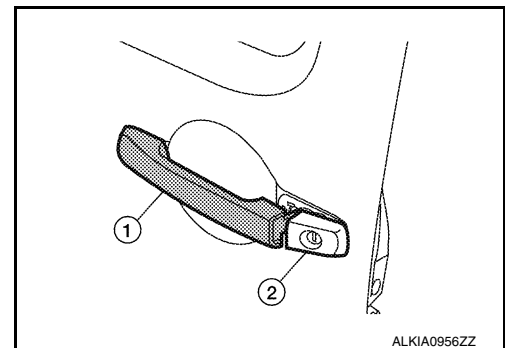
INFOID:000000005268134

#### REMOVAL

1. Remove the front door window regulator. Refer to [GW-14, "Front Door Glass Regulator"](#).
2. Remove door side grommet, and remove door key cylinder assembly (driver side) or outside handle escutcheon (passenger side) bolts (TORX T30) from grommet hole.



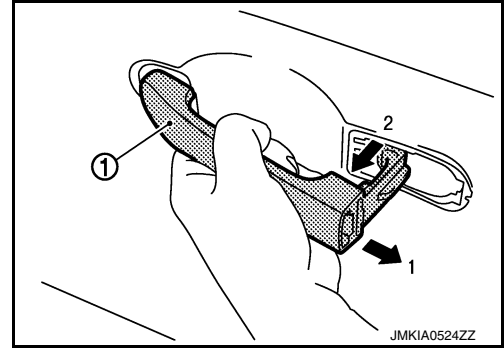
3. While pulling the outside handle (1), remove door key cylinder assembly or escutcheon (2).



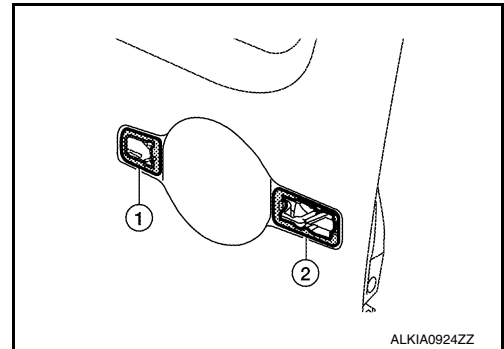
# FRONT DOOR LOCK

## < ON-VEHICLE REPAIR >

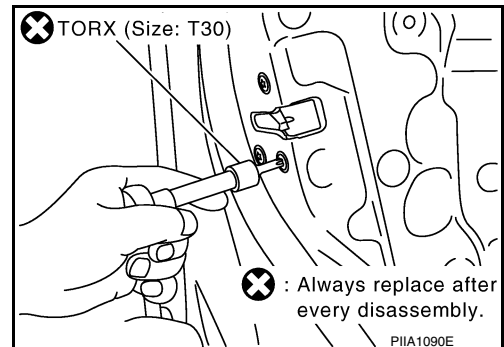
4. If equipped, separate the door key cylinder rod from the door key cylinder assembly.
5. While pulling outside handle (1), slide toward rear of vehicle to remove outside handle.



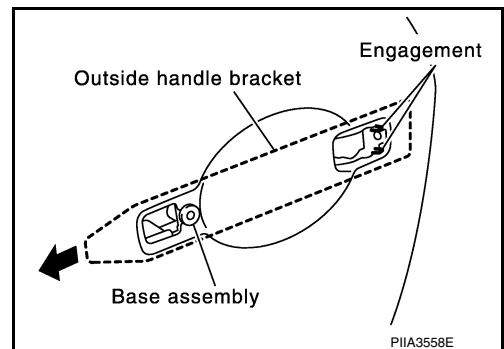
6. Remove the front gasket (1) and rear gasket (2).



7. Remove the TORX bolts (T30), remove the door lock assembly.



8. While pulling outside handle bracket, slide toward rear of vehicle to remove outside handle bracket and door lock assembly as shown.



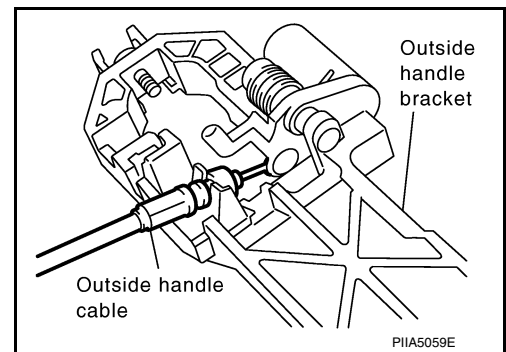
9. Disconnect the door lock actuator electrical connector.

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# FRONT DOOR LOCK

## < ON-VEHICLE REPAIR >

10. Separate the outside handle cable connection from the outside handle bracket.



## INSTALLATION

Installation is in the reverse order of removal.

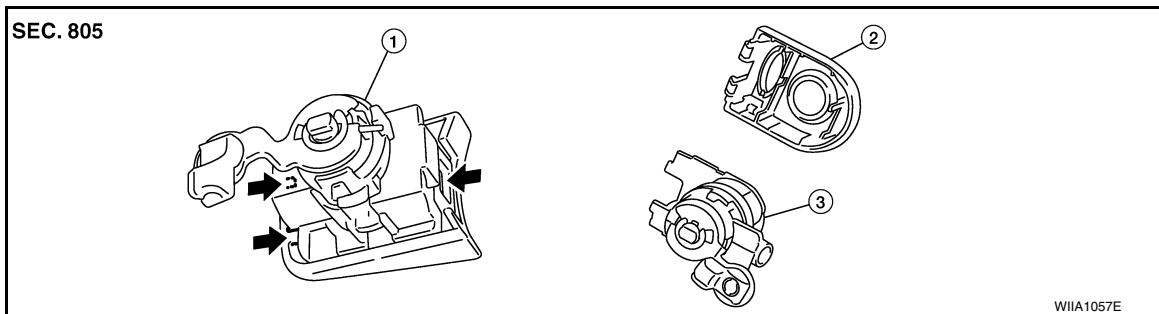
### **CAUTION:**

To install the key cylinder rod, be sure to rotate the key cylinder rod holder until a click is felt.

## Disassembly and Assembly

INFOID:000000005268135

## DOOR KEY CYLINDER ASSEMBLY



1. Door key cylinder assembly

2. Door key cylinder escutcheon

3. Door key cylinder

← Pawl

Release the key cylinder escutcheon pawls to remove the door key cylinder.



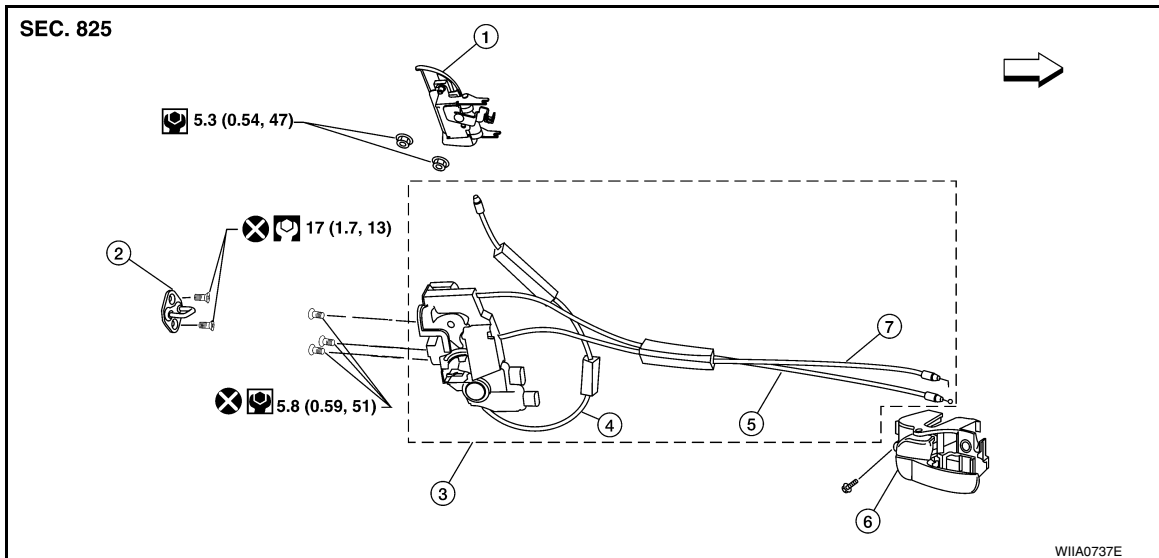
# REAR DOOR LOCK

< ON-VEHICLE REPAIR >

## REAR DOOR LOCK

### Component Structure

INFOID:000000005268136



- |                              |                             |                                |
|------------------------------|-----------------------------|--------------------------------|
| 1. Outside door handle       | 2. Rear door striker        | 3. Rear door lock assembly     |
| 4. Outside door handle cable | 5. Inside door handle cable | 6. Inside door handle assembly |
| 7. Door lock cable           | ← Vehicle front             |                                |

### Removal and Installation

INFOID:000000005268137

#### REMOVAL

1. Remove the rear door window regulator. Refer to [GW-18, "Rear Door Glass Regulator"](#).
2. Remove door grommets, and remove outside handle nuts from the hole.
3. Remove outside handle.
4. Disconnect the outside handle cable connection.
5. Remove the inside door handle.
6. Disconnect the door lock and inside door handle cables from the inside door handle.
7. Disconnect the door lock actuator connector and remove the assembly.

#### INSTALLATION

Installation is in the reverse order of removal.

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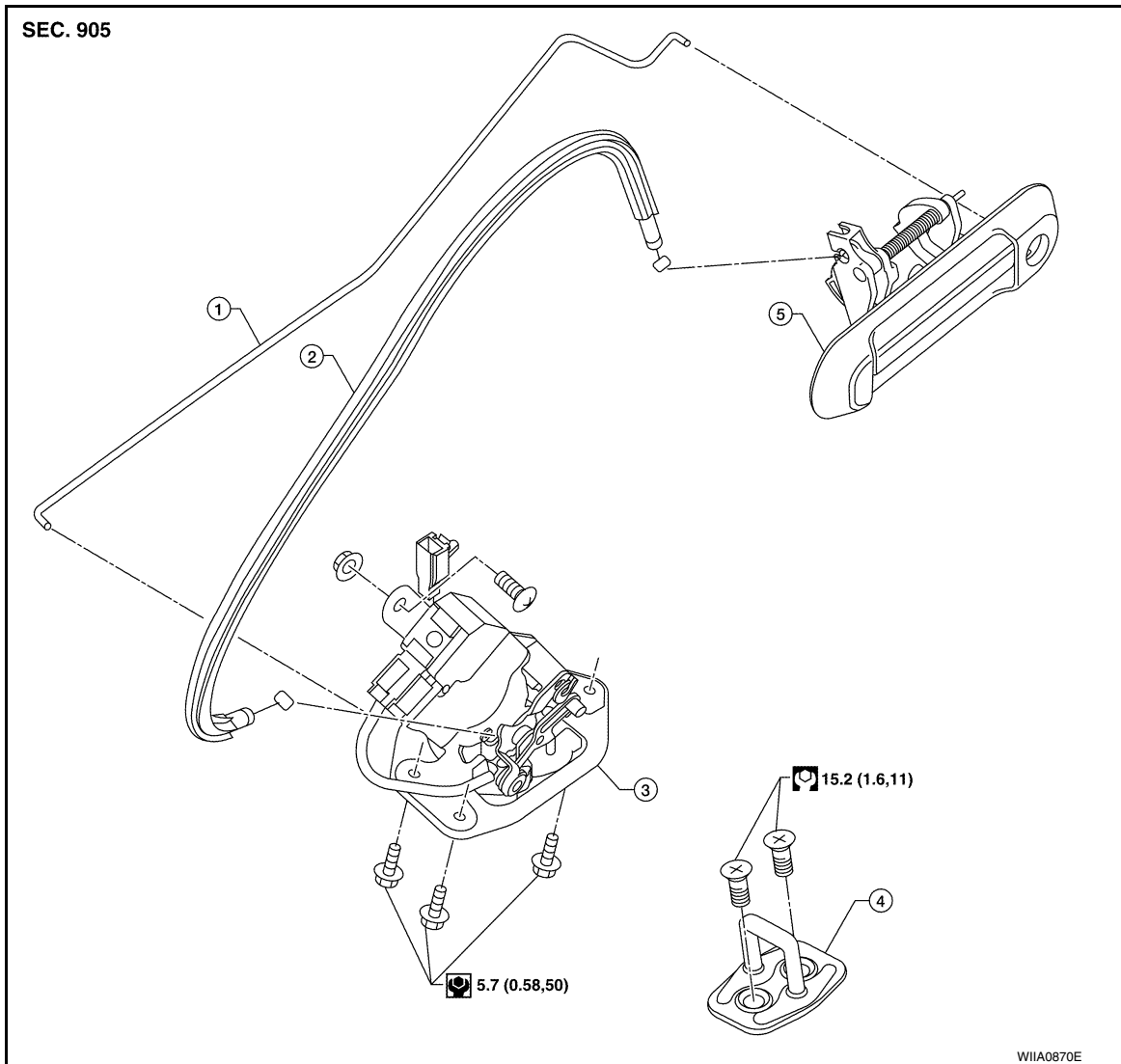
# BACK DOOR LOCK

< ON-VEHICLE REPAIR >

## BACK DOOR LOCK

### Component Structure

INFOID:000000005268138



1. Back door lock rod

2. Back door latch cable

3. Back door latch

4. Back door striker

5. Back door release handle