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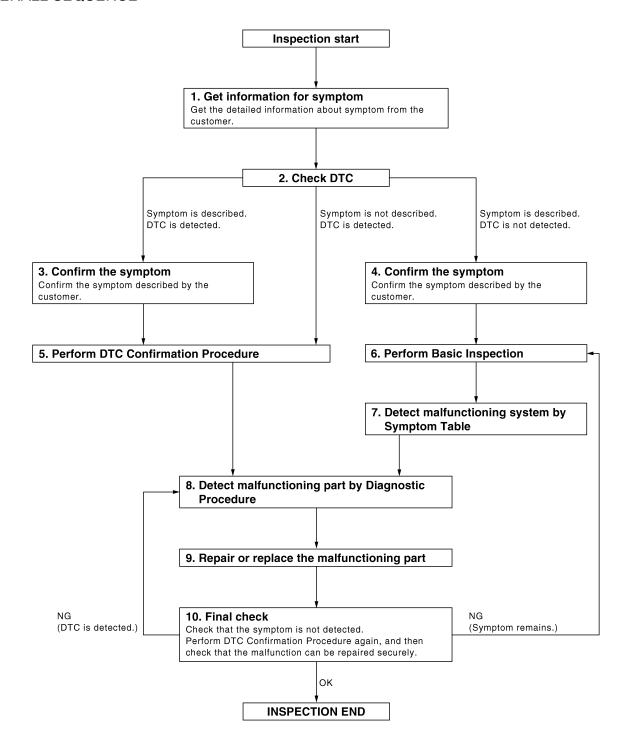
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# **BASIC INSPECTION**

### DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

#### **OVERALL SEQUENCE**



### DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[WITH I-KEY, WITHOUT SUPER LOCK]

### 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

- Check DTC for Intelligent Key unit and BCM.
- 2. Perform the following procedure if DTC is displayed.
- Erase DTC.
- Study the relationship between the cause detected by DTC and the symptom described by the customer.
- 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. If two or more DTCs are detected, refer to DLK-163, "DTC Inspection Priority Chart" (Intelligent Key unit) DLK-202, "DTC Inspection Priority Chart" (BCM) and determine trouble diagnosis order.

### Is DTC detected?

YES >> GO TO 8.

>> Refer to GI-39, "Intermittent Incident". NO

### $oldsymbol{6}$ .PERFORM BASIC INSPECTION

Perform Basic Inspection. Refer to DLK-220, "Basic Inspection".

### 7.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM TABLE

Detect malfunctioning system according to Symptom Table based on the confirmed symptom in step 4.

>> GO TO 8

>> GO TO 7.

### 8.DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

### NOTE:

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

>> GO TO 9.

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**DLK-21** 

### **DIAGNOSIS AND REPAIR WORKFLOW**

[WITH I-KEY, WITHOUT SUPER LOCK]

### < BASIC INSPECTION >

### 9. 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 10.

## 10. FINAL CHECK

When DTC was detected in step 9, perform DTC Confirmation Procedure or Component Function Check again, and then check that the malfunctions have been fully repaired.

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

### Does the symptom reappear?

YES (DTC is detected)>>GO TO 8.

YES (Symptom remains)>>GO TO 6.

NO >> INSPECTION END

### **INSPECTION AND ADJUSTMENT**

< BASIC INSPECTION >

[WITH I-KEY, WITHOUT SUPER LOCK]

# INSPECTION AND ADJUSTMENT ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

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ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description

Perform the system initialization when replacing Intelligent Key unit, replacing Intelligent Key or registering an additional Intelligent Key.

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement

Refer to the CONSULT-III Operation Manual-NATS.

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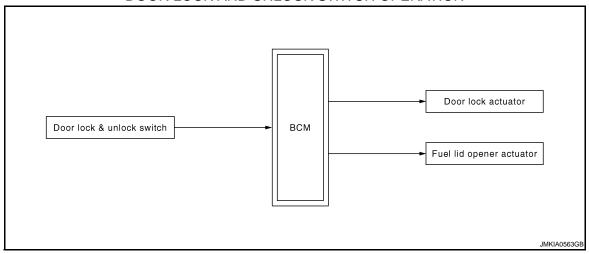
### **FUNCTION DIAGNOSIS**

# DOOR LOCK FUNCTION DOOR LOCK AND UNLOCK SWITCH

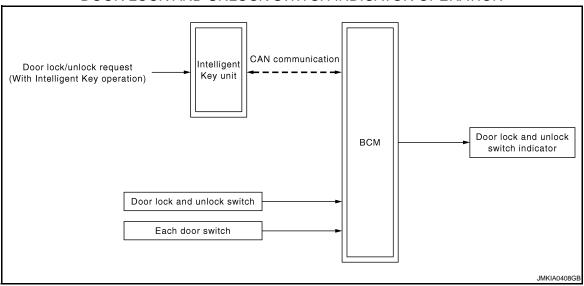
DOOR LOCK AND UNLOCK SWITCH: System Diagram

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#### DOOR LOCK AND UNLOCK SWITCH OPERATION



### DOOR LOCK AND UNLOCK SWITCH INDICATOR OPERATION



### DOOR LOCK AND UNLOCK SWITCH: System Description

INFOID:0000000001183537

### DOOR LOCK AND UNLOCK SWITCH OPERATION

Functions are available by operating the door lock and unlock switch on center console. Interlocked with the lock/unlock operation of door lock and unlock switch, door lock actuators of all doors are locked/unlocked.

#### **Operation Condition**

If the following conditions are not satisfied, door lock/unlock operation is not performed even if the door lock and unlock switch is operated.

### DOOR LOCK FUNCTION

### < FUNCTION DIAGNOSIS >

### [WITH I-KEY, WITHOUT SUPER LOCK]

Door lock and unlock switch	Operation condition
Lock operation	All of the following conditions are satisfied.     Except driver side doors are closed.     Doors are not locked with Intelligent Key or door request switch.
Unlock operation	All of the following conditions are satisfied.     Doors are not locked with Intelligent Key or door request switch.

### NOTE:

When the door lock is locked with Intelligent Key or door request switch, door lock and unlock switch operation will be invalid until either of the following conditions is satisfied.

- Turn ignition switch ON.
- Unlock with Intelligent Key or door request switch.

#### DOOR LOCK AND UNLOCK SWITCH INDICATOR OPERATION

Door lock and unlock switch indicator indicates door lock status. The indicator turns ON while ignition switch is ON and each door lock is locked. If any door is opened, the indicator will turn OFF.

#### 1 Minute Timer

A timer to turn OFF the indicator will run for 1 minute after locking with Intelligent Key, door request switch or auto door lock.

#### 30 Minutes Timer

A timer must be running to turn OFF the indicator. The timer will run for 30 minutes after locking with door lock and unlock switch.

#### NOTE:

1 minute timer condition is satisfied while 30 minutes timer is active, however the 30 minutes timer does not change to 1 minute timer condition.

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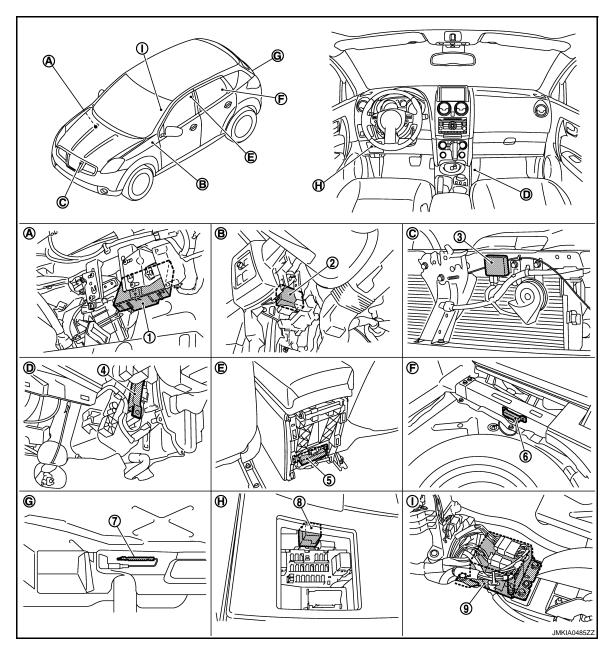
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**DLK-25** 

### DOOR LOCK AND UNLOCK SWITCH: Component Parts Location

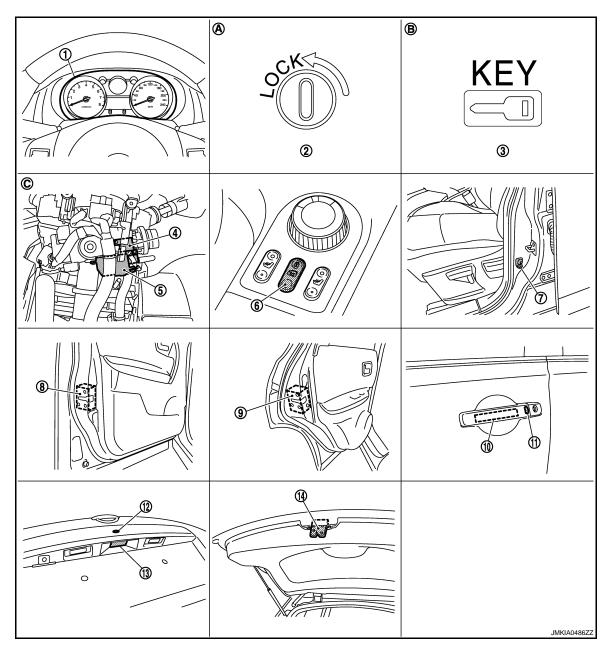
INFOID:0000000001183538



- BCM M65, M66, M67
- Inside key antenna (instrument center)
   M70
- 7. Outside key antenna (rear bumper)
- A. Over the glove box
- D. View with lower instrument cover removed
- G. View with rear bumper fascia removed

- Intelligent Key unit M40
- 5. Inside key antenna (center console)
  M61
- Passenger side anti-hijack relay M90
- B. Over the instrument lower panel (driver side)
- E. View with center console rear finisher removed
- H. View with fuse box lid removed

- Intelligent Key warning buzzer E25
- 6. Inside key antenna (rear seat)
- Air bag diagnosis sensor unit M59
- C. View with front bumper removed
- F. View with luggage floor spacer (LH) removed
- I. View with center console removed



- Combination meter
   M34
- Ignition knob switch, key switch and key 5. lock solenoid (key switch)
   M25
- 7. Front door switch (driver side)
- Outside key antenna (driver side)
   D11
- 13. Back door opener switch D186
- A. On the combination meter

- Lock warning lamp
   M34
- Ignition knob switch, key switch and key 6. lock solenoid (key lock solenoid) M25
- 8. Front door lock actuator (driver side)
- 11. Front door request switch (driver side)
- Back door lock assembly D152
- B. On the combination meter

- Key warning lamp M34
- 6. Door lock and unlock switch M89
- Rear door lock actuator LH D85
- 12. Back door request switch D187
- C. View with steering column cover removed

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### DOOR LOCK AND UNLOCK SWITCH: Component Description

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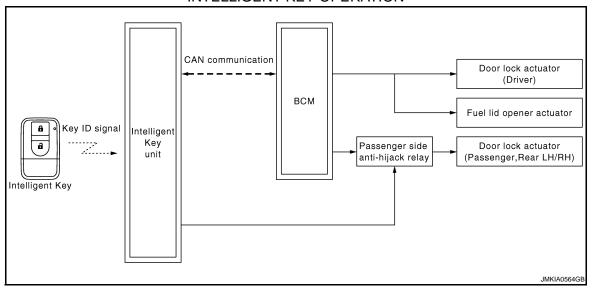
Item	Function
BCM	Controls the door lock function.
Door switch	Detects door state (open or close).
Door lock and unlock switch	Transmits door lock/unlock signal to BCM. Door lock/unlock switch indicator is built-in door lock and unlock switch.
Door lock actuator	Receives door lock/unlock signal from BCM. Door lock actuator locks and unlocks each door.

### **INTELLIGENT KEY**

### INTELLIGENT KEY: System Diagram

INFOID:0000000001183540

#### INTELLIGENT KEY OPERATION



### INTELLIGENT KEY: System Description

INFOID:0000000001183541

### INTELLIGENT KEY OPERATION

The Intelligent Key has the same functions as the multi remote control system. Therefore, it can be used in the same manner as the keyfob by operating the door lock/unlock button.

This function can be set to ON or OFF\* with CONSULT-III. For the setting information, refer to <u>DLK-65</u>, "CONSULT-III Function (INTELLIGENT KEY)".

#### OPERATION CONDITION

Remote controller operation	Operation condition
Lock	<ul> <li>All doors are closed</li> <li>Key switch is OFF (key is removed from ignition key cylinder)</li> <li>Ignition knob is OFF or LOCK position</li> </ul>
Unlock	<ul> <li>Key switch is OFF (key is removed from ignition key cylinder)</li> <li>Ignition knob is OFF or LOCK position</li> </ul>

#### **OPERATION AREA**

To ensure that the Intelligent Key works effectively, use within a 100 cm range of each door, however the operable range may differ according to surroundings.

### DOOR LOCK AND UNLOCK CONTROL

When door lock and unlock button of the Intelligent Key are pressed, lock signal or unlock signal is transmitted from Intelligent Key to Intelligent Key unit.

<sup>\*:</sup> The factory setting

When Intelligent Key unit receives the door lock and unlock signal, it operates door lock actuator.

#### **ANTI-HIJACK MODE**

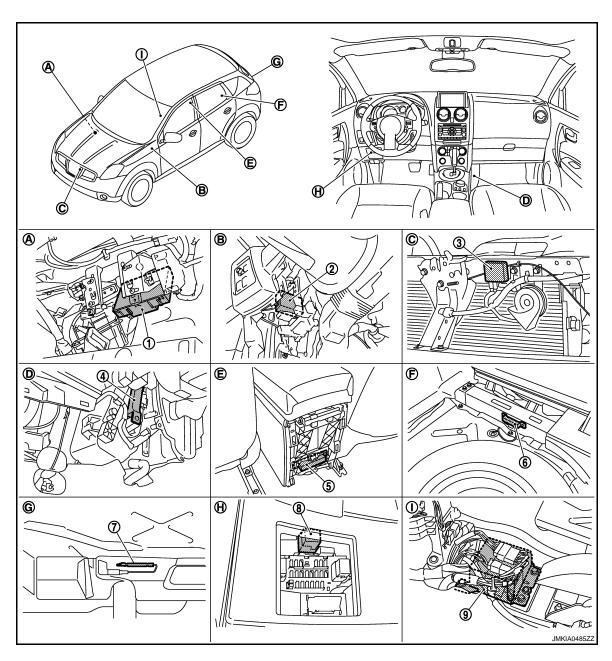
When door lock is unlocked, pressing LOCK button on Intelligent Key once will lock all doors. When door lock is locked, pressing UNLOCK button on Intelligent Key door will unlock driver side door. Pressing UNLOCK button on Intelligent Key a second time within 5 seconds from the first time will unlock all doors and back door can be opened with back door opener switch.

#### NOTE:

Anti-hijack mode can be set to ON or OFF\* with CONSULT-III. For the setting information, refer to <u>DLK-65</u>. "CONSULT-III Function (INTELLIGENT KEY)".

\*: The factory setting

### INTELLIGENT KEY: Component Parts Location



- 1. BCM M65, M66, M67
- Inside key antenna (instrument center) M70
- Intelligent Key unit M40
- Inside key antenna (center console) M61
- Intelligent Key warning buzzer
   F25
- 6. Inside key antenna (rear seat) B45

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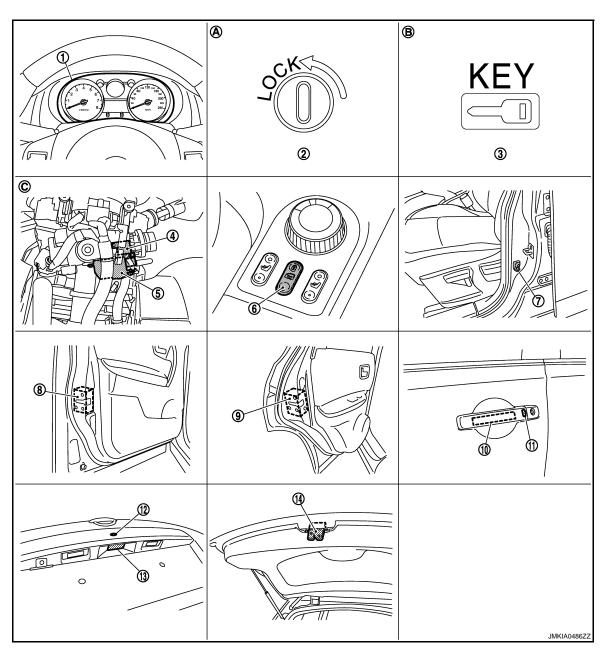
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### [WITH I-KEY, WITHOUT SUPER LOCK]

- 7. Outside key antenna (rear bumper)
- A. Over the glove box
- D. View with lower instrument cover removed
- G. View with rear bumper fascia removed
- Passenger side anti-hijack relay
   Moo
- B. Over the instrument lower panel (driver side)
- View with center console rear finisher removed
- H. View with fuse box lid removed
- 9. Air bag diagnosis sensor unit
- C. View with front bumper removed
- F. View with luggage floor spacer (LH) removed
- I. View with center console removed



- Combination meter
   M34
- Ignition knob switch, key switch and key 5. lock solenoid (key switch) M25
- 7. Front door switch (driver side)
- Outside key antenna (driver side)
   D11
- Lock warning lamp
   M34
- Ignition knob switch, key switch and key 6. lock solenoid (key lock solenoid) M25
- 8. Front door lock actuator (driver side)
- Front door request switch (driver side)
   D10
- Key warning lamp
   M34
- Door lock and unlock switch M89
- Rear door lock actuator LH D85
- 12. Back door request switch D187

### DOOR LOCK FUNCTION

### < FUNCTION DIAGNOSIS >

### [WITH I-KEY, WITHOUT SUPER LOCK]

- Back door opener switch D186
- Back door lock assembly D152
- A. On the combination meter
- B. On the combination meter
- View with steering column cover removed

### INTELLIGENT KEY: Component Description

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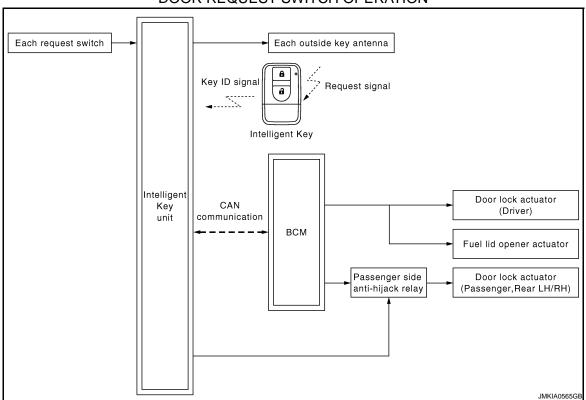
Item	Function
Intelligent Key unit	Controls the door lock/unlock operation with BCM.
BCM	Controls the door lock/unlock operation with Intelligent Key unit.
Door switch	Detects door state (open or closed).
Key switch	Detects that mechanical key is inserted into ignition key cylinder.
Ignition knob switch	Detects ignition knob state (push or release).
Outside key antenna	Detects that Intelligent Key is in detection area of outside key antenna.
Intelligent Key	Transmits key ID to Intelligent Key unit when lock/unlock button is pressed.
Passenger side anti-hijack relay	Controls the circuit of door lock actuator (passenger side, rear LH/RH).
Door lock actuator	Receives lock/unlock signal from BCM. Door lock actuator locks and unlocks each door.

### DOOR REQUEST SWITCH

### DOOR REQUEST SWITCH: System Diagram

INFOID:0000000001183544

#### DOOR REQUEST SWITCH OPERATION



### DOOR REQUEST SWITCH: System Description

INFOID:0000000001183545

#### DOOR REQUEST SWITCH OPERATION

Only when pressing the request switch, it is possible to lock and unlock the door by carrying the Intelligent Key. The Intelligent Key system is a system that makes it possible to lock and unlock the door by carrying the

### < FUNCTION DIAGNOSIS >

Intelligent Key, which operates based on the results of electronic ID verification using two-way communications between the Intelligent Key and the vehicle (Intelligent Key unit).

This function can be set to ON or OFF\* with CONSULT-III. For the setting information, refer to <u>DLK-65</u>, "CONSULT-III Function (INTELLIGENT KEY)".

\*: The factory setting

#### **CAUTION:**

#### The driver should always carry the Intelligent Key

#### **OPERATION CONDITION**

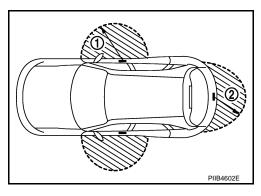
If the following conditions are not satisfied, door lock and unlock operation is not performed even if the request switch is operated.

Each request switch operation	Operation condition	
Lock operation	<ul> <li>All doors are closed</li> <li>Key switch is OFF (Key is removed from ignition key cylinder)</li> <li>Ignition knob is OFF or LOCK position</li> <li>Any Intelligent Key is not inside the vehicle</li> <li>Intelligent Key is within outside key antenna detection area</li> </ul>	
Unlock Operation	<ul> <li>Key switch is OFF (Key is removed from ignition key cylinder)</li> <li>Ignition knob is OFF or LOCK position</li> <li>Intelligent Key is not inside the vehicle*</li> <li>Intelligent Key is within outside key antenna detection area</li> </ul>	

<sup>\*:</sup> Even with a registered Intelligent Key remaining inside the vehicle, door locks can be unlocked from outside of the vehicle with a spare Intelligent Key as long as key IDs are different.

#### **OUTSIDE KEY ANTENNA DETECTION AREA**

The outside key antenna detection area of door lock and unlock function is in the range of approximately 80 cm (31.50 in) surrounding the driver and passenger door handles (1) and the back door request switch (2). However, this operating range depends on the ambient conditions.



### DOOR LOCK AND UNLOCK CONTROL

When the Intelligent Key detects that door request switch is pressed, it starts corresponding with outside key antenna (door of request switch pressed side). Then, the Intelligent Key is checked to be near the door. If the Intelligent Key is within the outside key antenna detection area, it receives the request signal and transmits the key ID signal to the Intelligent Key unit. Intelligent Key unit receives the key ID signal and compares it with the registered key ID. Intelligent Key unit sends the door lock and unlock signal to BCM via CAN communication.

#### ANTI-HIJACK MODE

- When door is unlocked, pressing door request switch (driver or passenger) once will lock all doors. When
  door is locked, pressing door request switch (driver or passenger) once will unlock operated door. Pressing
  the door request switch door a second time within 5 seconds from the first time will unlock all doors and back
  door can be opened with back door opener switch.
- When door is unlocked, pressing door request switch (back door) will lock all doors. When door lock is locked, pressing door request switch (back door) will unlock back door only back door can be opened with back door opener switch. Pressing back door switch a second time within 5 seconds will unlock all doors.

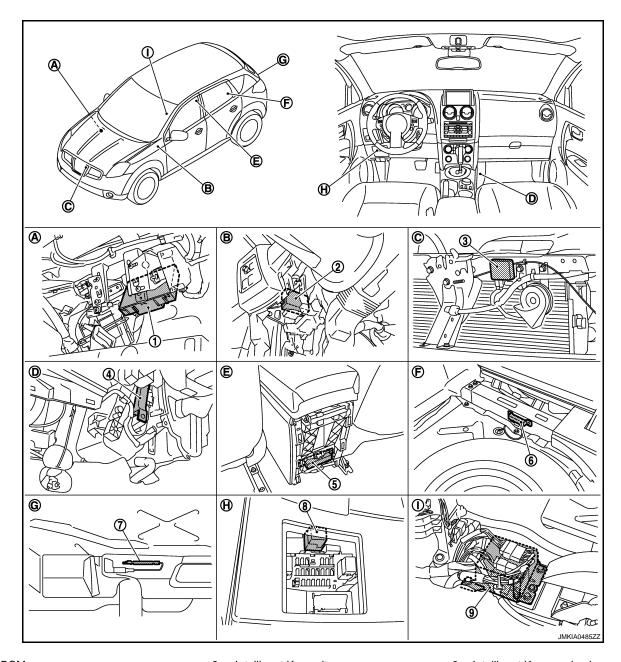
#### NOTE:

Anti-hijack mode can be set to ON or OFF\* with CONSULT-III and Intelligent Key. For the setting information, refer to <u>DLK-65</u>, "CONSULT-III Function (INTELLIGENT KEY)".

\*: The factory setting

### DOOR REQUEST SWITCH: Component Parts Location

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- 1. BCM M65, M66, M67
- Inside key antenna (instrument center)
   M70
- 7. Outside key antenna (rear bumper) B81
- A. Over the glove box
- D. View with lower instrument cover removed
- G. View with rear bumper fascia removed

- Intelligent Key unit M40
- 5. Inside key antenna (center console)
- 8. Passenger side anti-hijack relay
- B. Over the instrument lower panel (driver side)
- E. View with center console rear finisher removed
- H. View with fuse box lid removed

- 3. Intelligent Key warning buzzer E25
- 6. Inside key antenna (rear seat)
- Air bag diagnosis sensor unit M59
- C. View with front bumper removed
- F. View with luggage floor spacer (LH) removed
- I. View with center console removed

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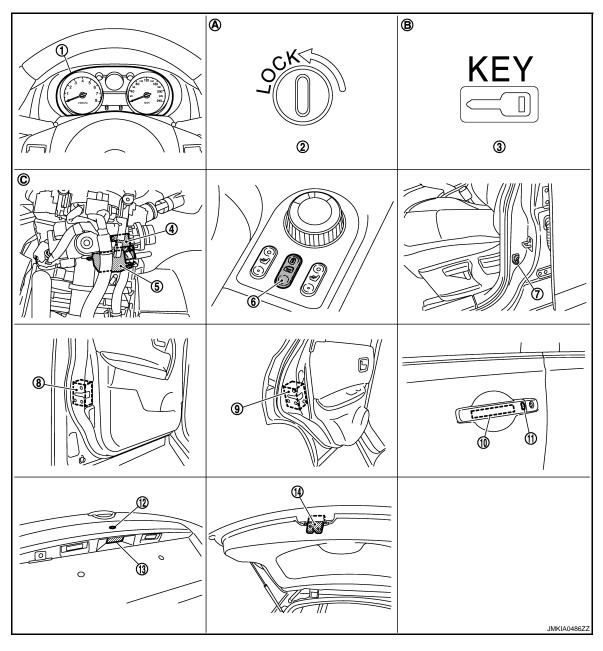
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- Combination meter
   M34
- Ignition knob switch, key switch and key 5. lock solenoid (key switch) M25
- 7. Front door switch (driver side)
- Outside key antenna (driver side)
   D11
- 13. Back door opener switch D186
- A. On the combination meter

- Lock warning lamp
   M34
- Ignition knob switch, key switch and key 6. lock solenoid (key lock solenoid) M25
- 8. Front door lock actuator (driver side)
- 11. Front door request switch (driver side)
- 14. Back door lock assembly D152
- B. On the combination meter

- Key warning lamp M34
- Door lock and unlock switch M89
- 9. Rear door lock actuator LH D85
- Back door request switch D187
- C. View with steering column cover removed

### DOOR REQUEST SWITCH: Component Description

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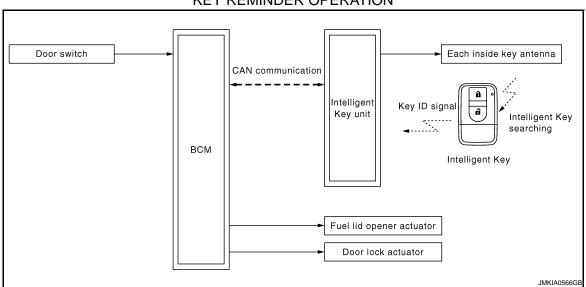
Item	Function	
Intelligent Key unit	Controls the door lock function with BCM.	
BCM	Controls the door lock/unlock function with Intelligent Key unit.	
Door request switch	Transmits operation signal (lock and unlock) to Intelligent Key unit.	
Door switch	Detects door state (open or closed).	
Key switch	Detects that mechanical key is inserted into ignition key cylinder.	
Ignition knob switch	Detects ignition knob state (push or release).	
Outside key antenna	Detects that Intelligent Key is in detection area of outside key antenna.	
Inside key antenna	Detects that Intelligent Key is in detection area of inside key antenna.	
Intelligent Key	Transmits key ID to Intelligent Key unit when request signal is received from outside key antenna.	
Passenger side anti-hijack relay	Controls the circuit of door lock actuator (passenger side, rear LH/RH).	
Door lock actuator	Receives lock/unlock signal from BCM. Door lock actuator locks/unlocks each door.	

### **KEY REMINDER**

### **KEY REMINDER: System Diagram**

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#### **KEY REMINDER OPERATION**



**KEY REMINDER: System Description** 

INFOID:0000000001183549

### KEY REMINDER OPERATION

Key reminder have the following 2 functions.

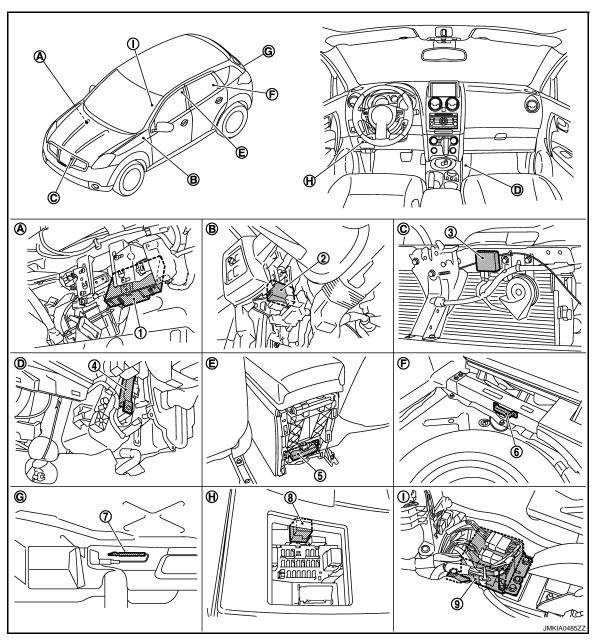
Operation	Operation condition	Operation
Driver door close	Right after driver side door is closed under the following conditions.  Door lock operation.  Driver side door is opened.  Driver side door is in unlock state.	All doors unlock
Any door open to all doors close	Right after all doors are closed under the following conditions.  Intelligent Key is inside the vehicle.  Any door is opened.  All doors are locked by door lock and unlock switch.	All doors unlock     Active Intelligent Key warning buzzer

### **CAUTION:**

The above function operates when the Intelligent Key is inside the vehicle. However, there may be times when the Intelligent Key cannot be detected, and this function will not operate when the Intelligent Key is on the instrument panel, rear parcel shelf or in the glove box. Also, this system sometimes does not operate if the Intelligent Key is in the door pocket of an open door.

**KEY REMINDER: Component Parts Location** 

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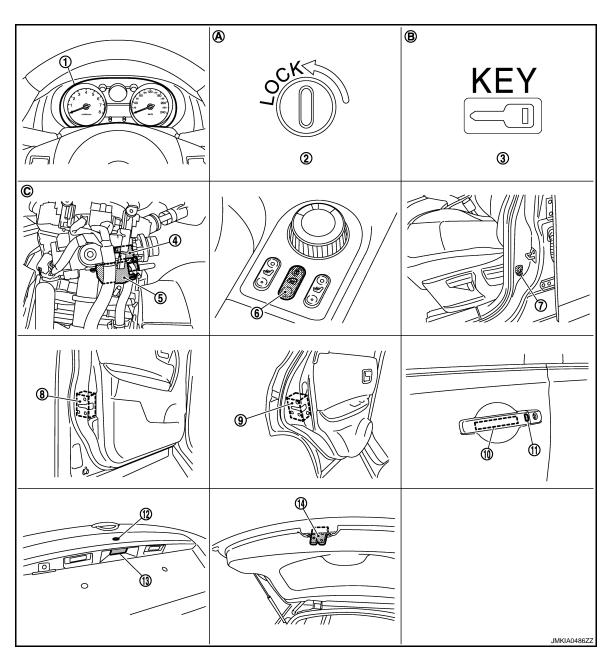


### [WITH I-KEY, WITHOUT SUPER LOCK]

- 1. BCM M65, M66, M67
- 4. Inside key antenna (instrument center)
- 7. Outside key antenna (rear bumper)
- A. Over the glove box
- D. View with lower instrument cover removed
- G. View with rear bumper fascia removed

- Intelligent Key unit M40
- 5. Inside key antenna (center console)
- 8. Passenger side anti-hijack relay
- B. Over the instrument lower panel (driver side)
- View with center console rear finisher removed
- H. View with fuse box lid removed

- 3. Intelligent Key warning buzzer
- 6. Inside key antenna (rear seat)
- Air bag diagnosis sensor unit M59
- C. View with front bumper removed
- F. View with luggage floor spacer (LH) removed
- I. View with center console removed



- Combination meter
- Ignition knob switch, key switch and key 5. lock solenoid (key switch) M25
- Lock warning lamp
   M34
  - Ignition knob switch, key switch and key 6. lock solenoid (key lock solenoid) M25
- Key warning lamp M34
- 6. Door lock and unlock switch M89

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#### DOOR LOCK FUNCTION

#### < FUNCTION DIAGNOSIS >

#### [WITH I-KEY, WITHOUT SUPER LOCK]

7.	Front door switch (driver side) B34	8.	Front door lock actuator (driver side) D9	9.	Rear door lock actuator LH D85
10.	Outside key antenna (driver side) D11	11.	Front door request switch (driver side) D10	12.	Back door request switch D187
13.	Back door opener switch D186	14.	Back door lock assembly D152		
A.	On the combination meter	B.	On the combination meter	C.	View with steering column cover removed

### **KEY REMINDER: Component Description**

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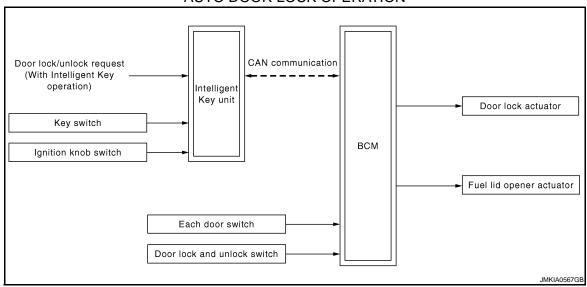
Item	Function
Intelligent Key unit	Controls the door lock function with BCM.
BCM	Controls the door lock and unlock operation with Intelligent Key unit.
Door switch	Detects door state (open or closed).
Inside key antenna	Detects that Intelligent Key is in detection area of inside key antenna.
Intelligent Key	Transmits key ID to Intelligent Key unit when Intelligent Key is searching.
Door lock actuator	Receives lock and unlock signal from BCM. Door lock actuator locks/unlocks each door.

### **AUTO DOOR LOCK**

### AUTO DOOR LOCK: System Diagram

INFOID:0000000001183552

#### **AUTO DOOR LOCK OPERATION**



### AUTO DOOR LOCK: System Description

INFOID:0000000001183553

#### **AUTO DOOR LOCK OPERATION**

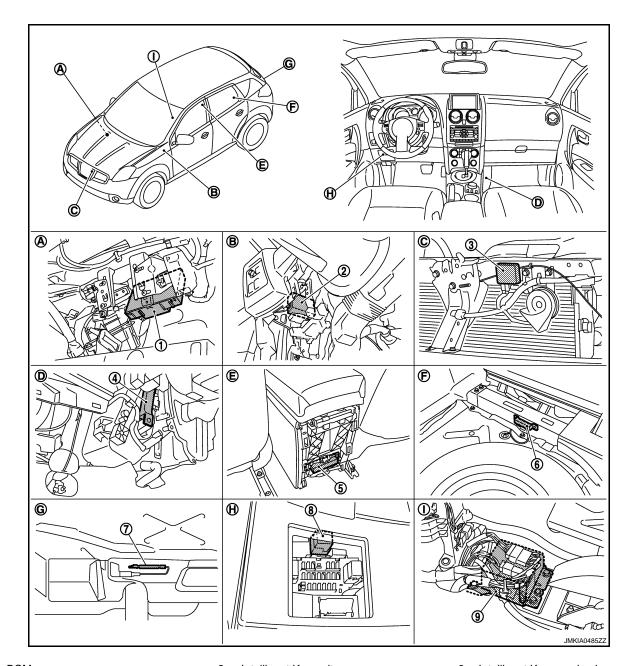
When all doors are locked and then doors are unlocked with Intelligent Key or door request switch, Intelligent Key unit does not receive the following signals within 2 minutes<sup>\*1</sup>, and all doors are automatically locked.

- Any door is opened.
- Ignition knob is pressed.
- Ignition key is inserted into ignition key cylinder.
- Door is locked with Intelligent Key.
- Door is locked/unlocked with door lock and unlock switch.

<sup>\*1:</sup> Auto door lock operation mode can be changed with CONSULT-III. Refer to <u>DLK-65</u>, "CONSULT-III Function (INTELLIGENT KEY)".

### AUTO DOOR LOCK: Component Parts Location

INFOID:0000000001544642



- 1. BCM M65, M66, M67
- 4. Inside key antenna (instrument center)
  M70
- 7. Outside key antenna (rear bumper) B81
- A. Over the glove box
- D. View with lower instrument cover removed
- G. View with rear bumper fascia removed

- Intelligent Key unit M40
- 5. Inside key antenna (center console)
- 8. Passenger side anti-hijack relay
- B. Over the instrument lower panel (driver side)
- E. View with center console rear finisher removed
- H. View with fuse box lid removed

- 3. Intelligent Key warning buzzer E25
- 6. Inside key antenna (rear seat)
- Air bag diagnosis sensor unit M59
- C. View with front bumper removed
- F. View with luggage floor spacer (LH) removed
- I. View with center console removed

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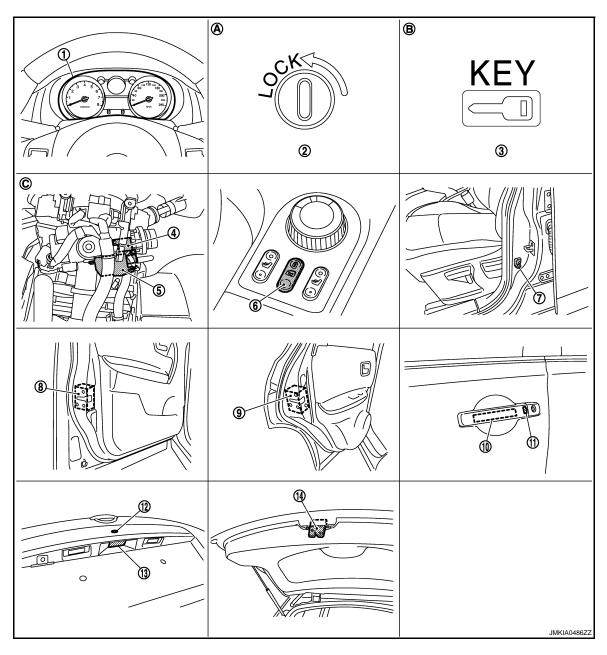
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- Combination meter
   M34
- Ignition knob switch, key switch and key 5. lock solenoid (key switch) M25
- 7. Front door switch (driver side)
- Outside key antenna (driver side)
   D11
- 13. Back door opener switch D186
- A. On the combination meter

- Lock warning lamp
- Ignition knob switch, key switch and key 6. lock solenoid (key lock solenoid) M25
- 8. Front door lock actuator (driver side)
- 11. Front door request switch (driver side)
- 14. Back door lock assembly D152
- B. On the combination meter

- Key warning lamp M34
- Door lock and unlock switch M89
- 9. Rear door lock actuator LH D85
- Back door request switch D187
- C. View with steering column cover removed

### AUTO DOOR LOCK: Component Description

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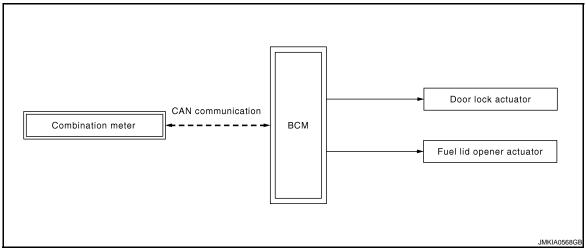
Item	Function		
Intelligent Key unit	Controls the door lock function with BCM.		
BCM	Controls the door lock function with Intelligent Key unit.		
Door switch	Detects door state (open or closed).		
Key switch	Detects that mechanical key is inserted into ignition key cylinder.		
Ignition knob switch	Detects ignition knob state (push or release).		
Door lock and unlock switch	Transmits door lock and unlock signal to BCM.		
Door lock actuator	Receives lock and unlock signal from BCM. Door lock actuator locks and unlocks each door.		

### VEHICLE SPEED SENSING AUTO DOOR LOCK

### VEHICLE SPEED SENSING AUTO DOOR LOCK: System Diagram

INFOID:0000000001183556

#### VEHICLE SPEED SENSING AUTO DOOR LOCK OPERATION



### VEHICLE SPEED SENSING AUTO DOOR LOCK: System Description

INFOID:0000000001183557

#### VEHICLE SPEED SENSING AUTO DOOR LOCK OPERATION

When the vehicle speed exceeds 25 km/h (16 MPH), all doors are automatically locked. BCM receives vehicle speed signal from combination meter via CAN communication.

#### CHANGE SETTING PROCEDURE

Vehicle speed sensing auto door lock function can be enabled/disabled with door lock and unlock switch.

- Turn ignition switch ON.
- Press and hold door lock/unlock switch (LOCK) for 5 seconds within 2 seconds after turn ignition switch ON.
- Buzzer sounds for 1 second.

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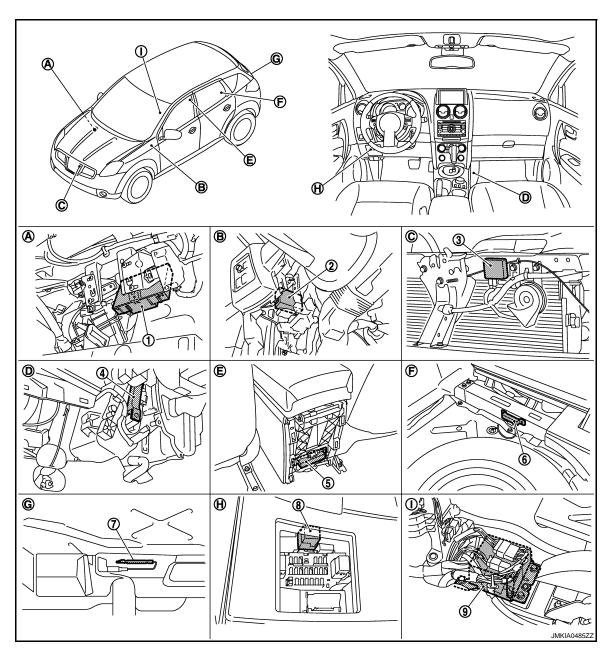
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## VEHICLE SPEED SENSING AUTO DOOR LOCK : Component Parts Location

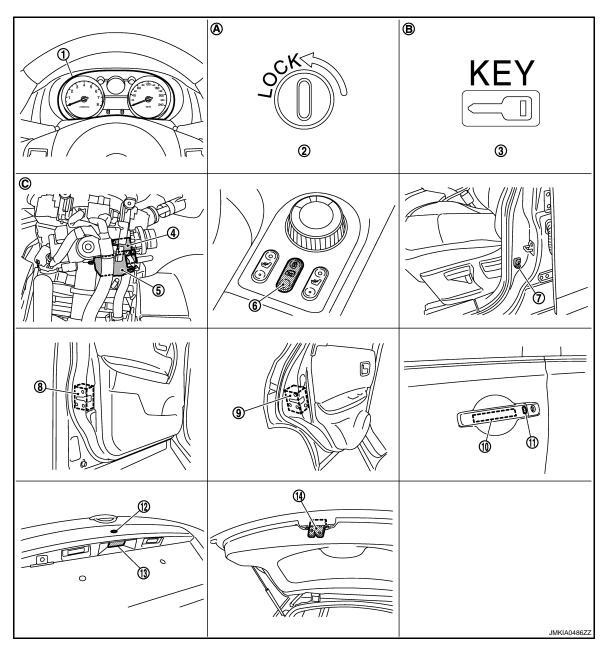
IFOID:0000000001544643



- 1. BCM M65, M66, M67
- Inside key antenna (instrument center)
   M70
- 7. Outside key antenna (rear bumper)
- A. Over the glove box
- View with lower instrument cover removed
- G. View with rear bumper fascia removed

- Intelligent Key unit M40
- 5. Inside key antenna (center console)
- 8. Passenger side anti-hijack relay
- B. Over the instrument lower panel (driver side)
- View with center console rear finisher removed
- H. View with fuse box lid removed

- Intelligent Key warning buzzer E25
- Inside key antenna (rear seat) B45
- Air bag diagnosis sensor unit
- C. View with front bumper removed
- F. View with luggage floor spacer (LH) removed
- I. View with center console removed



- Combination meter
   M34
- Ignition knob switch, key switch and key 5. lock solenoid (key switch) M25
- 7. Front door switch (driver side)
- Outside key antenna (driver side)
   D11
- 13. Back door opener switch D186
- A. On the combination meter

- Lock warning lamp
   M34
- Ignition knob switch, key switch and key 6. lock solenoid (key lock solenoid) M25
- 8. Front door lock actuator (driver side)
- 11. Front door request switch (driver side)
- Back door lock assembly D152
- B. On the combination meter

- Key warning lamp M34
- 6. Door lock and unlock switch M89
- Rear door lock actuator LH D85
- 12. Back door request switch D187
- C. View with steering column cover removed

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#### [WITH I-KEY, WITHOUT SUPER LOCK]

## VEHICLE SPEED SENSING AUTO DOOR LOCK : Component Description

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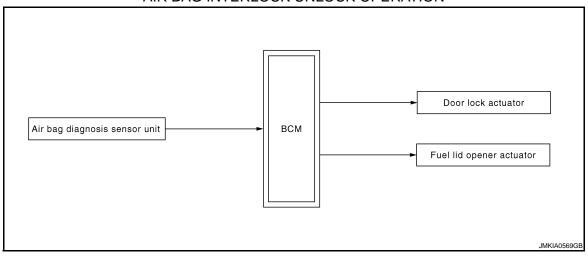
Item	Function
BCM	Controls the door lock/unlock function.
Combination meter	Transmits vehicle speed signal to BCM via CAN communication.
Door lock actuator	Receives door lock and unlock signal from BCM. Door lock actuator locks and unlocks each door.

### AIR BAG INTERLOCK UNLOCK

### AIR BAG INTERLOCK UNLOCK: System Diagram

INFOID:0000000001183560

#### AIR BAG INTERLOCK UNLOCK OPERATION



### AIR BAG INTERLOCK UNLOCK : System Description

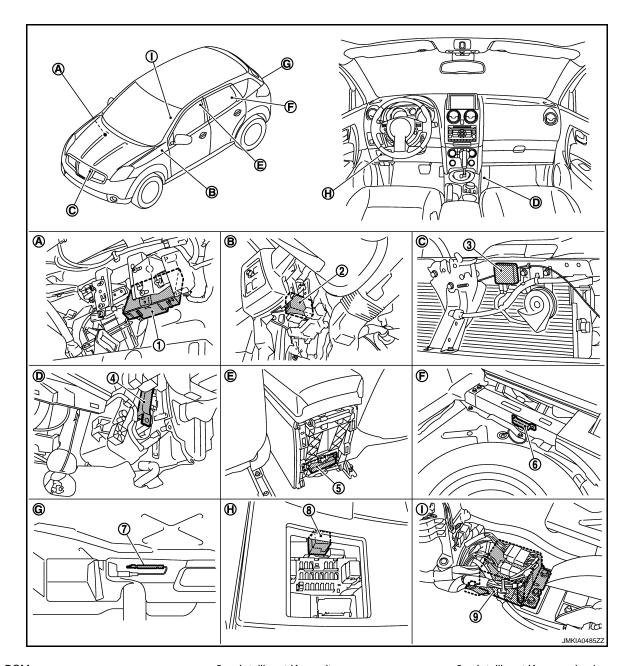
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#### AIR BAG INTERLOCK UNLOCK OPERATION

When ignition switch is ON and BCM receives air bag deployment signal, it operates automatically to unlock all doors. Air bag diagnosis sensor unit sends the air bag deployment signal to BCM.

### AIR BAG INTERLOCK UNLOCK: Component Parts Location

INFOID:0000000001544644



- BCM M65, M66, M67
- Inside key antenna (instrument center)
   M70
- 7. Outside key antenna (rear bumper) B81
- A. Over the glove box
- D. View with lower instrument cover removed
- G. View with rear bumper fascia removed

- Intelligent Key unit M40
- 5. Inside key antenna (center console)
- 8. Passenger side anti-hijack relay
- B. Over the instrument lower panel (driver side)
- E. View with center console rear finisher removed
- H. View with fuse box lid removed

- 3. Intelligent Key warning buzzer E25
- 6. Inside key antenna (rear seat)
- Air bag diagnosis sensor unit M59
- C. View with front bumper removed
- F. View with luggage floor spacer (LH) removed
- I. View with center console removed

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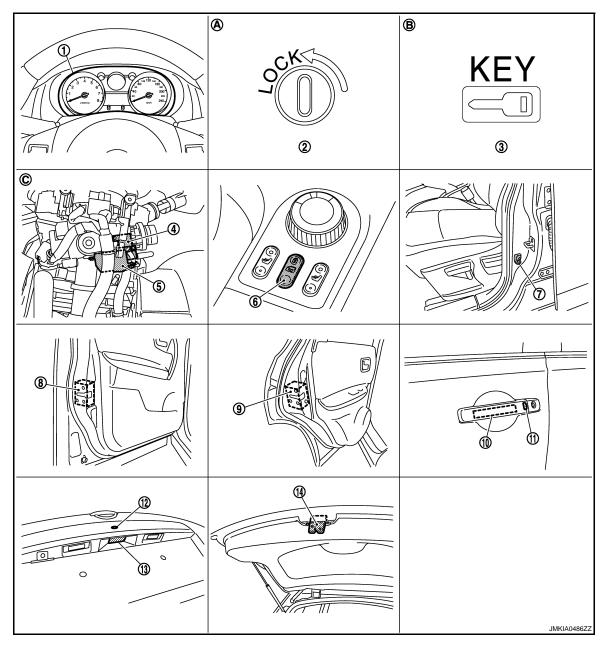
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- Combination meter
   M34
- Ignition knob switch, key switch and key 5. lock solenoid (key switch) M25
- 7. Front door switch (driver side)
- Outside key antenna (driver side)
   D11
- 13. Back door opener switch D186
- A. On the combination meter

- Lock warning lamp
- Ignition knob switch, key switch and key 6. lock solenoid (key lock solenoid) M25
- 8. Front door lock actuator (driver side)
- 11. Front door request switch (driver side)
- 14. Back door lock assembly D152
- B. On the combination meter

- Key warning lamp M34
- Door lock and unlock switch M89
- 9. Rear door lock actuator LH D85
- Back door request switch D187
- C. View with steering column cover removed

### DOOR LOCK FUNCTION

### < FUNCTION DIAGNOSIS >

### [WITH I-KEY, WITHOUT SUPER LOCK]

## AIR BAG INTERLOCK UNLOCK : Component Description

INFOID:0000000001183563

Item	Function		
BCM	Controls the door lock function.		
Air bag diagnosis sensor unit	Transmits air bag deployment signal to BCM for shock sensing auto unlock.		
Door lock actuator	Receives unlock signal from BCM. Door lock actuator unlocks each door.		

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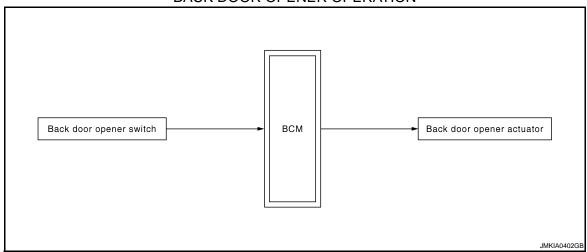
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# BACK DOOR OPENER FUNCTION BACK DOOR OPENER SWITCH

BACK DOOR OPENER SWITCH: System Diagram

INFOID:0000000001183564

#### **BACK DOOR OPENER OPERATION**



### BACK DOOR OPENER SWITCH: System Description

INFOID:0000000001183565

#### **BACK DOOR OPENER OPERATION**

When back door opener switch is pressed, BCM opens back door opener actuator.

#### NOTE:

Back door opener actuator is not for locking the back door. The function is only to open the back door.

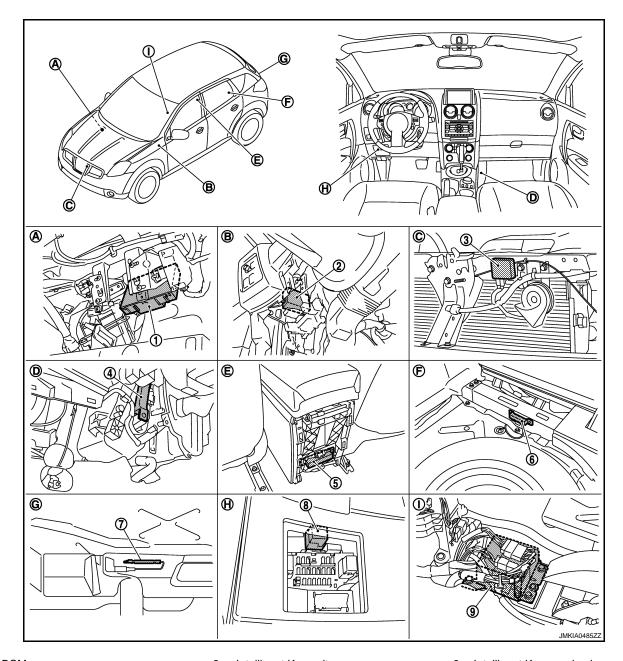
#### **OPERATION CONDITION**

If the following conditions are not satisfied, back door opener operation is not performed.

Back door opener switch operation	Operation condition	
Back door open	<ul><li>Vehicle speed is less than 5 km/h (3 MPH).</li><li>All doors are unlocked.</li></ul>	

### BACK DOOR OPENER SWITCH: Component Parts Location

INFOID:0000000001544645



- **BCM** M65, M66, M67
- Inside key antenna (instrument center)
- Outside key antenna (rear bumper) 7.
- Over the glove box
- D. View with lower instrument cover removed
- View with rear bumper fascia removed

- Intelligent Key unit
- 5. Inside key antenna (center console)
- Passenger side anti-hijack relay 8.
- Over the instrument lower panel (driver side)
- E. View with center console rear finisher removed
- H. View with fuse box lid removed

- 3. Intelligent Key warning buzzer
- Inside key antenna (rear seat)
- 9. Air bag diagnosis sensor unit
- View with front bumper removed
- View with luggage floor spacer (LH) removed
- View with center console removed

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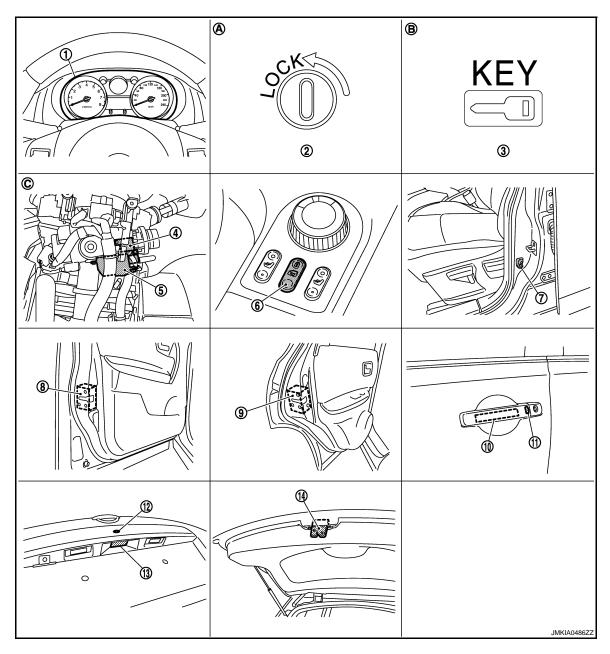
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- Combination meter
   M34
- Ignition knob switch, key switch and key 5. lock solenoid (key switch) M25
- 7. Front door switch (driver side)
- Outside key antenna (driver side)
   D11
- 13. Back door opener switch D186
- A. On the combination meter

- Lock warning lamp
   M34
- Ignition knob switch, key switch and key 6. lock solenoid (key lock solenoid) M25
- 8. Front door lock actuator (driver side)
- 11. Front door request switch (driver side)
- 14. Back door lock assembly D152
- B. On the combination meter

- Key warning lamp M34
- Door lock and unlock switch M89
- 9. Rear door lock actuator LH D85
- Back door request switch D187
- C. View with steering column cover removed

### **BACK DOOR OPENER FUNCTION**

< FUNCTION DIAGNOSIS >

### [WITH I-KEY, WITHOUT SUPER LOCK]

## BACK DOOR OPENER SWITCH : Component Description

INFOID:0000000001183567

Item	Function	
BCM	Controls the back door opener function.	
Back door opener switch	Transmits back door opener switch operation signal to BCM.	
Back door opener actuator	Opens the back door with the back door open signal from BCM.	
Combination meter	Transmits vehicle speed signal to BCM via CAN communication.	

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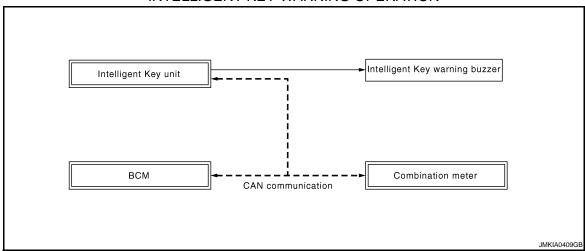
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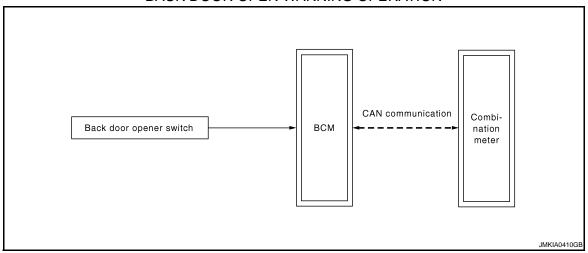
### WARNING FUNCTION

System Diagram

#### INTELLIGENT KEY WARNING OPERATION



#### BACK DOOR OPEN WARNING OPERATION



### System Description

INFOID:0000000001183569

#### DESCRIPTION

The warning functions are as follows and are given to the user as warning information and warnings using combinations of Intelligent Key warning buzzer, key warning lamps and buzzer (built in combination meter).

#### INTELLIGENT KEY WARNING OPERATION

Once one of the following conditions below is established, alert or warning will be executed.

### [WITH I-KEY, WITHOUT SUPER LOCK]

Warning/Information functions				Warning chime	
		Operation conditions	Warning lamp	Combination meter buzzer	Intelligent Key warning buzz- er
Ignition knob return forgotten warning		When all the conditions below are met. Ignition knob: OFF or LOCK (knob is pressed). Door switch (driver side): ON (Door is open).	_	Active for 5 seconds (pipipipi, pipipipi···)	_
Ignition key warning (when mechanical key is used)		When all the conditions below are met. Ignition switch: OFF position. Key switch: ON (inserted) Door switch (driver side): ON (Door is open).	_	Active for 5 seconds (pipipipi, pipipipi···)	_
OFF position warning		When all the conditions below are met.  • Ignition switch is between ACC and OFF position or ignition knob is pressed in while ignition switch is in LOCK position.  • 1 second in the above state have pressed.  "LOCK" (RED blinking)		Active for 1 second (pipi, pipi···)	_
Take away warning	Any door open to all doors closed	<ul> <li>When all the conditions below are met.</li> <li>Ignition switch: Except LOCK position.</li> <li>Door switch: ON to OFF (Door is open to closed).</li> <li>Intelligent Key cannot be detected inside the vehicle.</li> </ul>	"KEY" (RED blinking)	_	Active (pi, pi, pi)
	Door is open	<ul> <li>When all the conditions below are met.</li> <li>Door switch: ON (Door is open)</li> <li>Key ID verification every 5 seconds when registered Intelligent Key can not be detected inside the vehicle.</li> </ul>	"KEY" (RED blinking)	_	_
	Take away through win- dow*	<ul> <li>When all the conditions below are met.</li> <li>Key ID verification: OK</li> <li>Every 30 seconds when registered Intelligent Key cannot be detected inside the vehicle or result of vehicle speed verification is NG. (The registered Intelligent Key cannot be detected inside the vehicle when ignition switch is ON.)</li> <li>Key switch: OFF (Key is removed from ignition key cylinder.)</li> </ul>	"KEY" (RED blinking)	Active for 3 seconds (pipipi)	_

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Warning/Information functions				Warning chime	
		Operation conditions	Warning lamp	Combination meter buzzer	Intelligent Key warning buzz- er
Door lock op-	Request switch opera- tion	<ul> <li>When request switch is pressed (lock operation) under the following conditions.</li> <li>Door switch: ON (Any door is open).</li> <li>Ignition switch is in ACC position or mechanical key is inserted into ignition key cylinder.</li> <li>Intelligent Key is inside vehicle.</li> </ul>	_	_	Active for 2 seconds (pipipi)
eration warn- ing	Intelligent Key button opera- tion	<ul> <li>When Intelligent Key button is pushed (lock operation) under the following conditions.</li> <li>Door switch: ON (Any door is open).</li> <li>Ignition switch is in ACC or OFF position or ignition knob is pressed in LOCK position or mechanical key is inserted into ignition key cylinder.</li> </ul>	_	_	Active for 2 seconds (pipipi)
Intelligent Key low battery warning		When Intelligent Key battery voltage is low, Intelligent Key unit is detected after ignition switch is turned ON.	"KEY" (GREEN blink- ing for 30 sec- onds)	_	_

<sup>\*:</sup> The factory setting for this function is OFF.

#### KEY WARNING LAMP & LOCK WARNING LAMP

The key indicator and lock indicator indicates Intelligent Key system status.

#### **Operation Condition**

E	Behavior of lamps		Operation condition	
	GREEN		All the following conditions are satisfied.  Ignition knob is pressed in LOCK position. (Ignition knob switch is ON)  Ignition key is removed from ignition key cylinder. (Key switch is OFF)  Intelligent Key is detected inside of the vehicle.  KEY RED lighting/blinking conditions are not satisfied.	
		Blinking	while Intelligent Key low battery warning is operating.	
KEY	RED	Lighting	All the following conditions are satisfied.  Ignition knob is pressed. (Ignition knob switch is ON)  Ignition key is removed from ignition key cylinder. (Key switch is OFF)  Intelligent Key is not detected inside of the vehicle.	
		Blinking	All the following conditions are satisfied.     Take away warning is operating.     KEY RED lighting condition is not satisfied.	
LOCK	LOCK Blinking		while OFF position warning is operating.	
KEY(RE	KEY(RED) and LOCK lighting		All the following conditions are satisfied.  Ignition switch is ON.  Steering lock ID is NG.	

#### BACK DOOR OPEN WARNING OPERATION

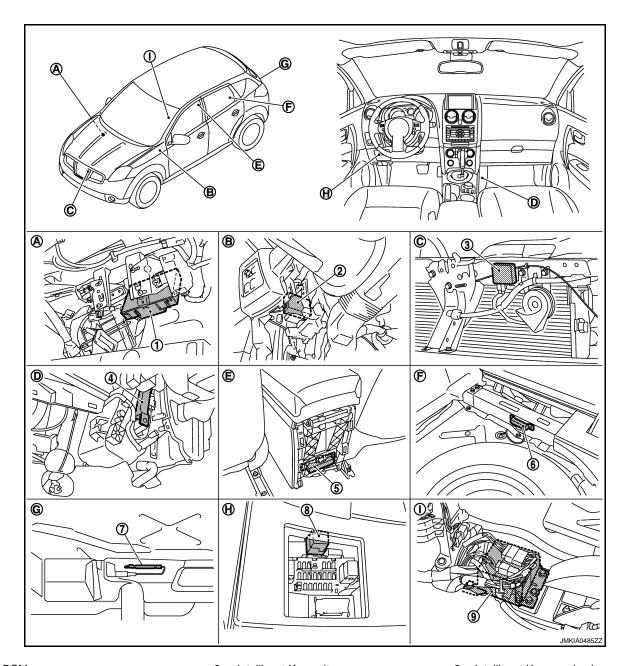
When back door opener switch is operated, when door lock is locked with door lock and unlock switch, speed sensing lock or only driver side is unlocked with anti-hijack function, the buzzer (built in combination meter) will sound.

#### **KEY REMINDER OPERATION**

- The buzzer (combination meter) will sound and the doors will not lock if the door lock and unlock switch is
  pressed while the driver door is open and mechanical key is inserted ignition key cylinder.
- The buzzer (combination meter) will sound and the doors will not lock if the door lock and unlock switch is pressed while any door other than the driver door is open.

### Component Parts Location

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- BCM M65, M66, M67
- Inside key antenna (instrument center)
   M70
- 7. Outside key antenna (rear bumper) B81
- A. Over the glove box
- D. View with lower instrument cover removed
- G. View with rear bumper fascia removed

- Intelligent Key unit M40
- 5. Inside key antenna (center console)
- 8. Passenger side anti-hijack relay
- B. Over the instrument lower panel (driver side)
- E. View with center console rear finisher removed
- H. View with fuse box lid removed

- 3. Intelligent Key warning buzzer E25
- 6. Inside key antenna (rear seat)
- Air bag diagnosis sensor unit M59
- C. View with front bumper removed
- F. View with luggage floor spacer (LH) removed
- I. View with center console removed

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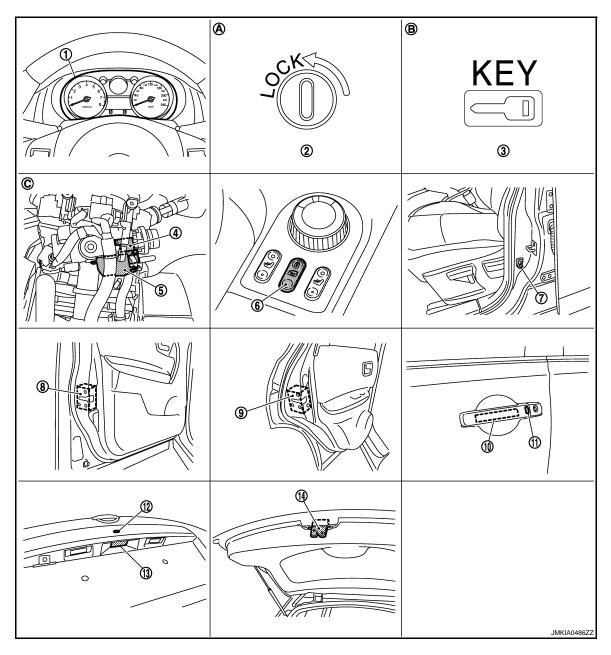
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- Combination meter
   M34
- Ignition knob switch, key switch and key 5. lock solenoid (key switch) M25
- 7. Front door switch (driver side)
- Outside key antenna (driver side)
   D11
- 13. Back door opener switch D186
- A. On the combination meter

- Lock warning lamp
- Ignition knob switch, key switch and key 6. lock solenoid (key lock solenoid) M25
- 8. Front door lock actuator (driver side)
- 11. Front door request switch (driver side)
- 14. Back door lock assembly D152
- B. On the combination meter

- Key warning lamp M34
- Door lock and unlock switch M89
- 9. Rear door lock actuator LH D85
- Back door request switch D187
- C. View with steering column cover removed

### **WARNING FUNCTION**

< FUNCTION DIAGNOSIS >

### [WITH I-KEY, WITHOUT SUPER LOCK]

## Component Description

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Item	Function		
BCM	Controls the warning function with Intelligent Key unit.		
Intelligent Key unit	Controls the warning function with BCM.		
Key switch	Detects that mechanical key is inserted into ignition key cylinder.		
Door switch	Detects door state (open or closed).		
Door lock and unlock switch	Transmits door lock and unlock signal to BCM.		
Intelligent Key unit	Requests to turn ON hazard warning lamp to BCM and turn signal indicator to combination meter.		
Combination meter	Turns ON the LOCK indicator, KEY indicator, turn signal indicator and buzzer (built in combination meter) by the request from Intelligent Key unit via CAN communication.		
Intelligent Key warning buzzer	Sounds by the request from Intelligent Key unit.		
Back door opener switch	Transmits back door open signal to BCM		

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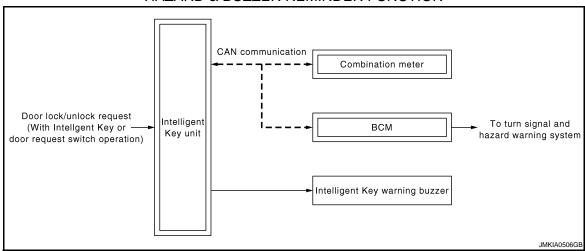
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System Diagram

#### HAZARD & BUZZER REMINDER FUNCTION



### System Description

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#### HAZARD AND BUZZER REMINDER FUNCTION

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When door is locked or unlocked by Intelligent Key or door request switch, Intelligent Key unit sounds buzzer and sends hazard request signal to BCM via CAN communication. Then BCM flashes hazard warning lamps as a reminder.

#### NOTE:

Hazard and buzzer reminder function mode can be changed with CONSULT-III. Refer to <u>DLK-65</u>. "CONSULT-III Function (INTELLIGENT KEY)".

Hazard Operation

Hazard reminder setting (With CONSULT-III)		Door lock operation (with Intelligent Key or door request switch)	Hazard warning lamp flash
	OFF	Any	_
		Lock	Once
	LOCK ONLY	Unlock	_
		Unlock (Anti-hijack)	_
HAZARD ANSWER BACK	UNLK ONLY	Lock	_
HAZARD ANSWER BACK		Unlock	Twice
		Unlock (Anti-hijack)	Twice (quick)
	LOCK/UNLK	Lock	Once
		Unlock	Twice
		Unlock (Anti-hijack)	Twice (quick)
zzer Operation			
Buzzer reminder setting (With CONSULT-III)		Door lock operation (with Intelligent Key or door request switch)	Buzzer warning sounds
		Lock	Once
ANSWER BACK WITH	BUZZER	Unlock	Depends on other setting
I-KEY LOCK		Unlock (Anti-hijack)	Depends on other setting

## < FUNCTION DIAGNOSIS >

### [WITH I-KEY, WITHOUT SUPER LOCK]

Buzzer reminder setting (With CONSULT-III)		Door lock operation (with Intelligent Key or door request switch)	Buzzer warning sounds
		Lock	Depends on other setting
ANSWER BACK WITH	BUZZER	Unlock	Twice
I-KEY UNLOCK		Unlock (Anti-hijack)	Twice
	OFF*	Any	_
ANSWER BACK FUNC- TION	_ ON	Lock	Once
		Unlock	Twice
		Unlock (Anti-hijack)	Twice
	OFF*	Any	_

<sup>\*:</sup> The factory setting for these function are OFF.

### Component Parts Location

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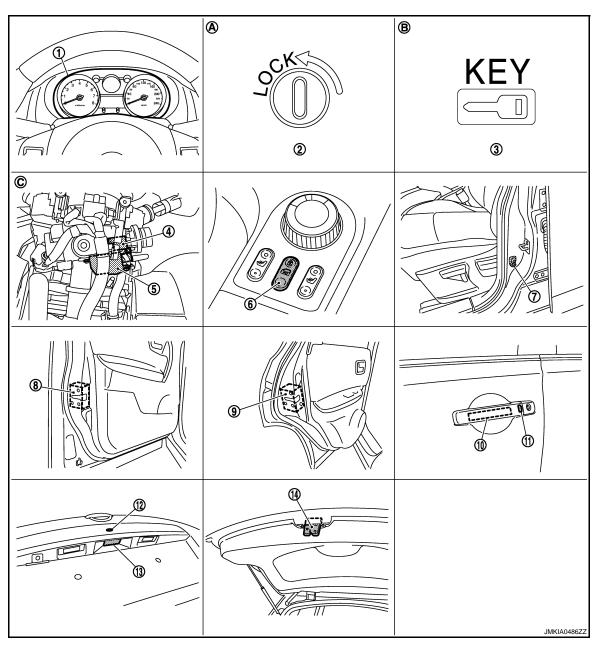
#### < FUNCTION DIAGNOSIS >

#### [WITH I-KEY, WITHOUT SUPER LOCK]

- 1. BCM M65, M66, M67
- Inside key antenna (instrument center)
   M70
- 7. Outside key antenna (rear bumper)
- A. Over the glove box
- D. View with lower instrument cover removed
- G. View with rear bumper fascia removed

- 2. Intelligent Key unit M40
- 5. Inside key antenna (center console)
  M61
- Passenger side anti-hijack relay M90
- B. Over the instrument lower panel (driver side)
- View with center console rear finisher removed
- H. View with fuse box lid removed

- Intelligent Key warning buzzer E25
- 6. Inside key antenna (rear seat)
- Air bag diagnosis sensor unit M59
- C. View with front bumper removed
- F. View with luggage floor spacer (LH) removed
- I. View with center console removed



- Combination meter
   M34
- Ignition knob switch, key switch and key 5. lock solenoid (key switch) M25
- Lock warning lamp
   M34
  - Ignition knob switch, key switch and key 6. lock solenoid (key lock solenoid) M25
- Key warning lamp M34
  - Door lock and unlock switch M89

### < FUNCTION DIAGNOSIS >

### [WITH I-KEY, WITHOUT SUPER LOCK]

7.	Front door switch (driver side) B34	8.	Front door lock actuator (driver side) D9	9.	Rear door lock actuator LH D85
10.	Outside key antenna (driver side) D11	11.	Front door request switch (driver side) D10	12.	Back door request switch D187
13.	Back door opener switch D186	14.	Back door lock assembly D152		
A.	On the combination meter	B.	On the combination meter	C.	View with steering column cover removed

### Component Description

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Item	Function
BCM	Controls the hazard and buzzer reminder function with Intelligent Key unit.
Intelligent Key unit	Controls the hazard and buzzer reminder function with BCM.
Combination meter	Turns ON the LOCK indicator, KEY indicator, turn signal indicator and buzzer (built in combination meter) by the request from Intelligent Key unit via CAN communication.
Intelligent Key warning buzzer	Sounds by the request signal from Intelligent Key unit

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## **DIAGNOSIS SYSTEM (BCM)**

**COMMON ITEM** 

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

INFOID:0000000001559278

#### APPLICATION ITEM

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

Diagnosis mode	Function Description
Work Support	Changes the setting for each system function.
Self Diagnostic Result	Displays the diagnosis results judged by BCM. Refer to BCS-62, "DTC Index".
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM.
Data Monitor	The BCM input/output signals are displayed.
Active Test	The signals used to activate each device are forcibly supplied from BCM.
Ecu Identification	The BCM part number is displayed.
Configuration	<ul> <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.

×: Applicable item

Custom	Sub system selection item	Diagnosis mode			
System		WORK SUPPORT	DATA MONITOR	ACTIVE TEST	
_	BCM	×			
Door lock	DOOR LOCK	×	×	×	
Rear window defogger	REAR DEFOGGER	×	×	×	
Warning chime	BUZZER		×	×	
Interior room lamp	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		×		
Intelligent Key system	INTELLIGENT KEY		×		
Combination switch	COMB SW		×		
Immobilizer	IMMU		×	×	
Interior room lamp battery saver	BATTERY SAVER	×	×	×	
Back door open	TRUNK		×	×	
Vehicle security system	THEFT ALM	×	×	×	
Signal buffer system	SIGNAL BUFFER		×	×	
PTC heater system	PTC HEATER		×	×	

**DOOR LOCK** 

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

INFOID:0000000001183577

**DATA MONITOR** 

### [WITH I-KEY, WITHOUT SUPER LOCK]

Monitor Item	Condition
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.
ACC ON SW	Indicates [ON/OFF] condition of ignition switch in ACC position.
PUSH SW <sup>*1</sup>	Indicates [ON/OFF] condition of ignition knob switch.
KEY ON SW	Indicates [ON/OFF] condition of key switch.
CDL LOCK SW	Indicates [ON/OFF] condition of door lock and unlock switch.
CDL UNLOCK SW	Indicates [ON/OFF] condition of door lock and unlock switch.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch (driver side).
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch (passenger side).
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.
BACK DOOR SW	Indicates [ON/OFF] condition of back door switch.
KEYLESS LOCK*2	Indicates [ON/OFF] condition of lock signal from key fob.
KEYLESS UNLOCK*2	Indicates [ON/OFF] condition of unlock signal from key fob.
I-KEY LOCK*1	Indicates [ON/OFF] condition of lock signal from Intelligent Key.
I-KEY UNLOCK*1	Indicates [ON/OFF] condition of unlock signal from Intelligent Key.
UNLOCK SHOCK	Indicates [ON/OFF] condition of signal from air bag diagnosis unit.  ON: During the unlock operation interlock with air bag.  OFF: Other than above.
SHOCK SENSOR	<ul> <li>Indicates [NOMAL/ON/OFF] condition of circuit between BCM and air bag diagnosis sensor unit.</li> <li>NORMAL: Ignition switch ON. (BCM is receiving normal condition signal from air bag diagnosis sensor unit.)</li> <li>ON: During the receiving of air bag deployment signal from air bag diagnosis sensor unit.</li> <li>OFF: After the receiving of air bag deployment signal from air bag diagnosis sensor unit.</li> </ul>
VEHICLE SPEED	Displays the vehicle speed signal received from combination meter by numerical value [km/h].

<sup>\*1:</sup> For the Intelligent key equipped vehicle.

#### **ACTIVE TEST**

Test item	Description	
SUPER LOCK*1	This test is able to check super lock operation [LOCK (SET)/UNLOCK (RELEASE)].	
DOOR LOCK IND	This test is able to check door lock indicator (built in door lock and unlock switch on center console) operation [ON/OFF].	
DOOR LOCK	This test is able to check door lock operation [ALL LOCK/ALL UNLOCK/DR UNLOCK/OTHER UNLOCK].	

<sup>:\*1</sup> For the super lock equipped vehicle.

#### **WORK SUPPORT**

Test item	Description
SECURITY DOOR LOCK SET	<ul> <li>Anti hijack function mode can be changed in this mode.</li> <li>ON: Anti hijack mode is active.</li> <li>OFF: Anti hijack mode is inactive.</li> </ul>

### INTELLIGENT KEY

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<sup>\*2:</sup> For the multi remote control system equipped vehicle.

### **DIAGNOSIS SYSTEM (BCM)**

< FUNCTION DIAGNOSIS >

[WITH I-KEY, WITHOUT SUPER LOCK]

## INTELLIGENT KEY: CONSULT-III Function (BCM - INTELLIGENT KEY) INFOID:000000001183578

#### **DATA MONITOR**

Monitor Item	Condition
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.
ACC ON SW	Indicates [ON/OFF] condition of ignition switch in ACC position.
KEY ON SW	Indicates [ON/OFF] condition of key switch.
PUSH SW	Indicates [ON/OFF] condition of ignition knob switch.
I-KEY LOCK	Indicates [ON/OFF] condition of lock signal from Intelligent Key.
I-KEY UNLOCK	Indicates [ON/OFF] condition of unlock signal from Intelligent Key.

### **TRUNK**

TRUNK: CONSULT-III Function (BCM - TRUNK)

INFOID:0000000001183579

#### **DATA MONITOR**

Monitor Item	Condition	
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.	
KEY ON SW	Indicates [ON/OFF] condition of key switch.	
PUSH SW <sup>*1</sup>	Indicates [ON/OFF] condition of ignition knob switch.	
TRNK OPNR SW	Indicates [ON/OFF] condition of back door opener switch.	
VEHICLE SPEED	Displays the vehicle speed signal received from combination meter by numerical value [km/h].	

<sup>\*1:</sup> For the Intelligent key equipped vehicle.

#### **ACTIVE TEST**

Test item	Description
TRUNK/GLASS HATCH	This test is able to check back door opener operation [ON/OFF].

<sup>\*2:</sup> For the remote keyless entry system equipped vehicle.

## **DIAGNOSIS SYSTEM (INTELLIGENT KEY UNIT)**

< FUNCTION DIAGNOSIS >

[WITH I-KEY, WITHOUT SUPER LOCK]

## **DIAGNOSIS SYSTEM (INTELLIGENT KEY UNIT)**

### CONSULT-III Function (INTELLIGENT KEY)

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#### **APPLICATION ITEM**

CONSULT-III performs the following functions via CAN communication with Intelligent Key unit.

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function.
SELF-DIAG RESULTS	Displays the diagnosis results judged by Intelligent Key unit.
CAN DIAG SUPPORT MNTR	Monitors the reception status of CAN communication viewed from Intelligent Key unit.
DATA MONITOR	The Intelligent Key unit input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from Intelligent Key unit.
ECU IDENTIFICATION	The Intelligent Key unit part number is displayed.

#### **WORK SUPPORT**

Support item	Description	Selection item	Condition
CONFIRM KEY FOB ID	It can check whether Intelligent Key ID code is registered or not.	_	_
TAKE OUT FROM WINDOW WARN	Take away warning chime (from window)	ON	Active
TARE OUT FROM WINDOW WARN	mode can be changed.	OFF*	Inactive
LOW BATT OF KEY FOB WARN	Intelligent Key low battery warning mode can	ON*	Active
LOW BATT OF RETTOR WARRIN	be changed.	OFF	Inactive
VEVI FOR FUNCTION	Door lock function with Intelligent Key when	ON*	Active
KEYLESS FUNCTION	there is intelligent key in the passenger compartment can be changed.	OFF	Inactive
ANSWER BACK FUNCTION	Buzzer reminder eneration can be shapped	ON	Active
ANSWER BACK FUNCTION	Buzzer reminder operation can be changed.	OFF*	Inactive
SELECTIVE UNLOCK FUNCTION	Anti-hijack mode can be changed.	ON	Active
	Anti-nijack mode can be changed.	OFF*	Inactive
HAZARD ANSWER BACK	Hazard reminder operation mode can be changed.	Refer to DLK-58.	
	Buzzer reminder operation (lock operation)	BUZZER	Active
ANSWER BACK WITH I-KEY LOCK	mode by each door request switch can be changed.	OFF*	Inactive
	Buzzer reminder operation (unlock operation)	BUZZER	Active
ANSWER BACK WITH I-KEY UNLOCK	mode by each door request switch can be changed.	OFF*	Inactive
AUTO RELOCK TIMER	Auto door lock operation mode can be	OFF	Inactive
AUTO RELOCK HIVIER	changed.	2 min*	Active
ENGINE START BY I-KEY	Engine start function (by Intelligent Key)	ON*	Active
LINGING START BT I-RET	mode can be changed.	OFF	Inactive
LOCK/UNLOCK BY I-KEY	Door lock function by door request switch can	ON*	Active
LOGIVON BI I-INE I	be changed.	OFF	Inactive

<sup>\*:</sup> The factory setting

SELF-DIAG RESULT Refer to <u>DLK-163, "DTC\_Index"</u>.

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### [WITH I-KEY, WITHOUT SUPER LOCK]

Monitor Item	Condition
PUSH SW	Indicates [ON (pressed)/OFF (released)] condition of ignition knob switch.
KEY SW	Indicates [ON (inserted)/OFF (removed)] condition of key switch.
DR REQ SW	Indicates [ON (pressed)/OFF (released)] condition of door request switch (driver side).
AS REQ SW	Indicates [ON (pressed)/OFF (released)] condition of door request switch (passenger side).
BD/TR REQ SW	Indicates [ON (pressed)/OFF (released)] condition of door request switch (back door).
IGN SW	Indicates [ON (ON or START position)/OFF (other than ON and START position)] condition of ignition switch ON position.
ACC SW	Indicates [ON/OFF] condition of ignition switch ACC position.
STOP LAMP SW	Indicates [ON/OFF] condition of stop lamp switch.
DOOR LOCK SIG	Indicates [ON/OFF] condition of LOCK signal from Intelligent Key.
DOOR UNLOCK SIG	Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key.
DOOR SW DR	Indicates [OPEN/CLOSE] condition of front door switch (driver side) from BCM via CAN communication.
DOOR SW AS	Indicates [OPEN/CLOSE] condition of front door switch (passenger side) from BCM via CAN communication.
DOOR SW RR	Indicates [OPEN/CLOSE] condition of rear door switch (RH) from BCM via CAN communication.
DOOR SW RL	Indicates [OPEN/CLOSE] condition of rear door switch (LH) from BCM via CAN communication.
DOOR BK SW	Indicates [OPEN/CLOSE] condition of back door switch from BCM via CAN communication.
VEHICLE SPEED	Displays the vehicle speed signal received from combination meter by numerical value [km/h].

#### **ACTIVE TEST**

Test item	Description
DOOR LOCK/UNLOCK	This test is able to check door lock/unlock operation.  • ALL UNLK: All door lock actuators are unlocked.  • DR UNLK: Door lock actuator (driver side) is unlocked.  • AS UNLK: Door lock actuator (passenger side) is unlocked.  • BK UNLK: This item is indicated, but inactive.  • LOCK: All door lock actuator is locked.
ANTENNA	<ul> <li>This test is able to check Intelligent Key antenna operation.</li> <li>When the following condition are met, LED (on Intelligent Key) flashes.</li> <li>ROOM ANT1: Inside key antenna (console) transmissions can be detected by Intelligent Key, when "ROOM ANT1" is selected.</li> <li>ROOM ANT2: Inside key antenna (instrument center/rear seat) transmissions can be detected by Intelligent Key, when "ROOM ANT2"is selected.</li> <li>DRIVER ANT: Outside key antenna (driver side) transmissions can be detected by Intelligent Key, when "DRIVER ANT" is selected.</li> <li>ASSIST ANT: Outside key antenna (passenger side) transmissions can be detected by Intelligent Key, when "ASSIST ANT" is selected.</li> <li>BK DOOR ANT: Outside key antenna (rear bumper) transmissions can be detected by Intelligent Key, when "BK DOOR ANT" is selected.</li> </ul>
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation.  ON OFF
INSIDE BUZZER	This test is able to check warning chime in combination meter operation.  TAKE OUT: Take away warning chime sounds.  KNOB: Ignition knob switch warning chime sounds.  KEY: Key warning chime sounds.  OFF

### **DIAGNOSIS SYSTEM (INTELLIGENT KEY UNIT)**

## < FUNCTION DIAGNOSIS >

## [WITH I-KEY, WITHOUT SUPER LOCK]

Test item Description		
INDICATOR	This test is able to check warning lamp operation.  BLUE ON: Key warning lamp (green) illuminates.  RED ON: Key warning lamp (red) illuminates.  KNOB ON: Lock warning lamp illuminates.  BLUE IND: Key warning lamp (green) flashes.  RED IND: Key warning lamp (red) flashes.  KNOB IND: Lock warning lamp flashes.  OFF	
KEY LOCK SOLENOID*1	<ul><li>This test is able to check key interlock operation.</li><li>LOCK: Key interlock is active.</li><li>UNLOCK: Key interlock is inactive.</li></ul>	

<sup>\*1:</sup> The item is only for M/T model.

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### COMPONENT DIAGNOSIS

### U1000 CAN COMM CIRCUIT

Description INFOID:000000001183581

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

DTC Logic

#### DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC Detection Condition	Possible cause
U1000	CAN COMM CIRCUIT	When Intelligent Key unit 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.  Transmission Receiving (BCM) Receiving (IPDM E/R) Receiving (ECM) Receiving (METER/M&A) Receiving (MULTI AV)

### Diagnosis Procedure

INFOID:0000000001183583

### 1.PERFORM SELF DIAGNOSTIC

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

#### Is "CAN COMM CIRCUIT" displayed?

YES >> Refer to LAN-13, "Trouble Diagnosis Flow Chart".

NO >> Refer to GI-39, "Intermittent Incident".

### **U1010 CONTROL UNIT (CAN)**

< COMPONENT DIAGNOSIS >

[WITH I-KEY, WITHOUT SUPER LOCK]

### U1010 CONTROL UNIT (CAN)

Description INFOID:0000000001183584

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

CAN Communication Signal Chart, refer to LAN-28. "CAN Communication Signal Chart".

DTC Logic

#### DTC DETECTION LOGIC

DTC	CONSULT-III display de- scription	DTC Detection Condition	Possible cause	
U1010	CONTROL UNIT (CAN)	When detecting error during the initial diagnosis of CAN controller of Intelligent Key unit.	Intelligent Key unit	F

### Diagnosis Procedure

1. REPLACE INTELLIGENT KEY UNIT

When DTC [U1010] is detected, replace Intelligent Key unit.

>> Replace Intelligent Key unit.

### Special Repair Requirement

>> Work end.

1. REQUIRED WORK WHEN REPLACING INTELLIGENT KEY UNIT

Initialize control unit. Refer to CONSULT-III operation manual NATS-IVIS/NVIS.

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#### **B2552 INTELLIGENT KEY**

Description INFOID:000000001183588

Intelligent key unit performs engine start operation and steering lock control by crosschecking ID with the Intelligent key.

DTC Logic

#### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2552	INTELLIGENT KEY UNIT	Malfunction is detected inside Intelligent key unit.	Intelligent Key unit

#### DTC CONFIRMATION PROCEDURE

### 1. PERFORM DTC CONFIRMATION PROCEDURE

- Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT-III.

#### Is DTC detected?

YES >> Refer to <u>DLK-70</u>, "<u>Diagnosis Procedure</u>".

NO >> INSPECTION END

### Diagnosis Procedure

## 1. REPLACE INTELLIGENT KEY UNIT

- 1. Replace Intelligent Key unit.
- Perform initialization with CONSULT-III. Re-register all mechanical keys. Refer to "CONSULT-III Operation Manual NATS".
- 3. Start the engine.

#### Does the engine start?

YES >> INSPECTION END

NO >> Perform "DTC confirmation procedure". Refer to <u>DLK-70, "DTC Logic"</u>.

### Special Repair Requirement

INFOID:0000000001183591

INFOID:0000000001183590

### 1. REQUIRED WORK WHEN REPLACING INTELLIGENT KEY UNIT

Initialize control unit. Refer to CONSULT-III operation manual NATS-IVIS/NVIS.

>> Work end.

#### POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[WITH I-KEY, WITHOUT SUPER LOCK]

# POWER SUPPLY AND GROUND CIRCUIT INTELLIGENT KEY UNIT

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### INTELLIGENT KEY UNIT : Diagnosis Procedure

### 1. CHECK FUSE AND FUSIBLE LINK

Check that the following fuse is not blown.

Terminal No. Signal name		Fuse No.
11	Battery power supply	9 (10A)
6	Ignition power supply	4 (10A)

#### Is the fuse blown?

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

NO >> GO TO 2.

### 2.CHECK POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect Intelligent Key unit connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between Intelligent Key unit harness connector and ground.

Terminal			
(	+)	(-)	Voltage (V)
Intelligen	Intelligent Key unit		Voltage (V) (Approx.)
Connector	Terminal	Ground	
M40	11	Ground	Dettemosible
IVI4U	6		Battery voltage

#### Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

### 3. CHECK GROUND CIRCUIT

Check continuity between Intelligent Key unit harness connector and ground.

Intelligent Key unit			Continuity
Connector	Terminal	Ground	Continuity
M40	12		Exists

#### Does continuity exist?

YES >> Intelligent Key unit power supply and ground circuit are OK.

NO >> Repair harness or connector.

**BCM** 

### **BCM**: Diagnosis Procedure

### 1. CHECK FUSE AND FUSIBLE LINK

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

Terminal No.	Signal name	Fuse and fusible link No.
41	Rattory power supply	9 (10A)
57	Battery power supply	J (40A)

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#### POWER SUPPLY AND GROUND CIRCUIT

### < COMPONENT DIAGNOSIS >

[WITH I-KEY, WITHOUT SUPER LOCK]

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

NO >> GO TO 2.

## 2. CHECK POWER SUPPLY CIRCUIT

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

Terminals			
(+) (-)			Voltage (Approx.)
ВС	BCM		(Approx.)
Connector	Terminal	Ground	
M66	41		Pottory voltage
M67	57		Battery voltage

#### Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

### 3. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM			Continuity
Connector	Terminal	Ground	Continuity
M67	55		Existed

### Does continuity exist?

YES >> BCM power supply and ground circuit are OK.

NO >> Repair harness or connector.

### DOOR LOCK AND UNLOCK SWITCH

< COMPONENT DIAGNOSIS >

[WITH I-KEY, WITHOUT SUPER LOCK]

### DOOR LOCK AND UNLOCK SWITCH

Description INFOID:0000000001183594

Transmits door lock/unlock operation to BCM.

Component Function Check

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# 1. CHECK FUNCTION

### (P)With CONSULT-III

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

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

### Is the inspection result normal?

YES >> Door lock and unlock switch is OK.

NO >> Refer to <u>DLK-73</u>, "<u>Diagnosis Procedure</u>".

# Diagnosis Procedure

INFOID:0000000001183596

# 1. CHECK DOOR LOCK AND UNLOCK INPUT SIGNAL

Turn ignition switch OFF.

2. Disconnect door lock and unlock switch connector.

Check signal between door lock and unlock switch harness connector and ground with oscilloscope.

Terminal				
(+)			Signal	
Door lock and unlock switch connector	Terminal	(–)	(Reference value)	
	1			
M89	6	Ground	(V) 15 10 5 0 → → 10ms JPMIA0154GB	

### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

# 2.check door lock and unlock switch circuit

Disconnect BCM connector.

Check continuity between BCM harness connector and door lock and unlock switch harness connector.

BCM connector	Terminal	Door lock and unlock switch connector	Terminal	Continuity
M65	7	M89	6	Exists
IVIOS	9	IVIOS	1	LAISIS

3. Check continuity between BCM harness connector and ground.

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BCM connector	Terminal		Continuity
M65	7	Ground	Does not exist
IVIOS	9		Does not exist

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

# 3.check door lock and unlock switch ground

Check continuity between door lock and unlock switch harness connector and ground.

Door lock and unlock switch connector	Terminal	Ground	Continuity
M89	5	Ground	Exists

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

### 4. CHECK BCM OUTPUT SIGNAL

- Connect BCM connector.
- 2. Check signal between BCM harness connector and ground with oscilloscope.

Terminal			0: 1
(+)	(+)		Signal (Reference value)
BCM connector	Terminal	(–)	(
	7		
M65	9	Ground	(V) 15 10 5 0 →10ms JPMIA0154GB

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace BCM. Refer to BCS-65, "Exploded View".

### 5. CHECK DOOR LOCK AND UNLOCK SWITCH

### Check door lock and unlock switch

Refer to DLK-74, "Component Inspection".

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace door lock and unlock switch. Refer to <a href="DLK-278">DLK-278</a>, "Exploded View".

## Component Inspection

### 1.CHECK DOOR LOCK AND UNLOCK SWITCH

Check door lock and unlock switch.

Door lock and unlock switch	Terminal		Condition	Continuity
M89	6	E	LOCK	Exists
IVIOS	1	5	UNLOCK	EXISIS

#### Is the inspection result normal?

YES >> Door lock and unlock switch is OK.

NO >> Replace door lock and unlock switch. Refer to DLK-278, "Exploded View".

### DOOR LOCK AND UNLOCK SWITCH INDICATOR

< COMPONENT DIAGNOSIS >

[WITH I-KEY, WITHOUT SUPER LOCK]

### DOOR LOCK AND UNLOCK SWITCH INDICATOR

Description INFOID:0000000001183598

The door lock and unlock switch indicates door lock status. The indicator will illuminate when a lock operation is accomplished, and during this status, if any door is opened, the indicator will turn OFF.

# Component Function Check

# INFOID:000000001183599

# 1.CHECK FUNCTION

### (P)With CONSULT-III

Check "DOOR LOCK IND" in "Active Test" mode with CONSULT-III.

Test item		Condition	
DOOR LOCK IND	:ON	Illuminated	
DOOK LOCK IND	:OFF	Not illuminated	

### Is the inspection result normal?

YES >> Door lock and unlock switch is OK.

NO >> Refer to <u>DLK-75</u>, "<u>Diagnosis Procedure</u>".

## Diagnosis Procedure

# 1. CHECK DOOR LOCK AND UNLOCK SWITCH INDICATOR INPUT SIGNAL

Turn ignition switch OFF.

Check voltage between door lock and unlock switch harness connector and ground.

Ter	Terminal			
(+)			Condition	Voltage
Door lock and unlock switch connector	Terminal	( <del>-</del> )		(Approx.)
M89	4	Ground	Door lock operation is accomplished	Battery voltage
			Any door is OPEN	0

### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

# 2.CHECK DOOR LOCK AND UNLOCK SWITCH CIRCUIT

Disconnect BCM connector and door lock and unlock switch connector.

Check continuity between BCM harness connector and door lock and unlock switch harness connector.

BCM connector	Terminal	Door lock and unlock switch connector	Terminal	Continuity
M65	24	M89	4	Exists

3. Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M65	24	Ground	Does not exist

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3.CHECK DOOR LOCK AND UNLOCK SWITCH GROUND

Check continuity between door lock and unlock switch harness connector and ground.

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### DOOR LOCK AND UNLOCK SWITCH INDICATOR

### < COMPONENT DIAGNOSIS >

### [WITH I-KEY, WITHOUT SUPER LOCK]

Door lock and unlock switch connector	Terminal	Ground	Continuity
M89	5		Exists

### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

### 4. CHECK BCM OUTPUT SIGNAL

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

Ter	Terminal			V 16	
(+)		(-)	Condition	Voltage (Approx.)	
BCM connector	Terminal	(-)		(11 - /	
M65	24	Ground	Door lock operation is accomplished	Battery voltage	
			Any door is OPEN	0	

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39. "Intermittent Incident".

NO >> Replace BCM. Refer to BCS-65, "Exploded View".

## ${f 5.}$ CHECK DOOR LOCK AND UNLOCK SWITCH INDICATOR

Check door lock and unlock switch

Refer to DLK-76, "Component Inspection".

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace door lock and unlock switch. Refer to <u>DLK-278</u>, "Exploded View".

# Component Inspection

INFOID:0000000001183601

# 1. CHECK DOOR LOCK AND UNLOCK SWITCH INDICATOR

Check continuity door lock and unlock switch.

Door lock and unlock switch	Terminal		Continuity
Door lock and unlock Switch	(+)	(-)	Continuity
M89	5	4	Exists
M89	4	5	Does not exist

### Is the inspection result normal?

YES >> Door lock and unlock switch is OK.

NO >> Replace door lock and unlock switch. Refer to <u>DLK-278</u>, "Exploded View".

# DOOR REQUEST SWITCH

**DRIVER SIDE** 

DRIVER SIDE : Description

INFOID:0000000001183602

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Transmits lock/unlock operation to Intelligent Key unit.

DRIVER SIDE: Component Function Check

INFOID:0000000001183603

# 1. CHECK FUNCTION

### (II) With CONSULT-III

Check door request switch "DR REQ SW" in "Data Monitor" mode with CONSULT-III.

Monitor item	Condition		
DR REQ SW	Door request switch is pressed	:ON	
	Door request switch is released	:OFF	

### Is the inspection result normal?

YES >> Door request switch is OK.

NO >> Refer to <u>DLK-77</u>, "<u>DRIVER SIDE</u>: <u>Diagnosis Procedure</u>".

### DRIVER SIDE: Diagnosis Procedure

INFOID:0000000001183604

## 1. CHECK INTELLIGENT KEY UNIT INPUT SIGNAL

1. Turn ignition switch OFF.

2. Check voltage between Intelligent Key unit harness connector and ground.

Terminal				
(+)			Door request	Voltage (V)
Intelligent Key unit connector	Terminal	(–)	switch condition	(Approx.)
M40	F	Ground	Pressed	0
IVI40	M40 5	Ground	Released	5

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

# 2.check front door request switch circuit

Disconnect Intelligent Key unit.

2. Check continuity between Intelligent Key unit harness connector and door request switch harness con-

nector.

Intelligent Key unit connector	Terminal	Door request switch connector	Terminal	Continuity
M40	5	D10	1	Exists

Check continuity between Intelligent Key unit harness connector and ground.

Intelligent Key unit connector	Terminal	Ground	Continuity
M40	5		Does not exist

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between Intelligent Key unit and front outside handle.

3.check door request switch ground circuit

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### DOOR REQUEST SWITCH

### [WITH I-KEY, WITHOUT SUPER LOCK]

Check continuity between door request switch harness connector and ground.

Door request switch connector	Terminal	Ground	Continuity
D10	2		Exists

### Is the inspection result normal?

< COMPONENT DIAGNOSIS >

YES >> GO TO 4.

NO >> Repair or replace front outside handle ground circuit.

### 4. CHECK INTELLIGENT KEY UNIT OUTPUT SIGNAL

- Connect Intelligent Key unit connector.
- 2. Check voltage between Intelligent Key unit harness connector and ground.

Intelligent Key unit connector	Terminal	Ground	Voltage (V) (Approx.)
M40	5		5

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39. "Intermittent Incident".

NO >> GO TO 6.

# 5. CHECK DOOR REQUEST SWITCH

Check door request switch.

Refer to DLK-78, "DRIVER SIDE: Component Inspection".

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace malfunctioning front outside handle. Refer to <u>DLK-258</u>, "<u>OUTSIDE HANDLE</u>: <u>Removal and Installation</u>".

### 6.REPLACE INTELLIGENT KEY UNIT

Replace Intelligent Key unit.

Refer to DLK-280, "Exploded View".

#### NOTE:

Perform the system initialization when replacing Intelligent Key unit.

Refer to <u>DLK-23</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

### >> INSPECTION END

# **DRIVER SIDE: Component Inspection**

INFOID:0000000001183605

### 1. CHECK DOOR REQUEST SWITCH

Check door request switch.

Ter	minal	Door request switch condition	Continuity
Door req	uest switch	Door request switch container	
1	2	Pressed	Exists
ı	2	Released	Does not exist

#### Is the inspection result normal?

YES >> Door request switch is OK.

NO >> Replace malfunctioning front outside handle. Refer to <u>DLK-258</u>. "<u>OUTSIDE HANDLE</u>: <u>Removal and Installation</u>".

### PASSENGER SIDE

### PASSENGER SIDE: Description

INFOID:0000000001183606

Transmits lock/unlock operation to Intelligent Key unit.

# PASSENGER SIDE: Component Function Check

INFOID:0000000001183607

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### 1.CHECK FUNCTION

**With CONSULT-III** 

Check door request switch "AS REQ SW" in "Data Monitor" mode with CONSULT-III.

Monitor item	Condition		
AS REQ SW	Door request switch is pressed	:ON	
AS ILLO SW	Door request switch is released	:OFF	

### Is the inspection result normal?

YES >> Door request switch is OK.

NO >> Refer to DLK-79, "PASSENGER SIDE : Diagnosis Procedure".

### PASSENGER SIDE: Diagnosis Procedure

INFOID:0000000001183608

# 1. CHECK INTELLIGENT KEY UNIT INPUT SIGNAL

1. Turn ignition switch OFF.

2. Check voltage between Intelligent Key unit harness connector and ground.

Terminal				
(+)			Door request	Voltage (V)
Intelligent Key unit connector	Terminal	(-)	switch condition	(Approx.)
M40	25	Ground	Pressed	0
10140 25	23	Ground	Released	5

### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

# 2.check door request switch circuit

Disconnect Intelligent Key unit.

Check continuity between Intelligent Key unit harness connector and door request switch harness connector.

ne	Cto	Γ.

Intelligent Key unit connector	Terminal	Door request switch connector	Terminal	Continuity
M40	25	D49	1	Exists

Check continuity between Intelligent Key unit harness connector and ground.

Intelligent Key unit connector	Terminal	Ground	Continuity
M40	25		Does not exist

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between Intelligent Key unit and front outside handle.

# 3.check door request switch ground circuit

Check continuity between front door request switch harness connector and ground.

Door request switch connector	Terminal	Ground	Continuity
D49	2		Exists

Is the inspection result normal?

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### DOOR REQUEST SWITCH

[WITH I-KEY, WITHOUT SUPER LOCK]

#### < COMPONENT DIAGNOSIS >

YES >> GO TO 4.

NO >> Repair or replace front outside handle ground circuit.

### f 4.CHECK INTELLIGENT KEY UNIT OUTPUT SIGNAL

- 1. Connect Intelligent Key unit connector.
- 2. Check voltage between Intelligent Key unit harness connector and ground.

Intelligent Key unit connector	Terminal	Ground	Voltage (V) (Approx.)
M40	25		5

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 6.

# 5.CHECK DOOR REQUEST SWITCH

Check door request switch.

Refer to <u>DLK-80</u>, "<u>PASSENGER SIDE</u>: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace malfunctioning front outside handle. Refer to <u>DLK-258</u>, "<u>OUTSIDE HANDLE</u>: Removal and Installation".

### 6.REPLACE INTELLIGENT KEY UNIT

Replace Intelligent Key unit.

Refer to <u>DLK-280</u>, "Exploded View".

NOTE:

Perform the system initialization when replacing Intelligent Key unit.

Refer to <u>DLK-23</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

### >> INSPECTION END

# PASSENGER SIDE : Component Inspection

INFOID:0000000001183609

### CHECK DOOR REQUEST SWITCH

Check door request switch.

Ter	minal	Door request switch condition	Continuity	
Door req	uest switch	Door request switch condition		
1	2	Pressed	Exists	
'	2	Released	Does not exist	

#### Is the inspection result normal?

YES >> Door request switch is OK.

NO >> Replace malfunctioning front outside handle. Refer to <u>DLK-258, "OUTSIDE HANDLE : Removal and Installation"</u>.

### BACK DOOR

**BACK DOOR: Description** 

INFOID:0000000001183610

INFOID:0000000001183611

Transmits lock/unlock operation to Intelligent Key unit.

### **BACK DOOR: Component Function Check**

# 1. CHECK FUNCTION

### (II) With CONSULT-III

Check door request switch "BD/TR REQ SW" in "Data Monitor" mode with CONSULT-III.

### [WITH I-KEY, WITHOUT SUPER LOCK]

Monitor item	Condition		
BD/TR REQ SW	Door request switch is pressed	:ON	
BD/TR REQ SW	Door request switch is released	:OFF	

Is the inspection result normal?

YES >> Door request switch is OK.

NO >> Refer to <u>DLK-81</u>, "BACK DOOR : <u>Diagnosis Procedure</u>".

### **BACK DOOR: Diagnosis Procedure**

# 1. CHECK INTELLIGENT KEY UNIT INPUT SIGNAL

1. Turn ignition switch OFF.

2. Check voltage between Intelligent Key unit harness connector and ground.

	Terminal			
(+)			Door request	Voltage (V)
Intelligent Key unit connector	Terminal	(-)	switch condition	(Approx.)
M40	29	Ground	Pressed	0
IVI40	29	Giodila	Released	5

### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

# 2.CHECK DOOR REQUEST SWITCH CIRCUIT

Disconnect Intelligent Key unit.

Check continuity between Intelligent Key unit harness connector and door request switch harness connector.

Intelligent Key unit connector	Terminal	Door request switch connector	Terminal	Continuity
M40	29	D187	1	Exists

Check continuity between Intelligent Key unit harness connector and ground.

Intelligent Key unit connector	Terminal	Ground	Continuity	
M40	29		Does not exist	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between Intelligent Key unit and back door request switch.

## 3.CHECK DOOR REQUEST SWITCH GROUND CIRCUIT

Check continuity between back door request switch harness connector and ground.

Door request switch connector	Terminal	Ground	Continuity
D187	2		Exists

### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace back door request switch ground circuit.

# 4. CHECK INTELLIGENT KEY UNIT OUTPUT SIGNAL

- Connect Intelligent Key unit connector.
- 2. Check voltage between Intelligent Key unit harness connector and ground.

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### DOOR REQUEST SWITCH

### [WITH I-KEY, WITHOUT SUPER LOCK]

### < COMPONENT DIAGNOSIS >

Intelligent Key unit connector	Terminal	Ground	Voltage (V) (Approx.)
M40	29		5

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 6.

### 5. CHECK DOOR REQUEST SWITCH

Check door request switch.

Refer to <u>DLK-82</u>, "BACK DOOR: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace back door request switch. Refer to <u>DLK-276</u>. "Exploded View".

### **6.**REPLACE INTELLIGENT KEY UNIT

Replace Intelligent Key unit.

Refer to DLK-280, "Exploded View".

#### NOTE:

Perform the system initialization when replacing Intelligent Key unit.

Refer to <u>DLK-23</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

#### >> INSPECTION END

## **BACK DOOR: Component Inspection**

INFOID:0000000001183613

## 1. CHECK DOOR REQUEST SWITCH

Check door request switch.

Ter	minal	Door request switch condition	Continuity	
Door req	uest switch	Door request switch condition	Continuity	
1	2	Pressed	Exists	
ı	2	Released	Does not exist	

#### Is the inspection result normal?

YES >> Door request switch is OK.

NO >> Replace back door request switch. Refer to <a href="DLK-276">DLK-276</a>, "Exploded View".

DOOR SWITCH

**DRIVER SIDE** 

DRIVER SIDE: Description

Detects door open/closed condition.

DRIVER SIDE: Component Function Check

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## 1. CHECK FUNCTION

## (II) With CONSULT-III

Check door switches "DOOR SW-DR" in "Data Monitor" mode with CONSULT-III.

Monitor item	Condition		
DOOR SW-DR	OPEN	:ON	
	CLOSE	:OFF	·

### Is the inspection result normal?

YES >> Door switch is OK.

NO >> Refer to <u>DLK-83</u>, "<u>DRIVER SIDE</u>: <u>Diagnosis Procedure</u>".

# DRIVER SIDE : Diagnosis Procedure

INFOID:0000000001183616

# 1. CHECK DOOR SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.

2. Check signal between BCM harness connector and ground with oscilloscope.

	Terminals			
(+	(+)		Door condition	Voltage (V) (Approx.)
BCM connector	Terminal	(–)	Bool condition	(Approx.)
			OPEN	0
M65	26	Ground	CLOSE	(V) 15 10 5 0 10 ms  JPMIA0011GB

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to <a href="GI-39">GI-39</a>, "Intermittent Incident".

NO >> GO TO 2.

## 2.CHECK DOOR SWITCH CIRCUIT

Disconnect BCM connector.

2. Check continuity between BCM harness connector and door switch harness connector.

BCM connector	Terminal	Door switch connector	Terminal	Continuity
M65	26	B34	1	Exists

3. Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M65	26	Giodila	Does not exist

### [WITH I-KEY, WITHOUT SUPER LOCK]

#### < COMPONENT DIAGNOSIS >

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between BCM and door switch.

## 3.check door switch

Check door switch.

Refer to DLK-84, "DRIVER SIDE: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace malfunctioning door switch. Refer to <a href="DLK-270">DLK-270</a>, "Exploded View".

### DRIVER SIDE: Component Inspection

INFOID:0000000001183617

### 1. CHECK DOOR SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect door switch connector.
- 3. Check door switch.

Terminal		Door switch condition	Continuity	
Doo	Door switch			
1	Ground part of door switch	Pressed	Exists	
	1 Ground part of door switch	Released	Does not exist	

#### Is the inspection result normal?

YES >> Door switch is OK.

NO >> Replace malfunctioning door switch. Refer to <u>DLK-270, "Exploded View"</u>.

### PASSENGER SIDE

PASSENGER SIDE : Description

INFOID:0000000001183618

Detects door open/closed condition.

PASSENGER SIDE: Component Function Check

INFOID:0000000001183619

# 1. CHECK FUNCTION

### (III) With CONSULT-III

Check door switches "DOOR SW-AS" in "Data Monitor" mode with CONSULT-III.

Monitor item	Condition		
DOOR SW-AS	OPEN	: ON	
	CLOSE	: OFF	

### Is the inspection result normal?

YES >> Door switch is OK.

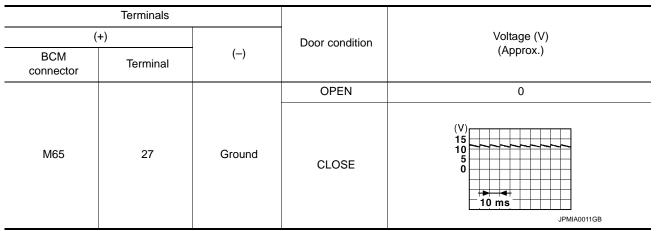
NO >> Refer to <u>DLK-84</u>, "<u>PASSENGER SIDE</u>: <u>Diagnosis Procedure</u>".

### PASSENGER SIDE: Diagnosis Procedure

INFOID:0000000001183620

### 1. CHECK DOOR SWITCH INPUT SIGNAL

- Turn ignition switch OFF.
- 2. Check signal between BCM harness connector and ground with oscilloscope.



#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2.

# 2. CHECK DOOR SWITCH CIRCUIT

1. Disconnect BCM connector.

Check continuity between BCM harness connector and door switch harness connector.

BCM connector	Terminal	Door switch connector	Terminal	Continuity
M65	27	B27	1	Exists

3. Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M65	27	Oloulia	Does not exist

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between BCM and door switch.

# 3. CHECK DOOR SWITCH

Check door switch.

Refer to DLK-85, "PASSENGER SIDE: Component Inspection".

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace malfunctioning door switch. Refer to <u>DLK-270. "Exploded View"</u>.

### PASSENGER SIDE: Component Inspection

# 1. CHECK DOOR SWITCH

- 1. Turn ignition switch OFF.
- Disconnect door switch connector.
- 3. Check door switch.

Terminal		Door switch condition	Continuity	
	Door switch			
1	Ground part of door switch	Pressed	Exists	
1	Ground part of door switch	Released	Does not exist	

### Is the inspection result normal?

YES >> Door switch is OK.

NO >> Replace malfunctioning door switch. Refer to <u>DLK-270</u>, "Exploded View".

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### < COMPONENT DIAGNOSIS >

REAR LH

REAR LH : Description

INFOID:0000000001183622

Detects door open/closed condition.

REAR LH: Component Function Check

INFOID:0000000001183623

## 1. CHECK FUNCTION

### (II) With CONSULT-III

Check door switches "DOOR SW RL" in "Data Monitor" mode with CONSULT-III.

Monitor item	Condition		
DOOR SW RL	OPEN	:ON	
	CLOSE	:OFF	

#### Is the inspection result normal?

YES >> Door switch is OK.

NO >> Refer to <u>DLK-86</u>, "<u>REAR LH</u>: <u>Diagnosis Procedure</u>".

## **REAR LH: Diagnosis Procedure**

INFOID:0000000001183624

# 1. CHECK DOOR SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Check signal between BCM harness connector and ground with oscilloscope.

	Terminals			
(+)			Door condition	Voltage (V) (Approx.)
BCM connector	Terminal	(–)		(Approx.)
			OPEN	0
M65	25	Ground	CLOSE	(V) 15 10 5 0 10 ms JPMIA0011GB

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2.

# 2. CHECK DOOR SWITCH CIRCUIT

- 1. Disconnect BCM connector.
- 2. Check continuity between BCM harness connector and door switch harness connector.

BCM connector	Terminal	Door switch connector	Terminal	Continuity
M65	25	B71	1	Exists

3. Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M65	25	Giodila	Does not exist

### Is the inspection result normal?

### **DOOR SWITCH**

### < COMPONENT DIAGNOSIS >

### [WITH I-KEY, WITHOUT SUPER LOCK]

YES >> GO TO 3. NO

>> Repair or replace harness between BCM and door switch.

3.check door switch

Check door switch.

Refer to DLK-87, "REAR LH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

>> Replace malfunctioning door switch. Refer to DLK-270, "Exploded View". NO

## REAR LH: Component Inspection

# 1. CHECK DOOR SWITCH

Turn ignition switch OFF.

- Disconnect door switch connector.
- 3. Check door switch.

Terminal		Door switch condition	Continuity	
Do	Door switch			
1	Ground part of door switch	Pressed	Exists	
ı	Ground part of door switch	Released	Does not exist	

### Is the inspection result normal?

YES >> Door switch is OK.

NO >> Replace malfunctioning door switch. Refer to DLK-270, "Exploded View".

REAR RH

**REAR RH: Description** 

Detects door open/close condition.

REAR RH: Component Function Check

# 1. CHECK FUNCTION

## (II) With CONSULT-III

Check door switches "DOOR SW RR" in "Data Monitor" mode with CONSULT-III.

Monitor item	Condition		
DOOR SW RR	OPEN	:ON	
DOOR SW KK	CLOSE	:OFF	

### Is the inspection result normal?

YES >> Door switch is OK.

>> Refer to DLK-87, "REAR RH: Diagnosis Procedure". NO

### **REAR RH: Diagnosis Procedure**

# 1. CHECK DOOR SWITCH INPUT SIGNAL

- Turn ignition switch OFF.
- Check signal between BCM harness connector and ground with oscilloscope.

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INFOID:0000000001183627

INFOID:0000000001183628

**DLK-87** 

INFOID:0000000001183629

	Terminals			
(-	+)		Door condition	Voltage (V) (Approx.)
BCM connector	Terminal	(–)	(Approx.)	
			OPEN	0
M65	29	Ground	CLOSE	(V) 15 10 5 0 10 ms  JPMIA0011GB

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2.

# 2. CHECK DOOR SWITCH CIRCUIT

- 1. Disconnect BCM connector.
- 2. Check continuity between BCM harness connector and door switch harness connector.

BCM connector	Terminal	Door switch connector	Terminal	Continuity
M65	29	B53	1	Exists

3. Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M65	29	Ground	Does not exist

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between BCM and door switch.

# 3. CHECK DOOR SWITCH

Check door switch.

Refer to DLK-88, "REAR RH: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace malfunctioning door switch. Refer to <u>DLK-270</u>, "Exploded View".

# REAR RH: Component Inspection

# 1. CHECK DOOR SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect door switch connector.
- Check door switch.

Terminal Door switch		Door switch condition	Continuity	
		Door Switch Condition		
1	Ground part of door switch	Pressed	Exists	
1	Ground part of door switch	Released	Does not exist	

### Is the inspection result normal?

YES >> Door switch is OK.

NO >> Replace malfunctioning door switch. Refer to <u>DLK-270</u>. "Exploded View".

**BACK DOOR** 

BACK DOOR: Description

INFOID:0000000001183630

Detects back door open/close condition.

BACK DOOR: Component Function Check

INFOID:0000000001183631

1. CHECK FUNCTION

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(III) With CONSULT-III

Check "DOOR BK SW" in "Data Monitor" mode with CONSULT-III.

Monitor item	Condition		
DOOR BK SW	OPEN	: ON	
DOON BY 3W	CLOSE	: OFF	

Is the inspection result normal?

YES >> Back door lock assembly (door switch) is OK.

NO >> Refer to <u>DLK-89</u>, "BACK DOOR : <u>Diagnosis Procedure</u>".

**BACK DOOR: Diagnosis Procedure** 

INFOID:0000000001183632

1. CHECK BACK DOOR LOCK ASSEMBLY (DOOR SWITCH) INPUT SIGNAL

Turn ignition switch OFF.

2. Check voltage between BCM harness connector and ground.

	Terminals		Back door Voltage (V) condition (Approx.)	
(	+)	(-)		
BCM connector	Terminal	(-)	( фр. 200)	(11 - /
M65	28	Ground	OPEN	0
	28	Ground	CLOSE	Battery voltage

### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

# 2.check back door lock assembly (door switch) circuit

Disconnect BCM connector.

Check continuity between BCM harness connector and back door lock assembly (door switch) harness connector.

BCM connector	Terminal	Back door lock assembly (door switch) connector	Terminal	Continuity
M65	28	D152	4	Exists

Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M65	28	Oround	Does not exist

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between BCM and back door switch.

# 3.CHECK BACK DOOR LOCK ASSEMBLY GROUND CIRCUIT

Check continuity between back door lock assembly harness connector and ground.

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### < COMPONENT DIAGNOSIS >

Back door lock assembly (door switch) connector	Terminal	Ground	Continuity
D152	3		Exists

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace back door lock assembly harness connector ground circuit.

## 4. CHECK BCM OUTPUT SIGNAL

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

Terminals			V-15 0.0	
(+)		(-)	Voltage (V) (Approx.)	
BCM connector	Terminal	(-)	(11 - 7	
M65	28	Ground	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace BCM. Refer to BCS-65, "Exploded View".

# 5.CHECK BACK DOOR LOCK ASSEMBLY (DOOR SWITCH)

Check back door lock assembly (door switch).

Refer to DLK-90, "BACK DOOR: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace back door lock assembly (door switch). Refer to <u>DLK-266, "DOOR LOCK : Removal and Installation".</u>

## **BACK DOOR: Component Inspection**

INFOID:0000000001183633

# 1. CHECK BACK DOOR LOCK ASSEMBLY (DOOR SWITCH)

- 1. Turn ignition switch OFF.
- 2. Disconnect back door lock assembly (door switch) connector.
- 3. Check back door lock assembly (door switch).

Terminal		Trunk condition	Continuity
Back door lock assembly (door switch)		Trank condition	
1	3	OPEN	Exists
4	3	CLOSE	Does not exist

### Is the inspection result normal?

YES >> Back door lock assembly (door switch) is OK.

NO >> Replace back door lock assembly (door switch). Refer to <u>DLK-266, "DOOR LOCK : Removal and</u> Installation".

## **KEY SWITCH**

Description INFOID:000000001183634

Key switch detects that mechanical key is inserted into the key cylinder, and then transmits the signal to BCM and Intelligent Key unit.

## Component Function Check

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# 1. CHECK KEY SWITCH INPUT SIGNAL

Check key switch "KEY SW" in "Data Monitor" mode with CONSULT-III.

Monitor item	Condition	
KEY SW	Insert mechanical key into key cylinder	: ON
KLT 3W	Remove mechanical key from key cylinder	: OFF

### Is the inspection result normal?

YES >> Key switch is OK.

NO >> Refer to <u>DLK-91</u>, "<u>Diagnosis Procedure</u>".

## Diagnosis Procedure

INFOID:0000000001183636

# 1. CHECK KEY SWITCH INPUT SIGNAL

- Turn ignition switch OFF.
- 2. Disconnect Intelligent Key unit and BCM connector.
- 3. Check voltage between Intelligent Key unit harness connector and ground.

Terminals					
(+)			Condition	Voltage (V)	
Intelligent Key unit con- nector	Terminal	(–)		(Approx.)	
M40	M40 7 Ground		Insert mechanical key into key cylinder	Battery voltage	
10140	<i>'</i>	Giodila	Remove mechanical key from key cylinder	0	

4. Check voltage between BCM harness connector and ground.

	Terminals			V-14 () ()	
(+)		Condition	Voltage (V) (Approx.)		
BCM connector	Terminal	(–)		( 44.5)	
M65	36	Ground	Insert mechanical key into key cylinder	Battery voltage	
IVIOS	30	Ground	Remove mechanical key from key cylinder	0	

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2.

# 2.CHECK KEY SWITCH POWER SUPPLY CIRCUIT

- 1. Remove mechanical key from key cylinder.
- 2. Disconnect ignition knob switch and key lock solenoid connector.
- 3. Check voltage between ignition knob switch and key lock solenoid harness connector and ground.

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(+)			Voltage (V)
Ignition knob switch and key lock solenoid connector	Terminal	(–)	(Approx.)
M25	2	Ground	Battery voltage

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3.check key switch signal circuit

 Check continuity between Intelligent Key unit harness connector and ignition knob switch and key lock solenoid connector.

Intelligent Key unit connector	Terminal	Ignition knob switch and key lock solenoid connector	Terminal	Continuity
M40	7	M25	1	Exists

Check continuity between BCM harness connector and ignition knob switch and key lock solenoid connector.

BCM connector	Terminal	Ignition knob switch and key lock solenoid connector	Terminal	Continuity
M65	36	M25	1	Exists

3. Check continuity between ignition knob switch and key lock solenoid connector and ground.

Ignition knob switch and key lock solenoid connector	Terminal	Ground	Continuity
M25	1	Ground	Does not exist

### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

### 4. CHECK KEY SWITCH

Check key switch.

Refer to <u>DLK-92</u>, "Component Inspection".

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace key cylinder assembly.

### Component Inspection

INFOID:0000000001183637

#### COMPONENT INSPECTION

## 1. CHECK KEY SWITCH

Check continuity between ignition knob switch and key lock solenoid terminals.

Terminal		Condition	Continuity	
ignition knob switch and key lock solenoid connector		Condition		
1	2	Insert mechanical key into key cylinder	Exists	
1	Remove mechanical key from key cylinder	Does not exist		

### Is the inspection result normal?

YES >> Key switch is OK.

NO >> Replace key cylinder assembly.

## **IGNITION KNOB SWITCH**

Description INFOID:0000000001183638

Ignition knob switch detects that ignition knob is pressed, and then transmits the signal to Intelligent Key unit. Then Intelligent Key unit transmits the information to BCM via CAN.

### Component Function Check

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# 1. CHECK IGNITION KNOB SWITCH INPUT SIGNAL

Check ignition knob switch "PUSH SW" in "Data Monitor" mode with CONSULT-III.

Monitor item	Condition		
PUSH SW	Ignition knob switch is pressed	: ON	
F 0311 3W	Ignition knob switch is released	: OFF	

### Is the inspection result normal?

YES >> Ignition knob switch is OK.

NO >> Refer to <u>SEC-59</u>, "<u>Diagnosis Procedure</u>".

# Diagnosis Procedure

INFOID:0000000001183640

# 1. CHECK IGNITION KNOB SWITCH INPUT SIGNAL

Turn ignition switch OFF.

2. Disconnect Intelligent Key unit connector.

3. Check voltage between Intelligent Key unit harness connector and ground.

Terminals				
(+)			Condition	Voltage (V)
Intelligent Key unit con- nector	Terminal	(-)		(Approx.)
M40	27	Ground	Ignition knob switch is pressed	Battery voltage
10140	21	Ground	Ignition knob switch is released	0

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2.

# 2.check ignition knob switch power supply circuit

1. Disconnect ignition knob switch and key lock solenoid connector.

Check voltage between ignition knob switch and key lock solenoid harness connector and ground.

(+)			Voltage (V)
Ignition knob switch and key lock solenoid connector Terminal		(–)	(Approx.)
M25 4		Ground	Battery voltage

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3.check ignition knob switch signal circuit

 Check continuity between Intelligent Key unit harness connector and ignition knob switch and key lock solenoid harness connector.

DLK-93

### **IGNITION KNOB SWITCH**

### [WITH I-KEY, WITHOUT SUPER LOCK]

### < COMPONENT DIAGNOSIS >

Intelligent Key unit connector	Terminal	Ignition knob switch and key lock solenoid connector	Terminal	Continuity
M40	27	M25	3	Exists

2. Check continuity between ignition knob switch and key lock solenoid harness connector and ground.

Ignition knob switch and key lock solenoid connector	Terminal	Ground	Continuity
M25	3		Does not exist

### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

# 4.CHECK IGNITION KNOB SWITCH

Check ignition knob switch.

Refer to SEC-60, "Component Inspection".

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace key cylinder assembly.

# Component Inspection

INFOID:0000000001183641

# 1. CHECK IGNITION KNOB SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect ignition knob switch and key lock solenoid connector.
- Check continuity between ignition knob switch and key lock solenoid terminals under the following conditions.

Ignition knob switch and key lock solenoid		Condition	Continuity		
Connector	Terminal		Condition	Continuity	
M25	3	4	Ignition knob switch is pressed	Exists	
IVIZJ	10125	4	Ignition knob switch is released	Does not exist	

### Is the inspection result normal?

YES >> Ignition knob switch is OK.

NO >> Replace key cylinder assembly.

**DRIVER SIDE** 

**DRIVER SIDE: Description** 

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Locks/unlocks the door with the signal from BCM.

DRIVER SIDE: Component Function Check

INFOID:0000000001183643

# 1. CHECK FUNCTION

### (P)With CONSULT-III

Check "DOOR LOCK/UNLOCK" in "Active Test" mode with CONSULT-III.

Test item		Condition
	:ALL UNLK	The all door lock actuators are unlocked
DOOR LOCK/UNLOCK	:DR UNLK	The door lock actuator (driver side) is unlocked
	:LOCK	The all door lock actuators are locked

#### Is the inspection result normal?

YES >> Door lock actuator is OK.

>> Refer to DLK-95, "DRIVER SIDE : Diagnosis Procedure". NO

### DRIVER SIDE: Diagnosis Procedure

INFOID:0000000001183644

# 1. CHECK BCM OUTPUT SIGNAL

Turn ignition switch OFF.

Check voltage between BCM harness connector and ground.

Terminals (+)		0 199	V-16 0.0		
			Condition of door lock and unlock switch	Voltage (V) (Approx.)	
BCM connector	Terminal	(-)		(	
M67	56	Ground	Lock	$0 \rightarrow \text{Battery voltage} \rightarrow 0$	
1007	60	Giodila	Unlock	0 → Battery voltage → 0	

### Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 2.

# 2.CHECK DOOR LOCK ACTUATOR CIRCUIT 1

Disconnect BCM and front door lock actuator (driver side) connector.

2. Check continuity between BCM harness connector and front door lock actuator (driver side) harness connector.

BCM connector	Terminal	Door lock actuator connector	Terminal	Continuity
M67	56	D9	3	Exists
IVIO7	60	Da	2	LAISIS

3. Check continuity between BCM harness connector and ground.

BCM connector	Terminal		Continuity
M67	56	Ground	Does not exist
	60		Does not exist

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 3. DLK

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INFOID:0000000001183645

#### < COMPONENT DIAGNOSIS >

# 3.CHECK DOOR LOCK ACTUATOR CIRCUIT ${\scriptstyle 2}$

1. Disconnect anti-hijack relay connector.

2. Check continuity between BCM harness connector and anti-hijack relay harness connector.

BCM connector	Terminal	Anti-hijack relay connector	Terminal	Continuity
M67	56	M90	4	Exists

3. Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity	
M67	M67 56		Does not exist	

### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

## 4. CHECK ANTI-HIJACK RELAY

Check continuity of anti-hijack relay.

Anti-hijack relay connector	Terr	Continuity	
M90	4	3	Exists

### Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace anti-hijack relay.

# 5. CHECK DOOR LOCK ACTUATOR CIRCUIT 3

Check continuity between anti-hijack relay harness connector and front door lock actuator (driver side)
harness connector.

Anti-hijack relay connector	Terminal	Door lock actuator connector	Terminal	Continuity
M90	3	D9	3	Exists

2. Check continuity between anti-hijack relay harness connector and ground.

Anti-hijack relay connector	Terminal	Ground	Continuity
M90	3		Does not exist

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace harness.

## 6. CHECK DOOR LOCK ACTUATOR

Check door lock actuator.

Refer to <u>DLK-96</u>, "<u>DRIVER SIDE</u>: <u>Component Inspection</u>".

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace door lock actuator. Refer to <u>DLK-254</u>, "<u>DOOR LOCK</u>: Removal and Installation". After that, <u>DLK-97</u>, "<u>DRIVER SIDE</u>: Special Repair Requirement"

## **DRIVER SIDE: Component Inspection**

# 1. CHECK FRONT DOOR LOCK ACTUATOR (DRIVER SIDE)

Check the actuator operation by connecting the battery voltage to front door lock actuator (driver side).

### [WITH I-KEY, WITHOUT SUPER LOCK]

Front door lock actuator (driver side)	Tern	ninal	Door lock actuator condition	
From door lock actuator (driver side)	(+)	(-)	Door lock actuator condition	
D9	3	2	LOCK	
59	2	3	UNLOCK	

Is the inspection result normal?

YES >> Front door lock actuator (driver side) is OK.

NO >> Replace front door lock actuator (driver side). Refer to <u>DLK-254, "DOOR LOCK : Removal and Installation".</u>

DRIVER SIDE: Special Repair Requirement

Refer to <u>PWC-4</u>, "<u>ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL</u>: <u>Special Repair Requirement</u>".

PASSENGER SIDE

PASSENGER SIDE: Description

Locks/unlocks the door with the signal from BCM.

PASSENGER SIDE: Component Function Check

1. CHECK FUNCTION

(P)With CONSULT-III

Check "DOOR LOCK/UNLOCK" in "Active Test" mode with CONSULT-III.

Test item		Condition
	:ALL UNLK	The all door lock actuators are unlocked
DOOR LOCK/UNLOCK	:AS UNLK	The door lock actuator (passenger side) is locked
	:LOCK	The all door lock actuators are locked

#### Is the inspection result normal?

YES >> Door lock actuator is OK.

NO >> Refer to <u>DLK-97</u>, "<u>PASSENGER SIDE</u>: <u>Diagnosis Procedure</u>".

# PASSENGER SIDE : Diagnosis Procedure

1. CHECK BCM OUTPUT SIGNAL

Turn ignition switch OFF.

2. Check voltage between BCM harness connector and ground.

Terminals			0 100		
(+)		(-)	Condition of door lock and unlock switch	Voltage (V) (Approx.)	
BCM connector	Terminal	()		(/	
M67	56	Ground	Lock	$0 \rightarrow \text{Battery voltage} \rightarrow 0$	
IVIO7	54	Ground	Unlock	0 → Battery voltage → 0	

### Is the inspection result normal?

YES >> GO TO 3. NO >> GO TO 2.

## 2.CHECK DOOR LOCK ACTUATOR CIRCUIT

- 1. Disconnect BCM and front door lock actuator (passenger side) connector.
- Check continuity between BCM harness connector and front door lock actuator (passenger side) harness connector.

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### < COMPONENT DIAGNOSIS >

BCM connector	Terminal	Door lock actuator connector	Terminal	Continuity
M67	56	D48	3	Exists
IVIO /	54	D46	2	EXISIS

Check continuity between BCM harness connector and ground.

BCM connector	Terminal		Continuity
M67	56	Ground	Does not exist
	54		DOES HOLEKIST

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39. "Intermittent Incident".

NO >> Repair or replace harness.

## 3.CHECK DOOR LOCK ACTUATOR

Check door lock actuator.

Refer to DLK-98, "PASSENGER SIDE: Component Inspection".

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to <a href="GI-39">GI-39</a>, "Intermittent Incident".

>> Replace door lock actuator. Refer to DLK-254, "DOOR LOCK: Removal and Installation". NO

### PASSENGER SIDE: Component Inspection

INFOID:0000000001183650

INFOID:0000000001183651

# 1. CHECK FRONT DOOR LOCK ACTUATOR (PASSENGER SIDE)

Check the actuator operation by connecting the battery voltage directly to front door lock actuator (passenger side).

Front door lock actuator	Terr	ninal	Door lock actuator condition	
(passenger side) connector	(+)	(-)	Door lock actuator condition	
D48	3	2	LOCK	
D40	2	3	UNLOCK	

### Is the inspection result normal?

**REAR LH**: Description

YES >> Front door lock actuator (passenger side) is OK.

NO >> Replace front door lock actuator (passenger side). Refer to <u>DLK-254, "DOOR LOCK: Removal</u> and Installation".

### REAR LH

Locks/unlocks the door with the signal from BCM.

REAR LH: Component Function Check INFOID:0000000001183652

# 1. CHECK FUNCTION

#### (P)With CONSULT-III

Check "DOOR LOCK/UNLOCK" in "Active Test" mode with CONSULT-III.

Test item		Condition	
DOOR LOCK/UNLOCK	:ALL UNLK	The all door lock actuators are unlocked	
BOOK EGONONEGOK	:LOCK	The all door lock actuators are locked	

#### Is the inspection result normal?

YES >> Door lock actuator is OK.

NO >> Refer to DLK-99, "REAR LH: Diagnosis Procedure".

## **REAR LH: Diagnosis Procedure**

INFOID:0000000001183653

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# 1. CHECK BCM OUTPUT SIGNAL

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

Terminals			O a life and band at	V II. 00	
(+)		( )	Condition of door lock and unlock switch	Voltage (V) (Approx.)	
BCM connector	Terminal	(–)		(11.5.4)	
M67	56	Ground	Lock	$0 \rightarrow \text{Battery voltage} \rightarrow 0$	
IVIO7	54	Giodila	Unlock	0 → Battery voltage → 0	

### Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 2.

# 2.CHECK DOOR LOCK ACTUATOR CIRCUIT 1

- 1. Disconnect BCM and rear door lock actuator (LH) connector.
- 2. Check continuity between BCM harness connector and rear door lock actuator (LH) harness connector.

BCM connector	Terminal	Door lock actuator connector	Terminal	Continuity
M67	M67 56		3	Exists
M67 54		D85	2	LAISIS

3. Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Terminal	
M67	56	Ground	Does not exist
	54		Does not exist

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 3.

# 3.CHECK DOOR LOCK ACTUATOR CIRCUIT 2

- 1. Disconnect anti-hijack relay connector.
- 2. Check continuity between BCM harness connector and anti-hijack relay harness connector.

BCM connector	Terminal	Anti-hijack relay connector	Terminal	Continuity
M67	56	M90	4	Exists

3. Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M67	56	Ground	Does not exist

### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

## 4. CHECK ANTI-HIJACK RELAY

Check continuity anti-hijack relay.

Anti-hijack relay connector	Terr	Continuity	
M90	4	3	Exists

Is the inspection result normal?

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[WITH I-KEY, WITHOUT SUPER LOCK]

#### < COMPONENT DIAGNOSIS >

YES >> GO TO 5.

NO >> Replace anti-hijack relay.

## 5. CHECK DOOR LOCK ACTUATOR CIRCUIT 3

 Check continuity between anti-hijack relay harness connector and rear door lock actuator (LH) harness connector.

Anti-hijack relay connector	Terminal	Door lock actuator connector	Terminal	Continuity
M90	3	D85	3	Exists

2. Check continuity between anti-hijack relay harness connector and ground.

Anti-hijack relay connector	Terminal	Ground	Continuity
M90	3		Does not exist

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace harness.

### 6. CHECK DOOR LOCK ACTUATOR

Check door lock actuator.

Refer to DLK-100, "REAR LH: Component Inspection".

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace door lock actuator. Refer to <u>DLK-254, "DOOR LOCK : Removal and Installation"</u>.

### REAR LH: Component Inspection

INFOID:0000000001183654

# 1. CHECK REAR DOOR LOCK ACTUATOR (LH)

Check the actuator operation by connecting the battery voltage directly to rear door lock actuator (LH).

Rear door lock actuator (LH)	Terminal		Door lock actuator condition
iteal door lock actuator (E11)	(+)	(-)	Door lock actuator condition
	3	2	LOCK
D03	2	3	UNLOCK

### Is the inspection result normal?

YES >> Rear door lock actuator (LH) is OK.

NO >> Replace rear door lock actuator (LH). Refer to <u>DLK-254, "DOOR LOCK : Removal and Installation".</u>

### REAR RH

REAR RH : Description

INFOID:0000000001183655

INFOID:0000000001183656

Locks/unlocks the door with the signal from BCM.

### REAR RH: Component Function Check

# 1. CHECK FUNCTION

#### (P)With CONSULT-III

Check "DOOR LOCK/UNLOCK" in "Active Test" mode with CONSULT-III.

Test item		Condition
DOOR LOCK/UNLOCK	:ALL UNLK	The all door lock actuators are unlocked
	:LOCK	The all door lock actuators are locked

#### < COMPONENT DIAGNOSIS >

### [WITH I-KEY, WITHOUT SUPER LOCK]

YES >> Door lock actuator is OK.

NO >> Refer to <u>DLK-101</u>, "<u>REAR RH</u>: <u>Diagnosis Procedure</u>".

### REAR RH: Diagnosis Procedure

# 1. CHECK BCM OUTPUT SIGNAL

Turn ignition switch OFF.

Check voltage between BCM harness connector and ground.

Terminals				
(+)	(+)		Condition of door lock and unlock switch	Voltage (V) (Approx.)
BCM connector	Terminal	(-)		V 11 - 2 /
M67	56	Ground	Lock	$0 \rightarrow Battery \ voltage \rightarrow 0$
IVIO7	54	Giodila	Unlock	$0 \rightarrow Battery\ voltage \rightarrow 0$

### Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 2.

# 2.CHECK DOOR LOCK ACTUATOR CIRCUIT 1

Turn ignition switch OFF.

2. Disconnect BCM and rear door lock actuator (RH) connector.

Check continuity between BCM harness connector and rear door lock actuator (RH) harness connector.

BCM connector	Terminal	Door lock actuator connector	Terminal	Continuity
M67	56	D105	3	Exists
19107	M67 54		2	LAISIS

Check continuity between BCM harness connector and ground.

BCM connector	Terminal		Continuity	
M67	56	Ground	Does not exist	
	54	-	Does not exist	

#### Is the inspection result normal?

>> Check intermittent incident. Refer to GI-39, "Intermittent Incident". YES

NO >> GO TO 3.

## 3.CHECK DOOR LOCK ACTUATOR CIRCUIT $\scriptscriptstyle 2$

Disconnect anti-hijack relay.

Check continuity between BCM harness connector and anti-hijack relay harness connector.

BCM connector	Terminal	Anti-hijack relay connector	Terminal	Continuity
M67	56	M90	4	Exists

3. Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M67	56	Oround	Does not exist

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

### f 4.CHECK ANTI-HIJACK RELAY

Check continuity anti-hijack relay.

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### [WITH I-KEY, WITHOUT SUPER LOCK]

INFOID:0000000001183658

### < COMPONENT DIAGNOSIS >

Anti-hijack relay connector	Terminal		Continuity
M90	4	3	Exists

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

## 5. CHECK DOOR LOCK ACTUATOR CIRCUIT 3

 Check continuity between anti-hijack relay harness connector and rear door lock actuator (RH) harness connector.

Anti-hijack relay connector	Terminal	Door lock actuator connector	Terminal	Continuity
M90	3	D105	3	Exists

Check continuity between anti-hijack relay harness connector and ground.

Anti-hijack relay connector	Terminal	Ground	Continuity
M90	3		Does not exist

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39. "Intermittent Incident".

NO >> Repair or replace harness.

### **6.**CHECK DOOR LOCK ACTUATOR

Check door lock actuator.

Refer to <u>DLK-102</u>, "REAR RH: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to <a href="GI-39">GI-39</a>, "Intermittent Incident".

NO >> Replace door lock actuator. Refer to <u>DLK-254, "DOOR LOCK: Removal and Installation"</u>.

## REAR RH: Component Inspection

# 1.check rear door lock actuator (RH)

Check the actuator operation by connecting the battery voltage directly to rear door lock actuator (RH).

Rear door lock actuator (RH)	Terminal		Door lock actuator condition	
Near door lock actuator (NTI)	(+)	(-)	Boot lock actuator condition	
D105	3	2	LOCK	
D103	2	3	UNLOCK	

#### Is the inspection result normal?

YES >> Rear door lock actuator (RH) is OK.

NO >> Replace rear door lock actuator (RH). Refer to <u>DLK-254, "DOOR LOCK: Removal and Installation".</u>

### **BACK DOOR OPENER ACTUATOR**

< COMPONENT DIAGNOSIS >

[WITH I-KEY, WITHOUT SUPER LOCK]

### BACK DOOR OPENER ACTUATOR

Description INFOID:0000000001183659

Opens the back door with the signal from BCM.

Component Function Check

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# 1. CHECK FUNCTION

### (P)With CONSULT-III

Check "TRUNK/GLASS HATCH" in "Active Test" mode with CONSULT-III.

Test item		Condition	
TRUNK/GLASS HATCH	:OPEN	Back door lock opener actuator operation	

#### Is the inspection result normal?

YES >> Door lock actuator is OK.

NO >> Refer to DLK-103, "Diagnosis Procedure".

## Diagnosis Procedure

INFOID:0000000001183661

### 1. CHECK BCM OUTPUT SIGNAL

Check voltage between BCM harness connector and ground.

Terminals			0 150	
(+)		(-)	Condition of back door opener switch	Voltage (V) (Approx.)
BCM connector	Terminal	(-)	'	, , ,
M66	45	Ground	Pressed	$0 \rightarrow \text{Battery voltage} \rightarrow 0$

### Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 2.

# 2.CHECK BACK DOOR LOCK ASSEMBLY CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect BCM and back door lock assembly connector.
- Check continuity between BCM harness connector and back door lock assembly harness connector.

BCM connector	Terminal	Back door lock assembly connector	Terminal	Continuity
M66	45	D152	2	Exists

Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M66	45	Ground	Does not exist

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

## f 3.CHECK BACK DOOR LOCK ASSEMBLY GROUND CIRCUIT

Check continuity between back door lock assembly harness connector and ground.

Back door lock assembly connector Terminal		Ground	Continuity
D152	1		Exists

Is the inspection result normal?

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### **BACK DOOR OPENER ACTUATOR**

### < COMPONENT DIAGNOSIS >

[WITH I-KEY, WITHOUT SUPER LOCK]

YES >> GO TO 4.

NO >> Repair or replace harness.

## 4. CHECK BACK DOOR LOCK ASSEMBLY

Check the actuator operation by connecting battery voltage to back door lock assembly. Refer to <u>DLK-104</u>, "Component Inspection".

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace back door lock assembly. Refer to <u>DLK-266, "DOOR LOCK: Removal and Installation"</u>.

### Component Inspection

INFOID:0000000001183662

# 1. CHECK BACK DOOR LOCK ASSEMBLY

Check the actuator operation by connecting battery voltage to back door lock assembly.

Back door lock assembly connector	Terminal		Back door actuator condition
D152	(+)	(-)	OPEN
	2	1	OI LIV

### Is the inspection result normal?

YES >> Back door lock assembly (back door lock actuator) is OK.

NO >> Replace back door lock assembly (back door lock actuator). Refer to <u>DLK-266, "DOOR LOCK : Removal and Installation"</u>.

### **BACK DOOR OPENER SWITCH**

< COMPONENT DIAGNOSIS >

[WITH I-KEY, WITHOUT SUPER LOCK]

### **BACK DOOR OPENER SWITCH**

Description INFOID:0000000001183663

Sends the back door opening signal to BCM.

# Component Function Check

# 1.check function

# (P)With CONSULT-III

Check "TRNK OPNR SW" in "Data Monitor" mode with CONSULT-III.

Monitor item	Condition		
TRNK OPNR SW	Back door opener switch is pressed :Of	N	
TRNK OPNR SW	Back door opener switch is released :OF	FF	

#### Is the inspection result normal?

YES >> Back door opener switch is OK.

NO >> Refer to <u>DLK-105</u>, "<u>Diagnosis Procedure</u>".

# Diagnosis Procedure

### 1. CHECK BCM INPUT SIGNAL

Check voltage between BCM harness connector and ground.

Terminals			One Property and Transfer	
(+)		(–)	Condition of back door opener switch	Voltage (V) (Approx.)
BCM connector	Terminal	(-)	•	, ,
M65	12	Ground	Pressed	0
COIVI	12	Giouna	Released	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 2.

# 2. CHECK BACK DOOR OPENER SWITCH CIRCUIT

Turn ignition switch OFF.

- 2. Disconnect BCM connector and back door opener switch connector.
- 3. Check continuity between BCM harness connector and back door opener switch harness connector.

BCM connector	Terminal	Back door opener switch connector	Terminal	Continuity
M65	12	D186	1	Exists

4. Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity	
M65	12	Giodila	Does not exist	

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

### 3.CHECK BCM OUTPUT SIGNAL

Check voltage between BCM harness connector and ground.

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INFOID:0000000001183664

INFOID:0000000001183665

### **BACK DOOR OPENER SWITCH**

### < COMPONENT DIAGNOSIS >

### [WITH I-KEY, WITHOUT SUPER LOCK]

	Terminals	V ( 00		
(+)		(-)	Voltage (V) (Approx.)	
BCM connector	BCM connector Terminal			
M65	12	Ground	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace BCM. Refer to BCS-65, "Exploded View".

# 4. CHECK BACK DOOR OPENER SWITCH GROUND CIRCUIT

Check continuity between back door opener switch harness connector and ground.

Back door opener switch connector	Terminal	Ground	Continuity
D186	2		Exists

### Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

# 5. CHECK BACK DOOR OPENER SWITCH

Check back door opener switch.

Refer to <u>DLK-106</u>, "Component Inspection".

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace back door opener switch. Refer to <u>DLK-277, "Exploded View"</u>.

# Component Inspection

INFOID:0000000001183666

# 1. CHECK BACK DOOR OPENER SWITCH

Check back door opener switch.

Back door opener switch connector	Terminal		Back door opener switch condition	Continuity
D186	1	2	Pressed	Exists
D160	ı	2	Released	Does not exist

### Is the inspection result normal?

YES >> Back door opener switch is OK.

NO >> Replace back door opener switch. Refer to <u>DLK-277</u>, "Exploded View".

### **OUTSIDE KEY ANTENNA**

< COMPONENT DIAGNOSIS >

[WITH I-KEY, WITHOUT SUPER LOCK]

# **OUTSIDE KEY ANTENNA**

**DRIVER SIDE** 

DRIVER SIDE : Description

INFOID:0000000001183667

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Intelligent Key detects antenna transmission.

Timing of reply from Intelligent Key to Intelligent Key unit when antenna the Intelligent Key is closest to (inside or outside of the vehicle).

Integrated in front outside handle (driver side).

DRIVER SIDE : Component Function Check

INFOID:0000000001183668

# 1. CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL

### (I) With CONSULT-III

1. Check "ANTENNA" in "Active Test" mode with CONSULT-III.

- 2. Touch "DRIVER ANT".
- 3. When Intelligent Key is in outside key antenna (driver side) detection area, LED (on Intelligent Key) blinks.

Te	est Item	Outside Antenna	
ANTENNA	:DRIVER ANT	Outside key antenna (driver side)	

### Is the inspection result normal?

YES >> Outside key antenna is OK.

NO >> Refer to <u>DLK-273</u>, "<u>DRIVER SIDE</u>: <u>Removal and Installation</u>".

DRIVER SIDE : Diagnosis Procedure

# 1.CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL 1

- Turn ignition switch OFF.
- 2. Check signal between Intelligent Key unit harness connector and ground with oscilloscope.

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Terminals						
(+)  Intelligent Key unit connector  Terminal		(–)	Condition		Signal (Reference value)	
	Driver side (+)	19	Ground	Request switch is pressed	When Intelligent Key is in the antenna detection area.	(V) 15 10 5 11 1
M40					When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 1 s 1 s JMKIA0514ZZ
	Driver side (-)	20			When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0 1   S   S   S   S   S   S   S   S   S
				When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 1 1 s JMKIA0515ZZ	

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2.

# 2.CHECK OUTSIDE KEY ANTENNA CIRCUIT

- 1. Disconnect Intelligent Key unit connector and front outside handle connector.
- Check continuity between Intelligent Key unit harness connector and outside key antenna harness connector.

Intelligent Key unit connector	Terminal	Outside key antenna connector	Terminal	Continuity
M40	19	D11	1	Exists
	20	DII	2	LAISIS

3. Check continuity between Intelligent Key unit harness connector and ground.

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#### < COMPONENT DIAGNOSIS >

Intelligent Key unit connector	Terminal		Continuity	
M40	19	Ground	Does not exist	
10140	20		Does not exist	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between Intelligent Key unit and outside key antenna.

### 3. CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL 2

- 1. Replace outside key antenna. (New antenna or other antenna)
- 2. Connect Intelligent Key unit connector and outside key antenna connector.
- 3. Check signal between Intelligent Key unit harness connector and ground with oscilloscope.

	Tern	ninals					
(+)  Intelligent Key unit connector  Terminal		(–)	Con	dition	Signal (Reference value)		
	Driver side	19		Door request switch	When Intelligent Key is in the antenna detection area.	(V) 15 10 15 11 15 15 15 15 15 15 15 15 15 15 15	
M40	(+)	15	Ground	is pressed	When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0  JMKIA0514ZZ	
	Driver side	de 20	Ground		Door request switch	When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0 JMKIA0395ZZ
	(-)			is pressed	When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 JMKIA0515ZZ	

#### Is the inspection result normal?

YES >> Replace outside key antenna (driver side). Refer to <u>DLK-273, "DRIVER SIDE : Exploded View"</u>.

NO >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

### PASSENGER SIDE

#### **OUTSIDE KEY ANTENNA**

< COMPONENT DIAGNOSIS >

[WITH I-KEY, WITHOUT SUPER LOCK]

### PASSENGER SIDE: Description

INFOID:0000000001183670

Intelligent Key detects antenna transmission.

Timing of reply from Intelligent Key to Intelligent Key unit when antenna the Intelligent Key is closest to (inside or outside of the vehicle).

Integrated in front outside handle (passenger side).

### PASSENGER SIDE: Component Function Check

INFOID:0000000001183671

### 1. CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL

### (E) With CONSULT-III

- 1. Check "ANTENNA" in "Active Test" mode with CONSULT-III.
- Touch "ASSIST ANT".
- 3. When Intelligent Key is in outside key antenna (passenger side) detection area, LED (on Intelligent Key) blinks.

	Test Item	Outside Antenna		
ANTENNA	:ASSIST ANT	Outside key antenna (passenger side)		

#### Is the inspection result normal?

YES >> Outside key antenna is OK.

NO >> Refer to <u>DLK-110</u>, "<u>PASSENGER SIDE</u>: <u>Diagnosis Procedure</u>".

### PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000001183672

### 1. CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL 1

- Turn ignition switch OFF.
- 2. Check signal between Intelligent Key unit harness connector and ground with oscilloscope.

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	Termir	nals				
Into	(+) Iligent Key unit		( <del>-</del> )		Condition	Signal (Reference value)
	connector					
	Passenger side	37			When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0 III III III III III III III III II
M40	(+)			Requestswitch	When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0  MMI  JMKIA0514ZZ
MITO	Passenger side	20	Ground	is pressed	When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0 1 s JMKIA0395ZZ
	(-)	38			When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 JMKIA0515ZZ

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2.

## 2.check outside key antenna circuit

1. Disconnect Intelligent Key unit connector and front outside handle connector.

 Check continuity between Intelligent Key unit harness connector and outside key antenna harness connector.

Intelligent Key unit connector	Terminal	Outside key antenna connector	Terminal	Continuity	
M40	37	D50	1	Exists	
W40	38	D30	2	LAISIS	

3. Check continuity between Intelligent Key unit harness connector and ground.

Intelligent Key unit connector	Terminal		Continuity	
M40	37	Ground	Does not exist	
	38		DOGS HOLEKISL	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between Intelligent Key unit and outside key antenna.

## ${f 3.}$ CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL 2

- 1. Replace outside key antenna. (New antenna or other antenna)
- 2. Connect Intelligent Key unit connector and outside key antenna connector.
- 3. Check signal between Intelligent Key unit harness connector and ground with oscilloscope.

	Terminal					
	(+)			Condition		Signal
	Intelligent Key unit connector Termina		(-)			(Reference value)
	Passenger side	37			When Intelligent Key is in the anten- na detection area.	(V) 15 10 5 0 1
M40	(+)		Ground	Door request switch	When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 1   Million   Million
WITC	Passenger side	38	Stouria	is pressed	When Intelligent Key is in the anten- na detection area.	(V) 15 10 5 0  JMKIA0395ZZ
	(-)				When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 JMKIA0515ZZ

#### Is the inspection result normal?

- YES >> Replace outside key antenna (passenger side). Refer to <u>DLK-273, "PASSENGER SIDE : Exploded View"</u> (passenger side).
- NO >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

#### **OUTSIDE KEY ANTENNA**

< COMPONENT DIAGNOSIS >

[WITH I-KEY, WITHOUT SUPER LOCK]

### **REAR BUMPER**

#### REAR BUMPER : Description

INFOID:0000000001183673

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Intelligent Key detects antenna transmission.

Timing of reply from Intelligent Key to Intelligent Key unit when antenna the Intelligent Key is closest to (inside or outside of the vehicle).

Installed in rear bumper.

### REAR BUMPER: Component Function Check

INFOID:0000000001183674

### ${f 1}$ .CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL

### (P)With CONSULT-III

- Check "ANTENNA" in "Active Test" mode with CONSULT-III.
- Touch "BK DOOR ANT".
- When Intelligent Key is in outside key antenna (rear bumper) detection area, LED (on Intelligent Key) blinks.

Tes	t Item	Outside Antenna	
ANTENNA	:BK DOOR ANT	Outside key antenna (rear bumper)	

#### Is the inspection result normal?

YES >> Outside key antenna is OK.

NO >> Refer to <u>DLK-113</u>, "REAR BUMPER : Diagnosis Procedure".

### REAR BUMPER: Diagnosis Procedure

INFOID:0000000001183675

### 1. CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL 1

- 1. Turn ignition switch OFF.
- 2. Check signal between Intelligent Key unit harness connector and ground with oscilloscope.

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	Ter	minal				
	(+) gent Key unit	Terminal	(–)	C	Condition	Signal (Reference value)
	onnector				When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0
	Rear bumper (+)	17			When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0
M40			Ground	Request switch is pressed	When Intelligent Key is in the antenna detection area.	JMKIA0514ZZ  (V) 15 10 5 0 JMKIA0395ZZ
	Rear bumper (-)	18			When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 1 s JMKIA0515ZZ

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2.

## 2.CHECK OUTSIDE KEY ANTENNA CIRCUIT

- 1. Disconnect Intelligent Key unit connector and front outside handle connector.
- Check continuity between Intelligent Key unit harness connector and outside key antenna harness connector.

Intelligent Key unit connector	Terminal Outside key antenna connector		Terminal	Continuity	
M40	17	B81 (rear bumper)	1	Exists	
WHO	18	Bot (real bumper)	2	LAISIS	

3. Check continuity between Intelligent Key unit harness connector and ground.

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Intelligent Key unit connector	Terminal		Continuity	
M40	17	Ground	Does not exist	
	18		Does not exist	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between Intelligent Key unit and outside key antenna.

### 3.CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL 2

- 1. Replace outside key antenna. (New antenna or other antenna)
- Connect Intelligent Key unit connector and outside key antenna connector. 2.
- Check signal between Intelligent Key unit harness connector and ground with oscilloscope.

	Terr	minal				
(+)  Intelligent Key unit connector  Terminal		(-)	Condition		Signal (Reference value)	
	Rear bumper	17			When Intelligent Key is in the an- tenna detection area.	(V) 15 10 5 0 1   S   JMKIA0397ZZ
M40	(+)	Door request switch	When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0		
	Rear bumper	18		is pressed	When Intelligent Key is in the an- tenna detection area.	(V) 15 10 5 0
	(-)	16			When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 JMKIA0515ZZ

#### Is the inspection result normal?

- YES >> Replace outside key antenna (rear bumper). Refer to <u>DLK-274, "REAR BUMPER: Exploded</u> View" (Rear bumper).
- >> Check intermittent incident. Refer to GI-39, "Intermittent Incident". NO

#### **INSIDE KEY ANTENNA**

< COMPONENT DIAGNOSIS >

[WITH I-KEY, WITHOUT SUPER LOCK]

# INSIDE KEY ANTENNA INSTRUMENT CENTER

**INSTRUMENT CENTER: Description** 

INFOID:0000000001183676

Detects whether Intelligent Key is inside the vehicle.

### INSTRUMENT CENTER: Component Function Check

INFOID:0000000001183677

## 1. CHECK INSIDE KEY ANTENNA INPUT SIGNAL

#### (P)With CONSULT-III

- 1. Check "ANTENNA" in Active test mode with CONSULT-III.
- Touch "ROOM ANT 2".
- When Intelligent Key is in inside key antenna (instrument center) detection area, LED (on Intelligent Key) blinks.

-	Test Item	Inside Antenna		
ANTENNA	:ROOM ANT 2	Inside key antenna (instrument center)		

#### Is the inspection result normal?

YES >> Inside key antenna is OK.

NO >> Refer to <u>DLK-116</u>, "INSTRUMENT CENTER: <u>Diagnosis Procedure</u>".

### **INSTRUMENT CENTER:** Diagnosis Procedure

INFOID:0000000001183678

## 1. CHECK INSIDE KEY ANTENNA INPUT SIGNAL 1

- Turn ignition switch OFF.
- 2. Check signal between Intelligent Key unit harness connector and ground with oscilloscope.

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	Terminals					
(+) Intelligent Key unit connector Terminal		(-)	(–) Condition		Signal (Reference value)	
	Instrument	22			When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0 1
M40 -	center (+)	33	- Ground	<ul> <li>All doors are closed</li> <li>Ignition knob switch is pressed</li> </ul>	When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0
	Instrument center (-)				When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0 1 s JMKIA0392ZZ
					When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 JMKIA0390ZZ

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2.

## 2.CHECK INSIDE KEY ANTENNA CIRCUIT

1. Disconnect Intelligent Key unit connector and inside key antenna connector.

2. Check continuity between Intelligent Key unit harness connector and inside key antenna harness connector.

Intelligent Key unit connector	Terminal	Inside key antenna connector	Terminal	Continuity
M40	33	M70 (instrument center)	1	Exists
	34	W70 (Illistrament center)	2	EXISIS

3. Check continuity between Intelligent Key unit harness connector and ground.

Intelligent Key unit connector	Terminal		Continuity
M40	33	Ground	Does not exist
	34		DOGS HOLEKISE

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between Intelligent Key unit and inside key antenna.

## 3.check inside key antenna input signal 2

- 1. Replace inside key antenna. (New antenna or other antenna)
- 2. Connect Intelligent Key unit connector and inside key antenna connector.
- 3. Check signal between Intelligent Key harness connector and ground with oscilloscope.

	Terminals					
	(+)		( )	Co	ondition	Signal (Reference value)
	Intelligent Key unit connector Terminal		(-)			(Noticional value)
M40	Instrument center (+)	33	- Ground	<ul> <li>All doors are closed</li> <li>Ignition knob switch is pressed</li> </ul>	When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0 1 s JMKIA0393ZZ
					When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 1 s JMKIA0391ZZ
	Instrument center (-)	34			When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0 1 s JMKIA0392ZZ
		er 34			When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0

#### Is the inspection result normal?

- YES >> Replace inside key antenna (instrument center). Refer to <u>DLK-271, "INSTRUMENT CENTER: Exploded View"</u> (instrument center).
- NO >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

#### **INSIDE KEY ANTENNA**

[WITH I-KEY, WITHOUT SUPER LOCK] < COMPONENT DIAGNOSIS > **CONSOLE** Α **CONSOLE**: Description INFOID:0000000001183679 Detects whether Intelligent Key is inside the vehicle. В CONSOLE: Component Function Check INFOID:0000000001183680 1. CHECK INSIDE KEY ANTENNA INPUT SIGNAL C (P)With CONSULT-III 1. Check "ANTENNA" in Active test mode with CONSULT-III. D Touch "ROOM ANT 1". When Intelligent Key is in inside key antenna (console) detection area, LED (on Intelligent Key) blinks. Test Item Inside Antenna Е **ANTENNA** :ROOM ANT 1 Inside key antenna (console) Is the inspection result normal? F YES >> Inside key antenna is OK. NO >> Refer to <u>DLK-119</u>, "CONSOLE: <u>Diagnosis Procedure"</u>. CONSOLE: Diagnosis Procedure INFOID:0000000001183681 1. CHECK INSIDE KEY ANTENNA INPUT SIGNAL 1 Turn ignition switch OFF. Н 2. Check signal between Intelligent Key unit harness connector and ground with oscilloscope.

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	Terminal						
	(+)	I	( )	Cor	ndition	Signal (Reference value)	
	Intelligent Key unit connector Terminal		(-)			(itelerance value)	
	Console	15			When Intelligent Key is in the antenna detection area.	(V) 15 10 5 11 1	
M40	(+)	15		All doors are closed	When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 1 s JMKIA0391ZZ	
IVIAO	Console (-)	consolo	Ground	Ignition knob switch is pressed	When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0 1 s JMKIA0392ZZ	
		1 16			When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 1 1 s 1 MKIA0390ZZ	

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39. "Intermittent Incident".

NO >> GO TO 2.

## 2.CHECK INSIDE KEY ANTENNA CIRCUIT

1. Disconnect Intelligent Key unit connector and inside key antenna connector.

2. Check continuity between Intelligent Key unit harness connector and inside key antenna harness connector.

Intelligent Key unit connector Terminal		Inside key antenna connector	Terminal	Continuity
M40	15	M61 (console)	1	Exists
	16	ivio i (corisole)	2	LXISIS

3. Check continuity between Intelligent Key unit harness connector and ground.

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Intelligent Key unit connector	Terminal		Continuity
M40	15	Ground	Does not exist
IVI40	16		Does not exist

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between Intelligent Key unit and inside key antenna.

## ${f 3.}$ CHECK INSIDE KEY ANTENNA INPUT SIGNAL 2

- 1. Replace inside key antenna. (New antenna or other antenna)
- 2. Connect Intelligent Key unit connector and inside key antenna connector.
- 3. Check signal between Intelligent Key harness connector and ground with oscilloscope.

Terminal							
(+) Intelligent Key unit connector Terminal		(–)	Condition		Signal (Reference value)		
M40 -	Console (+)	15	Ground	All doors are closed     Ignition knob switch is pressed	When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
					When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 4 1 s JMKIA0391ZZ	
	Console (-)	16			When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0  MKIA0392ZZ	
					When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 11 1 s  JMKIA0390ZZ	

#### Is the inspection result normal?

YES >> Replace inside key antenna (console). Refer to <u>DLK-271, "CONSOLE: Exploded View"</u> (console).

NO >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

**REAR SEAT** 

#### **INSIDE KEY ANTENNA**

< COMPONENT DIAGNOSIS >

[WITH I-KEY, WITHOUT SUPER LOCK]

REAR SEAT : Description

INFOID:0000000001183682

Detects whether Intelligent Key is inside the vehicle.

REAR SEAT : Component Function Check

INFOID:0000000001183683

## 1. CHECK INSIDE KEY ANTENNA INPUT SIGNAL

### (E) With CONSULT-III

- 1. Check "ANTENNA" in "Active Test" mode with CONSULT-III.
- 2. Touch "ROOM ANT 2".
- 3. When Intelligent Key is in inside key antenna (rear seat) detection area, LED (on Intelligent Key) blinks.

	Inside Antenna	
ANTENNA	:ROOM ANT 2	Inside key antenna (rear seat)

#### Is the inspection result normal?

YES >> Inside key antenna is OK.

NO >> Refer to <u>DLK-122</u>, "<u>REAR SEAT</u>: <u>Diagnosis Procedure</u>".

### **REAR SEAT: Diagnosis Procedure**

INFOID:0000000001183684

## 1. CHECK INSIDE KEY ANTENNA INPUT SIGNAL 1

- 1. Turn ignition switch OFF.
- 2. Check signal between Intelligent Key unit harness connector and ground with oscilloscope.

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Terminal						Signal (Reference value)	
	(+) Intelligent Key unit connector  Terminal		(–)	Condition			
	Jilliectoi				When Intelligent Key is in the antenna de-	(V) 15 10 5 0	
M40 -	Rear seat (+)	13			tection area.	JMKIA0393ZZ	
			Ground	All doors are closed     Ignition knob switch is pressed	When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 1 s JMKIA0391ZZ	
	Rear seat (-)	Rear seat			When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0 1   1   1   1   1   1   1   1   1   1	
					When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 1 s JMKIA0390ZZ	

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2.

## 2.CHECK INSIDE KEY ANTENNA CIRCUIT

- 1. Disconnect Intelligent Key unit connector and inside key antenna connector.
- 2. Check continuity between Intelligent Key unit harness connector and inside key antenna harness connector.

Intelligent Key unit connector	Terminal	Inside key antenna connector	Terminal	Continuity
M40	13	B45 (rear seat)	1	Exists
	14	D45 (Teal Seat)	2	LXISIS

3. Check continuity between Intelligent Key unit harness connector and ground.

Intelligent Key unit connector	Terminal			
M40	13	Ground	Does not exist	
IVI40	14		DOGS HOLEKISE	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between Intelligent Key unit and inside key antenna.

### 3. CHECK INSIDE KEY ANTENNA INPUT SIGNAL 2

- 1. Replace inside key antenna. (New antenna or other antenna)
- 2. Connect Intelligent Key unit connector and inside key antenna connector.
- 3. Check signal between Intelligent Key harness connector and ground with oscilloscope.

	Terminal						
	(+)			Со	ndition	Signal (Deference value)	
	gent Key unit onnector	Terminal	(-)			(Reference value)	
	Rear seat	13			When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0 1 s JMKIA0393ZZ	
M40	(+)	19	Ground	All doors are closed	When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0  MKIA0391ZZ	
	Rear seat	14		Ignition knob switch is pressed	When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0 1 s JMKIA0392ZZ	
	(-) 14	When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 1 s JMKIA0390ZZ				

#### Is the inspection result normal?

YES >> Replace inside key antenna (rear seat). Refer to <u>DLK-272, "REAR : Exploded View"</u> (rear seat).

NO >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

## ANTI-HIJACK RELAY

PASSENGER SIDE

PASSENGER SIDE: Description

Receives anti-hijack signal from Intelligent Key unit.

PASSENGER SIDE: Component Function Check

INFOID:0000000001183686

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### 1. CHECK FUNCTION

- 1. All doors are locked using Intelligent Key or door request switch. (Super lock system condition: Set)
- 2. Press door request switch (passenger side), only passenger side door is UNLÓCK.

#### Is the inspection result normal?

YES >> Anti-hijack relay is OK.

NO >> Refer to <u>DLK-125</u>, "PASSENGER SIDE : <u>Diagnosis Procedure"</u>.

INFOID:0000000001183687

### PASSENGER SIDE : Diagnosis Procedure

### 1. CHECK INTELLIGENT KEY UNIT INPUT SIGNAL 1

1. Check voltage between Intelligent Key unit harness connector and ground.

Termina					
(+)		Condition	Voltage (V)		
Intelligent Key unit connector	Terminal	(–)		(Approx.)	
M40	11	Ground	Ignition switch OFF	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Check condition of harness and connector. If NG, repair or replace harness.

### 2.check intelligent key unit input signal $\scriptscriptstyle 2$

1. Check voltage between Intelligent Key unit harness connector and ground.

Ter	minal					
(+)			Condition		Voltage (V)	
Intelligent Key unit connector	Terminal	(–)	Condition		(Approx.)	
M40	40	Ground	Press front door request switch  Anti-hijack operation		Battery voltage → 0 → Battery voltage	
			(passenger side)	Other than above	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 4.

### 3.CHECK INTELLIGENT KEY UNIT GROUND CIRCUIT

Check continuity between Intelligent Key unit harness connector and ground.

Intelligent Key unit connector	Terminal	Ground	Continuity
M40	12		Exists

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair harness or connector.

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## 4. CHECK PASSENGER SIDE ANTI-HIJACK RELAY GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect passenger side anti-hijack relay connector and Intelligent Key unit connector.
- 3. Check voltage between passenger side anti-hijack relay harness connector and ground.

Terminal				
(+)		Condition	Voltage (V)	
Passenger side anti-hijack relay connector	Terminal	(–)		(Approx.)
M90	2	Ground	Ignition switch OFF	Battery voltage

4. Check continuity between passenger side anti-hijack relay harness connector and Intelligent Key unit connector.

Passenger side anti-hijack relay connector	Terminal	Intelligent Key unit connector	Terminal	Continuity
M90	1	M40	40	Exists

5. Check continuity between passenger side anti-hijack relay harness connector and ground.

Passenger side anti-hijack relay connector	Terminal	Ground	Continuity	
M90	1	Glound	Does not exist	

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Check condition of harness and connector. If NG, repair or replace harness.

### 5.CHECK ANTI-HIJACK RELAY

Check anti-hijack relay.

Refer to <u>DLK-126</u>, "PASSENGER SIDE: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace anti-hijack relay. Refer to <u>DLK-26, "DOOR LOCK AND UNLOCK SWITCH : Component Parts Location"</u>.

### PASSENGER SIDE: Component Inspection

INFOID:0000000001183688

### 1. CHECK ANTI-HIJACK RELAY

- Turn ignition switch OFF.
- Disconnect passenger side anti-hijack relay connector.
- 3. Check continuity passenger side anti-hijack relay terminals 3 and 4.

Passenger side anti-hijack relay connector	Terminal		Condition	Continuity	
M90 3		4	Battery voltage direct current supply between terminals 1 and 2	Does not exist	
			Other than above	Exists	

#### Is the inspection result normal?

YES >> Passenger side anti-hijack relay is OK.

NO >> Replace passenger side anti-hijack relay. Refer to <a href="DLK-26">DLK-26</a>, "DOOR LOCK AND UNLOCK SWITCH: Component Parts Location".

#### INTELLIGENT KEY WARNING BUZZER

< COMPONENT DIAGNOSIS >

[WITH I-KEY, WITHOUT SUPER LOCK]

### INTELLIGENT KEY WARNING BUZZER

Description INFOID:0000000001183689

Answers back and warns about an inappropriate operation.

### Component Function Check

INFOID:0000000001183690

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## 1. CHECK FUNCTION

(P)With CONSULT-III

Check Intelligent Key warning buzzer "OUTSIDE BUZZER" in "Active Test" mode with CONSULT-III.

Is the inspection result normal?

>> Intelligent Key warning buzzer is OK. YES

>> Refer to <u>DLK-127</u>, "<u>Diagnosis Procedure</u>". NO

### Diagnosis Procedure

INFOID:0000000001183691

### ${f 1}$ .CHECK INTELLIGENT KEY UNIT INPUT SIGNAL 1

Check voltage between Intelligent Key unit harness connector and ground.

	Terminal				
(+)			Warning buzzer	Voltage (V)	
Intelligent Key unit connector	Terminal	(–)	operation condition	(Approx.)	
M40	4	Ground	Sounding	0	
IVI40	4	Ground	Not sounding	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 2.

### 2.CHECK INTELLIGENT KEY WARNING BUZZER POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect Intelligent Key warning buzzer connector.
- Check voltage between Intelligent Key warning buzzer harness connector and ground.

Т				
(+)		Voltage (V)		
Intelligent Key warning buzzer connector	Terminal	(–)	(Approx.)	
E25	1	Ground	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace Intelligent Key warning buzzer power supply circuit.

### 3.CHECK HARNESS CONTINUITY

Disconnect Intelligent Key unit connector.

Check continuity between Intelligent Key warning buzzer harness connector and Intelligent Key unit harness connector.

Intelligent Key warning buzzer connector	Terminal	Intelligent Key unit connector	Terminal	Continuity
E25	3	M40	4	Exists

Check continuity between Intelligent Key warning buzzer harness connector and ground.

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#### INTELLIGENT KEY WARNING BUZZER

#### < COMPONENT DIAGNOSIS >

#### [WITH I-KEY, WITHOUT SUPER LOCK]

Intelligent Key warning buzzer connector	Terminal	Ground	Continuity	
E25	3		Does not exist	

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness between Intelligent Key warning buzzer and Intelligent Key unit.

### 4. CHECK INTELLIGENT KEY WARNING BUZZER

Check Intelligent Key warning buzzer.

Refer to <u>DLK-128</u>, "Component Inspection".

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace Intelligent Key warning buzzer. Refer to <u>DLK-275, "Exploded View"</u>.

#### 5.REPLACE INTELLIGENT KEY UNIT

Replace Intelligent Key unit.

Refer to DLK-280, "Exploded View".

#### NOTE:

Perform the system initialization when replacing Intelligent Key unit.

Refer to <u>DLK-23</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

#### >> INSPECTION END

### Component Inspection

INFOID:0000000001183692

### 1. CHECK INTELLIGENT KEY WARNING BUZZER

Connect battery power supply to Intelligent Key warning buzzer terminals 1 and 3, and check the operation.

Intelligent Key warning buzzer	Teri	minal	Operation
connector	(+)	(-)	Buzzer sounds
E25	1	3	Duzzei sourius

#### Is the inspection result normal?

YES >> Intelligent Key warning buzzer is OK. GO TO 2.

NO >> Replace Intelligent Key warning buzzer. Refer to <u>DLK-275</u>, "Exploded View".

### 2.REPLACE INTELLIGENT KEY UNIT

Replace Intelligent Key unit.

Refer to DLK-280, "Exploded View".

#### NOTE:

Perform the system initialization when replacing Intelligent Key unit.

Refer to <u>DLK-23</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

#### >> INSPECTION END

# BUZZER (COMBINATION METER) [WITH I-KEY. WITHOUT SUPER LOCK]

< COMPONENT DIAGNOS	COMPONENT DIAGNOSIS > [WITH I-KEY						
BUZZER (COMBIN	ATION ME	TER)					
Description	INFOID:000000001183693						
Performs operation method	guide and warn	ing with buzzer.					
Component Function	Check	INFOID:000000001183694					
1.CHECK FUNCTION							
(E) With CONSULT-III Check the operation with "IN	NSIDE BUZZER	" in "Active Test" with CONSULT-III.					
Test item		Condition					
	:TAKE OUT	Take away warning chime sounds					
INSIDE BUZZER	:KNOB	Ignition knob switch warning chime sounds					
	:KEY	Key warning chime sounds					
Is the inspection result norm							
YES >> Warning buzzer NO >> Refer to <u>DLK-12</u>							
Diagnosis Procedure		INFOID:000000001183698					
1.CHECK BUZZER (COME	BINATION MET	ER) CIRCUIT					
Refer to WCS-21, "Compon		·					
Is the inspection result norm							
•		fer to GI-39, "Intermittent Incident".					
YES >> Check intermitte	ent incident. Re	fer to <u>GI-39, "Intermittent Incident"</u> . pination meter) circuit.					
YES >> Check intermitte	ent incident. Re						
YES >> Check intermitte	ent incident. Re						

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#### **KEY WARNING LAMP**

[WITH I-KEY, WITHOUT SUPER LOCK]

### **KEY WARNING LAMP**

Description INFOID:000000001183696

Performs operation method guide and warning together with buzzer.

### Component Function Check

INFOID:0000000001183697

### 1. CHECK FUNCTION

#### (P)With CONSULT-III

Check the operation with "INDICATOR" in "Active Test" with CONSULT-III.

Test item	Condition			
	:BLUE ON	Key warning lamp (green) illuminates		
INDICATOR	:RED ON	Key warning lamp (red) illuminates		
INDICATOR	:BLUE IND Key warning lamp (green) flashes			
	:RED IND	Key warning lamp (red) flashes		

#### Is the inspection result normal?

YES >> Key warning lamp in combination meter is OK.

NO >> Refer to <u>DLK-130, "Diagnosis Procedure"</u>.

### Diagnosis Procedure

INFOID:0000000001183698

### 1. CHECK KEY WARNING LAMP CIRCUIT

Refer to WCS-21, "Component Function Check".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace key warning lamp circuit.

### **LOCK WARNING LAMP**

**IWITH I-KEY. WITHOUT SUPER LOCK1** 

LOCK WARNING LAMP			
Description			INFOID:00000000011836
Performs operation method guide a	INFOID:000000000118370		
1.CHECK FUNCTION			
With CONSULT-III Check the operation with "INDICAT	OR" in "Active	Test" with CONSULT-III.	
Test item		Condition	
INDICATOR	:KNOB ON	Lock warning lamp illuminates	
	:KNOB IND	Lock warning lamp flashes	
Diagnosis Procedure  1. CHECK LOCK WARNING LAM			
Refer to <u>WCS-21, "Component Fur</u> Is the inspection result normal?	nction Check".		
YES >> Check intermittent inci NO >> Repair or replace lock		GI-39, "Intermittent Incident". circuit.	

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#### HAZARD WARNING LAMPS

< COMPONENT DIAGNOSIS >

[WITH I-KEY, WITHOUT SUPER LOCK]

### HAZARD WARNING LAMPS

Description INFOID:000000001183702

Performs answer-back for each operation with the number of blinks.

### Component Function Check

INFOID:0000000001183703

### 1. CHECK FUNCTION

#### (A) With CONSULT-III

Check hazard warning lamp "FLASHER" in "Active test" with CONSULT-III.

#### Is the inspection result normal?

YES >> Hazard warning lamp circuit is OK.

NO >> Refer to <u>DLK-132</u>, "<u>Diagnosis Procedure</u>".

### Diagnosis Procedure

INFOID:0000000001183704

## 1. CHECK HAZARD SWITCH CIRCUIT

Check hazard switch circuit.

Refer to EXL-75, "Component Function Check".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace hazard warning switch circuit.

### **VEHICLE SPEED SIGNAL CIRCUIT**

< COMPONENT DIAGNOSIS >

[WITH I-KEY, WITHOUT SUPER LOCK]

< COMPONENT DIAGNOSIS >	[WITH I-KEY, WITHOUT SUPER LOCK]
VEHICLE SPEED SIGNAL CIRCUIT	
Description	INFOID:000000001183705
Displays the vehicle speed signal received from combination me Component Function Check	ter as a numerical value (km/h).
. CHECK FUNCTION	
Check that all doors are automatically locked at the vehicle spee	ed of more than 25 km/h (16 MPH).
s the inspection result normal?  YES >> Vehicle speed signal circuit is OK.  NO >> Refer to <u>DLK-133, "Diagnosis Procedure"</u> .	
Diagnosis Procedure	INFOID:000000001183707
.CHECK VEHICLE SPEED SIGNAL CIRCUIT	
heck "VEHICLE SPEED" in "Data Monitor" mode in CONSULT-	·III.
sthe inspection result normal?  YES >> Check intermittent incident. Refer to GI-39, "Intermitation of the second o	tent Incident".

### INTELLIGENT KEY BATTERY

Description INFOID:000000001183708

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

- Door lock and unlock
- Engine start

Remote control entry function is available when operating the button.

### Component Function Check

INFOID:0000000001183709

### 1. CHECK INTELLIGENT KEY FUNCTION

Does door lock and unlock operate when operating Intelligent Key switch?

Is the inspection result normal?

YES >> Intelligent Key is OK.

NO >> Refer to <u>DLK-134</u>, "<u>Diagnosis Procedure</u>".

### Diagnosis Procedure

INFOID:0000000001183710

## 1. CHECK INTELLIGENT KEY BATTERY

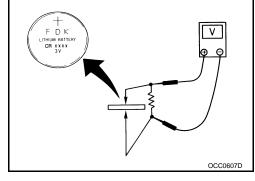
Check by connecting a resistance (approximately 300  $\Omega)$  so that the current value becomes about 10 mA.

Standard : Approx. 2.5 - 3.0 V

Is the measurement value within the specification?

YES >> Replace Intelligent Key.

NO >> Replace Intelligent Key battery. Refer to <u>DLK-279</u>, "Exploded View".



## **ECU DIAGNOSIS**

### INTELLIGENT KEY UNIT

Reference Value

#### VALUES ON THE DIAGNOSIS TOOL

CONSULT	L-III WOI	NITOR	ITFM

Monitor Item		Condition	Value/Status
DI ICH CW	Ignition knob	Release	OFF
PUSH SW	Ignition knob	Press	ON
KEN OM	Machaniaal kay	Removed	OFF
KEY SW	Mechanical key	Inserted	ON
DD DEO CW	Door request switch	Release	OFF
DR REQ SW	(driver)	Press	ON
AC DEO CW	Door request switch	Release	OFF
AS REQ SW	(passenger)	Press	ON
DD/TD DEO SW	Door request switch	Release	OFF
BD/TR REQ SW	(back door)	Press	ON
ICNI CIM	lamition quitab	Other than ON position	OFF
IGN SW	Ignition switch	ON position	ON
ACC CW	lamition quitab	Other than ACC or ON position	OFF
ACC SW	Ignition switch	ACC or ON position	ON
CTOD LAMP CW	Droke nedel	Press	OFF
STOP LAMP SW	Brake pedal	Release	ON
DOOD I OOK SIC	Lock button of	Release	OFF
DOOR LOCK SIG	Intelligent Key	Press	ON
DOOR UNLOCK SIG	Unlock button of	Release	OFF
DOOR UNLOCK SIG	Intelligent Key	Press	ON
DOOD CW DD	Deer (driver eide)	Close	OFF
DOOR SW DR	Door (driver side)	Open	ON
DOOR SW AS	Door (pageonger side)	Close	OFF
DOOK SW AS	Door (passenger side)	Open	ON
DOOD CW DD	Door (roor DII)	Close	OFF
DOOR SW RR	Door (rear RH)	Open	ON
DOOD SW DI	Door (roor LH)	Close	OFF
DOOR SW RL	Door (rear LH)	Open	ON
DOOD BY SW	Pools door	Close	OFF
DOOR BK SW	Back door	Open	ON
VEHICLE SPEED	While driving		Equivalent to speedometer reading

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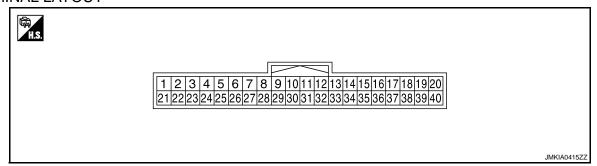
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### TERMINAL LAYOUT



#### PHYSICAL VALUES

Term	ninal No.	\ <i>\\!</i> :=0	Description				\/alua [\/]
+	_	Wire color	Signal name	Input/ Output	(	Condition	Value [V] (Approx.)
1	Ground	LG	Steering lock unit power supply	Output	Ignition switch	OFF or ACC	5
2	Ground	L	CAN-H	Input/ Output		_	_
3	Ground	Р	CAN-L	Input/ Output		_	_
4	Ground	LG	Intelligent Key warn- ing buzzer	Output	Intelligent Key warning	Sounding  Not sounding	0 Battery voltage
					buzzer Front door	ON (Pressed)	0
5	Ground	Р	Front door request switch (driver side)	Input	request switch (driver side)	OFF (Released)	5
6	Ground	W	Ignition switch pow-	Innut	Ignition	OFF or ACC	0
O	Giouna	VV	er supply	Input	switch	ON or START	Battery voltage
7	Ground	V	Key switch	Input	When ignition nition key cylin	key is inserted into ig- nder	Battery voltage
,	Ciduid	v	Troy Switch	mpat	When ignition ignition key cy	key is not inserted into linder	0
11	Ground	٧	Battery power sup- ply	Input	Ignition switch	OFF	Battery voltage
12	Ground	В	Ground		Ignition switch	ON	0
13	Ground	Y	Inside key antenna	Output	Ignition knob	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1   1   1   1   1   1   1   1   1   1
13	Giound	1	(+) (rear seat)	Output	is pressed.	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0

### **INTELLIGENT KEY UNIT**

Term	Terminal No. Description					Value D.O.						
+	-	Wire color	Signal name	Input/ Output	(	Condition	Value [V] (Approx.)	Α				
14	Cround	W	Inside key antenna	Output	Ignition knob	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	B C D				
14	Ground	V	(-) (rear seat)	Output	is pressed.	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1   1   1   1   1   1   1   1   1   1	E				
15	Ground	SB	Inside key antenna	Output	Ignition knob	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1   1   1   1   1   1   1   1   1   1	G H				
15	Glound	36	(+) (console)	is pre				is pressed.	is pressed.	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 4 1   1   1   1   1   1   1   1   1   1	J DLK L
16	Ground	BR	Inside key antenna	Output	Ignition knob	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 III III III III III III III III II	M				
10	Giound	מע	(-) (console)	Output	is pressed.	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0  JMKIA0390ZZ	P				

Term	ninal No.	Wire	Description				\/alice [\/]										
+	_	color	Signal name	Input/ Output	(	Condition	Value [V] (Approx.)										
17	Ground	SB	Outside key antenna	Output	When the back door request switch	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1   1   1   1   1   1   1   1   1   1										
	Clound	35	(+) (rear bumper)		is operated with ignition		When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0514ZZ									
18	Ground	V	Outside key antenna	Output	When the back door request switch	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1   MKIA0395ZZ										
			(-) (rear bumper)	Output quest switch is operated with ignition switch OFF	w										is operated with ignition	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0515ZZ
19	Ground	L	Outside key antenna	Output	When the front door request switch (driver side)	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1   I   I   I   I   I   I   I   I   I										
	9 Ground L (+) (driver side) Output	is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s													

### **INTELLIGENT KEY UNIT**

### [WITH I-KEY, WITHOUT SUPER LOCK]

Term	ninal No.	Wire	Description		Condition		Value [V]
+	_	color	Signal name	Input/ Output			(Approx.)
			Outside key antenna		When the front door request switch	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0395ZZ
20	Ground	BR	(-) (driver side)	Output	(driver side) is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0  JMKIA0515ZZ
oo*1	Craund	W	Kay lask salansid	Outerut	Key lock so-	LOCK*2	Battery voltage
22 <sup>*1</sup>	Ground	VV	Key lock solenoid	Output	lenoid	UNLOCK*2	0
					Front door	ON (Pressed)	0
25	Ground	BR	Front door request switch (passenger side)	Input	request switch (passenger side)	OFF (Released)	5
27	Crawad		lamition lands quitab	lanut	Ignition	When ignition knob switch is pressed	Battery voltage
27	Ground	L	Ignition knob switch	Input	switch OFF	When ignition knob switch is released	0
29	Ground	GR	Back door request	Input	Back door re-	ON (Pressed)	0
23	Stourid	511	switch	mput	quest switch	OFF (Released)	5
31	Ground	GR	Steering lock unit ground	_	_	_	0
						LOCK status	5
32	Ground	Р	Steering lock unit communication	Input/ Output	Steering lock	LOCK or UNLOCK	(V) 6 4 2 0 100 ms JMKIA0433ZZ

**DLK-139** 

Term	Terminal No.		Description				)/.l . D/I	
+	_	Wire color	Signal name	Input/ Output	(	Condition	Value [V] (Approx.)	
33	Ground	0	Inside key antenna (+) (instrument center)	Output	Ignition knob is pressed.	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s 1 s JMKIA0393ZZ	
33						When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0	
34	Ground	G	Inside key antenna (-) (instrument center)	Output	Ignition knob is pressed.	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s 1 s JMKIA0392ZZ	
						When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0390ZZ	
37	Ground	L	Outside key antenna (+) (passenger side)	Output	When the front door request switch (passenger side) is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s 1 s JMKIA0397ZZ	
31						When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1   Million   Million	

### **INTELLIGENT KEY UNIT**

### < ECU DIAGNOSIS >

### [WITH I-KEY, WITHOUT SUPER LOCK]

Term	Terminal No.		Description				Value [V]	
+	_	Wire color	Signal name	Input/ Output	Condition		(Approx.)	
38	Ground	0	Outside key antenna (-) (passenger side)	Output	When the front door request switch (passenger side) is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1   I   I   I   I   I   I   I   I   I	
						When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 1 s JMKIA0515ZZ	
40	Ground	Y	Passenger side anti- hijack relay	Input	Press front door request switch (pas- senger side)	Anti-hijack operation	Battery voltage → 0 → Battery voltage	
						Other than above	Battery voltage	

<sup>\*1:</sup> Only for M/T model.

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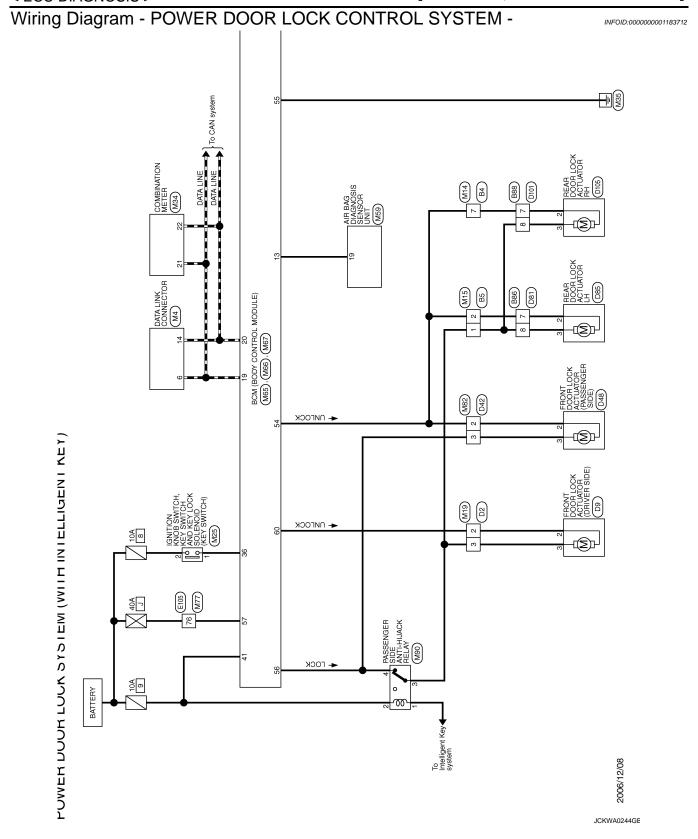
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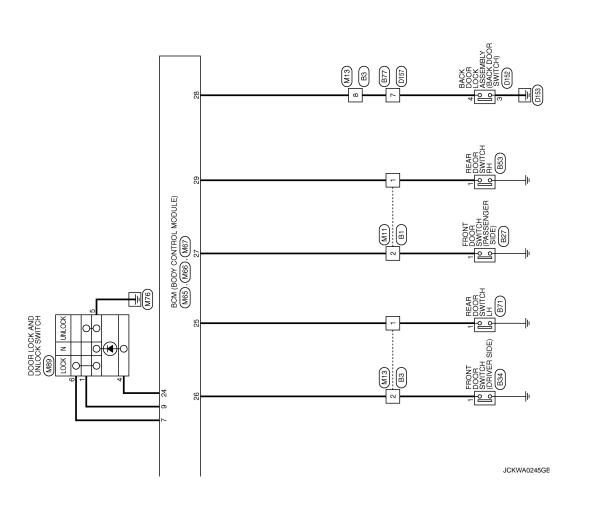
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<sup>\*2:</sup> Key interlock operation is only for M/T model for operation condition, refer to <u>SEC-10, "System Description"</u>.





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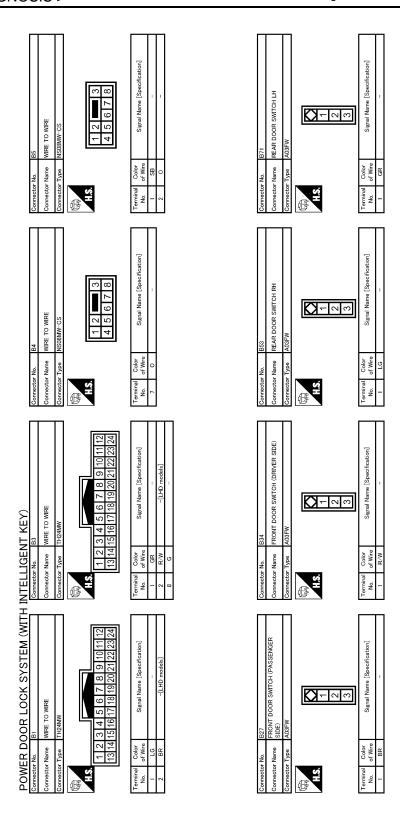
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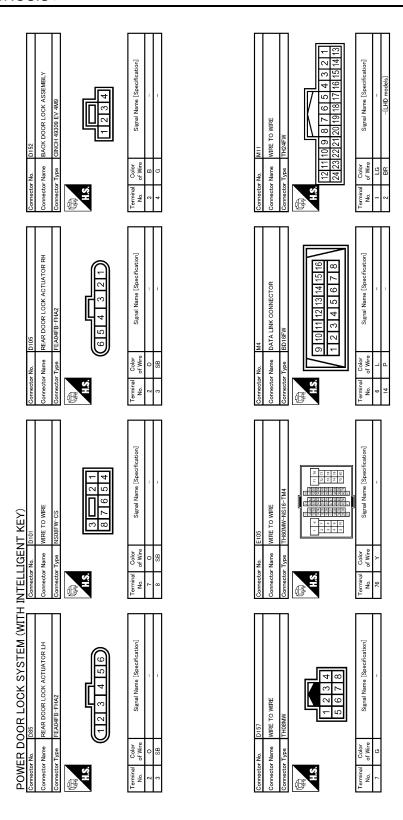
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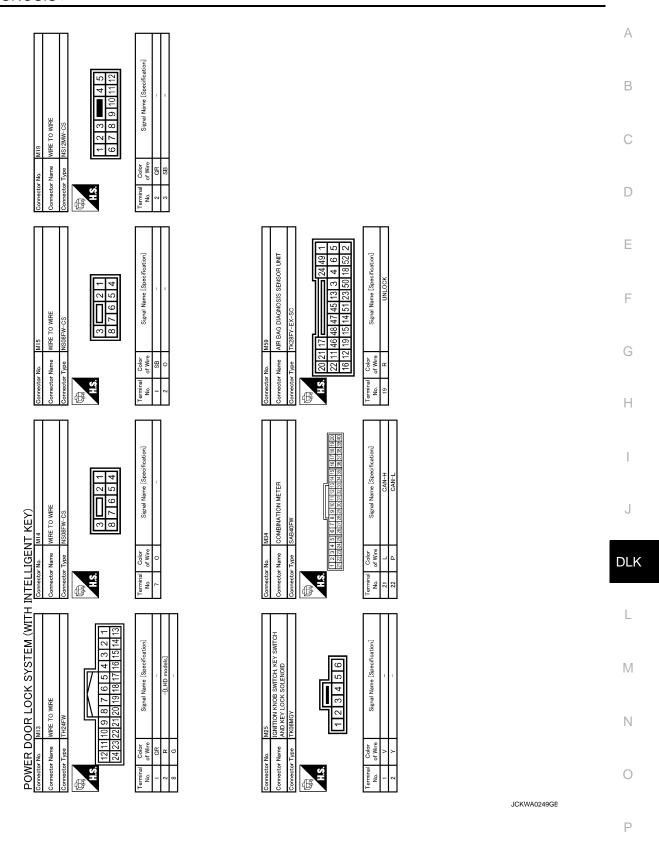


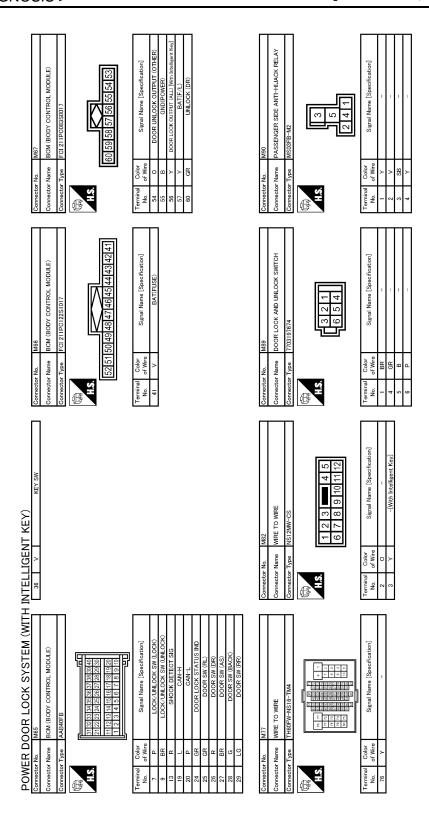
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CS  10 9 8 7 6  Signal Name [Specification]  -[With Intelligent Key]	-CS  T 6 5 4  Signal Name [Specification]		АВ
Connector No.   D2	Connector No.   DB1		C
-05 2	FRONT DOOR LOCK ACTUATOR (PASSENGER SIDE) FEAUAFB—FHAZ   Signal Name Especification]  -[With Intelligent Key] -[With Intelligent Key]		E F
Connector No.   B88	Connector No. D48 Connector Name (PASSEN Connector Type FEAJ4FB H.S. H.S.  Terminal Color No. of Wire 2 P 3 Y		G H
NSGRWW-CS NSGRWW-CS Signal Name [Specification]	DH2   NS12FW-CS		J
H INTELLIGEN Connector Name Connector Name Connector Types Terminal Color No of Wive 7 0 0 7 0	Connector No. Connector Name Connector Type No. of Wire 2 P 3 Y		DLK L
POWER DOOR LOCK SYSTEM (WIT Connector Name 1770 WIRE Connector Type 17405 W  ALS   4 3 2 1    Reminal   Color Signal Name (Specification)    7   G   Connector Type   Signal Name (Specification)	PRONT DOOR LOCK ACTUATOR (DRIVER SIDE) FEAGAFB-FHA2  T 2 3 4 5 6  Signal Name [Specification] -[With Intelligent Key] -[With Intelligent Key]		M
POWER DOOR Connector No.  Connector Name WRE TO Connector Type TH06FW  Terminal Color No.  of Wire  7	Connector No. D9 Connector Name SIJED Connector Type FEAGN No. of Wive 2 GR 3 R.Y Y	JCKWA0247GE	0
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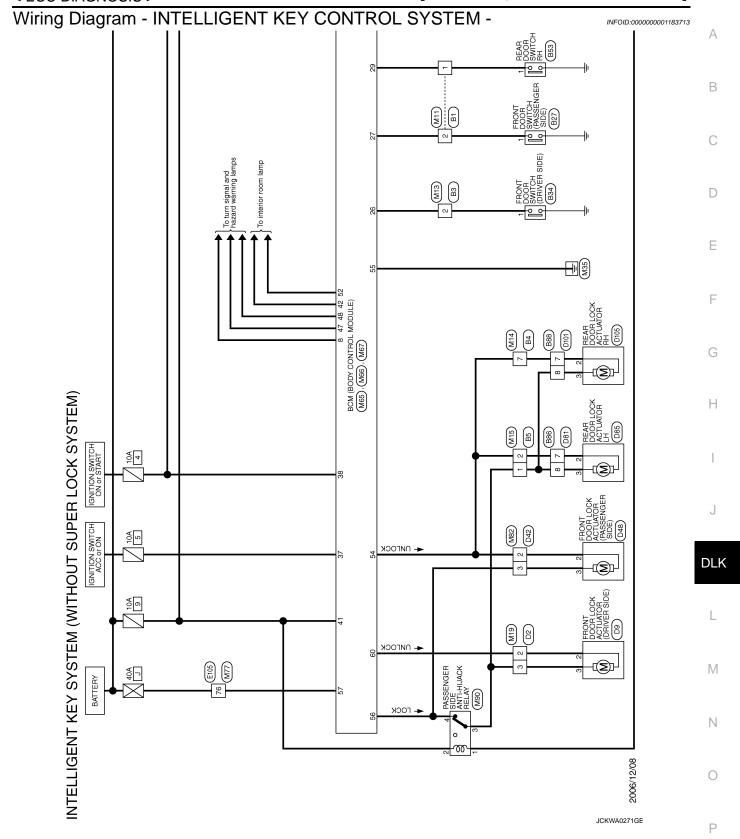


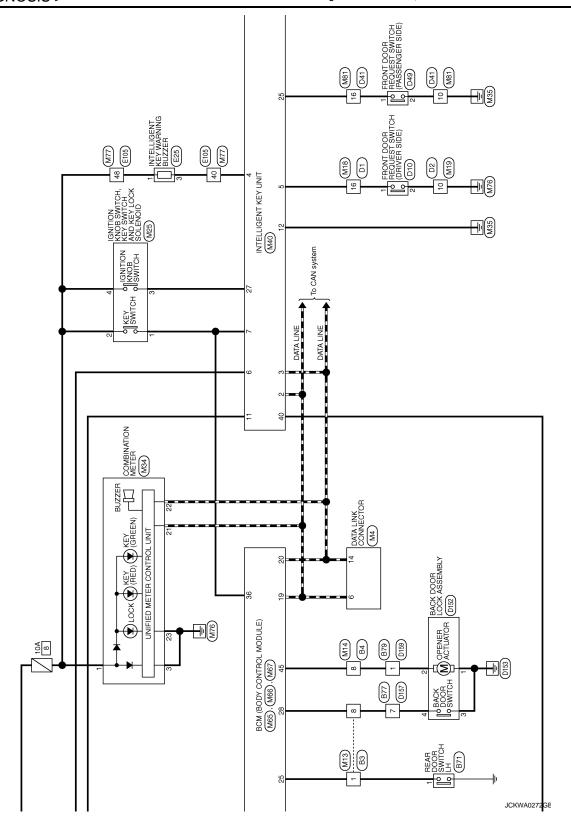
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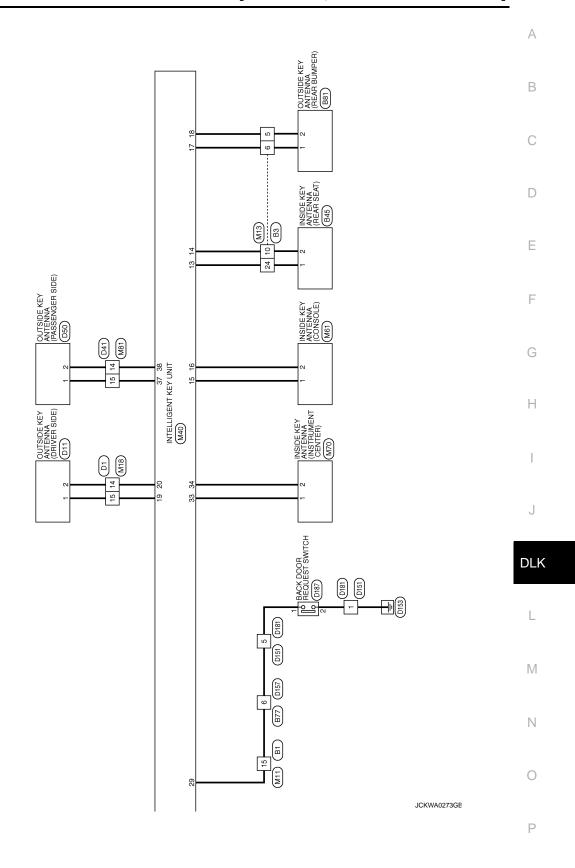


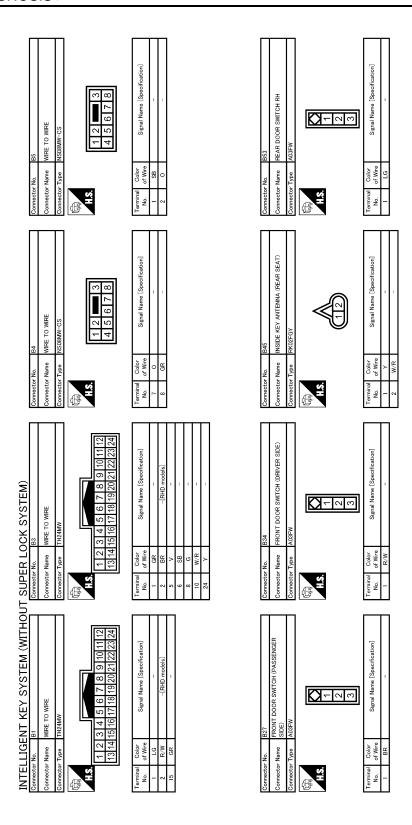


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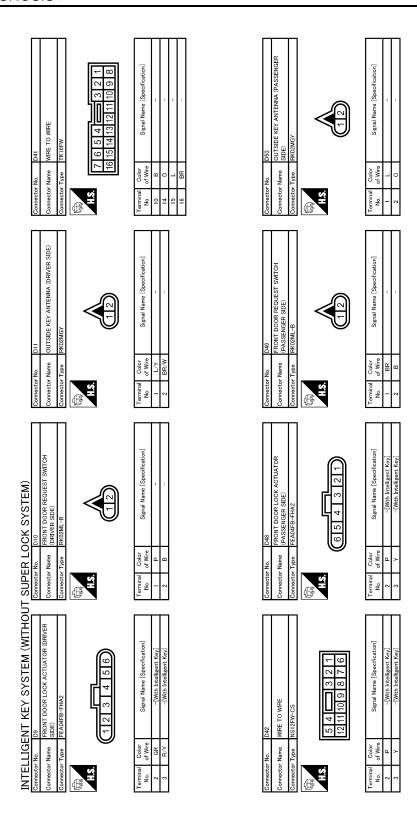




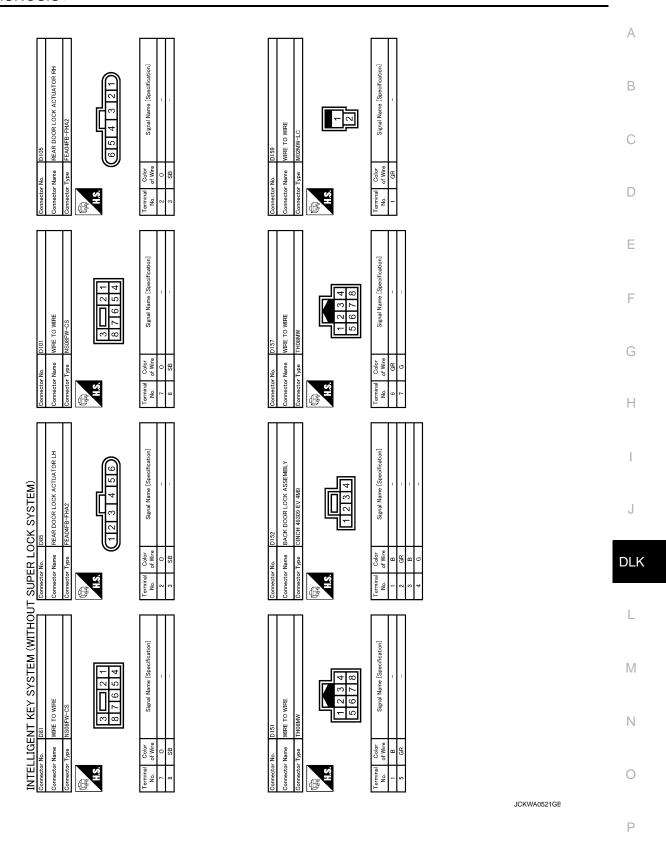


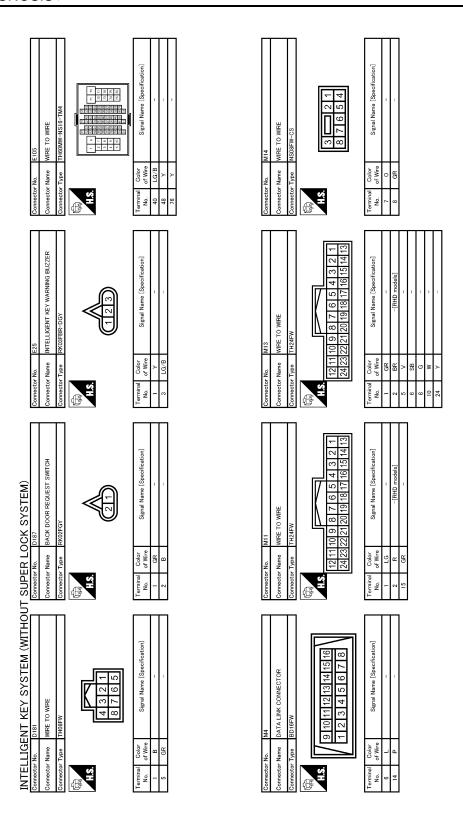
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BB1 OUTSIDE KEY ANTENNA (REAR BUMPER) RKOZFGY  Signal Name [Specification]	D2 WIRE TO WIRE NSI/2PW-CS  NSI/2PW-CS  5 4  3 2 1  12 11 10 9 8 7 6  Signal Name [Specification]  -[With Intelligent Key]	В
Connector No. Connector Name Connector Type  I.S.  I.S	Connector No. Connector Name Connector Type  Terminal Color No. 2 GWre 2 GR 2 GR 10 B	D
WIRE TO WIRE  MOZEW-LC  Signal Name [Specification]	WIRE TO WIRE   TK16FW	E F
Commettor No. B79 Commettor Name WIFE Commettor Type MOZE H.S. H.S.  Terminal Color No. of Wire 1 GR	Connector No.   D1	G H
SYSTEM) whre 4 3 2 1 8 7 6 5 Signal Name [Specification]	WIRE  CS  2   1   3   5   6   7   8   5   5   6   7   8   5   5   6   7   8   5   5   6   7   8   5   5   6   7   8   5   5   6   7   8   5   5   6   7   8   5   5   6   7   8   5   5   6   7   8   5   5   6   7   8   5   5   6   7   8   5   5   6   7   8   5   5   6   7   8   5   5   6   7   8   5   5   6   7   8   5   5   6   7   8   5   5   6   7   8   5   5   6   7   8   5   5   6   7   8   5   6   7   8   8	I J
SUPER LOCK Somestor No. B17 Connector Name WRE TO Connector Type TH08FW Connector Type TH08FW No. of Wire 6 GR 7 G	Connector No.   B88	DLK
INTELLIGENT KEY SYSTEM (WITHOUT Connector No. B71  Connector Name REAR DOOR SWITCH LH  Connector Type A03FW  A18.	WIRE -CS  2	L M
LIGENT KEY SYST No. B71 Nome REAR DOOR SWITCH LH Type A03FW  Color Signal Name [Sp GR	1	N
Connector No. Connector Name Connector Type Connector Type A.S.  H.S.  I erminal Color No. Of Wire  Of	Connector No. Connector Type Connector Type H.S. H.S. No. R.	JCKWA0519GE
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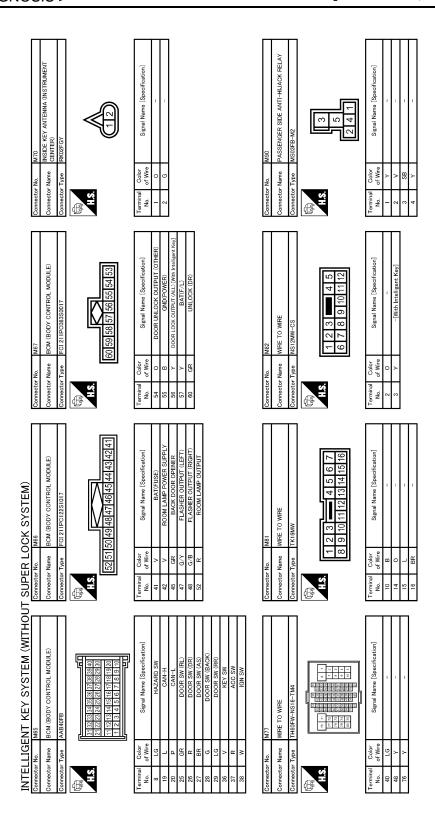
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JCKWA0522GE

Connector No. M25 Connector Name Intrinsic Manual AND REY LOCK SOLENDID Connector Type TYGOMGY  MANUAL MANU	Terminal   Color   Signal Name   Specification	Connector No. M61 Connector Name INSIDE KEY ANTENNA (CONSOLE) Connector Type RNQ2FGY  Terminal Color No. of Wire Signal Name [Specification] 1 SB 2 BR		A B C
Connector No.         MIII           Connector Name         WIRE TO WIRE           Connector Type         NS12MW-CS           MAINTERNATION OF THE TOWNER         Image: Connector Type           Image: Connector Type         I	Terminal   Color   Signal Name   Specification   Color   Col	16 BR		E F G
T SUPER LOCK SYSTEM)   Gomestor No.   MIS   Connector Type   TK16MW   MRE TO WIRE	No.   Color   Signal Name [Specification]   14   ER     -	Connector No.   M4D		J DLK
INTELLIGENT KEY SYSTEM (WITHOUT Connector No. MIS  Connector Name WRE TO WISE  Connector Type INSOSPY-CS  (A)  (A)  (B)  (B)  (B)  (C)  (C)  (C)  (C)  (C	Terminal   Color   Signal Mame [Specification]   No.   S.     S.	Connector No.   M34	JCKWA0523GE	M N
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Wiring Diagram - BACK DOOR OPENER CONTROL SYSTEM -

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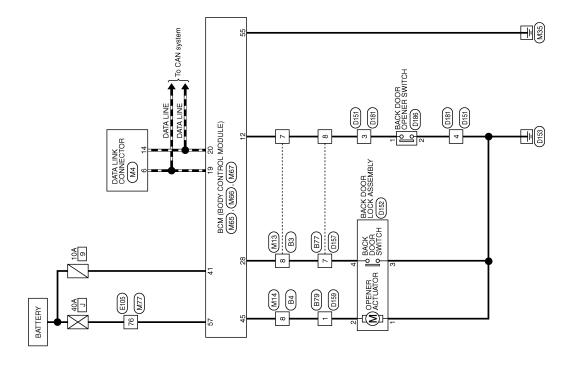
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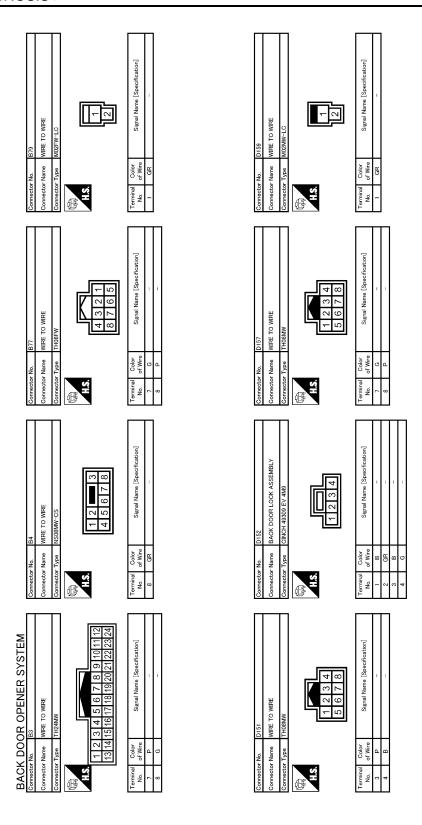
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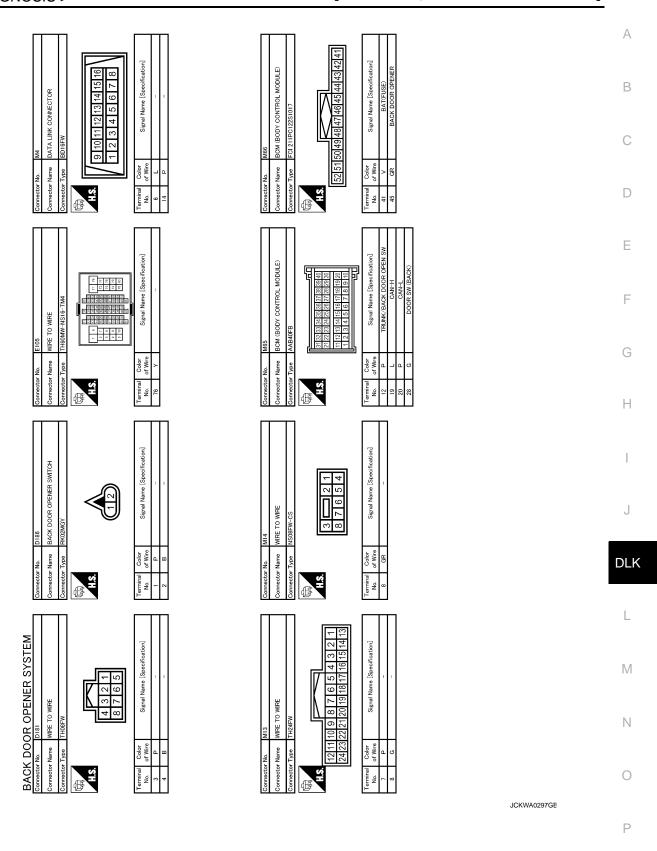
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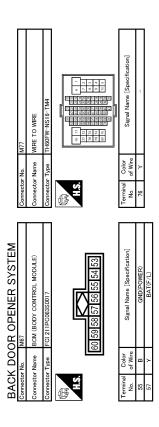
JCKWA0295GE

BACK DOOR OPENER SYSTEM



JCKWA0296GE





JCKWA0298GE

Fail Safe

Display contents of CONSULT-III	Fail-safe	Cancellation
B2013: STRG COMM 1	Inhibits steering look unlocking	Erase DTC
B2552: INTELLIGENT KEY	Inhibits steering look unlocking     Inhibits engine cranking     (BCM)     Fuel cut     (ECM)	Erase DTC
B2590: NATS MALFUNCTION	Inhibits steering look unlocking     Inhibits engine cranking     (BCM)     Fuel cut     (ECM)	Erase DTC

## DTC Inspection Priority Chart

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

Priority	DTC
1	U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN) B2552: INTELIGENT KEY
2	B2013: STRG COMM 1     B2590: NATS MALFUNCTION

DTC Index

#### 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	Detection condition	Fail-safe	Diagnosis
No DTC is detected. further testing may be required.	_	_	_
U1000: CAN COMM CIRCUIT	Intelligent Key unit cannot receive CAN communication signal continuously for 2 seconds or more.	_	Check CAN communication system.  Refer to SEC-33
U1010: CONTROL UNIT (CAN)	Intelligent Key unit detects internal CAN communication circuit malfunction.	_	Replace Intelligent Key unit.
B2013: STRG COMM 1	The ID verification result between Intelligent key unit and steering lock unit are NG. Or Intelligent Key unit cannot communicate with steering lock unit.	×	Perform steering lock unit ID registration with CONSULT-III
B2552: INTELLIGENT KEY	Intelligent Key unit internal malfunction.	×	Replace Intelligent Key unit.
B2590: NATS MALFUNCTION	The ID verification result between Intelligent key unit and BCM are NG. Or Intelligent Key unit cannot communicate with BCM.	×	Check NATS Refer to <u>SEC-55</u>

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Reference Value

#### VALUES ON THE DIAGNOSIS TOOL

Monitor Item		Value/Status		
ACC ON SW	Ignition switch OFF	Off		
ACC ON SW	Ignition switch ACC or ON	On		
AIR COND SW	A/C switch OFF			
AIR COIND SW	A/C switch ON		On	
AUT LIGHT SYS	Outside of the room is bri	ght	Off	
AUT LIGITI 313	Outside of the room is da	On		
AUTO LIGHT SW	Lighting switch OFF		Off	
AUTO LIGHT SW	Lighting switch AUTO		On	
AUTO RELOCK	Auto lock function does no	ot operate	Off	
AUTO RELOCK	Auto lock function is oper	ating	On	
BACK DOOD SW	Back door closed		Off	
BACK DOOR SW	Back door opened		On	
BATTERY VOLT NOTE: Diesel engine models only	Ignition switch ON	Approximately the same as power supply voltage		
BRAKE SW	Brake pedal is not depres	sed	Off	
DRAKE SW	Brake pedal is depressed		On	
CDL LOCK SW	Door lock/unlock switch d	Off		
CDL LOCK 3W	Press door lock/unlock sv	On		
CDL UNLOCK SW	Door lock/unlock switch d	Off		
CDL UNLOCK SW	Press door lock/unlock sv	On		
DOOR SW-AS	Passenger door closed	Off		
DOOK SW-AS	Passenger door opened	On		
DOOR SW-DR	Driver door closed	Off		
DOOK SW-DK	Driver door opened	On		
DOOR SW-RL	Rear LH door closed	Off		
DOOK SW-KL	Rear LH door opened	On		
DOOR SW-RR	Rear RH door closed		Off	
DOOK SW-KK	Rear RH door opened	On		
		Fan switch ON (when engine coolant is cool)  NOTE: Depending on the ambient temperature, battery voltage, etc.	Off	
ELEC PWR CUT NOTE:	Engine running	The current status maintained with the signal from ECM received.	FREEZ	
Diesel engine models only		Fan switch OFF     Fan switch ON after engine warming UP     NOTE:     Depending on the engine coolant temperature, ambient temperature, battery voltage, etc.	INHBT	

#### < ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status		
ENG COOLNT T  NOTE: Diesel engine models only	Engine rupping Approximately the same as wa			
ENGINE RPM NOTE: Diesel engine models only	Engine running	Approximately the same as tachometer reading		
ENGINE RUN	Engine stopped	Off		
LINGINE RON	Engine running	On		
ENGINE STATUS	Engine stopped	STOP		
NOTE:	While the engine stalls	STALL		
Diesel engine models	Engine running	RUN		
only	At engine cranking	CRA		
FAN ON SIG	Fan switch OFF	Off		
AN ON SIG	Fan switch ON	On		
FR FOG SW	Front fog lamp switch OFF	Off		
IN FUG SW	Front fog lamp switch ON	On		
FR WASHER SW	Front washer switch OFF	Off		
FR WASHER SW	Front washer switch ON	On		
ED WIDED LOW	Front wiper switch OFF	Off		
FR WIPER LOW	Front wiper switch LO	On		
	Front wiper switch OFF	Off		
FR WIPER HI	Front wiper switch HI	On		
ED WIDED INT	Front wiper switch OFF	Off		
FR WIPER INT	Front wiper switch INT	On		
ED WIDED OTOD	Any position other than front wiper stop position	Off		
FR WIPER STOP	Front wiper stop position	On		
	The vehicle without glass break sensor	On		
GLS BREAK SEN	The vehicle with glass break sensor	Off		
114.74.D.D. O.M.	When hazard switch is not pressed	Off		
HAZARD SW	When hazard switch is pressed	On		
HD LIGHT TIME	_	Displays a setting time of the follow me home function set by the work support		
HEAD LAMP SW 1	Lighting switch OFF	Off		
	Lighting switch 2ND	On		
HEAD LAMP SW 2	Lighting switch OFF	Off		
LILAD LAWIF 344 Z	Lighting switch 2ND	On		
HI BEAM SW	Lighting switch OFF	Off		
III DEANN OVV	Lighting switch HI	On		
HOOD SW	Close the hood NOTE: Vehicles without theft warning system are OFF-fixed	Off		
	Open the hood	On		
H/L WASH SW	NOTE: The item is indicated, but not monitored	Off		

#### < ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
IONI ONI OW	Ignition switch OFF or ACC	Off
IGN ON SW	Ignition switch ON	On
IONI OW OAN	Ignition switch OFF or ACC	Off
IGN SW CAN	Ignition switch ON	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7
LKEVLOCK	LOCK button of Intelligent Key is not pressed	Off
I-KEY LOCK	LOCK button of Intelligent Key is pressed	On
LIZEV LINILOOK	UNLOCK button of Intelligent Key is not pressed	Off
I-KEY UNLOCK	UNLOCK button of Intelligent Key is pressed	On
KEY ON OW	Mechanical key is removed from key cylinder	Off
KEY ON SW	Mechanical key is inserted to key cylinder	On
1/E)// E00 L00//	LOCK button of key fob is not pressed	Off
KEYLESS LOCK	LOCK button of key fob is pressed	On
KEY LESS PANIC	NOTE: The item is indicated, but not monitored	Off
	UNLOCK button of key fob is not pressed	Off
KEYLESS UNLOCK	UNLOCK button of key fob is pressed	On
	Light & rain sensor is in normal condition	OK
LIT-SEN FAIL	Light & rain sensor is with internal error	NOT OK
	Key fob ID code is not registered in "Memory 1"	Off
MEMORY 1	Key fob ID code is registered in "Memory 1"	On
	Key fob ID code is not registered in "Memory 2"	Off
MEMORY 2	Key fob ID code is registered in "Memory 2"	On
	Key fob ID code is not registered in "Memory 3"	Off
MEMORY 3	Key fob ID code is registered in "Memory 3"	On
	Key fob ID code is not registered in "Memory 4"	Off
MEMORY 4	Key fob ID code is registered in "Memory 4"	On
	Key fob ID code is not registered in "Memory 5"	Off
MEMORY 5	Key fob ID code is registered in "Memory 5"	On
OIL PRESS SW	Ignition switch OFF or ACC     Engine running	Off
	Ignition switch ON	On
OUT SIDE TEMP NOTE: Diesel engine models	Ignition switch ON	Approximately the same as outside air temperature
	Other than lighting switch PASS	Off
PASSING SW	Lighting switch PASS	On
	Except selector lever R position	Off
REVERSE SW CAN	Selector lever R position	On
	Return to ignition switch to LOCK position	Off
PUSH SW	Press ignition switch	On
DEAD DEE 2000	Rear window defogger switch OFF	Off
REAR DEF SW	Rear window defogger switch ON	On
	Rear fog lamp switch OFF	Off
RR FOG SW	Rear fog lamp switch ON	On

#### < ECU DIAGNOSIS >

## [WITH I-KÉY, WITHOUT SUPER LOCK]

Monitor Item	Condition	Value/Status
RR WASHER SW	Rear washer switch OFF	Off
KK WASHER SW	Rear washer switch ON	On
RR WIPER INT	Rear wiper switch OFF	Off
KK WIFEK INI	Rear wiper switch INT	On
RR WIPER ON	Rear wiper switch OFF	Off
RR WIPER ON	Rear wiper switch ON	On
RR WIPER STOP	Rear wiper stop position	Off
RR WIPER STOP	Other than rear wiper stop position	On
	Ignition switch ON	NOMAL
SHOCK SENSOR	After the reception of air bag deployment signal from air bag diagnosis sensor unit	Off
	During the reception of air bag deployment signal from air bag diagnosis sensor unit	On
TAIL LAND CVA	Lighting switch OFF	Off
TAIL LAMP SW	Lighting switch 1ST	On
TRNK OPNR SW	When back door opener switch is not pressed	Off
TRINK OPINK 5W	When back door opener switch is pressed	On
TURN SIGNAL L	Turn signal switch OFF	Off
TURN SIGNAL L	Turn signal switch LH	On
TURN SIGNAL R	Turn signal switch OFF	Off
I UKIN SIGNAL K	Turn signal switch RH	On
LINI OCK CHOCK	Other than the following	Off
UNLOCK SHOCK	During the unlock operation interlocked with air bag	On
VEHICLE SPEED	While driving	Equivalent to speedometer reading

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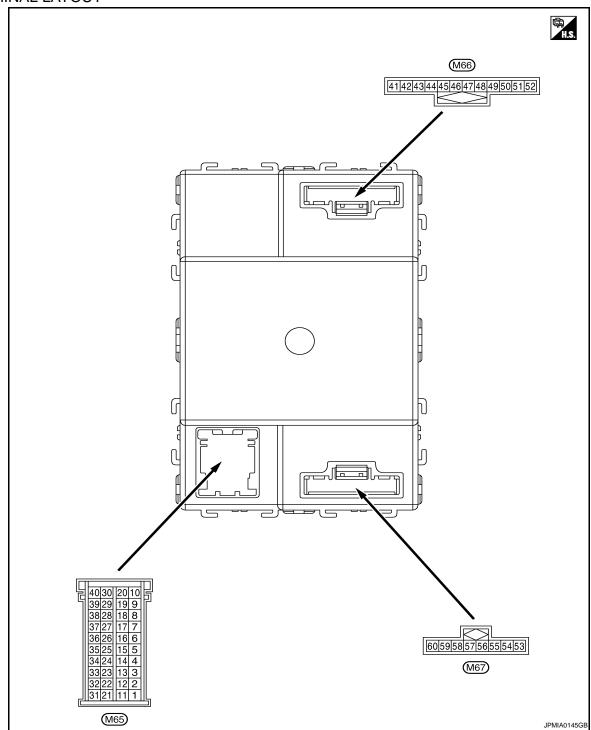
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#### **TERMINAL LAYOUT**



#### PHYSICAL VALUES

#### **CAUTION:**

- Check combination switch system terminal waveform under the loaded condition with lighting switch, turn signal switch and wiper switch OFF is not to be fluctuated by being overloaded.
- Turn wiper intermittent dial position to 4 except when checking waveform or voltage of wiper intermittent dial position. Wiper intermittent dial position can be confirmed on CONSULT-III. Refer to BCS-27, "COMB SW: CONSULT-III Function (BCM COMB SW)".
- BCM reads the status of the combination switch at 10 ms internal normally. Refer to <u>BCS-10, "System Description"</u>.

	nal No.	Description			0 150	Value	
+	e color)	Signal name	Input/ Output		Condition	(Approx.)	
					All switch OFF (Wiper intermittent dial 4)	0 V	
					Front wiper switch HI (Wiper intermittent dial 4)		
1	Ground	Combination switch	Output	Combination	Rear wiper switch INT (Wiper intermittent dial 4)	(V) 15 10	
(P)	Giodila	OUTPUT 1	Output	switch	Any of the condition below with all switch OFF	5 0	
					<ul><li>Wiper intermittent dial 1</li><li>Wiper intermittent dial 2</li><li>Wiper intermittent dial 3</li></ul>	→ - 2ms	
					<ul><li>Wiper intermittent dial 6</li><li>Wiper intermittent dial 7</li></ul>	9.1 V	
					All switch OFF	0 V	
					Lighting switch 2ND	_	
				Combination	Lighting switch PASS	(V) 15	
2	Ground	Combination switch	Output	switch	Front fog lamp switch ON	10	
(Y)	Ciouna	OUTPUT 4	Guipui	(Wiper intermit- tent dial 4)	Turn signal switch LH	0 → -2ms JPMIA0163GB	
						9.3 V	
					All switch OFF	0 V	
					Lighting switch AUTO	(V)	
_				Combination	Rear fog lamp switch OFF	15	
3 (LG)	Ground	Combination switch OUTPUT 3	Output	switch (Wiper intermit-	Front wiper switch MIST Front wiper switch INT	5	
` ,				tent dial 4)	From wiper switch in i	→ 2ms	
					Front wiper switch LO	JPMIA0162GB	
					All quitek OFF	9.3 V	
					All switch OFF (Wiper intermittent dial 4)	0 V	
					Front washer switch ON (Wiper intermittent dial 4)		
4		Combination switch		Combination	Rear wiper switch ON (Wiper intermittent dial 4)	(V) 15	
(R)	Ground	OUTPUT 2	Output	switch	Rear washer switch ON (Wiper intermittent dial 4)	10 5 0	
					Any of the condition below with all switch OFF  Wiper intermittent dial 1  Wiper intermittent dial 5  Wiper intermittent dial 6	JPMIA0161GB	

Signal name Output Outp	Terminal No.			Description				Val.	
Ground Combination switch OUTPUT 5  Ground Door lock/unlock switch (Lock)  Torn signal switch RH  Turn signal switch RH  Turn signal switch RH  Turn signal switch RH  Torn signal swit			-	Signal name			Condition	Value (Approx.)	
Ground Combination switch OUTPUT 5  Ground Combination switch OUTPUT 5  Output Combination switch (Wiper intermittent dial 4)  Turn signal switch RH  Turn signal switch RH  Turn signal switch RH  Output Combination switch (Wiper intermittent dial 4)  Turn signal switch RH  Turn signal switch RH  Output Combination switch (Wiper intermittent dial 4)  Turn signal switch RH  Output Turn signal sw							All switch OFF	0 V	
Ground Combination switch OUTPUT 5  Ground Combination switch OUTPUT 5  Output Combination switch (Wiper intermittent dial 4)  Turn signal switch RH  Turn signal switch RH  Output Signal switch RH  Turn signal switch RH  Output Signal switch RH  Turn signal switch RH  Output Signal switch RH  Ou							Lighting switch 1ST		
Fressed to the lock side  Ground Combination switch OUTPUT 5  Output Switch (Wiper intermittent dial 4)  Turn signal switch HI  Turn signal switch RH  Turn signal switch RH  Door lock/unlock switch (Lock)  Pressed to the lock side  Ground Hazard switch  By JPMIA0164G  1.2 V  Pressed to the lock side  Output Switch (Wiper intermittent dial 4)  Turn signal switch HI  Turn signal switch RH  Pressed to the lock side  Output Switch (Vintermittent dial 4)  Turn signal switch RH  Pressed to the lock side  Output Switch (Vintermittent dial 4)  Pressed to the lock side  Output Switch (Vintermittent dial 4)  Not pressed  Not pressed  Not pressed						Combination	Lighting switch 2ND	(V)	
Turn signal switch RH		Ground			Output	switch	Lighting switch HI	10	
Ground Ground Door lock/unlock switch Input Door lock/unlock switch    Not pressed   1.5   10   10   10   10   10   10   10   1	(W)	Ground	(W)	OUTPUT 5	Output		Turn signal switch RH	0 → +2ms JPMIA0164GB	
Pressed to the lock side 0 V  8 Ground Hazard switch Input Hazard switch  Not pressed	7 (P)	Ground	7 (P)		Input		Not pressed	15 10 5 0 → ←10ms JPMIA0154GB	
8 Ground Hazard switch Input Hazard switch  Not pressed							Pressed to the lock side		
	8 (LG)	Ground		Hazard switch	Input	Hazard switch	Not pressed	15 10 5 0 → ←10ms JPMIA0154GB	
Pressed 0 V							Pressed	0 V	
9 (BR) Ground Door lock/unlock switch (Unlock) Input Door lock/unlock switch    Door lock/unlock switch   Not pressed	9 (BR)	Ground	9 (BR)		Input		Not pressed	15 10 5 0 → ←10ms JPMIA0154GB	
Pressed to the unlock side 0 V							Pressed to the unlock side	0 V	
12 (P) Ground Back door opener switch Input Back door opener switch Not pressed Opener switch Not pressed 1.2 V		Ground			Input		Not pressed	15 10 5 0 10ms JPMIA0154GB	
Pressed 0 V							Pressed	0 V	

< ECU DIAGNOSIS >

Terminal No. Description (Wire color)					Value	
+ (vvire	–	Signal name	Input/ Output		Condition	(Approx.)
				Ignition switch O	FF or ACC	0 V
13 (R) Ground Shock detect sensor	Shock detect sensor	Input	Ignition switch ON		(V) 15 10 5 0	
					JPMIA0155GB 6.0 V	
14	Ground	A/C switch	Input	A/C switch	Not pressed	Battery voltage
(L/R)			·		Pressed	0 V
15	Ground	Fan switch	Input	Fan switch	Not pressed	Battery voltage
(LG/B)			- •	2	Pressed	0 V
16 (GR)	Ground	Alarm link	Output		_	_
			Ignition switch O	FF or ACC	Battery voltage	
17 (BR)	Ground	Light & rain sensor serial link	Input/ Output	Ignition switch ON		(V) 15 10 5 0
					ON	3PMIA0156GB 8.7 V
18 (SB)	Ground	Security indicator	Output Security indicator	Blinking	(V) 15 10 5 0 JPMIA0014GB	
					OFF	Battery voltage
19 (L)	_	CAN-H	Input/ Output		<u> </u>	_
20 (P)	_	CAN-L	Input/ Output		_	_
21 (SB)	Ground	Rear window defog- ger switch	Input	Rear window defogger switch	Not pressed	(V) 15 10 5 0 10ms JPMIA0154GB
				i e	I .	01 WII/10134GB

	nal No.	Description				Value	
(Wire	color)	Signal name Input/			Condition	Value (Approx.)	
24		Door lock status indi-		Door lock status	ON	Battery voltage	
(GR)	Ground	cator	Output	indicator	OFF	0 V	
25 (GR)	Ground	Rear door switch LH	Input	Rear door switch LH	OFF (When rear door LH closed)  ON (When rear door LH opened)	(V) 15 10 5 0 PKID0924E 11.2 V	
26 (R)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closed)	(V) 15 10 5 0 10 ms 10 ms PKID0924E	
					ON (When driver door opened)	0 V	
27 (BR)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closed)	(V) 15 10 5 0 10 ms PKID0924E 11.2 V	
					ON (When passenger door opened)	0 V	
28	Ground	Back door switch	Input	Back door	OFF (When back door closed)	Battery voltage	
(G)	Ground	Dack Goo! SWILCH	прис	switch	ON (When back door opened)	0 V	
29 (LG)	Ground	Rear door switch RH	Input	Rear door switch RH	OFF (When rear door RH closed)	(V) 15 10 5 0 10 ms 10 ms PKID0924E	
					ON (When rear door RH opened)	0 V	
30 (SB)	Ground	Audio link	Input/ Output	_	_	_	

#### < ECU DIAGNOSIS >

## [WITH I-KÉY, WITHOUT SUPER LOCK]

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	Terminal No. Description (Wire color)				Value	А	
+ (vvire	- COIOF)	Signal name	Input/ Output		Condition	(Approx.)	
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 JPMIA0165GB 1.3 V	B C
					Front fog lamp switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 → 1ms JPMIA0167GB 1.3 V	E
31 (BR)			Input	Combination switch	Rear fog lamp switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 JPMIA0168GB 1.3 V	G H
					Rear wiper switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 JPMIA0169GB 1.3 V	J DLk
					Any of the condition below with all switch OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 2  • Wiper intermittent dial 6  • Wiper intermittent dial 7	(V) 15 10 5 0 JPMIA0196GB 1.3 V	M

	nal No.	Description				Value
+ (Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF	(V) 15 10 5 0 JPMIA0165GB 1.4 V
					Lighting switch PASS	(V) 15 10 5 0 JPMIA0167GB 1.3 V
32 (G)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermit- tent dial 4)	Lighting switch 2ND	(V) 15 10 5 0 JPMIA0166GB 1.3 V
					Front wiper switch INT	(V) 15 10 5 0 1ms JPMIA0168GB 1.3 V
					Front wiper switch HI	(V) 15 10 5 0 JPMIA0196GB 1.3 V

#### < ECU DIAGNOSIS >

## [WITH I-KÉY, WITHOUT SUPER LOCK]

Ρ

Terminal No. Descript (Wire color)		Description			0 11:	Value	
+	<u> </u>	Signal name	Input/ Output		Condition	(Approx.)	
					All switch OFF	(V) 15 10 5 0 JPMIA0165GB 1.4 V	
					Turn signal switch LH	(V) 15 10 5 0 JPMIA0167GB 1.3 V	
33 Ground Combination s INPUT 1	Combination switch INPUT 1	Input	Combination switch (Wiper intermit- tent dial 4)	Turn signal switch RH	(V) 15 10 5 0 JPMIA0166GB 1.3 V		
		Front wiper switch LO	(V) 15 10 5 0 JPMIA0168GB 1.3 V				
		Front washer switch ON	(V) 15 10 5 0 JPMIA0196GB 1.3 V				

	nal No. color)	Description				Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 JPMIA0165GB 1.4 V
					Lighting switch AUTO (Wiper intermittent dial 4)	(V) 15 10 5 0 JPMIA0167GB 1.3 V
34 (GR)	Ground	Combination switch INPUT 4	Input	Combination switch	Lighting switch 1ST (Wiper intermittent dial 4)	(V) 15 10 5 0 JPMIA0166GB 1.3 V
					Rear wiper INT (Wiper intermittent dial 4)	(V) 15 10 5 0 1.3 V
					Any of the condition below with all switch OFF  Wiper intermittent dial 1  Wiper intermittent dial 6	(V) 15 10 5 0 JPMIA0196GB 1.3 V

Terminal No. Description					Value	
+ (vvire	Vire color)  Signal name  Input/ Output		Condition	(Approx.)		
			Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 JPMIA0165GB 1.4 V
					Lighting switch HI (Wiper intermittent dial 4)	(V) 15 10 5 0 1ms JPMIA0166GB 1.3 V
35 (L)		Combination switch INPUT 3			Lighting switch 2ND (Wiper intermittent dial 4)	(V) 15 10 5 0 1ms JPMIA0167GB 1.3 V
					Rear wiper switch ON	(V) 15 10 5 0 1ms JPMIA0169GB 1.3 V
				Any of the condition below with all switch OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 2  • Wiper intermittent dial 3	(V) 15 10 5 0 → 1ms 1 JPMIA0196GB 1.3 V	
36 (V)	Ground	Key switch	Input	der  Remove mecha	al key into ignition key cylin- nical key from ignition key	Battery voltage
37	Ground	ACC power supply	Input	cylinder Ignition switch C		0 V
(R) 38	Ground	Ignition power sup-	Input	Ignition switch A		Battery voltage 0 V
(W)		ply		Ignition switch C	DN	Battery voltage

Termi	nal No.	Description				
(Wire	color)	Signal name	Input/ Output		Condition	Value (Approx.)
39 (P)	Ground	NATS antenna amp.	Input/ Output	Insert mechanica	al key into ignition key cylin-	Just after Insert mechanical key into ignition key cylinder. Pointer of tester should move
40 (LG)	Ground	NATS antenna amp.	Input/ Output	Insert mechanical key into ignition key cylinder		Just after Insert mechanical key into ignition key cylinder. Pointer of tester should move
41 (V)	Ground	Battery power sup- ply	Input	Ignition switch O	FF	Battery voltage
42	Ground	Interior room lamp	Output	After passing the saver operation t	interior room lamp battery ime	0 V
(V)	Ground	power supply	Output	Any other time af lamp battery sav	ter passing the interior room er operation time	Battery voltage
43	Ground	Rear wiper motor	Output	Rear wiper switch	h OFF	0 V
(L)	Oroana	rtodi impor motor	- Catpat	Rear wiper switch	h ON	Battery voltage
					Rear wiper stop position	0 V
44 (L/W)	Ground	Rear wiper auto stop	Input	Ignition switch ON	Any position other than rear wiper stop position	(V) 15 10 5 0 → -10ms JPMIA0197GB
45	Ground	Back door lock actu-	0 1 1	Back door	Pressed	Battery voltage (300ms)
(GR)	Ground	ator	Output	opener switch	Not pressed	0 V
					Turn signal switch OFF	0 V
47 (G/Y)	Ground	Turn signal LH	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s PKID0926E
					Turn signal switch OFF	0 V
48 (G/B)	Ground	Turn signal RH	Output	Ignition switch ON	Turn signal switch RH	(V) 15 10 5 0 1 s PKID0926E
				Lighting switch	Rear fog lamp switch OFF	0 V
49 (Y)	Ground	Rear fog lamp	Output	1ST and front fog lamp switch ON	Rear fog lamp switch ON	Battery voltage
51	_			Depress the brake	ke pedal	Battery voltage
(R/W)*1 (R)*2	Ground	Stop lamp switch	Input	Release the brak	se pedal	0 V

#### < ECU DIAGNOSIS >

# [WITH I-KÉY, WITHOUT SUPER LOCK]

Terminal No.		Description				Value	_
(Wire	color)	Signal name	Input/ Output		Condition	(Approx.)	
52	Ground	Room lamp timer	Output	Interior room	OFF	Battery voltage	_
(R)	Ground	control	Output	lamp	ON	0 V	_
53	Ground	Power window pow-	Output Ignition switch -	OFF or ACC	0 V	_	
(L)	Giodila	er supply	Output	ignition switch	ON	Battery voltage	_
54	Ground	Door unlock (All)	Output	Door lock/un-	Pressed to the unlock side	Battery voltage	_
(O)	Giodila	Door drilock (All)	Output	lock switch	Pressed to the lock side	0 V	
55 (B)	Ground	Ground	_	Ignition switch ON		0 V	_
56				Door lock/un-	Pressed to the unlock side	0 V	_
(Y) <sup>*1</sup> (SB) <sup>*2</sup>	Ground	Door lock (All)	Output	lock switch	Pressed to the lock side	Battery voltage	_
57 (Y)	Ground	Battery power sup- ply	Input	Ignition switch O	FF	Battery voltage	_
58 (P)	Ground	Power window pow- er supply	Output	Ignition switch O	FF	Battery voltage	_
59	Cravind		Outrout	When lock button is not pressed	of key fob or Intelligent Key	0 V	_
(BR)	Ground	Super lock Ou		When lock button of key fob or Intelligent Ke		Battery voltage	_
60	Ground	Driver door unlock	Output	Door lock/un-	Pressed to the unlock side	Battery voltage	_
(GR)	Giouila	Driver door drillock	door unlock Output		Pressed to the lock side	0 V	_

<sup>\*1:</sup> With Intelligent Key system

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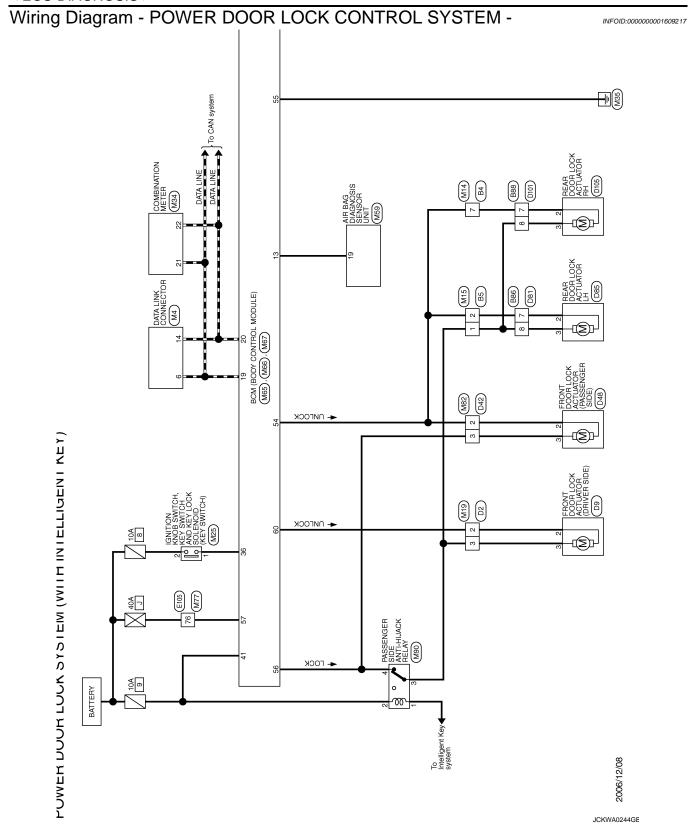
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<sup>\*2:</sup> Without Intelligent Key system



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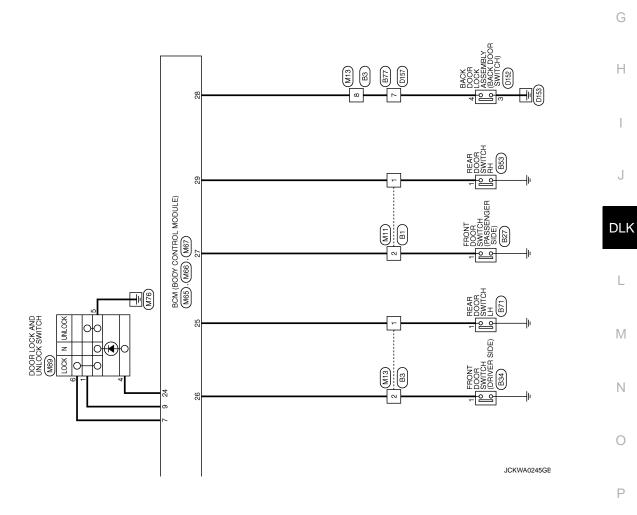
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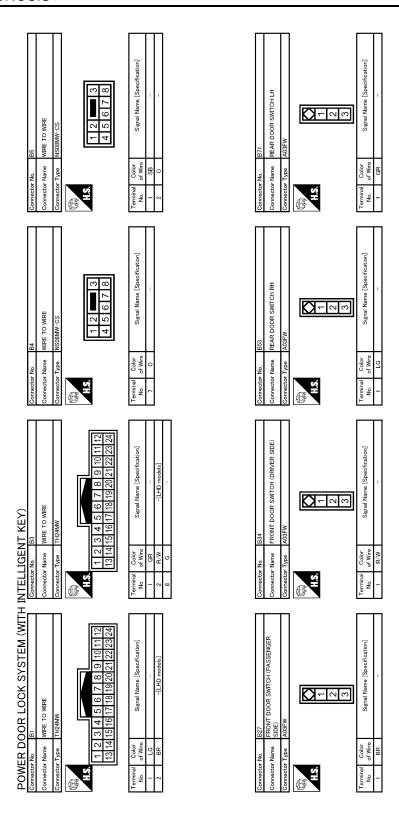
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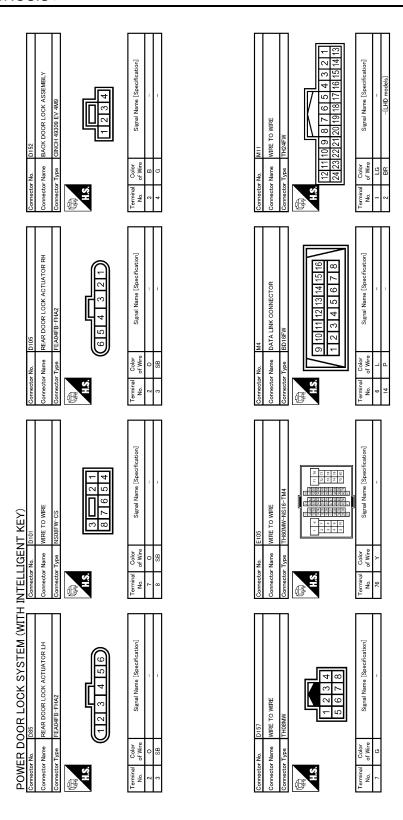


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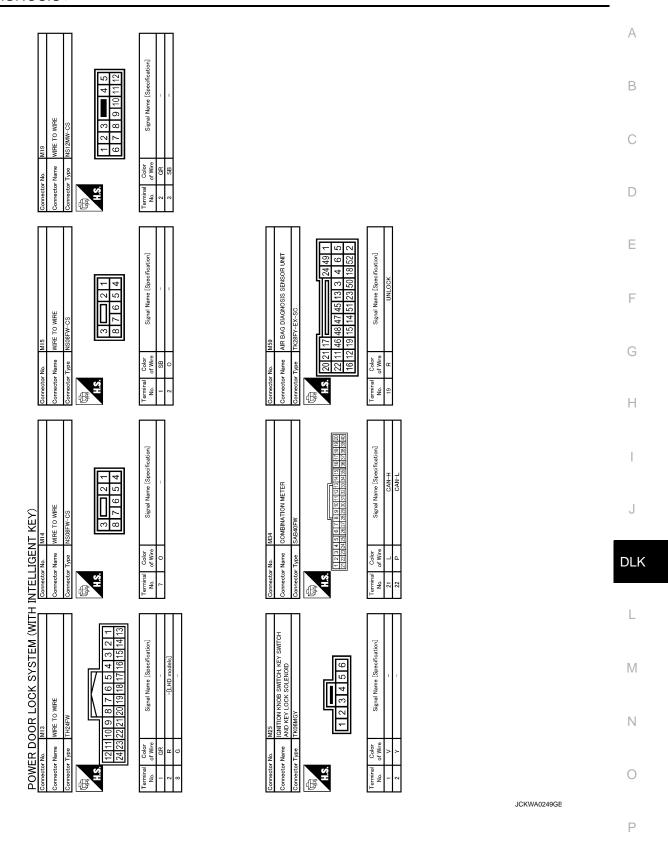


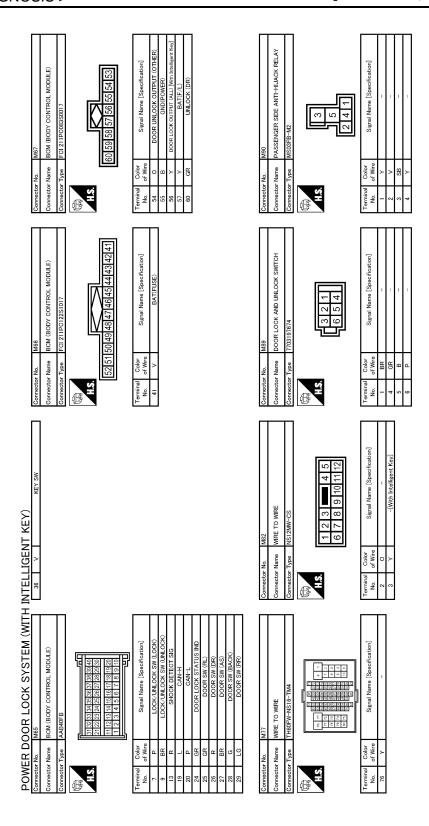
JCKWA0246GE

CS  10 9 8 7 6  Signal Name [Specification]  -[With Intelligent Key]	-CS  T 6 5 4  Signal Name [Specification]		АВ
Connector No.   D2	Connector No.   DB1		C
-05 2	FRONT DOOR LOCK ACTUATOR (PASSENGER SIDE) FEAUAFB—FHAZ   Signal Name Especification]  -[With Intelligent Key] -[With Intelligent Key]		E F
Connector No.   B88	Connector No. D48 Connector Name (PASSEN Connector Type FEAJ4FB H.S. H.S.  Terminal Color No. of Wire 2 P 3 Y		G H
NSGRWW-CS NSGRWW-CS Signal Name [Specification]	DH2   NS12FW-CS		J
H INTELLIGEN Connector Name Connector Name Connector Types Terminal Color No of Wive 7 0 0 7 0	Connector No. Connector Name Connector Type No. of Wire 2 P 3 Y		DLK L
POWER DOOR LOCK SYSTEM (WIT Connector Name 1770 WIRE Connector Type 17405 W  ALS   4 3 2 1    Reminal   Color Signal Name (Specification)    7   G   Connector Type   Signal Name (Specification)	PRONT DOOR LOCK ACTUATOR (DRIVER SIDE) FEAGAFB-FHA2  T 2 3 4 5 6  Signal Name [Specification] -[With Intelligent Key] -[With Intelligent Key]		M
POWER DOOR Connector No.  Connector Name WRE TO Connector Type TH06FW  Terminal Color No.  of Wire  7	Connector No. D9 Connector Name SIJED Connector Type FEAGN No. of Were 2 GR 3 R.Y  NY	JCKWA0247GE	0
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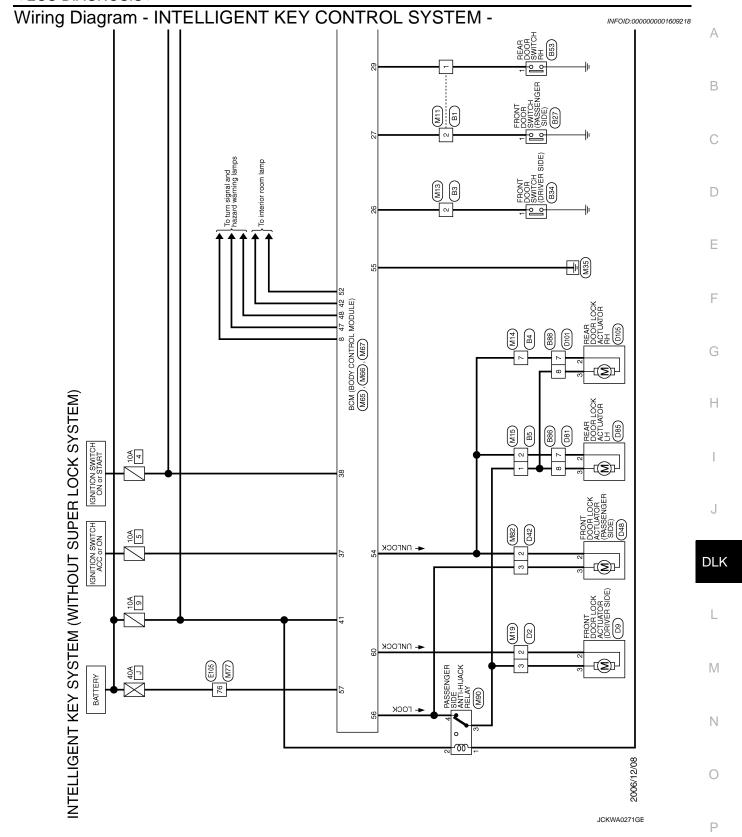


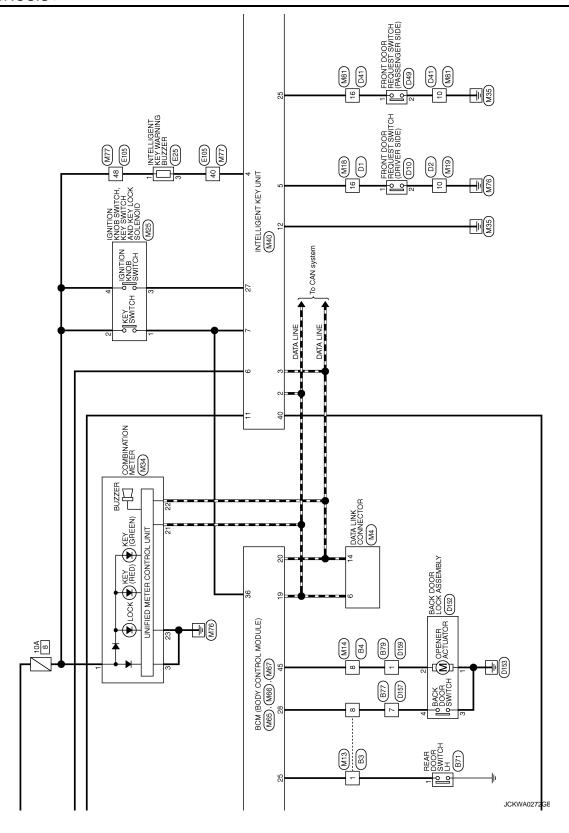
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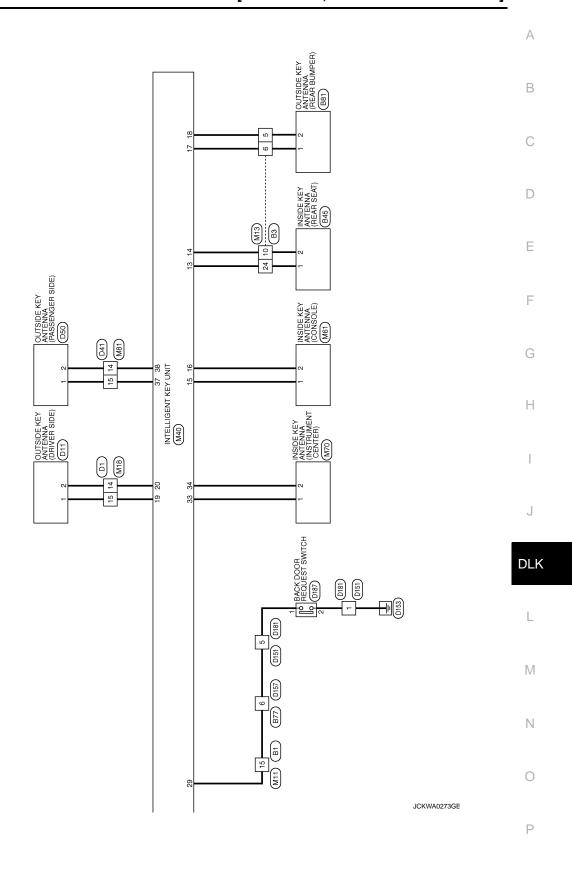


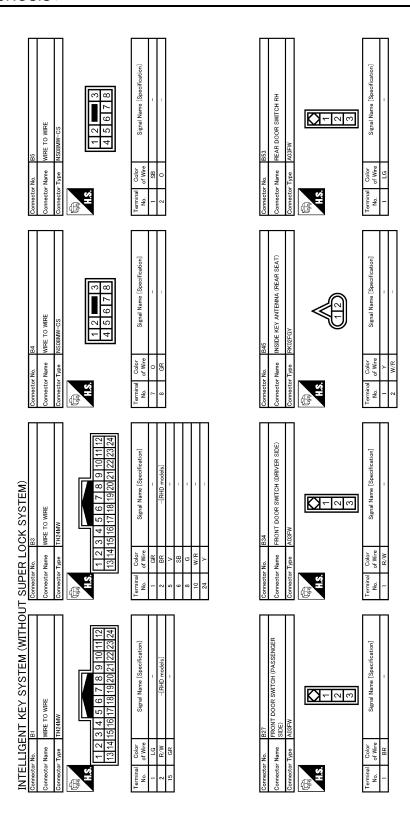


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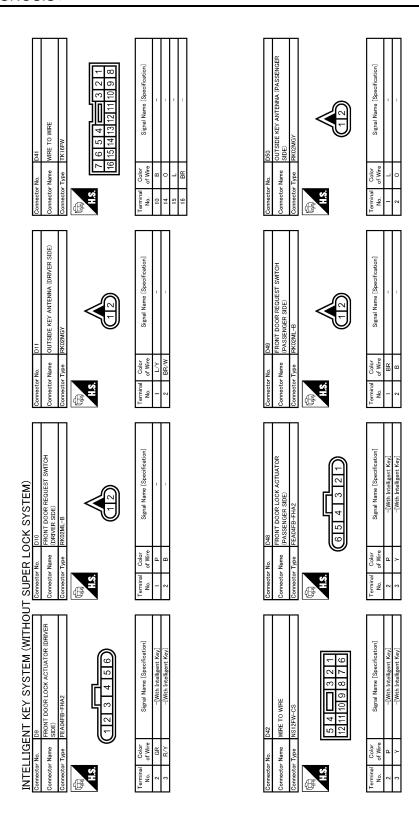




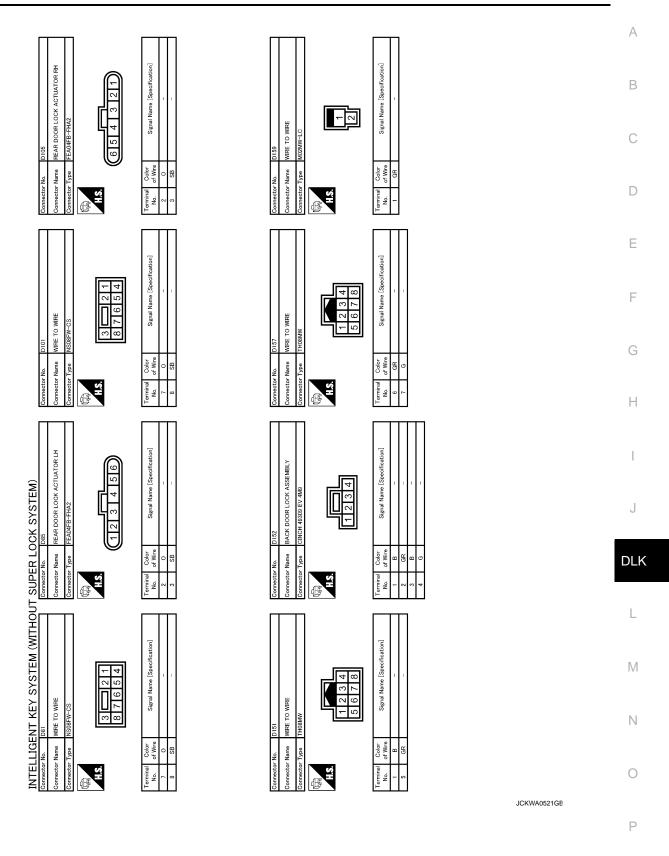


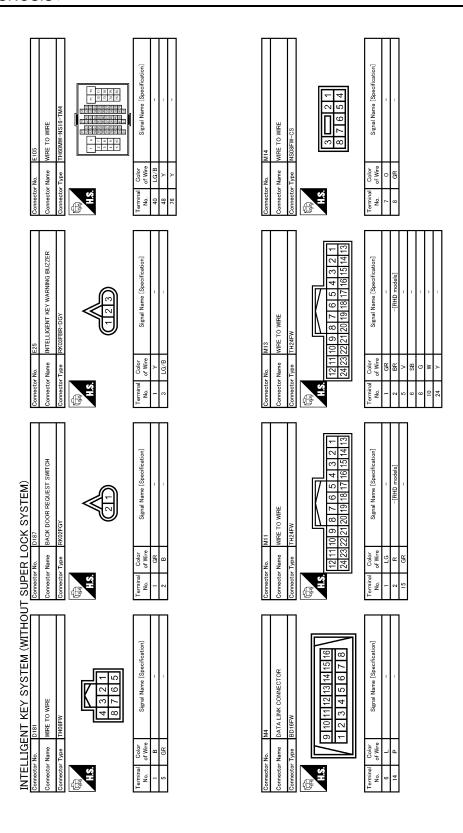
JCKWA0518GE

OUTSIDE KEY ANTENNA (REAR BUMPER) RROZFGY  Signal Name [Specification]	CS  10 9 8 7 6  -[With Intelligent Kev]		АВ
Name Name Type of Wire SB V	No. D2  Nume WIRE TO  Type NSIZEW  12 11  12 11  B B B B  B B B B  B B B B  B B B B B  B B B B B  B B B B B B  B B B B B B B  B B B B B B B B B B  B		C
Commeton Commeton Commeton Terminal No. 1	Commettor Commettor No. 10		E
WIRE TO WIRE MOZEW-LC  T  Signal Name [Specification]	NWRE TO WIRE TKIBFW  6 5 4 3 2 1  15 14 13 12 11 10 9 8  Signal Name [Specification]		F
Connector No.  Connector Name WIRE Connector Type MOZE  A.S.  I.S.  I.S.	Connector No   DI		G H
WRE  3 2 1  Signal Name [Specification]	CS		I
INTELLIGENT KEY SYSTEM (WITHOUT SUPER LOCK SYSTEM)   Connector Name   FEAR DOOR SWITCH LH	Connector No.   888   Connector Name   WIRE TO WIRE   Connector Type   NSDBAWI-CS     1 2		DLK
T (WITHOUT	ation]		L
ENT KEY SYSTEM (W B71 REAR DOOR SWITCH LH A03FW  Signal Name [Specification]	CS 2		M
INTELLIGENT KI Connector No. Connector Type A03FW  Terminal Color No. of Wire  I GR	WRE TO NISOBANIV		N
INTEL Commercial Commercial Commercial Terminal No.	Connector No. Connector Name Connector Type Terminal No. of W. 7 0 7 0 8 SB	JCKWA0519GE	0
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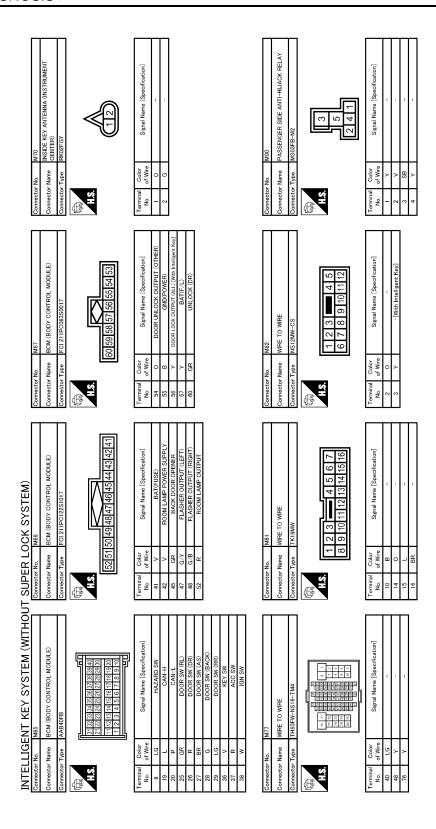
JCKWA0520GE





JCKWA0522GE

No. MZS Name IGANITION KNOB SWITCH, KEY SWITCH Name AND KEY LOCK SOLENOID Type TROBMGY  1 2 3 4 5 6	Oolor Signal Name [Specification]  V	for No. M61  for Name (NSIDE KEY ANTENNA (CONSOLE)  for Types (RYGZFGY  Color Signal Name [Specification]  SB  ER		A B
Connector No. Connector Name Connector Type H.S.	Terminal No. 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Connector Connector No. 1 1 2		D E
MIS WIRE TO WIRE INSIZAM-CS	Signal Name (Specification)	CONSOLE (-) REAR BUMPER (-) REAR BUMPER (-) DRIVER DOOR (-) INSTRUMENT (-) INSTRUMENT (-) INSTRUMENT (-) ASSENGER DOOR (-) PASSENGER DOOR (-) AS ANTI-HUACK		F
Connector No.  Connector Name  Connector Type IN.  LAS.	Terminal   Color     No. of Wire     2 GR     3 SB     10 B	16 BR 17 SB 18 SB		G H
MIS WINE TO WINE TRIBAW  2 3	Signal Name (Specification)	MAD  THAGPW  THAGPW  Signal Name [Specification]  Signal Name [Specification]  CAN-H		J
SUPER LC Connector Name Connector Type  This	Terminal   Color   14   BR   15   L   16   P   16   P	Multiple		DLK
INTELLIGENT KEY SYSTEM (WITHOUT Somector No. MIS  Connector Name WRE TO WIRE  Connector Type NSORIW-CS  CARACTER STORES AND STORES A	Signal Name [Specification]	Signal Name [Specification]  Signal Name [Specification]  CAN-H  CAN-L  CAN-L  CAND		L M
INTELLIGENT KEY Connector No. MIS Connector Name WIRE TO WIRE Connector Type INSORPH-CS CONNECTOR TO MISSERIAL CS CONNECTO	O O O O O O O O O O O O O O O O O O O	No.   M34   No.   M34   No.   M34   No.		N O
Conne Conne	Terminal No.	Commetton Commetton Commetton Terminal No. 1 No. 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	JCKWA0523GE	
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Wiring Diagram - BACK DOOR OPENER CONTROL SYSTEM -

INFOID:0000000001609219

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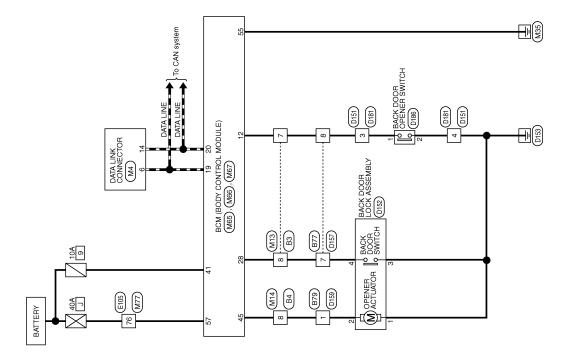
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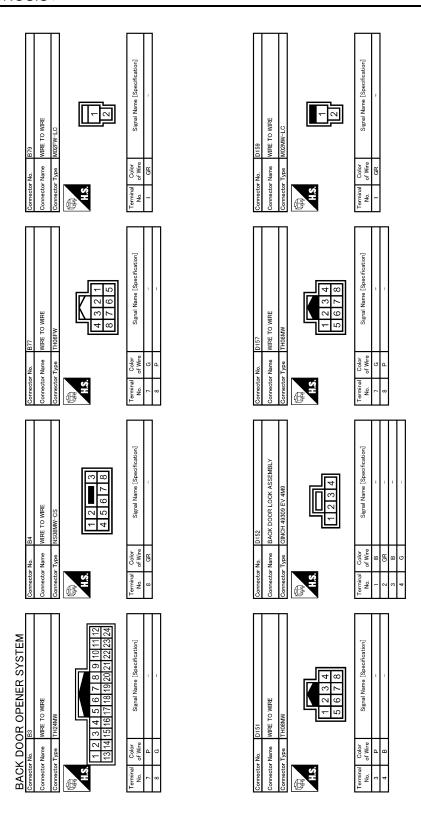
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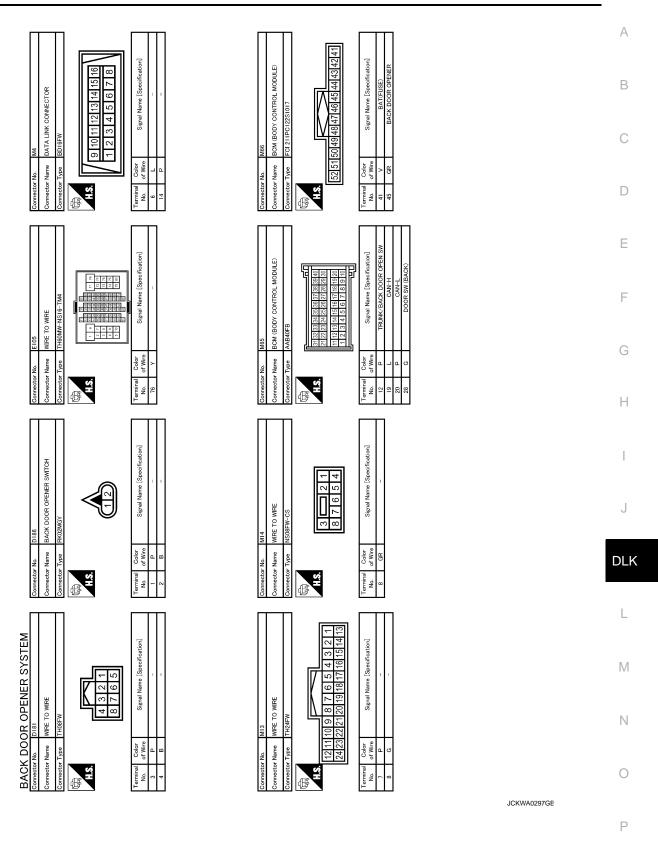
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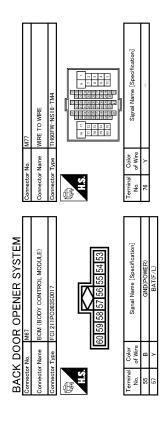
JCKWA0295GE

BACK DOOR OPENER SYSTEM



JCKWA0296GE





JCKWA0298GE

Fail Safe

Fail-safe index

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

# **BCM (BODY CONTROL MODULE)**

### < ECU DIAGNOSIS >

# [WITH I-KÉY, WITHOUT SUPER LOCK]

Display contents of CONSULT	Fail-safe	Cancellation
B2190: NATS ANTENNA AMP	<ul> <li>Inhibits engine cranking</li> <li>Inhibits steering lock unlocking (Intelligent Key unit)</li> <li>Fuel cut (ECM)</li> </ul>	Erase DTC
B2191: DIFFERENCE OF KEY	Inhibits engine cranking     Inhibits steering lock unlocking (Intelligent Key unit)     Fuel cut (ECM)	Erase DTC
B2192: ID DISCORD BCM-ECM	Fuel cut (ECM)	Erase DTC
B2193: CHAIN OF BCM-ECM	Fuel cut (ECM)	Erase DTC
B2194: DISCORD BCM-I-KEY	Inhibits engine cranking     Inhibits steering lock unlocking (Intelligent Key unit)     Fuel cut (ECM)	Erase DTC
B2195: ANTI SCANNING	Inhibits engine cranking     Inhibits steering lock unlocking (Intelligent Key unit)     Fuel cut (ECM)	Erase DTC
B2196: DONGLE NG	<ul> <li>Inhibits engine cranking</li> <li>Inhibits steering lock unlocking (Intelligent Key unit)</li> <li>Fuel cut (ECM)</li> </ul>	Erase DTC

### REAR WIPER CONTROL

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

When a rear wiper auto stop signal is in the condition listed below, BCM stops power supply to rear wiper after rear wiper is activated for five seconds.

Ignition switch	Rear wiper switch	Rear wiper auto stop signal
ON	OFF	The rear wiper auto stop signal (stop position) cannot be input for 5 seconds.
ON	ON	The rear wiper auto stop signal does not change for 5 seconds.

### NOTE:

The above operation is repeated when operating the rear wiper switch one minute after the stop of the rear wiper caused by Fail-safe.

### TURN SIGNAL LAMP CONTROL

BCM detects the turn signal lamp circuit status from the terminal voltage.

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

#### NOTE:

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

### LIGHT & RAIN SENSOR MALFUNCTION DETECTION FUNCTION

BCM controls the following items when LIGHT & RAIN sensor has a malfunction.

### Auto Light Control

Headlamp is turned ON.

### Front Wiper Control

The condition just before the activation of Fail-safe is maintained until the front wiper switch is turned OFF.

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# [WITH I-KEY, WITHOUT SUPER LOCK]

# DTC Inspection Priority Chart

INFOID:0000000001559294

Priority	DTC
1	U1000: CAN COMM CIRCUIT     U1010: CONTROL UNIT (CAN)
2	<ul> <li>B2190: NATS ANTENNA AMP</li> <li>B2191: DIFFERNCE OF KEY</li> <li>B2192: ID DISCORD BCM-ECM</li> <li>B2193: CHAIN OF BCM-ECM</li> <li>B2194: DISCORD BCM-I-KEY</li> <li>B2195: ANTI SCANNING</li> <li>B2196: DONGLE NG</li> </ul>

DTC Index

### 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.
- PAST: Displays when there is a malfunction that is detected in the past and stored.
- 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	TI	ME	Fail-safe	Refer to
No DTC is detected. further testing may be required.	_	_	_	_
U1000: CAN COMM CIRCUIT	0	1 - 39	_	BCS-33
U1010: CONTROL UNIT (CAN)	0	1 - 39	_	BCS-34
B2190: NATS ANTENNA AMP	CRNT	PAST	×	With Intelligent Key system <u>SEC-45</u> Without Intelligent Key system <u>SEC-194</u>
B2191: DIFFERENCE OF KEY	CRNT	PAST	×	With Intelligent Key system <u>SEC-47</u> Without Intelligent Key system <u>SEC-196</u>
B2192: ID DISCORD BCM-ECM	CRNT	PAST	×	With Intelligent Key system <u>SEC-48</u> Without Intelligent Key system <u>SEC-197</u>
B2193: CHAIN OF BCM-ECM	CRNT	PAST	×	With Intelligent Key system <u>SEC-50</u> Without Intelligent Key system <u>SEC-199</u>
B2194: DISCORD BCM-I-KEY	CRNT	PAST	×	<u>SEC-51</u>
B2195: ANTI SCANNING	CRNT	PAST	×	With Intelligent Key system <u>SEC-52</u> Without Intelligent Key system <u>SEC-200</u>
B2196: DONGLE NG	CRNT	PAST	×	With Intelligent Key system <u>SEC-53</u> Without Intelligent Key system <u>SEC-201</u>

< SYMPTOM DIAGNOSIS >

[WITH I-KEY, WITHOUT SUPER LOCK]

# SYMPTOM DIAGNOSIS

# DOOR LOCK FUNCTION SYMPTOMS DOOR LOCK AND UNLOCK SWITCH

DOOR LOCK AND UNLOCK SWITCH: Symptom Table

INFOID:0000000001183725

### DOOR LOCK AND UNLOCK SWITCH OPERATION MALFUNCTION NOTE:

- Before performing the diagnosis in the following table, check "Work Flow". Refer to DLK-20, "Work Flow".
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

- · Except driver side, doors are closed.
- Passenger side door is not in anti-hijack state.
- · Doors are not locked by Intelligent Key or door request switch.

### Symptom Table

Symptom	Diagnosis/service procedure			Reference page
Door lock and unlock function does not operate with door lock and unlock switch.	1.	Check BCM power supply and ground circuit.		<u>DLK-71</u>
	2.	Check door lock and unlock switch.		<u>DLK-73</u>
ato man door look and amook ownor.	3.	Check intermittent incident.		<u>GI-39</u>
	1.	Check door lock and unlock switch	h.	DLK-73
			Passenger side	<u>DLK-84</u>
Door lock function does not operate with door	2.	Olivet transfer	Rear LH	DLK-86
lock and unlock switch.	Check door switch.	Rear RH	DLK-87	
			Back door	DLK-89
	3.	Check intermittent incident.		<u>GI-39</u>
		Check door lock actuator.	Driver side	DLK-95
			Passenger side	DLK-97
Specific door lock actuator does not operate.	1.	Check door lock actuator.	Rear LH	DLK-98
		Rear RH	Rear RH	DLK-100
	2.	Check intermittent incident.		<u>GI-39</u>
Rear LH and RH door lock actuator does not operate.	1.	Check anti-hijack relay.		DLK-125
	2.	Check intermittent incident.		<u>GI-39</u>
Door lock and unlock switch indicator does not	1.	Check door lock and unlock switch indicator.		DLK-75
illuminate.	2.	Check Intermittent Incident.		<u>GI-39</u>

### INTELLIGENT KEY

INTELLIGENT KEY: Symptom Table

INFOID:0000000001183726

# INTELLIGENT KEY OPERATION MALFUNCTION

### NOTE:

- Before performing the diagnosis in the following table, check "Work Flow". Refer to <u>DLK-20, "Work Flow".</u>
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

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# [WITH I-KEY, WITHOUT SUPER LOCK]

### < SYMPTOM DIAGNOSIS >

Conditions of Vehicle (Operating Conditions)

- · Door lock and unlock operation are normal.
- Emergency key is removed from ignition key cylinder.
- All doors are closed.
- Ignition knob is not pressed.
- No Intelligent Keys are inside the vehicle.

### Symptom Table

Symptom	Diagnosis/service procedure	Reference page
	Check Intelligent Key power supply and ground circuit.	DLK-71
	Check driver side door switch.	DLK-83
All of the Intelligent Key functions do not	3. Check key switch.	DLK-91
operate.	4. Check ignition knob switch.	<u>DLK-93</u>
	5. Check Intelligent Key battery.	DLK-134
	Check intermittent incident.	<u>GI-39</u>
Anti-hijack function does not operate by Intelligent Key.	1. Check "SELECTIVE UNLOCK FUNCTION" setting in "WORK SUPPORT".	DLK-65
	Check intermittent incident.	<u>GI-39</u>

### DOOR REQUEST SWITCH

# DOOR REQUEST SWITCH: Symptom Table

INFOID:0000000001183727

# DOOR REQUEST SWITCH OPERATION MALFUNCTION

- NOTE:
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.

• Before performing the diagnosis in the following table, check "Work Flow". Refer to DLK-20, "Work Flow".

• If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

- Intelligent Key operation is normal.
- "LOCK/UNLOCK BY I-KEY" is ON when setting on CONSULT-III.
- Emergency key is removed from ignition key cylinder.
- · Ignition switch is in OFF position.
- Intelligent Keys are not inside the vehicle.

### Symptom Table

Symptom		Diagnosis/service procedure	Reference page
Door lock and unlock do not operate by door	1.	Check "LOCK/UNLOCK BY I-KEY" setting in "WORK SUPPORT".	DLK-65
request switch.	2.	Check intermittent incident.	<u>GI-39</u>
Door lock/unlock does not operate by request switch (driver side).	1.	Check door request switch (driver side).	<u>DLK-77</u>
	2.	Check outside key antenna (driver side).	DLK-107
	3.	Check intermittent incident.	<u>GI-39</u>
	1.	Check door request switch (passenger side).	DLK-79
Door lock/unlock does not operate by request switch (passenger side).	2.	Check outside key antenna (passenger side).	DLK-110
(p. 1000 · g. 1000 )	3.	Check intermittent incident.	<u>GI-39</u>
Door lock/unlock does not operate by request switch (back door).	1.	Check door request switch (back door).	DLK-80
	2.	Check outside key antenna (rear bumper).	DLK-113
	3.	Check intermittent incident.	<u>GI-39</u>

### < SYMPTOM DIAGNOSIS >

# [WITH I-KEY, WITHOUT SUPER LOCK]

Symptom	Diagnosis/service procedure		Reference page
Anti-hijack function does not operate by driver side door request switch (other door lock	1.	Check "SELECTIVE UNLOCK FUNCTION" setting in "WORK SUPPORT".	DLK-65
functions operate).	2.	Check intermittent incident.	<u>GI-39</u>
Passenger side anti-hijack function does not	1.	Check passenger side anti-hijack relay.	DLK-125
operate by passenger side door request switch (other door lock functions operate).	2.	Check intermittent incident.	<u>GI-39</u>

### **KEY REMINDER**

# **KEY REMINDER: Symptom Table**

### INFOID:0000000001183728

### KEY REMINDER OPERATION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check "Work Flow". Refer to <u>DLK-20, "Work Flow".</u>
- To understand the operation when it does work, refer to <u>DLK-35. "KEY REMINDER: System Description"</u>.
  Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and
- check each symptom.
  If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

Request switch operation and door lock and unlock switch operation are normal.

Symptom Table

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Symptom	Dia	Reference page	
Key reminder operation does not operate.	1. Check door swite	ch (driver side).	DLK-83
		Instrument center	DLK-116
	2. Check inside key	cantenna. Console	DLK-119
	Rear seat		<u>DLK-122</u>
	3. Check intermitter	nt incident.	<u>GI-38</u>

### AUTO DOOR LOCK

# **AUTO DOOR LOCK: Symptom Table**

INFOID:0000000001183729

## AUTO DOOR LOCK OPERATION MALFUNCTION

#### NOTE:

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- "AUTO RELOCK TIMER" is not OFF when setting on CONSULT-III.
- Before performing the diagnosis in the following table, check "Work Flow". Refer to DLK-20, "Work Flow".
- To understand the operation when it does work, refer to <u>DLK-38</u>, "AUTO <u>DOOR LOCK</u>: <u>System Description</u>"
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column
  in this order.

Conditions of Vehicle (Operating Conditions)

Request switch operation and door lock and unlock switch operation are normal.

Symptom Table

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< SYMPTOM DIAGNOSIS >

### [WITH I-KEY, WITHOUT SUPER LOCK]

Symptom		Diagnosis/service procedu	ire	Reference page
	1.	Check "AUTO RELOCK TIMER" settir PORT".	ng in "WORK SUP-	DLK-65
			Driver side	DLK-83
	2.	Check door switch.	Passenger side	DLK-84
			Rear LH	DLK-86
Auto door lock operation does not operate.			Rear RH	DLK-87
			Back door	DLK-89
	3.	Check ignition knob switch.		DLK-93
	4.	Check key switch.		DLK-91
	5.	Check intermittent incident.		<u>GI-39</u>

# VEHICLE SPEED SENSING AUTO DOOR LOCK

# VEHICLE SPEED SENSING AUTO DOOR LOCK : Symptom Table

INFOID:0000000001183730

# VEHICLE SPEED SENSING AUTO DOOR LOCK OPERATION MALFUNCTION NOTE:

- Before performing the diagnosis in the following table, check "Work Flow". Refer to DLK-20, "Work Flow".
- To understand the operation when it does work, refer to <a href="DLK-41">DLK-41</a>. "VEHICLE SPEED SENSING AUTO DOOR LOCK: System Description".
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

• Request switch operation and door lock and unlock switch operation are normal.

### Symptom Table

Symptom		Diagnosis/service procedure	Reference page
Vehicle speed sensing auto door lock oper-	Check vehicle speed signal.		DLK-133
ation does not operate.	2.	Check intermittent incident.	<u>GI-39</u>

### **BACK DOOR OPEN FUNCTION SYMPTOMS**

< SYMPTOM DIAGNOSIS >

[WITH I-KEY, WITHOUT SUPER LOCK]

# BACK DOOR OPEN FUNCTION SYMPTOMS BACK DOOR OPENER SWITCH

BACK DOOR OPENER SWITCH: Symptom Table

#### INFOID:0000000001183731

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### BACK DOOR OPENER FUNCTION MALFUNCTION

### NOTE:

- Before performing the diagnosis in the following table, check "Work Flow". Refer to DLK-20, "Work Flow".
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

### Conditions of Vehicle (Operating Conditions)

- · Door lock function is normal.
- Vehicle speed is less than 5 km/h (3 MPH).
- All doors are unlocked.

### Symptom Table

Symptom	Diagnosis/service procedure Reference page			
	Check back door opener switch.	DLK-105		
Back door opener function does not operate by	Check vehicle speed signal.	DLK-133		
back door opener switch.	Check back door opener actuator.	DLK-103		
	4. Check intermittent incident.	<u>GI-39</u>		

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# WARNING FUNCTION SYMPTOMS BUZZER (COMBINATION METER)

## BUZZER (COMBINATION METER): Symptom Table

INFOID:0000000001183732

# BUZZER (COMBINATION METER) OPERATION MALFUNCTION NOTE:

- Before performing the diagnosis in the following table, check "Work Flow". Refer to DLK-20, "Work Flow".
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

### Conditions of Vehicle (Operating Conditions)

- Warning chime functions operating conditions are extremely complicated. During operation confirmations, reconfirm the list above twice in order to ensure proper operation. Refer to <u>DLK-52</u>, "System <u>Description"</u>.
- · Door lock function is normal.

### Symptom Table

Sympt	om		Diagnosis/service procedure	Reference page
Ignition knob return forgotten warning does not		1.	Check buzzer (combination meter).	DLK-129
operate properly.		2.	Check intermittent incident.	<u>GI-39</u>
Ignition key warning door	not aparata proporty	1.	Check buzzer (combination meter).	DLK-129
ignition key warning does	tion key warning does not operate properly.		Check intermittent incident.	<u>GI-39</u>
OFF position worning door	not operate properly	1.	Check buzzer (combination meter).	DLK-129
OFF position warning does	s not operate property.	2.	Check intermittent incident.	<u>GI-39</u>
Take away warning does	Take away warning does	1.	Check buzzer (combination meter).	DLK-129
not operate properly.	not operate properly. window		Check intermittent incident.	<u>GI-39</u>

### INTELLIGENT KEY WARNING BUZZER

# INTELLIGENT KEY WARNING BUZZER: Symptom Table

INFOID:0000000001183733

# INTELLIGENT KEY WARNING BUZZER OPERATION MALFUNCTION

- Before performing the diagnosis in the following table, check "Work Flow". Refer to <u>DLK-20, "Work Flow".</u>
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column
  in this order.

### Conditions of Vehicle (Operating Conditions)

Warning chime functions operating conditions are extremely complicated. During operation confirmations, reconfirm the list above twice in order to ensure proper operation. Refer to <a href="DLK-52">DLK-52</a>, "System Description".

### Symptom Table

Sympto	Symptom		Diagnosis/service procedure	Reference page
Take away warning does	Any door open to all	1.	Check Intelligent Key warning buzzer.	DLK-127
not operate properly.	y. doors closed.		Check intermittent incident.	<u>GI-39</u>
	Request switch oper-	1.	Check Intelligent Key warning buzzer.	DLK-127
Door lock operation warning chime does not oper-	ation	2.	Check intermittent incident.	<u>GI-39</u>
ate properly.	not oper- Intelligent Key button	1.	Check Intelligent Key warning buzzer.	<u>DLK-127</u>
	operation	2.	Check intermittent incident.	<u>GI-39</u>

# < SYMPTOM DIAGNOSIS >

WARNING LAMP

## WARNING LAMP: Symptom Table

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# WARNING LAMP OPERATION MALFUNCTION

### NOTE:

- Before performing the diagnosis in the following table, check "Work Flow". Refer to <u>DLK-20. "Work Flow"</u>.
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

- Warning chime functions operating conditions are extremely complicated. During operation confirmations. reconfirm the list above twice in order to ensure proper operation. Refer to DLK-52, "System Description".
- Door lock function is normal.

### Symptom Table

Symptom		Diagnosis/service procedure		Reference page
OFF position warning does not operate properly.		1.	Check LOCK warning lamp. (RED blinking)	DLK-131
		2.	Check intermittent incident.	<u>GI-39</u>
Any door open to all		1.	Check KEY warning lamp. (RED blinking)	DLK-131
	doors closed.	2.	Check intermittent incident.	<u>GI-39</u>
Take away warning does not operate properly.  Door is open  Take away through window	Dooriooner	1.	Check KEY warning lamp. (RED blinking)	DLK-131
	Door is open	2.	Check intermittent incident.	<u>GI-39</u>
	Take away through	1.	Check KEY warning lamp. (RED blinking)	DLK-131
	2.	Check intermittent incident.	<u>GI-39</u>	
		1.	Check "LOW BAT OF KEY FOB WARN" setting in "WORK SUPPORT".	DLK-65
Intelligent Key low battery	warning does not oper-	2.	Check Intelligent Key battery.	DLK-134
ate properly.		3.	Check KEY warning lamp. (GREEN blinking)	DLK-130
		4.	Check intermittent incident.	<u>GI-39</u>

**BACK DOOR** 

**BACK DOOR: Symptom Table** 

INFOID:0000000001183735

# BACK DOOR OPEN WARNING OPERATION MALFUNCTION

### NOTE:

- Before performing the diagnosis in the following table, check "Work Flow". Refer to <u>DLK-20, "Work Flow".</u>
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

• Door lock function and back door opener function is normal.

#### Symptom Table

Symptom		Diagnosis/service procedure	Reference page
Back door open warning does not operate properly.	1.	Check back door opener switch.	DLK-105
Back door open warning does not operate properly.	2.	Check intermittent incident.	<u>GI-39</u>

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## HAZARD AND BUZZER REMINDER FUNCTION SYMPTOMS

< SYMPTOM DIAGNOSIS >

[WITH I-KEY, WITHOUT SUPER LOCK]

# HAZARD AND BUZZER REMINDER FUNCTION SYMPTOMS HAZARD WARNING LAMP

HAZARD WARNING LAMP: Symptom Table

INFOID:0000000001183737

# HAZARD REMINDER OPERATION MALFUNCTION

### NOTE:

- Before performing the diagnosis in the following table, check "Work Flow". Refer to DLK-20, "Work Flow".
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

### Conditions of Vehicle (Operating Conditions)

- "HAZARD ANSWER BACK" is ON when setting on CONSULT-III.
- Door lock function is normal.

### Symptom Table

Symptom	Diagnosis/service procedure Refe		Reference page
Hazard reminder operation does not operate	1.	Check setting of hazard reminder with CONSULT-III.	DLK-65
properly.	2.	Check intermittent incident.	<u>GI-39</u>

### INTELLIGENT KEY WARNING BUZZER

## INTELLIGENT KEY WARNING BUZZER: Symptom Table

INFOID:0000000001183736

### BUZZER REMINDER OPERATION MALFUNCTION

#### NOTE:

- Before performing the diagnosis in the following table, check "Work Flow". Refer to <u>DLK-20, "Work Flow".</u>
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

### Conditions of Vehicle (Operating Conditions)

- "LOCK/UNLOCK BY I-KEY" is ON when setting on CONSULT-III.
- "ANSWER BACK WITH I-KEY LOCK", "ANSWER BACK WITH I-KEY UNLOCK" and "ANSWER BACK FUNCTION" are ON when setting on CONSULT-III.
- Door lock function is normal.

### Symptom Table

Symptom	Diagnosis/service procedure Re		Reference page
Buzzer reminder operation does not operate	not operate 1. C	Check setting of buzzer reminder with CONSULT-III.	DLK-65
properly.	2.	Check intermittent incident.	<u>GI-39</u>

Work Flow INFOID:0000000001183738 Customer Interview Duplicate the Noise and Test Drive. Check Related Service Bulletins.

Locate the Noise and Identify the Root Cause.

Repair the Cause.

Confirm Repair. OK Inspection End

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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 of the customer's comments; refer to DLK-215, "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 a test drive 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.

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### < SYMPTOM DIAGNOSIS >

[WITH I-KEY, WITHOUT SUPER LOCK]

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.

### 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 (Engine Ear or mechanics 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 fastener 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 <u>DLK-213</u>, "Inspection Procedure".

### 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 are available through your authorized Nissan Parts Department.

### **CAUTION:**

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

URETHANE PADS

Insulates connectors, harness, etc.

• INSULATOR (Foam blocks)

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

- INSULATOR (Light foam block)
- FELT CLOTHTAPE

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

The following materials, not available through NISSAN Parts Department, can also be used to repair squeaks and rattles.

UHMW(TEFLON) TAPE

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

SILICONE GREASE

Used in place 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.

# < SYMPTOM DIAGNOSIS >

[WITH I-KEY, WITHOUT SUPER LOCK]

Inspection Procedure	INFOID:0000000001183739	٨
Refer to Table of Contents for specific component removal and installation information.		А
INSTRUMENT PANEL		
Most incidents are caused by contact and movement between:		В
Cluster lid A and instrument panel		
Acrylic lens and combination meter housing		
Instrument panel to front pillar garnish		С
4. Instrument panel to windshield		
5. Instrument panel mounting pins		D
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 pressing on the components while driving to stop the noise. Most of these incidents can be repairing felt cloth tape or silicon spray (in hard to reach areas). Urethane pads can be used to insulate the pressure of the components of the pressure of the components of the components of the pressure of the components of the components of the pressure of the components of	aired by apply-	Е
ness.  CAUTION:		F
Do not use silicone spray to isolate a squeak or rattle. If you saturate the area with silic	cone, you will	
not be able to recheck the repair.		0
CENTER CONSOLE		G
Components to pay attention to include:		
Shifter assembly cover to finisher		Н
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:		J
Finisher and inner panel making a slapping noise		J
Inside handle escutcheon to door finisher	-	
Wiring harnesses tapping	Į	DL
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 condition many of these incidents. You can usually insulate the areas with felt cloth tape or insulator frepair the noise.		L
TRUNK		
Trunk noises are often caused by a loose jack or loose items put into the trunk by the owner. In addition look for:		M
Trunk lid dumpers out of adjustment		
Trunk lid striker out of adjustment		Ν
Trunk lid torsion bars knocking together		
4. A loose license plate or bracket		
Most of these incidents can be repaired by adjusting, securing or insulating the item(s) or comp ing the noise.	onent(s) caus-	0
SUNROOF/HEADLINING		
Noises in the sunroof/headlining area can often be traced to one of the following:		Р
1. Sunroof lid, rail, linkage or seals making a rattle or light knocking noise		
2. Sunvisor shaft shaking in the holder		

Again, pressing on the components to stop the noise while duplicating the conditions can isolate most of these

3. Front or rear windshield touching headlining and squeaking

incidents. Repairs usually consist of insulating with felt cloth tape.

### < SYMPTOM DIAGNOSIS >

[WITH I-KEY, WITHOUT SUPER LOCK]

#### SEATS

When isolating seat noise it is 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
- 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
- Engine wall mounts and connectors
- Loose radiator mounting pins
- 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.

# **Diagnostic Worksheet**

INFOID:0000000001183740

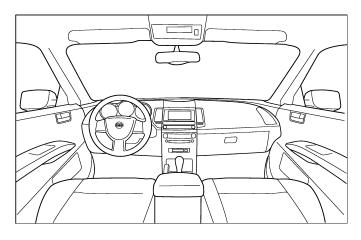


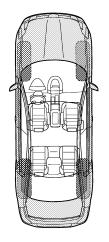
# SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

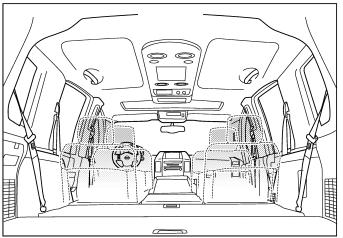
### Dear Nissan Customer:

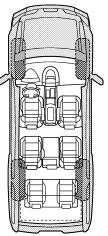
We are concerned about your satisfaction with your Nissan vehicle. Repairing a squeak or rattle sometimes can be very difficult. To help us fix your Nissan right the first time, please take a moment to note the area of the vehicle where the squeak or rattle occurs and under what conditions. You may be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

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.

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< SYMPTOM DIAGNOSIS >

[WITH I-KEY, WITHOUT SUPER LOCK]

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Briefly describe the location where the no	ise occur	s:		
II. WHEN DOES IT OCCUR? (please che	eck the bo	exes that ap	ply)	
<ul><li>□ anytime</li><li>□ 1st time in the morning</li><li>□ only when it is cold outside</li><li>□ only when it is hot outside</li></ul>	□ wh	er sitting ou en it is rain or dusty co er:	ing or we	
III. WHEN DRIVING:	IV. WI	HAT TYPE	OF NOIS	E
<ul> <li>□ through driveways</li> <li>□ over rough roads</li> <li>□ over speed bumps</li> <li>□ only about mph</li> <li>□ on acceleration</li> <li>□ coming to a stop</li> <li>□ on turns: left, right or either (circle)</li> <li>□ with passengers or cargo</li> <li>□ other:</li> <li>□ after driving miles or mir</li> </ul>	cre	eak (like wa tle (like sha ock (like a k k (like a cloc	lking on a king a ba nock at th ck second , muffled l	ne door) I hand) knock noise)
TO BE COMPLETED BY DEALERSHIP Test Drive Notes:	PERSON	INEL		
		YES	NO	Initials of person performing
Vehicle test driven with customer - Noise verified on test drive - Noise source located and repaired - Follow up test drive performed to confire	m repair			
VIN:				
W.O.#		ite: ——— hed to Worl		

**DLK-216** 

# **PRECAUTION**

## **PRECAUTIONS**

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

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

#### **WARNING:**

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision 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 "SRS AIRBAG".
- 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.

Precaution Necessary for Steering Wheel Rotation After Battery Disconnect

INFOID:0000000001183742

#### NOTE:

- This Procedure is applied only to models with Intelligent Key system and NATS (NISSAN ANTI-THEFT SYS-
- Remove and install all control units after disconnecting both battery cables with the ignition knob in the "LOCK" position.
- Always use CONSULT-III to perform self-diagnosis as a part of each function inspection after finishing work. If DTC is detected, perform trouble diagnosis according to self-diagnostic results.

For models equipped with the Intelligent Key system and NATS, an electrically controlled steering lock mechanism is adopted on the key cylinder.

For this reason, if the battery is disconnected or if the battery is discharged, the steering wheel will lock and steering wheel rotation will become impossible.

If steering wheel rotation is required when battery power is interrupted, follow the procedure below before starting the repair operation.

#### **OPERATION PROCEDURE**

Connect both battery cables.

#### NOTE:

Supply power using jumper cables if battery is discharged.

- 2. Use the Intelligent Key or mechanical key to turn the ignition switch to the "ACC" position. At this time, the steering lock will be released.
- Disconnect both battery cables. The steering lock will remain released and the steering wheel can be rotated.
- 4. Perform the necessary repair operation.
- 5. When the repair work is completed, return the ignition switch to the "LOCK" position before connecting the battery cables. (At this time, the steering lock mechanism will engage.)
- Perform a self-diagnosis check of all control units using CONSULT-III.

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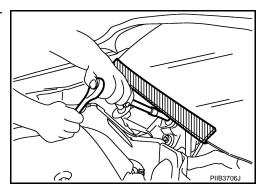
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# Precaution for Procedure without Cowl Top Cover

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When performing the procedure after removing cowl top cover, cover the lower end of windshield with urethane, etc.



Work

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

# [WITH I-KEY, WITHOUT SUPER LOCK]

# **PREPARATION**

# **PREPARATION**

# **Commercial Service Tools**

Tool name		Description	
Engine ear	SIIA0995E	Locating the noise	
Remover tool	PIIB7923J	Remove the clips, pawls, and metal clips	
	F1110/9233		
Power tool			
	PIIB1407E		

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[WITH I-KEY, WITHOUT SUPER LOCK]

#### < ON-VEHICLE MAINTENANCE >

# ON-VEHICLE MAINTENANCE

# PRE-INSPECTION FOR DIAGNOSTIC

**Basic Inspection** INFOID:0000000001183746

#### **BASIC INSPECTION**

# ${f 1}$ .CHECK POWER DOOR LOCK AND UNLOCK SWITCH OPERATION

Check door lock and unlock operation by operating door lock and unlock switch.

#### Is the inspection result normal?

YES >> GO TO 2.

>> Refer to DLK-203, "DOOR LOCK AND UNLOCK SWITCH: Symptom Table". NO

# 2.CHECK INTELLIGENT KEY OPERATION

Check door lock and unlock operation by operating the Intelligent Key remote control button.

#### Is the inspection result normal?

YES >> GO TO 3.

>> Refer to DLK-203, "INTELLIGENT KEY: Symptom Table". NO

# 3.check door request switch operation

Check door lock and unlock operation by operating door request switch.

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Refer to DLK-204, "DOOR REQUEST SWITCH: Symptom Table".

#### 4. CHECK KEY REMINDER OPERATION

Check key reminder operation. Refer to DLK-35, "KEY REMINDER: System Description".

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Refer to DLK-205, "KEY REMINDER: Symptom Table".

# ${f 5.}$ CHECK AUTO DOOR LOCK OPERATION

Check auto door lock operation. Refer to DLK-38, "AUTO DOOR LOCK: System Description".

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> Refer to DLK-205, "AUTO DOOR LOCK: Symptom Table".

#### O.CHECK VEHICLE SPEED SENSING AUTO DOOR LOCK OPERATION

Check vehicle speed sensing auto door lock operation. Refer to DLK-41, "VEHICLE SPEED SENSING AUTO DOOR LOCK: System Description".

#### Is the inspection result normal?

YES >> GO TO 7.

>> Refer to DLK-206, "VEHICLE SPEED SENSING AUTO DOOR LOCK: Symptom Table". NO

# 7 CHECK BACK DOOR OPENER OPERATION

Check back door opener operation by operating the back door opener switch.

#### Is the inspection result normal?

YES >> GO TO 8.

NO >> Refer to DLK-207, "BACK DOOR OPENER SWITCH: Symptom Table".

# 8.CHECK WARNING FUNCTION

Check warning function. Refer to DLK-52, "System Description".

#### Is the inspection result normal?

YES >> GO TO 9.

# PRE-INSPECTION FOR DIAGNOSTIC < ON-VEHICLE MAINTENANCE > [WITH I-KEY, WITHOUT SUPER LOCK] NO [Buzzer (combination meter)]>> Refer to DLK-208. "BUZZER (COMBINATION METER): Symptom Table". NO (Intelligent Key warning buzzer)>> Refer to DLK-208. "INTELLIGENT KEY WARNING BUZZER: Symptom Table". NO (Warning lamp)>> Refer to DLK-209. "WARNING LAMP: Symptom Table". NO (Back door open warning)>> Refer to DLK-209. "BACK DOOR: Symptom Table". 9.CHECK HAZARD AND BUZZER REMINDER FUNCTION Check hazard and buzzer reminder function by Intelligent Key or request switch. Refer to DLK-320. "System Description". Is the inspection result normal? YES >> GO TO 10. NO (Hazard warning lamp)>> Refer to DLK-210, "INTELLIGENT KEY WARNING BUZZER: Symptom

NO (Intelligent Key warning buzzer)>> Refer to DLK-210, "HAZARD WARNING LAMP: Symptom Table".

CHECK OUT.

10.CHECK OUT

>> INSPECTION END

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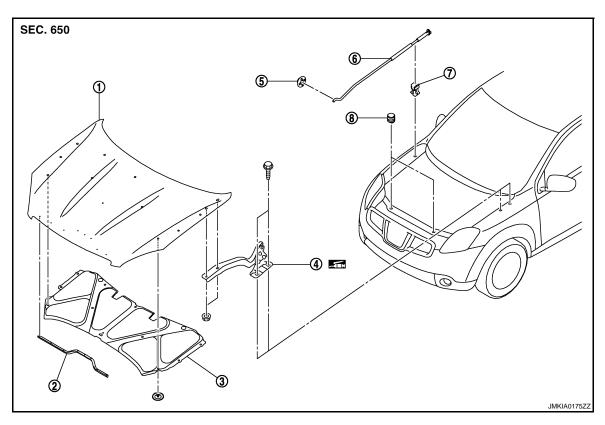
# **ON-VEHICLE REPAIR**

**HOOD** 

**HOOD ASSEMBLY** 

**HOOD ASSEMBLY: Exploded View** 

#### **REMOVAL**



- Hood assembly
- Hood hinge
- 7. Clamp

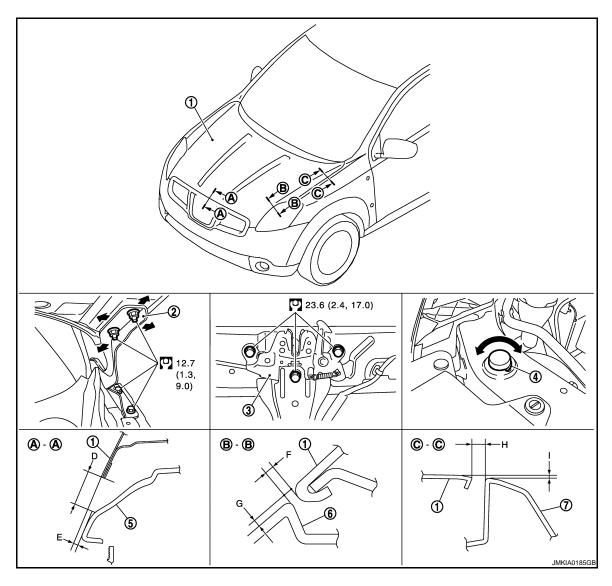
- Hood sealing rubber
- 5. Grommet
- 8. Hood bumper rubber

Refer to GI-4, "Components" for symbols in the figure.

#### **ADJUSTMENT**

Hood insulator

Hood support rod



Hood assembly 1.

Front fender

- Hood hinge 2.
- 4. Hood bumper rubber
- 5. Front grille

- Hood lock assembly 3.
- 6. Front combination lamp

Refer to GI-4, "Components" for symbols in the figure.

#### **HOOD ASSEMBLY: Removal and Installation**

**REMOVAL** 

7.

1. Support the hood lock assembly with the proper material to prevent it from falling.

#### **WARNING:**

Bodily injury may occur if no supporting rod is holding the hood open when removing the hood stay.

2. Remove the hood hinge mounting nuts on the hood to remove the hood assembly. **CAUTION:** 

Perform work with 2 workers, because of its heavy weight.

- 3. Remove the following parts after removing the hood assembly.
  - Hood insulator
  - Hood sealing rubber

#### **INSTALLATION**

Install in the reverse order of removal.

**CAUTION:** 

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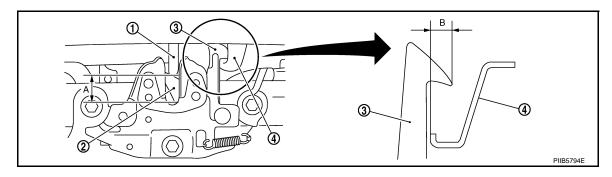
- · Perform work with 2 workers, because of its heavy weight.
- Before installing the hood hinge, apply anticorrosive agent onto the mounting surface of the vehicle body.
- After installing, perform hood fitting adjustment. Refer to <u>DLK-224, "HOOD ASSEMBLY: Adjust-ment".</u>

**HOOD ASSEMBLY: Adjustment** 

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P	ortion			Standard	Right/left Clearance (MAX)
Hood – Front bumper	<b>A</b> – <b>A</b>	D	Clearance	5.2 – 9.2 mm (0.205 – 0.362 in)	2.0 mm (0.079 in)
		E	Surface height	- 0.2 – 3.8 mm (- 0.008 – 0.150 in)	2.0 mm (0.079 in)
Hood – Front combination lamp	B – B –	F	Clearance	3.7 – 7.7 mm (0.140 – 0.303 in)	2.0 mm (0.079 in)
		G	Surface height	- 2.3 – 2.3 mm (- 0.091 – 0.091 in)	2.3 mm (0.091 in)
Hood – Front fender	C – C	н	Clearance	3.9 – 5.9 mm (0.154 – 0.232 in)	1.5 mm (0.059 in)
		ı	Surface height	- 1.0 – 1.0 mm (- 0.039 – 0.039 in)	1.5 mm (0.059 in)

- 1. Check the clearance and the surface height between the hood and each part by visualy and touching. (Fitting standard dimension in the table below should be satisfied.)
- 2. In case any parts are out of specification, adjust them according to the procedures shown below.
- 3. Remove the hood lock and adjust the height by rotating the bumper rubber until the hood becomes 1 to 1.5 mm (0.039 to 0.059 in) lower than the fender.
- 4. Temporarily tighten the hood lock, and position by engaging it with the hood striker. Check the lock and striker for looseness and adjust the clearance and evenness with the striker to satisfy the specification.
- 5. Adjust A and B shown in the figure to the following value with hood's own weight by dropping it from approximately. 200 mm (7.874 in) height or by pressing the hood lightly [approximately. 29 N (3 kg)].



1. Hood striker

Primary latch

Secondary striker

4. Secondary latch

A : 20.0 mm (0.787 in) B : 6.8 mm (0.268 in)

6. After adjustment tighten lock bolts to the specified torque.

**HOOD HINGE** 

**HOOD HINGE: Exploded View** 



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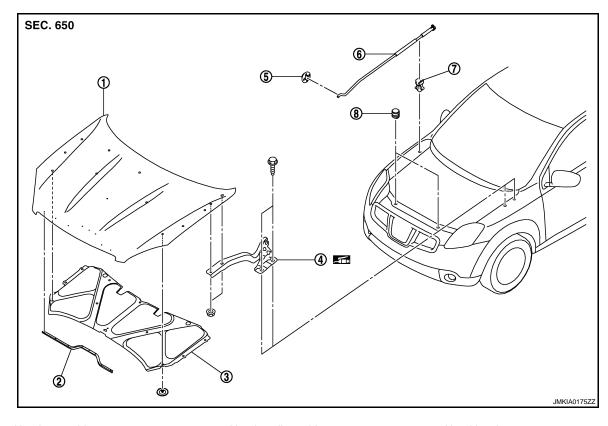
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- 1. Hood assembly
- 4. Hood hinge
- 7. Clamp

- Hood sealing rubber
- 5. Grommet
- 8. Hood bumper rubber
- 3. Hood insulator
- 6. Hood support rod

Refer to GI-4. "Components" for symbols in the figure.

# **HOOD HINGE**: Removal and Installation

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#### **REMOVAL**

- Remove the hood assembly. Refer to <u>DLK-223</u>. "HOOD ASSEMBLY: Removal and Installation".
- 2. Remove the front fender. Refer to DLK-232, "Removal and Installation".
- 3. Remove the hood hinge mounting bolts, and then remove the hood hinge.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

- After installation, apply touch-up paint (the body color) onto the head of the hinge mounting bolts and nuts.
- Before installation of hood hinge, apply anticorrosive agent onto the mounting surface of the vehicle body.
- After installation, perform hood fitting adjustment. Refer to <u>DLK-224, "HOOD ASSEMBLY: Adjust-ment"</u>.

#### HOOD SUPPORT ROD

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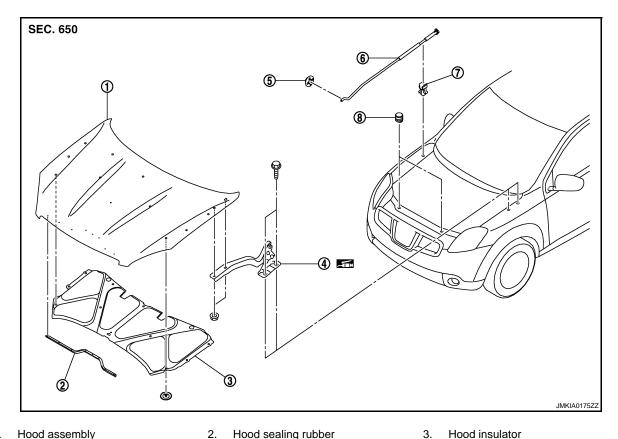
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Hood support rod

# **HOOD SUPPORT ROD: Exploded View**

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- Hood assembly
- Hood hinge 4.
- 7. Clamp

- Hood sealing rubber

Grommet

8. Hood bumper rubber

5.

Refer to GI-4, "Components" for symbols in the figure.

# **HOOD SUPPORT ROD:** Removal and Installation

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#### **REMOVAL**

Support the hood lock assembly with the proper material to prevent it from falling.

Bodily injury may occur if no supporting rod is holding the hood open when removing the hood

2. Remove the hood support rod from the grommet.

#### **INSTALLATION**

Install in the reverse order of removal.

#### HOOD LOCK CONTROL

**HOOD LOCK CONTROL: Exploded View** 



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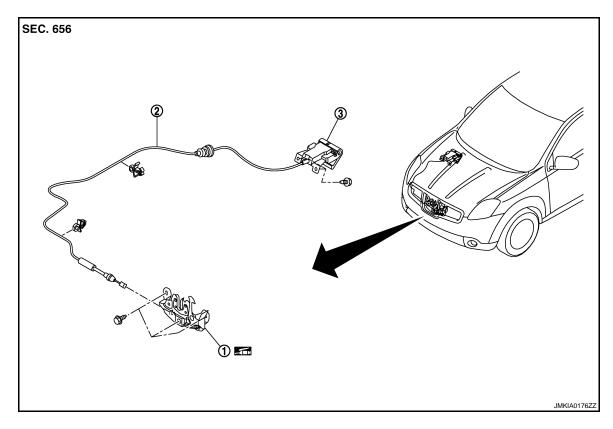
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- Hood lock assembly
- 2. Hood lock control cable
- 3. Hood lock opener

Refer to GI-4, "Components" for symbols in the figure.

#### **HOOD LOCK CONTROL**: Removal and Installation

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#### **REMOVAL**

- 1. Remove the hood lock opener mounting bolts, and then remove the hood lock opener.
- 2. Remove the front bumper fascia. Refer to EXT-11, "Removal and Installation".
- 3. Remove the hood lock mounting bolts, and then remove the hood lock.
- 4. Remove the fender protector. Refer to EXT-22, "Removal and Installation".
- 5. Disconnect the hood lock cable from hood lock, and clip it from the hoodledge.
- Remove the grommet on the dash lower panel, and pull the hood lock control cable toward the passenger compartment.

#### **CAUTION:**

While pulling, do not to damage (peeling) the outside of the hood lock control cable.

#### INSTALLATION

Install in the reverse order of removal.

#### **CAUTION:**

• Do not to bend the cable too much, keeping the radius 100 mm (3.937 in) or more.

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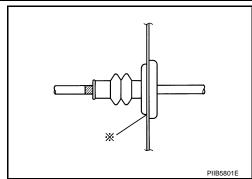
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Check that the cable is not offset from the positioning grommet, and apply the sealant to the grommet (at \*mark) properly.



- Check that the hood lock control cable is properly engaged with the hood lock.
- After installation, perform hood fitting adjustment. Refer to <u>DLK-224, "HOOD ASSEMBLY: Adjust-ment"</u>.
- After installation, perform the hood lock control inspection. Refer to <u>DLK-228</u>, "HOOD LOCK CONTROL: Inspection".

# HOOD LOCK CONTROL: Inspection

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#### NOTE:

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

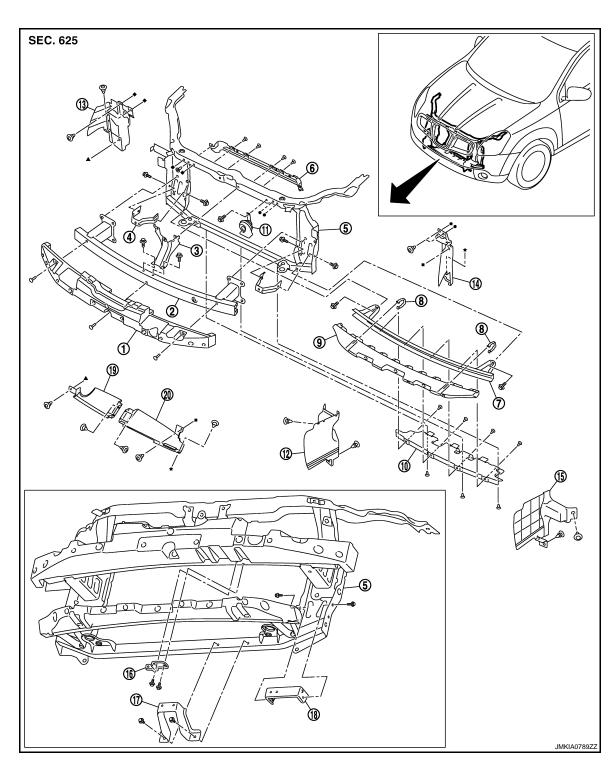
- Check that the secondary latch is properly engaged with the secondary striker [6.8 mm (0.268 in) shown in the figure] by hood weight.
- 2. While operating the hood opener, carefully check that the front end of the hood is raised by approximately 20.0 mm (0.787 in). Also check that the hood opener returns to the original position.
- 3. Check that the hood opener operating is condition 49 N (5.0 kg) or below.
- Install so that static closing face of hood is 94 − 490 N·m (9.6 − 50.0 kg-m).

#### NOTE:

- Exert vertical force on right side and left side of hood lock.
- Do not press simultaneously both sides.
- 5. Check the hood lock lubrication condition. If necessary, apply body grease to the hood lock.

# RADIATOR CORE SUPPORT

Exploded View



- 1. Energy absorber
- 4. Intercooler bracket (with K9K engine models)
- 7. Apron bracket assembly
- 10. Front air guide lower
- 13. Front air guide side RH
- 2. Bumper reinforcement
- 5. Radiator core support assembly
- 8. Fastener
- 11. Horn assembly
- 14. Front air guide side LH
- 3. Hood lock support stay
- 6. Upper air dam
- 9. Energy absorber lower
- 12. Front air guide side lower RH
- 15. Front air guide side lower LH

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#### RADIATOR CORE SUPPORT

[WITH I-KEY, WITHOUT SUPER LOCK]

#### < ON-VEHICLE REPAIR >

[WITH I-KET, WITHOUT SUPER LOCK

16. Oil cooler bracket upper19. Front air guide RH

17. Oil cooler bracket lower20. Front air guide LH

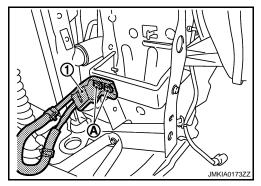
18. Oil cooler bracket side

# Removal and Installation

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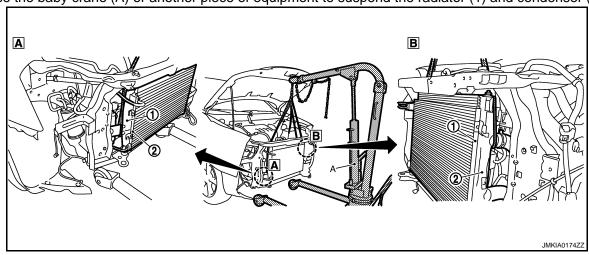
#### **REMOVAL**

- Remove the front fillet molding. Refer to <u>EXT-23</u>, "<u>Removal and Installation</u>".
- Remove the front grille. Refer to <u>EXT-17</u>, "Removal and Installation".
- Remove the front bumper fascia and the energy absorber. Refer to EXT-11, "Removal and Installation".
- 4. Remove the energy absorber (upper and lower). Refer to EXT-11, "Removal and Installation".
- 5. Remove the air cleaner duct. Refer to EM-28, "Removal and Installation".
- 6. Remove the all air guides mounting clips, and then remove the all air guides.
- 7. Remove the front combination lamp (LH/RH). Refer to EXL-175, "Removal and Installation".
- 8. Disconnect the hood lock control cable clamp, and then remove the hood lock assembly. Refer to <u>DLK-227</u>, "HOOD LOCK CONTROL: Removal and Installation".
- 9. Remove the hood lock stay mounting bolts, and then remove the hood lock stay.
- 10. Remove the bumper reinforcement. Refer to EXT-11, "Removal and Installation".
- Remove the hood switch (with theft warning systems). Refer to SEC-SEC-166, "Removal and Installation".
- 12. Remove the crush zone sensor. Refer to SR-14, "Removal and Installation".
- 13. Remove the horn. Refer to HRN-5, "Removal and Installation".
- 14. Remove the ambient sensor. Refer to <a href="VTL-23">VTL-23</a>, "Removal and Installation".
- 15. Remove the radiator mounting bracket (LH/RH). Refer to CO-13, "Removal and Installation".
- 16. Remove the Intelligent Key warning buzzer (with Intelligent Key systems). Refer to <a href="DLK-275">DLK-275</a>, "Removal and Installation".
- 17. Remove the charge air cooler assembly (with K9K and M9R engine models). Refer to <a href="EM-267">EM-267</a>, "Removal and Installation".
- Remove the A/T fluid cooler assembly and the A/T fluid cooler bracket (with A/T models only). Refer to <u>TM-563</u>, "FLUID COOLER: Removal and Installation".
- Remove the A/T fluid cooler pipe bracket (1) mounting bolts (A) (with A/T models only).



20. Remove the washer tank. Refer to WW-99, "Removal and Installation".

21. Use the baby crane (A) or another piece of equipment to suspend the radiator (1) and condenser (2).



- 22. Remove the radiator core support assembly mounting bolts, and draw out the radiator core support assembly to the front of the vehicle.
- 23. Remove the radiator core support assembly.
- 24. Remove the following parts after removing the radiator core support assembly.
  - Inlet tube bracket (with K9K and M9R engine models)
  - Intercooler bracket (with K9K and M9R engine models)
  - Apron reinforcement bracket

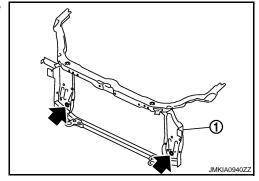
#### INSTALLATION

Install in the reverse order of removal.

#### **CAUTION:**

After installation, refill the following parts.

 Radiator core support (1) must be aligned to engine side member vartically. Use round pin to locate through both holes.



- A/T fluid. Refer to <u>TM-530, "Changing"</u>.
- Engine coolant. Refer to <u>CO-9</u>, "<u>Refilling</u>".

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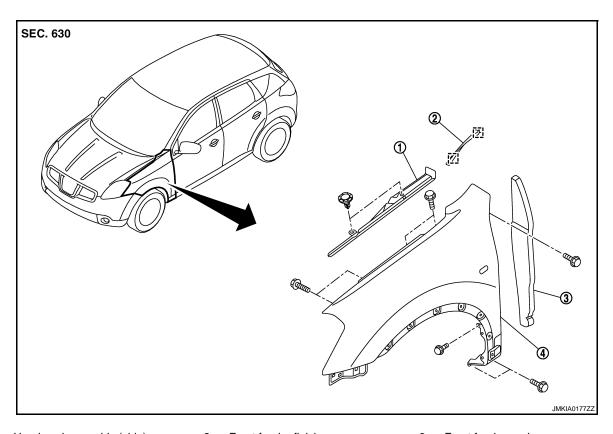
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# FRONT FENDER

Exploded View



- 1. Hood seal assembly (side)
- 2. Front fender finisher
- 3. Front fender seal

Front fender

: Metal clip

#### Removal and Installation

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## **REMOVAL**

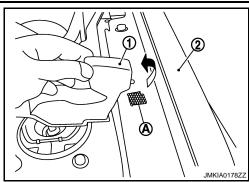
- Remove the outer fender protector. Refer to <u>EXT-22</u>, "<u>Removal and Installation</u>".
- 2. Remove the inner fender protector. Refer to EXT-22, "Removal and Installation".
- 3. Remove the side turn signal lamp. Refer to EXL-181, "Removal and Installation".
- 4. Remove the front bumper fascia. Refer to <u>EXT-11</u>, "Removal and Installation".
- Remove the front combination lamp.
  - XENON TYPE: EXL-175, "Removal and Installation".
  - HALOGEN TYPE: EXL-329, "Removal and Installation".
- 6. Remove the mounting clips and remove hoodledge cover.
- 7. Remove the center mudguard. Refer to EXT-28, "Removal and Installation".

#### **FRONT FENDER**

#### < ON-VEHICLE REPAIR >

#### [WITH I-KEY, WITHOUT SUPER LOCK]

8. Peel away the double-faced adhesive tape (A) of the front fender seal (1) from the front fender (2).



P. Remove the mounting bolts and remove the front fender.

#### **CAUTION:**

Use a shop cloth to protect the body from being damaged during removal.

- 10. Remove the following parts after removing the front fender.
  - Front fender seal.
  - Bumper side bracket. Refer to EXT-11, "Exploded View".

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

- Replace the double-faced adhesive tape on the back of the cowl top cover seal with new tape.
- Do not wash the vehicle within 24 hours after installation so as to keep adhesive.
- After installation, apply the touch-up paint (the body color) onto the head of the front fender mounting bolts.
- After installation, check the front fender adjustment. Refer to <u>DLK-224, "HOOD ASSEMBLY: Adjustment"</u> and DLK-236, "DOOR ASSEMBLY: Adjustment".

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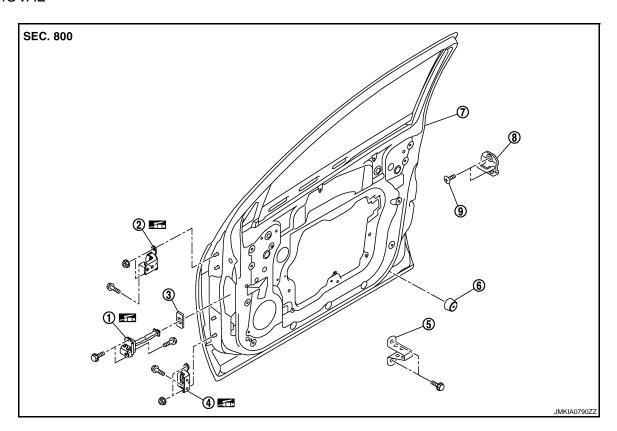
**DLK-233** 

# FRONT DOOR DOOR ASSEMBLY

DOOR ASSEMBLY: Exploded View

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#### **REMOVAL**



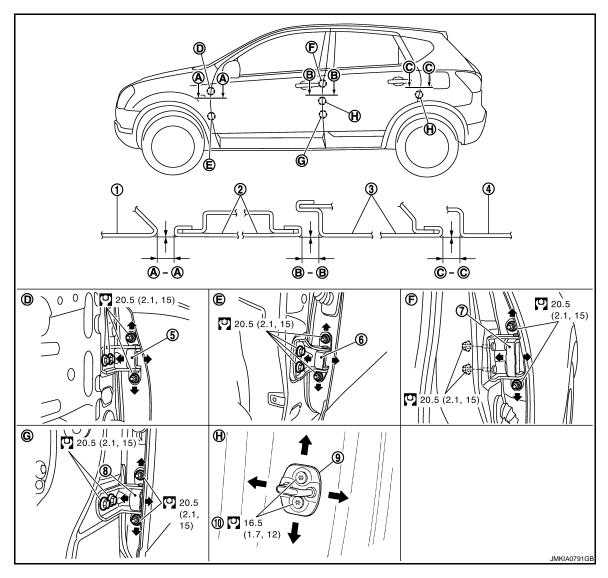
- 1. Door check link
- 4. Door hinge (lower)

Refer to GI-4, "Components" for symbols in the figure.

- 7. Front door panel
- 2. Door hinge (upper)
- Bracket
- 8. Door striker

- Door check link cover
- 6. Bumper rubber
- 9. TORX bolt

**ADJUSTMENT** 



- 1. Front fender
- 4. Rear fender
- 7. Rear door hinge (upper)
- 10. TORX bolt

Refer to GI-4, "Components" for symbols in the figure.

- 2. Front door outer
- 5. Front door hinge (upper)
- 8. Rear door hinge (lower)
- 3. Rear door outer
- 6. Front door hinge (lower)
- 9. Door striker

#### DOOR ASSEMBLY: Removal and Installation

**REMOVAL** 

- Remove the mounting bolt of the door check link on the vehicle.
- 2. Remove the front door harness grommet, and then pull out the harness from the vehicle.
- 3. Disconnect the front door harness connector.
- Remove the door hinge mounting nuts (door side), and then remove the door assembly. CAUTION:
  - When removing and installing the front door assembly, support the door with a jack and cloth to protect the door and body.
  - Perform work with 2 workers, because of its heavy weight.

#### INSTALLATION

Install in the reverse order of removal.

**CAUTION:** 

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#### < ON-VEHICLE REPAIR >

- When removing and installing the front door assembly, perform the fitting adjustment. Refer to <u>DLK-236</u>, "DOOR ASSEMBLY: Adjustment".
- After installation, apply touch-up paint (the body color) onto the head of the door hinge mounting nuts.
- Check the door hinge rotating part for poor lubrication. If necessary, apply body grease.
- Check the front door open/close operation after installation.

DOOR ASSEMBLY: Adjustment

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#### CLEARANCE, SURFACE HEIGHT AND SURFACE MISMATCH ADJUSTMENT

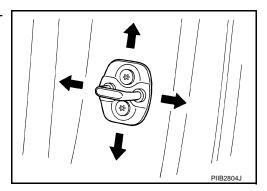
Portion		Clearance	Surface height	
Front fender – Front door	<b>A</b> – <b>A</b>	3.5 – 5.5 mm (0.138 – 0.217 in)	- 1.0 – 1.0 mm (- 0.039 – 0.039 in)	
Front door – Rear door	B – B	3.5 – 5.5 mm (0.138 – 0.217 in)	- 1.0 – 1.0 mm (- 0.039 – 0.039 in)	

- 1. Check the clearance and surface height and surface mismatch between the front door and each part visually and by touching. (Fitting standard dimension in the table below shall be satisfied.)
- 2. In case any parts are out of specification, adjust them according to the procedures shown below.
- Remove the front fender. Refer to refer to <u>DLK-232</u>, "<u>Removal and Installation</u>".
- 4. Loosen the door hinge mounting nuts on door side.
- 5. Adjust the surface height and surface mismatch of the front door according to the fitting standard dimension.
- 6. Temporarily tighten the hinge mounting nuts on door side.
- 7. Loosen the door hinge mounting bolts on body side.
- 8. Raise the front door at rear end to adjust clearance of the front door according to the fitting standard dimension.
- 9. After adjustment tighten bolts and nuts to the specified torque.
- Install the front fender. Refer to refer to <u>DLK-232</u>. "Removal and Installation".
   CAUTION:

After installation, check the front fender adjustment. Refer to <u>DLK-224, "HOOD ASSEMBLY : Adjustment".</u>

#### DOOR STRIKER ADJUSTMENT

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



DOOR STRIKER

# DOOR STRIKER: Exploded View

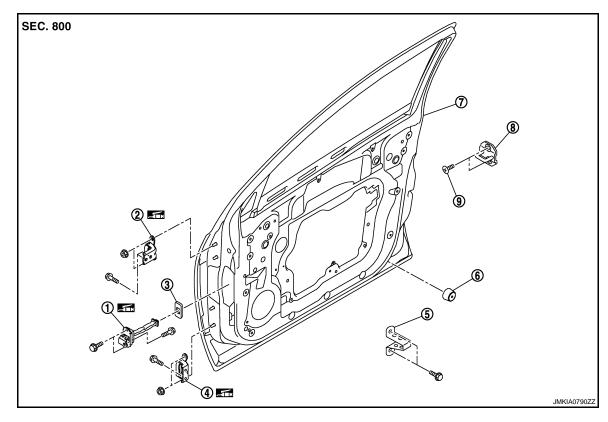
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- Door check link
- 4. Door hinge (lower)
- 7. Front door panel
- Door hinge (upper)
- Bracket 5.
- 8. Door striker

Refer to GI-4, "Components" for symbols in the figure.

- Door check link cover
- 6. Bumper rubber
- 9. TORX bolt

DOOR STRIKER: Removal and Installation

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#### **REMOVAL**

Remove the TORX bolts, and then remove the door striker.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

- Check the front door open/close operation after installation.
- When removing and installing the door striker, be sure to perform the fitting adjustment. Refer to DLK-236, "DOOR ASSEMBLY: Adjustment".

# **DOOR HINGE**

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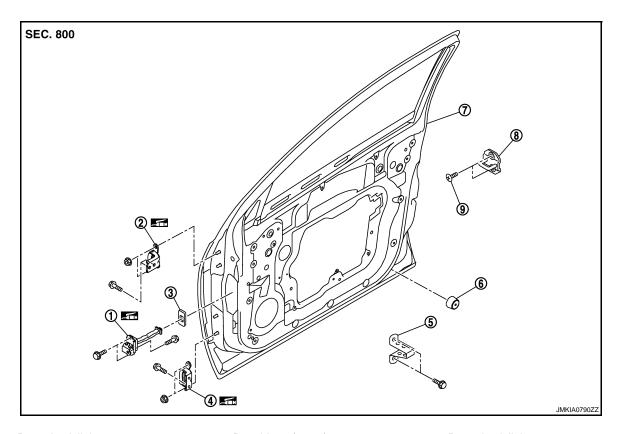
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**DOOR HINGE: Exploded View** 



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- 1. Door check link
- 4. Door hinge (lower)
- 7. Front door panel
- Door hinge (upper)
- 5. **Bracket**
- 8. Door striker

- Door check link cover
- Bumper rubber
- TORX bolt

Refer to GI-4, "Components" for symbols in the figure.

# DOOR HINGE: Removal and Installation

#### **REMOVAL**

- Remove the front door assembly. Refer to <u>DLK-235</u>, "<u>DOOR ASSEMBLY</u>: <u>Removal and Installation</u>".
- Remove the door hinge mounting bolts, and then remove the front door hinge.

#### INSTALLATION

Install in the reverse order of removal.

#### **CAUTION:**

- When removing and installing the front door assembly, perform the fitting adjustment. Refer to DLK-236, "DOOR ASSEMBLY: Adjustment".
- · After installation, apply touch-up paint (the body color) onto the head of the door hinge mounting nuts.
- Check the door hinge rotating part for poor lubrication. If necessary, apply body grease.
- Check the front door open/close operation after installation.

#### DOOR CHECK LINK

# DOOR CHECK LINK: Exploded View

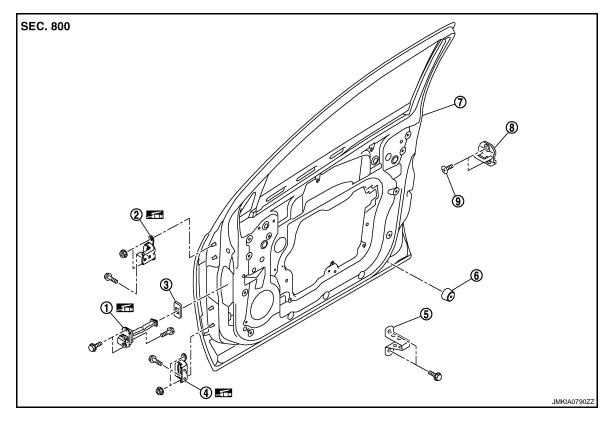
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- 1. Door check link
- 4. Door hinge (lower)
- 7. Front door panel
- 2. Door hinge (upper)
- 5. Bracket
- 8. Door striker

- 3. Door check link cover
- 6. Bumper rubber
- 9. TORX bolt

Refer to GI-4, "Components" for symbols in the figure.

# DOOR CHECK LINK: Removal and Installation

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#### **REMOVAL**

- 1. Remove the front door finisher. Refer to <a href="INT-10">INT-10</a>, "FRONT DOOR FINISHER: Removal and Installation".
- 2. Remove the front door speaker. Refer to AV-36, "Removal and Installation".
- 3. Remove the mounting bolt of the door check link on the vehicle.
- 4. Remove the door check link cover, and then remove the door check link mounting bolts.
- 5. Remove the door check link.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

Check the front door open/close operation after installation.

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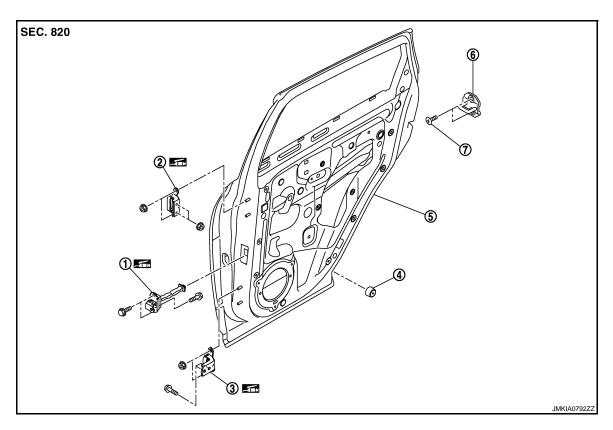
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# **REAR DOOR** DOOR ASSEMBLY

DOOR ASSEMBLY: Exploded View

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#### **REMOVAL**



- 1. Door check link
- Bumper rubber

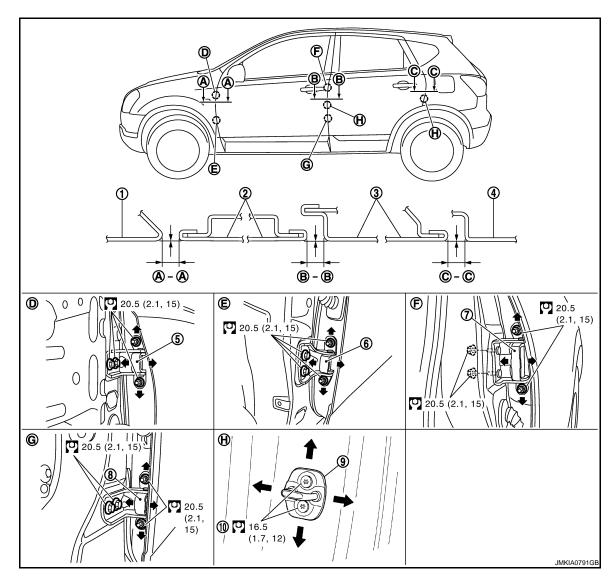
Refer to GI-4, "Components" for symbols in the figure.

7. TORX bolt

- Door hinge (upper)
- Rear door panel

- Door hinge (lower)
- Door striker

# **ADJUSTMENT**



- Front fender 1.
- 4. Rear fender
- Rear door hinge (upper) 7.
- 10. TORX bolt
- Refer to GI-4, "Components" for symbols in the figure.
- 2. Front door outer
- 5. Front door hinge (upper)
- 8. Rear door hinge (lower)
- 3. Rear door outer
- 6. Front door hinge (lower)
- 9. Striker

#### DOOR ASSEMBLY: Removal and Installation

**REMOVAL** 

- Remove the mounting bolt of the door check link on the vehicle.
- 2. Remove the rear door harness grommet, and then pull out the door harness from the vehicle.
- 3. Disconnect the rear door harness connector.
- Remove the door hinge mounting nuts (door side), and then remove the rear door assembly. **CAUTION:** 
  - When removing and installing the front door assembly, support the door with a jack and cloth to protect the door and body.
  - · Perform work with 2 workers, because of it's heavy weight.

#### INSTALLATION

Install in the reverse order of removal.

**CAUTION:** 

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#### < ON-VEHICLE REPAIR >

- When removing and installing the rear door assembly, perform the fitting adjustment. Refer to <u>DLK-242</u>, "DOOR ASSEMBLY: Adjustment".
- After installation, apply touch-up paint (the body color) onto the head of the door hinge mounting nuts.
- Check the door hinge rotating part for poor lubrication. If necessary, apply body grease.
- Check the rear door open/close operation after installation.
- Check the rear door lock/unlock operation after installation.

DOOR ASSEMBLY: Adjustment

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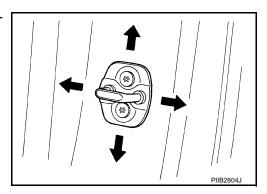
#### CLEARANCE, SURFACE HEIGHT AND SURFACE MISMATCH ADJUSTMENT

Portion		Clearance	Surface height	
Front door – Rear door B – B		3.5 – 5.5 mm (0.138 – 0.217 in)	- 1.0 – 1.0 mm (- 0.039 – 0.039 in)	
Rear door – Rear fender	C – C	3.5 – 5.5 mm (0.138 – 0.217 in)	- 1.0 – 1.0 mm (- 0.039 – 0.039 in)	

- 1. Check the clearance and surface height and surface mismatch between the rear door and each part visually and by touching. (Fitting standard dimension in the table below shall be satisfied.)
- 2. In case any parts are out of specification, adjust them according to the procedures shown below.
- 3. Remove the center pillar upper garnish and center pillar lower garnish. Refer to <a href="INT-14">INT-14</a>, "Removal and <a href="Installation"</a>.
- 4. Loosen the door hinge mounting nuts on door side.
- Adjust the surface height and surface mismatch of the rear door according to the fitting standard dimension.
- 6. Temporarily tighten the hinge mounting nuts on door side.
- 7. Loosen the door hinge mounting nuts and bolts on body side.
- Raise the rear door at rear end to adjust clearance of the rear door according to the fitting standard dimension.
- 9. After adjustment tighten bolts and nuts to the specified torque.
- 10. Install the center pillar upper garnish and center pillar lower garnish. Refer to <a href="INT-14">INT-14</a>, "Removal and Installation".

#### DOOR STRIKER ADJUSTMENT

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



DOOR STRIKER

# DOOR STRIKER: Exploded View

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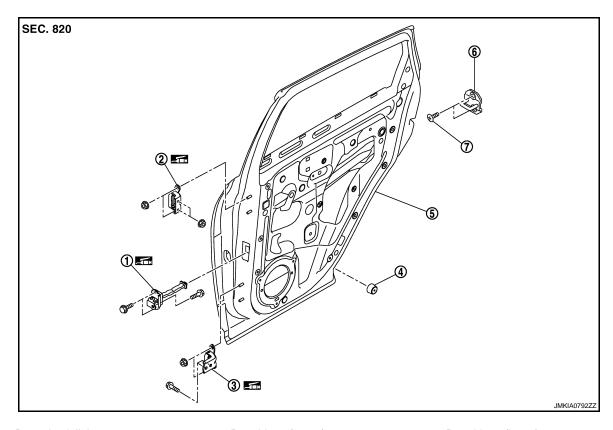
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- Door check link
  - Door hinge (upper) Bumper rubber
    - Rear door panel

- Door hinge (lower)
- Door striker

7. TORX bolt

Refer to GI-4, "Components" for symbols in the figure.

#### DOOR STRIKER: Removal and Installation

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**REMOVAL** 

4.

Remove the TORX bolts, and then remove the door striker.

**INSTALLATION** 

Install in the reverse order of removal.

**CAUTION:** 

- Check the rear door open/close operation after installation.
- When removing and installing the door striker, be sure to perform the fitting adjustment. Refer to DLK-242, "DOOR ASSEMBLY: Adjustment".

DOOR HINGE

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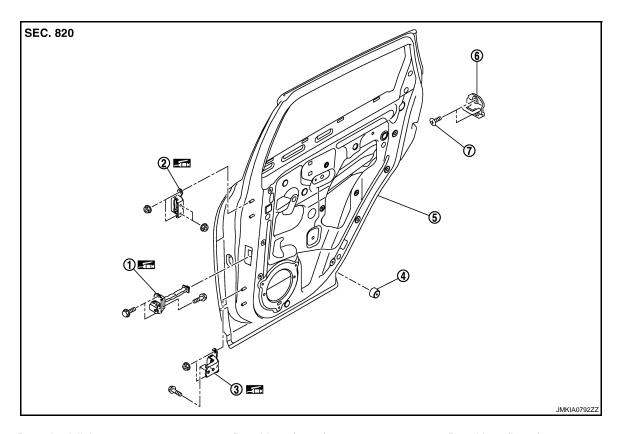
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DOOR HINGE: Exploded View

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- 1. Door check link
- 4. Bumper rubber
- 7. TORX bolt

- Door hinge (upper)
  - 5. Rear door panel
- 3. Door hinge (lower)
- 6. Door striker

Refer to GI-4, "Components" for symbols in the figure.

# DOOR HINGE: Removal and Installation

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#### **REMOVAL**

- Remove the center pillar lower garnish and the center pillar upper garnish. Refer to <u>INT-14</u>, "Removal and <u>Installation"</u>.
- 2. Remove the rear door assembly. Refer to <u>DLK-241, "DOOR ASSEMBLY: Removal and Installation"</u>.
- 3. Remove the rear door hinge mounting bolts and nuts (body side), and then remove the door hinge.

#### INSTALLATION

Install in the reverse order of removal.

#### **CAUTION:**

- When removing and installing the rear door assembly, perform the fitting adjustment. Refer to <a href="DLK-242">DLK-242</a>, "DOOR ASSEMBLY: Adjustment".
- Check the door hinge rotating part for poor lubrication. If necessary, apply body grease.
- After installing, apply the touch-up paint (the body color) onto the head of the hinge mounting nuts.
- Check the rear door open/close operation after installation.

#### DOOR CHECK LINK

# DOOR CHECK LINK: Exploded View

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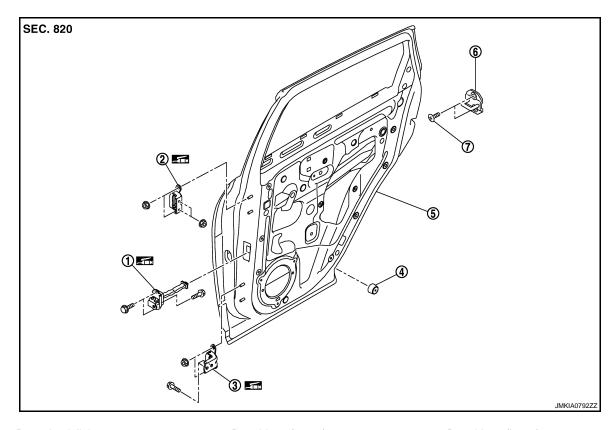
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- 1. Door check link
- 4. Bumper rubber
- 7. TORX bolt

- Door hinge (upper)
  - 5. Rear door panel

- 3. Door hinge (lower)
- 6. Door striker

Refer to GI-4, "Components" for symbols in the figure.

# DOOR CHECK LINK: Removal and Installation

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#### **REMOVAL**

- 1. Remove the rear door finisher. Refer to <a href="INT-10">INT-10</a>, "FRONT DOOR FINISHER: Removal and Installation".
- 2. Remove the rear door sealing screen.
- 3. Remove the mounting bolt of the check link on the vehicle.
- 4. Remove the door check link cover, and then remove the door check link mounting bolts.
- 5. Remove the door check link.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

Check front door open/close operation after installation.

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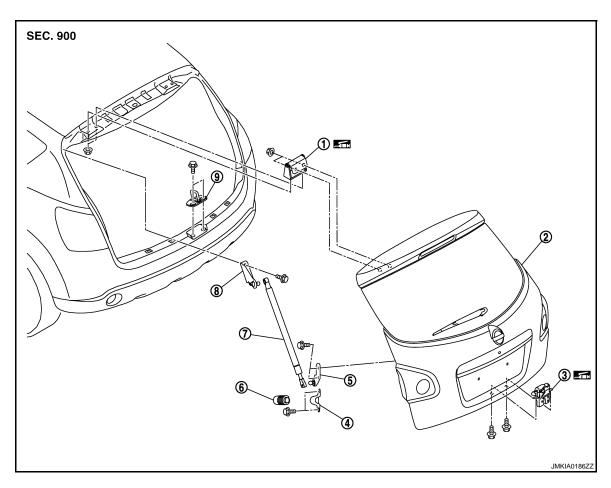
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# **BACK DOOR BACK DOOR ASSEMBLY**

BACK DOOR ASSEMBLY: Exploded View

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#### **REMOVAL**



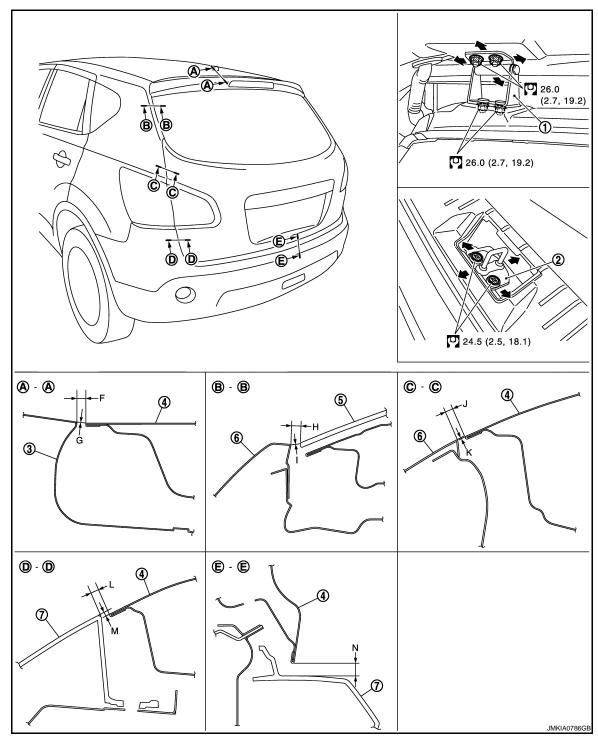
- 1. Back door hinge
- 4. Bumper rubber bracket

Refer to GI-4, "Components" for symbols in the figure.

7. Back door stay

- 2. Back door assembly
- 5. Back door stay bracket (lower)
- 8. Back door stay bracket (upper)
- 3. Back door lock assembly
- 6. Bumper rubber
- Back door striker

#### **ADJUSTMENT**



- Back door hinge
- Back door outer 4.
- Rear bumper fascia
- 2. Back door striker
- Back door glass
- 3. Roof panel
- Body side outer

Refer to GI-4, "Components" for symbols in the figure.

#### BACK DOOR ASSEMBLY: Removal and Installation

#### **REMOVAL**

- 1. Remove the back door finisher inner. Refer to INT-26, "Removal and Installation".
- 2. Remove the back door window glass. Refer to GW-17, "Removal and Installation". NOTE:

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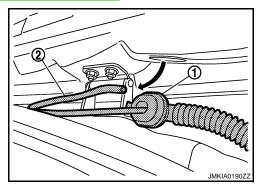
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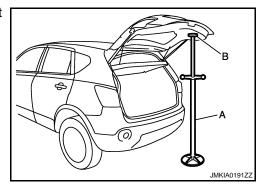
It is necessary to remove back door window glass in order to remove harness, because harness connector interferes with back door window glass pin.

- 3. Disconnect the connectors in the back door, and then remove the grommet, and pull out hte harness.
- 4. Remove the parcel shelf. Refer to INT-24, "Removal and Installation".
- 5. Remove the high-mounted stop lamp. Refer to EXL-186, "Removal and Installation".
- 6. Remove the grommet (1), and then pull out the washer tube (2).

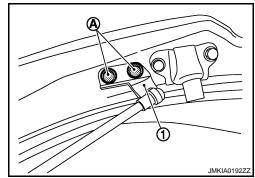


- 7. Pull the harness out of the back door.
- 8. Support the back door lock with the proper material to prevent it from falling.

A : Jack
B : Shop cloth



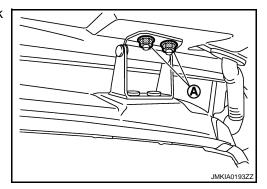
Remove the back door stay bracket (1) mounting bolts (A) on the back door.



10. Remove the back door hinge mounting nuts (A) on the back door and remove the back door assembly.

#### **CAUTION:**

Perform work with 2 workers, because of its heavy weight.



#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

· Perform work with 2 workers, because of its heavy weight.

- After installation, perform fitting adjustment. Refer to <a href="DLK-249">DLK-249</a>, "BACK DOOR ASSEMBLY: Adjustment".
- Check the back door open/close operation after installation.
- Check the back door lock/unlock operation after installation.

BACK DOOR ASSEMBLY : Adjustment

	Portio	n		Standard	Difference(RH/LH)	
Back door panel – Roof panel	<b>A</b> – <b>A</b>	F	Clearance	5.0 – 7.0 mm (0.197 – 0.276 in)	_	
		G	Surface height	0.0 – 2.0 mm (0.000 – 0.079 in)	_	
Back door glass – Body side outer	B – B	Н	Clearance	3.9 – 8.1 mm (0.154 – 0.319 in)	2.1 mm (0.083 in)	
		ı	Surface height	- 1.0 – 3.1 mm (- 0.039 – 0.122 in)	2.0 mm (0.079 in)	
Back door panel – Body side outer	C - C	J	Clearance	3.5 – 6.5 mm (0.138 – 0.256 in)	2.0 mm (0.079 in)	
		K	Surface height	- 1.0 – 1.0 mm (- 0.039 – 0.039 in)	_	
Back door panel – Rear bumper fascia	D – D	D D	L	Clearance	4.0 – 8.0 mm (0.157 – 0.315 in)	2.0 mm (0.079 in)
		M	Surface height	0.1 – 4.1 mm (0.004 – 0.161 in)	2.1 mm (0.083 in)	
Back door panel – Rear bumper fascia	E-E	N	Clearance	5.8 – 10.2 mm (0.228 – 0.402 in)	_	

#### FITTING ADJUSTMENT

- 1. Check the clearance and the evenness between the back door and each part visually and by touching. (Fitting standard dimension in the table below shall be satisfied.)
- 2. In case any parts are out of specification, adjust them according to the procedures shown below.
- Loosen the bumper rubber.
- 4. Loosen the back door striker mounting bolts.
- 5. Lift up the back door approximately 100 150 mm (3.937 5.906 in) height then close it lightly and check that it is engaged firmly with the back door closed.
- Check the clearance and evenness.
- 7. Finally tighten the back door striker.

#### BACK DOOR STRIKER

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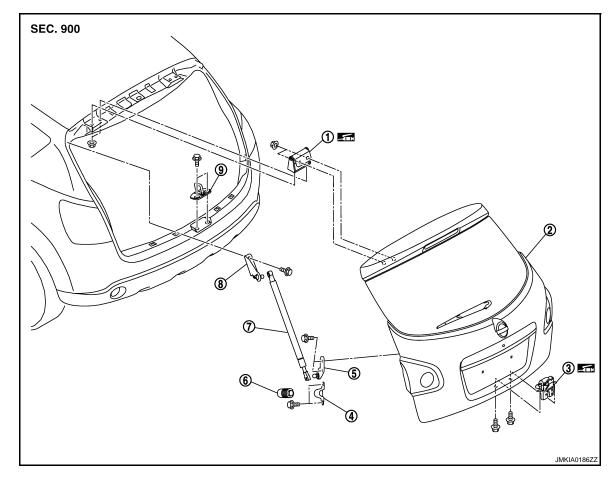
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# BACK DOOR STRIKER: Exploded View

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- 1. Back door hinge
- 4. Bumper rubber bracket
- 7. Back door stay

- 2. Back door assembly
- 5. Back door stay bracket (lower)
- 8. Back door stay bracket (upper)
- 3. Back door lock assembly
- 6. Bumper rubber
- 9. Back door striker

Refer to GI-4, "Components" for symbols in the figure.

## BACK DOOR STRIKER: Removal and Installation

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#### **REMOVAL**

- 1. Remove the luggage rear plate cap. Refer to <a href="INT-24">INT-24</a>, "Removal and Installation".
- 2. Remove the mounting bolts, and then remove the back door striker.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

- When removing and installing the back door striker, be sure to perform the fitting adjustment. Refer to <u>DLK-249</u>, "<u>BACK DOOR ASSEMBLY</u>: <u>Adjustment</u>".
- Check the back door open/close operation after installation.

#### **BACK DOOR HINGE**

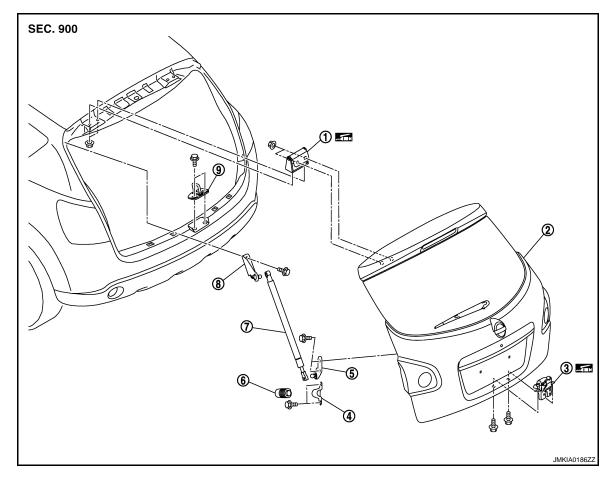
**BACK DOOR HINGE: Exploded View** 

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- 1. Back door hinge
- 4. Bumper rubber bracket
- 7. Back door stay

- 2. Back door assembly
- 5. Back door stay bracket (lower)
- 8. Back door stay bracket (upper)
- 3. Back door lock assembly
- 6. Bumper rubber
- 9. Back door striker

Refer to GI-4, "Components" for symbols in the figure.

#### BACK DOOR HINGE: Removal and Installation

#### **REMOVAL**

- 1. Remove the back door assembly. Refer to <u>DLK-247</u>, "BACK DOOR ASSEMBLY : Removal and Installation".
- 2. Remove upper side of the back door weatherstrip. Refer to <u>DLK-253, "BACK DOOR WEATHER-STRIP: Removal and Installation"</u>.
- 3. Remove rear seat belt cover. Refer to <a href="INT-21">INT-21</a>, "Removal and Installation".
- 4. Using remover tool, remove the headlining clip at the rear side of the headlining. Refer to <a href="INT-20">INT-20</a>, "Exploded View".
- 5. Remove the rear side of the headlining.
- 6. Remove the back door hinge mounting nuts (body side), and then remove the back door hinge.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

- When removing and installing the back door assembly, perform the fitting adjustment. Refer to <u>DLK-249</u>, "BACK DOOR ASSEMBLY: Adjustment".
- After installation, apply touch-up paint (the body color) onto the head of the hinge mounting nuts.
- Check the hinge rotating part for poor lubrication. If necessary, apply body grease.

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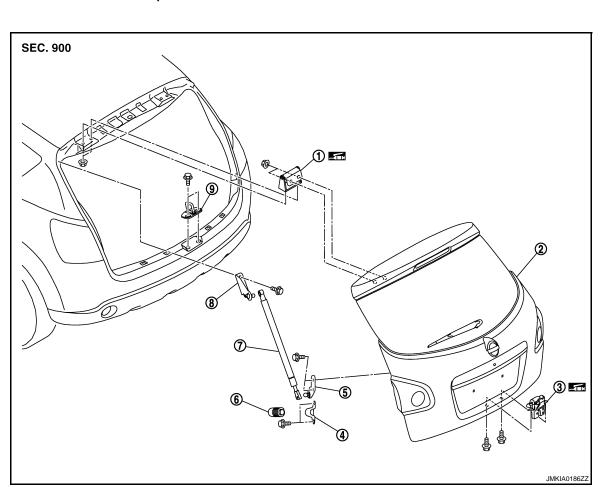
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• Check the back door open/close operation after installation.

**BACK DOOR STAY** 

**BACK DOOR STAY: Exploded View** 



- 1. Back door hinge
- 4. Bumper rubber bracket
- 7. Back door stay

- 2. Back door assembly
- Back door stay bracket (lower)
- Back door stay bracket (upper)

- 3. Back door lock assembly
- Bumper rubber
- 9. Back door striker

Refer to GI-4, "Components" for symbols in the figure.

#### BACK DOOR STAY: Removal and Installation

#### **REMOVAL**

- Remove the mounting bolts, and then remove the back door stay bracket on body side.
- Remove the stud ball, and then remove the back door stay on back door side.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

Check the back door open/close operation after installation.

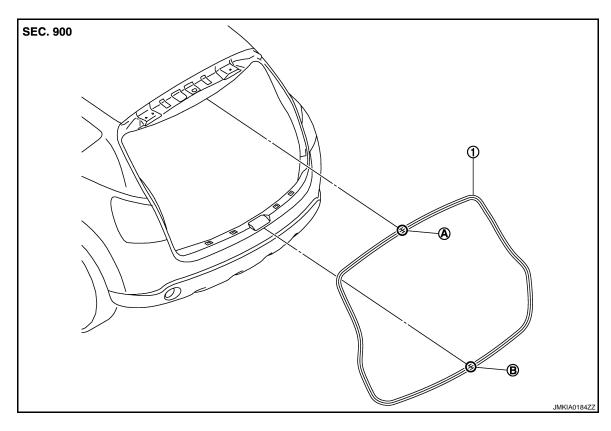
BACK DOOR WEATHER-STRIP

BACK DOOR WEATHER-STRIP: Exploded View

**REMOVAL** 

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- 1. Back door weatherstrip
- A. Mark (upper)
- B. Mark (lower)

#### BACK DOOR WEATHER-STRIP: Removal and Installation

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#### REMOVAL

Pull up and remove engagement with body from the weatherstrip joint.

#### **CAUTION:**

After removal, do not pull strongly on the weather-strip.

#### INSTALLATION

- 1. Working from the upper section, align the weatherstrip mark with vehicle center position mark and install the weatherstrip onto the vehicle.
- 2. For the lower section, align the weatherstrip seam with center of the back door striker.
- 3. After installation, pull the weatherstrip gently to ensure that there is no loose section. **NOTE:**

Make sure that the weatherstrip is fit tlightly at each corner and the luggage rear plate.

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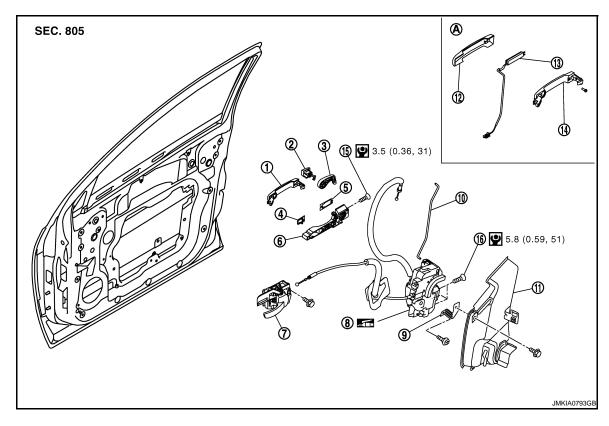
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## FRONT DOOR LOCK DOOR LOCK

DOOR LOCK: Exploded View

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- Outside handle assembly
- Front gasket 4.
- Inside handle
- 10. Key rod protector(SUPER LOCK model only)
- 13. Antenna
- 16. TORX bolt
- A: Intelligent Key only

- 2. Door key cylinder
- Rear gasket 5.
- Door lock assembly
- 11. Key rod protector assembly (SUPER 12. Outside handle cover LOCK and RH handle model only)
- 14. Outside handle base

- 3. Key cylinder lever
- Outside handle bracket 6.
- Key cylinder rod
- 15. TORX bolt

DOOR LOCK: Removal and Installation

Refer to GI-4, "Components" for symbols in the figure.

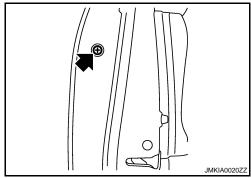
#### **REMOVAL**

- Remove the front door finisher. Refer to INT-10, "FRONT DOOR FINISHER: Removal and Installation".
- Remove the inside handle mounting bolt, and then disconnect the inside handle cable.
- 3. Remove the front door glass. Refer to GW-19, "Removal and Installation".
- Remove the front door module assembly. Refer to <u>GW-22, "Removal and Installation"</u>.
- 5. Disconnect the door antenna and the door request switch connector and remove the harness clamp (models with Intelligent Key system).

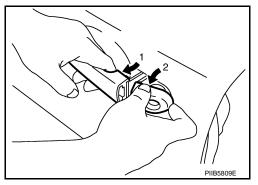
Remove the door side grommet, and loosen TORX bolt from grommet hole.

#### **CAUTION:**

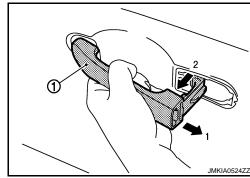
Do not forcibly remove the bolts.



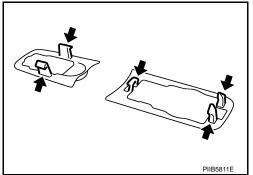
- 7. Reach in to separate the key cylinder rod connection (on the handle).
- 8. Disconnect the door key cylinder switch harness connector.
- 9. Remove the key cylinder lever from the door key cylinder.
- 10. While pulling the outside handle, remove door key cylinder assembly.



- 11. Disconnect front door request switch harness connector (models with Intelligent Key system).
- 12. While pulling outside handle (1), slide toward rear of vehicle to remove outside handle.



13. Remove the front gasket and the rear gasket.



- 14. Remove the door lock assembly TORX bolts.
- 15. Disconnect the door lock actuator connector, and then remove the door lock assembly.

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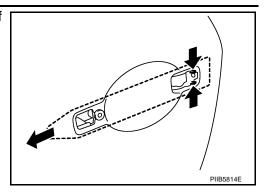
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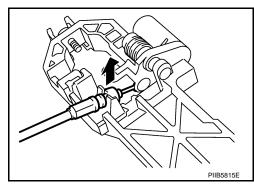
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16. While pulling the outside handle bracket, slide toward rear of vehicle to remove the outside handle bracket.



17. Reach in to separate the outside handle cable connection.



#### **INSTALLATION**

Install in the reverse order of removal.

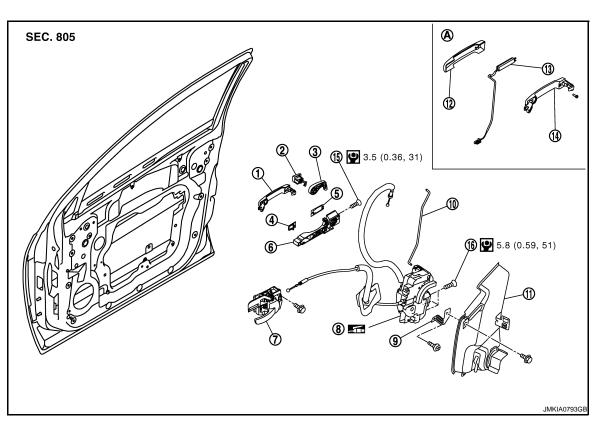
#### **CAUTION:**

- To install each rod, rotate the rod holder until a click is felt.
- Check the door lock/unlock operation after installation.
- Check the door open/close operation after installation.

#### **INSIDE HANDLE**

INSIDE HANDLE: Exploded View

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#### FRONT DOOR LOCK

#### < ON-VEHICLE REPAIR >

#### [WITH I-KEY, WITHOUT SUPER LOCK]

- 1. Outside handle assembly
- 4. Front gasket
- 7. Inside handle
- 10. Key rod protector(SUPER LOCK model only)
- 13. Antenna
- 16. TORX bolt
- A: Intelligent Key only

- 2. Door key cylinder
- 5. Rear gasket
- Door lock assembly
- Key rod protector assembly (SUPER 12. Outside handle cover LOCK and RH handle model only)
- 14. Outside handle base

- 3. Key cylinder lever
- 6. Outside handle bracket
- 9. Key cylinder rod
- 15. TORX bolt

### **INSIDE HANDLE:** Removal and Installation

Refer to GI-4, "Components" for symbols in the figure.

#### REMOVAL

- Remove the front door finisher. Refer to INT-10, "FRONT DOOR FINISHER: Removal and Installation".
- Remove the inside handle mounting bolt.
- Disconnect the inside handle cable, and then remove the inside handle.

#### INSTALLATION

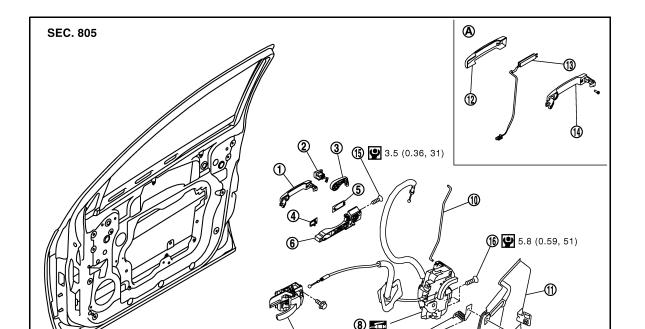
Install in the reverse order of removal.

#### **CAUTION:**

- Check the door lock/unlock operation after installation.
- Check the door open/close operation after installation.

#### **OUTSIDE HANDLE**

### **OUTSIDE HANDLE: Exploded View**



- Outside handle assembly
- Front gasket
- Inside handle 7.

- Door key cylinder
- 5. Rear gasket
- Door lock assembly
- 3. Key cylinder lever
- 6. Outside handle bracket

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Key cylinder rod

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#### [WITH I-KEY, WITHOUT SUPER LOCK]

- Key rod protector(SUPER LOCK model only)
- Key rod protector assembly (SUPER 12. Outside handle cover LOCK and RH handle model only)

13. Antenna

Outside handle base
 TORX bolt

- 16. TORX bolt
- A: Intelligent Key only

Refer to GI-4, "Components" for symbols in the figure.

#### **OUTSIDE HANDLE: Removal and Installation**

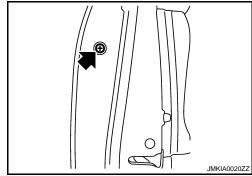
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#### REMOVAL

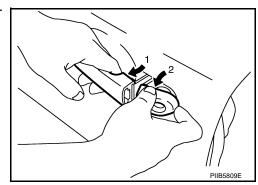
- Remove the front door finisher. Refer to <u>INT-10</u>, "<u>FRONT DOOR FINISHER</u>: <u>Removal and Installation</u>".
- 2. Remove the inside handle mounting bolt, and disconnect the inside handle knob cable and the lock knob cable.
- 3. Remove the front door glass. Refer to GW-19. "Removal and Installation".
- 4. Remove the front door module assembly. Refer to <a href="GW-22">GW-22</a>, "Removal and Installation".
- 5. Disconnect the door antenna and the door request switch connector and remove the harness clamp (models with Intelligent Key system).
- 6. Remove the door side grommet, and loosen TORX bolt from the grommet hole.

#### **CAUTION:**

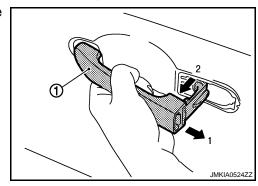
Do not forcibly remove the bolts .



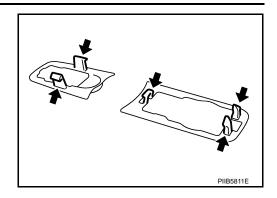
- 7. Reach in to separate the key cylinder rod connection (on the handle).
- 8. Disconnect the door key cylinder switch harness connector.
- 9. Remove the key cylinder lever from the door key cylinder.
- While pulling the outside handle, remove the door key cylinder assembly.



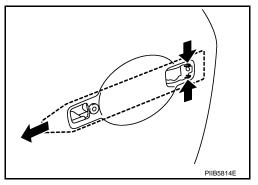
- 11. Disconnect the front door request switch harness connector (models with Intelligent Key system).
- 12. While pulling the outside handle (1), slide toward rear of vehicle to remove the outside handle.



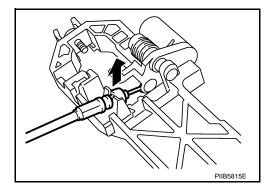
13. Remove the front gasket and rear gasket.



14. While pulling the outside handle bracket, slide toward rear of vehicle to remove the outside handle bracket.



15. Reach in to separate the outside handle cable connection.



#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

- To install each rod, rotate the rod holder until a click is felt.
- Check the door lock/unlock operation after installation.
- Check the door open/close operation after installation.

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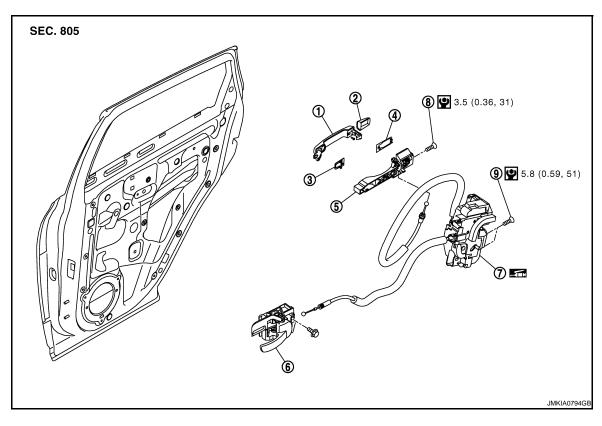
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## REAR DOOR LOCK DOOR LOCK

DOOR LOCK: Exploded View

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- 1. Outside handle
- 4. Rear gasket
- 7. Door lock assembly
- 2. Outside handle escutcheon
- 5. Outside handle bracket
- 8. TORX bolt

- 3. Front gasket
- 6. Inside handle
- 9. TORX bolt

Refer to  $\underline{\mbox{GI-4, "Components"}}$  for symbols in the figure.

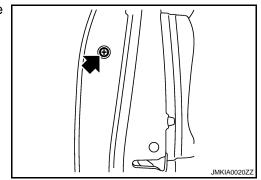
#### DOOR LOCK: Removal and Installation

#### **REMOVAL**

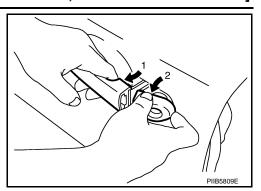
- 1. Remove the rear door finisher. Refer to INT-13, "REAR DOOR FINISHER: Removal and Installation".
- 2. Fully close the front door window.
- 3. Remove the door sealing screen.
- 4. Remove the inside handle mounting bolt, and then disconnect the inside handle cable.
- 5. Remove the door side grommet, and loosen TORX bolt from the grommet hole.

#### **CAUTION:**

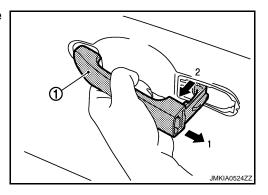
Do not forcibly remove the bolts.



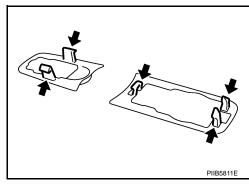
While pulling the outside handle, remove the door key cylinder assembly.



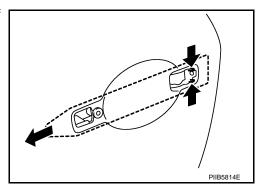
7. While pulling the outside handle (1), slide toward rear of vehicle to remove the outside handle.



8. Remove the front gasket and the rear gasket.



- 9. Remove the door lock assembly TORX bolts.
- 10. Disconnect the door lock actuator connector, and then remove the door lock assembly.
- 11. While pulling the outside handle bracket, slide toward rear of vehicle to remove the outside handle bracket.



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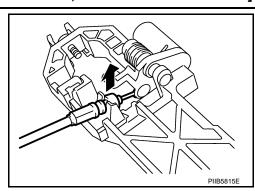
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12. Reach in to separate the outside handle cable connection.



#### **INSTALLATION**

Install in the reverse order of removal.

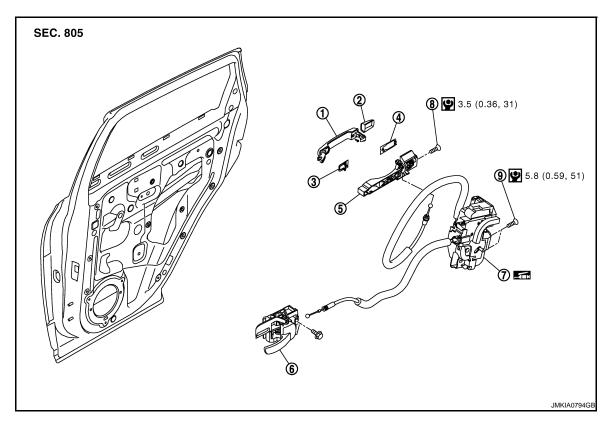
#### **CAUTION:**

- To install each rod, rotate the rod holder until a click is felt.
- Check the door lock/unlock operation after installation.
- Check the door open/close operation after installation.

#### INSIDE HANDLE

**INSIDE HANDLE: Exploded View** 

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- 1. Outside handle
- 4. Rear gasket
- 7. Door lock assembly
- 2. Outside handle escutcheon
- 5. Outside handle bracket
- 8. TORX bolt

- Front gasket
- 6. Inside handle
- 9. TORX bolt

Refer to GI-4, "Components" for symbols in the figure.

#### INSIDE HANDLE: Removal and Installation

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#### **REMOVAL**

- Remove the rear door finisher. Refer to <u>INT-13</u>, "<u>REAR DOOR FINISHER</u>: <u>Removal and Installation</u>".
- 2. Remove the door sealing screen.

- Remove the inside handle mounting bolt, and then disconnect the inside handle cable.
- Remove the inside handle.

#### **INSTALLATION**

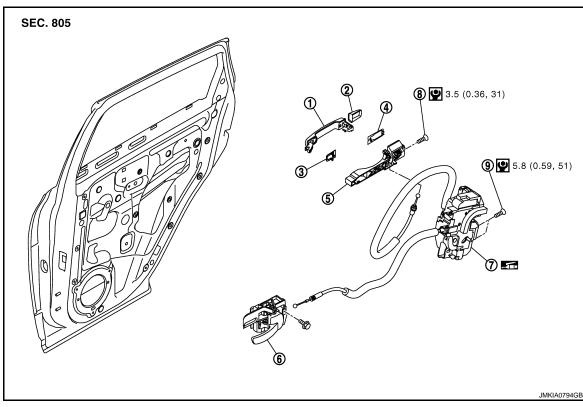
Install in the reverse order of removal.

#### **CAUTION:**

- Check the door lock/unlock operation after installation.
- Check the door open/close operation after installation.

#### **OUTSIDE HANDLE**

**OUTSIDE HANDLE: Exploded View** 



- Outside handle
- Rear gasket
- 7. Door lock assembly
- Outside handle escutcheon
- 5. Outside handle bracket
- TORX bolt 8.

- Front gasket
- Inside handle 6.
- TORX bolt 9.

Refer to GI-4, "Components" for symbols in the figure.

## OUTSIDE HANDLE: Removal and Installation

#### REMOVAL

- 1. Remove the rear door finisher. Refer to <a href="INT-13">INT-13</a>, "REAR DOOR FINISHER: Removal and Installation".
- 2. Fully close the front door window.
- 3. Remove the door sealing screen.
- 4. Remove the inside handle mounting bolt, disconnect the inside handle cable.

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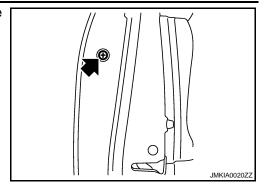
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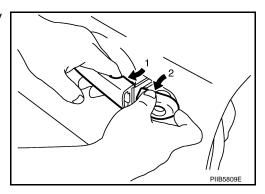
5. Remove the door side grommet, and loosen TORX bolt from the grommet hole.

#### **CAUTION:**

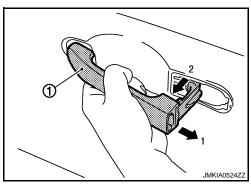
Do not forcibly remove the bolts.



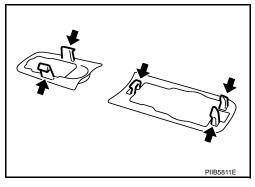
6. While pulling the outside handle, and then remove the door key cylinder assembly.



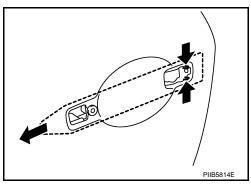
7. While pulling the outside handle (1), slide toward rear of vehicle to remove the outside handle.



8. Remove the front gasket and the rear gasket.



9. While pulling the outside handle bracket, slide toward rear of vehicle to remove the outside handle bracket.

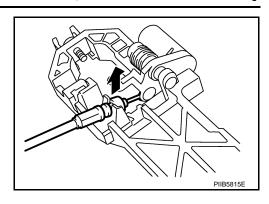


#### **REAR DOOR LOCK**

#### < ON-VEHICLE REPAIR >

#### [WITH I-KEY, WITHOUT SUPER LOCK]

10. Reach in to separate the outside handle cable connection.



#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

- Check the door lock/unlock operation after installation.
  Check the door open/close operation after installation.

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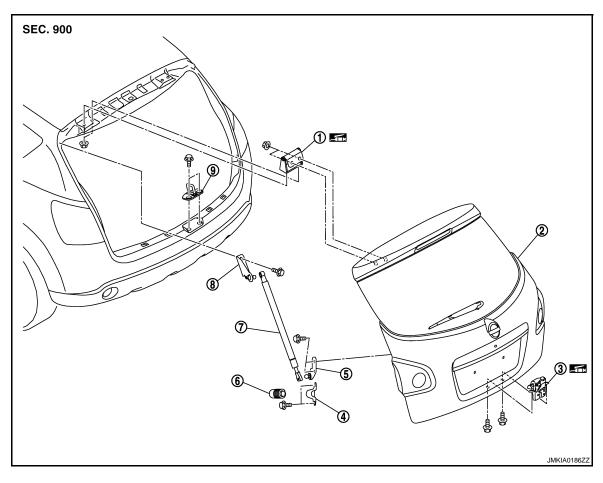
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# BACK DOOR LOCK DOOR LOCK

DOOR LOCK: Exploded View

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- 1. Back door hinge
- 4. Bumper rubber bracket
- Back door stay

- 2. Back door assembly
- 5. Back door stay bracket (lower)
- 8. Back door stay bracket (upper)
- 3. Back door lock assembly
- 6. Bumper rubber
- 9. Back door striker

Refer to GI-4, "Components" for symbols in the figure.

#### DOOR LOCK: Removal and Installation

#### **REMOVAL**

- 1. Remove the back door trim finisher lower. Refer to <a href="INT-26">INT-26</a>, "Removal and Installation".
- 2. Disconnect the back door lock assembly and back door opener switch connectors.
- 3. Remove the back door lock mounting bolts, and then remove the back door lock and actuator.

#### **INSTALLTION**

Install in the reverse order of removal.

#### **CAUTION:**

Check the back door lock/unlock operation after installation.

[WITH I-KEY, WITHOUT SUPER LOCK]

## FUEL FILLER LID OPENER

**FUEL FILLER LID** 

FUEL FILLER LID: Exploded View

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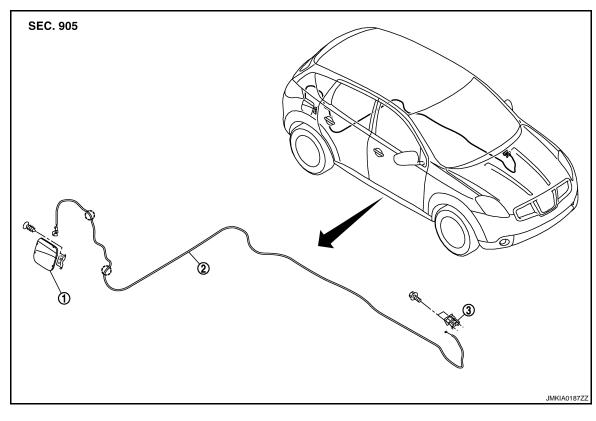
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1. Fuel filler lid assembly

2. Fuel filler opener cable

Fuel opener lever

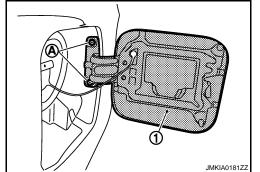
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#### FUEL FILLER LID: Removal and Installation

**REMOVAL** 

1. Fully open the fuel filler lid.

- 2. Remove the filler cap.
- 3. Remove the mounting screws (A), and then remove the fuel filler lid (1).



**INSTALLATION** 

Install in the reverse order of removal.

**CAUTION:** 

After installation, apply the touch-up paint (the body color) onto the head of the mounting screws. FUEL FILLER OPENER CABLE

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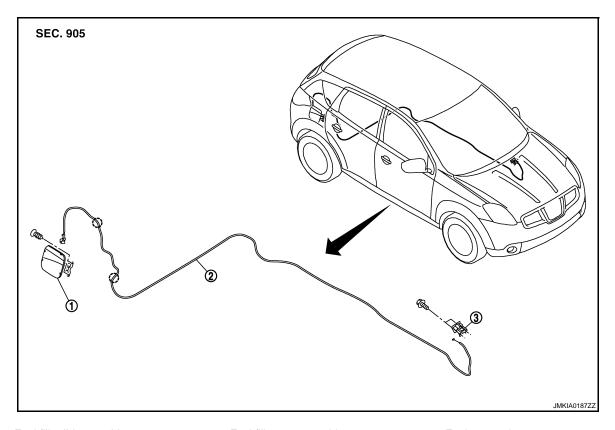
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## FUEL FILLER OPENER CABLE: Exploded View

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- 1. Fuel filler lid assembly
- 2. Fuel filler opener cable
- Fuel opener lever

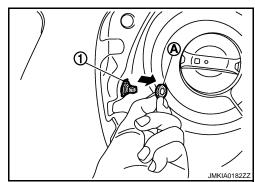
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#### FUEL FILLER OPENER CABLE: Removal and Installation

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#### **REMOVAL**

- Remove the rear seat cushion, rear seatback, seatback lower support, and seatback mounting outer bracket. Refer to <u>SE-21, "Removal and Installation"</u>.
- Remove the dash side finisher, front kicking plate inner, rear kicking plate inner, center pillar lower garnish, and luggage side lower finisher (front). Refer to <a href="INT-14">INT-14</a>, "Removal and Installation".
- 3. Remove the parcel shelf, luggage floor carpet, luggage floor spacer, luggage rear plate, luggage side lower finisher, and rear pillar finisher. Refer to <a href="INT-24">INT-24</a>, "Removal and Installation".
- 4. Remove the fuel filler lock seal (A) from fuel filler opener cable (1).

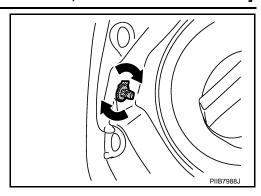


#### **FUEL FILLER LID OPENER**

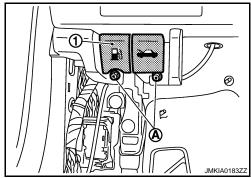
#### < ON-VEHICLE REPAIR >

#### [WITH I-KEY, WITHOUT SUPER LOCK]

5. Rotate the fuel filler lock, and then remove the fuel filler lock.



- 6. Remove the fuel filler opener cable mounting clips and the clamps.
- 7. Remove the mounting bolts (A), and then remove the fuel filler lid opener lever (1).



8. Remove the fuel filler opener cable.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

Check the fuel filler lid open/close operation after installation.

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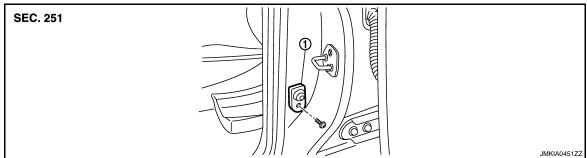
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## DOOR SWITCH

## **Exploded View**

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1. Door switch (driver side)

Refer to DLK-270, "Removal and Installation".

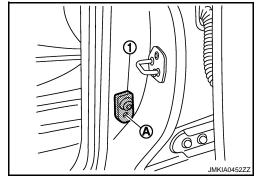
#### Removal and Installation

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#### **REMOVAL**

1. Remove the door switch mounting bolt (A), and then remove door switch (1).

#### NOTE:



#### **INSTALLATION**

Install in the reverse order of removal.

## INSIDE KEY ANTENNA **INSTRUMENT CENTER**

**INSTRUMENT CENTER:** Exploded View

INFOID:0000000001183810 **SEC. 253** 

Inside key antenna (instrument cen-1. ter)

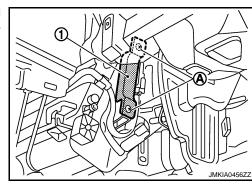
Refer to DLK-271, "INSTRUMENT CENTER: Removal and Installation".

#### **INSTRUMENT CENTER:** Removal and Installation

**REMOVAL** 

1. Remove the glove box and instrument lower cover RH. Refer to IP-11, "Exploded View" and IP-12, "Removal and Installation".

Remove the inside key antenna (instrument center) mounting screw (A), and then remove inside key antenna (instrument center) (1).

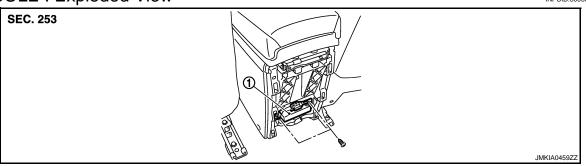


**INSTALLATION** 

Install in the reverse order of removal.

CONSOLE

**CONSOLE**: Exploded View



Inside key antenna (console)

Refer to DLK-271, "CONSOLE: Removal and Installation".

CONSOLE: Removal and Installation

**REMOVAL** 

**DLK-271** 

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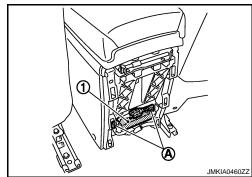
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#### < ON-VEHICLE REPAIR >

- 1. Remove the console rear finisher. Refer to IP-18, "Exploded View" and IP-18, "Removal and Installation".
- 2. Remove the inside key antenna (console) mounting screw (A), and then remove inside key antenna (console) (1).



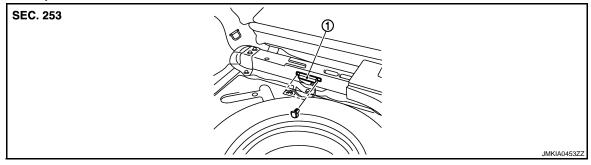
#### **INSTALLATION**

Install in the reverse order of removal.

**REAR** 

**REAR**: Exploded View





1. Inside key antenna (rear seat)

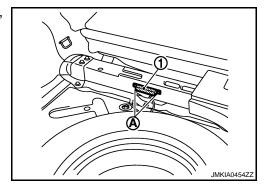
Refer to DLK-272, "REAR: Removal and Installation".

#### **REAR**: Removal and Installation

#### INFOID:0000000001183815

#### **REMOVAL**

- Remove the luggage floor spacer (LH). Refer to <u>INT-24, "Exploded View"</u> and <u>INT-24, "Removal and Installation"</u>.
- 2. Remove the inside key antenna (rear seat) mounting clips (A), and then remove inside key antenna (rear seat) (1).



#### **INSTALLATION**

Install in the reverse order of removal.

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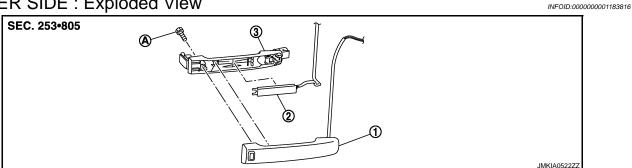
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## **OUTSIDE KEY ANTENNA**

**DRIVER SIDE** 

DRIVER SIDE: Exploded View



- Outside handle grip
- 2. Outside key antenna
- 3. Outside handle bracket

A. Bolt

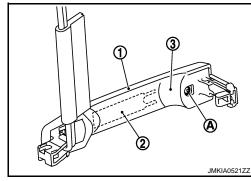
Refer to DLK-273, "DRIVER SIDE: Removal and Installation".

DRIVER SIDE: Removal and Installation

E: Removal and Installation

#### **REMOVAL**

- 1. Remove the outside handle. Refer to <a href="DLK-258">DLK-258</a>, "OUTSIDE HANDLE: Removal and Installation".
- 2. Remove the bolt (A) from outside handle grip (1).
- 3. Remove the outside key antenna (2) from outside handle bracket (3).

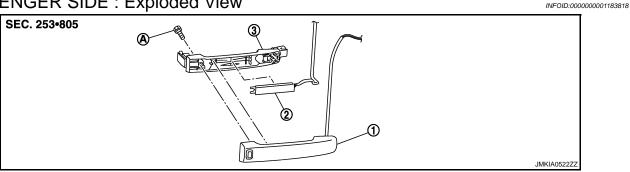


**INSTALLATION** 

Install in the reverse order of removal.

PASSENGER SIDE

PASSENGER SIDE: Exploded View



- 1. Outside handle grip
- 2. Outside key antenna
- 3. Outside handle bracket

A. Bolt

Refer to DLK-273, "PASSENGER SIDE: Removal and Installation".

PASSENGER SIDE: Removal and Installation INFOID:000000001183819

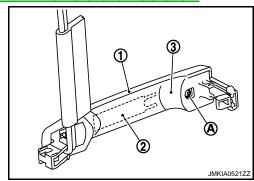
**REMOVAL** 

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**DLK-273** 

#### < ON-VEHICLE REPAIR >

- Remove the outside handle. Refer to <u>DLK-258</u>, "OUTSIDE HANDLE: Removal and Installation".
- 2. Remove the bolt (A) from outside handle grip (1).
- 3. Remove the outside key antenna (2) from outside handle bracket (3).



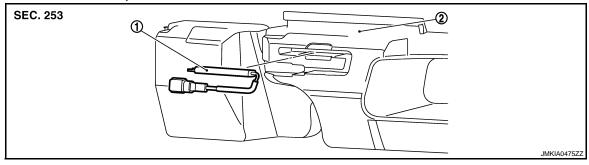
#### **INSTALLATION**

Install in the reverse order of removal.

#### REAR BUMPER

### **REAR BUMPER: Exploded View**

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1. Outside key antenna (rear bumper) 2. Rear bumper energy absorber

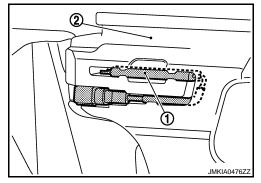
Refer to DLK-274, "REAR BUMPER: Removal and Installation".

#### REAR BUMPER: Removal and Installation

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#### **REMOVAL**

- 1. Remove the rear bumper. Refer to EXT-14, "Exploded View" and EXT-15, "Removal and Installation".
- 2. Remove the outside key antenna (rear bumper) (1) from rear bumper energy absorber (2).



#### INSTALLATION

Install in the reverse order of removal.

#### INTELLIGENT KEY WARNING BUZZER

< ON-VEHICLE REPAIR >

[WITH I-KEY, WITHOUT SUPER LOCK]

## INTELLIGENT KEY WARNING BUZZER

**Exploded View** 

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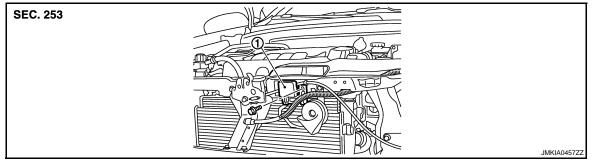
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1. Intelligent Key warning buzzer

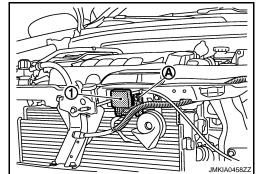
Refer to DLK-275, "Removal and Installation".

#### Removal and Installation

REMOVAL

Remove the front bumper. Refer to EXT-11, "Exploded View" and EXT-11, "Removal and Installation".

2. Remove the Intelligent Key warning buzzer mounting bolt (A), and then remove the Intelligent Key warning buzzer (1).



**INSTALLATION** 

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Install in the reverse order of removal.

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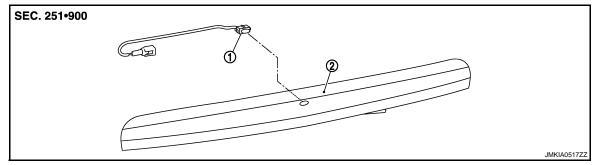
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## **BACK DOOR REQUEST SWITCH**

## **Exploded View**

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- 1. Back door request switch
- 2. Back door finisher

Refer to DLK-276, "Removal and Installation".

#### Removal and Installation

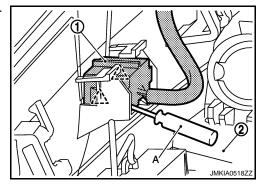
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#### **REMOVAL**

- Remove the back door finisher.
   Refer to <u>EXT-31</u>, "<u>Exploded View</u>" and <u>EXT-31</u>, "<u>Removal and Installation</u>".
- 2. Remove the back door request switch (1) from back door finisher (2) using flat-bladed screw driver (A) etc.



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#### **INSTALLATION**

Install in the reverse order of removal.

## **BACK DOOR OPENER SWITCH**

## **Exploded View**

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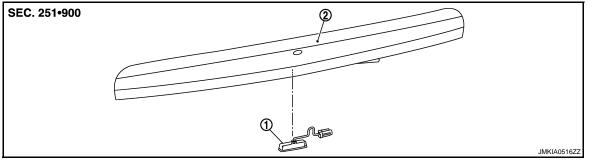
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1. Back door opener switch

2. Back door finisher

Refer to DLK-277, "Removal and Installation".

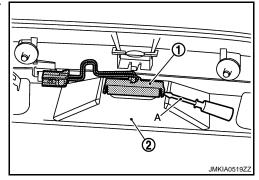
#### Removal and Installation

INFOID:0000000001183827

#### **REMOVAL**

- 1. Remove the back door finisher.

  Refer to <a href="EXT-31">EXT-31</a>, "Exploded View" and <a href="EXT-31">EXT-31</a>, "Removal and Installation".
- Remove the back door opener switch (1) from back door finisher
   using flat-bladed screw driver (A) etc.



#### **INSTALLATION**

Install in the reverse order of removal.

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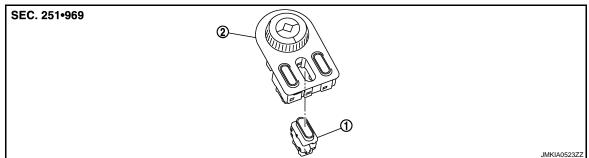
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## DOOR LOCK AND UNLOCK SWITCH

**Exploded View** 

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- 1. Door lock and unlock switch
- 2. Center console switch panel

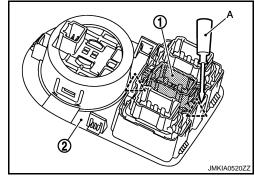
Refer to DLK-278, "Removal and Installation".

#### Removal and Installation

INFOID:0000000001183829

#### **REMOVAL**

- 1. Remove the center console switch panel. Refer to <u>IP-18, "Exploded View"</u> and <u>IP-18, "Removal and Installation"</u>.
- 2. Remove the door lock and unlock switch (1) from center console switch panel (2) using flat-bladed screwdriver (A), etc.



#### INSTALLATION

Install in the reverse order of removal.

## INTELLIGENT KEY BATTERY

Exploded View

Refer to DLK-279, "Removal and Installation".

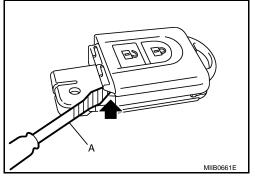
Removal and Installation

#### **REMOVAL**

- 1. Remove Intelligent Key cover.
- Insert a flat-bladed screwdriver (A) wrapped with tape as shown in the illustration and then separate lower and upper cases by twisting screwdriver.

#### **CAUTION:**

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



- 3. Remove the circuit board assembly from the upper case (1). [Substrate assembly: circuit board (3) + rubber (2)]
- 4. Gently press the rubber (2) and remove the circuit board (3). CAUTION:

Do not touch the printed circuits directly.

5. Remove the battery (4) from the lower case (5) and replace it.

Battery replacement : Coin-type lithium battery (CR2032)

#### **CAUTION:**

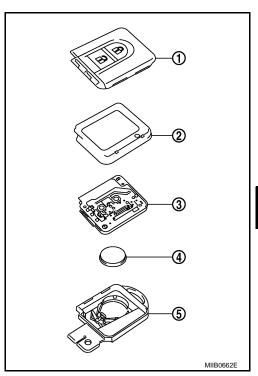
When replacing battery, keep dirt, grease, and other foreign materials off the electrode contact area.

6. After replacement, assemble the upper and lower cases by engaging the hooks on their circumference while being careful not to pinch the rubber, etc.

#### **CAUTION:**

After replacing the battery, check that all Intelligent Key functions work normally.

Refer to DLK-134, "Component Function Check".



#### INSTALLATION

Install in the reverse order of removal.

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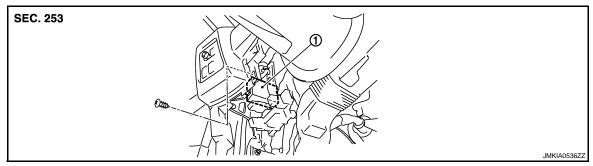
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INFOID:0000000001183831

### INTELLIGENT KEY UNIT

## **Exploded View**

INFOID:0000000001183832



1. Intelligent Key unit M40

Refer to DLK-280, "Removal and Installation".

#### Removal and Installation

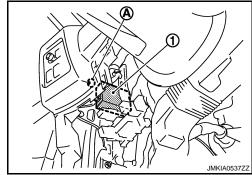
INFOID:0000000001183833

#### **REMOVAL**

- 1. Remove lower instrument panel (driver side) and mirror switch finisher. Refer to <a href="IP-11">IP-11</a>, "Exploded View" and <a href="IP-12">IP-12</a>, "Removal and Installation".
- 2. Remove the Intelligent Key unit mounting screw (A), and then remove Intelligent Key unit (1).

#### NOTE:

Perform the system initialization when replacing Intelligent Key unit. Refer to <u>DLK-23</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".



#### **INSTALLATION**

Install in the reverse order of removal.

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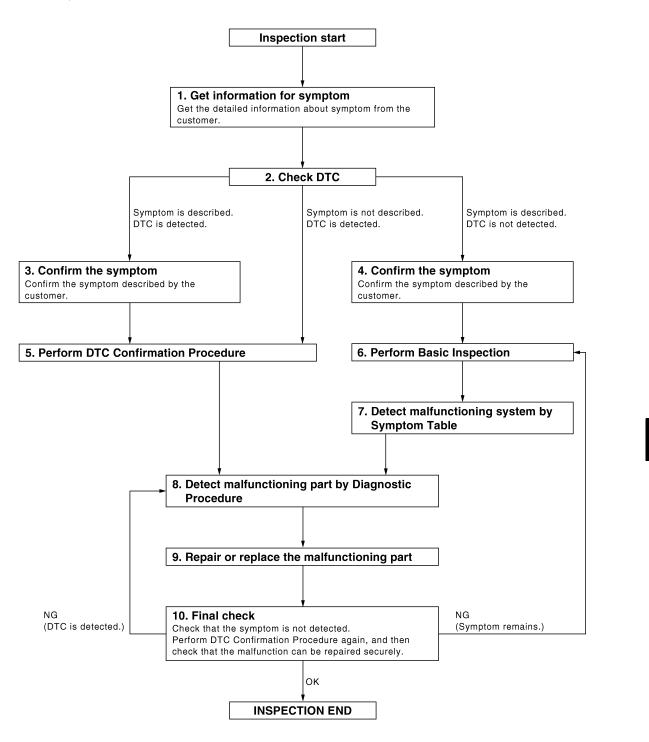
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## **BASIC INSPECTION**

## DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

**OVERALL SEQUENCE** 



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#### **DIAGNOSIS AND REPAIR WORKFLOW**

< BASIC INSPECTION >

[WITH I-KEY & SUPER LOCK]

## 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 for Intelligent Key unit and BCM.
- 2. Perform the following procedure if DTC is displayed.
- 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. If two or more DTCs are detected, refer to <u>DLK-431</u>, "<u>DTC Inspection Priority Chart</u>" (Intelligent Key unit), <u>DLK-470</u>, "<u>DTC Inspection Priority Chart</u>" (BCM) and determine trouble diagnosis order.

#### Is DTC detected?

YES >> GO TO 8.

NO >> Refer to GI-39, "Intermittent Incident".

#### PERFORM BASIC INSPECTION

Perform Basic Inspection. Refer to DLK-489, "Basic Inspection".

>> GO TO 7.

## 7.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM TABLE

Detect malfunctioning system according to Symptom Table based on the confirmed symptom in step 4.

>> GO TO 8.

## 8. DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

#### NOTE:

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

>> GO TO 9.

#### **DIAGNOSIS AND REPAIR WORKFLOW**

< BASIC INSPECTION >

[WITH I-KEY & SUPER LOCK]

## $9.\mathsf{REPAIR}$ 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 10.

## 10. 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.

#### Does the symptom reappear?

YES (DTC is detected)>>GO TO 8.

YES (Symptom remains)>>GO TO 6.

NO >> INSPECTION END

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#### **INSPECTION AND ADJUSTMENT**

< BASIC INSPECTION >

[WITH I-KEY & SUPER LOCK]

# INSPECTION AND ADJUSTMENT ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Description

INFOID:0000000001183835

Perform the system initialization when replacing Intelligent Key unit, replacing Intelligent Key or registering an additional Intelligent Key.

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement

Refer to the CONSULT-III Operation Manual-NATS.

## **FUNCTION DIAGNOSIS**

## DOOR LOCK FUNCTION

DOOR LOCK AND UNLOCK SWITCH

DOOR LOCK AND UNLOCK SWITCH: System Diagram

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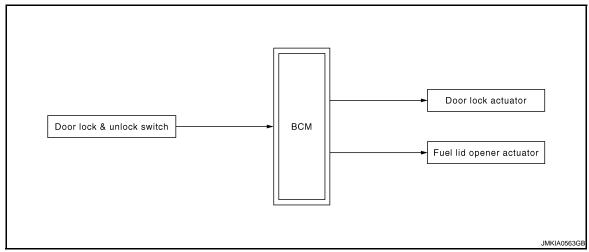
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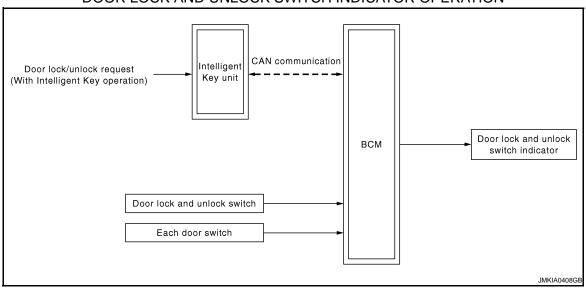
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#### DOOR LOCK AND UNLOCK SWITCH OPERATION



#### DOOR LOCK AND UNLOCK SWITCH INDICATOR OPERATION



## DOOR LOCK AND UNLOCK SWITCH: System Description

INFOID:0000000001183838

#### DOOR LOCK AND UNLOCK SWITCH OPERATION

Functions available by operating the door lock and unlock switch on center console. Interlocked with the lock/unlock operation of door lock and unlock switch, door lock actuators of all doors are locked/unlocked.

#### **Operation Condition**

If the following conditions are not satisfied, door lock/unlock operation is not performed even if the door lock and unlock switch is operated.

#### < FUNCTION DIAGNOSIS >

Door lock and unlock switch	Operation condition
Lock operation	Following all conditions are satisfied.  • Except driver side doors are closed.  • Doors are not locked with Intelligent Key or door request switch.
Unlock operation	Following all conditions are satisfied.  • Doors are not locked with Intelligent Key or door request switch.

#### NOTE:

When the door lock is locked with Intelligent Key or door request switch (in super lock set state), door lock and unlock switch operation will be invalid until either following condition is satisfied.

- Turn ignition switch ON.
- Unlock with Intelligent key or door request switch.

#### DOOR LOCK AND UNLOCK SWITCH INDICATOR OPERATION

Door lock and unlock switch indicator indicates door lock status. The indicator turn ON while ignition switch is ON and door lock is locked or super lock is set. If any door is opened, the indicator will be turn OFF.

#### 1 Minute Timer

A timer to turn OFF the indicator will running for 1 minute after super lock set or lock with Intelligent Key, door request switch or auto door lock.

#### 30 Minutes Timer

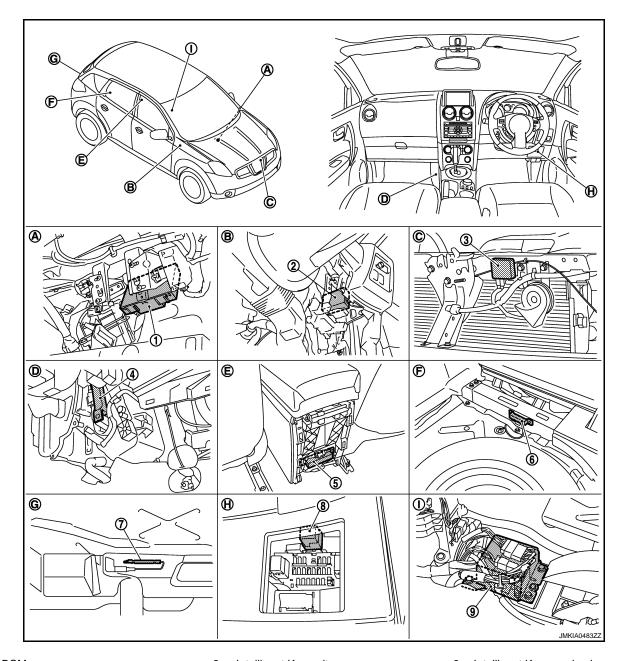
A timer must be running to turn OFF the indicator. The timer will running for 30 minutes after locking with door lock and unlock switch.

#### NOTE:

1 minuite timer condition is satisfied while 30 minutes timer is active, 30 minutes timer is not change to 1 minutes.

## DOOR LOCK AND UNLOCK SWITCH: Component Parts Location

INFOID:0000000001183839



- BCM M65, M66, M67
- 4. Inside key antenna (instrument center)
  M70
- 7. Outside key antenna (rear bumper) B81
- A. Over the glove box
- D. View with lower instrument cover removed
- G. View with rear bumper fascia removed

- Intelligent Key unit M40
- 5. Inside key antenna (center console)
- Passenger side anti-hijack relay
   M90
- B. Over the instrument lower panel (driver side)
- E. View with center console rear finisher removed
- H. View with fuse box lid removed

- 3. Intelligent Key warning buzzer E25
- 6. Inside key antenna (rear seat)
- Air bag diagnosis sensor unit M59
- C. View with front bumper removed
- F. View with luggage floor spacer (LH) removed
- I. View with center console removed

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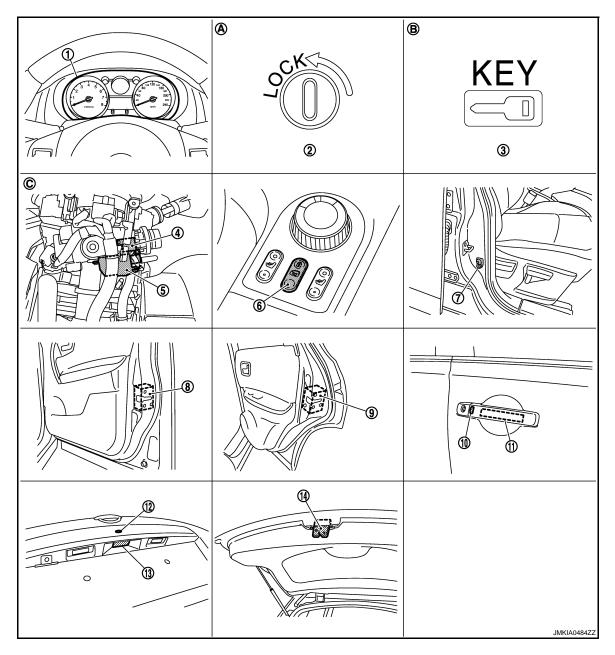
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- Combination meter
   M34
- Ignition knob switch, key switch and key lock solenoid (key switch) M25
- Front door switch (driver side) B34
- Front door request switch (driver side) 11.
   D30
- 13. Back door opener switch D186
- A. On the combination meter

- Lock warning lamp
   M34
- Ignition knob switch, key switch and key lock solenoid (key lock solenoid) M25
- Front door lock actuator (driver side) D29
- 11. Outside key antenna (driver side)
- Back door lock assembly D152
- B. On the combination meter

- Key warning lamp M34
- Door lock and unlock switch M89
- 9. Rear door lock actuator RH D95
- 12. Back door request switch D187
- C. View with steering column cover removed

# DOOR LOCK AND UNLOCK SWITCH: Component Description

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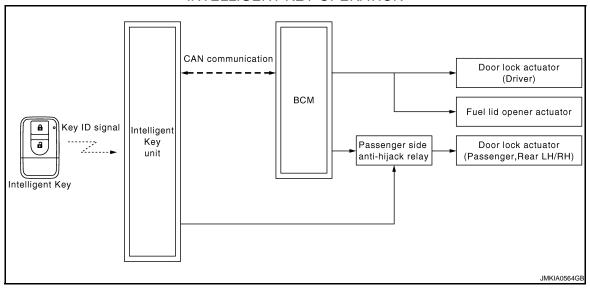
Item	Function	
BCM	Controls the door lock function.	
Door switch	Detects door state (open or close).	
Door lock and unlock switch	Transmits door lock and unlock signal to BCM. Door lock/unlock switch indicator is built-in door lock/unlock switch.	
Door lock actuator	Receives door lock/unlock signal from BCM. Door lock actuator locks and unlocks each door.	

# INTELLIGENT KEY

# INTELLIGENT KEY: System Diagram

INFOID:0000000001183841

#### INTELLIGENT KEY OPERATION



# INTELLIGENT KEY: System Description

INFOID:0000000001183842

#### INTELLIGENT KEY OPERATION

The Intelligent Key has the same functions as the multi remote control system. Therefore, it can be used in the same manner as the keyfob by operating the door lock/unlock button.

This function can be set to ON or OFF\* with CONSULT-III. For the setting information, refer to <u>DLK-327</u>. "CONSULT-III Function (INTELLIGENT KEY)".

#### **OPERATION CONDITION**

Remote controller operation	Operation condition
Lock	<ul> <li>All doors are closed</li> <li>Key switch is OFF (key is removed from ignition key cylinder)</li> <li>Ignition knob is OFF or LOCK position.</li> <li>No Intelligent Keys are inside the vehicle.</li> </ul>
Unlock	Key switch is OFF (key is removed from ignition key cylinder)     Ignition knob is OFF or LOCK position

#### **OPERATION AREA**

To ensure that the Intelligent Key works effectively, use within 100 cm range of each door, however the operable range may differ according to surroundings.

#### LOCK AND UNLOCK CONTROL

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#### **DLK-289**

<sup>\*:</sup> The factory setting

#### DOOR LOCK FUNCTION

#### < FUNCTION DIAGNOSIS >

[WITH I-KEY & SUPER LOCK]

When door lock and unlock button of the Intelligent Key is pressed, lock signal or unlock signal is transmitted from Intelligent Key to Intelligent Key unit.

When Intelligent Key unit receives the door lock and unlock signal, it operates door lock actuator.

#### SUPER LOCK CONTROL WITH ANTI-HIJACK MODE

- Super lock provides a higher anti-theft performance than a conventional power door lock system. The super lock system is controlled by BCM.
- When door lock is unlocked, pressing LOCK button on Intelligent Key once will lock and super lock set all
  doors. When all doors are set super lock, pressing UNLOCK button on Intelligent Key driver side door will
  unlock (and super lock release) driver side door and super lock release all other doors. Pressing UNLOCK
  button on Intelligent Key for a second time within 5 seconds from the first time will unlock all doors and back
  door can be opened with back door opener switch.

#### NOTE:

Anti-hijack mode can be set to ON or OFF\* with CONSULT-III. For the setting information, refer to <u>DLK-327</u>, <u>"CONSULT-III Function (INTELLIGENT KEY)"</u>.

\*: The factory setting

#### SUPER LOCK CONTROL WITHOUT ANTI-HIJACK MODE

When door lock is unlocked, pressing LOCK button on Intelligent Key once will lock and super lock set all doors. When all doors are set to super lock, pressing UNLOCK button on Intelligent Key will unlock all doors and super lock release all doors and back door can be opened with back door opener switch.

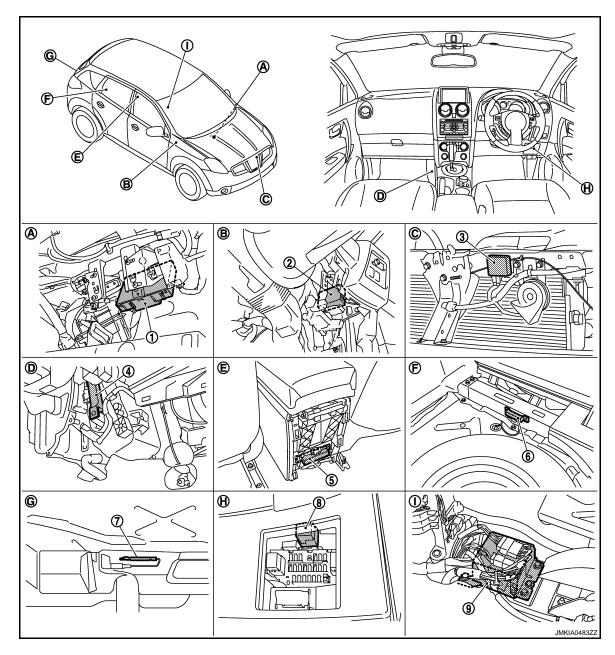
#### NOTE:

Anti-hijack mode can be set to ON or OFF\* with CONSULT-III. For the setting information, refer to <u>DLK-327</u>. "CONSULT-III Function (INTELLIGENT KEY)".

\*: The factory setting

# INTELLIGENT KEY: Component Parts Location

INFOID:0000000001544699



- BCM M65, M66, M67
- 4. Inside key antenna (instrument center)
  M70
- 7. Outside key antenna (rear bumper) B81
- A. Over the glove box
- D. View with lower instrument cover removed
- G. View with rear bumper fascia removed

- 2. Intelligent Key unit
- 5. Inside key antenna (center console)
- 8. Passenger side anti-hijack relay
- B. Over the instrument lower panel (driver side)
- E. View with center console rear finisher removed
- H. View with fuse box lid removed

- 3. Intelligent Key warning buzzer E25
- 6. Inside key antenna (rear seat)
- Air bag diagnosis sensor unit M59
- C. View with front bumper removed
- F. View with luggage floor spacer (LH) removed
- I. View with center console removed

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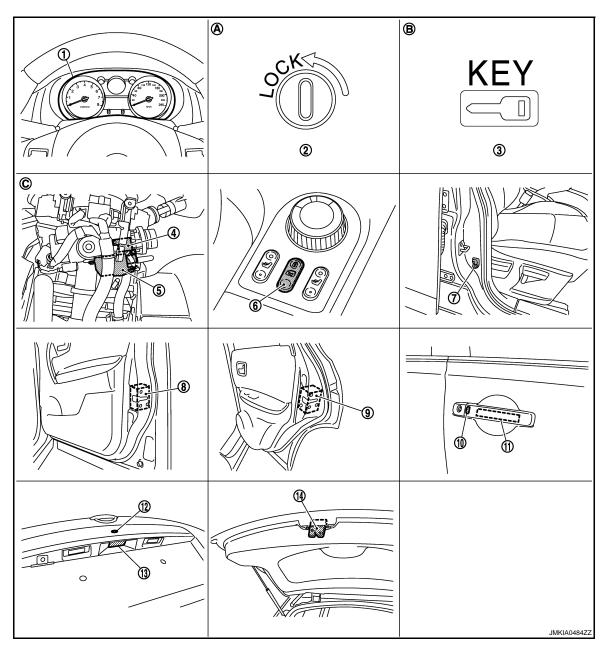
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- Combination meter
   M34
- Ignition knob switch, key switch and key lock solenoid (key switch) M25
- 7. Front door switch (driver side) B34
- Front door request switch (driver side) 11.
   D30
- 13. Back door opener switch D186
- A. On the combination meter

- Lock warning lamp
   M34
- Ignition knob switch, key switch and key lock solenoid (key lock solenoid) M25
- Front door lock actuator (driver side) D29
- Outside key antenna (driver side)
   D31
- Back door lock assembly D152
- B. On the combination meter

- Key warning lamp M34
- 6. Door lock and unlock switch M89
- 9. Rear door lock actuator RH D95
- 12. Back door request switch D187
- C. View with steering column cover removed

# INTELLIGENT KEY: Component Description

Item	Function	
Intelligent Key unit	Controls the door lock/unlock operation with BCM.	
BCM	Controls the door lock/unlock operation with Intelligent Key unit.	
Door switch	Detects door state (open or close).	
Key switch	Detects mechanical key is inserted into ignition key cylinder.	
Outside key antenna	Detects Intelligent Key is in detection area of outside key antenna.	
Inside key antenna	Detects Intelligent Key is in detection area of inside key antenna.	
Intelligent Key	Transmits key ID to Intelligent Key unit when lock/unlock button is pressed.	
Passenger side anti-hijack relay	Controls the circuit of door lock actuator (passenger side, rear LH/RH).	
Door lock actuator	Receives lock/unlock signal from BCM and lock and unlock each door.	
Super lock actuator	Receives super lock set/release signal from BCM and set/release super lock set/release supe	

#### DOOR REQUEST SWITCH

# DOOR REQUEST SWITCH: System Diagram

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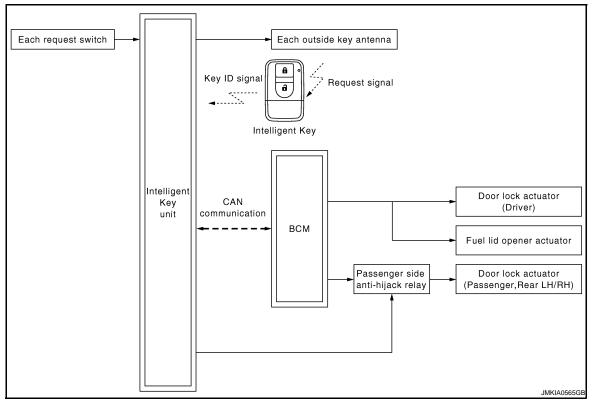
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#### DOOR REQUEST SWITCH OPERATION



# DOOR REQUEST SWITCH: System Description

INFOID:0000000001183846

#### DOOR REQUEST SWITCH OPERATION

Only when pressing the request switch, it is possible to lock and unlock the door by carrying the Intelligent Key. The Intelligent Key system is a system that makes it possible to lock and unlock the door by carrying the Intelligent Key, which operates based on the results of electronic ID verification using two-way communications between the Intelligent Key and the vehicle (Intelligent Key unit).

This function can be set to ON or OFF\* with CONSULT-III. For the setting information, refer to <u>DLK-327.</u> "CONSULT-III Function (INTELLIGENT KEY)".

<sup>\*:</sup> The factory setting

#### **CAUTION:**

#### The driver should always carry the Intelligent Key

#### OPERATION CONDITION

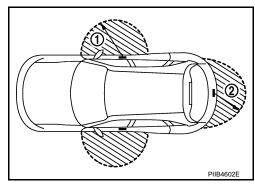
If the following conditions are not satisfied, door lock and unlock operation is not performed even if the request switch is operated.

Each request switch operation	Operation condition	
Lock operation	<ul> <li>All doors are closed</li> <li>Key switch is OFF (Key is removed from ignition key cylinder)</li> <li>Ignition knob is OFF or LOCK position</li> <li>No Intelligent Keys are inside the vehicle</li> <li>Intelligent Key is within outside key antenna detection area</li> </ul>	
Unlock Operation	<ul> <li>Key switch is OFF (Key is removed from ignition key cylinder)</li> <li>Ignition knob is OFF or LOCK position</li> <li>Intelligent Key is not inside the vehicle*</li> <li>Intelligent Key is within outside key antenna detection area</li> </ul>	

<sup>\*:</sup> Even with a registered Intelligent Key remaining inside the vehicle, door locks can be unlocked from outside of the vehicle with a spare Intelligent Key as long as key IDs are different.

#### **OUTSIDE KEY ANTENNA DETECTION AREA**

The outside key antenna detection area of door lock/unlock function is in the range of approximately 80 cm (31.50 in) surrounding the driver and passenger door handles (1) and the back door request switch (2). However, this operating range depends on the ambient conditions.



#### DOOR LOCK AND UNLOCK CONTROL

When the Intelligent Key detects that door request switch is pressed, it starts corresponding with outside key antenna (request switch pressed door). Then, the Intelligent Key is checked to be near the door.

If the Intelligent Key is within the outside key antenna detection area, it receives the request signal and transmits the key ID signal to the Intelligent Key unit. Intelligent Key unit receives the key ID signal and compares it with the registered key ID. Intelligent Key unit sends door lock and unlock signal to BCM via CAN communication.

#### SUPER LOCK CONTROL WITH ANTI-HIJACK MODE

- Super lock provides a higher anti-theft performance than a conventional power door lock system. The super lock system is controlled by BCM and Intelligent Key unit.
- When door is unlocked, pressing door request switch (driver side or passenger side) once will lock all doors
  and set super lock simultaneously. When super lock is set, all doors cannot be opened from inside.
   When super lock is set, pressing the door request switch once will unlock operated door and super lock is
  released except operated door. Pressing the door request switch a second time within 5 seconds from the
  first time will unlock all doors and back door can be opened with back door opener switch.
- When door is unlocked, pressing door request switch (back door) will lock all doors and set super lock simultaneously. When super lock is set, all doors cannot be opened from inside.

  When super lock is set, pressing door request switch (back door) will unlock all doors and release super lock

#### NOTE

Anti-hijack mode can be set to ON or OFF\* with CONSULT-III. For the setting information, refer to <u>DLK-327</u>, <u>"CONSULT-III Function (INTELLIGENT KEY)"</u>.

\*: The factory setting

#### SUPER LOCK CONTROL WITHOUT ANTI-HIJACK MODE

simultaneously and back door can be opened with back door opener switch.

When door is unlocked, pressing door request switch (driver, passenger or back door) will lock all doors and set super lock simultaneously. When super lock is set, all doors can not be opened from inside.

When super lock is set, pressing door request switch (driver side, passenger side or back door) will unlock. Back door only and back door can be opened with back door opener switch.

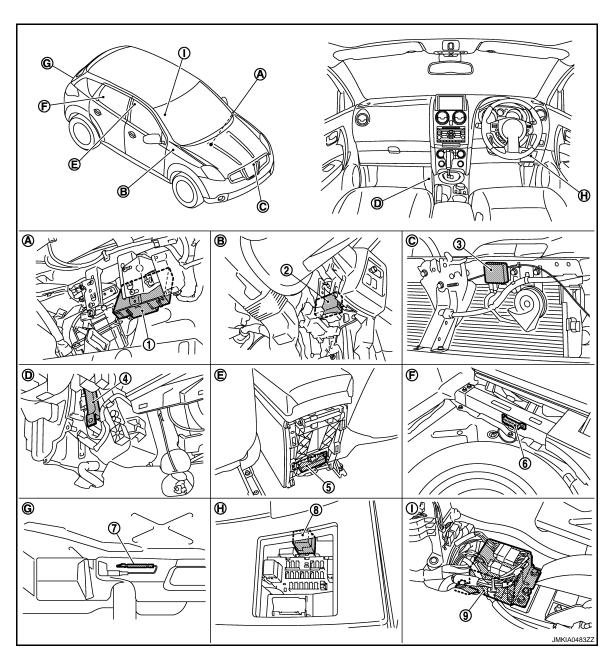
Pressing back door switch a second time with in 5 seconds will unlock all doors.

#### NOTE:

Anti-hijack mode can be set to ON or OFF\* with CONSULT-III. For the setting information, refer to <u>DLK-327</u>, <u>"CONSULT-III Function (INTELLIGENT KEY)"</u>.

\*: The factory setting

### DOOR REQUEST SWITCH: Component Parts Location



- BCM M65, M66, M67
- Inside key antenna (instrument center)
   M70
- 7. Outside key antenna (rear bumper) B81
- A. Over the glove box

- Intelligent Key unit M40
- Inside key antenna (center console)
   M61
- 8. Passenger side anti-hijack relay M90
- B. Over the instrument lower panel (driver side)
- Intelligent Key warning buzzer E25
- 6. Inside key antenna (rear seat)
- Air bag diagnosis sensor unit M59
- C. View with front bumper removed

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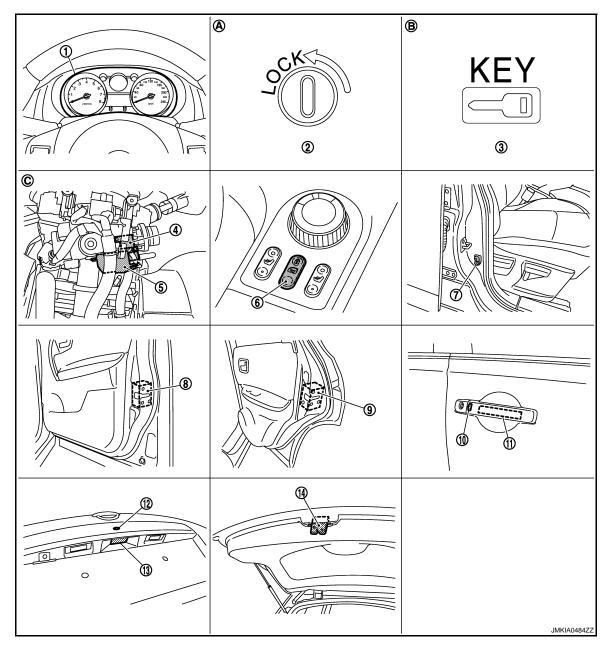
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- D. View with lower instrument cover removed
- G. View with rear bumper fascia removed
- E. View with center console rear finisher removed
- H. View with fuse box lid removed
- F. View with luggage floor spacer (LH) removed
- I. View with center console removed



- Combination meter M34
- Ignition knob switch, key switch and key lock solenoid (key switch) M25
- 7. Front door switch (driver side)
- Front door request switch (driver side)
   D30
- Back door opener switch D186
- A. On the combination meter

- Lock warning lamp M34
- Ignition knob switch, key switch and key lock solenoid (key lock solenoid) M25
- 8. Front door lock actuator (driver side)
- Outside key antenna (driver side)
   D31
- Back door lock assembly D152
- B. On the combination meter

- 3. Key warning lamp M34
- Door lock and unlock switch M89
- Rear door lock actuator RH D95
- Back door request switch D187
- View with steering column cover removed

# DOOR REQUEST SWITCH: Component Description

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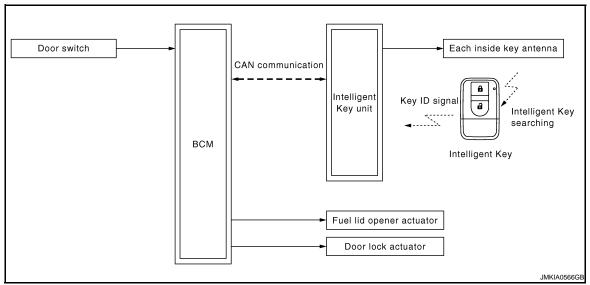
Item	Function	
Intelligent Key unit	Controls the door lock function with BCM.	
BCM	Controls the door lock function with Intelligent Key unit.	
Door request switch	Transmits operation signal (lock and unlock) to Intelligent Key unit.	
Door switch	Detects door state (open or close).	
Key switch	Detects mechanical key is inserted into ignition key cylinder.	
Ignition knob switch	Detects ignition knob state (push or release).	
Outside key antenna	Detects Intelligent Key is in detection area of outside key antenna.	
Inside key antenna	Detects Intelligent Key is in detection area of inside key antenna.	
Intelligent Key	Transmits key ID to Intelligent Key unit when request signal is received from outside key antenna.	
Passenger side anti-hijack relay	Controls the circuit of door lock actuator (passenger side, rear LH/RH).	
Door lock actuator	Receives lock/unlock signal from BCM and locks/unlocks each door.	
Super lock actuator	Receives super lock set/release signal from BCM and sets/releases super lock system.	

# **KEY REMINDER**

# KEY REMINDER: System Diagram

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#### KEY REMINDER OPERATION



KEY REMINDER : System Description

INFOID:0000000001183850

#### KEY REMINDER OPERATION

Key reminder have the following 2 functions.

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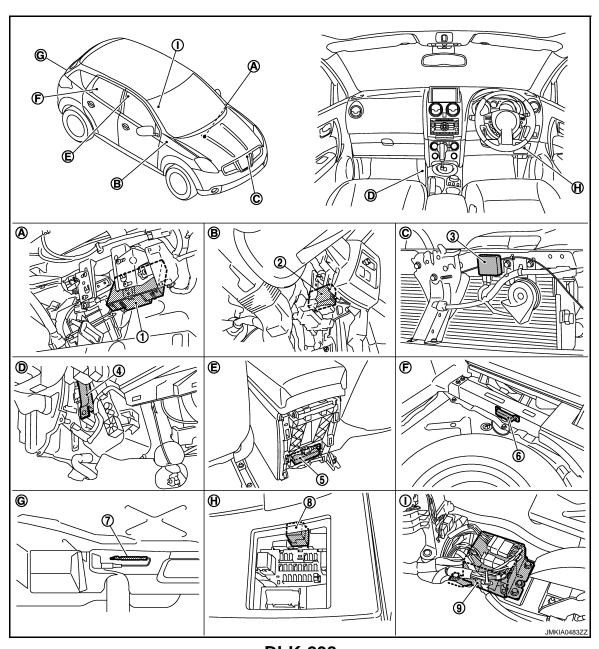
Operation	Operation condition	Operation
Driver door close	Right after driver side door is closed under the following conditions  Door lock operation  Driver side door is opened  Driver side door is in unlock state.	All doors unlock
Right after all doors are closed under the following conditions  • Intelligent Key is inside the vehicle • Any door is opened • All doors are locked by door lock and unlock switch.		All doors unlock     Honk Intelligent Key warning buzzer

#### **CAUTION:**

The above function operates when the Intelligent Key is inside the vehicle. However, there may be times when the Intelligent Key can not be detected, and this function will not operate when the Intelligent Key is on the instrument panel, rear parcel shelf or in the glove box. Also, this system some times does not operate if the Intelligent Key is in the door pocket for the open door.

**KEY REMINDER: Component Parts Location** 

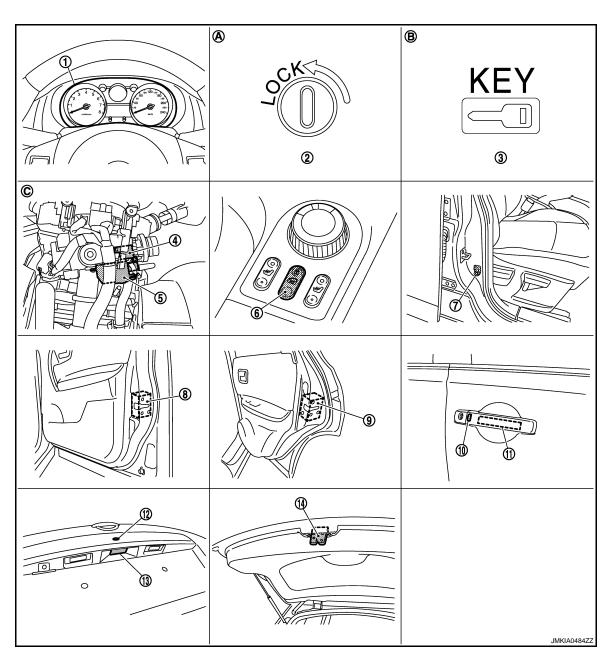
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- 1. BCM M65, M66, M67
- 4. Inside key antenna (instrument center)
- 7. Outside key antenna (rear bumper)
- A. Over the glove box
- View with lower instrument cover removed
- G. View with rear bumper fascia removed

- Intelligent Key unit M40
- 5. Inside key antenna (center console) M61
- 8. Passenger side anti-hijack relay
- B. Over the instrument lower panel (driver side)
- View with center console rear finisher removed
- H. View with fuse box lid removed

- 3. Intelligent Key warning buzzer E25
- 6. Inside key antenna (rear seat)
- Air bag diagnosis sensor unit M59
- C. View with front bumper removed
- F. View with luggage floor spacer (LH) removed
- I. View with center console removed



- Combination meter
- Ignition knob switch, key switch and key lock solenoid (key switch) M25
- Lock warning lamp
   M34
- Ignition knob switch, key switch and key lock solenoid (key lock solenoid) M25
- Key warning lamp M34
- 6. Door lock and unlock switch M89

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#### DOOR LOCK FUNCTION

#### < FUNCTION DIAGNOSIS >

#### [WITH I-KEY & SUPER LOCK]

7.	Front door switch (driver side) B34	8.	Front door lock actuator (driver side) D29	9.	Rear door lock actuator RH D95
10.	Front door request switch (driver side) D30	11.	Outside key antenna (driver side) D31	12.	Back door request switch D187
13.	Back door opener switch D186	14.	Back door lock assembly D152		
A.	On the combination meter	B.	On the combination meter	C.	View with steering column cover removed

# **KEY REMINDER: Component Description**

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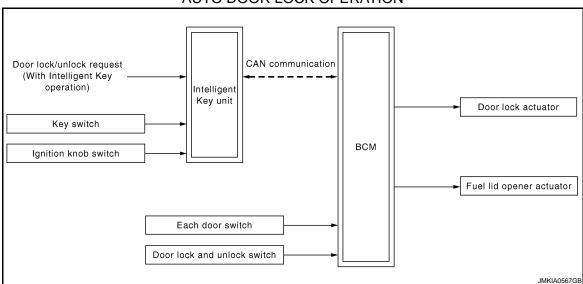
Item	Function
Intelligent Key unit	Controls the door lock function with BCM.
BCM	Controls the door lock and unlock operation with Intelligent Key unit.
Door switch	Detects door state (open or close).
Inside key antenna	Detects Intelligent Key is in detection area of inside key antenna.
Intelligent Key	Transmits key ID to Intelligent Key unit when Intelligent Key searching.
Door lock actuator	Receives lock and unlock signal from BCM and locks/unlocks each door.

# **AUTO DOOR LOCK**

# AUTO DOOR LOCK: System Diagram

INFOID:0000000001183853

#### **AUTO DOOR LOCK OPERATION**



# AUTO DOOR LOCK: System Description

INFOID:0000000001183854

### **AUTO RELOCK OPERATION**

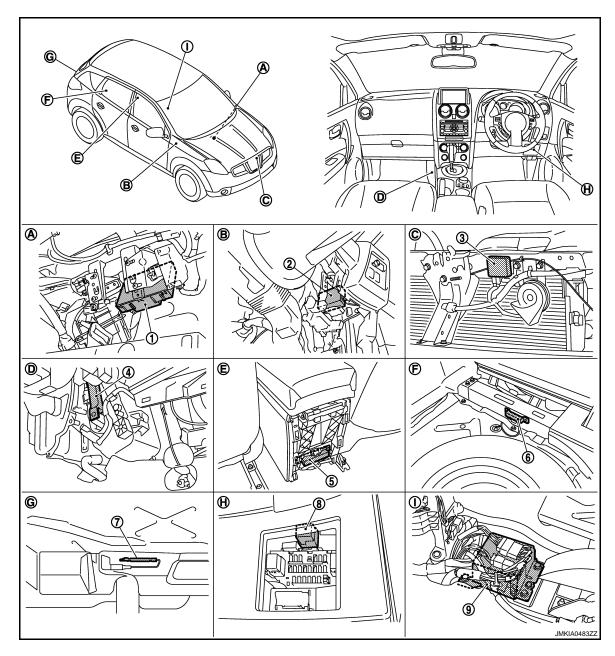
When all door is locked then doors are unlocked with Intelligent Key, door request switch or Intelligent Key unit does not receive the following signal within 2 minutes<sup>\*1</sup>, all doors are automatically locked.

- Any door is opened.
- · Ignition knob is pressed.
- Ignition key is inserted into ignition key cylinder.
- Door is locked with Intelligent Key.
- Door is locked/unlocked with door lock and unlock switch.

<sup>\*1:</sup> Auto door lock operation mode can be changed with CONSULT-III. Refer to <u>DLK-327, "CONSULT-III Function</u> (INTELLIGENT KEY)".

# AUTO DOOR LOCK: Component Parts Location

INFOID:0000000001542942



- BCM M65, M66, M67
- Inside key antenna (instrument center)
   M70
- 7. Outside key antenna (rear bumper) B81
- A. Over the glove box
- D. View with lower instrument cover removed
- G. View with rear bumper fascia removed

- Intelligent Key unit
- 5. Inside key antenna (center console)
- 8. Passenger side anti-hijack relay
- B. Over the instrument lower panel (driver side)
- E. View with center console rear finisher removed
- H. View with fuse box lid removed

- 3. Intelligent Key warning buzzer E25
- 6. Inside key antenna (rear seat)
- Air bag diagnosis sensor unit M59
- C. View with front bumper removed
- F. View with luggage floor spacer (LH) removed
- I. View with center console removed

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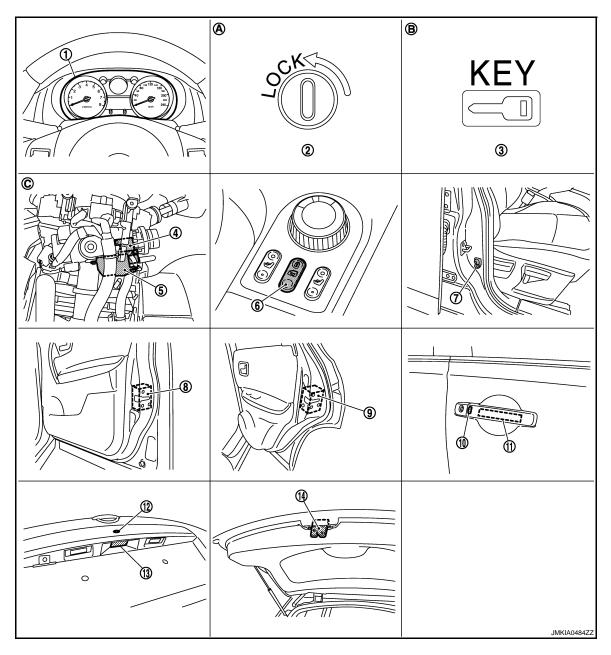
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- Combination meter
   M34
- Ignition knob switch, key switch and key lock solenoid (key switch)
   M25
- 7. Front door switch (driver side) B34
- Front door request switch (driver side) 11.
   D30
- 13. Back door opener switch D186
- A. On the combination meter

- Lock warning lamp
   M34
- Ignition knob switch, key switch and key lock solenoid (key lock solenoid) M25
- 8. Front door lock actuator (driver side) D29
- Outside key antenna (driver side)
   D31
- Back door lock assembly D152
- B. On the combination meter

- Key warning lamp M34
- Door lock and unlock switch M89
- 9. Rear door lock actuator RH D95
- 12. Back door request switch D187
- C. View with steering column cover removed

# AUTO DOOR LOCK: Component Description

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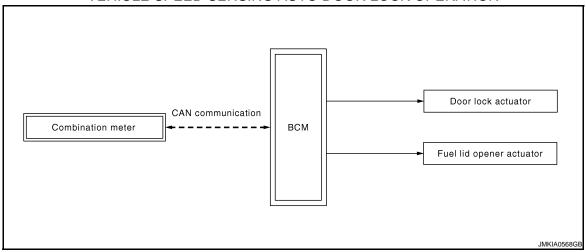
Item	Function
Intelligent Key unit	Controls the door lock function with BCM.
BCM	Controls the door lock function with Intelligent Key unit.
Door switch	Detects door state (open or close).
Key switch	Detects mechanical key is inserted into ignition key cylinder.
Ignition knob switch	Detects ignition knob state (push or release).
Door lock and unlock switch	Transmits door lock and unlock signal to BCM.
Door lock actuator	Receives lock and unlock signal from BCM and lock and unlock each door.

# VEHICLE SPEED SENSING AUTO DOOR LOCK

# VEHICLE SPEED SENSING AUTO DOOR LOCK: System Diagram

INFOID:0000000001183857

#### VEHICLE SPEED SENSING AUTO DOOR LOCK OPERATION



# VEHICLE SPEED SENSING AUTO DOOR LOCK: System Description

INFOID:0000000001183858

#### VEHICLE SPEED SENSING AUTO DOOR LOCK OPERATION

When the vehicle speed exceeds more than 25km/h (16MPH), all doors are automatically locked. BCM receive the vehicle speed signal from combination meter via CAN communication.

#### CHANGE SETTING PROCEDURE

Vehicle speed sensing auto door lock function can be enabled/disabled with door lock and unlock switch.

- Turn ignition switch ON.
- Press and hold door lock/unlock switch (LOCK) for 5 seconds within 2 seconds after turn ignition switch ON.
- 3. Buzzer sounds for 1 second.

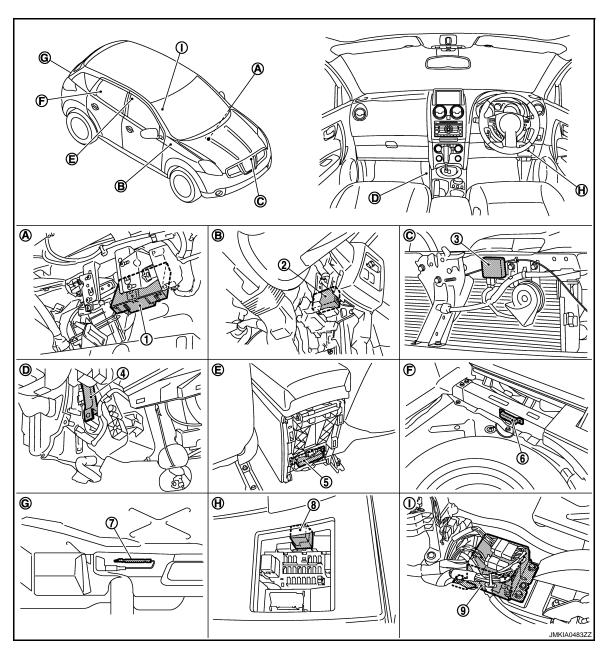
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# VEHICLE SPEED SENSING AUTO DOOR LOCK : Component Parts Location

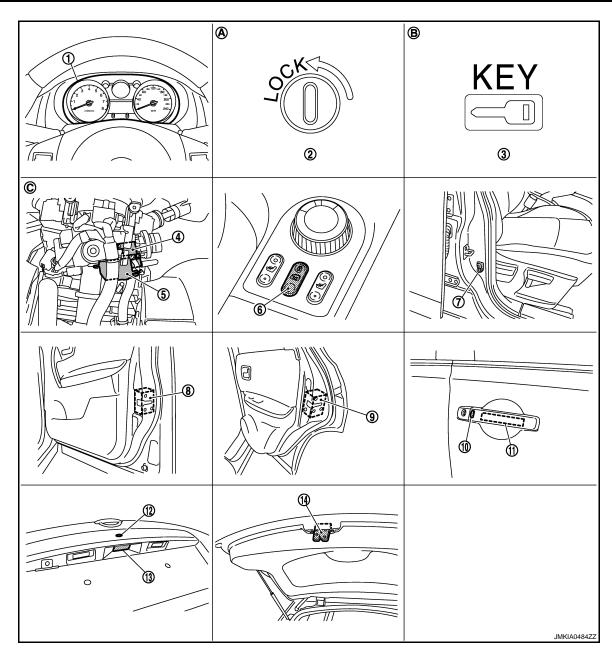
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- BCM M65, M66, M67
- Inside key antenna (instrument center)
   M70
- 7. Outside key antenna (rear bumper)
- A. Over the glove box
- View with lower instrument cover removed
- G. View with rear bumper fascia removed

- Intelligent Key unit M40
- 5. Inside key antenna (center console)
- 8. Passenger side anti-hijack relay
- B. Over the instrument lower panel (driver side)
- E. View with center console rear finisher removed
- H. View with fuse box lid removed

- Intelligent Key warning buzzer E25
- 6. Inside key antenna (rear seat)
- Air bag diagnosis sensor unit
- C. View with front bumper removed
- F. View with luggage floor spacer (LH) removed
- I. View with center console removed



- Combination meter
   M34
- Ignition knob switch, key switch and key lock solenoid (key switch) M25
- 7. Front door switch (driver side) B34
- Front door request switch (driver side) 11.
   D30
- Back door opener switch D186
- A. On the combination meter

- 2. Lock warning lamp
- Ignition knob switch, key switch and key lock solenoid (key lock solenoid) M25
- Front door lock actuator (driver side) D29
- 11. Outside key antenna (driver side)
- 14. Back door lock assembly D152
- B. On the combination meter

- Key warning lamp M34
- Door lock and unlock switch M89
- Rear door lock actuator RH D95
- 12. Back door request switch D187
- C. View with steering column cover removed

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# VEHICLE SPEED SENSING AUTO DOOR LOCK: Component Description

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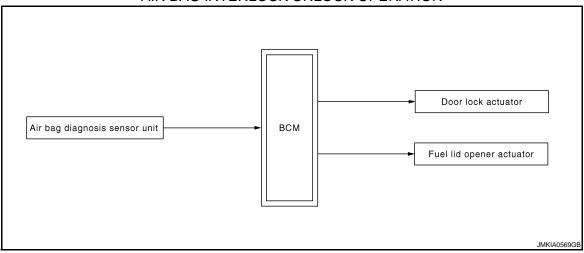
Item	Function	
BCM	Controls the door lock function.	
Combination meter	Transmits vehicle speed signal to BCM via CAN communication.	
Door lock actuator	Receives door lock and unlock signal from BCM and lock and unlock each door.	

# AIR BAG INTERLOCK UNLOCK

# AIR BAG INTERLOCK UNLOCK: System Diagram

INFOID:0000000001183861

#### AIR BAG INTERLOCK UNLOCK OPERATION



# AIR BAG INTERLOCK UNLOCK: System Description

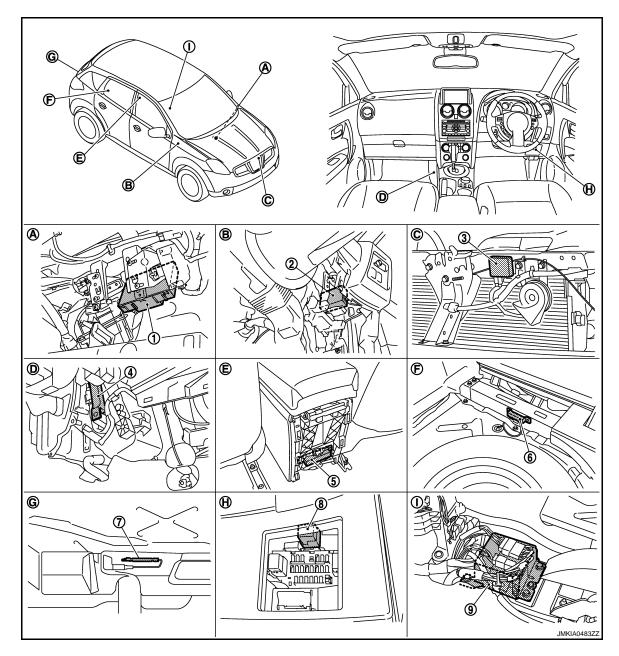
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#### AIR BAG INTERLOCK UNLOCK OPERATION

When ignition switch is ON and BCM receive air bag deployment signal, it operates automatically to unlock all doors. Air bag diagnosis sensor unit sends the air bag deployment signal to BCM.

# AIR BAG INTERLOCK UNLOCK: Component Parts Location

INFOID:0000000001544703



- BCM M65, M66, M67
- Inside key antenna (instrument center)
   M70
- 7. Outside key antenna (rear bumper) B81
- A. Over the glove box
- D. View with lower instrument cover removed
- G. View with rear bumper fascia removed

- Intelligent Key unit
- 5. Inside key antenna (center console)
- 8. Passenger side anti-hijack relay
- B. Over the instrument lower panel (driver side)
- E. View with center console rear finisher removed
- H. View with fuse box lid removed

- 3. Intelligent Key warning buzzer E25
- 6. Inside key antenna (rear seat)
- Air bag diagnosis sensor unit M59
- C. View with front bumper removed
- F. View with luggage floor spacer (LH) removed
- I. View with center console removed

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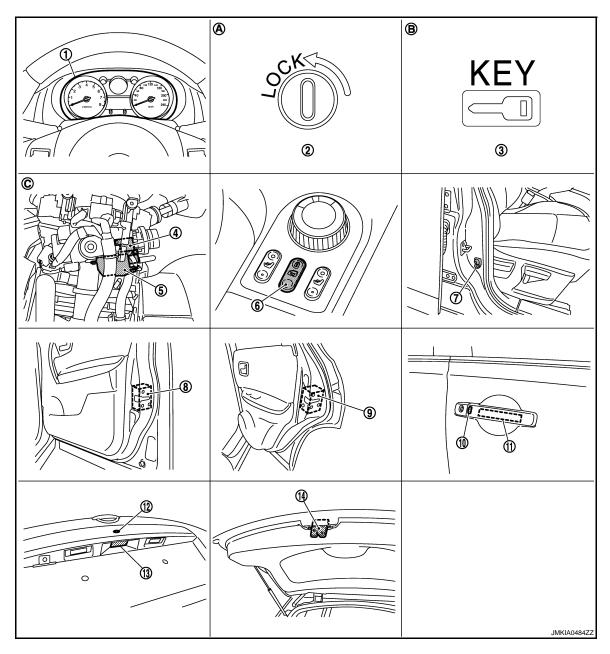
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- Combination meter
   M34
- Ignition knob switch, key switch and key lock solenoid (key switch) M25
- 7. Front door switch (driver side) B34
- Front door request switch (driver side) 11.
   D30
- 13. Back door opener switch D186
- A. On the combination meter

- Lock warning lamp
   M34
- Ignition knob switch, key switch and key lock solenoid (key lock solenoid) M25
- 8. Front door lock actuator (driver side) D29
- Outside key antenna (driver side)
   D31
- Back door lock assembly D152
- B. On the combination meter

- Key warning lamp M34
- Door lock and unlock switch M89
- 9. Rear door lock actuator RH D95
- 12. Back door request switch D187
- C. View with steering column cover removed

# DOOR LOCK FUNCTION

# < FUNCTION DIAGNOSIS >

# [WITH I-KEY & SUPER LOCK]

# AIR BAG INTERLOCK UNLOCK : Component Description

INFOID:0000000001183864

Item	Function
BCM	Controls the door lock function.
Air bag diagnosis sensor unit	Transmits air bag deployment signal to BCM.
Door lock actuator	Receives door lock/unlock signal from BCM and lock and unlock each door.

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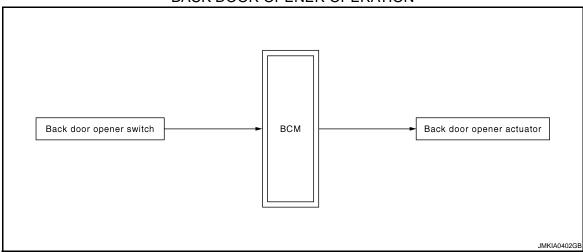
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# BACK DOOR OPENER FUNCTION BACK DOOR OPENER SWITCH

BACK DOOR OPENER SWITCH: System Diagram

INFOID:0000000001183865

#### **BACK DOOR OPENER OPERATION**



# BACK DOOR OPENER SWITCH: System Description

INFOID:0000000001183866

#### **BACK DOOR OPENER OPERATION**

When back door opener switch is pressed, BCM opens back door opener actuator.

#### NOTE:

Back door opener actuator is not for locking the back door. The function is only to open the back door.

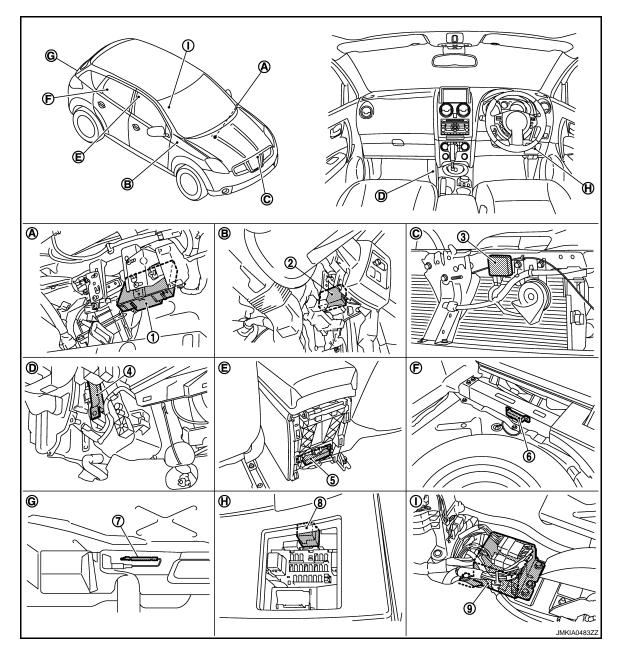
#### **OPERATION CONDITION**

If the following conditions are not satisfied, back door opener operation is not performed.

Back door opener switch operation	Operation condition
Back door open	<ul><li>Vehicle speed is less than 5 km/h (3 MPH).</li><li>All doors are unlocked.</li></ul>

# BACK DOOR OPENER SWITCH : Component Parts Location

INFOID:0000000001544628



- BCM M65, M66, M67
- Inside key antenna (instrument center)
   M70
- 7. Outside key antenna (rear bumper) B81
- A. Over the glove box
- View with lower instrument cover removed
- G. View with rear bumper fascia removed

- Intelligent Key unit
- 5. Inside key antenna (center console)
- 8. Passenger side anti-hijack relay
- B. Over the instrument lower panel (driver side)
- E. View with center console rear finisher removed
- H. View with fuse box lid removed

- 3. Intelligent Key warning buzzer E25
- 6. Inside key antenna (rear seat)
- Air bag diagnosis sensor unit M59
- C. View with front bumper removed
- F. View with luggage floor spacer (LH) removed
- I. View with center console removed

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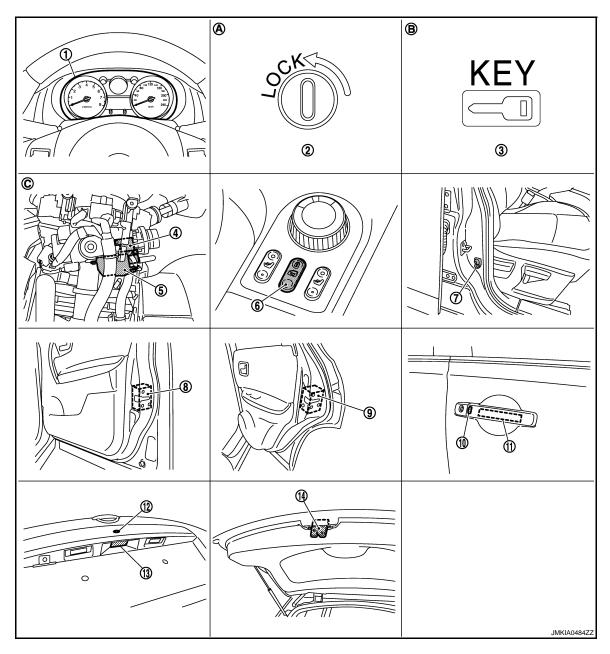
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- Combination meter
   M34
- Ignition knob switch, key switch and key lock solenoid (key switch) M25
- 7. Front door switch (driver side) B34
- Front door request switch (driver side) 11.
   D30
- 13. Back door opener switch D186
- A. On the combination meter

- Lock warning lamp
   M34
- Ignition knob switch, key switch and key lock solenoid (key lock solenoid) M25
- 8. Front door lock actuator (driver side) D29
- Outside key antenna (driver side)
   D31
- Back door lock assembly D152
- B. On the combination meter

- Key warning lamp M34
- Door lock and unlock switch M89
- 9. Rear door lock actuator RH D95
- 12. Back door request switch D187
- C. View with steering column cover removed

# **BACK DOOR OPENER FUNCTION**

< FUNCTION DIAGNOSIS >

# [WITH I-KEY & SUPER LOCK]

# BACK DOOR OPENER SWITCH : Component Description

INFOID:0000000001183868

Item	Function
BCM	Controls the back door opener function.
Back door opener switch	Transmits back door opener switch operation signal to BCM.
Back door opener actuator	Opens the back door with the back door open signal from BCM.
Combination meter	Transmits vehicle speed signal to BCM via CAN communication.

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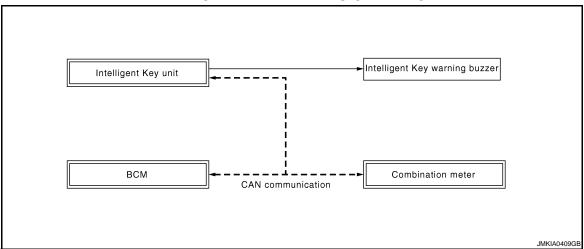
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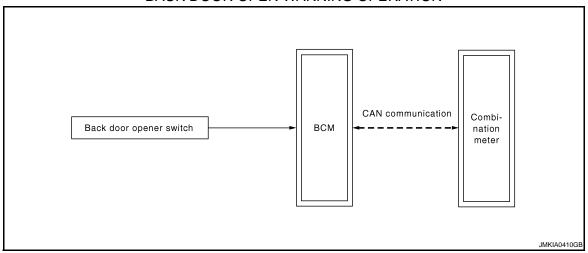
# WARNING FUNCTION

System Diagram

#### INTELLIGENT KEY WARNING OPERATION



#### BACK DOOR OPEN WARNING OPERATION



# System Description

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#### **DESCRIPTION**

The warning functions are as follows and are given to the user as warning information and warnings using combinations of Intelligent Key warning buzzer, key warning lamps and buzzer (built in combination meter).

#### INTELLIGENT KEY WARNING OPERATION

Once one of the following conditions below is established, alert or warning will be executed.

# [WITH I-KEY & SUPER LOCK]

				Warning	chime
Warning/Information functions		Operation conditions	Warning lamp	Combination meter buzzer	Intelligent Key warning buzz- er
Ignition knob return forgotten warning		When all the conditions below are met.  Ignition knob: OFF or LOCK (knob is pressed).  Door switch (driver side): ON (Door is open).	_	Active for 5 seconds (pipipipi, pipipipi···)	_
Ignition key warning (when mechanical key is used)		When all the conditions below are met. Ignition switch: OFF position. Key switch: ON (inserted) Door switch (driver side): ON (Door is open).	_	Active for 5 seconds (pipipipi, pipipipi···)	_
OFF position warning		When all the conditions below are met.  Ignition switch is between ACC and OFF position or ignition knob is pressed in while ignition switch is in LOCK position.  1 second in the above state have pressed.	"LOCK" (RED blinking)	Active for 1 second (pipi, pipi···)	_
Take away warning	Any door open to all doors closed	When all the conditions below are met.  Ignition switch: Except LOCK position.  Door switch: ON to OFF (Door is open to closed).  Intelligent Key cannot be detected inside the vehicle.	"KEY" (RED blinking)	_	Active (pi, pi, pi)
	Door is open	When all the conditions below are met.  Door switch: ON (Door is open)  Key ID verification every 5 seconds when registered Intelligent Key can not be detected inside the vehicle.	"KEY" (RED blinking)	_	_
	Take away through win- dow*	<ul> <li>When all the conditions below are met.</li> <li>Key ID verification: OK</li> <li>Every 30 seconds when registered Intelligent Key cannot be detected inside the vehicle or result of vehicle speed verification is NG. (The registered Intelligent Key cannot be detected inside the vehicle when ignition switch is ON.)</li> <li>Key switch: OFF (Key is removed from ignition key cylinder.)</li> </ul>	"KEY" (RED blinking)	Active for 3 seconds (pipipi)	_

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Warning/Information functions				Warning chime		
		Operation conditions	Warning lamp	Combination meter buzzer	Intelligent Key warning buzz- er	
Request switch operation  Door lock op-		<ul> <li>When request switch is pressed (lock operation) under the following conditions.</li> <li>Door switch: ON (Any door is open).</li> <li>Ignition switch is in ACC position or mechanical key is inserted into ignition key cylinder.</li> <li>Intelligent Key is inside vehicle.</li> </ul>	_	_	Active for 2 seconds (pipipi)	
eration warn- ing	Intelligent Key button opera- tion	<ul> <li>When Intelligent Key button is pressed (lock operation) under the following conditions.</li> <li>Door switch: ON (Any door is open).</li> <li>Ignition switch is in ACC or OFF position or ignition knob is pressed in LOCK position or mechanical key is inserted into ignition key cylinder.</li> </ul>	_	_	Active for 2 seconds (pipipi)	
Intelligent Key low battery warning		When Intelligent Key battery voltage is low, Intelligent Key unit is detected after ignition switch is turned ON.	"KEY" (GREEN blink- ing for 30 sec- onds)	_	_	

<sup>\*:</sup> The factory setting for this function is OFF.

#### KEY WARNING LAMP & LOCK WARNING LAMP

The key indicator and lock indicator indicates Intelligent Key system status.

#### Operation Condition

В	Behavior of lamps		Operation condition
	GREEN Lighting		All the following conditions are satisfied.  Ignition knob is pressed in LOCK position. (Ignition knob switch is ON)  Ignition key is removed from ignition key cylinder. (Key switch is OFF)  Intelligent Key is detected inside of the vehicle.  KEY RED lighting/blinking conditions are not satisfied.
		Blinking	while Intelligent Key low battery warning is operating.
KEY	RED	Lighting	All the following conditions are satisfied.  Ignition knob is pressed. (Ignition knob switch is ON)  Ignition key is removed from ignition key cylinder. (Key switch is OFF)  Intelligent Key is not detected inside of the vehicle.
		Blinking	All the following conditions are satisfied.     Take away warning is operating.     KEY RED lighting condition is not satisfied.
LOCK	LOCK Blinking		while OFF position warning is operating.
KEY(RED) and LOCK lighting		CK lighting	All the following conditions are satisfied.  Ignition switch is ON.  Steering lock ID is NG.

#### BACK DOOR OPEN WARNING OPERATION

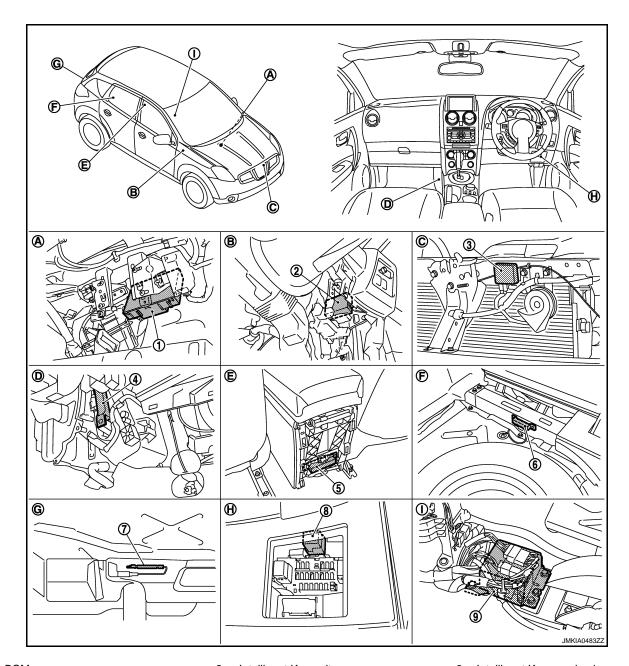
When back door opener switch is operated, when door lock is locked with door lock and unlock switch, speed sensing lock or only driver side is unlocked with anti-hijack function, the buzzer (built in combination meter) will sound.

#### KEY REMINDER OPERATION

- The buzzer (combination meter) will sound and the doors will not lock if the door lock and unlock switch is pressed while the driver door is open and mechanical key is inserted ignition key cylinder.
- The buzzer (combination meter) will sound and the doors will not lock if the door lock and unlock switch is pressed while any door other than the driver door is open.

# Component Parts Location

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- 1. BCM M65, M66, M67
- Inside key antenna (instrument center)
   M70
- 7. Outside key antenna (rear bumper) B81
- A. Over the glove box
- View with lower instrument cover removed
- G. View with rear bumper fascia removed

- Intelligent Key unit M40
- 5. Inside key antenna (center console)
- 8. Passenger side anti-hijack relay
- B. Over the instrument lower panel (driver side)
- E. View with center console rear finisher removed
- H. View with fuse box lid removed

- 3. Intelligent Key warning buzzer E25
- 6. Inside key antenna (rear seat)
- Air bag diagnosis sensor unit M59
- C. View with front bumper removed
- F. View with luggage floor spacer (LH) removed
- I. View with center console removed

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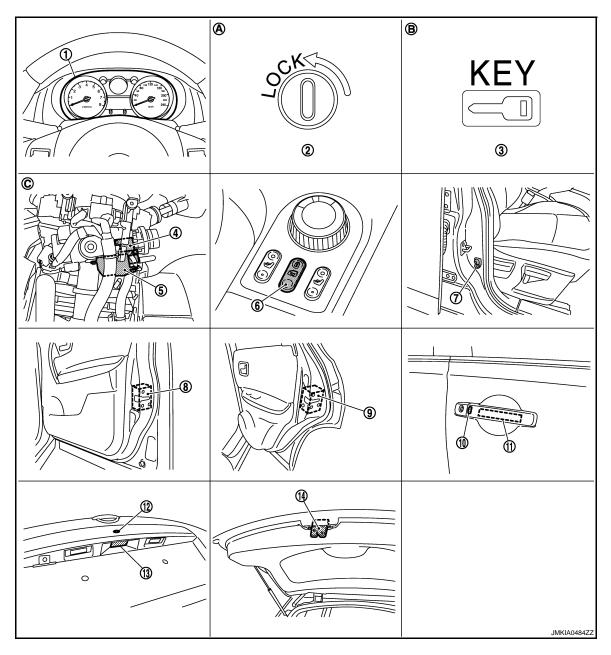
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- Combination meter
   M34
- Ignition knob switch, key switch and key lock solenoid (key switch) M25
- 7. Front door switch (driver side) B34
- Front door request switch (driver side) 11.
   D30
- 13. Back door opener switch D186
- A. On the combination meter

- Lock warning lamp
   M34
- Ignition knob switch, key switch and key lock solenoid (key lock solenoid) M25
- 8. Front door lock actuator (driver side) D29
- Outside key antenna (driver side)
   D31
- Back door lock assembly D152
- B. On the combination meter

- Key warning lamp M34
- 6. Door lock and unlock switch M89
- 9. Rear door lock actuator RH D95
- 12. Back door request switch D187
- C. View with steering column cover removed

# **WARNING FUNCTION**

# < FUNCTION DIAGNOSIS >

# [WITH I-KEY & SUPER LOCK]

# Component Description

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Item	Function
BCM	Controls the warning function with Intelligent Key unit.
Intelligent Key unit	Controls the warning function with BCM.
Key switch	Detects that mechanical key is inserted into ignition key cylinder.
Door switch	Detects door state (open or closed).
Door lock and unlock switch	Transmits door lock and unlock signal to BCM.
Intelligent Key unit	Requests to turn ON hazard warning lamp to BCM and turn signal indicator to combination meter.
Combination meter	Turns ON the LOCK indicator, KEY indicator, turn signal indicator and buzzer (built in combination meter) by the request from Intelligent Key unit via CAN communication.
Intelligent Key warning buzzer	Sounds by the request from Intelligent Key unit.
Back door opener switch	Transmits back door open signal to BCM

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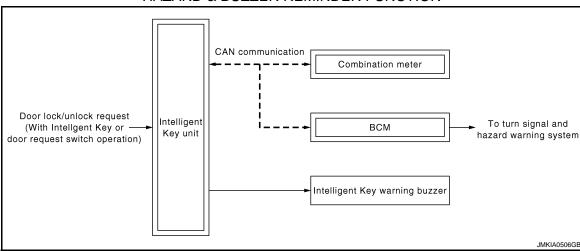
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# HAZARD AND BUZZER REMINDER FUNCTION

System Diagram

#### HAZARD & BUZZER REMINDER FUNCTION



# System Description

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#### HAZARD AND BUZZER REMINDER FUNCTION

When door is locked or unlocked by Intelligent Key or door request switch, Intelligent Key unit sounds buzzer and sends hazard request signal to BCM via CAN communication. Then BCM flashes hazard warning lamps as a reminder.

#### NOTE:

Hazard and buzzer reminder function mode can be changed with CONSULT-III. Refer to <u>DLK-327</u>, "CONSULT-III Function (INTELLIGENT KEY)".

Hazard reminder setting (With CONSULT-III)		Door lock operation (with Intelligent Key or door request switch)	Hazard warning lamp flash
	OFF	Any	_
		Lock	Once
	LOCK ONLY	Unlock	_
		Unlock (Anti-hijack)	_
HAZARD ANSWER BACK	UNLK ONLY	Lock	_
IAZARD ANSWER BACK		Unlock	Twice
		Unlock (Anti-hijack)	Twice (quick)
	LOCK/UNLK	Lock	Once
		Unlock	Twice
		Unlock (Anti-hijack)	Twice (quick)

**Buzzer Operation** 

Buzzer reminder setting (With CONSULT-III)		Door lock operation (with Intelligent Key or door request switch)	Buzzer warning sounds
ANSWER BACK WITH I-KEY LOCK		Lock	Once
	BUZZER	Unlock	Depends on other setting
		Unlock (Anti-hijack)	Depends on other setting
	OFF*	Any	_

# HAZARD AND BUZZER REMINDER FUNCTION

< FUNCTION DIAGNOSIS >

# [WITH I-KEY & SUPER LOCK]

Buzzer reminder setting (With CONSULT-III)		Door lock operation (with Intelligent Key or door request switch)	Buzzer warning sounds
		Lock	Depends on other setting
ANSWER BACK WITH	BUZZER	Unlock	Twice
I-KEY UNLOCK		Unlock (Anti-hijack)	Twice
	OFF*	Any	_
	ON	Lock	Once
ANSWER BACK FUNC-		Unlock	Twice
TION		Unlock (Anti-hijack)	Twice
	OFF*	Any	_

<sup>\*:</sup> The factory setting for these functions are OFF.

# Component Parts Location

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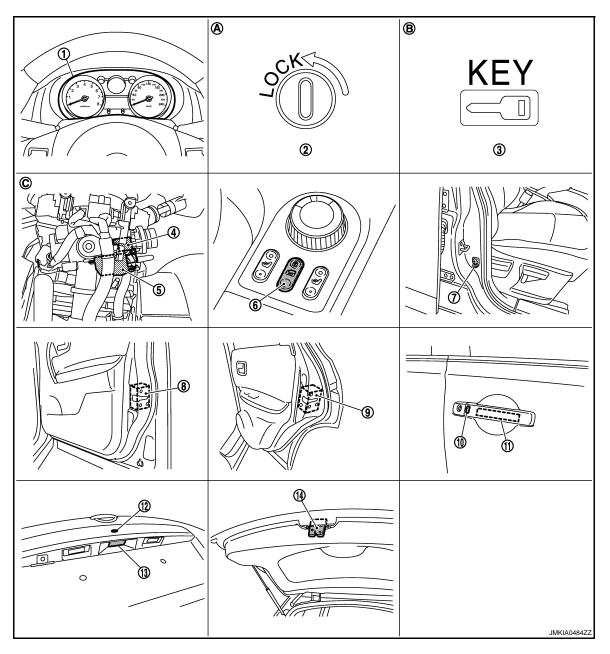
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- 1. BCM M65, M66, M67
- 4. Inside key antenna (instrument center)
- 7. Outside key antenna (rear bumper)
- A. Over the glove box
- View with lower instrument cover removed
- G. View with rear bumper fascia removed

- 2. Intelligent Key unit M40
- Inside key antenna (center console) M61
- Passenger side anti-hijack relay M90
- B. Over the instrument lower panel (driver side)
- View with center console rear finisher removed
- H. View with fuse box lid removed

- Intelligent Key warning buzzer E25
- 6. Inside key antenna (rear seat)
- Air bag diagnosis sensor unit M59
- C. View with front bumper removed
- F. View with luggage floor spacer (LH) removed
- I. View with center console removed



- Combination meter
   M34
- Ignition knob switch, key switch and key lock solenoid (key switch) M25
- Lock warning lamp M34
- Ignition knob switch, key switch and key lock solenoid (key lock solenoid) M25
- Key warning lamp M34
- Door lock and unlock switch M89

# HAZARD AND BUZZER REMINDER FUNCTION

#### < FUNCTION DIAGNOSIS >

# [WITH I-KEY & SUPER LOCK]

moved

7.	Front door switch (driver side) B34	8.	Front door lock actuator (driver side) D29	9.	Rear door lock actuator RH D95	А
10.	Front door request switch (driver side) D30	11.	Outside key antenna (driver side) D31	12.	Back door request switch D187	
13.	Back door opener switch D186	14.	Back door lock assembly D152			В
Α.	On the combination meter	B.	On the combination meter	C.	View with steering column cover re-	

# Component Description

INFOID:0000000001183876

Item	Function
BCM	Controls the hazard and buzzer reminder function with Intelligent Key unit.
Intelligent Key unit	Controls the hazard and buzzer reminder function with BCM.
Combination meter	Turns ON the LOCK indicator, KEY indicator, turn signal indicator and buzzer (built in combination meter) by the request from Intelligent Key unit via CAN communication.
Intelligent Key warning buzzer	Sounds by the request signal from Intelligent Key unit.

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# **DIAGNOSIS SYSTEM (BCM)**

**COMMON ITEM** 

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

INFOID:0000000001559348

#### APPLICATION ITEM

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

Diagnosis mode	Function Description
Work Support	Changes the setting for each system function.
Self Diagnostic Result	Displays the diagnosis results judged by BCM. Refer to BCS-62, "DTC Index".
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM.
Data Monitor	The BCM input/output signals are displayed.
Active Test	The signals used to activate each device are forcibly supplied from BCM.
Ecu Identification	The BCM part number is displayed.
Configuration	<ul> <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.

×: Applicable item

System	Sub system selection item	Diagnosis mode		
		WORK SUPPORT	DATA MONITOR	ACTIVE TEST
_	BCM	×		
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER	×	×	×
Warning chime	BUZZER		×	×
Interior room lamp	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		×	
Intelligent Key system	INTELLIGENT KEY		×	
Combination switch	COMB SW		×	
Immobilizer	IMMU		×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door open	TRUNK		×	×
Vehicle security system	THEFT ALM	×	×	×
Signal buffer system	SIGNAL BUFFER		×	×
PTC heater system	PTC HEATER		×	×

**DOOR LOCK** 

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

INFOID:0000000001559375

**DATA MONITOR** 

## [WITH I-KEY & SUPER LOCK]

Monitor Item	Condition	
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.	
ACC ON SW	Indicates [ON/OFF] condition of ignition switch in ACC position.	
PUSH SW*1	Indicates [ON/OFF] condition of ignition knob switch.	
KEY ON SW	Indicates [ON/OFF] condition of key switch.	
CDL LOCK SW	Indicates [ON/OFF] condition of door lock and unlock switch.	
CDL UNLOCK SW	Indicates [ON/OFF] condition of door lock and unlock switch.	
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch (driver side).	
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch (passenger side).	
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.	
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.	
BACK DOOR SW	Indicates [ON/OFF] condition of back door switch.	
KEYLESS LOCK*2	Indicates [ON/OFF] condition of lock signal from key fob.	
KEYLESS UNLOCK*2	Indicates [ON/OFF] condition of unlock signal from key fob.	
I-KEY LOCK*1	Indicates [ON/OFF] condition of lock signal from Intelligent Key.	
I-KEY UNLOCK*1	Indicates [ON/OFF] condition of unlock signal from Intelligent Key.	
UNLOCK SHOCK	<ul> <li>Indicates [ON/OFF] condition of signal from air bag diagnosis unit.</li> <li>ON: During the unlock operation interlock with air bag.</li> <li>OFF: Other than above.</li> </ul>	
SHOCK SENSOR	<ul> <li>Indicates [NOMAL/ON/OFF] condition of circuit between BCM and air bag diagnosis sensor unit.</li> <li>NORMAL: Ignition switch ON. (BCM is receiving normal condition signal from air bag diagnosis sensor unit.)</li> <li>ON: During the receiving of air bag deployment signal from air bag diagnosis sensor unit.</li> <li>OFF: After the receiving of air bag deployment signal from air bag diagnosis sensor unit.</li> </ul>	
VEHICLE SPEED	Displays the vehicle speed signal received from combination meter by numerical value [km/h].	

<sup>\*1:</sup> For the Intelligent key equipped vehicle.

### **ACTIVE TEST**

Test item	Description	
SUPER LOCK*1	This test is able to check super lock operation [LOCK (SET)/UNLOCK (RELEASE)].	
DOOR LOCK IND	This test is able to check door lock indicator (built in door lock and unlock switch on center console) operation [ON/OFF].	
DOOR LOCK	This test is able to check door lock operation [ALL LOCK/ALL UNLOCK/DR UNLOCK/OTHER UNLOCK].	

<sup>:\*1</sup> For the super lock equipped vehicle.

### **WORK SUPPORT**

Test item	Description
SECURITY DOOR LOCK SET	<ul> <li>Anti hijack function mode can be changed in this mode.</li> <li>ON: Anti hijack mode is active.</li> <li>OFF: Anti hijack mode is inactive.</li> </ul>

## INTELLIGENT KEY

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<sup>\*2:</sup> For the multi remote control system equipped vehicle.

## **DIAGNOSIS SYSTEM (BCM)**

### < FUNCTION DIAGNOSIS >

[WITH I-KEY & SUPER LOCK]

# INTELLIGENT KEY: CONSULT-III Function (BCM - INTELLIGENT KEY) INFOID:00000001559376

### **DATA MONITOR**

Monitor Item	Condition	
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.	
ACC ON SW	Indicates [ON/OFF] condition of ignition switch in ACC position.	
KEY ON SW	Indicates [ON/OFF] condition of key switch.	
PUSH SW	Indicates [ON/OFF] condition of ignition knob switch.	
I-KEY LOCK	Indicates [ON/OFF] condition of lock signal from Intelligent Key.	
I-KEY UNLOCK	Indicates [ON/OFF] condition of unlock signal from Intelligent Key.	

## TRUNK

TRUNK: CONSULT-III Function (BCM - TRUNK)

INFOID:0000000001559377

### **DATA MONITOR**

Monitor Item	Condition	
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.	
KEY ON SW	Indicates [ON/OFF] condition of key switch.	
PUSH SW <sup>*1</sup>	Indicates [ON/OFF] condition of ignition knob switch.	
TRNK OPNR SW	Indicates [ON/OFF] condition of back door opener switch.	
VEHICLE SPEED	Displays the vehicle speed signal received from combination meter by numerical value [km/h].	

<sup>\*1:</sup> For the Intelligent key equipped vehicle.

### **ACTIVE TEST**

Test item	Description
TRUNK/GLASS HATCH	This test is able to check back door opener operation [ON/OFF].

 $<sup>^{\</sup>star 2}\!\!:$  For the remote keyless entry system equipped vehicle.

## **DIAGNOSIS SYSTEM (INTELLIGENT KEY UNIT)**

< FUNCTION DIAGNOSIS >

[WITH I-KEY & SUPER LOCK]

# **DIAGNOSIS SYSTEM (INTELLIGENT KEY UNIT)**

## CONSULT-III Function (INTELLIGENT KEY)

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### **APPLICATION ITEM**

CONSULT-III performs the following functions via CAN communication with Intelligent Key unit.

Diagnosis mode	Function Description	
WORK SUPPORT	Changes the setting for each system function.	
SELF-DIAG RESULTS	Displays the diagnosis results judged by Intelligent Key unit.	
CAN DIAG SUPPORT MNTR	Monitors the reception status of CAN communication viewed from Intelligent Key unit.	
DATA MONITOR	The Intelligent Key unit input/output signals are displayed.	
ACTIVE TEST	The signals used to activate each device are forcibly supplied from Intelligent Key unit.	
ECU IDENTIFICATION	The Intelligent Key unit part number is displayed.	

### **WORK SUPPORT**

Support item Description		Selection item	Condition
CONFIRM KEY FOB ID	It can check whether Intelligent Key ID code is registered or not.	_	_
TAKE OUT FROM WINDOW WARN	Take away warning chime (from window)	ON	Active
TAKE OUT FROM WINDOW WARN	mode can be changed.	OFF*	Inactive
LOW BATT OF KEY FOB WARN	Intelligent Key low battery warning mode can	ON*	Active
LOW BATT OF RET FOB WARN	be changed.	OFF	Inactive
	Door lock function with Intelligent Key when	ON*	Active
KEYLESS FUNCTION	there is intelligent key in the passenger compartment can be changed.	OFF	Inactive
ANSWER BACK FUNCTION	Puzzor reminder energies can be changed	ON	Active
ANSWER BACK FUNCTION	Buzzer reminder operation can be changed.	OFF*	Inactive
SELECTIVE UNLOCK FUNCTION	Anti hiinah mada ann ha akan mad	ON	Active
SELECTIVE UNLOCK FUNCTION	Anti-hijack mode can be changed.	OFF*	Inactive
HAZARD ANSWER BACK	Hazard reminder operation mode can be changed.	Refer to DLK-320.	
	Buzzer reminder operation (lock operation)	BUZZER	Active
ANSWER BACK WITH I-KEY LOCK	mode by each door request switch can be changed.	OFF*	Inactive
	Buzzer reminder operation (unlock operation)	BUZZER	Active
ANSWER BACK WITH I-KEY UNLOCK	mode by each door request switch can be changed.	OFF*	Inactive
AUTO RELOCK TIMER	Auto door lock operation mode can be	OFF	Inactive
AUTO RELOCK TIMER	changed.	2 min*	Active
ENGINE START BY I-KEY	Engine start function (by Intelligent Key)	ON*	Active
LINGING START DI I-RET	mode can be changed.	OFF	Inactive
LOCK/UNLOCK BY I-KEY	Door lock function by door request switch can	ON*	Active
EGGIVONEGGIV DI I-IVE I	be changed.	OFF	Inactive

<sup>\*:</sup> The factory setting

SELF-DIAG RESULT Refer to <u>DLK-431</u>, "<u>DTC\_Index"</u>.

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## [WITH I-KEY & SUPER LOCK]

Monitor Item	Condition	
PUSH SW	Indicates [ON (pressed)/OFF (released)] condition of ignition knob switch.	
KEY SW	Indicates [ON (inserted)/OFF (removed)] condition of key switch.	
DR REQ SW	Indicates [ON (pressed)/OFF (released)] condition of door request switch (driver side).	
AS REQ SW	Indicates [ON (pressed)/OFF (released)] condition of door request switch (passenger side).	
BD/TR REQ SW	Indicates [ON (pressed)/OFF (released)] condition of door request switch (back door).	
IGN SW	Indicates [ON (ON or START position)/OFF (other than ON and START position)] condition of ignition switch ON position.	
ACC SW	Indicates [ON/OFF] condition of ignition switch ACC position.	
STOP LAMP SW	Indicates [ON/OFF] condition of stop lamp switch.	
DOOR LOCK SIG	Indicates [ON/OFF] condition of LOCK signal from Intelligent Key.	
DOOR UNLOCK SIG	Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key.	
DOOR SW DR	Indicates [OPEN/CLOSE] condition of front door switch (driver side) from BCM via CAN communication.	
DOOR SW AS	Indicates [OPEN/CLOSE] condition of front door switch (passenger side) from BCM via CAN communication.	
DOOR SW RR	Indicates [OPEN/CLOSE] condition of rear door switch (RH) from BCM via CAN communication.	
DOOR SW RL	Indicates [OPEN/CLOSE] condition of rear door switch (LH) from BCM via CAN communication.	
DOOR BK SW	Indicates [OPEN/CLOSE] condition of back door switch from BCM via CAN communication.	
VEHICLE SPEED	Displays the vehicle speed signal received from combination meter by numerical value [km/h].	

### **ACTIVE TEST**

Test item	Description	
DOOR LOCK/UNLOCK	This test is able to check door lock/unlock operation.  ALL UNLK: All door lock actuators are unlocked.  DR UNLK: Door lock actuator (driver side) is unlocked.  AS UNLK: Door lock actuator (passenger side) is unlocked.  BK UNLK: This item is indicated, but inactive.  LOCK: All door lock actuator is locked.	
ANTENNA	<ul> <li>This test is able to check Intelligent Key antenna operation.</li> <li>When the following condition are met, LED (on Intelligent Key) flashes.</li> <li>ROOM ANT1: Inside key antenna (console) transmissions can be detected by Intelligent Key, when "ROOM ANT1" is selected.</li> <li>ROOM ANT2: Inside key antenna (instrument center/rear seat) transmissions can be detected by Intelligent Key, when "ROOM ANT2"is selected.</li> <li>DRIVER ANT: Outside key antenna (driver side) transmissions can be detected by Intelligent Key, when "DRIVER ANT" is selected.</li> <li>ASSIST ANT: Outside key antenna (passenger side) transmissions can be detected by Intelligent Key, when "ASSIST ANT" is selected.</li> <li>BK DOOR ANT: Outside key antenna (rear bumper) transmissions can be detected by Intelligent Key, when "BK DOOR ANT" is selected.</li> </ul>	
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation.  ON OFF	
This test is able to check warning chime in combination meter operation.  TAKE OUT: Take away warning chime sounds.  KNOB: Ignition knob switch warning chime sounds.  KEY: Key warning chime sounds.  OFF		

# **DIAGNOSIS SYSTEM (INTELLIGENT KEY UNIT)**

# < FUNCTION DIAGNOSIS >

## [WITH I-KEY & SUPER LOCK]

Test item	Description	
INDICATOR	This test is able to check warning lamp operation.  BLUE ON: Key warning lamp (green) illuminates.  RED ON: Key warning lamp (red) illuminates.  KNOB ON: Lock warning lamp illuminates.  BLUE IND: Key warning lamp (green) flashes.  RED IND: Key warning lamp (red) flashes.  KNOB IND: Lock warning lamp flashes.  OFF	
KEY LOCK SOLENOID*1	This test is able to check key interlock operation.  • LOCK: Key interlock is active.  • UNLOCK: Key interlock is inactive.	

<sup>\*1:</sup> The item is only for M/T model.

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## COMPONENT DIAGNOSIS

### U1000 CAN COMM CIRCUIT

Description INFOID:000000001183882

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

DTC Logic

#### DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC Detection Condition	Possible cause
U1000	CAN COMM CIRCUIT	When Intelligent Key unit 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.  Transmission Receiving (BCM) Receiving (IPDM E/R) Receiving (ECM) Receiving (METER/M&A) Receiving (MULTI AV)

## Diagnosis Procedure

INFOID:0000000001183884

### 1.PERFORM SELF DIAGNOSTIC

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

### Is "CAN COMM CIRCUIT" displayed?

YES >> Refer to LAN-13, "Trouble Diagnosis Flow Chart".

NO >> Refer to GI-39, "Intermittent Incident".

### **U1010 CONTROL UNIT (CAN)**

< COMPONENT DIAGNOSIS >

[WITH I-KEY & SUPER LOCK]

## U1010 CONTROL UNIT (CAN)

Description INFOID:0000000001183885

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

D DTC Logic INFOID:0000000001183886

#### DTC DETECTION LOGIC

DTC	CONSULT-III display de- scription	DTC Detection Condition	Possible cause	
U1010	CONTROL UNIT (CAN)	When detecting error during the initial diagnosis of CAN controller of Intelligent Key unit.	Intelligent Key unit	F

### Diagnosis Procedure

1. REPLACE INTELLIGENT KEY UNIT

When DTC [U1010] is detected, replace Intelligent Key unit.

>> Replace Intelligent Key unit.

### Special Repair Requirement

>> Work end.

 ${f 1}$  .required work when replacing intelligent key unit

Initialize control unit. Refer to CONSULT-III operation manual NATS-IVIS/NVIS.

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### **B2552 INTELLIGENT KEY**

Description INFOID:000000001183889

Intelligent key unit performs engine start operation and steering lock control by crosschecking ID with the Intelligent key.

DTC Logic

### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2552	INTELLIGENT KEY UNIT	Malfunction is detected inside Intelligent key unit.	Intelligent Key unit

#### DTC CONFIRMATION PROCEDURE

## 1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT-III.

#### Is DTC detected?

YES >> Refer to <u>DLK-332</u>, "<u>Diagnosis Procedure</u>".

NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000001183891

# 1. REPLACE INTELLIGENT KEY UNIT

- Replace Intelligent Key unit.
- Perform initialization with CONSULT-III. Re-register all mechanical keys. Refer to "CONSULT-III Operation Manual NATS".
- 3. Start the engine.

### Does the engine start?

YES >> INSPECTION END

NO >> Perform "DTC confirmation procedure". Refer to <u>DLK-332</u>, "<u>DTC Logic</u>".

### Special Repair Requirement

INFOID:0000000001183892

## 1. REQUIRED WORK WHEN REPLACING INTELLIGENT KEY UNIT

Initialize control unit. Refer to CONSULT-III operation manual NATS-IVIS/NVIS.

>> Work end.

### POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[WITH I-KEY & SUPER LOCK]

## POWER SUPPLY AND GROUND CIRCUIT INTELLIGENT KEY UNIT

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**INTELLIGENT KEY UNIT: Diagnosis Procedure** 

## 1. CHECK FUSE AND FUSIBLE LINK

Check that the following fuse is not blown.

Terminal No.	Signal name	Fuse No.
11	Battery power supply	9 (10A)
6	Ignition power supply	4 (10A)

#### Is the fuse blown?

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

NO >> GO TO 2.

## 2.CHECK POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- Disconnect Intelligent Key unit connector. 2.
- Turn ignition switch ON.
- Check voltage between Intelligent Key unit harness connector and ground.

	_			
	(+)	(-)	Voltage (V)	
Intellige	nt Key unit		Voltage (V) (Approx.)	
Connector	Terminal	Ground		
M40	11		Dettervieltere	
IVI40	6		Battery voltage	

#### Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

## 3.CHECK GROUND CIRCUIT

Check continuity between Intelligent Key unit harness connector and ground.

Intelliger	nt Key unit		Continuity	
Connector Terminal		Ground	Continuity	
M40	M40 12		Exists	

#### Does continuity exist?

YES >> Intelligent Key unit power supply and ground circuit are OK.

NO >> Repair harness or connector.

**BCM** 

## **BCM**: Diagnosis Procedure

### 1. CHECK FUSE AND FUSIBLE LINK

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

Terminal No.	Signal name	Fuse and fusible link No.
41	Battery power supply	9 (10A)
57		J (40A)

Is the fuse fusing?

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### POWER SUPPLY AND GROUND CIRCUIT

### < COMPONENT DIAGNOSIS >

[WITH I-KEY & SUPER LOCK]

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

NO >> GO TO 2.

# 2. CHECK POWER SUPPLY CIRCUIT

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

	Terminals				
(+	+)	(-)	Voltage (Approx.)		
ВС	CM		(Approx.)		
Connector	Terminal	Cround			
M66	41	Ground	Dotton, voltono		
M67	57		Battery voltage		

### Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

## 3. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

В	CM		Continuity	
Connector	Connector Terminal		Continuity	
M67	55		Existed	

### Does continuity exist?

YES >> BCM power supply and ground circuit are OK.

NO >> Repair harness or connector.

### DOOR LOCK AND UNLOCK SWITCH

< COMPONENT DIAGNOSIS >

[WITH I-KEY & SUPER LOCK]

### DOOR LOCK AND UNLOCK SWITCH

Description INFOID:0000000001183895

Transmits door lock/unlock operation to BCM.

## Component Function Check

INFOID:0000000001183896

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## 1. CHECK FUNCTION

### (P)With CONSULT-III

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

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

#### Is the inspection result normal?

YES >> Door lock and unlock switch is OK.

NO >> Refer to <u>DLK-335</u>, "Diagnosis Procedure".

## Diagnosis Procedure

INFOID:0000000001183897

## 1. CHECK DOOR LOCK AND UNLOCK INPUT SIGNAL

Turn ignition switch OFF.

2. Disconnect door lock and unlock switch connector.

Check signal between door lock and unlock switch harness connector and ground with oscilloscope.

(+)			Signal (Reference value)	
Door lock and unlock switch connector	Terminal	(–)		
	1			
M89	6	Ground	(V) 15 10 → 10ms JPMIA0154GB	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

# 2.check door lock and unlock switch circuit

- Turn ignition switch OFF.
- 2. Disconnect BCM connector.
- Check continuity between BCM harness connector and door lock and unlock switch harness connector.

BCM connector	Terminal	Door lock and unlock switch connector	Terminal	Continuity
M65	7	M89	6	Exists
10100	9		1	

Check continuity between BCM connector and ground.

# **DLK-335**

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INFOID:0000000001183898

### < COMPONENT DIAGNOSIS >

BCM connector	Terminal		Continuity
M65	7	Ground	Does not exist
IVIOO	9		DOGS HOLEKISL

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

# 3.check door lock and unlock switch ground

Check continuity between door lock and unlock switch harness connector and ground.

Door lock and unlock switch connector	Terminal	Ground	Continuity
M89	5	Giodila	Exists

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

### 4. CHECK BCM OUTPUT SIGNAL

- Connect BCM connector.
- 2. Check signal between BCM harness connector and ground with oscilloscope.

	0: 1			
(+)	(+)		Signal (Reference value)	
BCM connector	Terminal	(–)	()	
	7			
M65	9	Ground	(V) 15 10 0 → ←10ms JPMIA0154GB	

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39. "Intermittent Incident".

NO >> Replace BCM. Refer to BCS-65, "Exploded View".

### 5. CHECK DOOR LOCK AND UNLOCK SWITCH

Check door lock and unlock switch

Refer to DLK-336, "Component Inspection".

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace door lock and unlock switch. Refer to <a href="DLK-278">DLK-278</a>, "Exploded View".

## Component Inspection

### 1.CHECK DOOR LOCK AND UNLOCK SWITCH

Check door lock and unlock switch.

Door lock and unlock switch	Terminal		Condition	Continuity
M89	6	- 5	LOCK	Exists
NIOS	1		UNLOCK	EXISIS

#### Is the inspection result normal?

YES >> Door lock and unlock switch is OK.

NO >> Replace door lock and unlock switch. Refer to <u>DLK-278</u>, "Exploded View".

### DOOR LOCK AND UNLOCK SWITCH INDICATOR

< COMPONENT DIAGNOSIS >

[WITH I-KEY & SUPER LOCK]

### DOOR LOCK AND UNLOCK SWITCH INDICATOR

Description INFOID:0000000001183899

The door lock and unlock switch indicates door lock status. The indicator will illuminate when a lock operation is accomplished, and during this status, if any door is opened, the indicator will turn OFF.

## Component Function Check

### INFOID:0000000001183900

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### 1. CHECK FUNCTION

(P)With CONSULT-III

Check "DOOR LOCK IND" in "Active Test" mode with CONSULT-III.

Test item		Condition
DOOR LOCK IND	:ON	Illuminated
BOOK LOCK IND	:OFF	Not illuminated

#### Is the inspection result normal?

YES >> Door lock and unlock switch is OK.

NO >> Refer to <u>DLK-337</u>, "<u>Diagnosis Procedure</u>".

### Diagnosis Procedure

INFOID:0000000001183901

# 1. CHECK DOOR LOCK AND UNLOCK SWITCH INDICATOR INPUT SIGNAL

Turn ignition switch OFF.

Check voltage between door lock and unlock switch harness connector and ground.

Terminal					
(+)	(+)		Condition	Voltage	
Door lock and unlock switch connector	Terminal	(-)		(Approx.)	
M89	4	Ground	Door lock operation is accomplished	Battery voltage	
			Any door is OPEN	0	

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

## 2.CHECK DOOR LOCK AND UNLOCK SWITCH CIRCUIT

Turn ignition switch OFF.

- 2. Disconnect BCM connector and door lock and unlock switch connector.
- Check continuity between BCM harness connector and door lock and unlock switch harness connector.

BCM connector	Terminal	Door lock and unlock switch connector	Terminal	Continuity
M65	24	M89	4	Exists

Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M65	24	Glound	Does not exist

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK DOOR LOCK AND UNLOCK SWITCH GROUND

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### DOOR LOCK AND UNLOCK SWITCH INDICATOR

### < COMPONENT DIAGNOSIS >

[WITH I-KEY & SUPER LOCK]

Check continuity between door lock and unlock switch harness connector and ground.

Door lock and unlock switch connector	Terminal	Ground	Continuity
M89	5		Exists

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

### 4. CHECK BCM OUTPUT SIGNAL

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

Terminal			\		
(+)		(_)	Condition	Voltage (Approx.)	
BCM connector	Terminal	- (-)		(	
M65	24	Ground	Door lock operation is accomplished	Battery voltage	
			Any door is OPEN	0	

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace BCM. Refer to BCS-65, "Exploded View".

## 5. CHECK DOOR LOCK AND UNLOCK SWITCH INDICATOR

Check door lock and unlock switch

Refer to DLK-338, "Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace door lock and unlock switch. Refer to DLK-278, "Exploded View".

### Component Inspection

INFOID:0000000001183902

## 1. CHECK DOOR LOCK AND UNLOCK SWITCH INDICATOR

Check continuity door lock and unlock switch.

Door lock and unlock switch	Terr	minal	Continuity
Door lock and dillock switch	(+)	(-)	Continuity
M89	5	4	Exists
Moa	4	5	Does not exist

#### Is the inspection result normal?

YES >> Door lock and unlock switch is OK.

NO >> Replace door lock and unlock switch. Refer to DLK-278, "Exploded View".

### DOOR REQUEST SWITCH

DRIVER SIDE

DRIVER SIDE : Description

INFOID:0000000001183903

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Transmits lock/unlock operation to Intelligent Key unit.

DRIVER SIDE : Component Function Check

INFOID:0000000001183904

### 1. CHECK FUNCTION

### (II) With CONSULT-III

Check door request switch "DR REQ SW" in "Data Monitor" mode with CONSULT-III.

Monitor item	Condition		
DR REQ SW	Door request switch is pressed	:ON	
DICINEQ SW	Door request switch is released	:OFF	

#### Is the inspection result normal?

YES >> Door request switch is OK.

NO >> Refer to <u>DLK-343</u>, "BACK DOOR : Diagnosis Procedure".

### DRIVER SIDE: Diagnosis Procedure

INFOID:0000000001183905

### 1. CHECK INTELLIGENT KEY UNIT INPUT SIGNAL

1. Turn ignition switch OFF.

2. Check voltage between Intelligent Key unit harness connector and ground.

Terminal				
(+)			Door request switch	Voltage (V)
Intelligent Key unit connector	Terminal	(-)	condition	(Approx.)
M40	5	Ground	Pressed	0
10140	3	Ground	Released	5

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

## 2.check front door request switch circuit

1. Disconnect intelligent key unit.

Check continuity between Intelligent Key unit harness connector and door request switch harness connector.

Intelligent Key unit connector	Terminal	Door request switch connector	Terminal	Continuity
M40	5	D30	1	Exists

Check continuity between Intelligent Key unit harness connector and ground.

Intelligent Key unit connector	Terminal	Ground	Continuity
M40	5		Does not exist

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between Intelligent Key unit and front outside handle.

3.check door request switch ground circuit

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### DOOR REQUEST SWITCH

### < COMPONENT DIAGNOSIS >

[WITH I-KEY & SUPER LOCK]

Check continuity between door request switch harness connector and ground.

Door request switch connector	Terminal	Ground	Continuity
D30	2		Exists

### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace front outside handle ground circuit.

### 4. CHECK INTELLIGENT KEY UNIT OUTPUT SIGNAL

- Connect Intelligent Key unit connector.
- 2. Check voltage between Intelligent Key unit harness connector and ground.

Intelligent Key unit connector	Terminal	Ground	Voltage (V) (Approx.)
M40	5		5

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39. "Intermittent Incident".

NO >> GO TO 6.

# 5. CHECK DOOR REQUEST SWITCH

Check door request switch.

Refer to <u>DLK-344</u>, "BACK DOOR: Component Inspection".

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace malfunctioning front outside handle. Refer to <u>DLK-258, "OUTSIDE HANDLE : Removal and Installation".</u>

### 6.REPLACE INTELLIGENT KEY UNIT

Replace Intelligent Key unit.

Refer to DLK-548, "Exploded View".

NOTE:

Perform the system initialization when replacing Intelligent Key unit.

Refer to <u>DLK-284</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

### >> INSPECTION END

## **DRIVER SIDE: Component Inspection**

INFOID:0000000001183906

### 1. CHECK DOOR REQUEST SWITCH

Check door request switch.

Ter	minal	Door request switch condition	Continuity	
Door req	uest switch	Door request switch condition		
	2	Pressed	Exists	
ı	2	Released	Does not exist	

#### Is the inspection result normal?

YES >> Door request switch is OK.

NO >> Replace malfunctioning front outside handle. Refer to <u>DLK-258, "OUTSIDE HANDLE : Removal and Installation"</u>.

### PASSENGER SIDE

### PASSENGER SIDE: Description

INFOID:0000000001183907

Transmits lock/unlock operation to Intelligent Key unit.

## PASSENGER SIDE: Component Function Check

INFOID:0000000001183908

INFOID:000000001183909

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### 1.CHECK FUNCTION

(I) With CONSULT-III

Check door request switch "AS REQ SW" in "Data Monitor" mode with CONSULT-III

Monitor item	Condition		
AS REQ SW	Door request switch is pressed	:ON	
AS ILLQ SW	Door request switch is released	:OFF	

#### Is the inspection result normal?

YES >> Door request switch is OK.

NO >> Refer to <u>DLK-341</u>, "PASSENGER SIDE : <u>Diagnosis Procedure"</u>.

### PASSENGER SIDE: Diagnosis Procedure

# 1. CHECK INTELLIGENT KEY UNIT INPUT SIGNAL

1. Turn ignition switch OFF.

2. Check voltage between Intelligent Key unit harness connector and ground.

Terminal				
(+)			Door request switch Condition	Voltage (V) (Approx.)
Intelligent Key unit connector	Terminal	(–)		
M40	25	Ground	Pressed	0
WHO	25	Ground	Released	5

### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

## 2. CHECK DOOR REQUEST SWITCH CIRCUIT

1. Disconnect intelligent key unit.

Check continuity between Intelligent Key unit harness connector and door request switch harness connector.

Intelligent Key unit connector	Terminal	Door request switch connector	Terminal	Continuity
M40	25	D69	1	Exists

3. Check continuity between Intelligent Key unit harness connector and ground.

Intelligent Key unit connector	Terminal	Ground	Continuity	
M40	25		Does not exist	

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between Intelligent Key unit and front outside handle.

# 3.check door request switch ground circuit

Check continuity between front door request switch harness connector and ground.

Door request switch connector	Terminal	Ground	Continuity
D69	2		Exists

Is the inspection result normal?

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### DOOR REQUEST SWITCH

### < COMPONENT DIAGNOSIS >

[WITH I-KEY & SUPER LOCK]

YES >> GO TO 4.

NO >> Repair or replace front outside handle ground circuit.

### f 4.CHECK INTELLIGENT KEY UNIT OUTPUT SIGNAL

- 1. Connect Intelligent Key unit connector.
- 2. Check voltage between Intelligent Key unit harness connector and ground.

Intelligent Key unit connector	Terminal	Ground	Voltage (V) (Approx.)
M40	25		5

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 6.

## 5.CHECK DOOR REQUEST SWITCH

Check door request switch.

Refer to DLK-342, "PASSENGER SIDE: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace malfunctioning front outside handle. Refer to <u>DLK-258</u>, "<u>OUTSIDE HANDLE</u>: Removal and Installation".

### 6.REPLACE INTELLIGENT KEY UNIT

Replace Intelligent Key unit.

Refer to <u>DLK-548</u>, "Exploded View".

NOTE:

Perform the system initialization when replacing Intelligent Key unit.

Refer to <u>DLK-284</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

### >> INSPECTION END

## PASSENGER SIDE : Component Inspection

INFOID:0000000001183910

### 1. CHECK DOOR REQUEST SWITCH

Check door request switch.

Ter	minal	Door request switch condition	Continuity
Door request switch		Door request switch condition	Continuity
1	2	Pressed	Exists
ı	2	Released	Does not exist

#### Is the inspection result normal?

YES >> Door request switch is OK.

NO >> Replace malfunctioning front outside handle. Refer to <u>DLK-258, "OUTSIDE HANDLE : Removal and Installation"</u>.

#### BACK DOOR

**BACK DOOR: Description** 

INFOID:0000000001183911

INFOID:0000000001183912

Transmits lock/unlock operation to Intelligent Key unit.

## BACK DOOR: Component Function Check

## 1. CHECK FUNCTION

### (II) With CONSULT-III

Check door request switch "BD/TR REQ SW" in "Data Monitor" mode with CONSULT-III.

### < COMPONENT DIAGNOSIS >

Monitor item	Condition			
BD/TR REQ SW	Door request switch is pressed	:ON		
BD/TR REQ SW	Door request switch is released	:OFF		

#### Is the inspection result normal?

YES >> Door request switch is OK.

NO >> Refer to <u>DLK-343</u>, "BACK DOOR : <u>Diagnosis Procedure</u>".

### **BACK DOOR: Diagnosis Procedure**

## 1. CHECK INTELLIGENT KEY UNIT INPUT SIGNAL

1. Turn ignition switch OFF.

2. Check voltage between Intelligent Key unit harness connector and ground.

Terminal				
(+)			Door request switch	Voltage (V) (Approx.)
Intelligent Key unit connector	Terminal	(–)	condition	(Approx.)
M40	29	Ground	Pressed	0
IVI40	29	Giodila	Released	5

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

## 2.CHECK DOOR REQUEST SWITCH CIRCUIT

Disconnect Intelligent Key unit.

Check continuity between Intelligent Key unit harness connector and door request switch harness connector.

Intelligent Key unit connector	Terminal	Door request switch connector	Terminal	Continuity
M40	29	D187	1	Exists

Check continuity between Intelligent Key unit harness connector and ground.

Intelligent Key unit connector	Terminal	Ground	Continuity
M40	29		Does not exist

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between Intelligent Key unit and back door request switch.

### 3.CHECK DOOR REQUEST SWITCH GROUND CIRCUIT

Check continuity between front door request switch harness connector and ground.

Door request switch connector	Terminal	Ground	Continuity
D187	2		Exists

### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace back door request switch ground circuit.

### 4. CHECK INTELLIGENT KEY UNIT OUTPUT SIGNAL

- Connect Intelligent Key unit connector.
- 2. Check voltage between Intelligent Key unit harness connector and ground.

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### DOOR REQUEST SWITCH

### < COMPONENT DIAGNOSIS >

#### [WITH I-KEY & SUPER LOCK]

Intelligent Key unit connector	Terminal	Ground	Voltage (V) (Approx.)
M40	29		5

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 6.

### 5. CHECK DOOR REQUEST SWITCH

Check door request switch.

Refer to DLK-344, "BACK DOOR: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace back door request switch. Refer to <u>DLK-276</u>. "Exploded View".

### **6.**REPLACE INTELLIGENT KEY UNIT

Replace Intelligent Key unit.

Refer to <u>DLK-548</u>, "Exploded View".

### NOTE:

Perform the system initialization when replacing Intelligent Key unit.

Refer to <u>DLK-23</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

#### >> INSPECTION END

### **BACK DOOR: Component Inspection**

INFOID:0000000001183914

### 1. CHECK DOOR REQUEST SWITCH

Check door request switch.

Ter	minal	Door request switch condition	Continuity	
Door req	uest switch	Door request switch condition	Continuity	
1	2	Pressed	Exists	
ı	2	Released	Does not exist	

#### Is the inspection result normal?

YES >> Door request switch is OK.

NO >> Replace back door request switch. Refer to <a href="DLK-276">DLK-276</a>, "Exploded View".

### DOOR SWITCH

**DRIVER SIDE** 

INFOID:0000000001183915

INFOID:0000000001183917

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DRIVER SIDE : Description

Detects door open/closed condition.

DRIVER SIDE: Component Function Check

INFOID:000000001183916

1. CHECK FUNCTION

## (II) With CONSULT-III

Check door switches "DOOR SW DR" in "Data Monitor" mode with CONSULT-III.

Monitor item	Condition		
DOOR SW DR	OPEN	:ON	
	CLOSE	:OFF	

### Is the inspection result normal?

YES >> Door switch is OK.

NO >> Refer to <u>DLK-345</u>, "<u>DRIVER SIDE</u>: <u>Diagnosis Procedure</u>".

### DRIVER SIDE: Diagnosis Procedure

## 1. CHECK DOOR SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.

2. Check signal between BCM harness connector and ground with oscilloscope.

Terminals				
(+	(+)		Door condition	Voltage (V) (Approx.)
BCM connector	Terminal	(–)		(Approx.)
			OPEN	0
M65	26	Ground	CLOSE	(V) 15 10 5 0 10 ms JPMIA0011GB

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to <a href="GI-39">GI-39</a>, "Intermittent Incident".

NO >> GO TO 2.

## 2.CHECK DOOR SWITCH CIRCUIT

1. Disconnect BCM connector.

2. Check continuity between BCM harness connector and door switch harness connector.

BCM connector	Terminal	Door switch connector	Terminal	Continuity
M65	26	B34	1	Exists

3. Check continuity between BCM harness connector and ground.

BCM connector	connector Terminal		Continuity
M65	26	Ground	Does not exist

#### < COMPONENT DIAGNOSIS >

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between BCM and door switch.

## 3.check door switch

Check door switch.

Refer to <u>DLK-346</u>, "DRIVER SIDE: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace malfunctioning door switch. Refer to <u>DLK-270, "Exploded View"</u>.

### **DRIVER SIDE**: Component Inspection

INFOID:0000000001183918

### 1. CHECK DOOR SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect door switch connector.
- 3. Check door switch.

Terminal		Door switch condition	Continuity	
Door switch		Door Switch Condition	Continuity	
4	Ground part of door switch	Pressed	Exists	
		Released	Does not exist	

#### Is the inspection result normal?

YES >> Door switch is OK.

NO >> Replace malfunctioning door switch. Refer to <u>DLK-270, "Exploded View"</u>.

### PASSENGER SIDE

PASSENGER SIDE: Description

INFOID:0000000001183919

Detects door open/closed condition.

PASSENGER SIDE: Component Function Check

INFOID:0000000001183920

## 1. CHECK FUNCTION

### (II) With CONSULT-III

Check door switches "DOOR SW AS" in "Data Monitor" mode with CONSULT-III.

Monitor item	Condition		
DOOR SW AS	OPEN	: ON	
	CLOSE	: OFF	

### Is the inspection result normal?

YES >> Door switch is OK.

NO >> Refer to <u>DLK-346</u>, "PASSENGER SIDE : <u>Diagnosis Procedure</u>".

### PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000001183921

### 1. CHECK DOOR SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Check signal between BCM harness connector and ground with oscilloscope.

Terminals (+)				
			Door condition	Voltage (V) (Approx.)
BCM connector	Terminal	(-)	2 001 00110.11	(Approx.)
			OPEN	0
M65	27	Ground	CLOSE	(V) 15 10 5 0 10 ms JPMIA0011GB

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2.

# 2. CHECK DOOR SWITCH CIRCUIT

1. Disconnect BCM connector.

Check continuity between BCM harness connector and door switch harness connector.

BCM connector	Terminal	Door switch connector	Terminal	Continuity
M65	27	B27	1	Exists

3. Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M65	27	Olouliu	Does not exist

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between BCM and door switch.

# 3. CHECK DOOR SWITCH

Check door switch.

Refer to DLK-347, "PASSENGER SIDE: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace malfunctioning door switch. Refer to <u>DLK-270. "Exploded View"</u>.

### PASSENGER SIDE : Component Inspection

## 1. CHECK DOOR SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect door switch connector.
- 3. Check door switch.

Terminal		Door switch condition	Continuity	
Door switch		Door Switch Condition		
1	Ground part of door switch	Pressed	Exists	
	Ground part of door switch	Released	Does not exist	

### Is the inspection result normal?

YES >> Door switch is OK.

NO >> Replace malfunctioning door switch. Refer to <u>DLK-270</u>, "Exploded View".

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INFOID:0000000001183922

### < COMPONENT DIAGNOSIS >

**REAR LH** 

**REAR LH: Description** 

INFOID:0000000001183923

Detects door open/closed condition.

REAR LH: Component Function Check

INFOID:0000000001183924

### 1. CHECK FUNCTION

### (II) With CONSULT-III

Check door switches "DOOR SW-RL" in "Data Monitor" mode with CONSULT-III.

Monitor item	Condition		
DOOR SW-RL	OPEN	:ON	
	CLOSE	:OFF	

### Is the inspection result normal?

YES >> Door switch is OK.

NO >> Refer to <u>DLK-348</u>. "REAR LH: <u>Diagnosis Procedure"</u>.

### **REAR LH: Diagnosis Procedure**

INFOID:0000000001183925

## 1. CHECK DOOR SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Check signal between BCM harness connector and ground with oscilloscope.

Terminals (+)				
		Door con	Door condition	Voltage (V) (Approx.)
BCM connector	Terminal	(-)		(Approx.)
			OPEN	0
M65	25	Ground	CLOSE	(V) 15 10 5 0 10 ms JPMIA0011GB

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2.

## 2. CHECK DOOR SWITCH CIRCUIT

- 1. Disconnect BCM connector.
- 2. Check continuity between BCM harness connector and door switch harness connector.

BCM connector	Terminal	Door switch connector	Terminal	Continuity
M65	25	B71	1	Exists

3. Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M65	25	Giodila	Does not exist

### Is the inspection result normal?

#### DOOR SWITCH

### < COMPONENT DIAGNOSIS >

[WITH I-KEY & SUPER LOCK]

YES >> GO TO 3.

NO >> Repair or replace harness between BCM and door switch.

3. CHECK DOOR SWITCH

Check door switch.

Refer to DLK-349, "REAR LH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace malfunctioning door switch. Refer to <u>DLK-270</u>, "Exploded View".

### REAR LH: Component Inspection

## 1. CHECK DOOR SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect door switch connector.
- 3. Check door switch.

Terminal		Door switch condition	Continuity	
Door switch		Door Switch Condition	Continuity	
1	Ground part of door switch	Pressed	Exists	
ı	Ground part of door switch	Released	Does not exist	

### Is the inspection result normal?

YES >> Door switch is OK.

NO >> Replace malfunctioning door switch. Refer to DLK-270, "Exploded View".

REAR RH

REAR RH : Description

Detects door open/close condition.

REAR RH: Component Function Check

## 1. CHECK FUNCTION

(II) With CONSULT-III

Check door switches "DOOR SW RR" in "Data Monitor" mode with CONSULT-III.

Monitor item	Condition		
DOOR SW RR	OPEN	:ON	
DOOK SW KK	CLOSE	:OFF	

### Is the inspection result normal?

YES >> Door switch is OK.

NO >> Refer to <u>DLK-349</u>, "REAR RH: <u>Diagnosis Procedure</u>".

### **REAR RH**: Diagnosis Procedure

## 1. CHECK DOOR SWITCH INPUT SIGNAL

- Turn ignition switch OFF.
- 2. Check signal between BCM harness connector and ground with oscilloscope.

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	Terminals				
(+	(+)		Door condition	Voltage (V)	
BCM connector	Terminal	(–)		(Approx.)	
			OPEN	0	
M65	29	Ground	CLOSE	(V) 15 10 5 0 10 ms JPMIA0011GB	

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2.

# 2.CHECK DOOR SWITCH CIRCUIT

- 1. Disconnect BCM connector.
- 2. Check continuity between BCM harness connector and door switch harness connector.

BCM connector	Terminal	Door switch connector	Terminal	Continuity
M65	29	B53	1	Exists

3. Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M65	29	Ground	Does not exist

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between BCM and door switch.

# 3. CHECK DOOR SWITCH

Check door switch.

Refer to DLK-350, "REAR RH: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace malfunctioning door switch. Refer to <u>DLK-270, "Exploded View"</u>.

## REAR RH: Component Inspection

## 1. CHECK DOOR SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect door switch connector.
- Check door switch.

Terminal		Door switch condition	Continuity	
Door switch		Door Switch Condition		
1	Ground part of door switch	Pressed	Exists	
		Released	Does not exist	

### Is the inspection result normal?

YES >> Door switch is OK.

NO >> Replace malfunctioning door switch. Refer to <u>DLK-270</u>, "Exploded View".

BACK DOOR

BACK DOOR : Description

INFOID:0000000001183931

Detects back door open/close condition.

**BACK DOOR: Component Function Check** 

INFOID:0000000001183932

1. CHECK FUNCTION

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(III) With CONSULT-III

Check "DOOR BK SW" in "Data Monitor" mode with CONSULT-III.

	D
	-
	_
: ON	_

Condition

: OFF

**OPEN** 

**CLOSE** 

Is the inspection result normal?

YES >> Back door lock assembly (door switch) is OK.

NO >> Refer to <u>DLK-351</u>, "BACK DOOR : <u>Diagnosis Procedure</u>".

**BACK DOOR: Diagnosis Procedure** 

Monitor item

DOOR BK SW

INFOID:0000000001183933

1. CHECK BACK DOOR LOCK ASSEMBLY (DOOR SWITCH) INPUT SIGNAL

Turn ignition switch OFF.

2. Check voltage between BCM harness connector and ground.

Terminals			D. J. J.	Voltage (V) (Approx.)	
(+)		Back door condition			
BCM connector	Terminal	(-)		, , 	
M65	28	28 Ground	OPEN	0	
COIVI		Giouna	CLOSE	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

## 2.check back door lock assembly (door switch) circuit

Disconnect BCM connector.

Check continuity between BCM harness connector and back door lock assembly (door switch) harness connector.

	50111		·	
M65	28	D152	4	Exists
BCM connector	Terminal	Back door lock assembly (door switch) connector	Terminal	Continuity

Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M65	28	Oround	Does not exist

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between BCM and trunk room lamp switch.

3.CHECK BACK DOOR LOCK ASSEMBLY GROUND CIRCUIT

Check continuity between back door lock assembly harness connector and ground.

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#### < COMPONENT DIAGNOSIS >

Back door lock assembly (door switch) connector	Terminal	Ground	Continuity
D152	3		Exists

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace back door lock assembly ground circuit.

## 4. CHECK BCM OUTPUT SIGNAL

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

Terminals			V 16 00	
(+)		(-)	Voltage (V) (Approx.)	
BCM connector	Terminal	(-)	(11 - 7	
M65	28	Ground	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace BCM. Refer to BCS-65, "Exploded View".

## 5.CHECK BACK DOOR LOCK ASSEMBLY (DOOR SWITCH)

Check back door lock assembly (door switch).

Refer to DLK-352, "BACK DOOR: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace back door lock assembly (door switch). Refer to <u>DLK-266, "DOOR LOCK : Removal and Installation".</u>

### **BACK DOOR: Component Inspection**

INFOID:0000000001183934

## 1. CHECK BACK DOOR LOCK ASSEMBLY (DOOR SWITCH)

- 1. Turn ignition switch OFF.
- 2. Disconnect back door lock assembly (door switch) connector.
- Check back door lock assembly (door switch).

Terminal		Trunk condition	Continuity	
Back door lock assembly (door switch)		Trank condition	Continuity	
1	2	OPEN	Exists	
4	4 3	CLOSE	Does not exist	

#### Is the inspection result normal?

YES >> Back door lock assembly (door switch) is OK.

NO >> Replace back door lock assembly (door switch). Refer to <u>DLK-535, "DOOR LOCK : Removal and Installation".</u>

### KEY SWITCH

Description INFOID:000000001183935

Key switch detects that mechanical key is inserted into the key cylinder, and then transmits the signal to BCM and Intelligent Key unit.

### Component Function Check

#### INFOID:0000000001183936

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## 1. CHECK KEY SWITCH INPUT SIGNAL

Check "KEY SW" in "Data Monitor" mode with CONSULT-III.

Monitor item	Condition	
KEY SW	Insert mechanical key into key cylinder	: ON
	Remove mechanical key from key cylinder	: OFF

#### Is the inspection result normal?

YES >> Key switch is OK.

NO >> Refer to <u>DLK-353</u>, "<u>Diagnosis Procedure</u>".

## Diagnosis Procedure

### INFOID:0000000001183937

# 1. CHECK KEY SWITCH INPUT SIGNAL

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

Terminals					
(+)			Condition	Voltage (V)	
Intelligent Key unit con- nector	Terminal	(–)		(Approx.)	
M40	7 Ground		Insert mechanical key into key cylinder	Battery voltage	
IVI40	,	Ground	Remove mechanical key from key cylinder	0	

4. Check voltage between BCM harness connector and ground.

Terminals					
(+)		( )	Condition	Voltage (V) (Approx.)	
BCM connector	Terminal	(–)		(11 - 7	
M65	36	Ground	Insert mechanical key into key cylinder	Battery voltage	
WIOS	30	Ground	Remove mechanical key from key cylinder	0	

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2.

## 2.CHECK KEY SWITCH POWER SUPPLY CIRCUIT

- 1. Remove mechanical key from key cylinder.
- 2. Disconnect ignition knob switch and key lock solenoid connector.
- Check voltage between ignition knob switch and key lock solenoid harness connector and ground.

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(+)			Voltage (V)
Ignition knob switch and key lock solenoid connector	Terminal	(–)	(Approx.)
M25	2	Ground	Battery voltage

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3.check key switch signal circuit

1. Check continuity between Intelligent Key unit harness connector and ignition knob switch and key lock solenoid harness connector.

Intelligent Key unit connector	Terminal	Ignition knob switch and key lock solenoid connector	Terminal	Continuity
M40	7	M25	1	Exists

Check continuity between BCM harness connector and ignition knob switch and key lock solenoid harness connector.

BCM connector	Terminal	Ignition knob switch and key lock solenoid connector	Terminal	Continuity
M65	36	M25	1	Exists

3. Check continuity between ignition knob switch and key lock solenoid harness connector and ground.

Ignition knob switch and key lock solenoid connector	Terminal	Ground	Continuity
M25	1	Ground	Does not exist

### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

### 4. CHECK KEY SWITCH

Check key switch.

Refer to <u>DLK-354</u>, "Component Inspection".

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace key switch.

### Component Inspection

INFOID:0000000001183938

#### COMPONENT INSPECTION

### 1. CHECK KEY SWITCH

Check continuity between ignition knob switch and key lock solenoid terminals.

Terminal  Ignition knob switch and key lock solenoid connector		Condition	Continuity	
1	2	Insert mechanical key into key cylinder	Exists	
	2	Remove mechanical key from key cylinder	Does not exist	

#### Is the inspection result normal?

YES >> Key switch is OK.

NO >> Replace key cylinder assembly.

### **IGNITION KNOB SWITCH**

**Description** 

Ignition knob switch detects that ignition knob is pressed, and then transmits the signal to Intelligent Key unit. Then Intelligent Key unit transmits the information to BCM via CAN.

### Component Function Check

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## 1. CHECK IGNITION KNOB SWITCH INPUT SIGNAL

Check "PUSH SW" in "Data Monitor" mode with CONSULT-III.

Monitor item	Condition		
PUSH SW	Ignition knob switch is pressed	: ON	
	Ignition knob switch is released	: OFF	

### Is the inspection result normal?

YES >> Ignition knob switch is OK.

NO >> Refer to <u>SEC-59</u>, "<u>Diagnosis Procedure</u>".

## Diagnosis Procedure

INFOID:0000000001183941

# 1. CHECK IGNITION KNOB SWITCH INPUT SIGNAL

- Turn ignition switch OFF.
- 2. Disconnect Intelligent Key unit connector.
- 3. Check voltage between Intelligent Key unit harness connector and ground.

Terminals					
(+)			Condition	Voltage (V)	
Intelligent Key unit con- nector	Terminal	(–)		(Approx.)	
M40	27	Ground	Ignition knob switch is pressed	Battery voltage	
10140	21	Ground	Ignition knob switch is released	0	

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2.

# 2.check ignition knob switch power supply circuit

1. Disconnect ignition knob switch and key lock solenoid connector.

Check voltage between ignition knob switch and key lock solenoid harness connector and ground.

(+)			Voltage (V)
Ignition knob switch and key lock solenoid connector Terminal		(–)	(Approx.)
M25	4	Ground	Battery voltage

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3.check ignition knob switch signal circuit

 Check continuity between Intelligent Key unit harness connector and ignition knob switch and key lock solenoid harness connector.

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**DLK-355** 

### **IGNITION KNOB SWITCH**

#### < COMPONENT DIAGNOSIS >

#### [WITH I-KEY & SUPER LOCK]

Intelligent Key unit connector	Terminal	Ignition knob switch and key lock solenoid connector	Terminal	Continuity
M40	27	M25	3	Exists

2. Check continuity between ignition knob switch and key lock solenoid harness connector and ground.

Ignition knob switch and key lock solenoid connector	Terminal	Ground	Continuity
M25	3		Does not exist

### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

## 4.CHECK IGNITION KNOB SWITCH

Check ignition knob switch.

Refer to SEC-60, "Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace key cylinder assembly.

## Component Inspection

INFOID:0000000001183942

# 1. CHECK IGNITION KNOB SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect ignition knob switch and key lock solenoid connector.
- Check continuity between ignition knob switch and key lock solenoid terminals under the following conditions.

Ignition knob switch and key lock solenoid		Condition	Continuity	
Connector	Terr	minal	Condition	Continuity
M25	3	4	Ignition knob switch is pressed	Exists
IVIZJ	3	4	Ignition knob switch is released	Does not exist

#### Is the inspection result normal?

YES >> Ignition knob switch is OK.

NO >> Key cylinder assembly.

### DOOR LOCK ACTUATOR

**DRIVER SIDE** 

DRIVER SIDE : Description

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Locks/unlocks the door with the signal from BCM.

DRIVER SIDE : Component Function Check

INFOID:0000000001183944

## 1. CHECK FUNCTION

### (II) With CONSULT-III

Check "DOOR LOCK/UNLOCK" in "Active Test" mode with CONSULT-III.

Test item		Condition
	:ALL UNLK	The all door lock actuators are unlocked
DOOR LOCK/UNLOCK	:DR UNLK	The door lock actuator (driver side) is unlocked
	:LOCK	The all door lock actuators are locked

#### Is the inspection result normal?

YES >> Door lock actuator is OK.

DRIVER SIDE: Diagnosis Procedure

NO >> Refer to <u>DLK-357</u>, "<u>DRIVER SIDE</u>: <u>Diagnosis Procedure</u>".

## INFOID:000000001183945

# 1. CHECK BCM OUTPUT SIGNAL

1. Turn ignition switch OFF.

2. Check voltage between BCM harness connector and ground.

	Terminals (-)		Condition of door lock and unlock switch	Voltage (V) (Approx.)
(+)				
BCM connector	Terminal	(-)		(11.5.4)
M67	56	Ground	Lock	$0 \rightarrow \text{Battery voltage} \rightarrow 0$
IVIO7	60	Ground	Unlock	$0 \rightarrow Battery \ voltage \rightarrow 0$

### Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 2.

## 2.CHECK DOOR LOCK ACTUATOR CIRCUIT 1

1. Disconnect BCM and front door lock actuator (driver side) connector.

Check continuity between BCM harness connector and front door lock actuator (driver side) harness connector.

BCM connector	Terminal	Door lock actuator connector	Terminal	Continuity
M67	56	D9	3	Exists
IVIO7	60	Da	2	LAISIS

3. Check continuity between BCM harness connector and ground.

BCM connector	Terminal		Continuity
M67	56	Ground	Does not exist
	60		Does not exist

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 3.

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### < COMPONENT DIAGNOSIS >

# 3.CHECK DOOR LOCK ACTUATOR CIRCUIT $^{2}$

1. Disconnect anti-hijack relay connector.

2. Check continuity between BCM harness connector and anti-hijack relay connector.

BCM connector	Terminal	Anti-hijack relay connector	Terminal	Continuity
M67	56	M90	4	Exists

3. Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M67	56	Ground	Does not exist

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

## 4. CHECK ANTI-HIJACK RELAY

Check continuity of anti-hijack relay.

Anti-hijack relay connector	Terr	Continuity	
M90	4	3	Exists

### Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace anti-hijack relay.

## 5. CHECK DOOR LOCK ACTUATOR CIRCUIT 3

Check continuity between anti-hijack relay harness connector and front door lock actuator (driver side)
harness connector.

Anti-hijack relay connector	Terminal	Door lock actuator connector	Terminal	Continuity
M90	3	D9	3	Exists

2. Check continuity between anti-hijack relay connector and ground.

Anti-hijack relay connector	Terminal	Ground	Continuity
M90	3		Does not exist

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace harness.

### 6.CHECK DOOR LOCK ACTUATOR

Check door lock actuator.

Refer to DLK-358, "DRIVER SIDE: Component Inspection".

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace door lock actuator. Refer to <u>DLK-254, "DOOR LOCK: Removal and Installation"</u>.

### DRIVER SIDE: Component Inspection

 ${f 1}$  .CHECK FRONT DOOR LOCK ACTUATOR (DRIVER SIDE)

Check the actuator operation by connecting the battery voltage to front door lock actuator (driver side).

#### [WITH I-KEY & SUPER LOCK]

Front door lock actuator (driver side)	Tern	ninal	Door lock actuator condition
Tioni door lock actuator (univer side)	(+)	(-)	Door lock actuator condition
D9	3	2	LOCK
Da	2	3	UNLOCK

Is the inspection result normal?

YES >> Front door lock actuator (driver side) is OK.

NO >> Replace front door lock actuator (driver side). Refer to <u>DLK-254, "DOOR LOCK : Removal and</u> Installation".

DRIVER SIDE: Special Repair Requirement

Refer to <u>PWC-4</u>, "<u>ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL</u>: <u>Special Repair Requirement</u>".

PASSENGER SIDE

PASSENGER SIDE: Description

Locks/unlocks the door with the signal from BCM.

PASSENGER SIDE: Component Function Check

1. CHECK FUNCTION

(P)With CONSULT-III

Check "DOOR LOCK/UNLOCK" in "Active Test" mode with CONSULT-III.

Test item		Condition
	:ALL UNLK	The all door lock actuators are unlocked
DOOR LOCK/UNLOCK	:DR UNLK	The door lock actuator (driver side) is unlocked
	:LOCK	The all door lock actuators are locked

#### Is the inspection result normal?

YES >> Door lock actuator is OK.

NO >> Refer to <u>DLK-366</u>, "<u>PASSENGER SIDE</u>: <u>Diagnosis Procedure</u>".

## PASSENGER SIDE : Diagnosis Procedure

## 1. CHECK BCM OUTPUT SIGNAL

Check voltage between BCM harness connector and ground.

Terminals		0 155	V 16 0.0	
(+)	(+)		Condition of door lock and unlock switch	Voltage (V) (Approx.)
BCM connector	Terminal	(-)		VII - /
M67	56	Ground	Lock	0  o Battery voltage  o 0
IVIO /	54	Ground	Unlock	$0 \rightarrow Battery voltage \rightarrow 0$

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

### 2. CHECK DOOR LOCK ACTUATOR CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM and front door lock actuator (passenger side) connector.
- 3. Check continuity between BCM harness connector and front door lock actuator (passenger side) harness connector.

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#### < COMPONENT DIAGNOSIS >

BCM connector	Terminal	Door lock actuator connector	Terminal	Continuity
M67	56	D48	3	Exists
	54	D+0	2	LAISIS

Check continuity between BCM harness connector and ground.

BCM connector	Terminal		Continuity
M67	56	Ground	Does not exist
	54		Does not exist

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace harness.

### 3.CHECK DOOR LOCK ACTUATOR

Check door lock actuator.

Refer to DLK-359, "PASSENGER SIDE: Diagnosis Procedure".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace door lock actuator. Refer to <a href="DLK-254">DLK-254</a>, "DOOR LOCK: Removal and Installation".

### PASSENGER SIDE: Component Inspection

INFOID:0000000001183951

## 1. CHECK FRONT DOOR LOCK ACTUATOR (PASSENGER SIDE)

Check the actuator operation by connecting the battery voltage directly to front door lock actuator (passenger side).

Front door lock actuator	Terminal		- Door lock actuator condition
(passenger side) connector	(+)	(-)	
D48	3	2	LOCK
D40	2	3	UNLOCK

#### Is the inspection result normal?

YES >> Front door lock actuator (passenger side) is OK.

NO >> Replace front door lock actuator (passenger side). Refer to <u>DLK-254, "DOOR LOCK : Removal and Installation"</u>.

#### REAR LH

REAR LH : Description

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Locks/unlocks the door with the signal from BCM.

### REAR LH: Component Function Check

## 1. CHECK FUNCTION

#### (P)With CONSULT-III

Check "DOOR LOCK/UNLOCK" in "Active Test" mode with CONSULT-III.

Test item		Condition	
DOOR LOCK/UNLOCK	:ALL UNLK	The all door lock actuators are unlocked	
	:DR UNLK	The door lock actuator (driver side) is unlocked	
	:LOCK	The all door lock actuators are locked	

#### Is the inspection result normal?

YES >> Door lock actuator is OK.

### DOOR LOCK ACTUATOR

#### < COMPONENT DIAGNOSIS >

#### [WITH I-KEY & SUPER LOCK]

NO >> Refer to <u>DLK-361</u>, "<u>REAR LH</u>: <u>Diagnosis Procedure</u>".

# **REAR LH: Diagnosis Procedure**

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# 1. CHECK BCM OUTPUT SIGNAL

1. Turn ignition switch OFF.

2. Check voltage between BCM harness connector and ground.

Terminals				V 16 00	
(+)		(-)	Condition of door lock and unlock switch	Voltage (V) (Approx.)	
BCM connector	Terminal	()		(11 - 7	
M67	56	Ground	Lock	$0 \rightarrow Battery \ voltage \rightarrow 0$	
IVIO7	54	Giodila	Unlock	$0 \to \text{Battery voltage} \to 0$	

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 2.

# 2. CHECK DOOR LOCK ACTUATOR CIRCUIT 1

1. Disconnect BCM and rear door lock actuator (LH) connector.

2. Check continuity between BCM harness connector and rear door lock actuator (LH) harness connector.

BCM connector	Terminal	Door lock actuator connector	Terminal	Continuity
M67	56	D85	3	Exists
IVI67	54	200	2	LAISIS

3. Check continuity between BCM harness connector and ground.

BCM connector	Terminal		Continuity
M67	56	Ground	Does not exist
	54		Does not exist

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 3.

# 3.CHECK DOOR LOCK ACTUATOR CIRCUIT $^{ m 2}$

1. Disconnect anti-hijack relay connector.

2. Check continuity between BCM connector and anti-hijack relay connector.

BCM connector	Terminal	Anti-hijack relay connector	Terminal	Continuity
M67	56	M90	4	Exists

3. Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M67	56	Giodila	Does not exist

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

# 4. CHECK ANTI-HIJACK RELAY

Check continuity anti-hijack relay.

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#### < COMPONENT DIAGNOSIS >

Anti-hijack relay connector	Terr	Continuity	
M90	4	3	Exists

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace anti-hijack relay.

# 5. CHECK DOOR LOCK ACTUATOR CIRCUIT 3

 Check continuity between anti-hijack relay harness connector and rear door lock actuator (LH) harness connector.

Anti-hijack relay connector	Terminal	Door lock actuator connector	Terminal	Continuity
M90	3	D85	3	Exists

2. Check continuity between anti-hijack relay harness connector and ground.

Anti-hijack relay connector	Terminal	Ground	Continuity
M90	3		Does not exist

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace harness.

### **6.**CHECK DOOR LOCK ACTUATOR

Check door lock actuator.

Refer to DLK-362, "REAR LH: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace door lock actuator. Refer to <u>DLK-254, "DOOR LOCK: Removal and Installation"</u>.

# REAR LH: Component Inspection

# 1. CHECK REAR DOOR LOCK ACTUATOR (LH)

Check the actuator operation by connecting the battery voltage directly to rear door lock actuator (LH).

Rear door lock actuator (LH)	Teri	minal	Door lock actuator condition	
Near door lock actuator (E11)	(+)	(-)	Door lock actuator condition	
D85	3	2	LOCK	
D03	2	3	UNLOCK	

#### Is the inspection result normal?

YES >> Rear door lock actuator (LH) is OK.

NO >> Replace rear door lock actuator (LH). Refer to <u>DLK-254, "DOOR LOCK : Removal and Installation"</u>.

#### REAR RH

**REAR RH**: Description

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INFOID:0000000001183955

Locks/unlocks the door with the signal from BCM.

# REAR RH: Component Function Check

# 1. CHECK FUNCTION

#### (P)With CONSULT-III

Check "DOOR LOCK/UNLOCK" in "Active Test" mode with CONSULT-III.

#### [WITH I-KEY & SUPER LOCK]

Test item		Condition
	:ALL UNLK	The all door lock actuators are unlocked
DOOR LOCK/UNLOCK	:DR UNLK	The door lock actuator (driver side) is unlocked
	:LOCK	The all door lock actuators are locked

Is the inspection result normal?

YES >> Door lock actuator is OK.

NO >> Refer to <u>DLK-363</u>, "REAR RH : <u>Diagnosis Procedure</u>".

**REAR RH: Diagnosis Procedure** 

# 1. CHECK BCM OUTPUT SIGNAL

1. Turn ignition switch OFF.

2. Check voltage between BCM harness connector and ground.

Terminals					
(+)	(+)		Condition of door lock and unlock switch	Voltage (V) (Approx.)	
BCM connector	Terminal	(-)		(11.5)	
M67	56	Ground	Lock	$0 \rightarrow \text{Battery voltage} \rightarrow 0$	
IVIO7	54	Giouna	Unlock	$0 \rightarrow \text{Battery voltage} \rightarrow 0$	

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 2.

# 2.CHECK DOOR LOCK ACTUATOR CIRCUIT 1

Turn ignition switch OFF.

2. Disconnect BCM and rear door lock actuator (RH) connector.

3. Check continuity between BCM harness connector and rear door lock actuator (RH) harness connector.

BCM connector	Terminal	Door lock actuator connector	Terminal	Continuity
M67	56	D105	3	Exists
IVIO7	54	2103	2	LAISIS

4. Check continuity between BCM harness connector and ground.

BCM connector	Terminal		Continuity
M67	56	Ground	Does not exist
	54	_ Does not e	Does not exist

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 3.

# 3.CHECK DOOR LOCK ACTUATOR CIRCUIT 2

1. Disconnect anti-hijack relay.

2. Check continuity between BCM harness connector and anti-hijack relay harness connector.

BCM connector	Terminal	Anti-hijack relay connector	Terminal	Continuity
M67	56	M90	4	Exists

3. Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M67	56	Ground	Does not exist

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### DOOR LOCK ACTUATOR

[WITH I-KEY & SUPER LOCK]

INFOID:0000000001183959

#### < COMPONENT DIAGNOSIS >

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

### 4. CHECK ANTI-HIJACK RELAY

Check continuity anti-hijack relay.

Anti-hijack relay connector	Terminal		Continuity
M90	4	3	Exists

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace anti-hijack relay.

# 5. CHECK DOOR LOCK ACTUATOR CIRCUIT 3

 Check continuity between anti-hijack relay harness connector and rear door lock actuator (RH) harness connector.

Anti-hijack relay connector	Terminal	Door lock actuator connector	Terminal	Continuity
M90	3	D105	3	Exists

2. Check continuity between anti-hijack relay harness connector and ground.

Anti-hijack relay connector	Terminal	Ground	Continuity
M90	3		Does not exist

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace harness.

# 6.CHECK DOOR LOCK ACTUATOR

Check door lock actuator.

Refer to DLK-364, "REAR RH: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace door lock actuator. Refer to <u>DLK-254, "DOOR LOCK: Removal and Installation"</u>.

# **REAR RH**: Component Inspection

# 1. CHECK REAR DOOR LOCK ACTUATOR (RH)

Check the actuator operation by connecting the battery voltage directly to rear door lock actuator (RH).

Rear door lock actuator (RH)	Terminal		Door lock actuator condition
Real Goof lock actuator (RTI)	(+)	(-)	Door lock actuator condition
D105	3	2	LOCK
D103	2	3	UNLOCK

#### Is the inspection result normal?

YES >> Rear door lock actuator (RH) is OK.

NO >> Replace rear door lock actuator (RH). Refer to <u>DLK-254, "DOOR LOCK : Removal and Installation"</u>.

**DRIVER SIDE** 

DRIVER SIDE : Description

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The super lock system is controlled by BCM.

DRIVER SIDE: Component Function Check

INFOID:0000000001183961

INFOID:0000000001183962

# 1. CHECK FUNCTION

#### (II) With CONSULT-III

Check "SUPER LOCK" in "Active Test" mode with CONSULT-III.

Te	est item	Condition	
SUPER LOCK	:LOCK (SET)	The super lock actuator is locked (SET)	
SOF LIN LOCK	:UNLOCK (RELEASE)	The super lock actuator is unlocked (RELEASE)	

#### Is the inspection result normal?

YES >> Door lock actuator (super lock actuator) is OK.

NO >> Refer to DLK-365, "DRIVER SIDE : Diagnosis Procedure".

# DRIVER SIDE: Diagnosis Procedure

# 1. CHECK BCM OUTPUT SIGNAL

Check voltage between BCM harness connector and ground.

Terminals				
(+)		(-)	(-) Condition Voltage (\(\text{Voltage}\) (Approx.	Voltage (V) (Approx.)
BCM connector	Terminal	(-)		( 4
M67	60	Ground	UNLOCK (RELEASE)	0 → Battery voltage → 0
IVIO7	59	Giodila	LOCK (SET)	0 → Battery Voltage → 0

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

# 2. CHECK SUPER LOCK ACTUATOR CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect BCM and front door lock actuator (driver side) connector.
- Check continuity between BCM harness connector and front door lock actuator (driver side) harness connector.

BCM connector	Terminal	Door lock actuator connector	Terminal	Continuity
M67	59	D29	1	Exists
IVIO7	60	D29	2	LAISIS

Check continuity between BCM harness connector and ground.

BCM connector	Terminal		Continuity
M67	59	Ground	Does not exist
IVIO7	60		Does not exist

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace harness.

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#### **DLK-365**

< COMPONENT DIAGNOSIS >

[WITH I-KEY & SUPER LOCK]

# 3. CHECK SUPER LOCK ACTUATOR

Check super lock actuator.

NO

Refer to DLK-366, "DRIVER SIDE: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

>> Replace door lock actuator. Refer to <u>DLK-254, "DOOR LOCK: Removal and Installation"</u>. After that, <u>DLK-366, "DRIVER SIDE: Special Repair Requirement"</u>.

### **DRIVER SIDE**: Component Inspection

INFOID:0000000001183963

# 1. CHECK SUPER LOCK ACTUATOR

Check the actuator operation by connecting the battery voltage to super lock actuator.

Door lock actuator	Ter	minal	Actuator condition
(super lock actuator) connector	(+)	(-)	Actuator condition
Dan	1	2	LOCK (SET)
D29	2	1	UNLOCK (RELEASE)

#### Is the inspection result normal?

YES >> Door lock actuator (super lock actuator) is OK.

NO >> Replace door lock actuator (super lock actuator). Refer to <u>DLK-254, "DOOR LOCK: Removal and Installation"</u>. After that, Refer to <u>DLK-366, "DRIVER SIDE: Special Repair Requirement"</u>.

# DRIVER SIDE: Special Repair Requirement

INFOID:0000000001183964

Perform initialization procedure. Refer to <u>PWC-4</u>, "<u>ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement"</u>.

#### PASSENGER SIDE

PASSENGER SIDE: Description

INFOID:0000000001183965

The super lock system is controlled by BCM.

PASSENGER SIDE: Component Function Check

INFOID:0000000001183966

# 1. CHECK FUNCTION

#### (P)With CONSULT-III

Check "SUPER LOCK" in Active test mode with CONSULT-III.

Test ite	em	Condition	
SUPER LOCK	:LOCK (SET)	The super lock actuator is locked (SET)	
SOF LIX LOOK	:UNLOCK (RELEASE)	The super lock actuator is unlocked (RELEASE)	

#### Is the inspection result normal?

YES >> Door lock actuator (super lock actuator) is OK.

NO >> Refer to <u>DLK-366</u>, "<u>PASSENGER SIDE</u>: <u>Diagnosis Procedure</u>".

### PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000001183967

# 1. CHECK BCM OUTPUT SIGNAL

Check voltage between BCM harness connector and ground.

#### < COMPONENT DIAGNOSIS >

#### [WITH I-KEY & SUPER LOCK]

Terminals				
(+)		(-)	Condition	Voltage (V) (Approx.)
BCM connector	Terminal	(-)		( ) 1
M67	54	Ground	UNLOCK (RELEASE)	0 Pottory voltage > 0
IVIO7	59	Giouria	LOCK (SET)	$0 \rightarrow Battery \ voltage \rightarrow 0$

Is the inspection result normal?

YES >> GO TO 3. NO >> GO TO 2.

# 2.check super lock actuator circuit

- Turn ignition switch OFF.
- Disconnect BCM and front door lock actuator (passenger side) connector.
- Check continuity between BCM harness connector and front door lock actuator (passenger side) harness connector.

BCM connector	Terminal	Door lock actuator connector	Terminal	Continuity
M67	59	D68	1	Exists
IVIO7	54	200	2	EXISIS

Check continuity between BCM harness connector and ground.

BCM connector	Terminal		Continuity	
M67	59	Ground	Does not exist	
	54		Does not exist	

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 3.

# 3.CHECK SUPER LOCK ACTUATOR

Check super lock actuator.

Refer to <u>DLK-367</u>, "PASSENGER SIDE: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

>> Replace door lock actuator. Refer to <u>DLK-254</u>, "<u>DOOR LOCK</u>: Removal and Installation". NO

# PASSENGER SIDE: Component Inspection

# 1. CHECK SUPER LOCK ACTUATOR

Check the actuator operation by connecting the battery voltage to super lock actuator.

Door lock actuator (super lock actuator) connector		minal	Actuator condition	
bool lock actuator (super lock actuator) confinector	(+)	(-)	Actuator condition	
D68	1	2	LOCK (SET)	
D00	2	1	UNLOCK (RELEASE)	

#### Is the inspection result normal?

YES >> Door lock actuator (super lock actuator) is OK.

>> Replace door lock actuator (super lock actuator). Refer to DLK-254, "DOOR LOCK: Exploded NO View and DLK-254, "DOOR LOCK: Removal and Installation".

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< COMPONENT DIAGNOSIS >

[WITH I-KEY & SUPER LOCK]

INFOID:0000000001183971

REAR LH: Description

The super lock system is controlled by BCM.

REAR LH: Component Function Check

# 1. CHECK FUNCTION

### (E) With CONSULT-III

Check "SUPER LOCK" in "Active Test" mode with CONSULT-III.

Test	item	Condition	
SUPER LOCK	:LOCK (SET)	The super lock actuator is locked (SET)	
30F ER EOCK	:UNLOCK (RELEASE)	The super lock actuator is unlocked (RELEASE)	

#### Is the inspection result normal?

YES >> Door lock actuator (super lock actuator) is OK.

NO >> Refer to <u>DLK-368</u>, "<u>REAR LH</u>: <u>Diagnosis Procedure</u>".

# REAR LH: Diagnosis Procedure

# 1. CHECK BCM OUTPUT SIGNAL

Check voltage between BCM harness connector and ground.

Terminals				
(+)		( )	Condition	Voltage (V) (Approx.)
BCM connector	Terminal	(-)		( 11 · · · /
M67	54	Ground	UNLOCK (RELEASE)	0 → Battery voltage → 0
IVIO 7	59	Giouna	LOCK (SET)	U → ballery voltage → U

#### Is the inspection result normal?

YES >> GO TO 3. NO >> GO TO 2.

# 2.CHECK SUPER LOCK ACTUATOR CIRCUIT

- Turn ignition switch OFF.
- Disconnect BCM and rear door lock actuator (LH) connector.
- 3. Check continuity between BCM harness connector and rear door lock actuator (LH) harness connector.

BCM connector	Terminal	Door lock actuator connector	Terminal	Continuity
M67	59	D115	1	Exists
54	54	פווט	2	EXISIS

Check continuity between BCM harness connector and ground.

BCM connector	Terminal		Continuity
M67	59	Ground	Does not exist
	54		Does not exist

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 3.

# 3. CHECK SUPER LOCK ACTUATOR

Check super lock actuator.

Refer to DLK-369, "REAR LH: Component Inspection".

Is the inspection result normal?

#### < COMPONENT DIAGNOSIS >

#### [WITH I-KEY & SUPER LOCK]

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace door lock actuator. Refer to <u>DLK-254, "DOOR LOCK: Removal and Installation"</u>.

# **REAR LH: Component Inspection**

#### INFOID:0000000001183972

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# 1. CHECK SUPER LOCK ACTUATOR

Check the actuator operation by connecting the battery voltage to super lock actuator.

Door lock actuator (super lock actuator) connector	Terr	minal	Actuator condition
Door lock actuator (super lock actuator) confinector	(+)	(-)	Actuator condition
D115	1	2	LOCK (SET)
5113	2	1	UNLOCK (RELEASE)

#### Is the inspection result normal?

YES >> Door lock actuator (super lock actuator) is OK.

NO >> Replace door lock actuator (super lock actuator). Refer to <u>DLK-254, "DOOR LOCK : Removal and Installation"</u>.

#### REAR RH

REAR RH : Description

INFOID:0000000001183973

The super lock system is controlled by BCM.

REAR RH: Component Function Check

INFOID:0000000001183974

# 1. CHECK FUNCTION

#### With CONSULT-III

Check "SUPER LOCK" in "Active Test" mode with CONSULT-III.

Test item		Condition	
SUPER LOCK	:LOCK (SET)	The super lock actuator is locked (SET)	
	:UNLOCK (RELEASE)	The super lock actuator is unlocked (RELEASE)	

#### Is the inspection result normal?

YES >> Door lock actuator (super lock actuator) is OK.

NO >> Refer to <u>DLK-369</u>, "REAR RH: <u>Diagnosis Procedure</u>".

# REAR RH: Diagnosis Procedure

#### INFOID:0000000001183975

# 1.CHECK BCM OUTPUT SIGNAL

Check voltage between BCM harness connector and ground.

Terminals				
(+)		( )	Condition	Voltage (V) (Approx.)
BCM connector	Terminal	()		VII - /
M67	54	Ground	UNLOCK (RELEASE)	0 → Battery voltage → 0
IVIO7	59	Ground	LOCK (SET)	0 → battery voltage → 0

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

# 2. CHECK SUPER LOCK ACTUATOR CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect BCM and rear door lock actuator (RH) connector.
- Check continuity between BCM harness connector and rear door lock actuator (RH) harness connector.

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#### < COMPONENT DIAGNOSIS >

#### [WITH I-KEY & SUPER LOCK]

BCM connector	Terminal	Door lock actuator connector	Terminal	Continuity
M67	59	D95	1	Exists
IVIO 1	54		2	LAISIS

4. Check continuity between BCM connector and ground.

BCM connector	Terminal		Continuity
M67	59	Ground	Does not exist
	54	— Does not e	Does not exist

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 3.

# 3.CHECK SUPER LOCK ACTUATOR

Check super lock actuator.

Refer to DLK-370, "REAR RH: Component Inspection".

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace door lock actuator. Refer to <u>DLK-254, "DOOR LOCK: Removal and Installation"</u>.

# **REAR RH: Component Inspection**

INFOID:0000000001183976

# 1. CHECK SUPER LOCK ACTUATOR

Check the actuator operate by connecting the battery voltage to super lock actuator.

Door lock actuator	Terr	minal	Actuator condition
(super lock actuator) connector	(+)	(-)	Actuator condition
D95	1	2	LOCK (SET)
D90	2	1	UNLOCK (RELEASE)

#### Is the inspection result normal?

YES >> Door lock actuator (super lock actuator) is OK.

NO >> Replace door lock actuator (super lock actuator). Refer to <u>DLK-254, "DOOR LOCK : Removal and Installation".</u>

### **BACK DOOR OPENER ACTUATOR**

< COMPONENT DIAGNOSIS >

[WITH I-KEY & SUPER LOCK]

# BACK DOOR OPENER ACTUATOR

Description INFOID:0000000001183977

Opens the back door with the signal from BCM.

Component Function Check

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# 1. CHECK FUNCTION

#### (P)With CONSULT-III

Check "TRUNK/GLASS HATCH" in Active test mode with CONSULT-III.

Test item		Condition	
TRUNK/GLASS HATCH	:OPEN	Back door lock opener actuator operation	

#### Is the inspection result normal?

YES >> Door lock actuator is OK.

NO >> Refer to DLK-371, "Diagnosis Procedure".

# Diagnosis Procedure

INFOID:0000000001183979

# 1. CHECK BCM OUTPUT SIGNAL

Check voltage between BCM harness connector and ground.

Terminals				
(+)		(_)	Condition of back door opener switch	Voltage (V) (Approx.)
BCM connector	Terminal	(-)	.,	(11 - /
M66	45	Ground	Pressed	$0 \rightarrow \text{Battery voltage} \rightarrow 0$

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 2.

# 2.CHECK BACK DOOR LOCK ASSEMBLY CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect BCM and back door lock assembly connector.
- Check continuity between BCM harness connector and back door lock assembly harness connector.

BCM connector	Terminal	Back door lock assembly connector	Terminal	Continuity
M66	45	D152	2	Exists

Check continuity between BCM harness connector and ground.

BCM connector	BCM connector Terminal		Continuity
M66	45	Ground	Does not exist

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# f 3.CHECK BACK DOOR LOCK ASSEMBLY GROUND CIRCUIT

Check continuity between back door lock assembly harness connector and ground.

Back door lock assembly connector Terminal		Ground	Continuity
D152	1		Exists

Is the inspection result normal?

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### **BACK DOOR OPENER ACTUATOR**

#### < COMPONENT DIAGNOSIS >

[WITH I-KEY & SUPER LOCK]

YES >> GO TO 4.

NO >> Repair or replace harness.

# 4. CHECK BACK DOOR LOCK ASSEMBLY

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace back door lock assembly. Refer to <u>DLK-266, "DOOR LOCK: Removal and Installation"</u>.

# Component Inspection

INFOID:0000000001183980

# 1. CHECK BACK DOOR LOCK ASSEMBLY

Check the actuator operation by connecting battery voltage to back door lock assembly.

Back door lock assembly connector	Teri	Back door actuator condition	
D152	(+)	(-)	OPEN
5132	2	1	OI LIV

# Is the inspection result normal?

YES >> Back door lock assembly (back door lock actuator) is OK.

NO >> Replace back door lock assembly (back door lock actuator). Refer to <u>DLK-266, "DOOR LOCK : Removal and Installation"</u>.

#### BACK DOOR OPENER SWITCH

### < COMPONENT DIAGNOSIS >

#### [WITH I-KEY & SUPER LOCK]

# **BACK DOOR OPENER SWITCH**

Description INFOID:0000000001183981

Sends the back door opening signal to BCM.

# Component Function Check

# 1. CHECK FUNCTION

### (P)With CONSULT-III

Check "TRNK OPNR SW" in "Data Monitor" mode with CONSULT-III.

Monitor item	Condition		
TRNK OPNR SW	Back door opener switch is pressed	:ON	
	Back door opener switch is released	:OFF	

#### Is the inspection result normal?

YES >> Back door opener switch is OK.

NO >> Refer to DLK-373, "Diagnosis Procedure".

# Diagnosis Procedure

### 1. CHECK BCM INPUT SIGNAL

Check voltage between BCM harness connector and ground.

Terminals			0 100		
(+)	( )		Condition of back door opener switch	Voltage (V) (Approx.)	
BCM connector	Terminal	(-)	.,	, ,	
M65	12	Ground	Pressed	0	
IVIOS	12	Giodila	Released	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 2.

# 2.CHECK BACK DOOR OPENER SWITCH CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect BCM connector and back door opener switch connector.
- Check continuity between BCM harness connector and back door opener switch harness connector.

BCM connector	Terminal	Back door opener switch connector	Terminal	Continuity
M65	12	D186	1	Exists

Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M65	12	Ground	Does not exist

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3.CHECK BCM OUTPUT SIGNAL

Check voltage between BCM harness connector and ground.

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### **BACK DOOR OPENER SWITCH**

#### < COMPONENT DIAGNOSIS >

[WITH I-KEY & SUPER LOCK]

	Terminals			
(+)	(+)		Voltage (V) (Approx.)	
BCM connector	BCM connector Terminal		(11 - 7	
M65	12	Ground	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace BCM. Refer to BCS-65, "Exploded View".

4. CHECK BACK DOOR OPENER SWITCH GROUND CIRCUIT

Check continuity between back door opener switch harness connector and ground.

Back door opener switch connector	Terminal	Ground	Continuity
D186	2		Exists

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

# 5. CHECK BACK DOOR OPENER SWITCH

Check back door opener switch.

Refer to DLK-374, "Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace back door opener switch. Refer to <u>DLK-277, "Exploded View"</u>.

# Component Inspection

INFOID:0000000001183984

# 1. CHECK BACK DOOR OPENER SWITCH

Check back door opener switch.

Back door opener switch connector	Terminal		Back door opener switch condition	Continuity
D186	1	2	Pressed	Exists
	1	2	Released	Does not exist

#### Is the inspection result normal?

YES >> Back door opener switch is OK.

NO >> Replace back door opener switch. Refer to <u>DLK-277</u>, "Exploded View".

### **OUTSIDE KEY ANTENNA**

< COMPONENT DIAGNOSIS >

[WITH I-KEY & SUPER LOCK]

OUTSIDE	KEY	ANTENNA	١
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DRIVER SIDE

DRIVER SIDE : Description

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Intelligent Key detects antenna transmission.

Timing of reply from Intelligent Key to Intelligent Key unit when antenna the Intelligent Key is closest to (inside or outside of the vehicle).

Integrated in front outside handle (driver side).

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INFOID:0000000001183987

DRIVER SIDE : Component Function Check

1. CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL

(I) With CONSULT-III

- 1. Check "ANTENNA" in "Active Test" mode with CONSULT-III.
- 2. Touch "DRIVER ANT".
- 3. When Intelligent Key is in outside key antenna (driver side) detection area, LED (on Intelligent Key) blinks.

Te	est Item	Outside Antenna	
ANTENNA	:DRIVER ANT	Outside key antenna (driver side)	

Is the inspection result normal?

YES >> Outside key antenna is OK.

NO >> Refer to <u>DLK-542</u>, "<u>DRIVER SIDE</u>: <u>Removal and Installation</u>".

DRIVER SIDE : Diagnosis Procedure

1.CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL 1

1. Turn ignition switch OFF.

2. Check signal between Intelligent Key unit harness connector and ground with oscilloscope.

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	Terr	ninals				
	(+) gent Key unit onnector	Terminal	(–)	C	Condition	Signal (Reference value)
	Driver side	19			When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0 1 s 1 s JMKIA0397ZZ
M40	(+)		Ground	Request switch	When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0
	Driver side	20		is pushed	When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0 JMKIA0395ZZ
	(-)				When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 JMKIA0515ZZ

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39. "Intermittent Incident".

NO >> GO TO 2.

# 2.CHECK OUTSIDE KEY ANTENNA CIRCUIT

- 1. Disconnect Intelligent Key unit connector and front outside handle connector.
- 2. Check continuity between Intelligent Key unit harness connector and outside key antenna harness connector.

Intelligent Key unit connector	Terminal	Outside key antenna connector	Terminal	Continuity	
M40	19	D31	1	Existed	
M40 20		D31	2	LXISIEU	

<sup>3.</sup> Check continuity between Intelligent Key unit harness connector and ground.

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Intelligent Key unit connector	Terminal		Continuity
M40	19	Ground	Not existed
W+O	20		Not existed

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between Intelligent Key unit and outside key antenna.

# 3.CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL 2

- 1. Replace outside key antenna. (New antenna or other antenna)
- 2. Connect Intelligent Key unit connector and outside key antenna connector.
- 3. Check signal between Intelligent Key unit harness connector and ground with oscilloscope.

		minals				
	(+) Intelligent Key unit connector Terminal		(–)	С	ondition	Signal (Reference value)
	Driver side	19		Door request switch is	When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0 1 s JMKIA0397ZZ
M40	(+)	.0	Ground	pushed	When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 1   MI
Wile	Driver side	20	Giodila	Door request switch is	When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0  MKIA0395ZZ
	(-)			pushed	When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0  MA  JMKIA0515ZZ

#### Is the inspection result normal?

YES >> Replace outside key antenna (driver side). Refer to <u>DLK-273, "DRIVER SIDE: Exploded View".</u>

NO >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

#### PASSENGER SIDE

### **OUTSIDE KEY ANTENNA**

< COMPONENT DIAGNOSIS >

[WITH I-KEY & SUPER LOCK]

# PASSENGER SIDE: Description

INFOID:0000000001183988

Intelligent Key detects antenna transmission.

Timing of reply from Intelligent Key to Intelligent Key unit when antenna the Intelligent Key is closest to (inside or outside of the vehicle).

Integrated in front outside handle (passenger side).

# PASSENGER SIDE: Component Function Check

INFOID:0000000001183989

# 1. CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL

# (I) With CONSULT-III

- 1. Check "ANTENNA" in "Active Test" mode with CONSULT-III.
- Touch "ASSIST ANT".
- 3. When Intelligent Key is in outside key antenna (passenger side) detection area, LED (on Intelligent Key) blinks.

_	Test Item	Outside Antenna
ANTENNA	:ASSIST ANT	Outside key antenna (passenger side)

#### Is the inspection result normal?

YES >> Outside key antenna is OK.

NO >> Refer to <u>DLK-542</u>, "<u>PASSENGER SIDE</u>: <u>Removal and Installation</u>".

# PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000001183990

# 1. CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL 1

- Turn ignition switch OFF.
- 2. Check signal between Intelligent Key unit harness connector and ground with oscilloscope.

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	Ter	minal					
	(+) Intelligent Key unit connector		(–)	С	Condition	Signal (Reference value)	
					When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0	
	Passenger side (+)	37			When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0	
M40	Passenger		Ground	Request switch is pushed	Ground Request switch is pushed	When Intelligent Key is in the antenna detection area.	JMKIA0514ZZ  (V) 15 10 5 0 JMKIA0395ZZ
	side (-)	38			When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 JMKIA0515ZZ	

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2.

# 2.check outside key antenna circuit

1. Disconnect Intelligent Key unit connector and front outside handle connector.

 Check continuity between Intelligent Key unit harness connector and outside key antenna harness connector.

Intelligent Key unit connector	Terminal	Outside key antenna connector	Terminal	Continuity
M40	37	D70	1	Existed
M40	38	570	2	LAISIEU

3. Check continuity between Intelligent Key unit harness connector and ground.

Intelligent Key unit connector	Terminal		Continuity
M40	37	Ground	Not existed
	38		Not existed

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between Intelligent Key unit and outside key antenna.

# ${f 3.}$ CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL 2

- 1. Replace outside key antenna. (New antenna or other antenna)
- 2. Connect Intelligent Key unit connector and outside key antenna connector.
- 3. Check signal between Intelligent Key unit harness connector and ground with oscilloscope.

	Terminal						
	(+)			С	ondition	Signal	
	gent Key unit connector	Terminal	(–)			(Reference value)	
M40	Passenger side	37	Ground	Door request switch is pushed	When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0 1	
	(+)				When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 1 s JMKIA0514ZZ	
	Passenger	38			When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0 1 s 1 s JMKIA0395ZZ	
	(-)	side			When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 1 s JMKIA0515ZZ	

#### Is the inspection result normal?

YES >> Replace outside key antenna (passenger side). Refer to <u>DLK-542, "PASSENGER SIDE : Removal and Installation"</u> (passenger side).

NO >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

REAR BUMPER

### **OUTSIDE KEY ANTENNA**

### < COMPONENT DIAGNOSIS >

#### [WITH I-KEY & SUPER LOCK]

# **REAR BUMPER: Description**

Intelligent Key detects antenna transmission.

Timing of reply from Intelligent Key to Intelligent Key unit when antenna the Intelligent Key is closest to (inside or outside of the vehicle).

Installed in rear bumper.

# REAR BUMPER: Component Function Check

INFOID:0000000001183992

INFOID:0000000001183991

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# 1. CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL

# (E) With CONSULT-III

- I. Check "ANTENNA" in "Active Test" mode with CONSULT-III.
- Touch "BK DOOR ANT".
- 3. When Intelligent Key is in outside key antenna (rear bumper) detection area, LED (on Intelligent Key) blinks..

Te	est Item	Outside Antenna	
ANTENNA	:BK DOOR ANT	Outside key antenna (rear bumper)	

#### Is the inspection result normal?

YES >> Outside key antenna is OK.

NO >> Refer to <u>DLK-381</u>, "<u>REAR BUMPER</u>: <u>Diagnosis Procedure</u>".

# REAR BUMPER : Diagnosis Procedure

INFOID:0000000001183993

# 1. CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL 1

- 1. Turn ignition switch OFF.
- 2. Check signal between Intelligent Key unit harness connector and ground with oscilloscope.

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	Ter	minal	-				
	(+) Intelligent Key unit connector		(–)	Condition		Signal (Reference value)	
	Rear bumper	17			When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0 1	
M40	(+)	.,	Ground	Request switch	When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 JMKIA0514ZZ	
	Rear bumper	18	Glodina	is pressed	When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0 JMKIA0395ZZ	
	(-)	10			When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 JMKIA0515ZZ	

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2.

# 2.CHECK OUTSIDE KEY ANTENNA CIRCUIT

- 1. Disconnect Intelligent Key unit connector and front outside handle connector.
- 2. Check continuity between Intelligent Key unit harness connector and outside key antenna harness connector.

Intelligent Key unit connector	Terminal	Outside key antenna connector	Terminal	Continuity
M40	17	B81 (rear bumper)	1	Exists
	18	Bot (real bumper)	2	EXISTS

<sup>3.</sup> Check continuity between Intelligent Key unit harness connector and ground.

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Intelligent Key unit connector	Terminal		Continuity
M40	17	Ground	Does not exist
	18		Does not exist

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between Intelligent Key unit and outside key antenna.

# 3.CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL 2

- 1. Replace outside key antenna. (New antenna or other antenna)
- Connect Intelligent Key unit connector and outside key antenna connector. 2.
- Check signal between Intelligent Key unit harness connector and ground with oscilloscope.

	Terr	ninal				
	(+) Intelligent Key unit connector Terminal		(–)	Condition		Signal (Reference value)
	Rear bumper	17			When Intelligent Key is in the an- tenna detection area.	(V) 15 10 1
M40	(+)	.,	Ground	Door request switch	When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0  JMKIA0514ZZ
	Rear bumper	Ground is pressed	When Intelligent Key is in the an- tenna detection area.	(V) 15 10 5 0 1 s JMKIA0395ZZ		
(-)	ear bumper (-)			When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0  JMKIA0515ZZ	

#### Is the inspection result normal?

- YES >> Replace outside key antenna (rear bumper). Refer to <u>DLK-274, "REAR BUMPER: Exploded</u> View".
- NO >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

### **INSIDE KEY ANTENNA**

< COMPONENT DIAGNOSIS >

[WITH I-KEY & SUPER LOCK]

# INSIDE KEY ANTENNA INSTRUMENT CENTER

**INSTRUMENT CENTER:** Description

INFOID:0000000001183994

Detects whether Intelligent Key is inside the vehicle.

# INSTRUMENT CENTER: Component Function Check

INFOID:0000000001183995

# 1. CHECK INSIDE KEY ANTENNA INPUT SIGNAL

#### (P)With CONSULT-III

- 1. Check "ANTENNA" in Active test mode with CONSULT-III.
- Touch "ROOM ANT 2".
- When Intelligent Key is in inside key antenna (instrument center) detection area, LED (on Intelligent Key) blinks.

	Test Item	Inside Antenna	
ANTENNA	:ROOM ANT 2	Inside key antenna (instrument center)	

#### Is the inspection result normal?

YES >> Inside key antenna is OK.

NO >> Refer to <u>DLK-384</u>, "INSTRUMENT CENTER: <u>Diagnosis Procedure</u>".

# **INSTRUMENT CENTER:** Diagnosis Procedure

INFOID:0000000001183996

# 1. CHECK INSIDE KEY ANTENNA INPUT SIGNAL 1

- Turn ignition switch OFF.
- 2. Check signal between Intelligent Key unit harness connector and ground with oscilloscope.

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	Terminals					
	(+)			Cor	ndition	Signal (Reference value)
	gent Key unit onnector	Terminal	(-)		,	(Nererence value)
	Instrument center	33			When Intelligent Key is in the antenna detection area.	(V) 15 10 5 11 1
	(+)	50	Ground	All doors are closed	When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 4 1 s JMKIA0391ZZ
M40	Instrument		Ground	Ignition knob switch is pressed	When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0 1 s JMKIA0392ZZ
	center (-)	34			When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0  JMKIA0390ZZ

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2.

# 2.CHECK INSIDE KEY ANTENNA CIRCUIT

- 1. Disconnect Intelligent Key unit connector and inside key antenna connector.
- Check continuity between Intelligent Key unit harness connector and inside key antenna harness connector.

Intelligent Key unit connector	Terminal	Inside key antenna connector	Terminal	Continuity	
M40	33	M70 (instrument center)	1	Exists	
W40	34	wito (instrument center)	2	EXISIS	

3. Check continuity between Intelligent Key unit harness connector and ground.

Intelligent Key unit connector	Terminal		Continuity	
M40	33	Ground	Does not exist	
	34			

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between Intelligent Key unit and inside key antenna.

# ${f 3.}$ CHECK INSIDE KEY ANTENNA INPUT SIGNAL 2

- 1. Replace inside key antenna. (New antenna or other antenna)
- 2. Connect Intelligent Key unit connector and inside key antenna connector.
- 3. Check signal between Intelligent Key harness connector and ground with oscilloscope.

	Termi	nals						
	(+)			Co	ondition	Signal (Reference value)		
	Intelligent Key unit connector		(-)		(Reference value)			
	Instrument center	33			When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0 1 s JMKIA0393ZZ		
M40 -	(+)	33		All doors are closed	When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 1 s JMKIA0391ZZ		
WITC	Instrument center (-)	34	Ground	Ignition knob switch is pressed	When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0 JMKIA0392ZZ		
		center 34			When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 1 s JMKIA0390ZZ		

#### Is the inspection result normal?

- YES >> Replace inside key antenna (instrument center). Refer to <a href="DLK-271">DLK-271</a>, "INSTRUMENT CENTER: Exploded View".
- NO >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

ı	NSIDE KEY ANTENN	NA
< COMPONENT DIAGNOSIS >		[WITH I-KEY & SUPER LOCK]
CONSOLE		
CONSOLE : Description		INFOID:000000001183997
Detects whether Intelligent Key is inside	the vehicle.	
CONSOLE : Component Func	tion Check	INFOID:000000001183998
1. CHECK INSIDE KEY ANTENNA INF	PUT SIGNAL	
<ul> <li>With CONSULT-III</li> <li>1. Check "ANTENNA" in Active test m</li> <li>2. Touch "ROOM ANT 1".</li> <li>3. When Intelligent Key is in inside ke</li> </ul>		on area, LED (on Intelligent Key) blinks.
Test Item		Inside Antenna
ANTENNA :ROOM	I ANT 1	Inside key antenna (console)
Is the inspection result normal?		
YES >> Inside key antenna is OK. NO >> Refer to <u>DLK-387, "CONSO</u>	DLE : Diagnosis Procedure".	
CONSOLE : Diagnosis Proced	ure	INFOID:000000001183999

# 1.CHECK INSIDE KEY ANTENNA INPUT SIGNAL 1

1. Turn ignition switch OFF.

2. Check signal between Intelligent Key unit harness connector and ground with oscilloscope.

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	Tern	ninal				
	(+) gent Key unit onnector	Terminal	(-)	Cor	ndition	Signal (Reference value)
	Console				When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0 1
M40	(+)		Ground	All doors are closed	When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 1
	Console (-)	16	Gloana	Ignition knob switch is pressed	When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0 1   1   1   1   1   1   1   1   1   1
		16			When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 1 s JMKIA0390ZZ

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2.

# 2.CHECK INSIDE KEY ANTENNA CIRCUIT

- 1. Disconnect Intelligent Key unit connector and inside key antenna connector.
- 2. Check continuity between Intelligent Key unit harness connector and inside key antenna harness connector.

Intelligent Key unit connector	Terminal	Inside key antenna connector	Terminal	Continuity
M40	15	M61 (console)	1	Exists
10140	16	WOT (CONSOLE)	2	LXISIS

<sup>3.</sup> Check continuity between Intelligent Key unit harness connector and ground.

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Intelligent Key unit connector	Terminal		Continuity
M40	15	Ground	Does not exist
10140	16		Does not exist

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between Intelligent Key unit and inside key antenna.

# ${f 3.}$ CHECK INSIDE KEY ANTENNA INPUT SIGNAL 2

- 1. Replace inside key antenna. (New antenna or other antenna)
- 2. Connect Intelligent Key unit connector and inside key antenna connector.
- 3. Check signal between Intelligent Key harness connector and ground with oscilloscope.

	Term	inal				
	(+) gent Key unit	Terminal	(-)	Co	ondition	Signal (Reference value)
CC	Console (+)	15			When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0 1 s JMKIA0393ZZ
M40			Ground	All doors are closed     Ignition knob switch is pressed	When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 4 1   1   1   1   1   1   1   1   1   1
	Console (-)	16			When Intelligent Key is in the antenna detection area.	(V) 15 10 5 1
					16	

#### Is the inspection result normal?

YES >> Replace inside key antenna (console). Refer to <u>DLK-271, "CONSOLE : Exploded View"</u> (console).

NO >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

**REAR SEAT** 

### **INSIDE KEY ANTENNA**

< COMPONENT DIAGNOSIS >

[WITH I-KEY & SUPER LOCK]

REAR SEAT: Description

Detects whether Intelligent Key is inside the vehicle.

REAR SEAT : Component Function Check

INFOID:0000000001184001

# 1. CHECK INSIDE KEY ANTENNA INPUT SIGNAL

# (E) With CONSULT-III

- 1. Check "ANTENNA" in "Active Test" mode with CONSULT-III.
- 2. Touch "ROOM ANT 2".
- 3. When Intelligent Key is in inside key antenna (rear seat) detection area, LED (on Intelligent Key) blinks.

	Test Item					
ANTENNA	:ROOM ANT 2	Inside key antenna (rear seat)				

#### Is the inspection result normal?

YES >> Inside key antenna is OK.

NO >> Refer to <u>DLK-390</u>, "REAR SEAT : Diagnosis Procedure".

# **REAR SEAT: Diagnosis Procedure**

INFOID:0000000001184002

# 1. CHECK INSIDE KEY ANTENNA INPUT SIGNAL 1

- 1. Turn ignition switch OFF.
- 2. Check signal between Intelligent Key unit harness connector and ground with oscilloscope.

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	Term	ninal					
	(+) gent Key unit onnector	Terminal	(-)	Cor	ndition	Signal (Reference value)	
	Rear seat				When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0 1 s JMKIA0393ZZ	
M40	(+)	13	Ground	All doors are closed	When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 1 s JMKIA0391ZZ	
Wife	Rear seat (-)			Ignition knob switch is pressed	When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0 1 s JMKIA0392ZZ	
					When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 1 s JMKIA0390ZZ	

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2.

# 2.CHECK INSIDE KEY ANTENNA CIRCUIT

- 1. Disconnect Intelligent Key unit connector and inside key antenna connector.
- 2. Check continuity between Intelligent Key unit harness connector and inside key antenna harness connector.

Intelligent Key unit connector	Terminal	Inside key antenna connector	Terminal	Continuity	
M40	13	B45 (rear seat)	1	Exists	
M40	14	D45 (Teal Seat)	2	EXISIS	

3. Check continuity between Intelligent Key unit harness connector and ground.

Intelligent Key unit connector	Terminal		Continuity		
M40	13	Ground	Does not exist		
WHO	14		DOES HOLEKISL		

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between Intelligent Key unit and inside key antenna.

# 3.CHECK INSIDE KEY ANTENNA INPUT SIGNAL 2

- 1. Replace inside key antenna. (New antenna or other antenna)
- 2. Connect Intelligent Key unit connector and inside key antenna connector.
- 3. Check signal between Intelligent Key harness connector and ground with oscilloscope.

	Termi	inal						
	(+)			Со	ndition	Signal		
	gent Key unit connector	Terminal	(-)			(Reference value)		
	Rear seat	13			When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0 1 s JMKIA0393ZZ		
M40	(+)		Ground	<ul> <li>All doors are closed</li> <li>Ignition knob switch is pressed</li> </ul>	When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 1 s JMKIA0391ZZ		
Mile	Rear seat (-)				When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0 JMKIA0392ZZ		
					When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 1 s JMKIA0390ZZ		

#### Is the inspection result normal?

YES >> Replace inside key antenna (rear seat). Refer to <u>DLK-272</u>, "<u>REAR</u>: <u>Exploded View</u>" (rear seat).

NO >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

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PASSENGER SIDE

PASSENGER SIDE : Description

INFOID:0000000001184003

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Receives anti-hijack signal from Intelligent Key unit.

PASSENGER SIDE: Component Function Check

INFOID:0000000001184004

# 1. CHECK FUNCTION

- 1. All doors are locked using Intelligent Key or door request switch. (Super lock system condition: Set)
- 2. Press door request switch (passenger side), only passenger side door is UNLOCK.

#### Is the inspection result normal?

YES >> Anti-hijack relay is OK.

NO >> Refer to <u>DLK-393</u>, "PASSENGER SIDE : <u>Diagnosis Procedure"</u>.

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INFOID:0000000001184005

# PASSENGER SIDE: Diagnosis Procedure

1. CHECK INTELLIGENT KEY UNIT INPUT SIGNAL 1

1. Check voltage between Intelligent Key unit harness connector and ground.

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<b>/</b> )			

(+)		Condition	Voltage (V)	
Intelligent Key unit connector	Terminal	(–)		(Approx.)
M40	11	Ground	Ignition switch OFF	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Check condition of harness and connector. If NG, repair or replace harness.

# 2.check intelligent key unit input signal 2 $\,$

1. Check voltage between Intelligent Key unit harness connector and ground.

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Ter	minal				
(+)	(+)			Condition	Voltage (V)
Intelligent Key unit connector	Terminal	(–)	Condition		(Approx.)
M40	40	Ground	Press front door request switch	Anti-hijack operation	Battery voltage → 0 → Battery voltage
			(passenger side)	Other than above	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 4.

# 3. CHECK INTELLIGENT KEY UNIT GROUND CIRCUIT

Check continuity between Intelligent Key unit harness connector and ground.

Intelligent Key unit connector	Terminal	Ground	Continuity
M40	12		Exists

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair harness or connector.

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# 4. CHECK PASSENGER SIDE ANTI-HIJACK RELAY GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect passenger side anti-hijack relay connector and Intelligent Key unit connector.
- 3. Check voltage between passenger side anti-hijack relay harness connector and ground.

Terminal				
(+)		Condition	Voltage (V) (Approx.)	
Passenger side anti-hijack relay connector Terminal		(-)		
M90	2	Ground	Ignition switch OFF	Battery voltage

 Check continuity between passenger side anti-hijack relay harness connector and Intelligent Key unit connector.

Passenger side anti-hijack relay connector	Terminal	Intelligent Key unit connector	Terminal	Continuity
M90	1	M40	40	Exists

Check continuity between passenger side anti-hijack relay harness connector and ground.

Passenger side anti-hijack relay connector	Terminal	Ground	Continuity	
M90	1	Ground	Does not exist	

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Check condition of harness and connector. If NG, repair or replace harness.

# 5.CHECK ANTI-HIJACK RELAY

Check anti-hijack relay.

Refer to <u>DLK-394</u>, "PASSENGER SIDE: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace anti-hijack relay. Refer to <u>DLK-287, "DOOR LOCK AND UNLOCK SWITCH : Component Parts Location"</u>.

# PASSENGER SIDE: Component Inspection

INFOID:0000000001184006

# 1. CHECK ANTI-HIJACK RELAY

- 1. Turn ignition switch OFF.
- Disconnect passenger side anti-hijack relay connector.
- 3. Check continuity passenger side anti-hijack relay terminals 3 and 4.

Passenger side anti-hijack relay connector	Terr	ninal	Condition	Continuity
M90	M90 3 4		Battery voltage direct current supply between terminals 1 and 2	Does not exist
			Other than above	Exists

#### Is the inspection result normal?

YES >> Passenger side anti-hijack relay is OK.

NO >> Replace passenger side anti-hijack relay. Refer to <a href="DLK-287">DLK-287</a>, "DOOR LOCK AND UNLOCK SWITCH: Component Parts Location".

### INTELLIGENT KEY WARNING BUZZER

< COMPONENT DIAGNOSIS >

[WITH I-KEY & SUPER LOCK]

# INTELLIGENT KEY WARNING BUZZER

Description INFOID:0000000001184007

Answers back and warns about an inappropriate operation.

# Component Function Check

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# 1. CHECK FUNCTION

#### (P)With CONSULT-III

Check Intelligent Key warning buzzer "OUTSIDE BUZZER" in "Active Test" mode with CONSULT-III.

#### Is the inspection result normal?

>> Intelligent Key warning buzzer is OK. YES

>> Refer to DLK-395, "Diagnosis Procedure". NO

# Diagnosis Procedure

INFOID:0000000001184009

# ${f 1}$ .CHECK INTELLIGENT KEY UNIT INPUT SIGNAL 1

Check voltage between Intelligent Key unit harness connector and ground.

	Terminal				
(+)			Warning buzzer	Voltage (V)	
Intelligent Key unit connector	Terminal	(–)	operation condition	(Approx.)	
M40	4	Ground	Sounding	0	
10140	W140 4		Not sounding	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 2.

# 2.CHECK INTELLIGENT KEY WARNING BUZZER POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect Intelligent Key warning buzzer connector.
- Check voltage between Intelligent Key warning buzzer harness connector and ground.

To			
(+)		Voltage (V)	
Intelligent Key warning buzzer connector	Terminal	(–)	(Approx.)
E25	1	Ground	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace Intelligent Key warning buzzer power supply circuit.

# 3.CHECK HARNESS CONTINUITY

Disconnect Intelligent Key unit connector.

Check continuity between Intelligent Key warning buzzer harness connector and Intelligent Key unit harness connector.

Intelligent Key warning buzzer connector	Terminal	Intelligent Key unit connector	Terminal	Continuity
E25	3	M40	4	Exists

Check continuity between Intelligent Key warning buzzer harness connector and ground.

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### INTELLIGENT KEY WARNING BUZZER

#### < COMPONENT DIAGNOSIS >

[WITH I-KEY & SUPER LOCK]

Intelligent Key warning buzzer connector	Terminal	Ground	Continuity
E25	3		Does not exist

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness between Intelligent Key warning buzzer and Intelligent Key unit.

# 4. CHECK INTELLIGENT KEY WARNING BUZZER

Check Intelligent Key warning buzzer.

Refer to <u>DLK-396</u>, "Component Inspection".

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace Intelligent Key warning buzzer. Refer to <u>DLK-275, "Exploded View"</u>.

### 5.REPLACE INTELLIGENT KEY UNIT

Replace Intelligent Key unit.

Refer to <u>DLK-548</u>, "Exploded View".

#### NOTE:

Perform the system initialization when replacing Intelligent Key unit.

Refer to <u>DLK-23</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

#### >> INSPECTION END

# Component Inspection

INFOID:0000000001184010

# 1. CHECK INTELLIGENT KEY WARNING BUZZER

Connect battery power supply to Intelligent Key warning buzzer terminals 1 and 3, and check the operation.

Intelligent Key warning buzzer	Terminal		Operation
connector	(+)	(-)	Buzzer sounds
E25	1	3	Duzzei sounus

#### Is the inspection result normal?

YES >> Intelligent Key warning buzzer is OK. GO TO 2.

NO >> Replace Intelligent Key warning buzzer. Refer to <u>DLK-275</u>, "Exploded View".

# 2.REPLACE INTELLIGENT KEY UNIT

Replace Intelligent Key unit.

Refer to DLK-548, "Exploded View".

#### NOTE:

Perform the system initialization when replacing Intelligent Key unit.

Refer to <u>DLK-23</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

#### >> INSPECTION END

# BUZZER (COMBINATION METER) [WITH I-KEY & SUPER LOCK]

COMPONENT DIAGNOSIS	S >	[WITH I-KEY & SUPER LOC	K]		
BUZZER (COMBINA	TION ME	TER)			
Description		INFOID:0000000011	184011		
Performs operation method gu	ing with buzzer.				
			84012		
CHECK FUNCTION					
With CONSULT-III Check the operation with "INS	IDE BUZZER	' in the Active test with CONSULT-III.			
Test item		Condition	-		
	:TAKE OUT	Take away warning chime sounds	_		
INSIDE BUZZER	:KNOB Ignition knob switch warning chime sounds				
	:KEY	Key warning chime sounds	_		
NO >> Refer to <u>DLK-397</u>		<u>"rocedure"</u> .	184013		
`		,			
BUZZER (COMBINATION METER)  Description  Performs operation method guide and warning with buzzer.  Component Function Check  INFOID:000000001184012  WHOID:000000001184012  BUZZER (COMBINATION METER)  BUZZER (COMBINATION METER)					
			-		

#### **KEY WARNING LAMP**

#### < COMPONENT DIAGNOSIS >

[WITH I-KEY & SUPER LOCK]

#### **KEY WARNING LAMP**

Description INFOID:000000001184014

Performs operation method guide and warning together with buzzer.

#### Component Function Check

INFOID:0000000001184015

### 1. CHECK FUNCTION

#### (P)With CONSULT-III

Check the operation with "INDICATOR" in "Active Test" with CONSULT-III.

Test item		Condition
	:BLUE ON	Key warning lamp (green) illuminates
INDICATOR	:RED ON	Key warning lamp (red) illuminates
INDICATOR	:BLUE IND	Key warning lamp (green) flashes
	:RED IND	Key warning lamp (red) flashes

#### Is the inspection result normal?

YES >> Key warning lamp in combination meter is OK.

NO >> Refer to <u>DLK-398, "Diagnosis Procedure"</u>.

### Diagnosis Procedure

INFOID:0000000001184016

#### 1. CHECK KEY WARNING LAMP CIRCUIT

Refer to WCS-21, "Component Function Check".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace key warning lamp circuit.

#### **LOCK WARNING LAMP**

#### < COMPONENT DIAGNOSIS >

#### [WITH I-KEY & SUPER LOCK]

#### LOCK WARNING LAMP Α Description INFOID:0000000001184017 Performs operation method guide and warning together with buzzer. В Component Function Check INFOID:0000000001184018 1. CHECK FUNCTION C (P)With CONSULT-III Check the operation with "INDICATOR" in "Active Test" with CONSULT-III. D Test item Condition :KNOB ON Lock warning lamp illuminates Е **INDICATOR** :KNOB IND Lock warning lamp flashes Is the inspection result normal? >> Lock warning lamp in combination meter is OK. YES F NO >> Refer to DLK-399, "Diagnosis Procedure". Diagnosis Procedure INFOID:0000000001184019 1. CHECK LOCK WARNING LAMP CIRCUIT Refer to WCS-21, "Component Function Check". Н Is the inspection result normal? >> Check intermittent incident. Refer to GI-39, "Intermittent Incident". Yes >> Repair or replace lock warning lamp circuit. No

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#### **HAZARD WARNING LAMPS**

#### < COMPONENT DIAGNOSIS >

[WITH I-KEY & SUPER LOCK]

#### HAZARD WARNING LAMPS

Description INFOID:000000001184020

Performs answer-back for each operation with the number of blinks.

#### Component Function Check

INFOID:0000000001184021

### 1. CHECK FUNCTION

#### (A) With CONSULT-III

Check hazard warning lamp "FLASHER" in "Active test" with CONSULT-III.

#### Is the inspection result normal?

YES >> Hazard warning lamp circuit is OK.

NO >> Refer to <u>DLK-400</u>, "<u>Diagnosis Procedure</u>".

#### Diagnosis Procedure

INFOID:0000000001184022

### 1. CHECK HAZARD SWITCH CIRCUIT

Check hazard switch circuit.

Refer to EXL-75, "Component Function Check".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace hazard warning switch circuit.

#### **VEHICLE SPEED SIGNAL CIRCUIT**

< COMPONENT DIAGNOSIS >

[WITH I-KEY & SUPER LOCK]

	I-KEY & SUPER LOCK
/EHICLE SPEED SIGNAL CIRCUIT	
Description	INFOID:000000001184023
Displays the vehicle speed signal received from combination meter as a numerical v	value (km/h).
Component Function Check	INFOID:000000001184024
.CHECK FUNCTION	
Check that all doors are automatically locked at the vehicle speed of more than 25 kes the inspection result normal?	km/h (16 MPH).
YES >> Vehicle speed signal circuit is OK.	
NO >> Refer to <u>DLK-401, "Diagnosis Procedure"</u> .	
Diagnosis Procedure	INFOID:0000000001184025
.CHECK VEHICLE SPEED SIGNAL CIRCUIT	
Check "VEHICLE SPEED" in "Data Monitor" with CONSULT-III.  s the inspection result normal?	
YES >> Check intermittent incident. Refer to GI-39. "Intermittent Incident".  NO >> Repair or replace vehicle speed signal circuit.	
	•

#### **INTELLIGENT KEY BATTERY**

Description INFOID:000000001184026

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

- Door lock and unlock
- Engine start

Remote control entry function is available when operating the button.

#### Component Function Check

INFOID:0000000001184027

### 1. CHECK INTELLIGENT KEY FUNCTION

Does door lock and unlock operate when operating Intelligent Key switch?

#### Is the inspection result normal?

YES >> Intelligent Key is OK.

NO >> Refer to <u>DLK-402</u>, "<u>Diagnosis Procedure</u>".

#### Diagnosis Procedure

INFOID:0000000001184028

### 1. CHECK INTELLIGENT KEY BATTERY

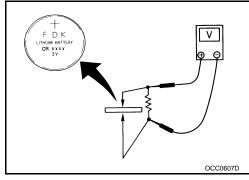
Check by connecting a resistance (approximately 300  $\Omega$ ) so that the current value becomes about 10 mA.

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

Is the measurement value within the specification?

YES >> Replace Intelligent Key.

NO >> Replace Intelligent Key battery. Refer to <u>DLK-547</u>, "Exploded View".



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## **ECU DIAGNOSIS**

### INTELLIGENT KEY UNIT

Reference Value

#### VALUES ON THE DIAGNOSIS TOOL

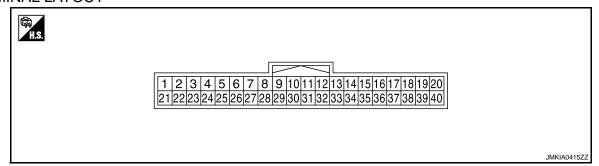
CONSULT	L-III WOI	NITOR	ITEM

Monitor Item		Condition	Value/Status
PUSH SW	Ignition knob	Release	OFF
PUSH SW	ignition knob	Press	ON
KEN CM	Machaniaal kay	Removed	OFF
KEY SW	Mechanical key	Inserted	ON
DD DEO CW	Door request switch	Release	OFF
DR REQ SW	Ignition knob  Mechanical key	Press	ON
AC DEO CW	Door request switch	Release	OFF
AS REQ SW	Ignition knob  Mechanical key  Door request switch (driver)  Door request switch (passenger)  Door request switch (back door)  Ignition switch  Ignition switch  Brake pedal  Lock button of Intelligent Key  Unlock button of Intelligent Key  Door (driver side)  Door (passenger side)  Door (rear RH)  Door (rear LH)  Back door	Press	ON
BD/TR REQ SW	Ignition knob  Mechanical key  Door request switch (driver)  Door request switch (passenger)  Door request switch (back door)  Ignition switch  Ignition switch  Brake pedal  Lock button of Intelligent Key  Unlock button of Intelligent Key  Door (driver side)  Door (passenger side)  Door (rear RH)  Door (rear LH)  Back door	Release	OFF
DD/TR REQ 3W		Press	ON
ICM CW	lamition quitab	Other than ON position	OFF
IGN SW	ignition switch	ON position	ON
ACC CIM	lamition quitab	Other than ACC or ON position	OFF
ACC SW	Mechanical key  Door request switch (driver)  Door request switch (passenger)  Door request switch (back door)  Ignition switch  Ignition switch  Brake pedal  Lock button of Intelligent Key  Unlock button of Intelligent Key  Door (driver side)  Door (passenger side)  Door (rear RH)  Door (rear LH)  Back door	ACC or ON position	ON
CTOD LAMD CW	Droke nedel	Press	OFF
	втаке редаг	Release	ON
DOOD I OOK GIG	Ignition knob  Mechanical key  Door request switch (driver)  Door request switch (passenger)  Door request switch (back door)  Ignition switch  Ignition switch  Brake pedal  Lock button of Intelligent Key  Unlock button of Intelligent Key  Door (driver side)  Door (passenger side)  Door (rear RH)  Door (rear LH)  Back door	Release	OFF
DOOR LOCK SIG		Press	ON
DOOR UNLOCK SIG	Mechanical key  Door request switch (driver)  Door request switch (passenger)  Door request switch (back door)  Ignition switch  Ignition switch  Brake pedal  Lock button of Intelligent Key  Unlock button of Intelligent Key  Door (driver side)  Door (passenger side)  Door (rear RH)  Door (rear LH)  Back door	Release	OFF
DOOR UNLOCK SIG		Press	ON
DOOR SW DR	Ignition knob  Mechanical key  Door request switch (driver)  Door request switch (passenger)  Door request switch (back door)  Ignition switch  Ignition switch  Brake pedal  Lock button of Intelligent Key  Unlock button of Intelligent Key  Door (driver side)  Door (passenger side)  Door (rear RH)  Door (rear LH)  Back door	Close	OFF
DOOK 5W DK	Door (driver side)	Open	ON
DOOR SW AS	Door (passanger side)	Close	OFF
DOOK SW AS	Door (passeriger side)	Open	ON
DOOR SW RR	Door (roor DU)	Close	OFF
DOOK SW KK	Lock button of Intelligent Key  Unlock button of Intelligent Key  Door (driver side)  Door (passenger side)  Door (rear RH)	Open	ON
DOOR SW RL	Door (rear LH)	Close	OFF
DOOK 3W KL	Door (lear LH)	Open	ON
DOOR BK SW	Pook door	Close	OFF
DOOK DK 3W	Dack door	Open	ON
VEHICLE SPEED	While driving	•	Equivalent to speedometer reading

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#### TERMINAL LAYOUT



#### PHYSICAL VALUES

Term	Terminal No.		Description				V-I D./I
+	_	Wire color	Signal name	Input/ Output	(	Condition	Value [V] (Approx.)
1	Ground	LG	Steering lock unit power supply	Output	Ignition switch	OFF or ACC	5 0
2	Ground	L	CAN-H	Input/ Output		_	_
3	Ground	Р	CAN-L	Input/ Output		_	_
4	Ground	LG	Intelligent Key warn- ing buzzer	Output	Intelligent Key warning	Sounding  Not sounding	0 Battery voltage
			3		buzzer Front door	_	0
5	Ground	Р	Front door request switch (driver side)	Input	request switch (driver side)	ON (Pressed)  OFF (Released)	5
	Ground	W	Ignition switch pow-	lanut	Ignition	OFF or ACC	0
6	Ground	VV	er supply	Input	switch	ON or START	Battery voltage
7	Ground	V	Key switch		When ignition key is inserted into ignition key cylinder		Battery voltage
,	Ground	V	Ney Switch	прис	When ignition key is not inserted into ignition key cylinder		0
11	Ground	V	Battery power sup- ply	Input	Ignition switch OFF		Battery voltage
12	Ground	В	Ground		Ignition switch	ON	0
13	Ground	<b>~</b>	Inside key antenna	Output	Ignition knob	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1   1   1   1   1   1   1   1   1   1
13	Ground	Y	(+) (rear seat)	Output	is pressed.	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1

Terminal No.				Value [V]			
+	_	color	Signal name	Input/ Output	(	Condition	(Approx.)
14	Ground	W	Inside key antenna	Output	Ignition knob	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
14	Glound	V	(-) (rear seat)	Output	is pressed.	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 1 s JMKIA0390ZZ
			Inside key antenna		Ignition knob	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 1 1 S  JMKIA0393ZZ
15 G	Ground	SB	(+) (console)	Output	is pressed.	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 H H JMKIA0391ZZ
16	Cround	<b>DD</b>	Inside key antenna	Outout	Ignition knob	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
16	Ground	BR	(-) (console)	Output	is pressed.	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0390ZZ

Term	ninal No.	\ <b>\</b> /:	Description				Value IVI		
+	_	Wire color	Signal name	Input/ Output	(	Condition	Value [V] (Approx.)		
17	Ground	SB	Outside key antenna	Output	When the back door request switch	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1   1   1   1   1   1   1   1   1   1		
			(+) (rear bumper)	is operated		is operated with ignition		When Intelligent Key is not in the antenna detection area	(V) 15 10 5 1
18	Ground	V	Outside key antenna		When the back door request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna de- tection area	(V) 15 10 1   1   1   1   1   1   1   1   1   1		
			(-) (rear bumper)			When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0515ZZ		
19	Ground	I	Outside key antenna		When the front door request switch (driver side) is operated with ignition switch OFF	front door re-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1   1   1   1   1   1   1   1   1   1	
	Ground	d L	(+) (driver side)	Output		When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s 1 s JMKIA0514ZZ		

### **INTELLIGENT KEY UNIT**

### [WITH I-KEY & SUPER LOCK]

Term	ninal No.	\\/:=a	Description				Value IVI	Δ.	
+	_	Wire color	Signal name	Input/ Output	(	Condition	Value [V] (Approx.)	А	
00	0		Outside key antenna	0.4.4	When the front door request switch	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1   Million   Million	B C	
20	Ground	BR	(-) (driver side)	is operated with ignition switch OFF	(driver side) is operated with ignition switch OFF	is operated with ignition	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s	E
22 <sup>*1</sup>	Ground	W	Kay lask salansid	Output	Key lock so-	LOCK*2	Battery voltage	G	
22 '	Ground	VV	Key lock solenoid	Output	lenoid	UNLOCK*2	0		
			<b>F</b>		Front door	ON (Pressed)	0	Н	
25	Ground	BR	Front door request switch (passenger side)	Input	request switch (passenger side)	OFF (Released)	5	I	
27	Ground	L	Ignition knob switch	Innut	Ignition	When ignition knob switch is pressed	Battery voltage		
21	Giouria	L	Ignition knob switch	Input	switch OFF	When ignition knob switch is released	0	J	
29	Ground	GR	Back door request	Input	Back door re-	ON (Pressed)	0	DI	
	Giodila	GIX	switch	iliput	quest switch	OFF (Released)	5	DLI	
31	Ground	GR	Steering lock unit ground	_	_	_	0	1	
						LOCK status	5	_	
32	Ground	Ground P Steering lock unit communication	Input/ Output	Steering lock	LOCK or UNLOCK	(V) 6 4 2 0 100 ms JMKIA0433ZZ	M		
								0	

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Term	ninal No.	Wire	Description				Value [V]		
+	_	color	Signal name	Input/ Output	(	Condition	(Approx.)		
33	Ground	0	Inside key antenna (+)	Quitout	Ignition knob	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 1 s JMKIA0393ZZ		
	Glound	O	(instrument center)	Output	is pressed.	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s 1 s JMKIA0391ZZ		
34	Ground	ound G (-) (instrument center)		Output	tput Ignition knob is pressed.	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0392ZZ		
0.	Godine			Сигри		When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 11 s  JMKIA0390ZZ		
37	Ground		Outside key antenna			When the front door request switch	front door request switch	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1   I   I   I   I   I   I   I   I   I
31	Ground	ound L	(+) (passenger side)	Output	(passenger side) is oper- ated with ig- nition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0		

#### **INTELLIGENT KEY UNIT**

#### < ECU DIAGNOSIS >

### [WITH I-KEY & SUPER LOCK]

Term	ninal No.	Wire	Description				Value [V]
+	_	color	Signal name	Input/ Output	(	Condition	(Approx.)
38	Ground		Outside key antenna		When the front door request switch (passenger	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1   I   I   I   I   I   I   I   I   I
30	Ground	0	(-) (passenger side)	Output	side) is oper- ated with ig- nition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 11 1
40	Ground	round Y Passenger side anti-	Press front door request	Anti-hijack operation	Battery voltage → 0 → Battery voltage		
-			hijack relay	,	switch (pas- senger side)	Other than above	Battery voltage

<sup>\*1:</sup> Only for M/T model.

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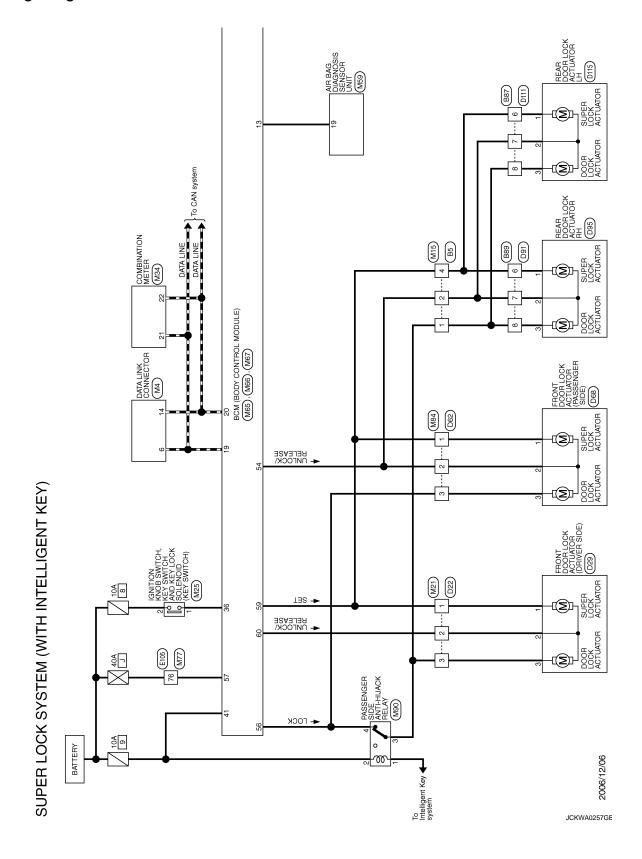
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<sup>\*2:</sup> Key interlock operation is only for M/T model for operation condition, refer to <u>SEC-10, "System Description"</u>.

Wiring Diagram - SUPER LOCK CONTROL SYSTEM -

INFOID:0000000001184030



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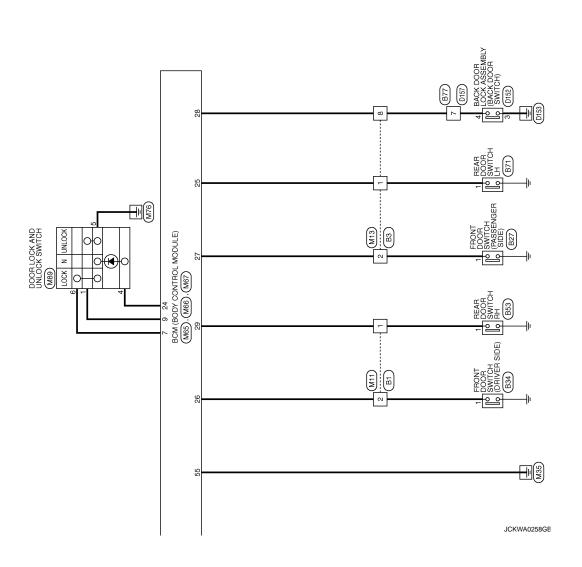
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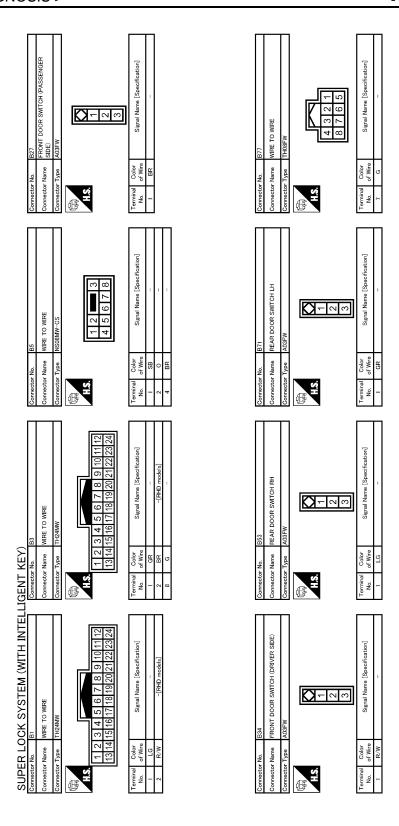
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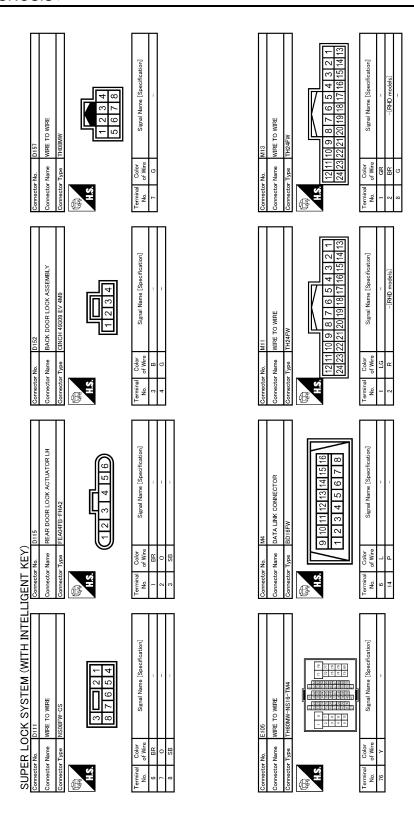
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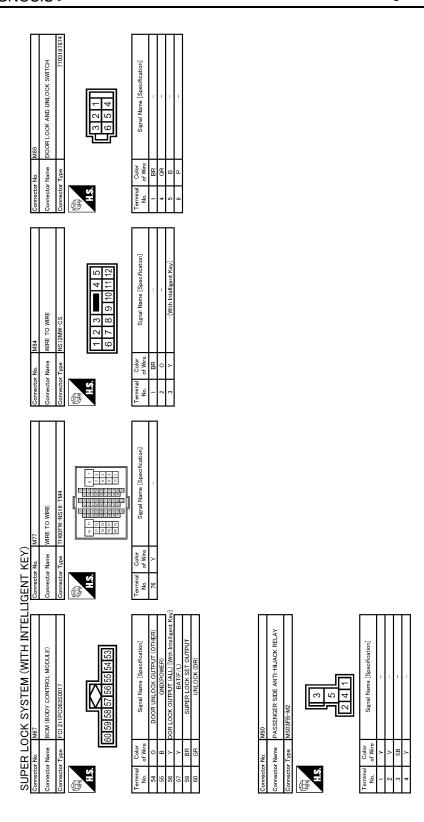
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Cornector No. D29 Connector Name FROMT DOOR LOCK ACTUATOR (DRIVER SIDE) Connector Type FEAURE FHA2  M.S. Connector Type FEAURE FHA2	Terminal   Color   Signal Name [Specification]	Connector Name   REAR DOOR LOOK ACTUATOR RH		A B C
Connector No. D22 Connector Name WIRE TO WIRE Connector Type NS12FW-CS  MS 2 1  12 1110 9 8 7 6	Terminal Oolor Signal Name [Specification] No. of Willie Signal Name [Specification] 1 BR	Connector No.   DB1   Connector No.   DB1   Connector Name   WIRE TO WIRE   Connector Type   NS08FW-CS   Connector Type   NS08FW-CS   Connector Type   Signal Name [Specification]   Color   No.   Of Wire   Of Wire   Color   No.   Of Wire   Color   No.   Of Wire   Color   No.   Of Wire   Color   No.   Of Wire   Of Wire   Color   No.   Of Wire		E F G
Cornector Na.   B89   Cornector Name   WIRE TO WIRE   Cornector Type   NSUGMW-CS	Terminal   Color   Signal Name (Specification)   GWre   ERR     -	Connector No.   Dist		J DLK
SUPER LOCK SYSTEM (WITH INTELL)  Connector No. 897  Connector Name WIRE TO WIRE  Connector Type NS38MW-CS  M.S. 1 2 3 1 2 3 1 2 5 6 7 8	Terminal   Color   Signal Name [Specification]   Color   Signal Name   Specification]   To   Color   Color	Connector No.   DB2   Connector No.   DB2   Connector Type   NS12PN-GS   Connector Type   NS12PN-GS   Connector Type   NS12PN-GS   Connector Type   Signal Name [Specification]   Color   Signal Name [Specification]   Color   Colo	JCKWA0260GE	M N
SUPER LOCK S Connector No. BB7 Connector Name WIRE TO Connector Type INSOBM		No. Type Color of Wire BR OO	JCKWA0260GE	

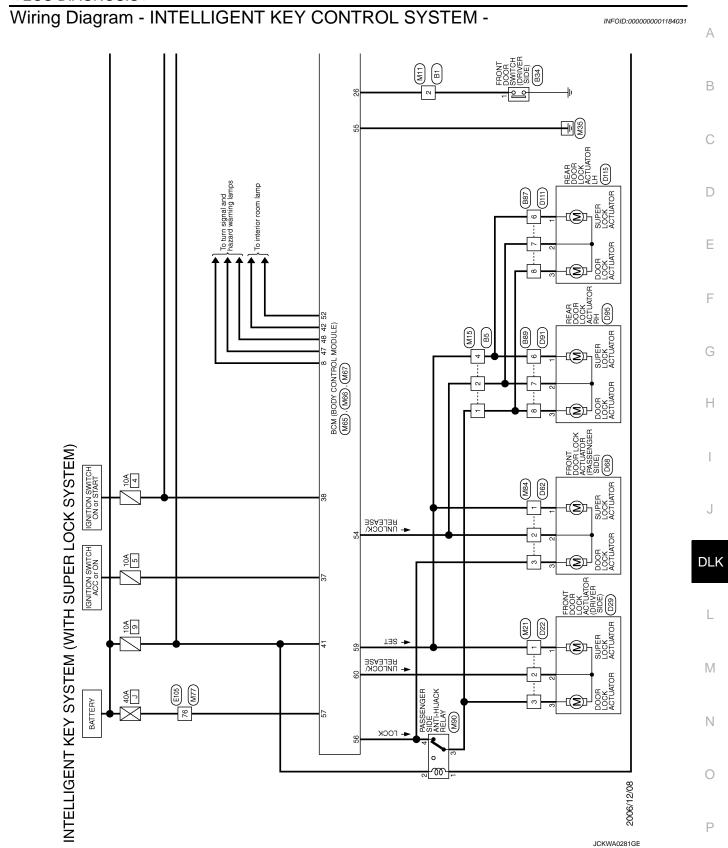


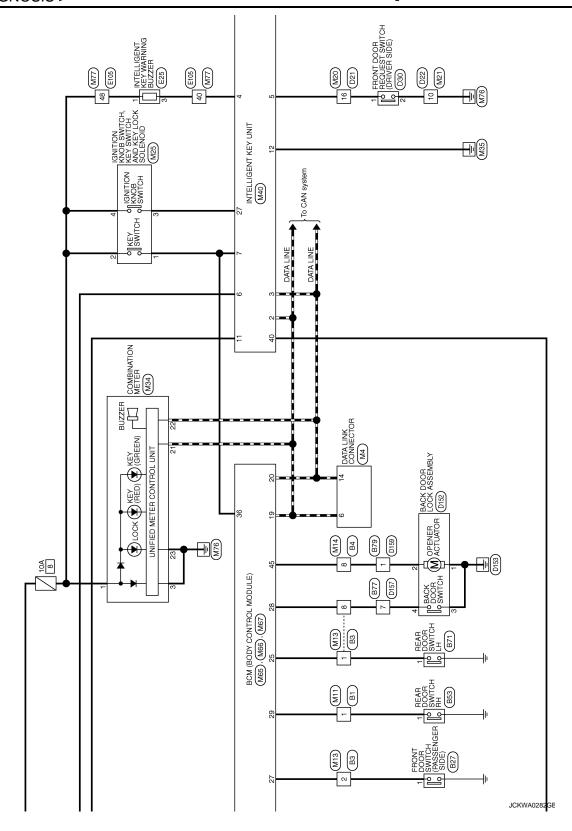
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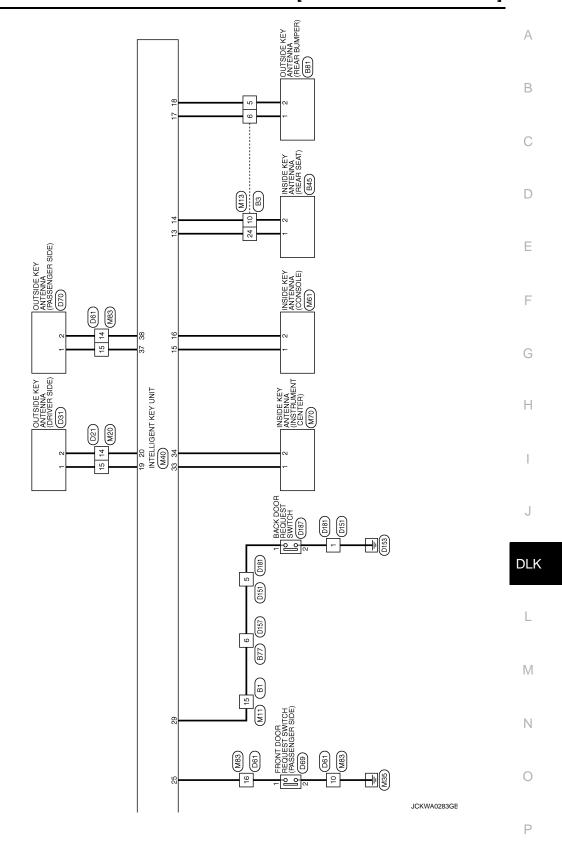
SUPER LOCK SYSTEM WITH INTELLIGENT KEY)  Superior to the property of the prope	Connector No. M34  Connector Name COMBINATION METER  Connector Type SAB40FW	1.5.	Color Signal Mane [Specificatori]	Cornector No. M66 Cornector Name BCM (BODY CONTROL MODULE) Cornector Type FCJ 211PC) 22S1017  Cornector Type FCJ 211PC) 22S1017  Cornector Type FCJ 211PC) 22S1017  Cornector Name (Specification)  A1 V BATTELSE)		A B C
Character Name   Char			Terminal No. No. 21 22 22			
SUPER LOCK SYSTEM (WITH INTELLIGENT KEY)  Connector No. Missay 6.5  Connector No. Missay 8.5  Co	D. M25 INDICH KNOB SWITCH AND KEY LOCK SOLENO PPE TKOGMGY	1 2 3 4 5		N KEY SI		
SUPER LOCK SYSTEM (WITH INTELLIGENT KEY)    Connector Name   Wilet TO WIEE   Connector Name   Co	Connector No Connector No Connector Ty	E H.S.		98		Н
JCKWA0262GE		1 2 3 • 4 4 6 7 8 9 10 11	Color of Wine SB R SB	M65   M65		
JCKWA0262GE	ELLIGEN Connec	₽ I	Termir		_	L
JCKWA0262GE	DK SYSTEM (WITH INTI	2 5	Signal Name [Specification]	IR BAG DIAGNOSIS SENSOR UNIT RZBFY-EK-SO    10   15   14   51   23   50   18   52     19   15   14   51   23   50   18   52     19   15   14   51   50   18   52     19   15   14   51   50   18   52     10   10   10   10   10     10   10		
JCKWA0262GE	SUPER LO( Connector No.	E.S.		Nome  Type  20 21  16 12  Color of Wire  R		0
	1-1-19				JCKWA0262GE	Р

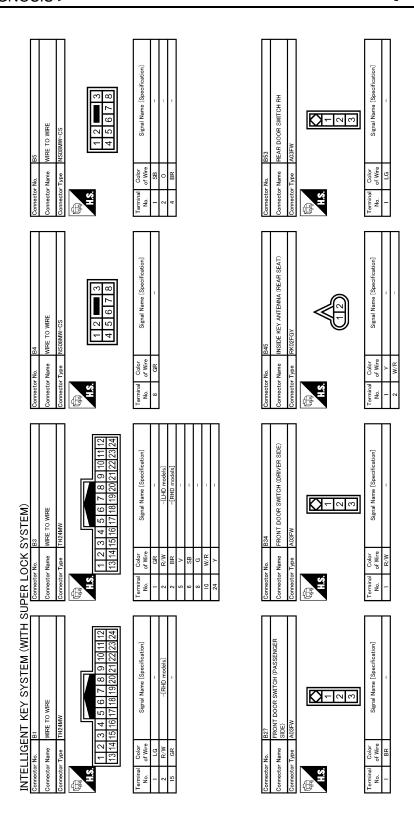


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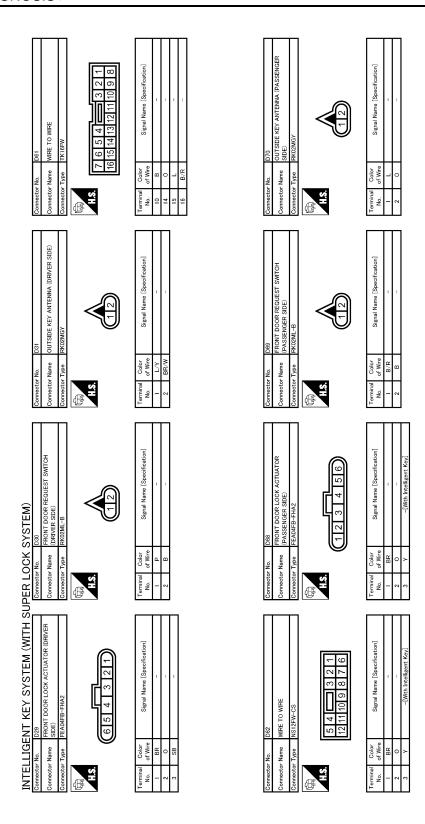






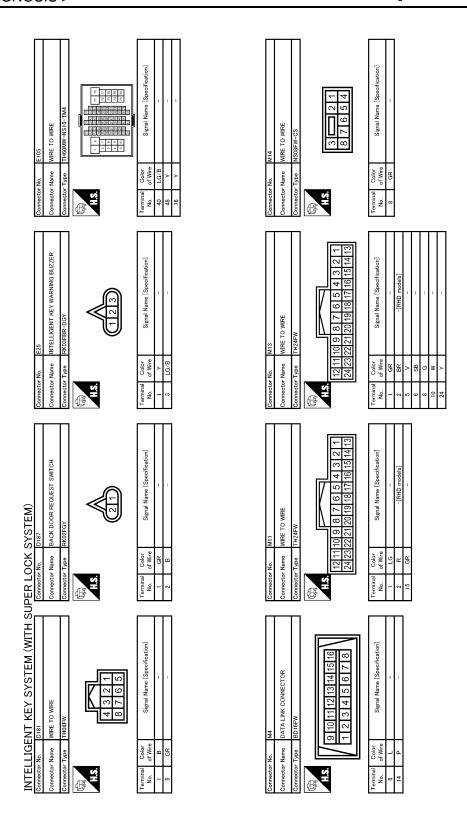
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Connector No. B81 Connector Name OUTSIDE KEY ANTENNA (REAR BUMPER) Connector Type RK02FGY  I SS	Connector No.   D22	A B C
Connector No. B79 Connector Type MIZE TO WIRE Connector Type MOZFW-LC  H.S.  Terminal Color No. of Wire Signal Name [Specification]	Comector No.   D21	F G
Connector No.   817   Connector No.   817   Connector No.   817   Connector Type   TH08FW	Connector No.   B89   Connector Name   WIRE TO WIRE	J
INTELLIGENT KEY SYSTEM (WITH SU Connector No. B71 Connector Type A03FW  Connector Type A03FW  Terminal Color Signal Name [Specification]  No. of Wire Signal Name [Specification]	Commetter No.   B87	M  N  O  JCKWA0526GE
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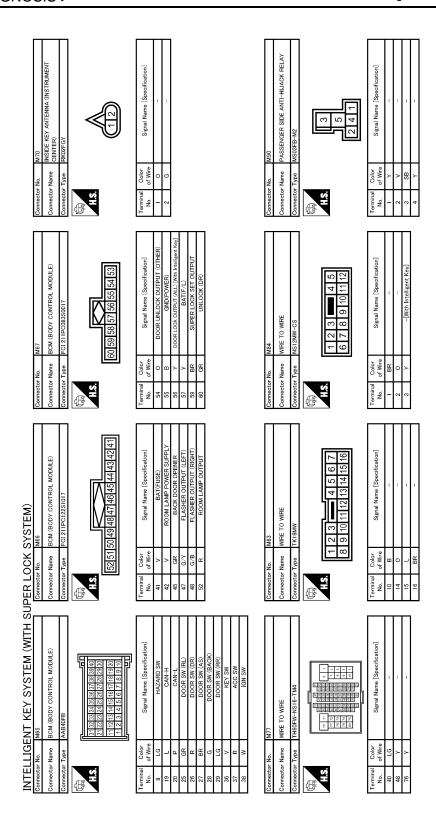
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Connector No. D115 Connector Name REAR DOOR LOOK ACTUATOR LH Connector Type FEAUFB-FHA2  A.S.  (1 2 3 4 5 6	Terminal   Color   Signal Name   Specification	Commettor No. D159  Commettor Name WIRE TO WIRE  Commetter Type MOZMW-LC  H.S.  H.S.  Terminal Color No. of Wire  1 GR Signal Name [Specification]		A B C
Connector No. D111 Connector Name WIRE TO WIRE Connector Type NS38FW-CS    3	Terminal   Color   Signal Name (Specification)   Terminal   Color   Signal Name (Specification)   Terminal   Terminal	Connector No. D157  Connector Name WIRE TO WIRE  Connector Type TH08MW  1 2 3 4  5 6 7 8  Terminal Color  No. of Wire  6 GR  7 G		E F G
SUPER LOCK SYSTEM)  Connector No. D95 Connector Name REAR DOOR LOOK ACTUATOR RH Connector Type REAGHE-FHAZ  ALS  (6 5 4 3 2 1)	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]	Connector No.   D152		J DLK
INTELLIGENT KEY SYSTEM (WITH SU  Connector Name WIRE TO WIRE  Connector Type N308FW-CS  ALS  RETERIA 2 1  RETERIA 2 1	Terminal   Color   Signal Name [Specification]   No. of Wire   BR   Color   Color	Connector No.   D151		M N
			JCKWA0528GE	Р



JCKWA0529GE

Connector No. M25 Connector Name IGNUTION KNOB SWITCH, KEY SWITCH AND KEY LOCK SOLENOID Connector Type ITKOBMGY  H.S. [1 2 3 4 5 6]	No.   Color   Signal Name [Specification]   Color   Signal Name [Specification]   1   V     -	Connector No. M81 Connector Name INSIDE KEY ANTENNA (CONSOLE) Connector Type RK02FGV  Terminal Color No. of Wire 1 SB 1 SB 1 SB 1 SB		A B C
M21 NSIZMW-CS  1 2 3  4 5 6 7 8 9 10 11 12	Color Signal Name (Specification) Te BR SB	BR		E F G
Connector No.   M20   Connector No.   M20   Connector No.   Connector No.	Terminal   Color   Signal Name   Specification   No.   Of Wire   Signal Name   Specification   No.   14   BR	Connector No.   M40		H J DLK
INTELLIGENT KEY SYSTEM (WITH SUI Connector No. Mis Connector Name WIRE TO WIRE Connector Type INSIGEW-CS	Terminal   Golor   Signal Name [Specification]   No.   Signal Name [Specification]   1   SB   -	Connector No.   M34   Connector Name   COMBINATION METER	JCKWA0530GE	M N
				Р



JCKWA0531GE

Wiring Diagram - BACK DOOR OPENER CONTROL SYSTEM -

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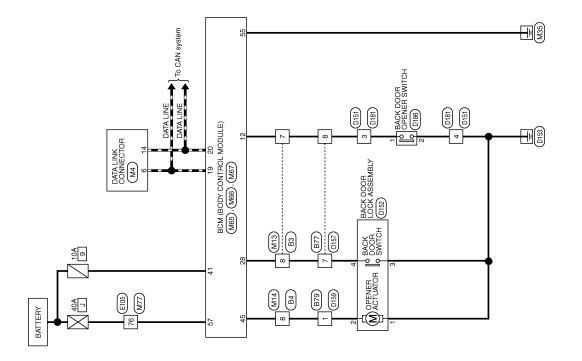
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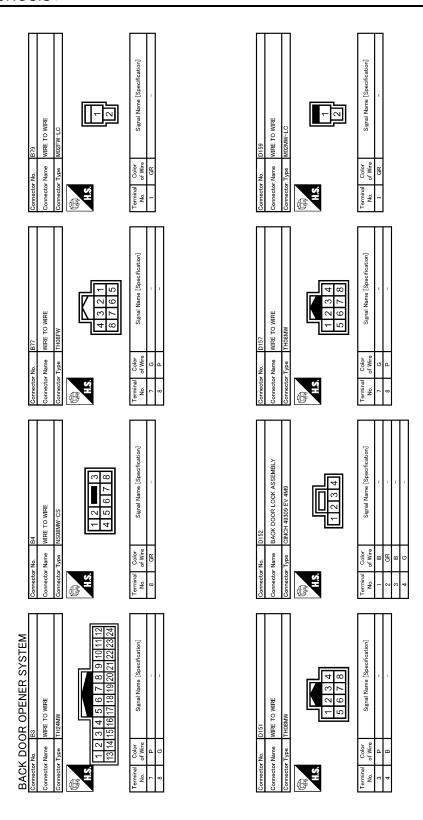
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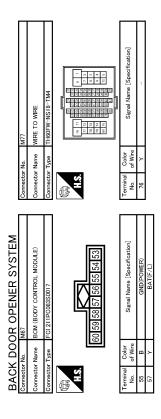
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JCKWA0295GE



JCKWA0296GE

M4  BD14 LINK CONNECTOR  BD16FW  9 10 11 12 13 14 15 16  1 2 3 4 5 6 7 8  Signal Name [Specification]	M96 ECM (BODY CONTROL MODULE) FCI 211PC122S1017  SG   48   47   46   45   44   43   42   41    Signal Name [Specification]  BATFUSE  BACK DOOR OPENER	А
Connector No.   M4	Connector No. M66 Connector Name BCM (BODY OC Connector Type FGI 2 11PO1225  A1 Connector Type FGI 2 11PO1225  Connector Name FGI 2 11PO1225  Connector Nam	C
WIRE TO WIRE THBOMM-NSIG-TM4  I I I I I I I I I I I I I I I I I I I	MOS  ROM (BODY CONTROL MODULE)  AAB40FB  TOTAL STATE OF THE	E
Connector No. E105 Connector Name WIRE TO WIRE Connector Type   TH50MM+NS16	Connector No.   M65	G H
BACK DOOR OPENER SWITCH RKGZMGV  Signal Name [Specification]	WIRE TO WIRE NSGEPW-CS Signal Name [Specification]	I J
Connector No.   D186	Connector No. M14 Connector Name WIFE Connector Type NS08 Terminal Color No. GR. B GR	<b>DL</b>
WIRE  WIRE  1 3 2 1  3 7 6 5  Signal Name [Specification]	WIRE    1   1   1   1   1   1   1   1   1	М
Connector Name   DISI	Connector No. M13 Connector Type TH24FW  Connector Type TH24FW  12 111 10 9 8 7  12 12 22 21 20 15  24 23 22 21 20 15  7 P P P P P P P P P P P P P P P P P P	N O
		JCKWA0297GE



JCKWA0298GE

Fail Safe

Display contents of CONSULT-III	Fail-safe	Cancellation
B2013: STRG COMM 1	Inhibits steering look unlocking	Erase DTC
B2552: INTELLIGENT KEY	Inhibits steering look unlocking     Inhibits engine cranking     (BCM)     Fuel cut     (ECM)	Erase DTC
B2590: NATS MALFUNCTION	Inhibits steering look unlocking     Inhibits engine cranking     (BCM)     Fuel cut     (ECM)	Erase DTC

#### DTC Inspection Priority Chart

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

Priority	DTC
1	U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN) B2552: INTELIGENT KEY
2	B2013: STRG COMM 1     B2590: NATS MALFUNCTION

DTC Index

#### 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	Detection condition F		Diagnosis
No DTC is detected. further testing may be required.	_	_	_
U1000: CAN COMM CIRCUIT	Intelligent Key unit cannot receive CAN communication signal continuously for 2 seconds or more.	_	Check CAN communication system.  Refer to SEC-33
U1010: CONTROL UNIT (CAN)	Intelligent Key unit detects internal CAN communication circuit malfunction.	_	Replace Intelligent Key unit.
B2013: STRG COMM 1	The ID verification result between Intelligent key unit and steering lock unit are NG. Or Intelligent Key unit cannot communicate with steering lock unit.	×	Perform steering lock unit ID registration with CONSULT-III
B2552: INTELLIGENT KEY	Intelligent Key unit internal malfunction.	×	Replace Intelligent Key unit.
B2590: NATS MALFUNCTION	The ID verification result between Intelligent key unit and BCM are NG. Or Intelligent Key unit cannot communicate with BCM.	×	Check NATS Refer to SEC-55

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### **BCM (BODY CONTROL MODULE)**

Reference Value

#### VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition		Value/Status
ACC ON SW	Ignition switch OFF		Off
ACC ON SVV	Ignition switch ACC or ON		On
AID COND CW	A/C switch OFF		Off
AIR COND SW	A/C switch ON		On
AUT LIGHT SYS	Outside of the room is bri	ght	Off
AUT LIGHT 313	Outside of the room is dark		On
ALITO LICHT SW	Lighting switch OFF		Off
AUTO LIGHT SW	Lighting switch AUTO		On
AUTO RELOCK	Auto lock function does n	ot operate	Off
AUTO RELOCK	Auto lock function is oper	ating	On
BACK DOOR SW	Back door closed		Off
BACK DOOR SW	Back door opened		On
BATTERY VOLT NOTE: Diesel engine models only	Ignition switch ON		Approximately the same as power supply voltage
BRAKE SW	Brake pedal is not depressed		Off
DIVARL OW	Brake pedal is depressed		On
CDL LOCK SW	Door lock/unlock switch does not operate		Off
ODE LOOK OW	Press door lock/unlock switch to the LOCK side		On
CDL UNLOCK SW	Door lock/unlock switch does not operate		Off
ODE ONEOOK OW	Press door lock/unlock switch to the UNLOCK side		On
DOOR SW-AS	Passenger door closed		Off
	Passenger door opened		On
DOOR SW-DR	Driver door closed		Off
DOOK SW-DK	Driver door opened		On
DOOR SW-RL	Rear LH door closed		Off
DOOK SW-KE	Rear LH door opened		On
DOOR SW-RR	Rear RH door closed		Off
DOOK SW-KK	Rear RH door opened		On
		Fan switch ON (when engine coolant is cool)  NOTE: Depending on the ambient temperature, battery voltage, etc.	Off
ELEC PWR CUT NOTE:	Engine running	The current status maintained with the signal from ECM received.	FREEZ
Diesel engine models only		Fan switch OFF     Fan switch ON after engine warming UP     NOTE:     Depending on the engine coolant temperature, ambient temperature, battery voltage, etc.	INHBT

# BCM (BODY CONTROL MODULE) [WITH I-KEY & SUPER LOCK]

## < ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
ENG COOLNT T  NOTE: Diesel engine models only	Engine running	Approximately the same as water temperature gauge reading
ENGINE RPM NOTE: Diesel engine models only	Engine running	Approximately the same as tachometer reading
ENGINE RUN	Engine stopped	Off
ENGINE RON	Engine running	On
ENGINE STATUS	Engine stopped	STOP
NOTE:	While the engine stalls	STALL
Diesel engine models only	Engine running	RUN
Jilly	At engine cranking	CRA
FAN ON SIG	Fan switch OFF	Off
AN UN SIG	Fan switch ON	On
FR FOG SW	Front fog lamp switch OFF	Off
I IX I OG SVV	Front fog lamp switch ON	On
FR WASHER SW	Front washer switch OFF	Off
FR WASHER SW	Front washer switch ON	On
FR WIPER LOW	Front wiper switch OFF	Off
FR WIPER LOW	Front wiper switch LO	On
ED WIDED III	Front wiper switch OFF	Off
FR WIPER HI	Front wiper switch HI	On
ED WIDED INT	Front wiper switch OFF	Off
FR WIPER INT	Front wiper switch INT	On
ED WIDED OTOD	Any position other than front wiper stop position	Off
FR WIPER STOP	Front wiper stop position	On
	The vehicle without glass break sensor	On
GLS BREAK SEN	The vehicle with glass break sensor	Off
	When hazard switch is not pressed	Off
HAZARD SW	When hazard switch is pressed	On
HD LIGHT TIME	_	Displays a setting time of the follow me home function set by the work support
LIEAD LAND OW	Lighting switch OFF	Off
HEAD LAMP SW 1	Lighting switch 2ND	On
LIEAD LAND ON C	Lighting switch OFF	Off
HEAD LAMP SW 2	Lighting switch 2ND	On
LIL DE AM CVA	Lighting switch OFF	Off
HI BEAM SW	Lighting switch HI	On
HOOD SW	Close the hood NOTE: Vehicles without theft warning system are OFF-fixed	Off
	Open the hood	On
H/L WASH SW	NOTE: The item is indicated, but not monitored	Off

**DLK-433** 

# **[WITH I-KEY & SUPER LOCK]**

Monitor Item	Condition	Value/Status
IGN ON SW	Ignition switch OFF or ACC	Off
IGN ON SW	Ignition switch ON	On
ICNI SWI CANI	Ignition switch OFF or ACC	Off
IGN SW CAN	Ignition switch ON	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7
I-KEY LOCK	LOCK button of Intelligent Key is not pressed	Off
I-RET LOCK	LOCK button of Intelligent Key is pressed	On
I-KEY UNLOCK	UNLOCK button of Intelligent Key is not pressed	Off
I-RET UNLOCK	UNLOCK button of Intelligent Key is pressed	On
KEY ON SW	Mechanical key is removed from key cylinder	Off
RET ON SW	Mechanical key is inserted to key cylinder	On
KEYLESS LOCK	LOCK button of key fob is not pressed	Off
RETLESS LOCK	LOCK button of key fob is pressed	On
KEY LESS PANIC	NOTE: The item is indicated, but not monitored	Off
	UNLOCK button of key fob is not pressed	Off
KEYLESS UNLOCK	UNLOCK button of key fob is pressed	On
	Light & rain sensor is in normal condition	OK
LIT-SEN FAIL	Light & rain sensor is with internal error	NOT OK
	Key fob ID code is not registered in "Memory 1"	Off
MEMORY 1	Key fob ID code is registered in "Memory 1"	On
MEMORY	Key fob ID code is not registered in "Memory 2"	Off
MEMORY 2	Key fob ID code is registered in "Memory 2"	On
MEMORY	Key fob ID code is not registered in "Memory 3"	Off
MEMORY 3	Key fob ID code is registered in "Memory 3"	On
MEMORY 4	Key fob ID code is not registered in "Memory 4"	Off
IVIEIVIORY 4	Key fob ID code is registered in "Memory 4"	On
MEMORY E	Key fob ID code is not registered in "Memory 5"	Off
MEMORY 5	Key fob ID code is registered in "Memory 5"	On
OIL PRESS SW	<ul><li>Ignition switch OFF or ACC</li><li>Engine running</li></ul>	Off
0.2	Ignition switch ON	On
OUT SIDE TEMP NOTE: Diesel engine models	Ignition switch ON	Approximately the same as outside air temperature
- Dieser engine models	Other than lighting switch PASS	Off
PASSING SW	Lighting switch PASS	On
	Except selector lever R position	Off
REVERSE SW CAN	Selector lever R position	On
	Return to ignition switch to LOCK position	Off
PUSH SW	Press ignition switch	On
	Rear window defogger switch OFF	Off
REAR DEF SW	Rear window defogger switch ON	On
	Rear fog lamp switch OFF	Off
RR FOG SW	Rear fog lamp switch ON	On
		-

# BCM (BODY CONTROL MODULE) [WITH I-KEY & SUPER LOCK]

## < ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
DD WACHED CW	Rear washer switch OFF	Off
RR WASHER SW	Rear washer switch ON	On
RR WIPER INT	Rear wiper switch OFF	Off
RR WIPER INT	Rear wiper switch INT	On
RR WIPER ON	Rear wiper switch OFF	Off
RR WIPER ON	Rear wiper switch ON	On
RR WIPER STOP	Rear wiper stop position	Off
RR WIPER STOP	Other than rear wiper stop position	On
	Ignition switch ON	NOMAL
SHOCK SENSOR	After the reception of air bag deployment signal from air bag diagnosis sensor unit	Off
	During the reception of air bag deployment signal from air bag diagnosis sensor unit	On
TAIL LAMP CVA	Lighting switch OFF	Off
TAIL LAMP SW	Lighting switch 1ST	On
TRNK OPNR SW	When back door opener switch is not pressed	Off
TRINK OPINK 5W	When back door opener switch is pressed	On
TURN SIGNAL L	Turn signal switch OFF	Off
TURN SIGNAL L	Turn signal switch LH	On
TURN SIGNAL R	Turn signal switch OFF	Off
TURN SIGNAL R	Turn signal switch RH	On
TINII OOK SHOOK	Other than the following	Off
UNLOCK SHOCK	During the unlock operation interlocked with air bag	On
VEHICLE SPEED	While driving	Equivalent to speedometer reading

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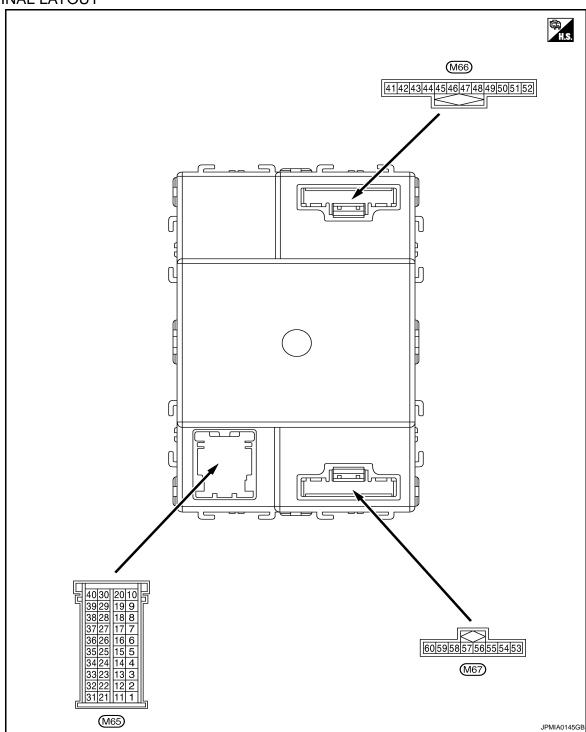
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#### **TERMINAL LAYOUT**



#### PHYSICAL VALUES

#### **CAUTION:**

- Check combination switch system terminal waveform under the loaded condition with lighting switch, turn signal switch and wiper switch OFF is not to be fluctuated by being overloaded.
- Turn wiper intermittent dial position to 4 except when checking waveform or voltage of wiper intermittent dial position. Wiper intermittent dial position can be confirmed on CONSULT-III. Refer to BCS-27, "COMB SW: CONSULT-III Function (BCM COMB SW)".
- BCM reads the status of the combination switch at 10 ms internal normally. Refer to <u>BCS-10, "System Description"</u>.

	nal No. color)	Description	1			Value	
+	-	Signal name	Input/ Output		Condition	(Approx.)	
					All switch OFF (Wiper intermittent dial 4)	0 V	
					Front wiper switch HI (Wiper intermittent dial 4)		
1	Ground	Combination switch	Output	Combination	Rear wiper switch INT (Wiper intermittent dial 4)	(V) 15 10 5	
(P)	Giouna	OUTPUT 1	Output	switch	Any of the condition below with all switch OFF  • Wiper intermittent dial 1	0	
					<ul> <li>Wiper intermittent dial 1</li> <li>Wiper intermittent dial 2</li> <li>Wiper intermittent dial 3</li> <li>Wiper intermittent dial 6</li> <li>Wiper intermittent dial 7</li> </ul>	→ -2ms	
					All switch OFF	0 V	
					Lighting switch 2ND		
				Combination	Lighting switch PASS	(V) 15	
2	Ground	Combination switch	Output	switch	Front fog lamp switch ON	10	
(Y)		OUTPUT 4	·	(Wiper intermit- tent dial 4)			
					Turn signal switch LH	JPMIA0163GB	
						9.3 V	
					All switch OFF	0 V	
					Lighting switch AUTO	(V)[	
				Combination	Rear fog lamp switch OFF	15	
3 LG)	Ground	Combination switch OUTPUT 3	Output	switch (Wiper intermit-	Front wiper switch MIST	5 0	
				tent dial 4)	Front wiper switch INT		
					Front wiper switch LO	<u>→</u> -2ms	
					Transmission Common Lo	JPMIA0162GB 9.3 V	
					All switch OFF (Wiper intermittent dial 4)	0 V	
					Front washer switch ON (Wiper intermittent dial 4)		
					Rear wiper switch ON (Wiper intermittent dial 4)	(V) 15	
4 (R)	Ground	Combination switch OUTPUT 2	Output	Combination switch	Rear washer switch ON	10 5 0	
					(Wiper intermittent dial 4)		
					Any of the condition below with all switch OFF	<u>→</u> -2ms	
					Wiper intermittent dial 1	JPMIA0161GB 9.1 V	
			l	1	Wiper intermittent dial 5	J *	

	nal No.	Description				Value
+ (vvire	color)	Signal name	Input/ Output		Condition	(Approx.)
5 (W)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF Lighting switch 1ST Lighting switch 2ND Lighting switch HI  Turn signal switch RH	0 V
					Turr signar switch for	JPMIA0164GB 9.1 V
7 (P)	Ground	Door lock/unlock switch (Lock)	Input	Door lock/un- lock switch	Not pressed	(V) 15 10 5 0 → ←10ms JPMIA0154GB
					Pressed to the lock side	0 V
8 (LG)	Ground	Hazard switch	Input	Hazard switch	Not pressed	(V) 15 10 5 0 10ms JPMIA0154GB
					Pressed	0 V
9 (BR)	Ground	Door lock/unlock switch (Unlock)	Input	Door lock/un- lock switch	Not pressed	(V) 15 10 5 0 JPMIA0154GB
					Pressed to the unlock side	0 V
12 (P)	Ground	Back door opener switch	Input	Back door opener switch	Not pressed	(V) 15 10 5 0 10ms JPMIA0154GB
					Pressed	0 V

	nal No. color)	Description			O Pro	Value
+	- COIOT)	Signal name	Input/ Output		Condition	(Approx.)
13 (R)	Ground	Shock detect sensor	Input	Ignition switch OFF or ACC  Ignition switch ON		0 V  (V) 15 10 5 0  JPMIA0155GB
14	Cround	A/C switch	loout	A/C switch	Not pressed	6.0 V  Battery voltage
(L/R)	Ground	A/C SWITCH	Input	A/C SWIICH	Pressed	0 V
15 (LG/B)	Ground	Fan switch	Input	Fan switch	Not pressed Pressed	Battery voltage 0 V
16 (GR)	Ground	Alarm link	Output		_	_
				Ignition switch O	FF or ACC	Battery voltage
17 (BR)	Ground	Light & rain sensor serial link	Input/ Output	Ignition switch O	N	(V) 15 10 5 0 10 10 10 10 10 10 10 10 10 10 10 10 1
					ON	8.7 V 0 V
18 (SB)	Ground	Security indicator	Output	Security indicator	Blinking	(V) 15 10 5 0 1 s
						10.3 V
19	_	CAN-H	Input/		OFF	Battery voltage
(L) 20			Output/			
20 (P)	_	CAN-L	Input/ Output		_	_
21 (SB)	Ground	Rear window defog- ger switch	Input	Rear window defogger switch	Not pressed	(V) 15 10 5 0 → -10ms JPMIA0154GB
					Mile	1.1 V
					While pressing	0 V

	nal No.	Description				Velue
(Wire	color)	Signal name	Input/ Output		Condition	Value (Approx.)
24	_	Door lock status indi-		Door lock status	ON	Battery voltage
(GR)	Ground	cator	Output	indicator	OFF	0 V
25 (GR)	Ground	Rear door switch LH	Input	Rear door switch LH	OFF (When rear door LH closed)  ON (When rear door LH	(V) 15 10 5 0
					opened)	0 V
26 (R)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closed)	(V) 15 10 5 0 PKID0924E 11.2 V
					ON (When driver door opened)	0 V
27 (BR)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closed)	(V) 15 10 5 0
					ON (When passenger door opened)	0 V
28	Ground	Back door switch	Input	Back door	OFF (When back door closed)	Battery voltage
(G)	Cidana	Zack doc. ownor	put	switch	ON (When back door opened)	0 V
29 (LG)	Ground	Rear door switch RH	Input	Rear door switch RH	OFF (When rear door RH closed)	(V) 15 10 5 0 10 ms PKID0924E
					ON (When rear door RH opened)	0 V
30 (SB)	Ground	Audio link	Input/ Output	_	_	_

# **BCM (BODY CONTROL MODULE)**

## < ECU DIAGNOSIS >

# [WITH I-KEY & SUPER LOCK]

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Signal name Output Output  All switch OFF (Wiper intermittent dial 4)  Front fog lamp switch ON (Wiper intermittent dial 4)  1.3 V  Combination switch Input Switch ON (Wiper intermittent dial 4)  1.3 V  Rear fog lamp switch ON (Wiper intermittent dial 4)  1.3 V  1.3 V		Value	O a diffici		Description	nal No.	
All switch OFF (Wiper intermittent dial 4)  Front fog lamp switch ON (Wiper intermittent dial 4)  1.3 V  The second of the secon		(Approx.)	Condition	Input/ Output	Signal name	1	
Front fog lamp switch ON (Wiper intermittent dial 4)  1.3 V  Combination switch INPUT 5  Ground (RR)  Ground Combination switch INPUT 5  Input Combination switch (Wiper intermittent dial 4)  1.3 V  1.3 V  (V)  (V)  (V)  (V)  (V)  (V)  (V)  (	JPMIA0165GB	15 10 5 0 1 ms 1 JPMIA0165GB					
31 (BR) Ground Combination switch INPUT 5 Input Combination switch (Wiper intermittent dial 4)  Rear fog lamp switch ON (Wiper intermittent dial 4)  1.3 V	JPMIA0167GB	15 10 5 0 1ms JPMIA0167GB					
	JPMIA0168GB	15 10 5 0 JPMIA0168GB	Rear fog lamp switch ON (Wiper intermittent dial 4	Input	Combination switch INPUT 5	Ground	
(Wiper intermittent dial 4)  1.3 V	JPMIA0169GB	15 10 5 0 1ms JPMIA0169GB	Rear wiper switch ON (Wiper intermittent dial 4				
Any of the condition below with all switch OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 2  • Wiper intermittent dial 6  • Wiper intermittent dial 7	JPMIA0196GB	10 5 0 → 1 ms JPMIA0196GB	with all switch OFF  • Wiper intermittent dial  • Wiper intermittent dial  • Wiper intermittent dial				

	nal No. color)	Description				Value
+ (vvire	- COIOF)	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF	(V) 15 10 5 0 JPMIA0165GB 1.4 V
					Lighting switch PASS	(V) 15 10 5 0 JPMIA0167GB
32 (G)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermit- tent dial 4)	Lighting switch 2ND	(V) 15 10 5 0 JPMIA0166GB 1.3 V
					Front wiper switch INT	(V) 15 10 5 0 JPMIA0168GB 1.3 V
					Front wiper switch HI	(V) 15 10 5 0 → ←1 ms JPMIA0196GB 1.3 V

# **BCM (BODY CONTROL MODULE)**

## < ECU DIAGNOSIS >

# [WITH I-KEY & SUPER LOCK]

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Terminal		Description				Value
(Wire col	– –	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF	(V) 15 10 5 0 JPMIA0165GB 1.4 V
					Turn signal switch LH	(V) 15 10 5 0 → 1ms JPMIA0167GB 1.3 V
33 (V)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermit- tent dial 4)	Turn signal switch RH	(V) 15 10 5 0 JPMIA0166GB 1.3 V
					Front wiper switch LO	(V) 15 10 5 0 JPMIA0168GB 1.3 V
					Front washer switch ON	(V) 15 10 5 0 JPMIA0196GB 1.3 V

	nal No.	Description	l			Value
+ (Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 JPMIA0165GB
					Lighting switch AUTO (Wiper intermittent dial 4)	(V) 15 10 5 0 JPMIA0167GB
34 (GR)	Ground	Combination switch INPUT 4	Input	Combination switch	Lighting switch 1ST (Wiper intermittent dial 4)	(V) 15 10 5 0 JPMIA0166GB 1.3 V
					Rear wiper INT (Wiper intermittent dial 4)	(V) 15 10 5 0 JPMIA0167GB
					Any of the condition below with all switch OFF  Wiper intermittent dial 1  Wiper intermittent dial 6	(V) 15 10 10 10 10 10 10 10 10 10 10 10 10 10

	nal No.	Description				Value
+	color)	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 JPMIA0165GB 1.4 V
					Lighting switch HI (Wiper intermittent dial 4)	(V) 15 10 5 0 JPMIA0166GB 1.3 V
35 (L)	Ground	Combination switch INPUT 3	Input	Combination switch	Lighting switch 2ND (Wiper intermittent dial 4)	(V) 15 10 5 0 1ms JPMIA0167GB 1.3 V
					Rear wiper switch ON	(V) 15 10 5 0 JPMIA0169GB 1.3 V
					Any of the condition below with all switch OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 2  • Wiper intermittent dial 3	(V) 15 10 5 0 → 1ms JPMIA0196GB 1.3 V
36 (V)	Ground	Key switch	Input	der  Remove mechar	al key into ignition key cylin-	Battery voltage
37 (R)	Ground	ACC power supply	Input	cylinder Ignition switch O Ignition switch A		0 V  Battery voltage
38 (W)	Ground	Ignition power supply	Input	Ignition switch O	FF or ACC	0 V  Battery voltage

< ECU I	DIAGNO	)SIS >			[4411	ITI-KET & SUFER LOCK]
	nal No.	Description				Value
(Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
39 (P)	Ground	NATS antenna amp.	Input/ Output	Insert mechanica der	Il key into ignition key cylin-	Just after Insert mechanical key into ignition key cylinder. Pointer of tester should move
40 (LG)	Ground	NATS antenna amp.	Input/ Output	Insert mechanica der	Il key into ignition key cylin-	Just after Insert mechanical key into ignition key cylinder. Pointer of tester should move
41 (V)	Ground	Battery power sup- ply	Input	Ignition switch O	FF	Battery voltage
42 (V)	Ground	Interior room lamp power supply	Output	saver operation t	interior room lamp battery ime ter passing the interior room	0 V
		Parrat cappy		lamp battery save		Battery voltage
43	Ground	Rear wiper motor	Output	Rear wiper switch	n OFF	0 V
(L)		'	•	Rear wiper switch	h ON	Battery voltage
					Rear wiper stop position	0 V
44 (L/W)	Ground	Rear wiper auto stop	Input	Ignition switch ON	Any position other than rear wiper stop position	(V) 15 10 5 0 → -10ms JPMIA0197GB
45 (CD)	Ground	Back door lock actu-	Output	Back door	Pressed	Battery voltage (300ms)
(GR)		ator	•	opener switch	Not pressed	0 V
47 (G/Y)	Ground	Turn signal LH	Output	Ignition switch ON	Turn signal switch OFF  Turn signal switch LH  Turn signal switch OFF	0 V  (V) 15 10 5 0 PKID0926E  6.5 V
					Tan dignar dimen di i	
48 (G/B)	Ground	Turn signal RH	Output	Ignition switch ON	Turn signal switch RH	(V) 15 10 5 0 1 s PKID0926E 6.5 V
				Lighting switch	Rear fog lamp switch OFF	0 V
49 (Y)	Ground	Rear fog lamp	Output	1ST and front fog lamp switch ON	Rear fog lamp switch ON	Battery voltage
51				Depress the brak	e pedal	Battery voltage
(R/W)*1 (R)*2	Ground	Stop lamp switch	Input	Release the brak	e pedal	0 V

# **BCM (BODY CONTROL MODULE)**

#### < ECU DIAGNOSIS >

# [WITH I-KEY & SUPER LOCK]

Terminal No.		Description				Value	_	
(Wire	color)	Signal name	Input/ Output		Condition	(Approx.)		
52	Ground	Room lamp timer	Output	Interior room	OFF	Battery voltage	_	
(R)	Ground	control	Output	lamp	ON	0 V	_	
53	Ground	Power window pow-	Output	Ignition switch	OFF or ACC	0 V	_	
(L)	Giodila	er supply	Output	ignition switch	ON	Battery voltage	_	
54	Ground	Door unlock (All)	Output	Door lock/un-	Pressed to the unlock side	Battery voltage	_	
(O)	Giodila	Door drilock (All)	Output	lock switch	Pressed to the lock side	0 V		
55 (B)	Ground	Ground	_	Ignition switch O	N	0 V	_	
56				Door lock/un-	Pressed to the unlock side	0 V	_	
(Y) <sup>*1</sup> (SB) <sup>*2</sup>	Ground	Door lock (All)	()utnut	Output	lock switch	Pressed to the lock side	Battery voltage	_
57 (Y)	Ground	Battery power sup- ply	Input	Ignition switch O	FF	Battery voltage	_	
58 (P)	Ground	Power window pow- er supply	Output	Ignition switch O	FF	Battery voltage	_	
59	Cravind	Cuparlask	Outrout	When lock button	of key fob or Intelligent Key	0 V	_	
(BR)	Ground	Super lock	Output	When lock button	of key fob or Intelligent Key	Battery voltage	_	
60	Ground	Driver door unlock	Output	Door lock/un-	Pressed to the unlock side	Battery voltage	_	
(GR)	Giouila	Driver door drilock	Output	lock switch	Pressed to the lock side	0 V	_	

<sup>\*1:</sup> With Intelligent Key system

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<sup>\*2:</sup> Without Intelligent Key system

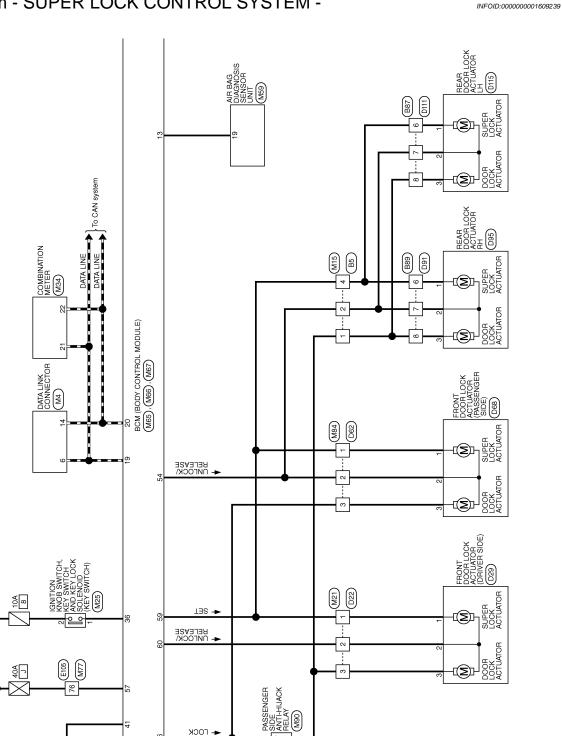
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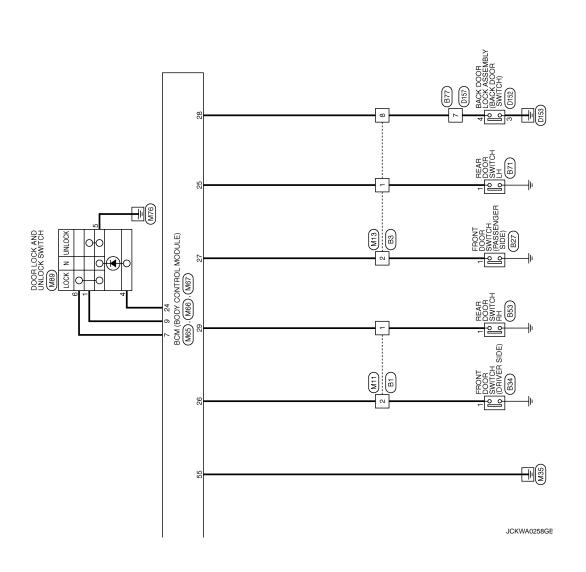
SUPER LOCK SYSTEM (WITH INTELLIGENT KEY)

10A

Wiring Diagram - SUPER LOCK CONTROL SYSTEM -



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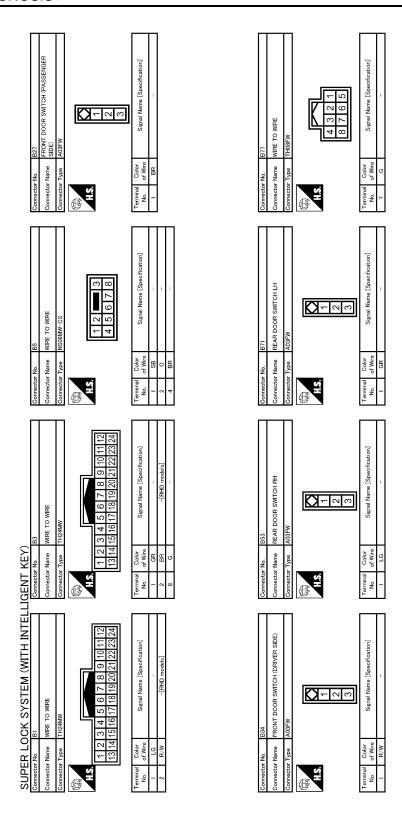
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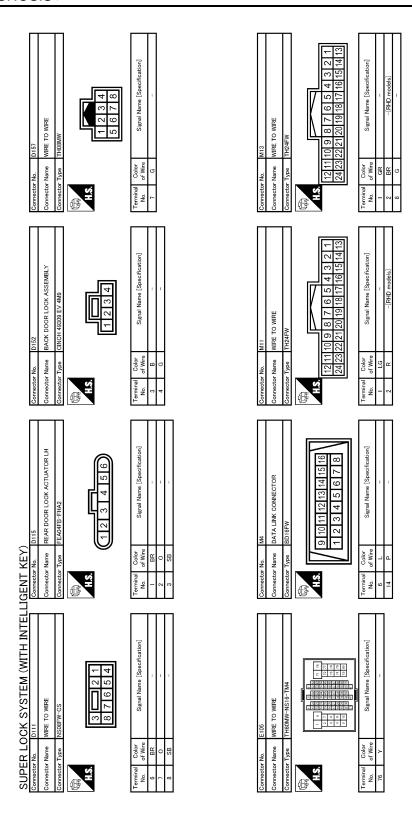
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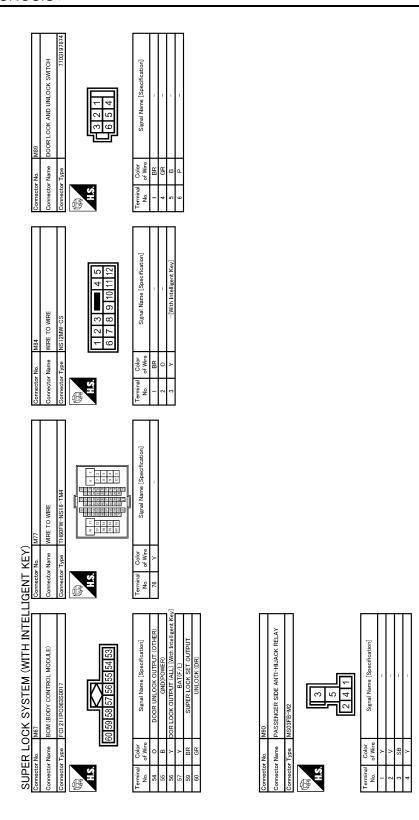
JCKWA0259GE

Connector No. 1029 Connector Nome FERMI DOOR LOCK ACTUATOR (DRIVER SIDE) Connector Type FEAME FHAZ  M.S.  (6 5 4 3 2 1)	Terminal   Color   Signal Name [Specification]   No.   of Wire   Signal Name [Specification]	Connector No.   D95		A B C
Connector No. D22 Connector Type NS12FW-CS  Connector Type 15 4  3 2 1 1 12 11 11 10 9 8 7 6	Terminal   Color   Signal Name [Specification]	Connector No.   D81		E F G
Commercer No.   B89   Commercer No.   B89   Commercer No.   B89   Commercer Name   WIFE TO WIRE   Commercer Type   NSOBMW-CS	Terminal Color   Signal Name [Specification]   No. of Wire   S   S   S   S   S   S   S   S   S	Commetter No.   D86   PRONE LOCK ACTUATOR   PRONE LOCK ACTUATOR		J DLK
SUPER LOCK SYSTEM (WITH INTELL Connector No. 1897  Connector Name WIRE TO WIRE  Connector Type INSORMY-CS  1 2 1 3 1 3 1 4 5 6 7 8	Terminal   Color   Signal Name [Specification]   Odor   Of Wire   Signal Name [Specification]   Odor   Of Wire   Odor   Odor	Connector No.   D62	JCKWA0260GE	M N
				Р

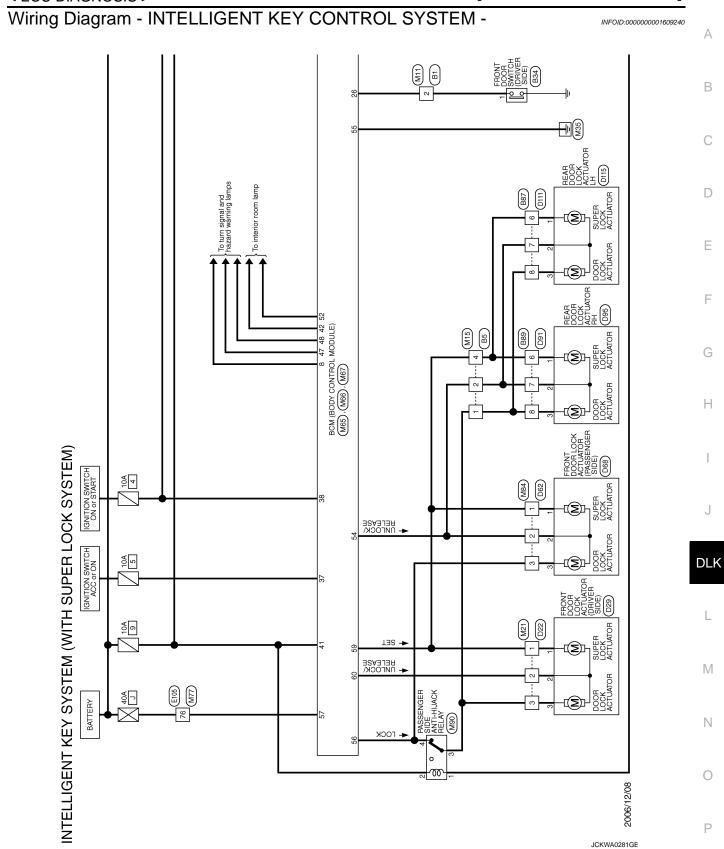


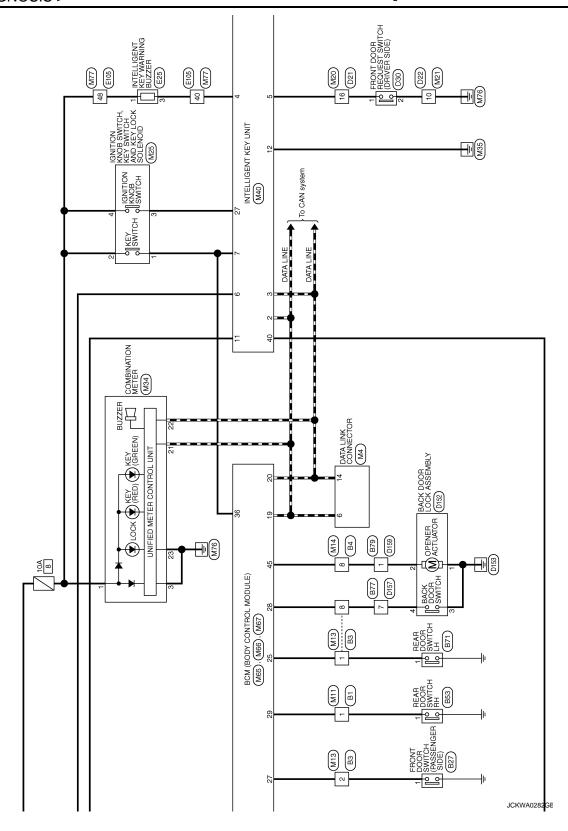
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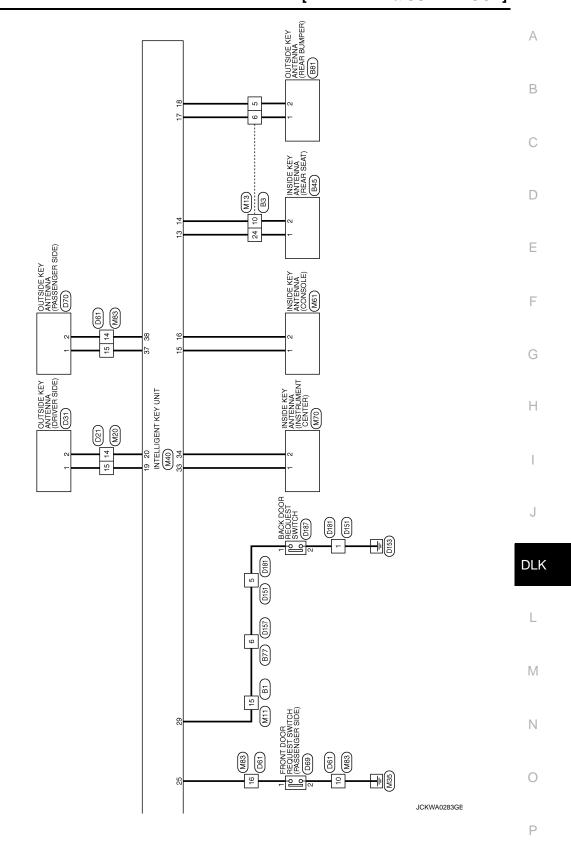
Connector No.   M34	Terminal   Color   Signal Name [Specification]	Connector No.   M86		A B C
Connector No. M25 Connector Name IGNITON KNOB SWITCH KEY SWITCH Connector Name AND KEY LOCK SOLENDID Connector Type IT/OBMGY  1.5  1.2  1.2  1.2  1.2  1.2  1.2  1.3	Terninal   Color   Signal Name [Specification]   V	36 V KEY SW		E F G
Connector No.   M21   Connector Name   WIRE TO WIRE   Connector Type   NS12MW-CS	Terminal   Color   No.   Signal Name [Specification]	Commetter No.   M65		J DLK
SUPER LOCK SYSTEM (WITH INTELLIGENT KEY)           Connector No.         MIS           Connector Name         WIRE           Connector Name         Connector Name           Connector Name         Connector Name           Connector Type         Connector Type           MASSIENY-CS         Connector Type           Connector Type         Connector Type           Connector Type         Connector Type	Terminal   Color   Signal Name [Specification]     Signal Name   Specification     Signal Name   Specification	Connector No. M99 Connector Type Tr28FY-EX-SC  H.S. 20 21 17	JCKWA0262GE	M N
				Р

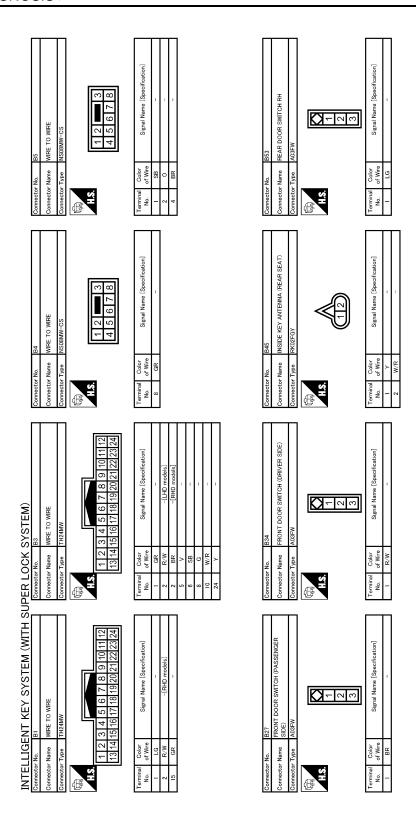


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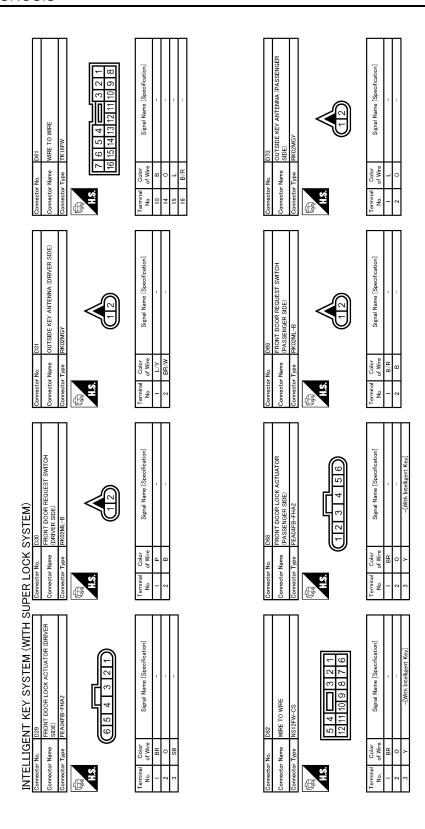






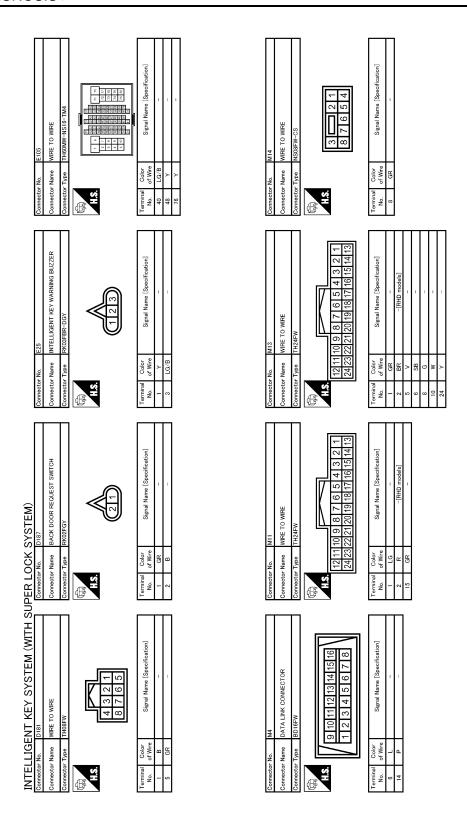
JCKWA0525GE

KEY ANTENNA (REAR BUMPER)	CS 10 9 8 7 6 1	АВ
BB1 OUTSIDE RK02FGY	022 WWRE TO NSIZEW 12 11 12 11	С
Connector No. Connector Type Connector Type H.S. H.S.  Terminal Color No. of Win	Connector No. Connector Name Connector Type H.S. H.S.  H.S.  1 BR 1 BR 1 BR 1 BR 10 BR 10 BR	D
offeation]	9 8 1 1 officeation]	E
UC TC Signal Name (Specification)	3 2 1 1 1 1 1 0 9 8 Signal Name [Specification]	F
Hector No. 879 Hector Name WIRE TO WIRE Hector Type MU2FW-LC  In of Wire Signal  O Glor  O F Wire Signal	Nector No   D21	G
Connector No. Connector Type Connector Type Terminal No. of Win Terminal Odo	Connector No Connector Name Connector Type H.S.  Terminal Code No. of Wr. 15 LY 16 LY	Н
WIRE  WIRE  1 3 2 1  5 7 6 5  Signal Name [Specification]	WIRE CS CS Signal Name [Specification]	I J
DCK SYSTEM) No. 877 No. 877 Nome WIRE TO WIRE Type 14 3 8 7 8 8 7 0 6 Wire GR	BB89 WRE TO NSOBMW	DLK
SUPER LOCK SYSTEM)  Gonnector No. B177  Connector Name WIRE TO WIRE  Connector Type TH08FW  A.S. Color  No. Of Wire  G GR  7 GR	Connector No Connector Name Connector Type H.S. H.S.  Terminal Calor No of Wr 6 BR 7 0 W	DLK
	[luoi]	L
EY SYSTEM (WOR SWITCH LH	WIRE -CS	M
ENT K B711 REAR DG A03FW	WRE TO NISOBMW.	N
INTELLIGE Connector Name Connector Type Connector Type (1.5) Connector Type Conne	Connector No. Connector Name Connector Type  LS.  LTerminal Color No. of Wire B BR B BR C BR C SB	0
		JCKWA0526GE
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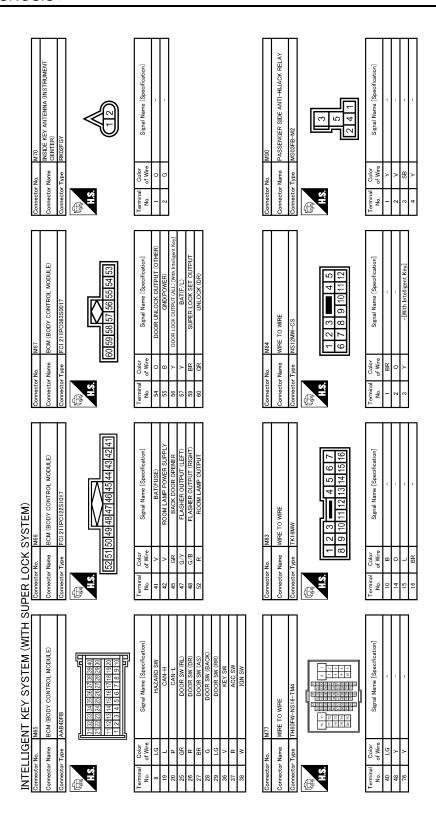
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MINISTRICERT KEY SYSTEM WITH SUDDE DOOK SYSTEM)  Control has been seen seen to be control has been seen seen seen seen seen seen see		PITS  REAR DOOR LOCK ACTUATOR LH  FEAGUFB-FHA2  12 3 4 5 6	Signal Name [Specification]	WIRE TO WIRE MOZNAW-LC	Signal Name [Specification] _		A B
MYELLIGENT KEY SYSTEM WITH SUPER LOCK SYSTEM)  Connector faces principle and significant formation for the significant formati	Ī	$\top$			Terminal Color of Wire of Wire		D
MTELLOCK SYSTEM)    Converted Name   Con			(Speoffcation)	40	e [Specification]		
MATELLIGENT KEY SYSTEM WITH SUDER LOCK SYSTEM)  Connector flow position of the second state of the second		WIRE TO WIRE NSOBFW-CS  3		<del></del>			
INTELLIGENT KEY SYSTEM (WITH SUIPER LOCK SYSTEM Connector Name Wite 10 Wite Connector Name Wite Wite Wite Connector Name Wite Wite Wite Connector Name Wite Wite Wite Wite Wite Wite Wite Wit		Connector N Connector T		Connector N Connector T Connector T			Н
INTELLIGENT KEY SYSTEM (WITH SUIPER LOCK SYSTEM Connector Name Wite 10 Wite Connector Name Wite Wite Wite Connector Name Wite Wite Wite Connector Name Wite Wite Wite Wite Wite Wite Wite Wit	M)	R LOCK ACTUATOR RH 74A2 4 3 2 1	ignal Name [Specification]	R LOCK ASSEMBLY DB EV AMB  2 3 4	gnal Name [Specification]		I
Connector Name WRE TO WIRE  Connector Name NSUGEW-CS  Connector Name NSUGEW-CS  ALS  Signal Name (Specification)  Connector Name Signal Name (Specification)  Connector Name WIRE TO WIRE  Connector Name WIRE TO WIRE  Connector Name Signal Name (Specification)  Signal Name (Specification)  Connector Name Signal Name (Specification)  Signal Name (Specification)  Connector Name Signal Name (Specification)  Signal Name (Specification)  Signal Name (Specification)  Connector Name Signal Name (Specification)	PER LOCK SYSTE		Oblor of Wee BR BR SB SB		G G B B B B B B B B B B B B B B B B B B		DLK
JCKWA0528GE	WITH SU		oo]		[e		L
JCKWA0528GE	SYSTEM	2 5	Name (Specificate	1387	Name [Specificati		M
JCKWA0528GE	SENT KEY	WIRE TO WIRE NSOBFW-CS 3					Ν
JCKWA0528GE	INTELLIC	Connector Name Connector Type		Connector Nome Connector Type			0
						JCKWA0528GE	Р



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Connector No. M25 Connector Name IGNITION KNOB SWITCH, KEY SWITCH AND KEY LOCK SOLENDID Connector Type TKOBMGY  TKOBMGY  TKOBMGY  TTO 3 4 5 6	Terminal   Color   Signal Name   Specification	Connector No. M61 Connector Name INSIDE KEY ANTENNA (CONSOLE) Connector Type RK02FGY  H.S. (12)  Terminal Color Signal Name [Specification] 1 SB 2 BR		A B C
Connector No. M21  Connector Name WIRE TO WIRE  Connector Type NS12MW-CS  LIS. 1 2 3 - 4 5 6 7 8 9 10 11 12	Terrninal   Color   Signal Name [Specification]   Color   Signal Name [Specification]	16   BR		E F G
SUPER LOCK SYSTEM)  Connector No. M20  Connector Name WIRE TO WIRE  Connector Type ITK19MW  A18. 1 2 3 4 5 6 7  B 9 10 11 12 13 14 15 16	Terminal   Color   Signal Name (Specification]   No.   of Wire     14   BR     -     15   L     -     16   P	Connector No.   M40   Connector No.   M40   Connector Name   ITH40FW   ITH		J DLK
INTELLIGENT KEY SYSTEM (WITH SU Connector No. M15 Connector Name WIRE TO WIRE Connector Type NSOBPW-CS  H.S. 3 2 1 8 7 6 5 4	Terminal   Color   Nu. of Wire   Signal Name [Specification]   1   SB   2   0   -   -     2   4   BR   -   -	Connector No.   M34   Connector Name   COMBINATION METER	JCKWA0530GE	M N
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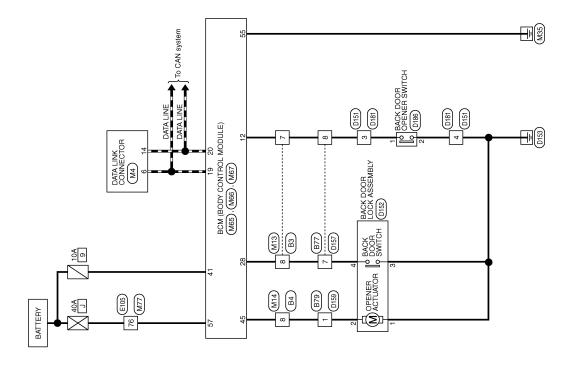
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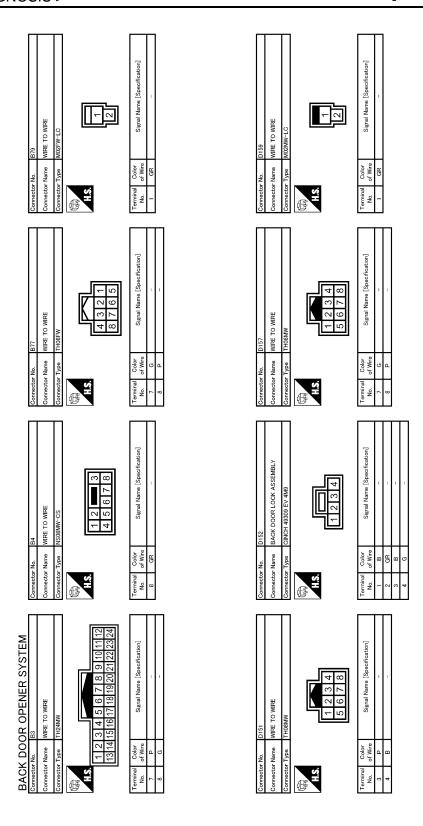
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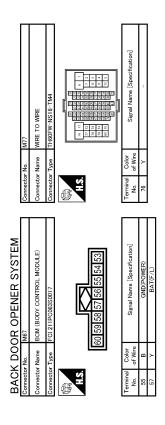
JCKWA0295GE

BACK DOOR OPENER SYSTEM



JCKWA0296GE

IK CONNECTOR  1 12 13 14 15 16  1 4 5 6 7 18  Signal Name [Specification]	612251017 612251017 847[46] 45 44 43 42 41 847[46] 45 44 43 64 41 847[46] 45 646 65 65 65 65 65 65 65 65 65 65 65 65 65		АВ
M4   M4   M4   M4   M4   M4   M4   M4	M66		C
T T T T T T T T T T T T T T T T T T T			E
FIOS THEOMW-NSIG-TMA THEOMW-NSIG-TMA THEOMW-NSIG-TMA THEOMY-NSIG-TMA Signal Name (Specification)	MAS BOM (BODY CONTROL MODULE)  AABA0FB  MAD BODY CONTROL MODULE)  AABA0FB  MAD BODY BODY BODY  MAD BODY BODY  Signal Mane [Specification]  TRUNK/BACK DOOR OPEN SW  CAN-H		F
octor No.  octor Type	ector No.  ector Type  inial Color  of Wire  B C C		G
Command Term No	Tam		Н
BACK DOOR OPENER SWITCH RKOZMGY  Signal Name [Specification]	WRE CS 7 65 7 8 54 7 8 54 7 7 8 54 7 7 8 54 7 7 8 54 7 7 8 54 7 7 8 54 7 7 8 54 7 7 8 54 7 7 8 54 7 7 8 54 7 7 8 54 7 8 54 7 8 54 7 8 54 7 8 54 7 8 54 7 8 54 7 8 54 7 8 54 7 8 54 7 8 54 7 8 54 8 54 8 54 8 54 8 54 8 54 8 54 8 54		J
D188 BACK DC RK02MG	WIRE TO NSOBERY (8)		
Connector No. Connector Name Connector Type Connector Type No. Of Wire 1 P P B 2 B	Connector No.   A Connector No.   A Connector No.   A Connector Type		DLK
			L
BACK DOOR OPENER SYSTEM Somestor Name WIRE TO WIRE  Damestor Type THOSPW  H.S.  A 3 2 1  B 7 6 5  A 9 P  A	WIRE 8 7 6 5 4 3 2 8 7 10 15 14 15 1		M
D181 WIRE TO WIRE TH006FW Signal	MI3 WIRE TO 110 9 9 122 212 13 13 13 13 13 13 13 13 13 13 13 13 13		Ν
BACK DO Connector No Connector Name Connector Type Connector Type Of Wire 3 P P 4 B	Connector No. Connector Type Connector Type 12 [1] 12 [1] 13 Color No. Of Wee		0
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Fail Safe

#### Fail-safe index

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

Display contents of CONSULT	Fail-safe	Cancellation
B2190: NATS ANTENNA AMP	Inhibits engine cranking     Inhibits steering lock unlocking (Intelligent Key unit)     Fuel cut (ECM)	Erase DTC
B2191: DIFFERENCE OF KEY	Inhibits engine cranking     Inhibits steering lock unlocking (Intelligent Key unit)     Fuel cut (ECM)	Erase DTC
B2192: ID DISCORD BCM-ECM	Fuel cut (ECM)	Erase DTC
B2193: CHAIN OF BCM-ECM	Fuel cut (ECM)	Erase DTC
B2194: DISCORD BCM-I-KEY	Inhibits engine cranking     Inhibits steering lock unlocking (Intelligent Key unit)     Fuel cut (ECM)	Erase DTC
B2195: ANTI SCANNING	Inhibits engine cranking     Inhibits steering lock unlocking (Intelligent Key unit)     Fuel cut (ECM)	Erase DTC
B2196: DONGLE NG	Inhibits engine cranking     Inhibits steering lock unlocking (Intelligent Key unit)     Fuel cut (ECM)	Erase DTC

#### REAR WIPER CONTROL

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

When a rear wiper auto stop signal is in the condition listed below, BCM stops power supply to rear wiper after rear wiper is activated for five seconds.

Ignition switch	Rear wiper switch	Rear wiper auto stop signal
ON	OFF	The rear wiper auto stop signal (stop position) cannot be input for 5 seconds.
ON	ON	The rear wiper auto stop signal does not change for 5 seconds.

#### NOTE:

The above operation is repeated when operating the rear wiper switch one minute after the stop of the rear wiper caused by Fail-safe.

#### TURN SIGNAL LAMP CONTROL

BCM detects the turn signal lamp circuit status from the terminal voltage.

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

#### NOTE:

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

#### LIGHT & RAIN SENSOR MALFUNCTION DETECTION FUNCTION

BCM controls the following items when LIGHT & RAIN sensor has a malfunction.

#### Auto Light Control

Headlamp is turned ON.

#### Front Wiper Control

The condition just before the activation of Fail-safe is maintained until the front wiper switch is turned OFF.

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## DTC Inspection Priority Chart

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Priority	DTC
1	U1000: CAN COMM CIRCUIT     U1010: CONTROL UNIT (CAN)
2	<ul> <li>B2190: NATS ANTENNA AMP</li> <li>B2191: DIFFERNCE OF KEY</li> <li>B2192: ID DISCORD BCM-ECM</li> <li>B2193: CHAIN OF BCM-ECM</li> <li>B2194: DISCORD BCM-I-KEY</li> <li>B2195: ANTI SCANNING</li> <li>B2196: DONGLE NG</li> </ul>

DTC Index

#### 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.
- PAST: Displays when there is a malfunction that is detected in the past and stored.
- 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	TI	ME	Fail-safe	Refer to
No DTC is detected. further testing may be required.	_	_	_	_
U1000: CAN COMM CIRCUIT	0	1 - 39	_	BCS-33
U1010: CONTROL UNIT (CAN)	0	1 - 39	_	BCS-34
B2190: NATS ANTENNA AMP	CRNT	PAST	×	With Intelligent Key system <u>SEC-45</u> Without Intelligent Key system <u>SEC-194</u>
B2191: DIFFERENCE OF KEY	CRNT	PAST	×	With Intelligent Key system <u>SEC-47</u> Without Intelligent Key system <u>SEC-196</u>
B2192: ID DISCORD BCM-ECM	CRNT	PAST	×	With Intelligent Key system <u>SEC-48</u> Without Intelligent Key system <u>SEC-197</u>
B2193: CHAIN OF BCM-ECM	CRNT	PAST	×	With Intelligent Key system <u>SEC-50</u> Without Intelligent Key system <u>SEC-199</u>
B2194: DISCORD BCM-I-KEY	CRNT	PAST	×	<u>SEC-51</u>
B2195: ANTI SCANNING	CRNT	PAST	×	With Intelligent Key system <u>SEC-52</u> Without Intelligent Key system <u>SEC-200</u>
B2196: DONGLE NG	CRNT	PAST	×	With Intelligent Key system <u>SEC-53</u> Without Intelligent Key system <u>SEC-201</u>

## SYMPTOM DIAGNOSIS

# DOOR LOCK FUNCTION SYMPTOMS DOOR LOCK AND UNLOCK SWITCH

## DOOR LOCK AND UNLOCK SWITCH: Symptom Table

INFOID:0000000001184043

## DOOR LOCK AND UNLOCK SWITCH OPERATION MALFUNCTION NOTE:

- Before performing the diagnosis in the following table, check "Work Flow". Refer to DLK-281, "Work Flow".
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column
  in this order.

Conditions of Vehicle (Operating Conditions)

- Except driver side, doors are closed.
- Super lock is not in set state.
- Passenger side door is not in anti-hijack state.
- Doors are not locked by Intelligent Key or door request switch.

#### Symptom Table

Symptom	Diagnosis/service procedure		Reference page	
	1.	Check BCM power supply and ground circuit.		DLK-333
Door lock and unlock function does not operate with door lock and unlock switch.	2.	Check door lock and unlock switch.		DLK-335
ale mar deer leek and ameek emiem	3.	Check intermittent incident.		<u>GI-39</u>
	1.	Check door lock and unlock sw	ritch	DLK-335
			Passenger side	DLK-346
Door lock function does not operate with door	2.	Check door switch.	Rear LH	DLK-348
lock and unlock switch.	۷.	Check door switch.	Rear RH	DLK-349
			Back door	DLK-351
	3.	Check intermittent incident.		GI-39
	1.	Check door lock actuator.	Driver side	DLK-357
			Passenger side	DLK-359
Specific door lock does not operate properly.			Rear LH	DLK-360
			Rear RH	DLK-362
	2.	Check intermittent incident.		<u>GI-39</u>
			Driver side	DLK-365
	4		Passenger side	DLK-366
Specific door does not open from inside the vehicle.	1.	Check super lock actuator.	Rear LH	DLK-368
			Rear RH	DLK-369
	Check intermittent incident.		GI-39	
Rear LH and RH door lock actuator does not	1.	Check passenger side anti-hijack relay.		DLK-393
operate.		Check intermittent incident.		<u>GI-39</u>
Door lock and unlock switch indicator does not		Check door lock and unlock switch indicator.		DLK-337
illuminate.	2.	Check Intermittent Incident.		<u>GI-39</u>

## INTELLIGENT KEY

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## **INTELLIGENT KEY: Symptom Table**

INFOID:0000000001184044

[WITH I-KEY & SUPER LOCK]

#### INTELLIGENT KEY OPERATION MALFUNCTION

#### NOTE:

- Before performing the diagnosis in the following table, check "WORK FLOW". Refer to DLK-281, "Work Flow".
- · Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

#### Conditions of Vehicle (Operating Conditions)

- · Door lock and unlock switch operations are normal.
- Emergency key is removed from ignition key cylinder.
- All doors are closed.
- Ignition knob is not pressed.
- No Intelligent keys are inside the vehicle.

#### Symptom Table

Symptom		Diagnosis/service procedure	Reference page	
		Check Intelligent Key unit power supply and	DLK-333	
	2.	Check driver side door switch.		DLK-351
All of the Intelligent Key functions do not	3.	Check key switch.		DLK-353
operate.	4.	Check ignition knob switch.		DLK-355
	5. Check Intelligent Key battery.			DLK-402
		Check intermittent incident.	<u>GI-39</u>	
	1.		Driver side	DLK-357
		Check door lock actuator.	Passenger side	DLK-359
Specific door does not operate properly.			Rear LH	DLK-360
			Rear RH	DLK-362
	2.	Check intermittent incident.	<u>GI-39</u>	
Anti-hijack function does not operate by In-	1.	Check "SELECTIVE UNLOCK FUNCTION" setting in "WORK SUPPORT".		DLK-327
telligent Key.	2.	Check intermittent incident.		<u>GI-39</u>

#### DOOR REQUEST SWITCH

## DOOR REQUEST SWITCH: Symptom Table

INFOID:0000000001184045

## DOOR REQUEST SWITCH OPERATION MALFUNCTION

#### NOTE:

- Before performing the diagnosis in the following table, check "Work Flow". Refer to <u>DLK-281, "Work Flow"</u>.
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

#### Conditions of Vehicle (Operating Conditions)

- Intelligent Key operation is normal.
- "LOCK/UNLOCK BY I-KEY" is ON when setting on CONSULT-III.
- Emergency key is removed from ignition key cylinder.
- Ignition switch is in OFF position.
- Intelligent Keys are not inside vehicle.

#### Symptom Table

Symptom		Diagnosis/service procedure	Reference page
Door lock and unlock do not operate by door	1.	Check "LOCK/UNLOCK BY I-KEY" setting in "WORK SUPPORT".	DLK-327
request switch.	2.	Check intermittent incident.	<u>GI-39</u>
	1.	Check door request switch (driver side).	DLK-339
Door lock/unlock does not operate by request switch (driver side).	2.	Check outside key antenna (driver side).	DLK-375
	3.	Check intermittent incident.	<u>GI-39</u>
Door lock/unlock does not operate by request switch (passenger side).	1.	Check door request switch (passenger side).	DLK-341
	2.	Check outside key antenna (passenger side).	DLK-378
	3.	Check intermittent incident.	<u>GI-39</u>
	1.	Check door request switch (back door).	DLK-342
Door lock/unlock does not operate by request switch (back door).	2.	Check outside key antenna (rear bumper).	DLK-381
Switch (Sack accir).	3.	Check intermittent incident.	<u>GI-39</u>
Anti-hijack function does not operate by driver side door request switch (other door lock func-		Check "SELECTIVE UNLOCK FUNCTION" setting in "WORK SUPPORT".	DLK-327
tions operate).	2.	Check intermittent incident.	<u>GI-39</u>
Passenger side anti-hijack function does not	1.	Check passenger side anti-hijack relay.	DLK-393
operate by passenger side door request switch (other door lock functions operate).		Check intermittent incident.	<u>GI-39</u>

## KEY REMINDER

## **KEY REMINDER: Symptom Table**

INFOID:0000000001184046

## KEY REMINDER OPERATION MALFUNCTION

#### NOTE:

- Before performing the diagnosis in the following table, check "WORK FLOW". Refer to <a href="DLK-281">DLK-281</a>, "Work Flow".
- Understand the operation when does it work, refer to <u>DLK-297, "KEY REMINDER: System Description"</u>.
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

#### Conditions of Vehicle (Operating Conditions)

• Request switch operation and door lock and unlock switch operation are normal.

#### Symptom Table

Symptom	Diagnosis/service proced	Reference page		
Key reminder operation does not operate properly.		Driver side	DLK-345	
	Check door switch.	Passenger side	DLK-346	
		Rear LH	DLK-348	
		Rear RH	DLK-349	
		Back door	par RH DLK-349 ack door DLK-351 strument DLK-384	
		Instrument center	DLK-384	
	Check inside key antenna.	Console <u>DLK-38</u>		
		Rear seat	DLK-390	
	Check Intermittent Incident.		GI-39	

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#### **AUTO DOOR LOCK**

**AUTO DOOR LOCK: Symptom Table** 

INFOID:0000000001184047

## AUTO DOOR LOCK OPERATION MALFUNCTION

#### NOTE:

- "AUTO RELOCK TIMER" is not OFF when setting on CONSULT-III.
- Before performing the diagnosis in the following table, check "Work Flow". Refer to <u>DLK-281, "Work Flow"</u>.
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- Understand the operation when does it work, refer to <u>DLK-300, "AUTO DOOR LOCK: System Description"</u>.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

Request switch operation and door lock and unlock switch operation are normal.

#### Symptom Table

Symptom	Diagnosis/service procedure	Reference page
Auto door lock operation does not operate properly.	Check "AUTO RELOCK TIMER" setting in "WORK SUP- PORT".	DLK-327
	2. Check ignition knob switch.	DLK-355
	3. Check key switch.	DLK-353
	4. Check Intermittent Incident.	<u>GI-39</u>

#### VEHICLE SPEED SENSING AUTO DOOR LOCK

#### VEHICLE SPEED SENSING AUTO DOOR LOCK: Symptom Table

INFOID:0000000001184048

# VEHICLE SPEED SENSING AUTO DOOR LOCK OPERATION MALFUNCTION NOTE:

- Before performing the diagnosis in the following table, check "WORK FLOW". Refer to <u>DLK-281, "Work Flow".</u>
- Understand the operation when does it work, refer to <u>DLK-303</u>, "VEHICLE SPEED SENSING AUTO DOOR <u>LOCK</u>: System Description".
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

Request switch operation and door lock and unlock switch operation are normal.

#### Symptom Table

Symptom	Diagnosis/service procedure	Reference page
Vehicle speed sensing auto door lock operation does not operate.	Check vehicle speed signal.	DLK-401
	Check Intermittent Incident.	<u>GI-39</u>

#### **BACK DOOR OPEN FUNCTION SYMPTOMS**

< SYMPTOM DIAGNOSIS >

[WITH I-KEY & SUPER LOCK]

# BACK DOOR OPEN FUNCTION SYMPTOMS BACK DOOR OPENER SWITCH

BACK DOOR OPENER SWITCH: Symptom Table

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# BACK DOOR OPENER FUNCTION MALFUNCTION NOTE:

- Before performing the diagnosis in the following table, check "WORK FLOW". Refer to <u>DLK-281. "Work Flow"</u>.
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

- Door lock function is normal.
- Vehicle speed is less than 5 km/h (3MPH).
- All doors are unlocked.

#### Symptom Table

Symptom	Diagnosis/service procedure	Reference page
Back door opener function does not operate by back door opener switch.	Check back door opener switch.	DLK-373
	2. Check vehicle speed signal.	DLK-401
	Check back door opener actuator.	DLK-371
	4. Check Intermittent Incident.	<u>GI-39</u>

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## WARNING FUNCTION SYMPTOMS **BUZZER (COMBINATION METER)**

#### BUZZER (COMBINATION METER): Symptom Table

INFOID:0000000001184050

[WITH I-KEY & SUPER LOCK]

#### BUZZER (COMBINATION METER) OPERATION MALFUNCTION NOTE:

- Before performing the diagnosis in the following table, check "WORK FLOW". Refer to DLK-281, "Work Flow".
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following "symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

#### Conditions of Vehicle (Operating Conditions)

- Warning chime functions operating condition is extremely complicated, during operating confirmations, reconfirm the list above twice in order to ensure proper operation. Refer to DLK-314, "System Description".
- Door lock function is normal.

#### Symptom Table

Symptom			Diagnosis/service procedure	Reference page
Ignition knob return forgotten warning.does not		1.	Check buzzer (combination meter).	DLK-397
operate properly.		2.	Check Intermittent Incident.	<u>GI-39</u>
Ignition key warning does not operate properly.		1.	Check buzzer (combination meter).	DLK-397
		2.	Check Intermittent Incident.	<u>GI-39</u>
OFF position warning does not operate properly.		1.	Check buzzer (combination meter).	DLK-397
		2.	Check Intermittent Incident.	<u>GI-39</u>
Take away warning does		1.	Check buzzer (combination meter).	DLK-397
not operate properly.	window	2.	Check Intermittent Incident.	<u>GI-39</u>

### INTELLIGENT KEY WARNING BUZZER

#### INTELLIGENT KEY WARNING BUZZER: Symptom Table

INFOID:0000000001184051

#### INTELLIGENT KEY WARNING BUZZER OPERATION MALFUNCTION NOTE:

- Before performing the diagnosis in the following table, check "WORK FLOW". Refer to <u>DLK-281, "Work</u> Flow".
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following "symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

#### **Conditions of Vehicle (Operating Conditions)**

- Warning chime functions operating condition is extremely complicated, during operating confirmations, reconfirm the list above twice in order to ensure proper operation. Refer to <u>DLK-314, "System Description"</u>.
- · Door lock function is normal.

#### Symptom Table

Symptom			Diagnosis/service procedure	Reference page
Take away warning does	Any door open to all	1.	Check Intelligent Key warning buzzer.	DLK-395
not operate properly.	door close.	2.	Check Intermittent Incident.	<u>GI-39</u>

#### WARNING FUNCTION SYMPTOMS

#### < SYMPTOM DIAGNOSIS >

#### [WITH I-KEY & SUPER LOCK]

Symptom			Diagnosis/service procedure	Reference page
Door lock operation warning chime does not operate properly.	Request switch operation	1.	Check Intelligent Key warning buzzer.	DLK-395
		2.	Check Intermittent Incident.	<u>GI-39</u>
	Intelligent Key button operation	1.	Check Intelligent Key warning buzzer.	DLK-395
		2.	Check Intermittent Incident.	<u>GI-39</u>

WARNING LAMP

WARNING LAMP: Symptom Table

INFOID:0000000001184052

#### WARNING LAMP OPERATION MALFUNCTION

#### NOTE:

- Before performing the diagnosis in the following table, check "WORK FLOW". Refer to DLK-281, "Work Flow".
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

- Warning chime functions operating condition is extremely complicated, during operating confirmations, reconfirm the list above twice in order to ensure proper operation. Refer to <u>DLK-314, "System Description"</u>.
- Door lock function is normal.

#### Symptom Table

Symptom		Diagnosis/service procedure		Reference page
OFF position warning does not operate properly.		1.	Check LOCK warning lamp. (RED blinking)	DLK-399
		2.	Check Intermittent Incident.	<u>GI-39</u>
	Any door open to all door close.	1.	Check Key warning lamp. (RED blinking)	DLK-399
Take away warning does not operate properly.		2.	Check Intermittent Incident.	<u>GI-39</u>
	Door is open	1.	Check Key warning lamp. (RED blinking)	DLK-399
		2.	Check Intermittent Incident.	<u>GI-39</u>
	Take away through window	1.	Check Key warning lamp. (RED blinking)	DLK-399
		2.	Check Intermittent Incident.	<u>GI-39</u>
Intelligent Key low battery warning dose not operate properly.		1.	Check "LOW BAT OF KEY FOB WARN" setting in "WARK SUPPORT".	DLK-327
		2.	Check Intelligent Key battery.	DLK-402
		3.	Check KEY warning lamp. (GREEN blinking)	DLK-398
		4.	Check Intermittent Incident.	<u>GI-39</u>

#### **BACK DOOR**

**BACK DOOR: Symptom Table** 

INFOID:0000000001184053

## BACK DOOR OPEN WARNING OPERATION MALFUNCTION

#### NOTE:

- Before performing the diagnosis in the following table, check "Work Flow". Refer to <u>DLK-281, "Work Flow"</u>.
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

Door lock function and back door opener function is normal.

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## **WARNING FUNCTION SYMPTOMS**

## < SYMPTOM DIAGNOSIS >

[WITH I-KEY & SUPER LOCK]

Symptom Table

Symptom	Diagnosis/service procedure	Reference page
Back door open warning does not operate properly.	Check buzzer (combination meter).	DLK-397
Back door open warning does not operate properly.	2. Check intermittent incident.	<u>GI-39</u>

#### HAZARD AND BUZZER REMINDER FUNCTION SYMPTOMS

< SYMPTOM DIAGNOSIS >

[WITH I-KEY & SUPER LOCK]

# HAZARD AND BUZZER REMINDER FUNCTION SYMPTOMS HAZARD WARNING LAMP

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HAZARD WARNING LAMP : Symptom Table

#### HAZARD REMINDER OPERATION MALFUNCTION

#### NOTE:

- Before performing the diagnosis in the following table, check "Work flow". Refer to DLK-281, "Work Flow".
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

- "HAZARD ANSWER BACK" is ON when setting on CONSULT-III.
- Door lock function is normal.

Symptom Table

Symptom	Diagnosis/service procedure	Reference page
Hazard reminder operation does not operate	Check setting of hazard reminder with CONSULT-III.	DLK-327
properly.	Check intermittent incident.	<u>GI-39</u>

#### INTELLIGENT KEY WARNING BUZZER

#### INTELLIGENT KEY WARNING BUZZER: Symptom Table

INFOID:0000000001184054

#### **BUZZER REMINDER OPERATION MALFUNCTION**

#### NOTE:

- Before performing the diagnosis in the following table, check "Work flow". Refer to DLK-281, "Work Flow".
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

- "LOCK/UNLOCK BY I-KEY" is ON when setting on CONSULT-III.
- "ANSWER BACK WITH I-KEY LOCK", "ANSWER BACK WITH I-KEY UNLOCK" and "ANSWER BACK FUNCTION" are ON when setting on CONSULT-III.
- · Door lock function is normal.

#### Symptom Table

Symptom		Diagnosis/service procedure	Reference page
Buzzer reminder operation dose not operate	1.	Check setting of buzzer reminder with CONSULT-III.	DLK-327
properly.	2.	Check intermittent incident.	<u>GI-39</u>

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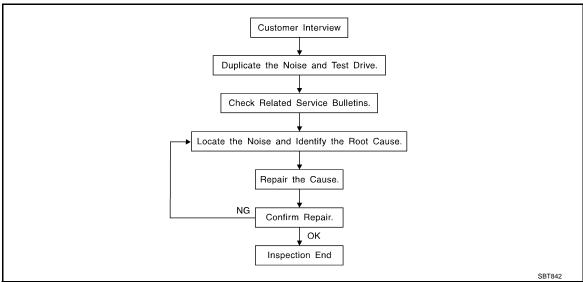
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### SQUEAK AND RATTLE TROUBLE DIAGNOSES

Work Flow



#### **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 of the customer's comments; refer to <a href="DLK-215">DLK-215</a>, "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 a test drive 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 [WITH I-KEY & SUPER LOCK] < 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: Α 1) Close a door. 2) Tap or push/pull around the area where the noise appears to be coming from. 3) Rev the engine. В 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. LOCATE THE NOISE AND IDENTIFY THE ROOT CAUSE D 1. Narrow down the noise to a general area. To help pinpoint the source of the noise, use a listening tool (Engine Ear or mechanics stethoscope). Е 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 fastener 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 placing a piece of paper between components that you suspect are causing the noise. Н looking for loose components and contact marks. Refer to <u>DLK-213</u>, "Inspection Procedure". 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 are available through your authorized Nissan Parts Department. **CAUTION:** Do not use excessive force as many components are constructed of plastic and may be damaged. NOTE: URETHANE PADS Insulates connectors, harness, etc. INSULATOR (Foam blocks) Insulates components from contact. Can be used to fill space behind a panel. INSULATOR (Light foam block) FELT CLOTHTAPE Used to insulate where movement does not occur. Ideal for instrument panel applications. The following materials, not available through NISSAN Parts Department, can also be used to repair

squeaks and rattles.

UHMW(TEFLON) TAPE

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

SILICONE GREASE

Used in place 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.

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#### SQUEAK AND RATTLE TROUBLE DIAGNOSES

#### < SYMPTOM DIAGNOSIS >

[WITH I-KEY & SUPER LOCK]

#### Inspection Procedure

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

#### INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

- Cluster lid A and instrument panel
- 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 silicon 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
- 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:

- Finisher and inner panel making a slapping noise
- 2. Inside handle escutcheon to door finisher
- 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 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 dumpers out of adjustment
- Trunk lid striker out of adjustment
- 3. Trunk lid torsion bars knocking together
- A loose license plate or bracket

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:

- Sunroof lid, rail, linkage or seals making a rattle or light knocking noise
- 2. Sunvisor shaft shaking in the holder
- Front or rear windshield touching headlining 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.

#### SQUEAK AND RATTLE TROUBLE DIAGNOSES

#### < SYMPTOM DIAGNOSIS >

[WITH I-KEY & SUPER LOCK]

#### SEATS

When isolating seat noise it is 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
- A squeak between the seat pad cushion and frame
- 3. 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
- 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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Diagnostic Worksheet

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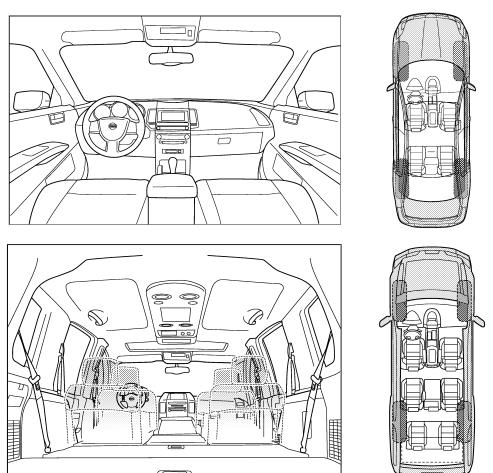
## SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

#### Dear Nissan Customer:

We are concerned about your satisfaction with your Nissan vehicle. Repairing a squeak or rattle sometimes can be very difficult. To help us fix your Nissan 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.

## 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.

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## **SQUEAK AND RATTLE TROUBLE DIAGNOSES**

SQUEAK & RATTLE DIAGNOSTIC WORKSHEET - page 2

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	noise occurs:			
II. WHEN DOES IT OCCUR? (please of	check the box	es that ap	ply)	
<ul><li>☐ anytime</li><li>☐ 1st time in the morning</li><li>☐ only when it is cold outside</li><li>☐ only when it is hot outside</li></ul>	☐ wher	n it is rain or dusty co	it in the ra ing or wet onditions	
III. WHEN DRIVING:	IV. WHA	T TYPE	OF NOIS	E
☐ through driveways ☐ over rough roads ☐ over speed bumps	creal	k (like wa	lking on a	es on a clean floor) n old wooden floor) by rattle)
☐ only about mph ☐ on acceleration ☐ coming to a stop	<ul> <li>□ rattle (like shaking a baby rattle)</li> <li>□ knock (like a knock at the door)</li> <li>□ tick (like a clock second hand)</li> <li>□ thump (heavy, muffled knock noise)</li> </ul>			
☐ on turns: left, right or either (circle) ☐ with passengers or cargo ☐ other:	☐ buzz		umble bee	·
after driving miles or r	minutes			
TO BE COMPLETED BY DEALERSH	IP PERSONN	IEL		
TO BE COMPLETED BY DEALERSH Test Drive Notes:	IP PERSONN	IEL		
	IP PERSONN	YES	NO	Initials of person
	IP PERSONN		NO	Initials of person performing
Vehicle test driven with customer - Noise verified on test drive			NO	performing
Vehicle test driven with customer - Noise verified on test drive - Noise source located and repaired	firm repair	YES		performing

## **PRECAUTION**

#### **PRECAUTIONS**

Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TEN-SIONER"

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

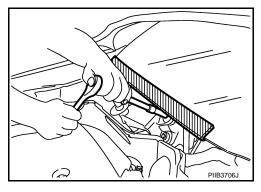
#### **WARNING:**

- 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 SRS 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.

#### Procedure without Cowl Top Cover

INFOID:0000000001184060

When performing the procedure after removing cowl top cover, cover the lower end of windshield with urethane, etc.



## Steering Wheel Rotation after Battery Disconnect

NFOID:000000000118406

#### NOTE:

- Before removing and installing any control units, first turn the push-button ignition switch to the LOCK position, then disconnect both battery cables.
- After finishing work, confirm that all control unit connectors are connected properly, then re-connect both battery cables.
- Always use CONSULT-III to perform self-diagnosis as a part of each function inspection after finishing work.
   If a DTC is detected, perform trouble diagnosis according to self-diagnosis results.

This vehicle is equipped with a push-button ignition switch and a steering lock unit.

If the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.

If turning the steering wheel is required with the battery disconnected or discharged, follow the procedure below before starting the repair operation.

#### **OPERATION PROCEDURE**

Connect both battery cables.

#### NOTE:

- Supply power using jumper cables if battery is discharged.
- 2. Carry the Intelligent Key or insert it to the key slot and turn the push-button ignition switch to ACC position. (At this time, the steering lock will be released.)

#### **PRECAUTIONS**

< PRECAUTION >

#### [WITH I-KEY & SUPER LOCK]

- 3. Disconnect both battery cables. The steering lock will remain released with both battery cables disconnected and the steering wheel can be turned.
- 4. Perform the necessary repair operation.
- 5. When the repair work is completed, re-connect both battery cables. With the brake pedal released, turn the push-button ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the push-button ignition switch is turned to LOCK position.)
- 6. Perform self-diagnosis check of all control units using CONSULT-III.

Work

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

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## **PREPARATION**

## **PREPARATION**

## **Commercial Service Tools**

INFOID:0000000001184063

Tool name		Description
Engine ear	SIIA0995E	Locating the noise
Remover tool	PIIB7923J	Remove the clips, pawls, and metal clips
Power tool	PIIB1407E	

YES

>> GO TO 9.

#### ON-VEHICLE MAINTENANCE Α PRE-INSPECTION FOR DIAGNOSTIC Basic Inspection INFOID:0000000001184064 BASIC INSPECTION ${f 1}$ .CHECK POWER DOOR LOCK AND UNLOCK SWITCH OPERATION Check door lock and unlock operation by operating door lock and unlock switch. Is the inspection result normal? D YES >> GO TO 2. >> Refer to DLK-471, "DOOR LOCK AND UNLOCK SWITCH: Symptom Table". NO 2.CHECK INTELLIGENT KEY OPERATION Е Check door lock and unlock operation by operating the Intelligent Key remote control button. Is the inspection result normal? F YES >> GO TO 3. >> Refer to DLK-472, "INTELLIGENT KEY: Symptom Table". NO 3.check door request switch operation Check door lock and unlock operation by operating door request switch. Is the inspection result normal? YFS >> GO TO 4. Н NO >> Refer to DLK-472, "DOOR REQUEST SWITCH: Symptom Table". 4.CHECK KEY REMINDER OPERATION Check key reminder operation. Refer to DLK-297, "KEY REMINDER: System Description". Is the inspection result normal? YES >> GO TO 5. NO >> Refer to DLK-473, "KEY REMINDER: Symptom Table". ${f 5.}$ CHECK AUTO DOOR LOCK OPERATION DLK Check auto door lock operation. Refer to DLK-300, "AUTO DOOR LOCK: System Description". Is the inspection result normal? YES >> GO TO 6. NO >> Refer to DLK-474, "AUTO DOOR LOCK: Symptom Table". O.CHECK VEHICLE SPEED SENSING AUTO DOOR LOCK OPERATION Check vehicle speed sensing auto door lock operation. Refer to DLK-303, "VEHICLE SPEED SENSING AUTO DOOR LOCK: System Description". Is the inspection result normal? YES >> GO TO 7. Ν NO >> Refer to DLK-474, "VEHICLE SPEED SENSING AUTO DOOR LOCK: Symptom Table". 7 -CHECK BACK DOOR OPENER OPERATION Check back door opener operation by operating the back door opener switch. Is the inspection result normal? YES >> GO TO 8. Р NO >> Refer to DLK-475, "BACK DOOR OPENER SWITCH: Symptom Table". 8. CHECK WARNING FUNCTION Check warning function. Refer to DLK-314, "System Description". Is the inspection result normal?

#### PRE-INSPECTION FOR DIAGNOSTIC

#### < ON-VEHICLE MAINTENANCE >

[WITH I-KEY & SUPER LOCK]

NO [Buzzer (combination meter)]>> Refer to <u>DLK-476, "BUZZER (COMBINATION METER) : Symptom Table"</u>.

NO (Intelligent Key warning buzzer)>> Refer to <u>DLK-476, "INTELLIGENT KEY WARNING BUZZER : Symptom Table".</u>

NO (Warning lamp)>> Refer to <u>DLK-477</u>, "WARNING LAMP: Symptom Table".

NO (Back door open warning)>> Refer to DLK-477, "BACK DOOR: Symptom Table".

## 9. CHECK HAZARD AND BUZZER REMINDER FUNCTION

Check hazard and buzzer reminder function by Intelligent Key or request switch. Refer to <u>DLK-320, "System Description"</u>.

#### Is the inspection result normal?

YES >> GO TO 10.

NO (Hazard warning lamp)>> Refer to <u>DLK-479</u>, "INTELLIGENT KEY WARNING BUZZER: Symptom Table".

NO (Intelligent Key warning buzzer)>> Refer to <u>DLK-479</u>, "HAZARD WARNING LAMP: Symptom Table".

10.CHECK OUT

CHECK OUT.

>> INSPECTION END

## **ON-VEHICLE REPAIR**

**HOOD** 

**HOOD ASSEMBLY** 

**HOOD ASSEMBLY: Exploded View** 

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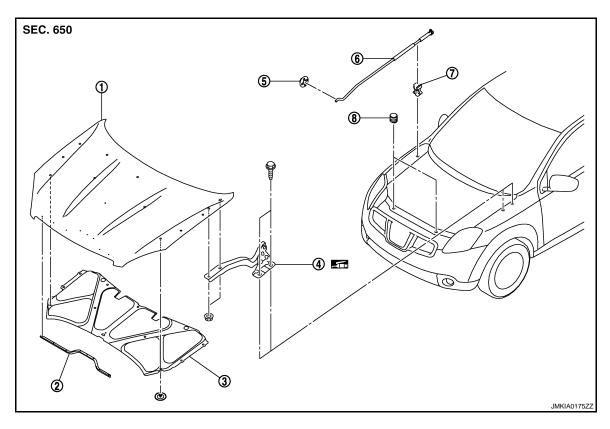
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#### **REMOVAL**



- 1. Hood assembly
- 4. Hood hinge
- 7. Clamp

- 2. Hood sealing rubber
- 5. Grommet
- 8. Hood bumper rubber

Refer to GI-4, "Components" for symbols in the figure.

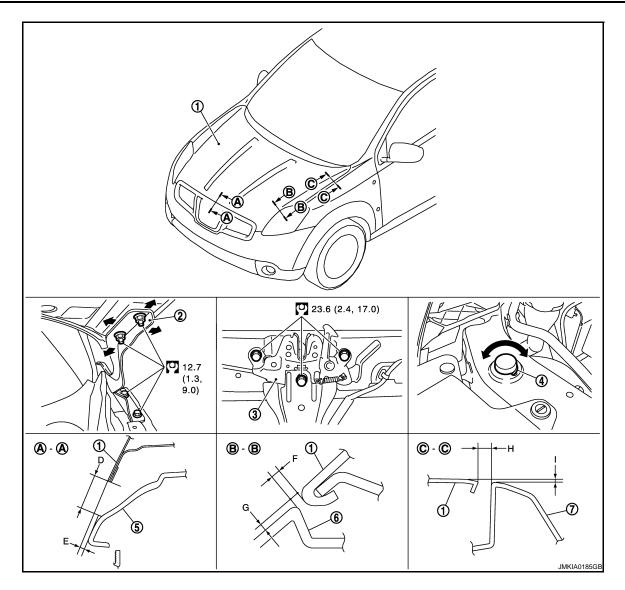
- B. Hood insulator
- 6. Hood support rod

### **ADJUSTMENT**

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Hood assembly

- 2. Hood hinge
- 4. Hood bumper rubber
- 5. Front grille

- 3. Hood lock assembly
- 6. Front combination lamp

INFOID:0000000001538423

7. Front fender

Refer to GI-4, "Components" for symbols in the figure.

#### **HOOD ASSEMBLY: Removal and Installation**

#### **REMOVAL**

Support the hood lock assembly with the proper material to prevent it from falling.

#### **WARNING:**

Bodily injury may occur if no supporting rod is holding the hood open when removing the hood stay.

Remove the hood hinge mounting nuts on the hood to remove the hood assembly. CAUTION:

## Perform work with 2 workers, because of its heavy weight.

- 3. Remove the following parts after removing the hood assembly.
  - Hood insulator
  - Hood sealing rubber

#### **INSTALLATION**

Install in the reverse order of removal.

**CAUTION:** 

- · Perform work with 2 workers, because of its heavy weight.
- Before installing the hood hinge, apply anticorrosive agent onto the mounting surface of the vehicle body.
- After installing, perform hood fitting adjustment. Refer to <u>DLK-827</u>, "HOOD ASSEMBLY: Adjust-ment".

**HOOD ASSEMBLY: Adjustment** 

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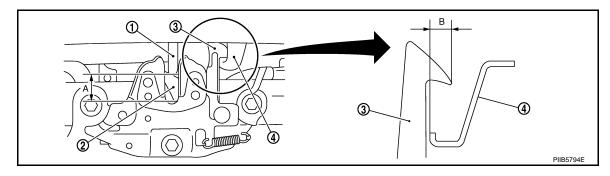
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F	ortion	Standard	Right/left Clearance (MAX)		
Hood – Front bumper	A – A	D	Clearance	5.2 – 9.2 mm (0.205 – 0.362 in)	2.0 mm (0.079 in)
		Е	Surface height	- 0.2 – 3.8 mm (- 0.008 – 0.150 in)	2.0 mm (0.079 in)
Hood – Front combination lamp	B – B	F	Clearance	3.7 – 7.7 mm (0.140 – 0.303 in)	2.0 mm (0.079 in)
		G	Surface height	- 2.3 – 2.3 mm (- 0.091 – 0.091 in)	2.3 mm (0.091 in)
Hood – Front fender	C – C	Н	Clearance	3.9 – 5.9 mm (0.154 – 0.232 in)	1.5 mm (0.059 in)
		ı	Surface height	- 1.0 – 1.0 mm (- 0.039 – 0.039 in)	1.5 mm (0.059 in)

- Check the clearance and the surface height between the hood and each part by visualy and touching. (Fitting standard dimension in the table below should be satisfied.)
- In case any parts are out of specification, adjust them according to the procedures shown below.
- 3. Remove the hood lock and adjust the height by rotating the bumper rubber until the hood becomes 1 to 1.5 mm (0.039 to 0.059 in) lower than the fender.
- 4. Temporarily tighten the hood lock, and position by engaging it with the hood striker. Check the lock and striker for looseness and adjust the clearance and evenness with the striker to satisfy the specification.
- 5. Adjust A and B shown in the figure to the following value with hood's own weight by dropping it from approximately. 200 mm (7.874 in) height or by pressing the hood lightly [approximately. 29 N (3 kg)].



Hood striker

- 2. Primary latch
- 3. Secondary striker

Secondary latch

A : 20.0 mm (0.787 in) B : 6.8 mm (0.268 in)

6. After adjustment tighten lock bolts to the specified torque.

HOOD HINGE

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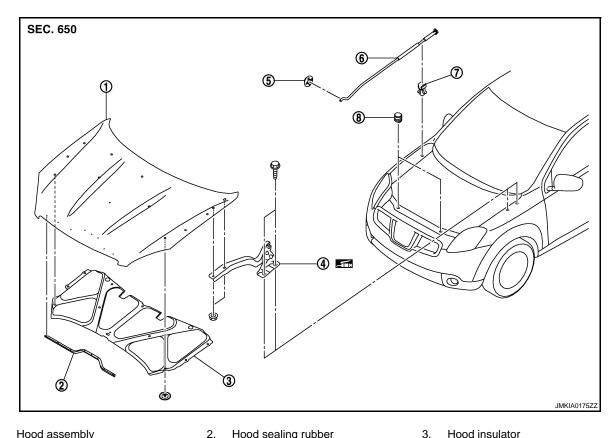
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**HOOD HINGE: Exploded View** 

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- Hood assembly
- 4. Hood hinge
- 7. Clamp

Hood sealing rubber

Grommet

- 8. Hood bumper rubber

Refer to GI-4, "Components" for symbols in the figure.

### **HOOD HINGE: Removal and Installation**

INFOID:0000000001538426

Hood support rod

#### **REMOVAL**

- Remove the hood assembly. Refer to <u>DLK-826</u>, "HOOD ASSEMBLY: Removal and Installation".
- Remove the front fender. Refer to <u>DLK-835</u>, "Removal and Installation".
- Remove the hood hinge mounting bolts, and then remove the hood hinge.

5.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

- · After installation, apply touch-up paint (the body color) onto the head of the hinge mounting bolts and nuts.
- Before installation of hood hinge, apply anticorrosive agent onto the mounting surface of the vehicle
- After installation, perform hood fitting adjustment. Refer to DLK-827, "HOOD ASSEMBLY: Adjust-

#### HOOD SUPPORT ROD

**HOOD SUPPORT ROD: Exploded View** 

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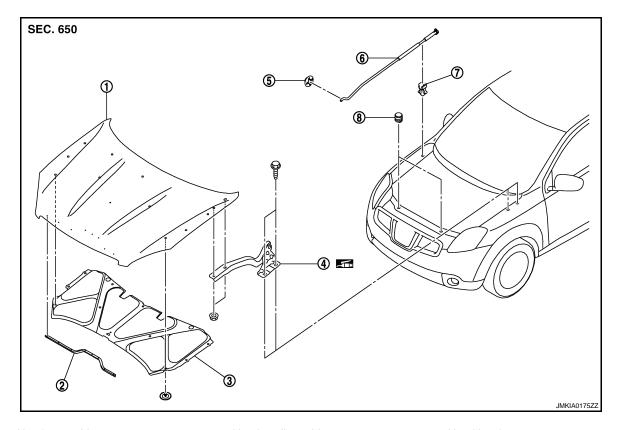
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- Hood assembly
- Hood hinge 4.
- Clamp 7.

- Hood sealing rubber
- 5. Grommet
- 8. Hood bumper rubber
- 3. Hood insulator
- Hood support rod

Refer to GI-4, "Components" for symbols in the figure.

#### **HOOD SUPPORT ROD:** Removal and Installation

INFOID:0000000001538428

#### **REMOVAL**

Support the hood lock assembly with the proper material to prevent it from falling.

Bodily injury may occur if no supporting rod is holding the hood open when removing the hood

2. Remove the hood support rod from the grommet.

**INSTALLATION** 

Install in the reverse order of removal.

HOOD LOCK CONTROL

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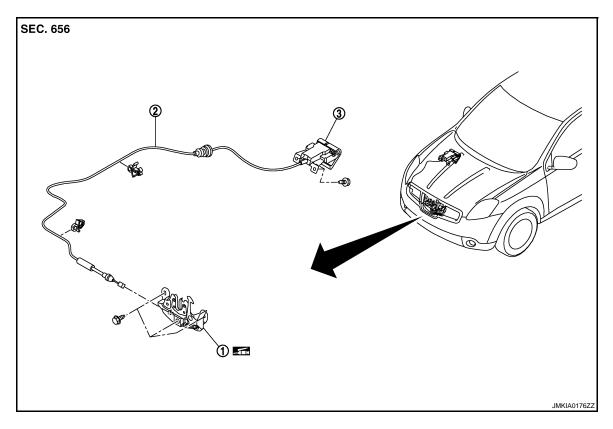
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**HOOD LOCK CONTROL: Exploded View** 

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- Hood lock assembly
- 2. Hood lock control cable
- Hood lock opener

Refer to GI-4, "Components" for symbols in the figure.

#### **HOOD LOCK CONTROL**: Removal and Installation

INFOID:0000000001538430

#### **REMOVAL**

- 1. Remove the hood lock opener mounting bolts, and then remove the hood lock opener.
- 2. Remove the front bumper fascia. Refer to EXT-11, "Removal and Installation".
- 3. Remove the hood lock mounting bolts, and then remove the hood lock.
- 4. Remove the fender protector. Refer to EXT-22, "Removal and Installation".
- 5. Disconnect the hood lock cable from hood lock, and clip it from the hoodledge.
- Remove the grommet on the dash lower panel, and pull the hood lock control cable toward the passenger compartment.

#### **CAUTION:**

While pulling, do not to damage (peeling) the outside of the hood lock control cable.

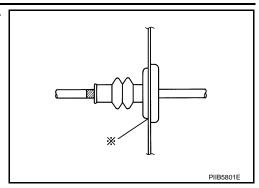
#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

• Do not to bend the cable too much, keeping the radius 100 mm (3.937 in) or more.

Check that the cable is not offset from the positioning grommet, and apply the sealant to the grommet (at \*mark) properly.



Check that the hood lock control cable is properly engaged with the hood lock.

After installation, perform hood fitting adjustment. Refer to <u>DLK-827, "HOOD ASSEMBLY: Adjust-ment"</u>.

• After installation, perform the hood lock control inspection. Refer to <u>DLK-831, "HOOD LOCK CONTROL</u>: Inspection".

#### **HOOD LOCK CONTROL**: Inspection

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#### NOTE:

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

- 1. Check that the secondary latch is properly engaged with the secondary striker [6.8 mm (0.268 in) shown in the figure] by hood weight.
- 2. While operating the hood opener, carefully check that the front end of the hood is raised by approximately 20.0 mm (0.787 in). Also check that the hood opener returns to the original position.
- 3. Check that the hood opener operating is condition 49 N (5.0 kg) or below.
- Install so that static closing face of hood is 94 − 490 N·m (9.6 − 50.0 kg-m).
   NOTE:
  - Exert vertical force on right side and left side of hood lock.
  - Do not press simultaneously both sides.
- 5. Check the hood lock lubrication condition. If necessary, apply body grease to the hood lock.

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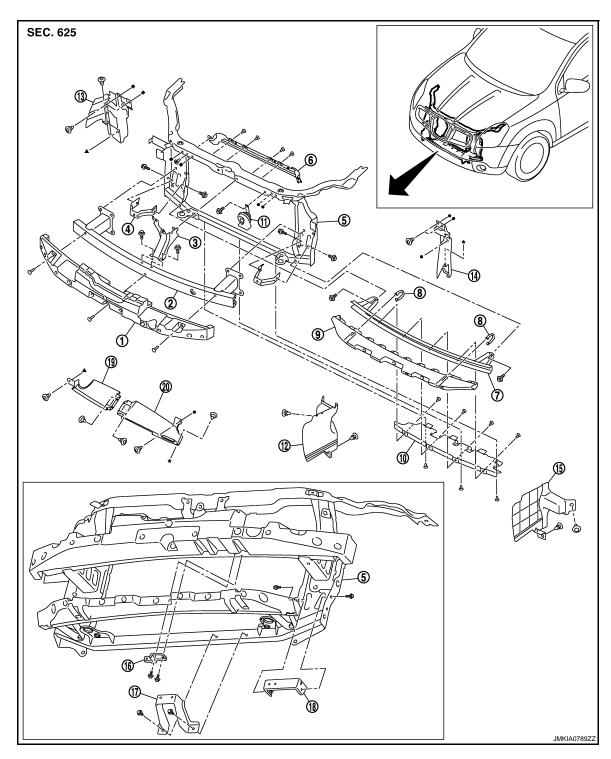
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## RADIATOR CORE SUPPORT

Exploded View



- 1. Energy absorber
- 4. Intercooler bracket (with K9K engine models)
- 7. Apron bracket assembly
- 10. Front air guide lower
- 13. Front air guide side RH
- 2. Bumper reinforcement
- 5. Radiator core support assembly
- 8. Fastener
- 11. Horn assembly
- 14. Front air guide side LH
- 3. Hood lock support stay
- 6. Upper air dam
- 9. Energy absorber lower
- 12. Front air guide side lower RH
- 15. Front air guide side lower LH

#### RADIATOR CORE SUPPORT

#### < ON-VEHICLE REPAIR >

#### [WITH I-KEY & SUPER LOCK]

- 16. Oil cooler bracket upper
- 17. Oil cooler bracket lower
- 18. Oil cooler bracket side

- 19. Front air guide RH
- 20. Front air guide LH

#### Removal and Installation

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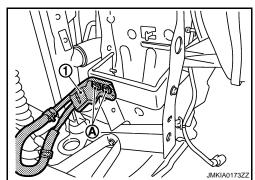
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#### REMOVAL

- Remove the front fillet molding. Refer to <u>EXT-23, "Removal and Installation"</u>.
- Remove the front grille. Refer to <u>EXT-17</u>, "Removal and Installation".
- Remove the front bumper fascia and the energy absorber. Refer to EXT-11, "Removal and Installation".
- 4. Remove the energy absorber (upper and lower). Refer to EXT-11, "Removal and Installation".
- 5. Remove the air cleaner duct. Refer to EM-28, "Removal and Installation".
- 6. Remove the all air guides mounting clips, and then remove the all air guides.
- 7. Remove the front combination lamp (LH/RH). Refer to EXL-175, "Removal and Installation".
- 8. Disconnect the hood lock control cable clamp, and then remove the hood lock assembly. Refer to <u>DLK-830</u>, "HOOD LOCK CONTROL: Removal and Installation".
- 9. Remove the hood lock stay mounting bolts, and then remove the hood lock stay.
- 10. Remove the bumper reinforcement. Refer to EXT-11, "Removal and Installation".
- 11. Remove the hood switch (with theft warning systems). Refer to SEC-<u>SEC-166. "Removal and Installation"</u>.
- 12. Remove the crush zone sensor. Refer to <a href="SR-14">SR-14</a>, "Removal and Installation".
- 13. Remove the horn. Refer to <a href="https://example.com/HRN-5">HRN-5</a>, "Removal and Installation".
- 14. Remove the ambient sensor. Refer to <a href="VTL-23">VTL-23</a>, "Removal and Installation".
- 15. Remove the radiator mounting bracket (LH/RH). Refer to CO-13, "Removal and Installation".
- 16. Remove the Intelligent Key warning buzzer (with Intelligent Key systems). Refer to <a href="DLK-275">DLK-275</a>, "Removal and Installation".
- 17. Remove the charge air cooler assembly (with K9K and M9R engine models). Refer to <a href="EM-267">EM-267</a>, "Removal and Installation".
- 18. Remove the A/T fluid cooler assembly and the A/T fluid cooler bracket (with A/T models only). Refer to TM-563, "FLUID COOLER: Removal and Installation".
- Remove the A/T fluid cooler pipe bracket (1) mounting bolts (A) (with A/T models only).



20. Remove the washer tank. Refer to WW-99, "Removal and Installation".

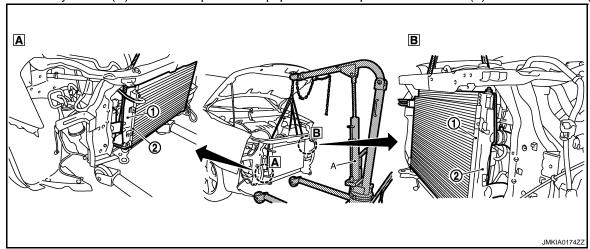
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21. Use the baby crane (A) or another piece of equipment to suspend the radiator (1) and condenser (2).



- 22. Remove the radiator core support assembly mounting bolts, and draw out the radiator core support assembly to the front of the vehicle.
- 23. Remove the radiator core support assembly.
- 24. Remove the following parts after removing the radiator core support assembly.
  - Inlet tube bracket (with K9K and M9R engine models)
  - Intercooler bracket (with K9K and M9R engine models)
  - Apron reinforcement bracket

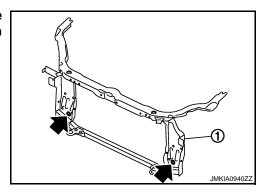
#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

After installation, refill the following parts.

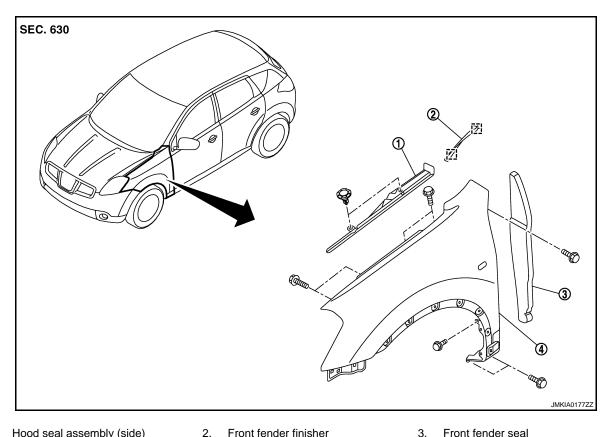
 Radiator core support (1) must be aligned to engine side member vartically. Use round pin to locate through both holes.



- A/T fluid. Refer to TM-530, "Changing".
- Engine coolant. Refer to <u>CO-9, "Refilling"</u>.

## FRONT FENDER

**Exploded View** INFOID:0000000001538434



- Hood seal assembly (side)
  - Front fender
- : Metal clip

Removal and Installation

INFOID:0000000001538435

#### **REMOVAL**

- Remove the outer fender protector. Refer to EXT-22, "Removal and Installation".
- Remove the inner fender protector. Refer to <u>EXT-22</u>, "Removal and Installation".
- Remove the side turn signal lamp. Refer to EXL-181, "Removal and Installation".
- Remove the front bumper fascia. Refer to <u>EXT-11</u>, "Removal and Installation".
- Remove the front combination lamp.
  - XENON TYPE: EXL-175, "Removal and Installation".
  - HALOGEN TYPE: EXL-329, "Removal and Installation".
- 6. Remove the mounting clips and remove hoodledge cover.
- 7. Remove the center mudguard. Refer to EXT-28, "Removal and Installation".

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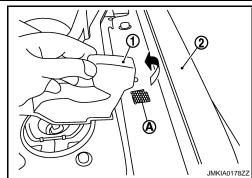
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#### < ON-VEHICLE REPAIR >

8. Peel away the double-faced adhesive tape (A) of the front fender seal (1) from the front fender (2).



9. Remove the mounting bolts and remove the front fender.

#### **CAUTION:**

Use a shop cloth to protect the body from being damaged during removal.

- 10. Remove the following parts after removing the front fender.
  - Front fender seal.
  - Bumper side bracket. Refer to EXT-11, "Exploded View".

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

- Replace the double-faced adhesive tape on the back of the cowl top cover seal with new tape.
- Do not wash the vehicle within 24 hours after installation so as to keep adhesive.
- After installation, apply the touch-up paint (the body color) onto the head of the front fender mounting bolts.
- After installation, check the front fender adjustment. Refer to <u>DLK-827</u>, "HOOD ASSEMBLY : Adjustment" and <u>DLK-839</u>, "DOOR ASSEMBLY : Adjustment".

# FRONT DOOR DOOR ASSEMBLY

DOOR ASSEMBLY: Exploded View

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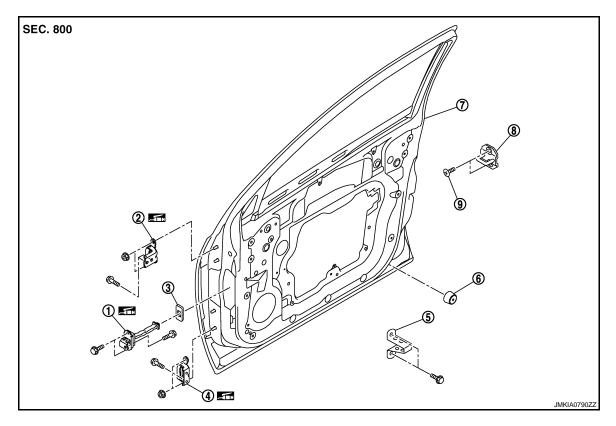
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#### **REMOVAL**



- 1. Door check link
- 4. Door hinge (lower)
- 7. Front door panel

- 2. Door hinge (upper)
- 5. Bracket
- 8. Door striker

Refer to GI-4. "Components" for symbols in the figure.

- 3. Door check link cover
- 6. Bumper rubber
- 9. TORX bolt

## **ADJUSTMENT**

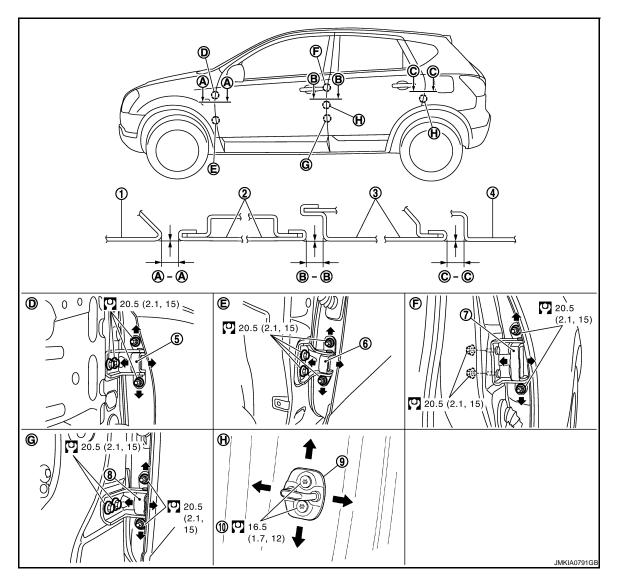
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- 1. Front fender
- 4. Rear fender
- 7. Rear door hinge (upper)
- 10. TORX bolt

Refer to GI-4, "Components" for symbols in the figure.

- 2. Front door outer
- 5. Front door hinge (upper)
- 8. Rear door hinge (lower)
- 3. Rear door outer
- 6. Front door hinge (lower)
- 9. Door striker

#### DOOR ASSEMBLY: Removal and Installation

INFOID:0000000001538437

#### **REMOVAL**

- 1. Remove the mounting bolt of the door check link on the vehicle.
- 2. Remove the front door harness grommet, and then pull out the harness from the vehicle.
- 3. Disconnect the front door harness connector.
- Remove the door hinge mounting nuts (door side), and then remove the door assembly. CAUTION:
  - When removing and installing the front door assembly, support the door with a jack and cloth to protect the door and body.
  - Perform work with 2 workers, because of its heavy weight.

#### INSTALLATION

Install in the reverse order of removal.

**CAUTION:** 

- When removing and installing the front door assembly, perform the fitting adjustment. Refer to <u>DLK-839</u>, "DOOR ASSEMBLY: Adjustment".
- After installation, apply touch-up paint (the body color) onto the head of the door hinge mounting nuts.
- Check the door hinge rotating part for poor lubrication. If necessary, apply body grease.
- Check the front door open/close operation after installation.

DOOR ASSEMBLY: Adjustment

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#### CLEARANCE, SURFACE HEIGHT AND SURFACE MISMATCH ADJUSTMENT

Portion		Clearance	Surface height
Front fender – Front door	A – A	3.5 – 5.5 mm (0.138 – 0.217 in)	- 1.0 – 1.0 mm (- 0.039 – 0.039 in)
Front door – Rear door	B – B	3.5 – 5.5 mm (0.138 – 0.217 in)	- 1.0 – 1.0 mm (- 0.039 – 0.039 in)

- 1. Check the clearance and surface height and surface mismatch between the front door and each part visually and by touching. (Fitting standard dimension in the table below shall be satisfied.)
- 2. In case any parts are out of specification, adjust them according to the procedures shown below.
- 3. Remove the front fender. Refer to refer to DLK-835, "Removal and Installation".
- 4. Loosen the door hinge mounting nuts on door side.
- Adjust the surface height and surface mismatch of the front door according to the fitting standard dimension.
- 6. Temporarily tighten the hinge mounting nuts on door side.
- 7. Loosen the door hinge mounting bolts on body side.
- 8. Raise the front door at rear end to adjust clearance of the front door according to the fitting standard dimension.
- 9. After adjustment tighten bolts and nuts to the specified torque.
- Install the front fender. Refer to refer to <u>DLK-835, "Removal and Installation"</u>.
   CAUTION:

After installation, check the front fender adjustment. Refer to <a href="DLK-827">DLK-827</a>, "HOOD ASSEMBLY : <a href="Adjustment"</a>.

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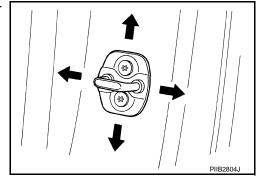
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#### DOOR STRIKER ADJUSTMENT

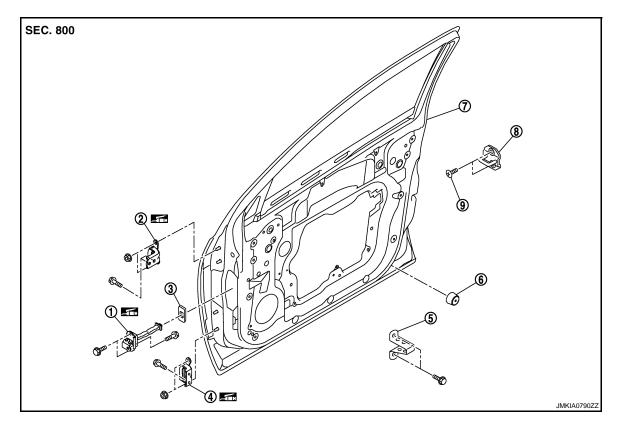
Adjust the door striker so that it becomes parallel with the lock insertion direction.



DOOR STRIKER

## **DOOR STRIKER: Exploded View**

INFOID:0000000001538439



- 1. Door check link
- 4. Door hinge (lower)
- 7. Front door panel
- 2. Door hinge (upper)
- 5. Bracket
- 8. Door striker
- Refer to GI-4, "Components" for symbols in the figure.

- Door check link cover
- 6. Bumper rubber
- 9. TORX bolt

## DOOR STRIKER: Removal and Installation

INFOID:0000000001538440

#### **REMOVAL**

Remove the TORX bolts, and then remove the door striker.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

- Check the front door open/close operation after installation.
- When removing and installing the door striker, be sure to perform the fitting adjustment. Refer to <u>DLK-839, "DOOR ASSEMBLY: Adjustment"</u>.

## **DOOR HINGE**

**DOOR HINGE: Exploded View** 

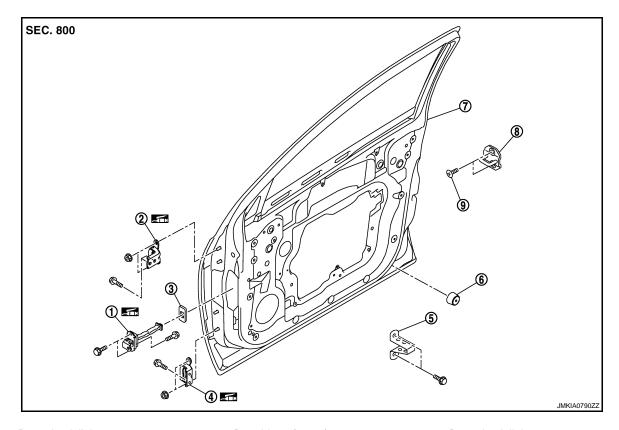
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- Door check link
- 4. Door hinge (lower)
- 7. Front door panel
- 2. Door hinge (upper)
- 5. Bracket
- 8. Door striker

- 3. Door check link cover
- 6. Bumper rubber
- 9. TORX bolt

Refer to GI-4, "Components" for symbols in the figure.

## DOOR HINGE: Removal and Installation

INFOID:0000000001538443

#### **REMOVAL**

- Remove the front door assembly. Refer to <u>DLK-838</u>, "<u>DOOR ASSEMBLY</u>: <u>Removal and Installation</u>".
- 2. Remove the door hinge mounting bolts, and then remove the front door hinge.

#### INSTALLATION

Install in the reverse order of removal.

#### **CAUTION:**

- When removing and installing the front door assembly, perform the fitting adjustment. Refer to <u>DLK-839</u>, "DOOR ASSEMBLY: Adjustment".
- After installation, apply touch-up paint (the body color) onto the head of the door hinge mounting nuts.
- Check the door hinge rotating part for poor lubrication. If necessary, apply body grease.
- Check the front door open/close operation after installation.

#### DOOR CHECK LINK

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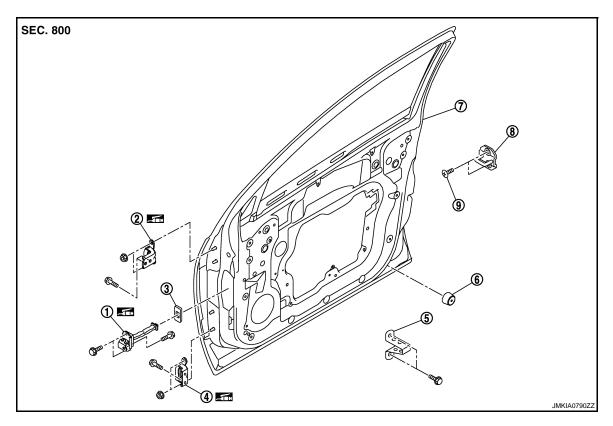
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**DLK-507** 

## DOOR CHECK LINK: Exploded View

INFOID:0000000001538445

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- 1. Door check link
- 4. Door hinge (lower)
- 7. Front door panel
- Door hinge (upper)
- 5. **Bracket**
- 8. Door striker

Refer to GI-4, "Components" for symbols in the figure.

- 3. Door check link cover
- Bumper rubber
- TORX bolt

DOOR CHECK LINK: Removal and Installation

#### **REMOVAL**

- 1. Remove the front door finisher. Refer to INT-10, "FRONT DOOR FINISHER: Removal and Installation".
- 2. Remove the front door speaker. Refer to AV-36, "Removal and Installation".
- 3. Remove the mounting bolt of the door check link on the vehicle.
- 4. Remove the door check link cover, and then remove the door check link mounting bolts.
- 5. Remove the door check link.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

Check the front door open/close operation after installation.

## REAR DOOR DOOR ASSEMBLY

DOOR ASSEMBLY: Exploded View

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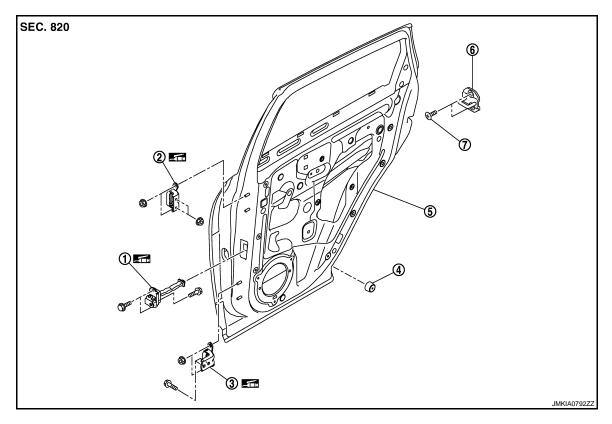
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#### **REMOVAL**



- 1. Door check link
- 4. Bumper rubber

Refer to GI-4. "Components" for symbols in the figure.

7. TORX bolt

- 2. Door hinge (upper)
- 5. Rear door panel
- 3. Door hinge (lower)
- Door striker

## **ADJUSTMENT**

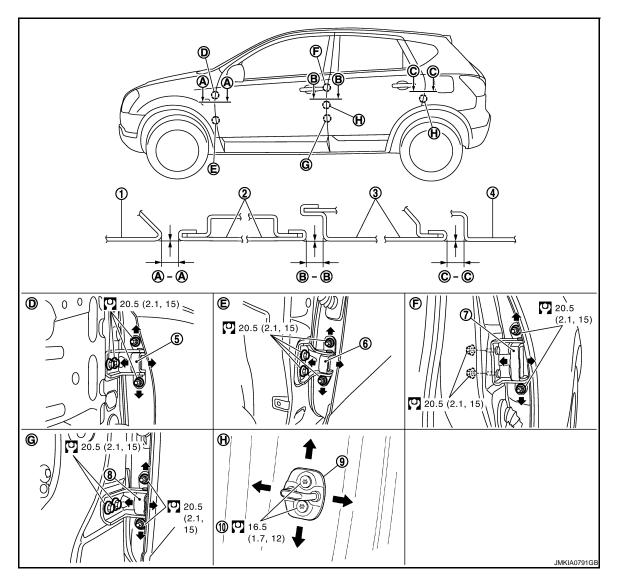
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- 1. Front fender
- 4. Rear fender
- 7. Rear door hinge (upper)
- 10. TORX bolt

Refer to GI-4, "Components" for symbols in the figure.

- 2. Front door outer
- 5. Front door hinge (upper)
- 8. Rear door hinge (lower)
- 3. Rear door outer
- 6. Front door hinge (lower)
- 9. Striker

#### DOOR ASSEMBLY: Removal and Installation

INFOID:0000000001538448

## **REMOVAL**

- 1. Remove the mounting bolt of the door check link on the vehicle.
- 2. Remove the rear door harness grommet, and then pull out the door harness from the vehicle.
- 3. Disconnect the rear door harness connector.
- 4. Remove the door hinge mounting nuts (door side), and then remove the rear door assembly. **CAUTION:** 
  - When removing and installing the front door assembly, support the door with a jack and cloth to protect the door and body.
  - Perform work with 2 workers, because of it's heavy weight.

#### INSTALLATION

Install in the reverse order of removal.

**CAUTION:** 

- When removing and installing the rear door assembly, perform the fitting adjustment. Refer to <a href="DLK-845">DLK-845</a>, "DOOR ASSEMBLY: Adjustment".
- After installation, apply touch-up paint (the body color) onto the head of the door hinge mounting nuts.
- Check the door hinge rotating part for poor lubrication. If necessary, apply body grease.
- Check the rear door open/close operation after installation.
- Check the rear door lock/unlock operation after installation.

DOOR ASSEMBLY: Adjustment

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## CLEARANCE, SURFACE HEIGHT AND SURFACE MISMATCH ADJUSTMENT

Portion		Clearance	Surface height
Front door – Rear door	B – B	3.5 – 5.5 mm (0.138 – 0.217 in)	- 1.0 – 1.0 mm (- 0.039 – 0.039 in)
Rear door – Rear fender	C – C	3.5 – 5.5 mm (0.138 – 0.217 in)	- 1.0 – 1.0 mm (- 0.039 – 0.039 in)

- 1. Check the clearance and surface height and surface mismatch between the rear door and each part visually and by touching. (Fitting standard dimension in the table below shall be satisfied.)
- 2. In case any parts are out of specification, adjust them according to the procedures shown below.
- 3. Remove the center pillar upper garnish and center pillar lower garnish. Refer to <a href="INT-14">INT-14</a>, "Removal and Installation".
- 4. Loosen the door hinge mounting nuts on door side.
- Adjust the surface height and surface mismatch of the rear door according to the fitting standard dimension.
- 6. Temporarily tighten the hinge mounting nuts on door side.
- 7. Loosen the door hinge mounting nuts and bolts on body side.
- Raise the rear door at rear end to adjust clearance of the rear door according to the fitting standard dimension.
- 9. After adjustment tighten bolts and nuts to the specified torque.
- 10. Install the center pillar upper garnish and center pillar lower garnish. Refer to <a href="INT-14">INT-14</a>, "Removal and Installation".

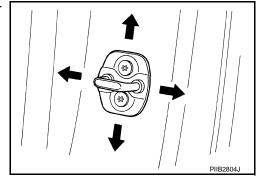
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#### DOOR STRIKER ADJUSTMENT

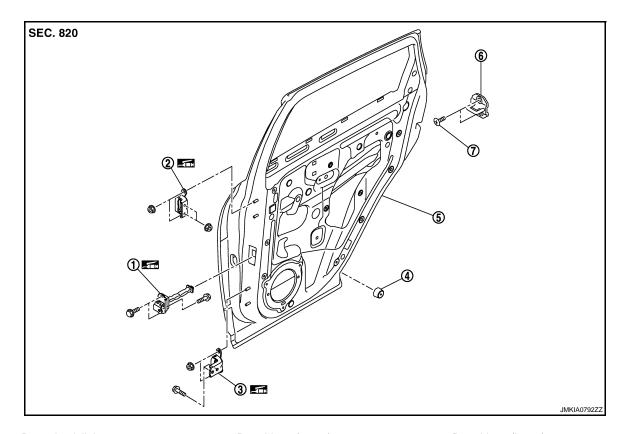
Adjust the door striker so that it becomes parallel with the lock insertion direction.



DOOR STRIKER

## DOOR STRIKER: Exploded View

INFOID:0000000001538450



- 1. Door check link
- 4. Bumper rubber
- 7. TORX bolt

- 2. Door hinge (upper)
- 5. Rear door panel
- 3. Door hinge (lower)
- 6. Door striker

Refer to GI-4, "Components" for symbols in the figure.

#### DOOR STRIKER: Removal and Installation

INFOID:0000000001538451

#### **REMOVAL**

Remove the TORX bolts, and then remove the door striker.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

- Check the rear door open/close operation after installation.
- When removing and installing the door striker, be sure to perform the fitting adjustment. Refer to <u>DLK-845, "DOOR ASSEMBLY: Adjustment"</u>.

## DOOR HINGE

DOOR HINGE: Exploded View

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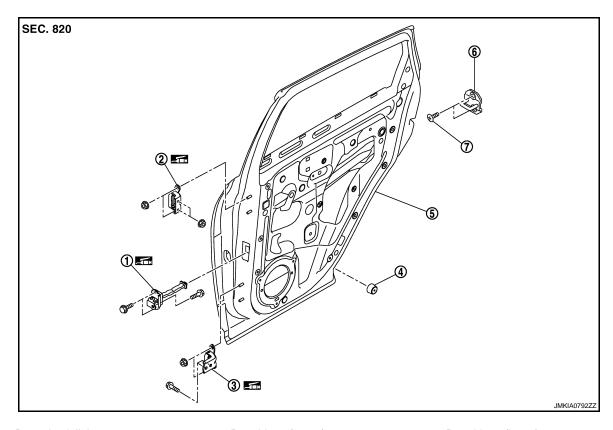
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- Door check link
- Bumper rubber
- 7. TORX bolt

- Door hinge (upper)
  - 5. Rear door panel

- 3. Door hinge (lower)
- Door striker

Refer to GI-4, "Components" for symbols in the figure.

## DOOR HINGE: Removal and Installation

INFOID:0000000001538454

#### **REMOVAL**

- 1. Remove the center pillar lower garnish and the center pillar upper garnish. Refer to <a href="INT-14">INT-14</a>, "Removal and Installation".
- Remove the rear door assembly. Refer to <u>DLK-844, "DOOR ASSEMBLY: Removal and Installation"</u>.
- 3. Remove the rear door hinge mounting bolts and nuts (body side), and then remove the door hinge.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

- When removing and installing the rear door assembly, perform the fitting adjustment. Refer to <u>DLK-845, "DOOR ASSEMBLY: Adjustment"</u>.
- Check the door hinge rotating part for poor lubrication. If necessary, apply body grease.
- After installing, apply the touch-up paint (the body color) onto the head of the hinge mounting nuts.
- Check the rear door open/close operation after installation.

### DOOR CHECK LINK

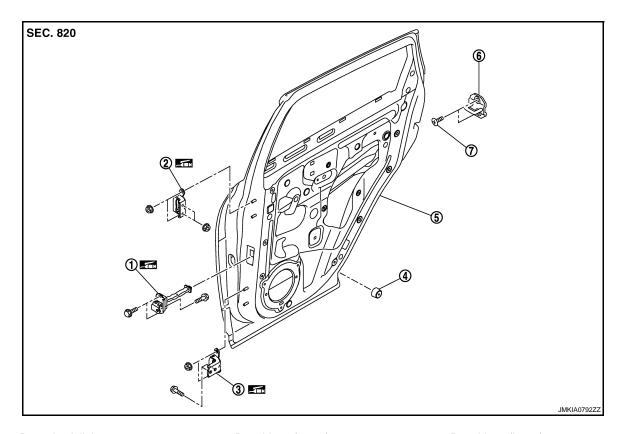
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## DOOR CHECK LINK: Exploded View

INFOID:0000000001538456



- 1. Door check link
- Bumper rubber
- 7. TORX bolt

- 2. Door hinge (upper)
- 5. Rear door panel
- 3. Door hinge (lower)
- 6. Door striker

Refer to GI-4, "Components" for symbols in the figure.

## DOOR CHECK LINK: Removal and Installation

INFOID:0000000001538457

## REMOVAL

- 1. Remove the rear door finisher. Refer to INT-10, "FRONT DOOR FINISHER: Removal and Installation".
- 2. Remove the rear door sealing screen.
- 3. Remove the mounting bolt of the check link on the vehicle.
- 4. Remove the door check link cover, and then remove the door check link mounting bolts.
- 5. Remove the door check link.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

Check front door open/close operation after installation.

## BACK DOOR

**BACK DOOR ASSEMBLY** 

BACK DOOR ASSEMBLY: Exploded View

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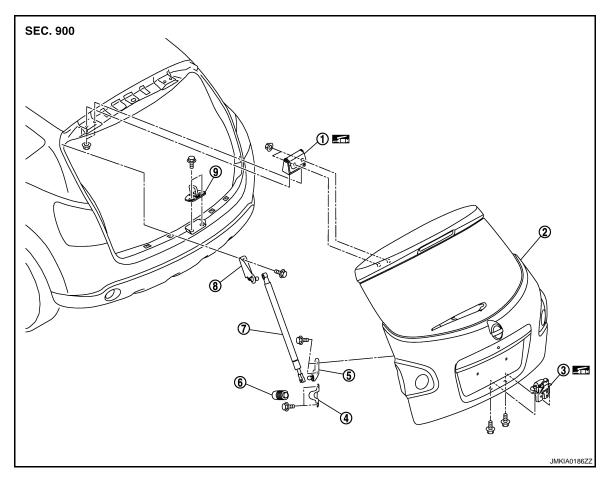
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#### **REMOVAL**



- 1. Back door hinge
- 4. Bumper rubber bracket

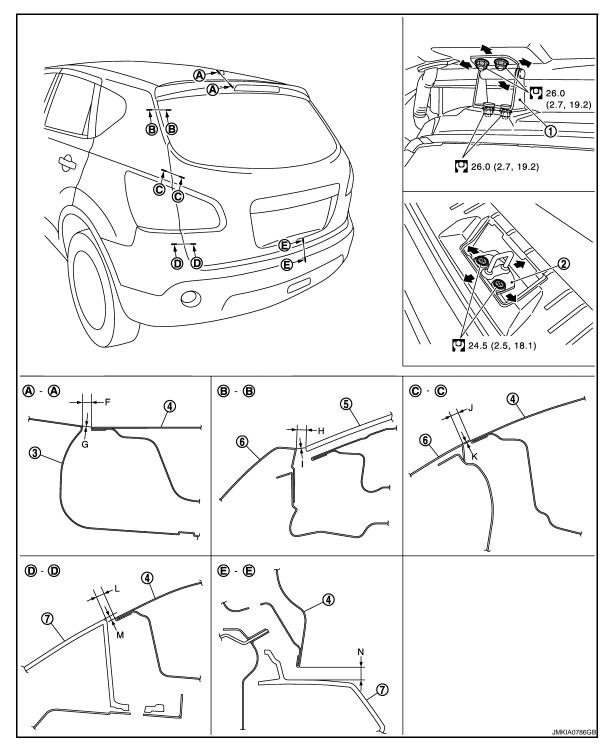
Refer to GI-4, "Components" for symbols in the figure.

7. Back door stay

- 2. Back door assembly
- 5. Back door stay bracket (lower)
- 8. Back door stay bracket (upper)
- 3. Back door lock assembly
- 6. Bumper rubber
- Back door striker

#### **ADJUSTMENT**

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- 1. Back door hinge
- 4. Back door outer
- 7. Rear bumper fascia
- 2. Back door striker
- Back door glass
- 3. Roof panel
- Body side outer

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## BACK DOOR ASSEMBLY: Removal and Installation

Refer to GI-4, "Components" for symbols in the figure.

### BAON BOON ACCEPTED TO THE THE INSTALLATION

## REMOVAL

- 1. Remove the back door finisher inner. Refer to <a href="INT-26">INT-26</a>, "Removal and Installation".
- Remove the back door window glass. Refer to <u>GW-17, "Removal and Installation"</u>.
   NOTE:

## **DLK-516**

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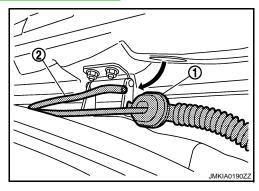
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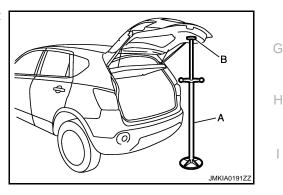
It is necessary to remove back door window glass in order to remove harness, because harness connector interferes with back door window glass pin.

- 3. Disconnect the connectors in the back door, and then remove the grommet, and pull out he harness.
- Remove the parcel shelf. Refer to INT-24, "Removal and Installation".
- 5. Remove the high-mounted stop lamp. Refer to EXL-186, "Removal and Installation".
- Remove the grommet (1), and then pull out the washer tube (2).

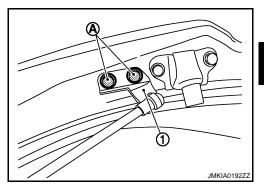


- Pull the harness out of the back door.
- Support the back door lock with the proper material to prevent it from falling.

: Jack B : Shop cloth



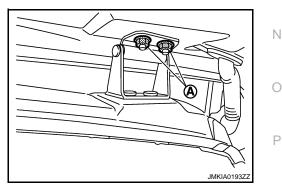
Remove the back door stay bracket (1) mounting bolts (A) on the back door.



10. Remove the back door hinge mounting nuts (A) on the back door and remove the back door assembly.

#### **CAUTION:**

Perform work with 2 workers, because of its heavy weight.



#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

Perform work with 2 workers, because of its heavy weight.

- After installation, perform fitting adjustment. Refer to <u>DLK-852</u>, "<u>BACK DOOR ASSEMBLY</u>: <u>Adjust-ment</u>".
- Check the back door open/close operation after installation.
- Check the back door lock/unlock operation after installation.

BACK DOOR ASSEMBLY : Adjustment

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	Portio	n		Standard	Difference(RH/LH)
Back door panel – Roof panel	A – A	F	Clearance	5.0 – 7.0 mm (0.197 – 0.276 in)	_
		G	Surface height	0.0 – 2.0 mm (0.000 – 0.079 in)	_
Back door glass – Body side outer	B – B	Н	Clearance	3.9 – 8.1 mm (0.154 – 0.319 in)	2.1 mm (0.083 in)
		I	Surface height	- 1.0 – 3.1 mm (- 0.039 – 0.122 in)	2.0 mm (0.079 in)
Back door panel – Body side outer	C – C	J	Clearance	3.5 – 6.5 mm (0.138 – 0.256 in)	2.0 mm (0.079 in)
		K	Surface height	- 1.0 – 1.0 mm (- 0.039 – 0.039 in)	_
Back door panel – Rear bumper fascia	D – D	L	Clearance	4.0 – 8.0 mm (0.157 – 0.315 in)	2.0 mm (0.079 in)
		M	Surface height	0.1 – 4.1 mm (0.004 – 0.161 in)	2.1 mm (0.083 in)
Back door panel – Rear bumper fascia	E-E	N	Clearance	5.8 – 10.2 mm (0.228 – 0.402 in)	_

#### FITTING ADJUSTMENT

- 1. Check the clearance and the evenness between the back door and each part visually and by touching. (Fitting standard dimension in the table below shall be satisfied.)
- 2. In case any parts are out of specification, adjust them according to the procedures shown below.
- 3. Loosen the bumper rubber.
- Loosen the back door striker mounting bolts.
- 5. Lift up the back door approximately 100 150 mm (3.937 5.906 in) height then close it lightly and check that it is engaged firmly with the back door closed.
- Check the clearance and evenness.
- 7. Finally tighten the back door striker.

### **BACK DOOR STRIKER**

## BACK DOOR STRIKER: Exploded View

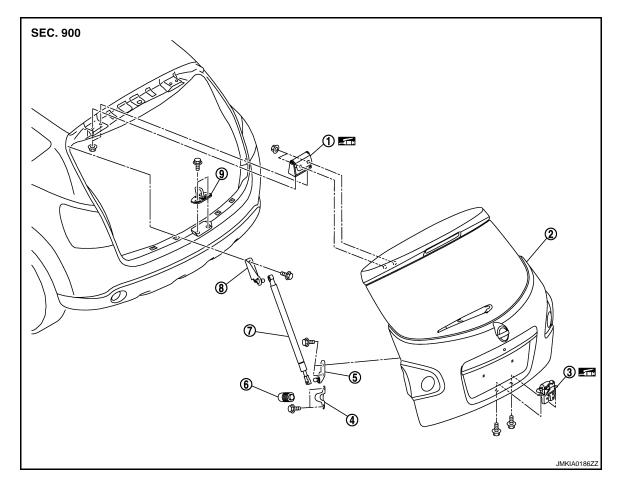
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- 1. Back door hinge
- 4. Bumper rubber bracket
- Back door stay

- 2. Back door assembly
- 5. Back door stay bracket (lower)
- 8. Back door stay bracket (upper)
- 3. Back door lock assembly
- 6. Bumper rubber
- Back door striker

BACK DOOR STRIKER: Removal and Installation

Refer to GI-4, "Components" for symbols in the figure.

#### REMOVAL

- 1. Remove the luggage rear plate cap. Refer to <a href="INT-24">INT-24</a>, "Removal and Installation".
- Remove the mounting bolts, and then remove the back door striker.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

- When removing and installing the back door striker, be sure to perform the fitting adjustment. Refer to <u>DLK-852</u>, "<u>BACK DOOR ASSEMBLY</u>: <u>Adjustment</u>".
- Check the back door open/close operation after installation.

#### **BACK DOOR HINGE**

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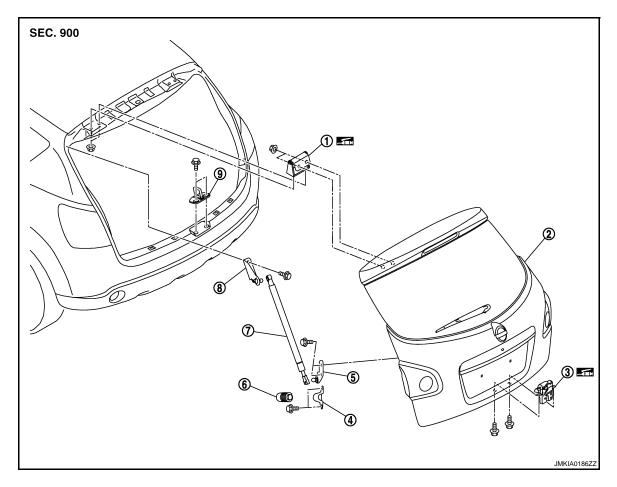
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BACK DOOR HINGE: Exploded View

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- 1. Back door hinge
- 4. Bumper rubber bracket
- 7. Back door stay

- 2. Back door assembly
- 5. Back door stay bracket (lower)
- 8. Back door stay bracket (upper)
- 3. Back door lock assembly
- 6. Bumper rubber
- 9. Back door striker

BACK DOOR HINGE: Removal and Installation

Refer to GI-4, "Components" for symbols in the figure.

#### REMOVAL

- Remove the back door assembly. Refer to <u>DLK-850</u>, "<u>BACK DOOR ASSEMBLY</u>: <u>Removal and Installation</u>".
- 2. Remove upper side of the back door weatherstrip. Refer to <u>DLK-856, "BACK DOOR WEATHER-STRIP: Removal and Installation"</u>.
- 3. Remove rear seat belt cover. Refer to <a href="INT-21">INT-21</a>, "Removal and Installation".</a>
- Using remover tool, remove the headlining clip at the rear side of the headlining. Refer to <u>INT-20</u>, "<u>Exploded View</u>".
- 5. Remove the rear side of the headlining.
- Remove the back door hinge mounting nuts (body side), and then remove the back door hinge.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

- When removing and installing the back door assembly, perform the fitting adjustment. Refer to <u>DLK-852</u>, "BACK DOOR ASSEMBLY: Adjustment".
- After installation, apply touch-up paint (the body color) onto the head of the hinge mounting nuts.
- Check the hinge rotating part for poor lubrication. If necessary, apply body grease.

• Check the back door open/close operation after installation.

**BACK DOOR STAY** 

**BACK DOOR STAY: Exploded View** 



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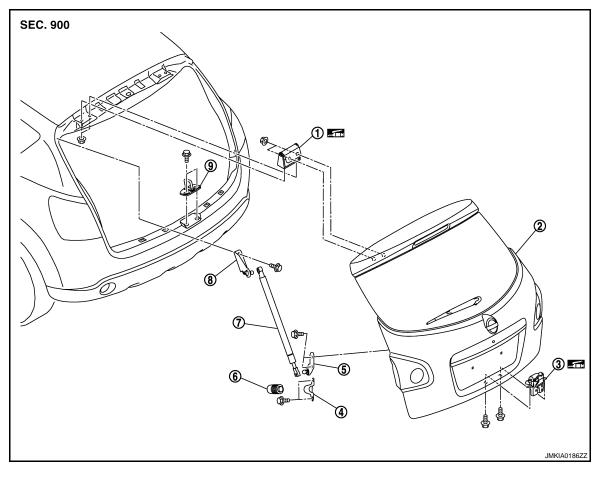
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- 1. Back door hinge
- 4. Bumper rubber bracket
- 7. Back door stay

- 2. Back door assembly
- 5. Back door stay bracket (lower)
- 8. Back door stay bracket (upper)
- . . . .
- Back door lock assembly
- 6. Bumper rubber
- 9. Back door striker

Refer to GI-4, "Components" for symbols in the figure.

### BACK DOOR STAY: Removal and Installation

#### REMOVAL

- 1. Remove the mounting bolts, and then remove the back door stay bracket on body side.
- 2. Remove the stud ball, and then remove the back door stay on back door side.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

Check the back door open/close operation after installation.

BACK DOOR WEATHER-STRIP

BACK DOOR WEATHER-STRIP: Exploded View

**REMOVAL** 

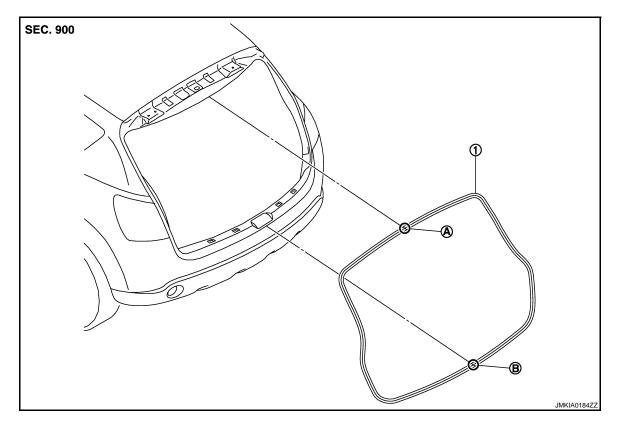
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- Back door weatherstrip
- A. Mark (upper)
- B. Mark (lower)

## BACK DOOR WEATHER-STRIP: Removal and Installation

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#### **REMOVAL**

Pull up and remove engagement with body from the weatherstrip joint.

#### CALITION

After removal, do not pull strongly on the weather-strip.

#### **INSTALLATION**

- 1. Working from the upper section, align the weatherstrip mark with vehicle center position mark and install the weatherstrip onto the vehicle.
- 2. For the lower section, align the weatherstrip seam with center of the back door striker.
- 3. After installation, pull the weatherstrip gently to ensure that there is no loose section. **NOTE:**

Make sure that the weatherstrip is fit tlightly at each corner and the luggage rear plate.

## FRONT DOOR LOCK DOOR LOCK

DOOR LOCK: Exploded View

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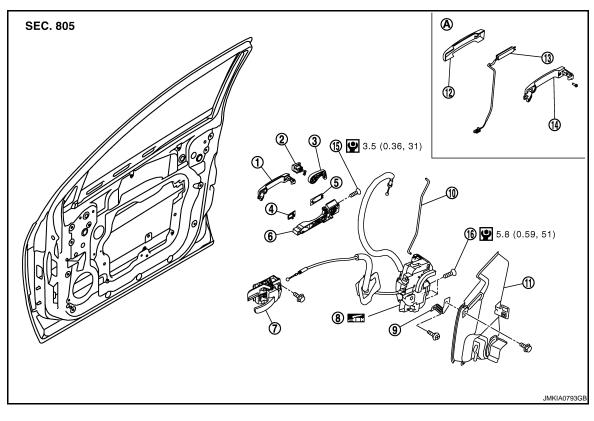
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- 1. Outside handle assembly
- Front gasket 4.
- 7. Inside handle
- Key rod protector(SUPER LOCK model only)
- 13. Antenna
- 16. TORX bolt
- Intelligent Key only

- 2. Door key cylinder
- Rear gasket 5.
- 8. Door lock assembly
- Key rod protector assembly (SUPER 12. Outside handle cover LOCK and RH handle model only)
- 14. Outside handle base

- 3. Key cylinder lever
- 6. Outside handle bracket
- Key cylinder rod
- 15. TORX bolt

#### DOOR LOCK: Removal and Installation

Refer to GI-4, "Components" for symbols in the figure.

**REMOVAL** 

- Remove the front door finisher. Refer to INT-10, "FRONT DOOR FINISHER: Removal and Installation". 1.
- Remove the inside handle mounting bolt, and then disconnect the inside handle cable. 2.
- 3. Remove the front door glass. Refer to GW-19, "Removal and Installation".
- 4. Remove the front door module assembly. Refer to <u>GW-22, "Removal and Installation"</u>.
- Disconnect the door antenna and the door request switch connector and remove the harness clamp 5. (models with Intelligent Key system).

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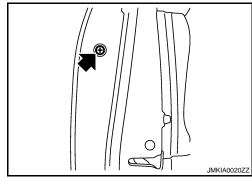
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#### < ON-VEHICLE REPAIR >

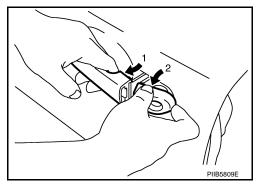
6. Remove the door side grommet, and loosen TORX bolt from grommet hole.

#### **CAUTION:**

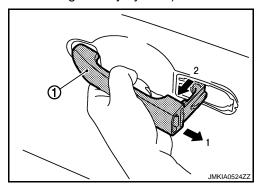
Do not forcibly remove the bolts.



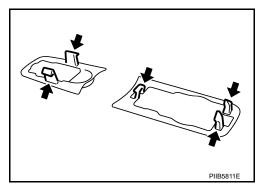
- 7. Reach in to separate the key cylinder rod connection (on the handle).
- 8. Disconnect the door key cylinder switch harness connector.
- 9. Remove the key cylinder lever from the door key cylinder.
- While pulling the outside handle, remove door key cylinder assembly.



- 11. Disconnect front door request switch harness connector (models with Intelligent Key system).
- 12. While pulling outside handle (1), slide toward rear of vehicle to remove outside handle.

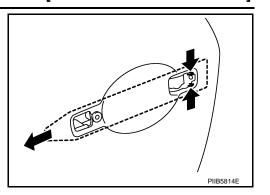


13. Remove the front gasket and the rear gasket.

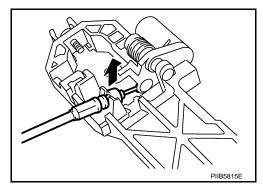


- 14. Remove the door lock assembly TORX bolts.
- 15. Disconnect the door lock actuator connector, and then remove the door lock assembly.

16. While pulling the outside handle bracket, slide toward rear of vehicle to remove the outside handle bracket.



17. Reach in to separate the outside handle cable connection.



#### **INSTALLATION**

Install in the reverse order of removal.

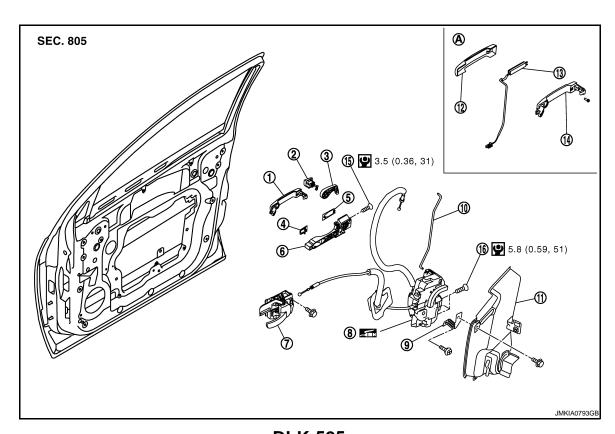
#### **CAUTION:**

- To install each rod, rotate the rod holder until a click is felt.
- Check the door lock/unlock operation after installation.
- Check the door open/close operation after installation.

## **INSIDE HANDLE**

**INSIDE HANDLE: Exploded View** 

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- 1. Outside handle assembly
- 4. Front gasket
- 7. Inside handle
- Key rod protector(SUPER LOCK model only)
- 13. Antenna
- 16. TORX bolt
- A: Intelligent Key only

- 2. Door key cylinder
- 5. Rear gasket
- 8. Door lock assembly
- Key rod protector assembly (SUPER 12. LOCK and RH handle model only)
- 14. Outside handle base

- 3. Key cylinder lever
- 6. Outside handle bracket
- 9. Key cylinder rod
- 12. Outside handle cover
- 15. TORX bolt

## INSIDE HANDLE: Removal and Installation

Refer to GI-4, "Components" for symbols in the figure.

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#### **REMOVAL**

- 1. Remove the front door finisher. Refer to INT-10, "FRONT DOOR FINISHER: Removal and Installation".
- Remove the inside handle mounting bolt.
- 3. Disconnect the inside handle cable, and then remove the inside handle.

#### **INSTALLATION**

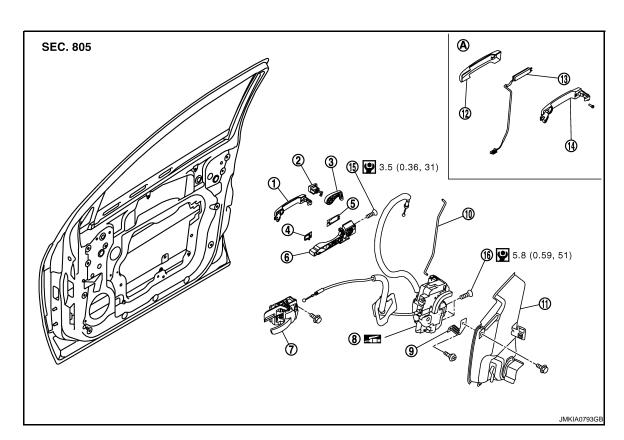
Install in the reverse order of removal.

#### **CAUTION:**

- Check the door lock/unlock operation after installation.
- Check the door open/close operation after installation.

#### **OUTSIDE HANDLE**

## **OUTSIDE HANDLE: Exploded View**



- 1. Outside handle assembly
- Front gasket
- Inside handle

- 2. Door key cylinder
- Rear gasket
- 8. Door lock assembly
- 3. Key cylinder lever
- Outside handle bracket
- 9. Key cylinder rod

## FRONT DOOR LOCK

#### < ON-VEHICLE REPAIR >

#### [WITH I-KEY & SUPER LOCK]

- Key rod protector(SUPER LOCK model only)
- LOCK and RH handle model only)
- 11. Key rod protector assembly (SUPER 12. Outside handle cover

13. Antenna

- 14. Outside handle base
- 15. TORX bolt

- 16. TORX bolt
- A: Intelligent Key only

Refer to GI-4, "Components" for symbols in the figure.

#### **OUTSIDE HANDLE: Removal and Installation**

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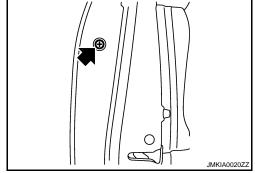
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#### REMOVAL

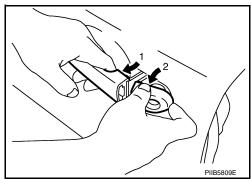
- 1. Remove the front door finisher. Refer to <a href="INT-10">INT-10</a>, "FRONT DOOR FINISHER: Removal and Installation".
- Remove the inside handle mounting bolt, and disconnect the inside handle knob cable and the lock knob cable.
- 3. Remove the front door glass. Refer to GW-19. "Removal and Installation".
- 4. Remove the front door module assembly. Refer to GW-22, "Removal and Installation".
- 5. Disconnect the door antenna and the door request switch connector and remove the harness clamp (models with Intelligent Key system).
- 6. Remove the door side grommet, and loosen TORX bolt from the grommet hole.

#### **CAUTION:**

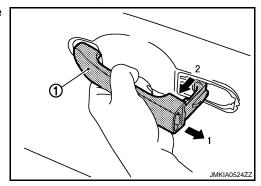
Do not forcibly remove the bolts .



- 7. Reach in to separate the key cylinder rod connection (on the handle).
- 8. Disconnect the door key cylinder switch harness connector.
- 9. Remove the key cylinder lever from the door key cylinder.
- 10. While pulling the outside handle, remove the door key cylinder assembly.



- 11. Disconnect the front door request switch harness connector (models with Intelligent Key system).
- 12. While pulling the outside handle (1), slide toward rear of vehicle to remove the outside handle.



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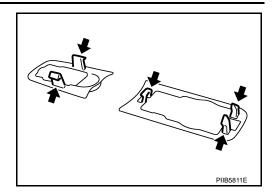
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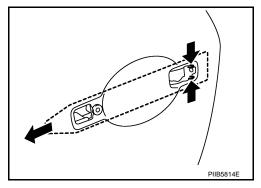
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**DLK-527** 

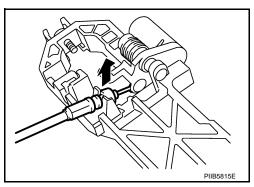
13. Remove the front gasket and rear gasket.



14. While pulling the outside handle bracket, slide toward rear of vehicle to remove the outside handle bracket.



15. Reach in to separate the outside handle cable connection.



#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

- To install each rod, rotate the rod holder until a click is felt.
- Check the door lock/unlock operation after installation.
- Check the door open/close operation after installation.

## REAR DOOR LOCK DOOR LOCK

DOOR LOCK: Exploded View

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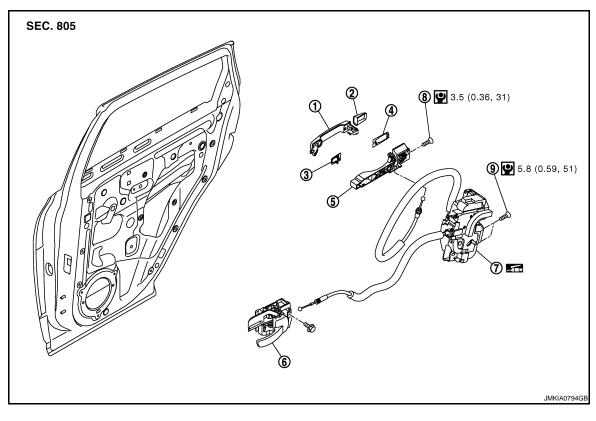
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- 1. Outside handle
- 4. Rear gasket
- 7. Door lock assembly
- 2. Outside handle escutcheon
- 5. Outside handle bracket
- 8. TORX bolt

- 3. Front gasket
- 6. Inside handle
- 9. TORX bolt

Refer to  $\underline{\mbox{GI-4, "Components"}}$  for symbols in the figure.

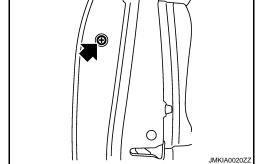
## DOOR LOCK: Removal and Installation

#### **REMOVAL**

- 1. Remove the rear door finisher. Refer to INT-13, "REAR DOOR FINISHER: Removal and Installation".
- 2. Fully close the front door window.
- 3. Remove the door sealing screen.
- 4. Remove the inside handle mounting bolt, and then disconnect the inside handle cable.
- 5. Remove the door side grommet, and loosen TORX bolt from the grommet hole.

#### **CAUTION:**

Do not forcibly remove the bolts.



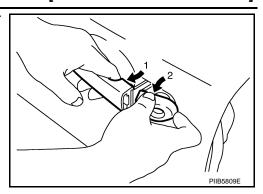
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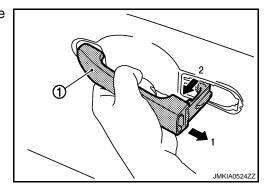
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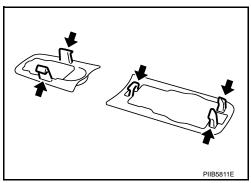
While pulling the outside handle, remove the door key cylinder assembly.



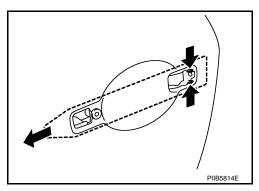
7. While pulling the outside handle (1), slide toward rear of vehicle to remove the outside handle.



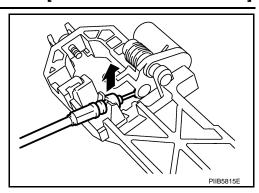
8. Remove the front gasket and the rear gasket.



- 9. Remove the door lock assembly TORX bolts.
- 10. Disconnect the door lock actuator connector, and then remove the door lock assembly.
- 11. While pulling the outside handle bracket, slide toward rear of vehicle to remove the outside handle bracket.



12. Reach in to separate the outside handle cable connection.



#### **INSTALLATION**

Install in the reverse order of removal.

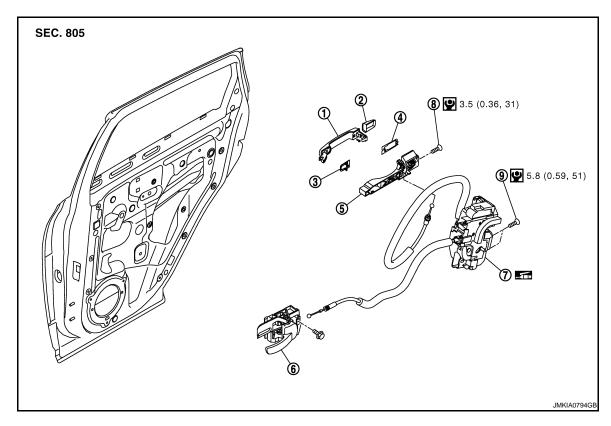
#### **CAUTION:**

- To install each rod, rotate the rod holder until a click is felt.
- Check the door lock/unlock operation after installation.
- Check the door open/close operation after installation.

#### **INSIDE HANDLE**

INSIDE HANDLE: Exploded View

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- 1. Outside handle
- 4. Rear gasket
- 7. Door lock assembly
- 2. Outside handle escutcheon
- 5. Outside handle bracket
- 8. TORX bolt

- Front gasket
- 6. Inside handle
- TORX bolt

Refer to GI-4, "Components" for symbols in the figure.

#### INSIDE HANDLE: Removal and Installation

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#### **REMOVAL**

- Remove the rear door finisher. Refer to <u>INT-13</u>, "<u>REAR DOOR FINISHER</u>: <u>Removal and Installation</u>".
- 2. Remove the door sealing screen.

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- 3. Remove the inside handle mounting bolt, and then disconnect the inside handle cable.
- 4. Remove the inside handle.

#### **INSTALLATION**

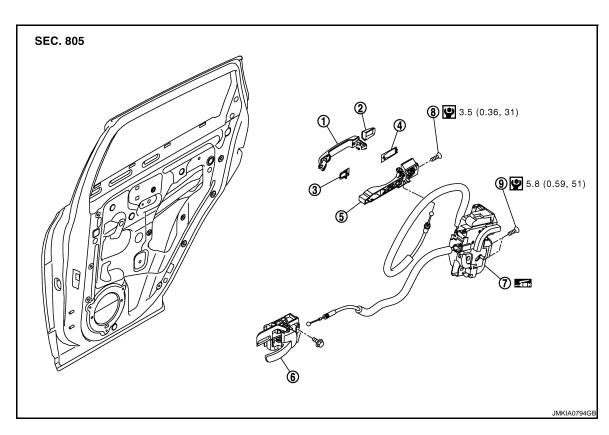
Install in the reverse order of removal.

#### **CAUTION:**

- Check the door lock/unlock operation after installation.
- Check the door open/close operation after installation.

#### **OUTSIDE HANDLE**

**OUTSIDE HANDLE: Exploded View** 



- 1. Outside handle
- 4. Rear gasket
- 7. Door lock assembly
- 2. Outside handle escutcheon
- 5. Outside handle bracket
- 8. TORX bolt

- 3. Front gasket
- 6. Inside handle
- 9. TORX bolt

Refer to  $\underline{\mbox{GI-4, "Components"}}$  for symbols in the figure.

#### OUTSIDE HANDLE: Removal and Installation

#### REMOVAL

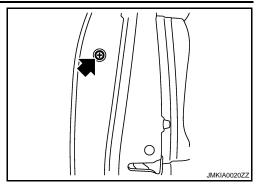
- 1. Remove the rear door finisher. Refer to <a href="INT-13">INT-13</a>, "REAR DOOR FINISHER: Removal and Installation".
- 2. Fully close the front door window.
- 3. Remove the door sealing screen.
- 4. Remove the inside handle mounting bolt, disconnect the inside handle cable.

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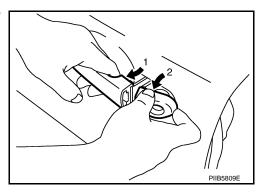
5. Remove the door side grommet, and loosen TORX bolt from the grommet hole.

#### **CAUTION:**

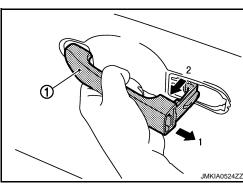
Do not forcibly remove the bolts.



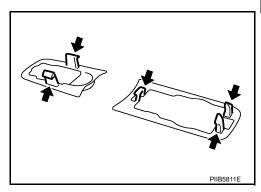
6. While pulling the outside handle, and then remove the door key cylinder assembly.



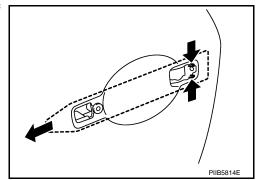
7. While pulling the outside handle (1), slide toward rear of vehicle to remove the outside handle.



8. Remove the front gasket and the rear gasket.



9. While pulling the outside handle bracket, slide toward rear of vehicle to remove the outside handle bracket.



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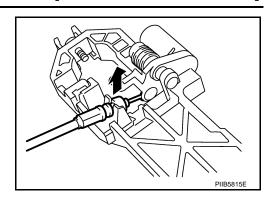
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## **REAR DOOR LOCK**

10. Reach in to separate the outside handle cable connection.



## **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

- Check the door lock/unlock operation after installation.
  Check the door open/close operation after installation.

BACK DOOR LOCK

**DOOR LOCK** 

DOOR LOCK : Exploded View

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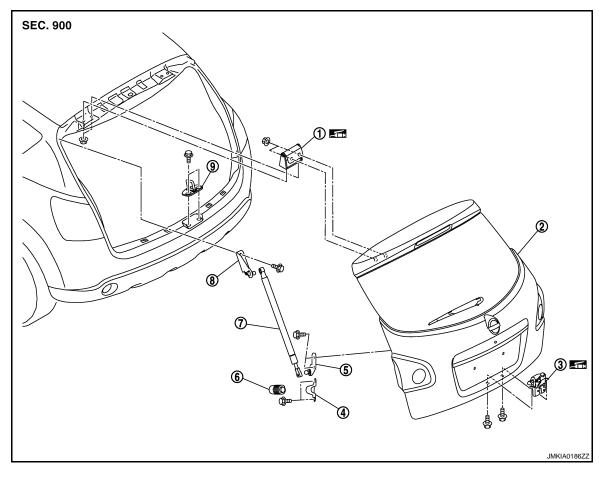
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- 1. Back door hinge
- 4. Bumper rubber bracket
- Back door stay

- 2. Back door assembly
- 5. Back door stay bracket (lower)
- 8. Back door stay bracket (upper)
- 3. Back door lock assembly
- 6. Bumper rubber
- 9. Back door striker

## DOOR LOCK: Removal and Installation

Refer to GI-4, "Components" for symbols in the figure.

#### **REMOVAL**

- Remove the back door trim finisher lower. Refer to <u>INT-26, "Removal and Installation"</u>.
- 2. Disconnect the back door lock assembly and back door opener switch connectors.
- 3. Remove the back door lock mounting bolts, and then remove the back door lock and actuator.

#### INSTALLTION

Install in the reverse order of removal.

#### **CAUTION:**

Check the back door lock/unlock operation after installation.

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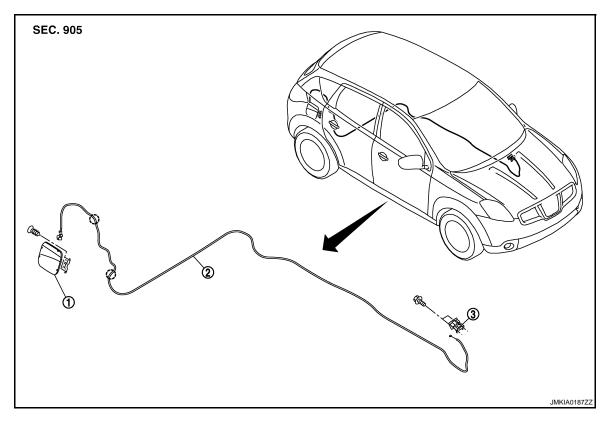
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## FUEL FILLER LID OPENER

**FUEL FILLER LID** 

FUEL FILLER LID: Exploded View

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- 1. Fuel filler lid assembly
- 2. Fuel filler opener cable
- 3. Fuel opener lever

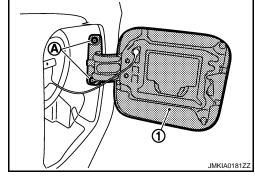
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## FUEL FILLER LID: Removal and Installation

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## **REMOVAL**

- 1. Fully open the fuel filler lid.
- 2. Remove the filler cap.
- 3. Remove the mounting screws (A), and then remove the fuel filler lid (1).



#### **INSTALLATION**

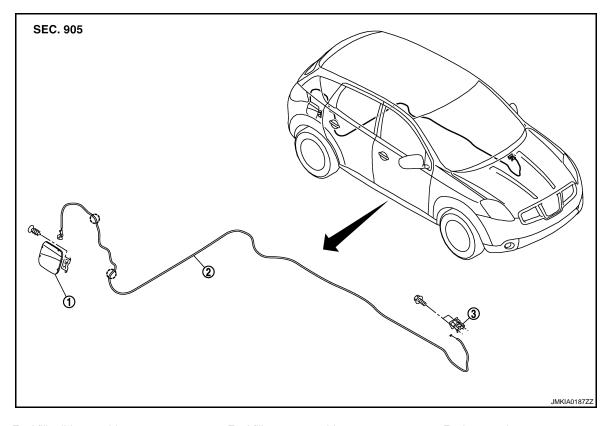
Install in the reverse order of removal.

#### **CAUTION:**

After installation, apply the touch-up paint (the body color) onto the head of the mounting screws. FUEL FILLER OPENER CABLE

## FUEL FILLER OPENER CABLE: Exploded View

INFOID:0000000001538492



Fuel filler lid assembly

Fuel filler opener cable

Fuel opener lever

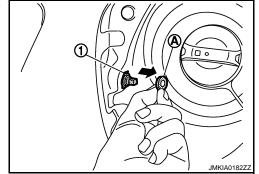
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### FUEL FILLER OPENER CABLE: Removal and Installation

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#### **REMOVAL**

- Remove the rear seat cushion, rear seatback, seatback lower support, and seatback mounting outer bracket. Refer to SE-21, "Removal and Installation".
- Remove the dash side finisher, front kicking plate inner, rear kicking plate inner, center pillar lower garnish, and luggage side lower finisher (front). Refer to INT-14, "Removal and Installation".
- Remove the parcel shelf, luggage floor carpet, luggage floor spacer, luggage rear plate, luggage side lower finisher, and rear pillar finisher. Refer to INT-24, "Removal and Installation".
- Remove the fuel filler lock seal (A) from fuel filler opener cable (1).



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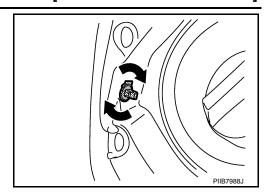
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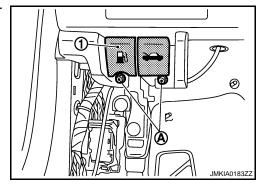
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5. Rotate the fuel filler lock, and then remove the fuel filler lock.



- 6. Remove the fuel filler opener cable mounting clips and the clamps.
- 7. Remove the mounting bolts (A), and then remove the fuel filler lid opener lever (1).



8. Remove the fuel filler opener cable.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

Check the fuel filler lid open/close operation after installation.

## **DOOR SWITCH**

**Exploded View** 

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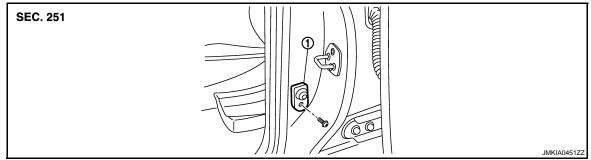
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1. Door switch (driver side)

Refer to DLK-539, "Removal and Installation".

## Removal and Installation

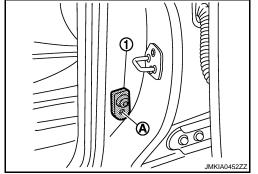
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#### **REMOVAL**

1. Remove the door switch mounting bolt (A), and then remove door switch (1).

#### NOTE:

The same procedure is also performed for door switch (passenger side, rear LH and rear RH).



#### **INSTALLATION**

Install in the reverse order of removal.

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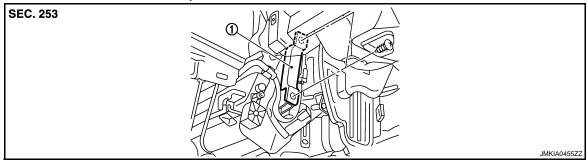
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# INSIDE KEY ANTENNA INSTRUMENT CENTER

**INSTRUMENT CENTER:** Exploded View

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1. Inside key antenna (instrument center)

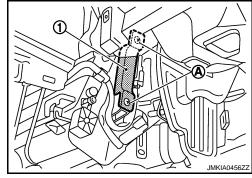
Refer to DLK-540, "INSTRUMENT CENTER: Removal and Installation".

#### **INSTRUMENT CENTER:** Removal and Installation

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#### **REMOVAL**

- 1. Remove the glove box and instrument lower cover RH. Refer to <a href="IP-11">IP-11</a>, "Exploded View" and <a href="IP-12">IP-12</a>, "Removal and Installation".
- 2. Remove the key slot mounting screw (A), and then remove inside key antenna (instrument center) (1).



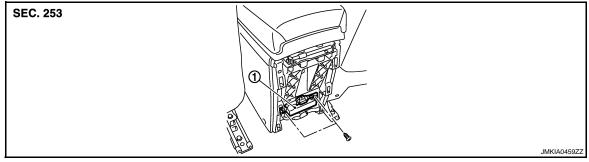
#### **INSTALLATION**

Install in the reverse order of removal.

CONSOLE

**CONSOLE**: Exploded View

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1. Inside key antenna (console)

Refer to DLK-540, "CONSOLE: Removal and Installation".

**CONSOLE**: Removal and Installation

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# **INSIDE KEY ANTENNA**

# < ON-VEHICLE REPAIR >

#### [WITH I-KEY & SUPER LOCK]

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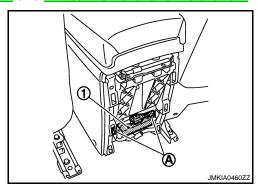
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- 1. Remove the console rear finisher. Refer to IP-18, "Exploded View" and IP-18, "Removal and Installation".
- 2. Remove the inside key antenna mounting screw (A), and then remove inside key antenna (console) (1).

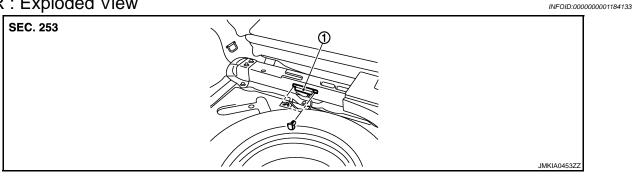


**INSTALLATION** 

Install in the reverse order of removal.

**REAR** 

**REAR**: Exploded View



1. Inside key antenna (rear seat)

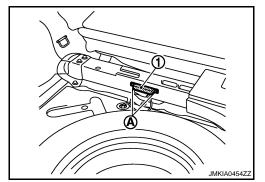
Refer to DLK-541, "REAR: Removal and Installation".

#### **REAR**: Removal and Installation

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#### **REMOVAL**

- 1. Remove the luggage floor spacer (LH). Refer to <a href="INT-24">INT-24</a>, "Exploded View" and <a href="INT-24">INT-24</a>, "Removal and <a href="INT-24">INT-24</a>, "Removal and <a href="INT-24">INT-24</a>, "Exploded View" and <a href="INT-24">INT-24</a>, "Removal and <a href=
- 2. Remove the inside key antenna (rear seat) mounting clips (A), and then remove inside key antenna (rear seat) (1).



**INSTALLATION** 

Install in the reverse order of removal.

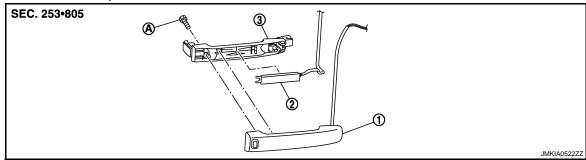
# OUTSIDE KEY ANTENNA

**DRIVER SIDE** 

DRIVER SIDE: Exploded View

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- 1. Outside handle grip
- 2. Outside key antenna
- 3. Outside handle bracket

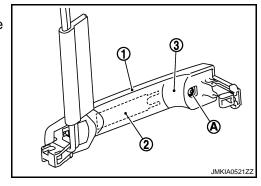
A. Bolt

Refer to DLK-542, "DRIVER SIDE: Removal and Installation".

DRIVER SIDE: Removal and Installation

**REMOVAL** 

- 1. Remove the outside handle. Refer to <u>DLK-526, "OUTSIDE HANDLE : Exploded View"</u> and <u>DLK-527, "OUTSIDE HANDLE : Removal and Installation".</u>
- 2. Remove the bolt (A) from outside handle grip (1).
- 3. Remove the outside key antenna (2) from outside handle bracket (3).



**INSTALLATION** 

Install in the reverse order of removal.

PASSENGER SIDE

PASSENGER SIDE: Exploded View

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Refer to DLK-273, "DRIVER SIDE: Exploded View".

PASSENGER SIDE: Removal and Installation

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REMOVAL

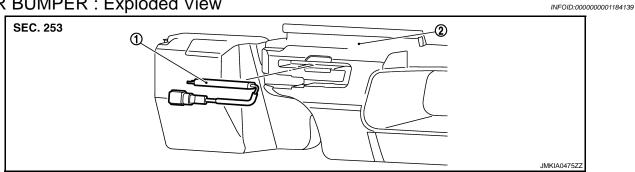
Refer to DLK-273, "DRIVER SIDE: Removal and Installation".

**INSTALLATION** 

Install in the reverse order of removal.

REAR BUMPER

# **REAR BUMPER: Exploded View**



1. Outside key antenna (rear bumper) 2. Rear bumper energy absorber

Refer to DLK-543, "REAR BUMPER: Removal and Installation".

# REAR BUMPER: Removal and Installation

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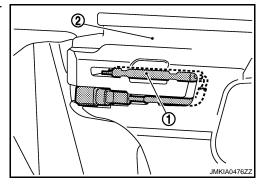
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#### **REMOVAL**

- 1. Remove the rear bumper. Refer to EXT-14, "Exploded View" and EXT-15, "Removal and Installation".
- Remove the outside key antenna (rear bumper) (1) from rear bumper energy absorber (2).



# **INSTALLATION**

Install in the reverse order of removal.

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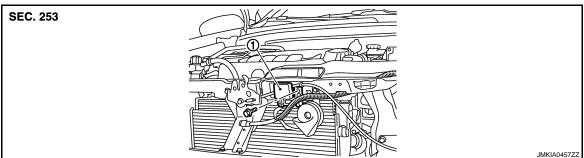
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# < ON-VEHICLE REPAIR > INTELLIGENT KEY WARNING BUZZER

**Exploded View** INFOID:0000000001184141



1. Intelligent Key warning buzzer

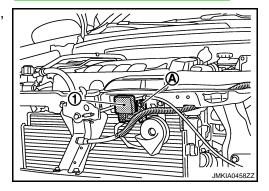
Refer to DLK-544, "Removal and Installation".

# Removal and Installation

INFOID:0000000001184142

#### **REMOVAL**

- Remove the front bumper. Refer to EXT-11, "Exploded View" and EXT-11, "Removal and Installation".
- Remove the Intelligent Key warning buzzer mounting bolt (A), and then remove the Intelligent Key warning buzzer (1).



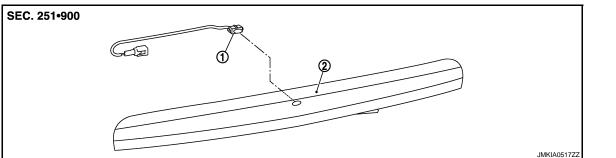
[WITH I-KEY & SUPER LOCK]

#### **INSTALLATION**

Install in the reverse order of removal.

# **BACK DOOR REQUEST SWITCH**

# **Exploded View**



1. Back door request switch

Back door finisher

Refer to DLK-545, "Removal and Installation".

# Removal and Installation

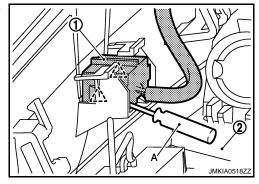
#### REMOVAL

- 1. Remove the back door finisher.

  Refer to <a href="EXT-31">EXT-31</a>, "Exploded View" and <a href="EXT-31">EXT-31</a>, "Removal and Installation".
- Remove the back door request switch (1) from back door finisher (2) using flat-bladed screw driver (A) etc.



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#### **INSTALLATION**

Install in the reverse order of removal.

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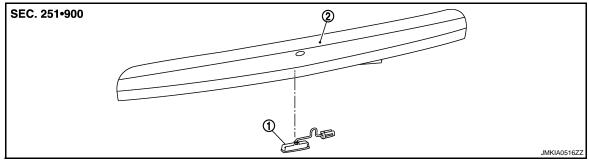
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# **BACK DOOR OPENER SWITCH**

# **Exploded View**

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- 1. Back door opener switch
- 2. Back door finisher

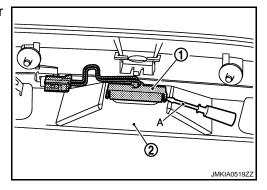
Refer to DLK-546, "Removal and Installation".

# Removal and Installation

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#### **REMOVAL**

- Remove the back door finisher.
   Refer to <u>EXT-31</u>, "<u>Exploded View</u>" and <u>EXT-31</u>, "<u>Removal and Installation</u>".
- 2. Remove the back door opener switch (1) from back door finisher (2) using flat-bladed screw driver (A) etc.



#### **INSTALLATION**

Install in the reverse order of removal.

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# INTELLIGENT KEY BATTERY

Exploded View

Refer to DLK-547, "Removal and Installation".

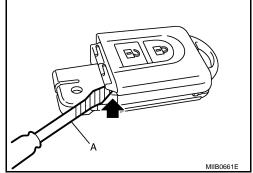
Removal and Installation

#### **REMOVAL**

- 1. Remove Intelligent Key cover.
- Insert a flat-bladed screwdriver (A) wrapped with tape as shown in the illustration and then separate lower and upper cases by twisting screwdriver.

#### **CAUTION:**

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



- 3. Remove the circuit board assembly from the upper case (1). [Substrate assembly: circuit board (3) + rubber (2)]
- 4. Gently press the rubber (2) and remove the circuit board (3). CAUTION:

Do not touch the printed circuits directly.

5. Remove the battery (4) from the lower case (5) and replace it.

Battery replacement : Coin-type lithium battery (CR2032)

#### **CAUTION:**

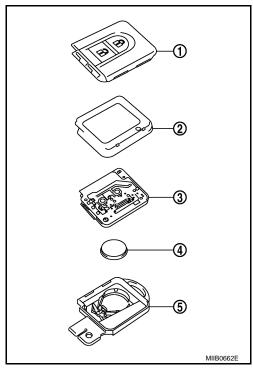
When replacing battery, keep dirt, grease, and other foreign materials off the electrode contact area.

6. After replacement, assemble the upper and lower cases by engaging the hooks on their circumference while being careful not to pinch the rubber, etc.

## **CAUTION:**

After replacing the battery, check that all Intelligent Key functions work normally.

Refer to DLK-134, "Component Function Check".



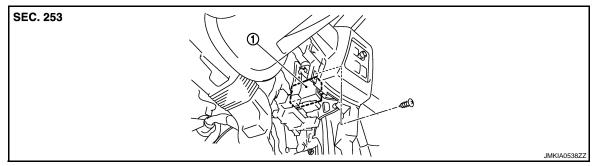
#### INSTALLATION

Install in the reverse order of removal.

# INTELLIGENT KEY UNIT

# **Exploded View**

INFOID:0000000001184149



1. Intelligent Key unit

<sup>1</sup>. M40

Refer to <u>DLK-547</u>, "Removal and Installation".

#### Removal and Installation

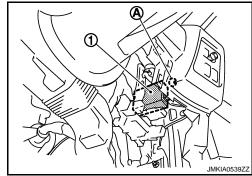
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#### **REMOVAL**

- 1. Remove lower instrument panel (driver side) and mirror switch finisher. Refer to <a href="IP-11">IP-11</a>, "Exploded View" and <a href="IP-12">IP-12</a>, "Removal and Installation".
- 2. Remove the Intelligent Key unit mounting screw (A), and then remove Intelligent Key unit (1).

#### NOTE:

Perform the system initialization when replacing Intelligent Key unit. Refer to <u>DLK-284</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".



#### **INSTALLATION**

Install in the reverse order of removal.

# [WITHOUT I-KEY & SUPER LOCK]

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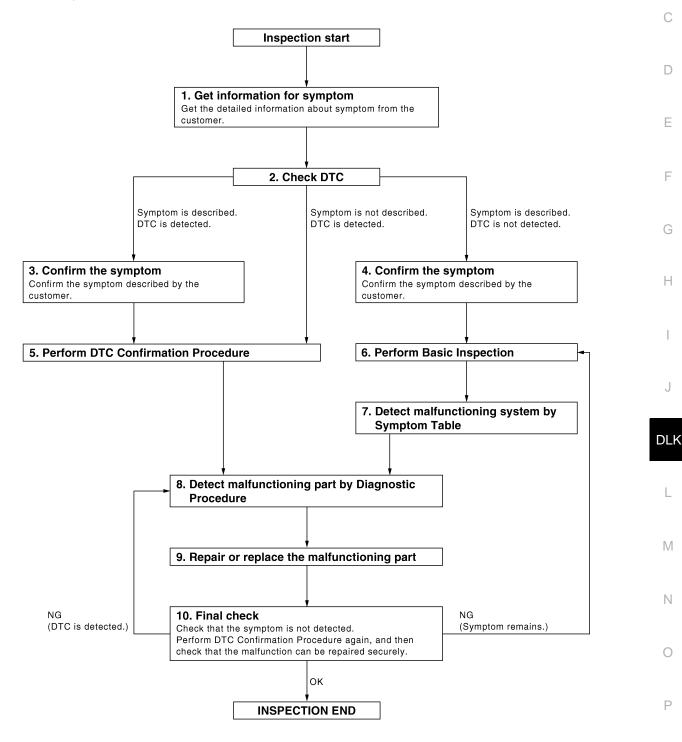
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# **BASIC INSPECTION**

# DIAGNOSIS AND REPAIR WORKFLOW

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**OVERALL SEQUENCE** 



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# **DIAGNOSIS AND REPAIR WORKFLOW**

[WITHOUT I-KEY & SUPER LOCK]

#### < 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 for BCM.
- 2. Perform the following procedure if DTC is displayed.
- 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. If two or more DTCs are detected, refer to <a href="DLK-641">DLK-641</a>, "DTC Inspection Priority Chart" and determine trouble diagnosis order.

#### Is DTC detected?

YES >> GO TO 8.

NO >> Refer to GI-39, "Intermittent Incident".

# PERFORM BASIC INSPECTION

Perform Basic Inspection, refer to DLK-657, "Basic Inspection".

Inspection End>>GO TO 7.

# 7.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM TABLE

Detect malfunctioning system according to Symptom Table based on the confirmed symptom in step 4.

>> GO TO 8.

# 8. DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

#### NOTE:

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

>> GO TO 9.

# **DIAGNOSIS AND REPAIR WORKFLOW**

< BASIC INSPECTION >

[WITHOUT I-KEY & SUPER LOCK]

# $9.\mathsf{REPAIR}$ OR REPLACE THE MALFUNCTIONING PART

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

>> GO TO 10.

# 10. 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.

#### Does the symptom reappear?

YES (DTC is detected)>>GO TO 8.

YES (Symptom remains)>>GO TO 6.

NO >> INSPECTION END

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# **INSPECTION AND ADJUSTMENT**

< BASIC INSPECTION >

[WITHOUT I-KEY & SUPER LOCK]

# INSPECTION AND ADJUSTMENT ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Description

INFOID:0000000001184152

Perform the system initialization when replacing or registering Keyfob and ignition key.

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement

Refer to the CONSULT-III Operation Manual-NATS.

# **FUNCTION DIAGNOSIS**

# DOOR LOCK FUNCTION

DOOR LOCK AND UNLOCK SWITCH

DOOR LOCK AND UNLOCK SWITCH: System Diagram

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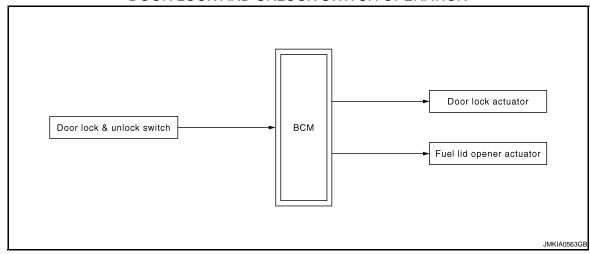
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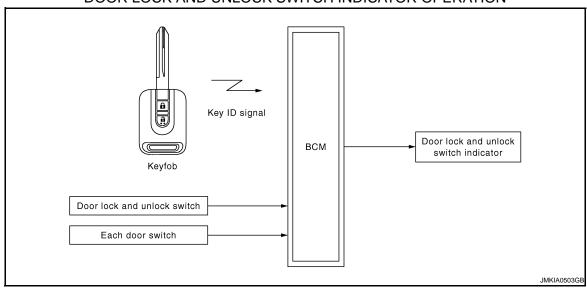
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#### DOOR LOCK AND UNLOCK SWITCH OPERATION



#### DOOR LOCK AND UNLOCK SWITCH INDICATOR OPERATION



DOOR LOCK AND UNLOCK SWITCH: System Description

INFOID:0000000001184155

## DOOR LOCK AND UNLOCK SWITCH OPERATION

Functions are available by operating the door lock and unlock switch on center console. Interlocked with the lock/unlock operation of door lock and unlock switch, door lock actuators of all doors are locked/unlocked.

#### **Operation Condition**

If the following conditions are satisfied, door lock/unlock operation can be performed when the door lock and unlock switch is operated.

Door lock and unlock switch	Operation condition	
Lock operation	All the following conditions are satisfied.  • Except driver side, doors are closed.  • Doors are not locked with keyfob.	
Unlock operation	All the following all conditions are satisfied.  • Doors are not locked with keyfob.	

#### NOTE:

When the door lock is locked with keyfob, door lock and unlock switch operation will be invalid until either of the following conditions is satisfied.

- Turn ignition switch ON.
- Unlock operation by keyfob.

#### DOOR LOCK AND UNLOCK SWITCH INDICATOR OPERATION

Door lock and unlock switch indicator indicates door lock status. The indicator turn ON while ignition switch is ON and door lock is locked. If any door is opened, the indicator will turn OFF.

#### 1 Minute Timer

A timer to turn OFF the indicator will run for 1 minute after locking with keyfob or auto door lock.

#### 30 Minutes Timer

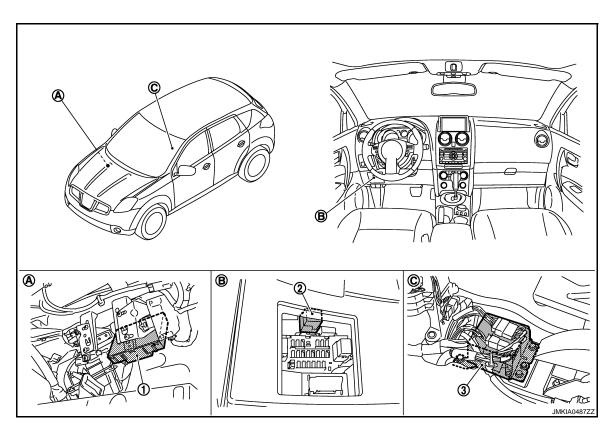
A timer to turn OFF the indicator will run for 30 minutes after locking with door lock and unlock switch.

#### NOTE:

1 minute timer condition is satisfied while 30 minutes timer is active, however 30 minutes timer does not change when 1 minutes timer is active.

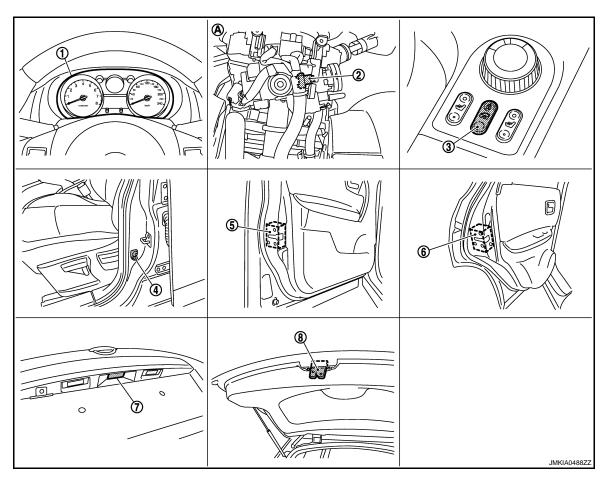
# DOOR LOCK AND UNLOCK SWITCH: Component Parts Location

INFOID:0000000001184156



- BCM M65, M66, M67
- A. Over the glove box

- Passenger side anti-hijack relay M90
- B. View with fuse box lid removed
- 3. Air bag diagnosis sensor unit
- C. View with center console removed



- Combination meter 1.
- Front door switch (driver side) B34
- Back door opener switch 7. D186
- View with steering column cover removed
- Key switch 2. M24
- Front door lock actuator (driver side)
- Back door lock assembly D152
- 3. Door lock and unlock switch
- 6. Rear door lock actuator LH D85

# DOOR LOCK AND UNLOCK SWITCH: Component Description

INFOID:0000000001184157

Item	Function		
BCM	Controls the door lock and unlock function.		
Door switch	Detects door state (open or closed).		
Door lock and unlock switch	Transmits door lock and unlock signal to BCM. Door lock and unlock switch indicator is built in door lock and unlock switch.		
Door lock actuator	Receives door lock and unlock signal from BCM. Door lock actuator locks and unlocks each door.		

**KEYFOB** 

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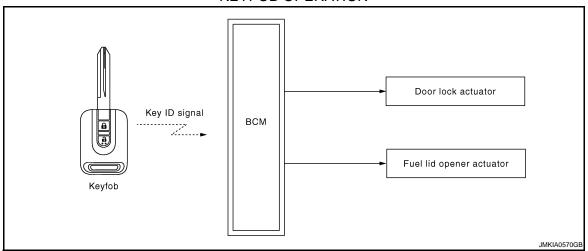
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# **KEYFOB**: System Diagram

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#### **KEYFOB OPERATION**



# **KEYFOB**: System Description

INFOID:0000000001184159

#### **KEYFOB OPERATION**

The multi remote control system can be locked and unlocked by pressing door lock and unlock button of keyfob.

#### DOOR LOCK AND UNLOCK OPERATION

When door lock and unlock button of keyfob is pressed, door lock and unlock signal transmits from keyfob to BCM. When BCM receives the door lock and unlock signal, it operates door lock actuator.

#### **OPERATION CONDITION**

Remote controller operation	Operation condition
Lock/unlock	Key switch is OFF (key is removed from ignition key cylinder).

#### OPERATION AREA

To ensure that the keyfob works effectively, use within 5m range of the vehicle, however the operable range may differ according to surroundings.

## **ANTI-HIJACK MODE**

When door lock is unlocked, pressing LOCK button on keyfob once will lock all doors. When door lock is locked, pressing UNLOCK button on keyfob will unlock driver side door. Pressing UNLOCK button on keyfob second time within 5 seconds from the first time will unlock all doors and back door can be opened with back door opener switch.

#### NOTE:

Anti-hijack mode can be set to ON or OFF\* with CONSULT-III. For the setting information, refer to <u>DLK-577</u>, "MULTIREMOTE ENT : CONSULT-III Function (BCM - MULTIREMOTE ENT)".

<sup>\*:</sup> The function setting.

**KEYFOB**: Component Parts Location

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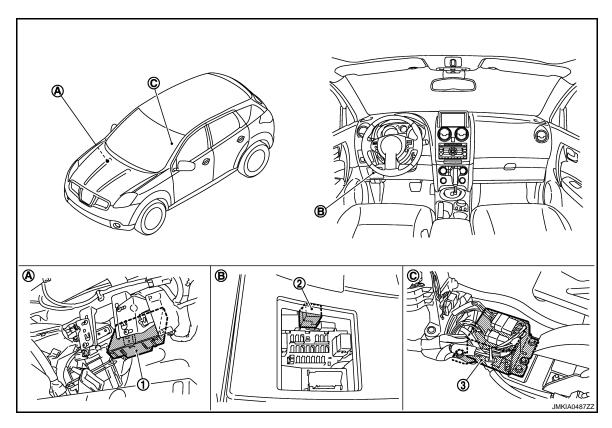
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- 1. BCM M65, M66, M67
- A. Over the glove box

- Passenger side anti-hijack relay M90
- B. View with fuse box lid removed
- 3. Air bag diagnosis sensor unit
- C. View with center console removed

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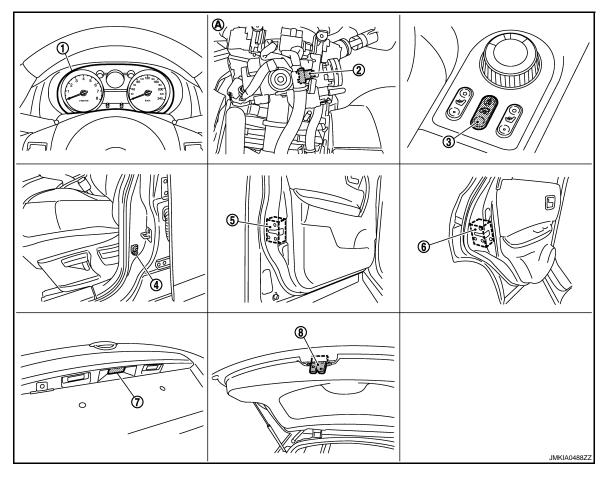
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- Combination meter
   M34
- 4. Front door switch (driver side) B34
- 7. Back door opener switch D186
- View with steering column cover removed.
- Key switch M24
- 5. Front door lock actuator (driver side) D9
- 8. Back door lock assembly D152
- 3. Door lock and unlock switch M89
- 6. Rear door lock actuator LH D85

INFOID:0000000001184161

# **KEYFOB**: Component Description

Item	Function
BCM	Controls the door lock function.
Key switch	Detects that ignition key is inserted into ignition key cylinder.
Door lock actuator	Receives lock and unlock signal from BCM and locks and unlocks each door.

# **AUTO DOOR LOCK**

# AUTO DOOR LOCK: System Diagram

INFOID:0000000001184162

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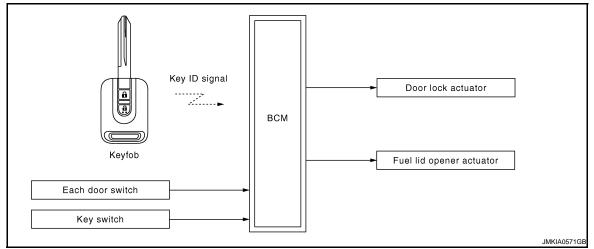
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#### **AUTO DOOR LOCK OPERATION**



# AUTO DOOR LOCK: System Description

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#### **AUTO RELOCK OPERATION**

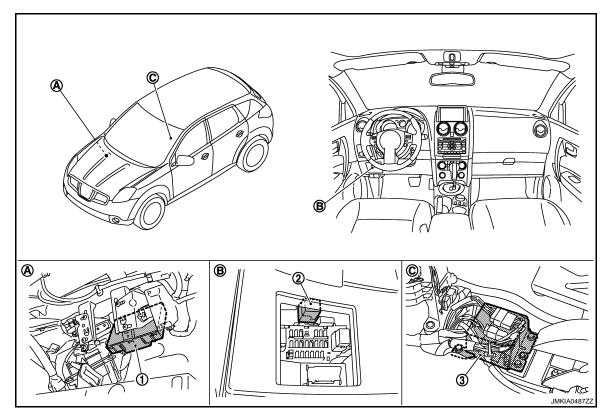
When all doors are locked and then doors are unlocked with keyfob, if BCM does not receive the following signal within 2 minutes\*1, all doors are automatically locked.

- Any door is opened.
- Ignition key is inserted into ignition key cylinder.
- Door is locked with keyfob.
- Door is locked/unlocked with door lock and unlock switch.

\*1: The time can be changed with CONSULT-III. Refer to <u>DLK-577, "MULTIREMOTE ENT : CONSULT-III</u> <u>Function (BCM - MULTIREMOTE ENT)"</u>.

# AUTO DOOR LOCK: Component Parts Location

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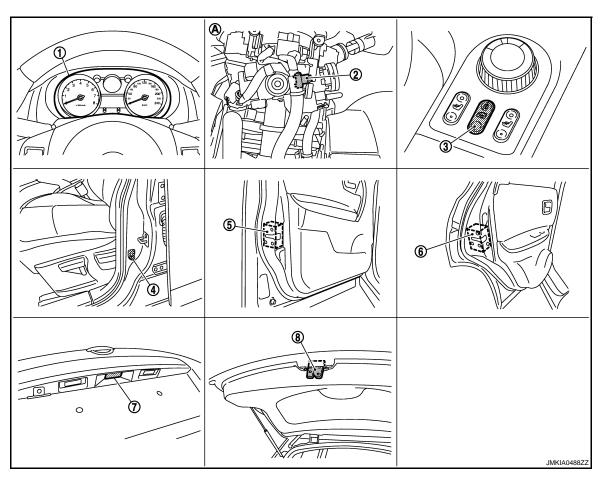


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#### < FUNCTION DIAGNOSIS >

- 1. BCM M65, M66, M67
- A. Over the glove box

- Passenger side anti-hijack relay M90
- B. View with fuse box lid removed
- 3. Air bag diagnosis sensor unit
- C. View with center console removed



- Combination meter
   M34
- 4. Front door switch (driver side) B34
- Back door opener switch D186
- View with steering column cover removed.
- Key switch M24
- 5. Front door lock actuator (driver side)
- 8. Back door lock assembly D152
- Door lock and unlock switch M89
- 6. Rear door lock actuator LH

INFOID:0000000001184165

# AUTO DOOR LOCK: Component Description

Item Function

BCM Controls the door lock function.

Door switch Detects door state (open or closed).

Key switch Detects that ignition key is inserted into ignition key cylinder.

Door lock/unlock switch Transmits door lock/unlock signal to BCM.

Keyfob Transmits key ID to BCM when lock and unlock button is pressed.

Door lock actuator Receives lock/unlock signal from BCM and locks/unlocks each door.

# VEHICLE SPEED SENSING AUTO DOOR LOCK

# VEHICLE SPEED SENSING AUTO DOOR LOCK: System Diagram

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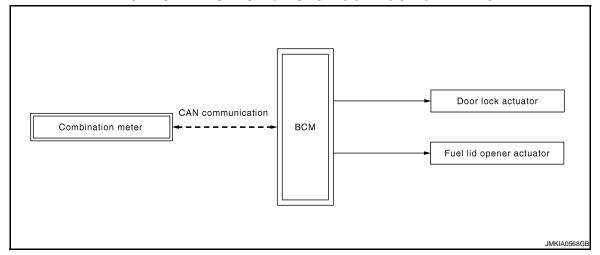
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#### VEHICLE SPEED SENSING AUTO DOOR LOCK OPERATION



# VEHICLE SPEED SENSING AUTO DOOR LOCK: System Description

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#### VEHICLE SPEED SENSING AUTO DOOR LOCK OPERATION

When the vehicle speed exceeds more than 25 km/h (16 MPH), all doors are automatically locked. The vehicle speed signal is received from combination meter via CAN communication.

#### CHANGE SETTING PROCEDURE

Vehicle speed sensing auto door lock function can be enabled/disabled with door lock and unlock switch.

- 1. Turn ignition switch ON.
- 2. Press and hold door lock/unlock switch (LOCK) for 5 seconds within 2 seconds after turn ignition switch ON.
- 3. Buzzer sounds for 1 second.

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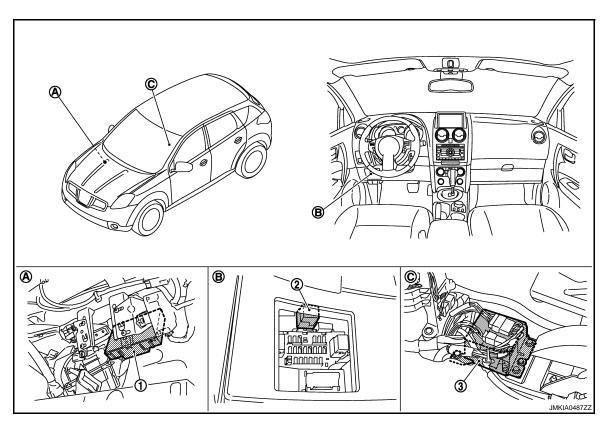
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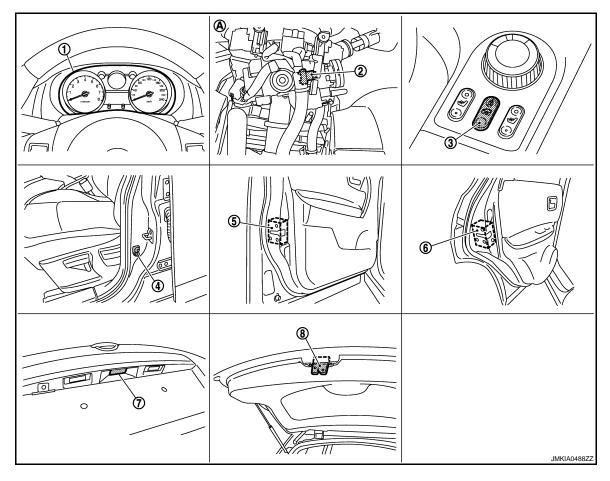
# VEHICLE SPEED SENSING AUTO DOOR LOCK : Component Parts Location

INFOID:0000000001184168



- 1. BCM M65, M66, M67
- A. Over the glove box

- 2. Passenger side anti-hijack relay M90
- B. View with fuse box lid removed
- 3. Air bag diagnosis sensor unit M59
- C. View with center console removed



- Combination meter M34
- 4. Front door switch (driver side) B34
- 7. Back door opener switch D186
- View with steering column cover removed
- Key switch M24
- 5. Front door lock actuator (driver side) D9
- 8. Back door lock assembly D152
- 3. Door lock and unlock switch M89
- 6. Rear door lock actuator LH D85

# VEHICLE SPEED SENSING AUTO DOOR LOCK: Component Description

INFOID:0000000001184169

Item	Item Function	
BCM	Controls the door lock function.	
Combination meter	Transmits vehicle speed signal to BCM via CAN communication.	
Door lock actuator	Receives door lock and unlock signal from BCM and locks and unlocks each door.	

# AIR BAG INTERLOCK UNLOCK

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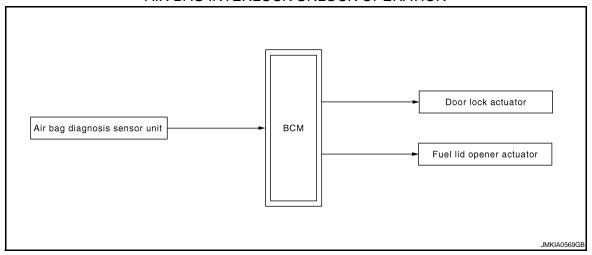
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# AIR BAG INTERLOCK UNLOCK: System Diagram

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#### AIR BAG INTERLOCK UNLOCK OPERATION



# AIR BAG INTERLOCK UNLOCK: System Description

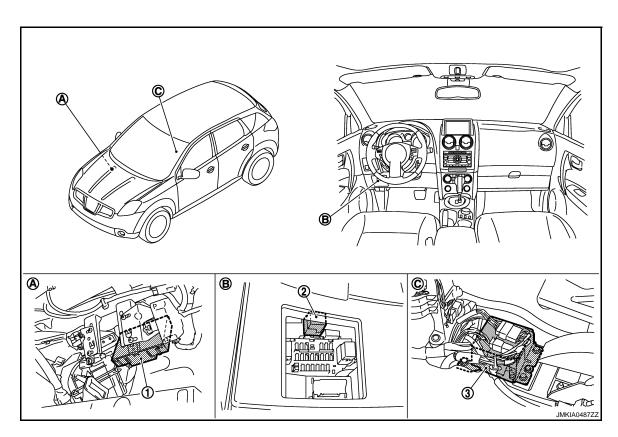
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#### AIR BAG INTERLOCK UNLOCK OPERATION

When ignition switch is ON and BCM receive air bag deployment signal, it operates automatically to unlock all doors. Air bag diagnosis sensor unit sends the air bag deployment signal to BCM.

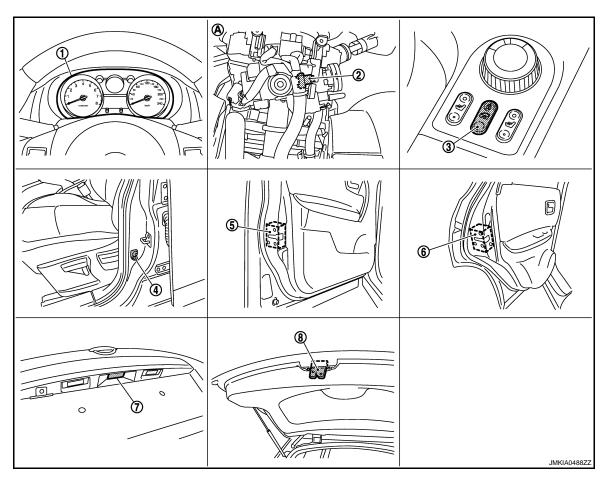
# AIR BAG INTERLOCK UNLOCK: Component Parts Location

INFOID:0000000001184172



- 1. BCM M65, M66, M67
- A. Over the glove box

- Passenger side anti-hijack relay M90
- B. View with fuse box lid removed
- Air bag diagnosis sensor unit M59
- C. View with center console removed



- Combination meter M34
- 4. Front door switch (driver side) B34
- 7. Back door opener switch D186
- View with steering column cover removed
- Key switch M24
- Front door lock actuator (driver side)D9
- 8. Back door lock assembly D152
- 3. Door lock and unlock switch M89
- 6. Rear door lock actuator LH D85

# AIR BAG INTERLOCK UNLOCK : Component Description

 Item
 Function

 BCM
 Controls the door lock function.

 Air bag diagnosis sensor unit
 Transmits air bag deployment signal to BCM.

 Door lock actuator
 Receives door lock and unlock signal from BCM and lock and unlock each door.

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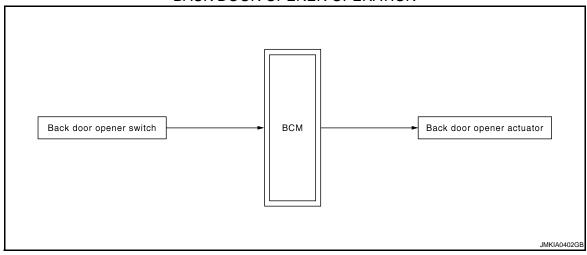
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# BACK DOOR OPENER FUNCTION BACK DOOR OPENER SWITCH

BACK DOOR OPENER SWITCH: System Diagram

INFOID:0000000001184174

#### **BACK DOOR OPENER OPERATION**



# BACK DOOR OPENER SWITCH: System Description

INFOID:0000000001184175

#### **BACK DOOR OPENER OPERATION**

When back door opener switch is pressed, BCM opens back door opener actuator.

#### NOTE:

Back door opener actuator is not for locking the back door. The function is only to open the back door.

#### **OPERATION CONDITION**

If the following conditions are satisfied, back door opener operation can be performed.

Back door opener switch operation	Operation condition
Back door open	<ul> <li>Vehicle speed is less than 5 km/h (3 MPH).</li> <li>All doors are unlocked.</li> </ul>

# BACK DOOR OPENER SWITCH: Component Parts Location

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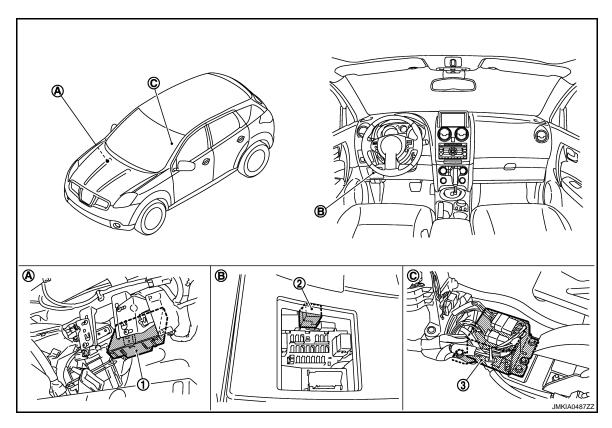
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- 1. BCM M65, M66, M67
- A. Over the glove box

- Passenger side anti-hijack relay M90
- B. View with fuse box lid removed
- 3. Air bag diagnosis sensor unit
- C. View with center console removed

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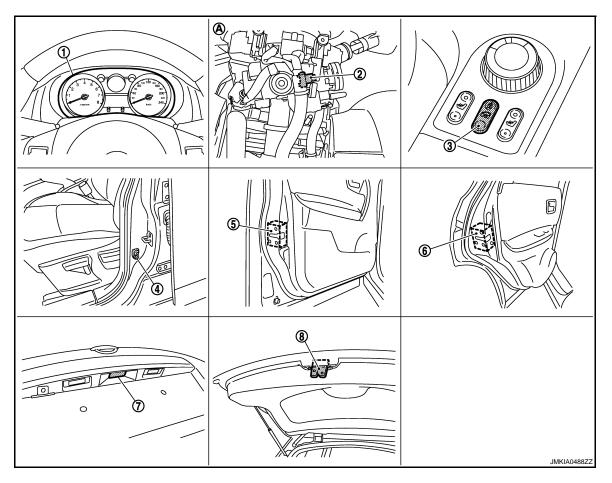
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- Combination meter M34
- 4. Front door switch (driver side) B34
- 7. Back door opener switch D186
- View with steering column cover removed
- Key switch M24
- 5. Front door lock actuator (driver side) D9
- 8. Back door lock assembly D152
- 3. Door lock and unlock switch M89
- 6. Rear door lock actuator LH D85

# BACK DOOR OPENER SWITCH: Component Description

INFOID:0000000001184177

Item	Function
BCM	Controls the back door opener function.
Back door opener switch	Transmits back door opener switch operation signal to BCM.
Back door opener actuator	Opens the back door with the back door open signal from BCM.
Combination meter	Transmits vehicle speed signal to BCM via CAN communication.

# WARNING FUNCTION

System Diagram

# BACK DOOR OPEN WARNING CAN communication Combination meter

# System Description

BACK DOOR OPEN WARNING OPERATION

Back door opener switch is operated, when door lock is locked with door lock and unlock switch, by speed sensing lock or when only the driver side is unlocked by the anti-hijack function, the buzzer (built in combination meter) will sound.

#### KEY REMINDER OPERATION

- The buzzer (combination meter) will sound and the doors will not lock if the door lock and unlock switch is pressed while the driver door is open and mechanical key is inserted ignition key cylinder.
- The buzzer (combination meter) will sound and the doors will not lock if the door lock and unlock switch is pressed while any door other than the driver door is open.

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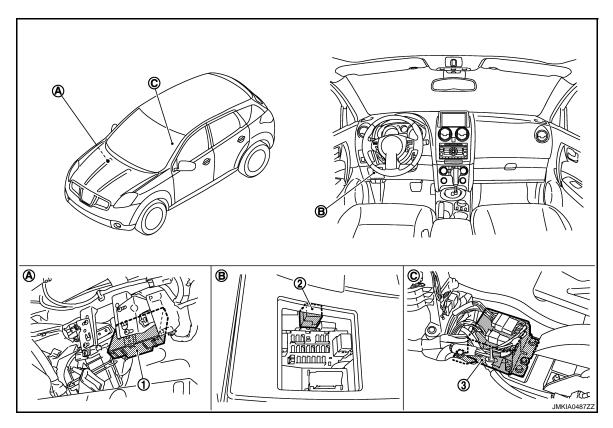
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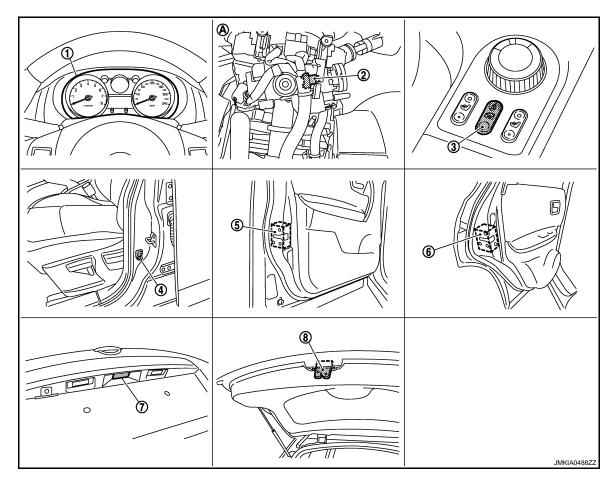
# Component Parts Location

INFOID:0000000001184180



- 1. BCM M65, M66, M67
- A. Over the glove box

- Passenger side anti-hijack relay M90
- B. View with fuse box lid removed
- 3. Air bag diagnosis sensor unit M59
- C. View with center console removed



- Combination meter M34
- 4. Front door switch (driver side) B34
- 7. Back door opener switch D186
- View with steering column cover removed
- Key switch M24
- Front door lock actuator (driver side)D9
- Back door lock assembly D152
- 3. Door lock and unlock switch M89
- 6. Rear door lock actuator LH D85

# Component Description

INFOID:0000000001184181

Item	Function	
BCM	Controls the warning function.	
Combination meter	Sounds the buzzer by the request signal from BCM via CAN communication.	
Back door opener switch	Transmit back door open signal to BCM	

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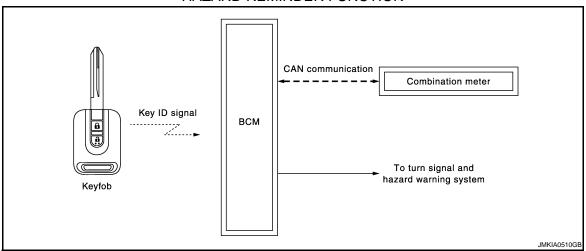
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# HAZARD REMINDER FUNCTION

System Diagram

# HAZARD REMINDER FUNCTION



# System Description

INFOID:0000000001184183

#### HAZARD REMINDER OPERATION

When door is locked or unlocked by keyfob, then BCM flashes hazard warning lamp as a reminder. **NOTE:** 

Hazard reminder mode can be changed with CONSULT-III. Refer to <u>DLK-577, "MULTIREMOTE ENT : CONSULT-III Function (BCM - MULTIREMOTE ENT)"</u>.

Hazard reminder setting (With CONSULT-III)		Door lock operation (with keyfob)	Hazard warning lamp flash	
	MODE 1	_	_	
	MODE 2	Lock	Once	
HAZARD LAMP SET		Unlock	_	
	MODE 3	Lock	_	
		Unlock	Twice	
	MODE 4	Lock	Once	
		Unlock	Twice	

# Component Parts Location

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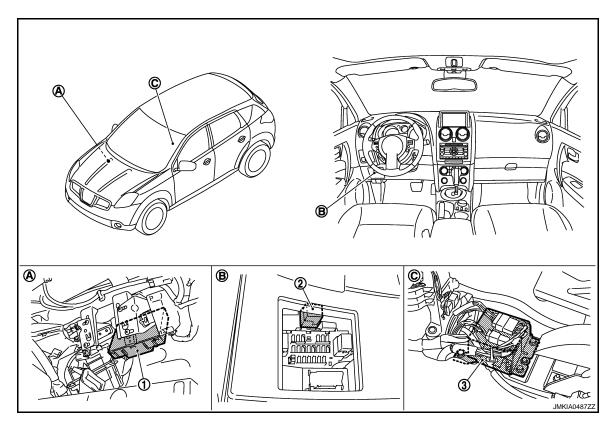
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- 1. BCM M65, M66, M67
- A. Over the glove box

- Passenger side anti-hijack relay M90
- B. View with fuse box lid removed
- 3. Air bag diagnosis sensor unit M59
- C. View with center console removed

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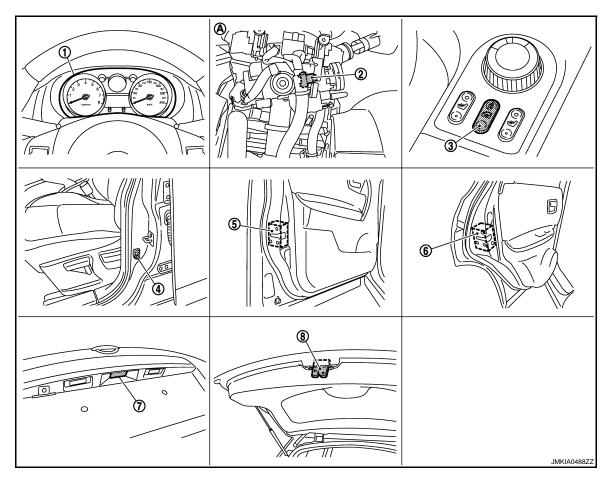
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- Combination meter M34
- 4. Front door switch (driver side) B34
- 7. Back door opener switch D186
- View with steering column cover removed
- Key switch M24
- 5. Front door lock actuator (driver side) D9
- 8. Back door lock assembly D152
- 3. Door lock and unlock switch M89
- 6. Rear door lock actuator LH D85

# Component Description

INFOID:0000000001184185

Item	Function	
BCM	Controls the hazard reminder system.	
Combination meter	Turns ON the turn signal indicator (built in combination meter) by the request from BCM via CAN communication.	
Keyfob	Transmits key ID to BCM when lock and unlock button is pressed.	

# **DIAGNOSIS SYSTEM (BCM)**

**COMMON ITEM** 

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

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#### APPLICATION ITEM

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

Diagnosis mode	Function Description		
Work Support	Changes the setting for each system function.		
Self Diagnostic Result	Displays the diagnosis results judged by BCM. Refer to BCS-62, "DTC Index".		
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM.		
Data Monitor	The BCM input/output signals are displayed.		
Active Test	The signals used to activate each device are forcibly supplied from BCM.		
Ecu Identification	The BCM part number is displayed.		
Configuration	<ul> <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.

×: Applicable item

System	Sub system selection item	Diagnosis mode		
		WORK SUPPORT	DATA MONITOR	ACTIVE TEST
<del></del>	BCM	×		
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER	×	×	×
Warning chime	BUZZER		×	×
Interior room lamp	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		×	
Intelligent Key system	INTELLIGENT KEY		×	
Combination switch	COMB SW		×	
Immobilizer	IMMU		×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door open	TRUNK		×	×
Vehicle security system	THEFT ALM	×	×	×
Signal buffer system	SIGNAL BUFFER		×	×
PTC heater system	PTC HEATER		×	×

**DOOR LOCK** 

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

INFOID:0000000001559411

**DATA MONITOR** 

Monitor Item	Condition
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.
ACC ON SW	Indicates [ON/OFF] condition of ignition switch in ACC position.
PUSH SW <sup>*1</sup>	Indicates [ON/OFF] condition of ignition knob switch.
KEY ON SW	Indicates [ON/OFF] condition of key switch.
CDL LOCK SW	Indicates [ON/OFF] condition of door lock and unlock switch.
CDL UNLOCK SW	Indicates [ON/OFF] condition of door lock and unlock switch.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch (driver side).
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch (passenger side).
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.
BACK DOOR SW	Indicates [ON/OFF] condition of back door switch.
KEYLESS LOCK*2	Indicates [ON/OFF] condition of lock signal from key fob.
KEYLESS UNLOCK*2	Indicates [ON/OFF] condition of unlock signal from key fob.
I-KEY LOCK*1	Indicates [ON/OFF] condition of lock signal from Intelligent Key.
I-KEY UNLOCK*1	Indicates [ON/OFF] condition of unlock signal from Intelligent Key.
UNLOCK SHOCK	Indicates [ON/OFF] condition of signal from air bag diagnosis unit.  ON: During the unlock operation interlock with air bag.  OFF: Other than above.
SHOCK SENSOR	<ul> <li>Indicates [NOMAL/ON/OFF] condition of circuit between BCM and air bag diagnosis sensor unit.</li> <li>NORMAL: Ignition switch ON. (BCM is receiving normal condition signal from air bag diagnosis sensor unit.)</li> <li>ON: During the receiving of air bag deployment signal from air bag diagnosis sensor unit.</li> <li>OFF: After the receiving of air bag deployment signal from air bag diagnosis sensor unit.</li> </ul>
VEHICLE SPEED	Displays the vehicle speed signal received from combination meter by numerical value [km/h].

<sup>\*1:</sup> For the Intelligent key equipped vehicle.

# **ACTIVE TEST**

Test item	Description
SUPER LOCK*1	This test is able to check super lock operation [LOCK (SET)/UNLOCK (RELEASE)].
DOOR LOCK IND	This test is able to check door lock indicator (built in door lock and unlock switch on center console) operation [ON/OFF].
DOOR LOCK	This test is able to check door lock operation [ALL LOCK/ALL UNLOCK/DR UNLOCK/OTHER UNLOCK].

<sup>:\*1</sup> For the super lock equipped vehicle.

# **WORK SUPPORT**

Test item	Description
SECURITY DOOR LOCK SET	<ul><li>Anti hijack function mode can be changed in this mode.</li><li>ON: Anti hijack mode is active.</li><li>OFF: Anti hijack mode is inactive.</li></ul>

# **MULTIREMOTE ENT**

<sup>\*2:</sup> For the multi remote control system equipped vehicle.

### **DIAGNOSIS SYSTEM (BCM)**

#### < FUNCTION DIAGNOSIS >

### [WITHOUT I-KEY & SUPER LOCK]

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

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#### **BCM CONSULT-III FUNCTION**

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

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

#### **DATA MONITOR**

Monitor Item	Condition
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.
ACC ON SW	Indicates [ON/OFF] condition of ignition switch in ACC position.
KEY ON SW	Indicates [ON/OFF] condition of key switch.
KEYKESS LOCK	Indicates [ON/OFF] condition of lock signal from key fob.
KEYLESS UNLOCK	Indicates [ON/OFF] condition of unlock signal from key fob.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch (driver side).
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch (passenger side).
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.
BACK DOOR SW	Indicates [ON/OFF] condition of back door switch.
CDL LOCK SW	Indicates [ON/OFF] condition of door lock and unlock switch.
CDL UNLOCK SW	Indicates [ON/OFF] condition of door lock and unlock switch.
KEYLESS PANIC	This item is indicated, but not monitored.
MEMORY 1	
MEMORY 2	
MEMORY 3	Indicates [ON/OFF] condition of key fob ID code registration.
MEMORY 4	
MEMORY 5	

#### **ACTIVE TEST**

Test item	Description	
DOOR LOCK	This test is able to check warning chime in combination meter operation. [ALL LOCK/ALL UNLOCK/DR UNLOCK/OTHER UNLOCK]	
INT LAMP	This test is able to check interior lamp operation [ON/OFF].	
FLASHER	This test is able to check flasher operation [LH/RH/OFF].	

#### **WORK SUPPORT**

Test item	Description
HAZARD LAMP SET	Answer back function (hazard) mode can be changed in this mode. For the detail of the setting, refer to <a href="DLK-572">DLK-572</a> , "System Description".
AUTO LOCK SET	Auto door lock time can be changed in this mode.  • MODE 1: 1 minute  • MODE 2: 2 minutes  • MODE 3: 3 minutes  • MODE 4: 4 minutes  • MODE 5: 5 minutes

#### **DLK-577**

### **DIAGNOSIS SYSTEM (BCM)**

< FUNCTION DIAGNOSIS >

[WITHOUT I-KEY & SUPER LOCK]

TRUNK

TRUNK: CONSULT-III Function (BCM - TRUNK)

INFOID:0000000001559415

#### **DATA MONITOR**

Monitor Item	Condition
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.
KEY ON SW	Indicates [ON/OFF] condition of key switch.
PUSH SW <sup>*1</sup>	Indicates [ON/OFF] condition of ignition knob switch.
TRNK OPNR SW	Indicates [ON/OFF] condition of back door opener switch.
VEHICLE SPEED	Displays the vehicle speed signal received from combination meter by numerical value [km/h].

<sup>\*1:</sup> For the Intelligent key equipped vehicle.

#### **ACTIVE TEST**

Test item	Description
TRUNK/GLASS HATCH	This test is able to check back door opener operation [ON/OFF].

<sup>\*2:</sup> For the remote keyless entry system equipped vehicle.

## **COMPONENT DIAGNOSIS**

### U1000 CAN COMM CIRCUIT

Description INFOID:000000001607754

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

DTC Logic

#### DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC Detection Condition	Possible cause	F
U1000	CAN COMM CIRCUIT	When BCM cannot communicate CAN communication signal continuously for 2 seconds or more.	Any item (or items) of the following listed below is malfunctioning in CAN communication system.  Transmission Receiving (ECM) Receiving (METER/M&A) Receiving (TCM) Receiving (MULTI AV) Receiving (IPDM E/R)	G

### Diagnosis Procedure

INFOID:0000000001607756

## 1.PERFORM SELF DIAGNOSTIC

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

#### Is "CAN COMM CIRCUIT" displayed?

YES >> Refer to LAN-13, "Trouble Diagnosis Flow Chart".

NO >> Refer to GI-39, "Intermittent Incident".

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### **U1010 CONTROL UNIT (CAN)**

< COMPONENT DIAGNOSIS >

[WITHOUT I-KEY & SUPER LOCK]

## U1010 CONTROL UNIT (CAN)

DTC Logic

#### DTC DETECTION LOGIC

DTC	CONSULT-III display de- scription	DTC Detection Condition	Possible cause
U1010	CONTROL UNIT (CAN)	When detecting error during the initial diagnosis of CAN controller of BCM.	BCM

### Diagnosis Procedure

INFOID:0000000001607758

### 1.REPLACE BCM

When "DTC:U1010" is detected, replace BCM.

>> Replace BCM. Refer to BCS-65, "Exploded View".

### Special Repair Requirement

INFOID:0000000001607759

1. ADDITIONAL SERVICE WHEN REPLACING BCM

>> Refer to BCS-3, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description".

### POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[WITHOUT I-KEY & SUPER LOCK]

## POWER SUPPLY AND GROUND CIRCUIT

**BCM** 

INFOID:0000000001184196

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### BCM : Diagnosis Procedure

1. CHECK FUSE AND FUSIBLE LINK

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

Terminal No.	Signal name	Fuse and fusible link No.
41	Battery power supply	9 (10A)
57	battery power supply	J (40A)

#### Is the fuse fusing?

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

NO >> GO TO 2.

# 2.CHECK POWER SUPPLY CIRCUIT

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

Terminals				
(+)		(-)	Voltage (Approx.)	
BCM			(Approx.)	
Connector	Terminal	Ground		
M66	41		Pottory voltage	
M67	57		Battery voltage	

#### Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

### 3. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity	
Connector Terminal				
M67	55		Existed	

#### Does continuity exist?

YES >> BCM power supply and ground circuit are OK.

NO >> Repair harness or connector.

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### DOOR LOCK AND UNLOCK SWITCH

Description INFOID:000000001184197

Transmits door lock/unlock operation to BCM.

### Component Function Check

INFOID:0000000001184198

## 1. CHECK FUNCTION

#### (P)With CONSULT-III

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

Monitor item	Condition		
ODL LOOK OW	LOCK	: ON	
CDL LOCK SW	UNLOCK	: OFF	
CDL UNLOCK SW	LOCK	: OFF	
CDL UNLOCK SW	UNLOCK	: ON	

#### Is the inspection result normal?

YES >> Door lock and unlock switch is OK.

NO >> Refer to <u>DLK-582</u>, "<u>Diagnosis Procedure</u>".

### Diagnosis Procedure

INFOID:0000000001184199

## 1. CHECK DOOR LOCK AND UNLOCK INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect door lock and unlock switch connector.
- 3. Check signal between door lock and unlock switch harness connector and ground with oscilloscope.

Terminal				
(+)			Signal	
Door lock and unlock switch connector	Terminal	(–)	(Reference value)	
	1			
M89	6	Ground	(V) 15 10 5 0 	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

## 2.check door lock and unlock switch circuit

- Turn ignition switch OFF.
- 2. Disconnect BCM connector.
- Check continuity between BCM connector and door lock and unlock switch harness connector.

BCM connector	Terminal	Door lock and unlock switch connector	Terminal	Continuity
M65	7	M89	6	Exists
	9		1	LAISIS

4. Check continuity between BCM harness connector and ground.

#### DOOR LOCK AND UNLOCK SWITCH

#### < COMPONENT DIAGNOSIS >

#### [WITHOUT I-KEY & SUPER LOCK]

BCM connector	Terminal		Continuity
M65	7	Ground	Does not exist
	9		Does not exist

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

## 3.check door lock and unlock switch ground

Check continuity between door lock and unlock switch harness connector and ground.

Door lock and unlock switch connector	Terminal	Ground	Continuity
M89	5	Ground	Exists

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

### 4. CHECK BCM OUTPUT SIGNAL

- Connect BCM connector.
- Check signal between BCM harness connector and ground oscilloscope.

Terminal			0:	
(+)		(-)	Signal (Reference value)	
BCM connector	Terminal	(-)	(1.0.0.000 10.00)	
	7			
M65	9	Ground	(V) 15 10 10 10 10 10 10 10 10 10 10 10 10 10	

#### Is the inspection result normal?

>> Check intermittent incident. Refer to GI-39, "Intermittent Incident". YES

NO >> Replace BCM. Refer to BCS-65, "Exploded View".

### $oldsymbol{5}.$ CHECK DOOR LOCK AND UNLOCK SWITCH

Check door lock and unlock switch

Refer to DLK-74, "Component Inspection".

#### Is the inspection result normal?

>> Check intermittent incident. Refer to GI-39, "Intermittent Incident". YES

>> Replace door lock and unlock switch. Refer to <a href="DLK-278">DLK-278</a>, "Exploded View".

### Component Inspection

### 1. CHECK DOOR LOCK AND UNLOCK SWITCH

Check door lock and unlock switch.

Door lock and unlock switch	Terminal		Condition	Continuity
M89	6	E	LOCK	Exists
Mea	1	5	UNLOCK	EXISTS

#### Is the inspection result normal?

YES >> Door lock and unlock switch is OK.

NO >> Replace door lock and unlock switch. Refer to <u>DLK-278</u>, "Exploded View". DLK

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INFOID:0000000001184200

#### DOOR LOCK AND UNLOCK SWITCH INDICATOR

< COMPONENT DIAGNOSIS >

[WITHOUT I-KEY & SUPER LOCK]

### DOOR LOCK AND UNLOCK SWITCH INDICATOR

Description INFOID:000000001184201

The door lock and unlock switch indicates door lock status. The indicator will illuminate when a lock operation is accomplished, and during this status, if any door is opened, the indicator will turn OFF.

### Component Function Check

INFOID:0000000001184202

### 1. CHECK FUNCTION

#### (P)With CONSULT-III

Check "DOOR LOCK IND" in "Active Test" mode with CONSULT-III.

Test item	Test item	
DOOR LOCK IND	:ON	Illuminated
BOOK EOOK IND	:OFF	Not illuminated

#### Is the inspection result normal?

YES >> Door lock and unlock switch is OK.

NO >> Refer to <u>DLK-584</u>, "<u>Diagnosis Procedure</u>".

### Diagnosis Procedure

INFOID:0000000001184203

## 1. CHECK DOOR LOCK AND UNLOCK SWITCH INDICATOR INPUT SIGNAL

- Turn ignition switch OFF.
- 2. Check voltage between door lock and unlock switch harness connector and ground.

Terminal				
(+)			Condition	Voltage
Door lock and unlock switch connector	Terminal	(-)		(Approx.)
M89	4	Ground	Door lock operation is accomplished	Battery voltage
			Any door is OPEN	0

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

## 2.check door lock and unlock switch circuit

- 1. Turn ignition switch OFF.
- Disconnect BCM connector and door lock and unlock switch connector.
- 3. Check continuity between BCM connector and door lock and unlock switch harness connector.

BCM connector	Terminal	Door lock and unlock switch connector	Terminal	Continuity
M65	24	M89	4	Exists

4. Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M65	24	Glound	Does not exist

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK DOOR LOCK AND UNLOCK SWITCH GROUND

### DOOR LOCK AND UNLOCK SWITCH INDICATOR

#### < COMPONENT DIAGNOSIS >

#### [WITHOUT I-KEY & SUPER LOCK]

Check continuity between door lock and unlock switch harness connector and ground.

Door lock and unlock switch connector	Terminal	Ground	Continuity
M89	5		Exists

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

### 4. CHECK BCM OUTPUT SIGNAL

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

Terminal				\/alta ===	
(+)		( )	Condition	Voltage (Approx.)	
BCM connector	Terminal	(-)		(Approxi)	
M65 24 Ground		Door lock operation is accomplished	Battery voltage		
			Any door is OPEN	0	

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace BCM. Refer to BCS-65, "Exploded View".

### 5. CHECK DOOR LOCK AND UNLOCK SWITCH INDICATOR

Check door lock and unlock switch

Refer to DLK-585, "Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace door lock and unlock switch. Refer to DLK-278, "Exploded View".

### Component Inspection

INFOID:0000000001184204

## 1. CHECK DOOR LOCK AND UNLOCK SWITCH INDICATOR

Check continuity door lock and unlock switch.

Door lock and unlock switch	Terminal		Continuity	
	(+)	(-)	Continuity	
M89	5	4	Exists	
	4	5	Does not exist	

#### Is the inspection result normal?

YES >> Door lock and unlock switch is OK.

NO >> Replace door lock and unlock switch. Refer to DLK-278, "Exploded View".

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#### < COMPONENT DIAGNOSIS >

DOOR SWITCH

**DRIVER SIDE** 

**DRIVER SIDE: Description** 

INFOID:0000000001184205

Detects door open/closed condition.

DRIVER SIDE: Component Function Check

INFOID:0000000001184206

### 1. CHECK FUNCTION

### (II) With CONSULT-III

Check door switches "DOOR SW-DR" in "Data Monitor" mode with CONSULT-III.

Monitor item	Condition		
DOOR SW-DR	OPEN	:ON	
DOOK SW-DK	CLOSE	:OFF	

#### Is the inspection result normal?

YES >> Door switch is OK.

NO >> Refer to <u>DLK-586</u>, "<u>DRIVER SIDE</u>: <u>Diagnosis Procedure</u>".

### DRIVER SIDE: Diagnosis Procedure

INFOID:0000000001184207

### 1. CHECK DOOR SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Check signal between BCM harness connector and ground with oscilloscope.

Terminals				
(+)			Door condition	Voltage (V) (Approx.)
BCM connector	Terminal	(–)		(Approx.)
			OPEN	0
M65	26	Ground	CLOSE	(V) 15 10 5 0 10 ms JPMIA0011GB

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to <a href="GI-39">GI-39</a>, "Intermittent Incident".

NO >> GO TO 2.

### 2.CHECK DOOR SWITCH CIRCUIT

- 1. Disconnect BCM connector.
- 2. Check continuity between BCM harness connector and door switch harness connector.

BCM connector	Terminal	Door switch connector	Terminal	Continuity
M65	26	B34	1	Exists

3. Check continuity between BCM harness connector and ground.

BCM connector Terminal		Ground	Continuity
M65	26	Giodila	Does not exist

#### DOOR SWITCH

#### < COMPONENT DIAGNOSIS >

#### [WITHOUT I-KEY & SUPER LOCK]

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between BCM and door switch.

### 3.check door switch

Check door switch.

Refer to <u>DLK-587</u>, "DRIVER SIDE: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace malfunctioning door switch. Refer to <a href="DLK-706">DLK-706</a>, "Exploded View".

### **DRIVER SIDE: Component Inspection**

### 1. CHECK DOOR SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect door switch connector.
- 3. Check door switch.

Terminal		Door switch condition	Continuity	
Door switch		Door Switch Condition		
1	Ground part of door switch	Pressed	Exists	
		Released	Does not exist	

#### Is the inspection result normal?

YES >> Door switch is OK.

NO >> Replace malfunctioning door switch. Refer to <a href="DLK-706">DLK-706</a>, "Exploded View".

#### PASSENGER SIDE

### PASSENGER SIDE: Description

Detects door open/closed condition.

### PASSENGER SIDE: Component Function Check

## .

## 1. CHECK FUNCTION

#### (III) With CONSULT-III

Check door switches "DOOR SW-AS" in "Data Monitor" mode with CONSULT-III.

Monitor item	Condition		
DOOR SW-AS	OPEN	: ON	
DOOK SW-AS	CLOSE	: OFF	

#### Is the inspection result normal?

YES >> Door switch is OK.

NO >> Refer to <u>DLK-587</u>, "PASSENGER SIDE : <u>Diagnosis Procedure</u>".

#### PASSENGER SIDE : Diagnosis Procedure

### 1. CHECK DOOR SWITCH INPUT SIGNAL

- Turn ignition switch OFF.
- Check signal between BCM harness connector and ground with oscilloscope.

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INFOID:0000000001184211

Terminals				
(+)		Door condition	Voltage (V) (Approx.)	
BCM connector	Terminal	(–) Bool condition		(Approx.)
			OPEN	0
M65	27	Ground	CLOSE	(V) 15 10 5 0 JPMIA0011GB

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2.

## 2. CHECK DOOR SWITCH CIRCUIT

- 1. Disconnect BCM connector.
- 2. Check continuity between BCM harness connector and door switch harness connector.

BCM connector	Terminal	Door switch connector	Terminal	Continuity
M65	27	B27	1	Exists

3. Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M65	27	Olouliu	Does not exist

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between BCM and door switch.

## 3. CHECK DOOR SWITCH

Check door switch.

Refer to DLK-588, "PASSENGER SIDE: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace malfunctioning door switch. Refer to <u>DLK-706, "Exploded View"</u>.

## PASSENGER SIDE: Component Inspection

INFOID:0000000001184212

## 1. CHECK DOOR SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect door switch connector.
- 3. Check door switch.

Terminal		Door switch condition	Continuity	
Door switch		Door Switch Condition		
1	Ground part of door switch	Pressed	Exists	
		Released	Does not exist	

#### Is the inspection result normal?

YES >> Door switch is OK.

NO >> Replace malfunctioning door switch. Refer to <u>DLK-706</u>, "Exploded View".

**REAR LH** 

**REAR LH**: Description

INFOID:0000000001184213

Detects door open/closed condition.

REAR LH: Component Function Check

INFOID:0000000001184214

1. CHECK FUNCTION

(II) With CONSULT-III

Check door switches "DOOR SW-RL" in "Data Monitor" mode with CONSULT-III.

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Monitor item	Condition		
DOOR SW-RL	OPEN	:ON	
DOOR SW-RL	CLOSE	:OFF	

#### Is the inspection result normal?

YES >> Door switch is OK.

NO >> Refer to <u>DLK-589</u>. "REAR LH: <u>Diagnosis Procedure"</u>.

### **REAR LH: Diagnosis Procedure**

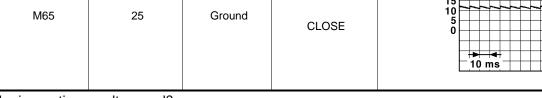
INFOID:0000000001184215

## 1. CHECK DOOR SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.

2. Check signal between BCM harness connector and ground with oscilloscope.

Terminals (+)					
			Door condition	Voltage (V) (Approx.)	
BCM connector	Terminal	(-)	Door condition	(Approx.)	
			OPEN	0	
				(V)	



JPMIA0011GB

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2.

## 2.check door switch circuit

Disconnect BCM connector.

2. Check continuity between BCM harness connector and door switch harness connector.

BCM connector	Terminal	Door switch connector	Terminal	Continuity
M65	25	B71	1	Exists

Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M65	25	Oround	Does not exist

Is the inspection result normal?

#### **DOOR SWITCH**

#### < COMPONENT DIAGNOSIS >

[WITHOUT I-KEY & SUPER LOCK]

YES >> GO TO 3.

NO >> Repair or replace harness between BCM and door switch.

### 3.check door switch

Check door switch.

Refer to DLK-590, "REAR LH: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39. "Intermittent Incident".

NO >> Replace malfunctioning door switch. Refer to <u>DLK-706</u>, "Exploded View".

### **REAR LH: Component Inspection**

INFOID:0000000001184216

### 1. CHECK DOOR SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect door switch connector.
- Check door switch.

Terminal  Door switch		Door switch condition	Continuity
		Door Switch Condition	Continuity
1	1 Ground part of door switch		Exists
	Ground part of door switch	Released	Does not exist

#### Is the inspection result normal?

YES >> Door switch is OK.

NO >> Replace malfunctioning door switch. Refer to <u>DLK-706, "Exploded View"</u>.

#### REAR RH

**REAR RH: Description** 

INFOID:0000000001184217

Detects door open/close condition.

REAR RH: Component Function Check

INFOID:0000000001184218

### 1. CHECK FUNCTION

#### (II) With CONSULT-III

Check door switches "DOOR SW-RR" in "Data Monitor" mode with CONSULT-III.

Monitor item	Condition		
DOOR SW-RR	OPEN	:ON	
DOOR SW-RR	CLOSE	:OFF	

#### Is the inspection result normal?

YES >> Door switch is OK.

NO >> Refer to <u>DLK-590</u>, "<u>REAR RH</u>: <u>Diagnosis Procedure</u>".

### REAR RH: Diagnosis Procedure

INFOID:0000000001184219

## 1. CHECK DOOR SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Check signal between BCM harness connector and ground with oscilloscope.

Terminals (+)				
			Door condition	Voltage (V) (Approx.)
BCM connector	Terminal	(–)	2001 00110111011	(Approx.)
			OPEN	0
M65	29	Ground	CLOSE	(V) 15 10 5 0 10 ms  JPMIA0011GB

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2.

## 2. CHECK DOOR SWITCH CIRCUIT

1. Disconnect BCM connector.

2. Check continuity between BCM harness connector and door switch harness connector.

BCM connector	Terminal	Door switch connector	Terminal	Continuity
M65	29	B53	1	Exists

3. Check continuity between BCM harness connector and ground.

BCM connector	Terminal	nal Ground	Continuity	
M65	29	Oround	Does not exist	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between BCM and door switch.

## 3. CHECK DOOR SWITCH

Check door switch.

Refer to DLK-591, "REAR RH: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace malfunctioning door switch. Refer to <u>DLK-706</u>, "Exploded View".

#### REAR RH: Component Inspection

### 1. CHECK DOOR SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect door switch connector.
- 3. Check door switch.

Terminal		Door switch condition	Continuity	
Door switch		Door Switch Condition		
1	Ground part of door switch	Pressed	Exists	
	Ground part of door switch	Released	Does not exist	

#### Is the inspection result normal?

YES >> Door switch is OK.

NO >> Replace malfunctioning door switch. Refer to <u>DLK-706</u>, "Exploded View".

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#### < COMPONENT DIAGNOSIS >

**BACK DOOR** 

BACK DOOR : Description

INFOID:0000000001184221

Detects back door open/close condition.

BACK DOOR: Component Function Check

INFOID:0000000001184222

### 1. CHECK FUNCTION

### (I) With CONSULT-III

Check "DOOR BK SW" in "Data Monitor" mode with CONSULT-III.

Monitor item	Condition		
DOOR BK SW	OPEN	: ON	
DOOR BK SW	CLOSE	: OFF	

#### Is the inspection result normal?

YES >> Back door lock assembly (door switch) is OK.

NO >> Refer to <u>DLK-592</u>, "BACK DOOR : <u>Diagnosis Procedure</u>".

### **BACK DOOR: Diagnosis Procedure**

INFOID:0000000001184223

## 1. CHECK BACK DOOR LOCK ASSEMBLY (DOOR SWITCH) INPUT SIGNAL

- Turn ignition switch OFF.
- 2. Check voltage between BCM harness connector and ground.

Terminals				
(-	(+)		Back door condition	Voltage (V) (Approx.)
BCM connector	Terminal	(-)		(11 - 7
M65	28	Ground	OPEN	0
WOS	28 Ground	Ground	CLOSE	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

## 2. CHECK BACK DOOR LOCK ASSEMBLY (DOOR SWITCH) CIRCUIT

- Disconnect BCM connector.
- Check continuity between BCM harness connector and back door lock assembly (door switch) harness connector.

BCM connector	Terminal	Back door lock assembly (door switch) connector	Terminal	Continuity
M65	28	D152	4	Exists

3. Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M65	28	Giodila	Does not exist

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between BCM and back door lock assembly (door switch).

## 3.CHECK BACK DOOR LOCK ASSEMBLY GROUND CIRCUIT

Check continuity between back door lock assembly harness connector and ground.

#### [WITHOUT I-KEY & SUPER LOCK]

Back door lock assembly (door switch) connector	Terminal	Ground	Continuity
D152	3		Exists
the inspection result normal?			

Is the inspection result normal?

YES >> GO TO 4.

>> Repair or replace back door lock assembly ground circuit. NO

### 4. CHECK BCM OUTPUT SIGNAL

- Connect BCM connector.
- Check voltage between BCM harness connector and ground.

Terminals			V I 00	
(+)		(-)	Voltage (V) (Approx.)	
BCM connector	Terminal	()	( +	
M65	28	Ground	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace BCM. Refer to BCS-65, "Exploded View".

### ${f 5.}$ CHECK BACK DOOR LOCK ASSEMBLY (DOOR SWITCH)

Check back door lock assembly (door switch).

Refer to <u>DLK-593</u>, "BACK DOOR: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39. "Intermittent Incident".

>> Replace back door lock assembly (door switch). Refer to DLK-702, "DOOR LOCK : Removal and NO Installation".

### BACK DOOR: Component Inspection

1. CHECK BACK DOOR LOCK ASSEMBLY (DOOR SWITCH)

- Turn ignition switch OFF.
- Disconnect back door lock assembly (door switch) connector. 2.
- Check back door lock assembly (door switch).

Term	ninal	Trunk condition	Continuity
Back door lock assembly (door switch)		Trank condition	Continuity
4	4 3	OPEN	Exists
4		CLOSE	Does not exist

#### Is the inspection result normal?

YES >> Back door lock assembly (door switch) is OK.

NO >> Replace back door lock assembly (door switch). Refer to DLK-702, "DOOR LOCK: Removal and Installation".

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### **KEY SWITCH**

Description INFOID:000000001184225

Key switch detects that ignition key is inserted into the key cylinder, and then transmits the signal to BCM.

Component Function Check

INFOID:0000000001184226

### 1. CHECK KEY SWITCH INPUT SIGNAL

Check key switch ("KEY ON SW") in "Data Monitor" mode with CONSULT-III.

Monitor item	Condition	
KEY ON SW	Insert mechanical key into key cylinder	: ON
KET ON SW	Remove mechanical key from key cylinder	: OFF

#### Is the inspection result normal?

YES >> Key switch is OK.

NO >> Refer to <u>DLK-594, "Diagnosis Procedure"</u>.

### Diagnosis Procedure

INFOID:0000000001184227

### 1. CHECK KEY SWITCH INPUT SIGNAL

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

Terminals				M. K	
(+)	(+)		Condition	Voltage (V) (Approx.)	
BCM connector	Terminal	(-)		(11 - 7	
M65	36	Ground	Insert ignition key into key cyl- inder	Battery voltage	
19100	30		Remove ignition key from key cylinder	0	

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2.

## 2.CHECK KEY SWITCH POWER SUPPLY CIRCUIT

- 1. Remove ignition key from key cylinder.
- 2. Disconnect key switch connector.
- 3. Check voltage between key switch harness connector and ground.

	V 16 0.0		
(+)		(-)	Voltage (V) (Approx.)
Key switch connector	Terminal		( + + +
M24	2	Ground	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

## 3.check key switch signal circuit

1. Check continuity between BCM harness connector and key switch harness connector.

#### **KEY SWITCH**

#### < COMPONENT DIAGNOSIS >

#### [WITHOUT I-KEY & SUPER LOCK]

	BCM connector	Terminal	Key switch connector	Terminal	Continuity
_	M65	36	M24	1	Existed
_ =	01 1 1 1 1 1				

2. Check continuity between key switch harness connector and ground.

Key switch connector	Terminal	Ground	Continuity
M24	1	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4. CHECK KEY SWITCH

Check key switch.

Refer to <u>DLK-595</u>, "Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace key cylinder assembly.

Component Inspection

INFOID:0000000001184228

COMPONENT INSPECTION

1. CHECK KEY SWITCH

Check continuity between key switch terminals.

Terminal key switch connector		Condition	Continuity
		Condition	Continuity
1	1 2	Insert ignition key into key cylinder	Existed
		Remove ignition key from key cylinder	Not existed

#### Is the inspection result normal?

YES >> Key switch is OK.

NO >> Replace key cylinder assembly.

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#### [WITHOUT I-KEY & SUPER LOCK]

#### < COMPONENT DIAGNOSIS >

DOOR LOCK ACTUATOR

**DRIVER SIDE** 

DRIVER SIDE : Description

INFOID:0000000001184229

Locks/unlocks the door with the signal from BCM.

DRIVER SIDE: Component Function Check

INFOID:0000000001184230

### 1. CHECK FUNCTION

#### (P)With CONSULT-III

Check "DOOR LOCK" in Active test mode with CONSULT-III.

Test item		Condition
	ALL LOCK	The all door lock actuator are locked
DOOR LOCK	ALL UNLOCK	The all door lock actuator are unlocked
_	DR UNLOCK	The door lock actuator (driver side) is unlocked

#### Is the inspection result normal?

YES >> Door lock actuator is OK.

NO >> Refer to <u>DLK-596</u>, "<u>DRIVER SIDE</u>: <u>Diagnosis Procedure</u>".

### DRIVER SIDE: Diagnosis Procedure

INFOID:0000000001184231

#### 1. CHECK BCM OUTPUT SIGNAL

Check voltage between BCM harness connector and ground.

Terminals					
(+)		( )	Condition of door lock and unlock switch	Voltage (V) (Approx.)	
BCM connector	Terminal	()		(11.5)	
M67	56	Ground	Lock	$0 \rightarrow Battery \ voltage \rightarrow 0$	
IVIO7	60	Giouna	Unlock	$0 \rightarrow \text{Battery voltage} \rightarrow 0$	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

## 2. CHECK DOOR LOCK ACTUATOR CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM and front door lock actuator (driver side) connector.
- Check continuity between BCM harness connector and front door lock actuator (driver side) harness connector.

BCM connector	Terminal	Door lock actuator connector	Terminal	Continuity	
M67	56	D9	3	Exists	
IVIO 7	60	D9	2	EXISIS	

4. Check continuity between BCM harness connector and ground.

BCM connector	Terminal		Continuity
M67	56	Ground	Does not exist
	60		Does not exist

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

#### < COMPONENT DIAGNOSIS >

#### [WITHOUT I-KEY & SUPER LOCK]

NO >> Repair or replace harness.

## 3. CHECK DOOR LOCK ACTUATOR

Check door lock actuator.

NO

Refer to DLK-597, "DRIVER SIDE: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

>> Replace door lock actuator. Refer to <u>DLK-690</u>, "<u>DOOR LOCK</u>: Removal and Installation" <u>DLK-254</u>, "<u>DOOR LOCK</u>: Removal and Installation".

### DRIVER SIDE : Component Inspection

#### INFOID:0000000001184232

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### 1. CHECK FRONT DOOR LOCK ACTUATOR (DRIVER SIDE)

Check the actuator operation by connecting the battery voltage to front door lock actuator (driver side).

Front door lock actuator (driver side)	Tern	ninal	Door lock actuator condition	
Tront door lock actuator (unver side)	(+)	(-)	Door lock actuator container	
D9	3	2	LOCK	
D9	2	3	UNLOCK	

#### Is the inspection result normal?

YES >> Front door lock actuator (driver side) is OK.

NO >> Replace front door lock actuator (driver side). Refer to <u>DLK-690, "DOOR LOCK : Removal and Installation"</u>.

### DRIVER SIDE: Special Repair Requirement

INFOID:0000000001184233

Refer to <u>PWC-4</u>, "<u>ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL</u>: <u>Special Repair Requirement</u>".

PASSENGER SIDE

PASSENGER SIDE : Description

INFOID:0000000001184234

Locks/unlocks the door with the signal from BCM.

PASSENGER SIDE: Component Function Check

#### INFOID:0000000001184235

INFOID:0000000001184236

## 1. CHECK FUNCTION

#### With CONSULT-III

Check "DOOR LOCK" in Active test mode with CONSULT-III.

Test item		Condition
	:ALL LOCK	The all door lock actuator are locked
DOOR LOCK	:ALL UNLOCK	The all door lock actuator are unlocked
	:OTHER UNLOCK	The door lock actuator (front passenger side, rear LH and rear RH) are unlocked

#### Is the inspection result normal?

YES >> Door lock actuator is OK.

NO >> Refer to <u>DLK-597</u>, "PASSENGER SIDE : <u>Diagnosis Procedure"</u>.

### PASSENGER SIDE : Diagnosis Procedure

### 1. CHECK BCM OUTPUT SIGNAL

Check voltage between BCM harness connector and ground.

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#### < COMPONENT DIAGNOSIS >

	Terminals			V ( 00	
(+)		( )	Condition of door lock and unlock switch	Voltage (V) (Approx.)	
BCM connector	Terminal	()		, , ,	
M67	56	Ground	Lock	$0 \to \text{Battery voltage} \to 0$	
WO7	54	Glound	Unlock	$0 \to \text{Battery voltage} \to 0$	

#### Is the inspection result normal?

YES >> GO TO 3. NO >> GO TO 2.

## 2.CHECK DOOR LOCK ACTUATOR CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM and front door lock actuator (passenger side) connector.
- Check continuity between BCM harness connector and front door lock actuator (passenger side) harness connector.

BCM connector	Terminal	Door lock actuator connector	Terminal	Continuity
M67	56	D48	3	Exists
WOT	54	240	2	LAISIS

4. Check continuity between BCM harness connector and ground.

BCM connector	Terminal		Continuity	
M67	56	Ground	Does not exist	
	54		DOGS HOLEKISL	

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace harness.

### 3. CHECK DOOR LOCK ACTUATOR

Check door lock actuator.

Refer to DLK-598, "PASSENGER SIDE: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace door lock actuator. Refer to <u>DLK-690, "DOOR LOCK: Removal and Installation"</u>.

### PASSENGER SIDE : Component Inspection

INFOID:0000000001184237

## 1. CHECK FRONT DOOR LOCK ACTUATOR (PASSENGER SIDE)

Check the actuator operation by connecting the battery voltage directly to front door lock actuator (passenger side).

Front door lock actuator	Terr	minal	Door lock actuator condition	
(passenger side) connector	(+)	(-)	Door lock actuator condition	
D48	3	2	LOCK	
D46	2	3	UNLOCK	

#### Is the inspection result normal?

YES >> Front door lock actuator (passenger side) is OK.

NO >> Replace front door lock actuator (passenger side). Refer to <u>DLK-690, "DOOR LOCK : Removal and Installation"</u>.

REAR LH

< COMPONENT DIAGNOSIS >

#### [WITHOUT I-KEY & SUPER LOCK]

**REAR LH: Description** 

INFOID:0000000001184238

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Locks/unlocks the door with the signal from BCM.

REAR LH: Component Function Check

INFOID:0000000001184239

### 1. CHECK FUNCTION

#### (P)With CONSULT-III

Check "DOOR LOCK" in Active test mode with CONSULT-III.

Te	est item	Condition
	:ALL LOCK	The all door lock actuator are locked
DOOR LOCK	:ALL UNLOCK	The all door lock actuator are unlocked
	:OTHER UNLOCK	The door lock actuator (front passenger side, rear LH and rear RH) are unlocked

#### Is the inspection result normal?

YES >> Door lock actuator is OK.

NO >> Refer to DLK-599, "REAR LH: Diagnosis Procedure".

### **REAR LH**: Diagnosis Procedure

INFOID:0000000001184240

### 1. CHECK BCM OUTPUT SIGNAL

Check voltage between BCM harness connector and ground.

Terminals					
(+)		( )	Condition of door lock and unlock switch	Voltage (V) (Approx.)	
BCM connector	Terminal	(–)		()	
M67	56	Ground	Lock	0  o Battery voltage  o 0	
IVIO /	54	Ground	Unlock	0  o Battery voltage  o 0	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

## 2.CHECK DOOR LOCK ACTUATOR CIRCUIT

Turn ignition switch OFF.

2. Disconnect BCM and rear door lock actuator (LH) connector.

Check continuity between BCM harness connector and rear door lock actuator (LH) harness connector.

BCM connector	Terminal	Door lock actuator connector	Terminal	Continuity
M67	56	D85	3	Exists
IVI67	54	D85	2	EXISIS

Check continuity between BCM harness connector and ground.

BCM connector	Terminal		Continuity
M67	56	Ground	Does not exist
	54		Does not exist

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace harness.

### 3.CHECK DOOR LOCK ACTUATOR

Check door lock actuator.

Refer to <u>DLK-600</u>, "REAR LH: Component Inspection".

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#### < COMPONENT DIAGNOSIS >

[WITHOUT I-KEY & SUPER LOCK]

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace door lock actuator. Refer to DLK-696. "DOOR LOCK: Removal and Installation".

### REAR LH: Component Inspection

INFOID:0000000001184241

## 1. CHECK REAR DOOR LOCK ACTUATOR (LH)

Check the actuator operation by connecting the battery voltage directly to rear door lock actuator (LH).

Rear door lock actuator (LH)	Terminal		Door lock actuator condition
rteal door lock actuator (Err)	(+)	(-)	Door lock actuator condition
D85	3	2	LOCK
D63	2	3	UNLOCK

#### Is the inspection result normal?

YES >> Rear door lock actuator (LH) is OK.

NO >> Replace rear door lock actuator (LH). Refer to <u>DLK-696, "DOOR LOCK: Removal and Installation".</u>

### **REAR RH**

**REAR RH: Description** 

INFOID:0000000001184242

Locks/unlocks the door with the signal from BCM.

REAR RH: Component Function Check

INFOID:0000000001184243

### 1. CHECK FUNCTION

### (E) With CONSULT-III

Check "DOOR LOCK" in Active test mode with CONSULT-III.

Te	est item	Condition
	:ALL LOCK	The all door lock actuator are locked
DOOR LOCK	:ALL UNLOCK	The all door lock actuator are unlocked
	:OTHER UNLOCK	The door lock actuator (front passenger side, rear LH and rear RH) are unlocked

#### Is the inspection result normal?

YES >> Door lock actuator is OK.

NO >> Refer to <u>DLK-600</u>, "<u>REAR RH</u>: <u>Diagnosis Procedure</u>".

### REAR RH: Diagnosis Procedure

INFOID:0000000001184244

### 1. CHECK BCM OUTPUT SIGNAL

Check voltage between BCM harness connector and ground.

Terminals			0 10 (1 1 1	
(+)		(–)	Condition of door lock and unlock switch	Voltage (V) (Approx.)
BCM connector	Terminal	(-)		, , ,
M67	56	Ground	Lock	$0 \to \text{Battery voltage} \to 0$
IVIO7	54	Giodila	Unlock	$0 \rightarrow Battery \ voltage \rightarrow 0$

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

### 2.CHECK DOOR LOCK ACTUATOR CIRCUIT

- Turn ignition switch OFF.
- Disconnect BCM and rear door lock actuator (RH) connector.

#### < COMPONENT DIAGNOSIS >

#### [WITHOUT I-KEY & SUPER LOCK]

3. Check continuity between BCM harness connector and rear door lock actuator (RH) harness connector.

BCM connector	Terminal	Door lock actuator connector	Terminal	Continuity
M67	56	D105	3	Exists
IVIO7	54	D103	2	LAISIS

4. Check continuity between BCM harness connector and ground.

BCM connector	Terminal		Continuity
M67	56	Ground	Does not exist
	54		Does not exist

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace harness.

## 3. CHECK DOOR LOCK ACTUATOR

Check door lock actuator.

Refer to DLK-601, "REAR RH: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace door lock actuator. Refer to <u>DLK-696, "DOOR LOCK: Removal and Installation"</u>.

### REAR RH: Component Inspection

### 1. CHECK REAR DOOR LOCK ACTUATOR (RH)

Check the actuator operation by connecting the battery voltage directly to rear door lock actuator (RH).

Rear door lock actuator (RH)	Tern	ninal	Door lock actuator condition
real door lock actuator (RTI)	(+)	(-)	
D105	3	2	LOCK
	2	3	UNLOCK

#### Is the inspection result normal?

YES >> Rear door lock actuator (RH) is OK.

NO >> Replace rear door lock actuator (RH). Refer to <u>DLK-696, "DOOR LOCK : Removal and Installation".</u>

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#### **BACK DOOR OPENER ACTUATOR**

< COMPONENT DIAGNOSIS >

[WITHOUT I-KEY & SUPER LOCK]

### **BACK DOOR OPENER ACTUATOR**

Description INFOID:000000001184246

Opens the back door with the signal from BCM.

### Component Function Check

INFOID:0000000001184247

### 1. CHECK FUNCTION

#### (P)With CONSULT-III

Check "TRUNK/GLASS HATCH" in "Active Test" mode with CONSULT-III.

Test item		Condition	
TRUNK/GLASS HATCH	:OPEN	Back door lock opener actuator operation	

#### Is the inspection result normal?

YES >> Door lock actuator is OK.

NO >> Refer to <u>DLK-602</u>, "<u>Diagnosis Procedure</u>".

### Diagnosis Procedure

INFOID:0000000001184248

### 1. CHECK BCM OUTPUT SIGNAL

Check voltage between BCM harness connector and ground.

Terminals			0 150	
(+)		(-)	Condition of back door opener switch	Voltage (V) (Approx.)
BCM connector	Terminal	(-)	,	, , , , , , , , , , , , , , , , , , ,
M66	45	Ground	Pressed	$0 \to \text{Battery voltage} \to 0$

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 2.

## 2.CHECK BACK DOOR LOCK ASSEMBLY CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect BCM and back door lock assembly connector.
- 3. Check continuity between BCM harness connector and back door lock assembly harness connector.

BCM connector	Terminal	Back door lock assembly connector	Terminal	Continuity
M66	45	D152	2	Exists

4. Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M66	45	Ground	Does not exist

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

### 3.CHECK BACK DOOR LOCK ASSEMBLY GROUND CIRCUIT

Check continuity between back door lock assembly harness connector and ground.

Back door lock assembly connector	Terminal	Ground	Continuity
D152	1		Exists

#### Is the inspection result normal?

#### **BACK DOOR OPENER ACTUATOR**

#### < COMPONENT DIAGNOSIS >

[WITHOUT I-KEY & SUPER LOCK]

YES >> GO TO 4.

NO >> Repair or replace harness.

### 4. CHECK BACK DOOR LOCK ASSEMBLY

Check the actuator operation by connecting battery voltage to back door lock assembly. Refer to <a href="https://doi.org/lock.org/least-100/back-10

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace back door lock assembly. Refer to <u>DLK-702</u>, "<u>DOOR LOCK</u>: Removal and Installation".

### Component Inspection

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## 1. CHECK BACK DOOR LOCK ASSEMBLY

Check the actuator operation by connecting battery voltage to back door lock assembly.

Back door lock assembly connector	Terminal		Back door actuator condition
D152	(+)	(-)	OPEN
D132	2	1	OI LIV

#### Is the inspection result normal?

YES >> Back door lock assembly (back door lock actuator) is OK.

NO >> Replace back door lock assembly (back door lock actuator). Refer to <u>DLK-702</u>, "<u>DOOR LOCK</u>: Removal and Installation".

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#### **BACK DOOR OPENER SWITCH**

< COMPONENT DIAGNOSIS >

[WITHOUT I-KEY & SUPER LOCK]

### **BACK DOOR OPENER SWITCH**

Description INFOID:000000001184250

Sends the back door opening signal to BCM.

### Component Function Check

INFOID:0000000001184251

## 1. CHECK FUNCTION

#### (P)With CONSULT-III

Check "TRNK OPNR SW" in "Data Monitor" mode with CONSULT-III.

Monitor item	Condition	
TRNK OPNR SW	Back door opener switch is pressed	:ON
	Back door opener switch is released	:OFF

#### Is the inspection result normal?

YES >> Back door opener switch is OK.

NO >> Refer to <u>DLK-604, "Diagnosis Procedure"</u>.

### Diagnosis Procedure

INFOID:0000000001184252

### 1. CHECK BCM INPUT SIGNAL

Check voltage between BCM harness connector and ground.

Terminals		0 150 (1 1 1	V I 00	
(+)		(-)	Condition of back door opener switch	Voltage (V) (Approx.)
BCM connector	Terminal	(-)		
M65	12	Ground	Pressed	0
WOS	12	Ground	Released	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 2.

## 2.CHECK BACK DOOR OPENER SWITCH CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM connector and back door opener switch connector.
- Check continuity between BCM harness connector and back door opener switch harness connector.

BCM connector	Terminal	Back door opener switch connector	Terminal	Continuity
M65	12	D186	1	Exists

Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M65	12	Oround	Does not exist

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

### 3.CHECK BCM OUTPUT SIGNAL

Check voltage between BCM harness connector and ground.

#### **BACK DOOR OPENER SWITCH**

#### < COMPONENT DIAGNOSIS >

#### [WITHOUT I-KEY & SUPER LOCK]

Terminals				
(+)	(+)		Voltage (V) (Approx.)	
BCM connector	Terminal	(-)	,	
M65	12	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace BCM. Refer to BCS-65, "Exploded View".

4.CHECK BACK DOOR OPENER SWITCH GROUND CIRCUIT

Check continuity between back door opener switch harness connector and ground.

Back door opener switch connector	Terminal	Ground	Continuity
D186	2		Exists

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

5. CHECK BACK DOOR OPENER SWITCH

Check back door opener switch.

Refer to <u>DLK-605</u>, "Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace back door opener switch. Refer to <a href="DLK-277">DLK-277</a>, "Exploded View".

Component Inspection

1. CHECK BACK DOOR OPENER SWITCH

Check back door opener switch.

Back door opener switch connector	Terminal		Back door opener switch condition	Continuity	
D186	1	2	Pressed	Exists	
D100	'	D180	2	Released	Does not exist

Is the inspection result normal?

YES >> Back door opener switch is OK.

NO >> Replace back door opener switch. Refer to <u>DLK-277, "Exploded View"</u>.

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### **BUZZER (COMBINATION METER)**

#### < COMPONENT DIAGNOSIS >

[WITHOUT I-KEY & SUPER LOCK]

## **BUZZER (COMBINATION METER)**

Description INFOID:000000001184254

Performs operation method guide and warning with buzzer.

### Component Function Check

INFOID:0000000001184255

## 1. CHECK FUNCTION

#### (P)With CONSULT-III

Check the operation with "KEY REMINDER WARN" in the "Active Test" with CONSULT-III.

#### Is the inspection result normal?

YES >> Warning buzzer into combination meter is OK.

NO >> Refer to <u>DLK-606</u>, "<u>Diagnosis Procedure</u>".

### Diagnosis Procedure

INFOID:0000000001184256

### 1. CHECK METER BUZZER CIRCUIT

Refer to WCS-21, "Component Function Check".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace meter buzzer circuit.

HAZARD WARNING LAMPS			
< COMPONENT DIAGNOSIS >	[WITHOUT I-KEY & SUPER LOCK]		
HAZARD WARNING LAMPS			
Description	INFOID:000000001184257		
Perform answer-back for each operation with number of blinks.			
Component Function Check	INFOID:000000001184258		
1.CHECK FUNCTION			
With CONSULT-III Check hazard warning lamp "FLASHER" in "Active Test" with CONSU	JLT-III.		
Is the inspection result normal?			
YES >> Hazard warning lamp circuit is OK. NO >> Refer to <u>DLK-607, "Diagnosis Procedure"</u> .			
Diagnosis Procedure	INFOID:000000001184259		

1. CHECK HAZARD SWITCH CIRCUIT

Refer to EXL-75, "Component Function Check".

>> Check intermittent incident. Refer to <u>GI-39</u>, "<u>Intermittent Incident</u>". >> Repair or replace hazard warning switch circuit.

Check hazard switch circuit.

YES NO

Is the inspection result normal?

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#### **VEHICLE SPEED SIGNAL CIRCUIT**

< COMPONENT DIAGNOSIS >

[WITHOUT I-KEY & SUPER LOCK]

### VEHICLE SPEED SIGNAL CIRCUIT

Description INFOID:000000001184260

Display the vehicle speed signal received from combination meter by numerical value (km/h).

### Component Function Check

INFOID:0000000001184261

## 1. CHECK FUNCTION

Check the vehicle speed more than 25km/h (16MPH), all doors are automatically locked.

#### Is the inspection result normal?

YES >> Vehicle speed signal circuit is OK.

NO >> Refer to <u>DLK-608</u>, "<u>Diagnosis Procedure</u>".

### Diagnosis Procedure

INFOID:0000000001184262

## 1. CHECK VEHICLE SPEED SIGNAL CIRCUIT

Check vehicle speed signal "VEHICLE SPEED" in "Data Monitor" with CONSULT-III. Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace hazard warning switch circuit.

### **KEYFOB BATTERY**

Description INFOID:000000001184263

Remote door lock and unlock control entry function available when operating on button.

• Door lock and unlock

### Component Function Check

## 1. CHECK KEYFOB FUNCTION

Does door lock and unlock operate with operating keyfob switch?

Is the inspection result normal?

YES >> Keyfob is OK.

NO >> Refer to <u>DLK-609</u>, "<u>Diagnosis Procedure</u>".

### Diagnosis Procedure

## 1. CHECK KEYFOB BATTERY

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

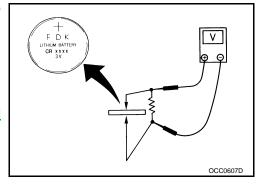
#### Standard: Approx. 2.5 - 3.0 V

Is the measurement value within the specification?

YES >> Replace keyfob.

NO

>> Replace keyfob battery. Refer to <u>DLK-708</u>, "<u>Exploded View</u>".



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# **ECU DIAGNOSIS**

## BCM (BODY CONTROL MODULE)

Reference Value

#### VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
ACC ON SW	Ignition switch OFF	Off
ACC ON SW	Ignition switch ACC or ON	On
AID COND CW	A/C switch OFF	Off
AIR COND SW	A/C switch ON	On
ALIT LICUT OVO	Outside of the room is bright	Off
AUT LIGHT SYS	Outside of the room is dark	On
AUTO LIGHT SW	Lighting switch OFF	Off
AUTO LIGHT SW	Lighting switch AUTO	On
ALITO DEL OCK	Auto lock function does not operate	Off
AUTO RELOCK	Auto lock function is operating	On
BACK DOOR SW	Back door closed	Off
BACK DOOK SW	Back door opened	On
BATTERY VOLT NOTE: Diesel engine models only	Ignition switch ON	Approximately the same as power supply voltage
BRAKE SW	Brake pedal is not depressed	Off
DIVARL OW	Brake pedal is depressed	On
CDL LOCK SW	Door lock/unlock switch does not operate	Off
CDL LOCK SW	Press door lock/unlock switch to the LOCK side	On
CDL UNLOCK SW	Door lock/unlock switch does not operate	Off
CDL UNLOCK SW	Press door lock/unlock switch to the UNLOCK side	On
DOOR SW-AS	Passenger door closed	Off
DOOK SW-AS	Passenger door opened	On
DOOR SW-DR	Driver door closed	Off
DOOK SW-DK	Driver door opened	On
DOOR SW-RL	Rear LH door closed	Off
DOOK SW-KL	Rear LH door opened	On
DOOR SW-RR	Rear RH door closed	Off
	Rear RH door opened	On

## **BCM (BODY CONTROL MODULE)**

### < ECU DIAGNOSIS >

### [WITHOUT I-KEY & SUPER LOCK]

Monitor Item		Condition	Value/Status
		Fan switch ON (when engine coolant is cool)  NOTE:  Depending on the ambient temperature, battery voltage, etc.	Off
ELEC PWR CUT NOTE:	Engine running	The current status maintained with the signal from ECM received.	FREEZ
Diesel engine models only	Lingine running	Fan switch OFF     Fan switch ON after engine warming UP     NOTE:     Depending on the engine coolant temperature, ambient temperature, battery voltage, etc.	INHBT
ENG COOLNT T  NOTE: Diesel engine models only	Engine running		Approximately the same as water temperature gauge reading
ENGINE RPM NOTE: Diesel engine models only	Engine running		Approximately the same as tachometer reading
ENCINE DUN	Engine stopped		Off
ENGINE RUN	Engine running		On
ENGINE STATUS	Engine stopped		STOP
NOTE:	While the engine stalls		STALL
Diesel engine models	Engine running		RUN
only	At engine cranking		CRA
FAN ON SIG	Fan switch OFF		Off
PAN ON SIG	Fan switch ON		On
FR FOG SW	Front fog lamp switch OFF		Off
FR FOG SW	Front fog lamp switch (	ON	On
FR WASHER SW	Front washer switch OFF		Off
I IX WASHEN SW	Front washer switch O	N	On
FR WIPER LOW	Front wiper switch OFF	-	Off
TIX VVII LIX LOVV	Front wiper switch LO		On
FR WIPER HI	Front wiper switch OFF	=	Off
	Front wiper switch HI		On
FR WIPER INT	Front wiper switch OFF	=	Off
I IX VVIE LIX IIVI	Front wiper switch INT		On
FR WIPER STOP	Any position other than	front wiper stop position	Off
	Front wiper stop position	on	On
GLS BREAK SEN	The vehicle without gla	ss break sensor	On
OLU DILLAIL UEIN	The vehicle with glass	break sensor	Off
HAZARD SW	When hazard switch is	not pressed	Off
	When hazard switch is	pressed	On
HD LIGHT TIME	_		Displays a setting time of the follow me home function set by the work support

Monitor Item	Condition	Value/Status
HEAD LAMP SW 1	Lighting switch OFF	Off
HEAD LAWIF SW 1	Lighting switch 2ND	On
HEAD LAMD CW/2	Lighting switch OFF	Off
HEAD LAMP SW 2	Lighting switch 2ND	On
LILDEAM CW	Lighting switch OFF	Off
HI BEAM SW	Lighting switch HI	On
HOOD SW	Close the hood NOTE: Vehicles without theft warning system are OFF-fixed	Off
	Open the hood	On
H/L WASH SW	NOTE: The item is indicated, but not monitored	Off
IGN ON SW	Ignition switch OFF or ACC	Off
1014 014 044	Ignition switch ON	On
IGN SW CAN	Ignition switch OFF or ACC	Off
IGN SW CAN	Ignition switch ON	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7
LVEVLOCK	LOCK button of Intelligent Key is not pressed	Off
I-KEY LOCK	LOCK button of Intelligent Key is pressed	On
I-KEY UNLOCK	UNLOCK button of Intelligent Key is not pressed	Off
	UNLOCK button of Intelligent Key is pressed	On
1/E// 01/ 01/	Mechanical key is removed from key cylinder	Off
KEY ON SW	Mechanical key is inserted to key cylinder	On
1/E)// E00   00//	LOCK button of key fob is not pressed	Off
KEYLESS LOCK	LOCK button of key fob is pressed	On
KEY LESS PANIC	NOTE: The item is indicated, but not monitored	Off
14E) (1 E00 1 IN II 0014	UNLOCK button of key fob is not pressed	Off
KEYLESS UNLOCK	UNLOCK button of key fob is pressed	On
	Light & rain sensor is in normal condition	ОК
LIT-SEN FAIL	Light & rain sensor is with internal error	NOT OK
	Key fob ID code is not registered in "Memory 1"	Off
MEMORY 1	Key fob ID code is registered in "Memory 1"	On
	Key fob ID code is not registered in "Memory 2"	Off
MEMORY 2	Key fob ID code is registered in "Memory 2"	On
	Key fob ID code is not registered in "Memory 3"	Off
MEMORY 3	Key fob ID code is registered in "Memory 3"	On
	Key fob ID code is not registered in "Memory 4"	Off
MEMORY 4	Key fob ID code is registered in "Memory 4"	On
	Key fob ID code is not registered in "Memory 5"	Off
MEMORY 5	Key fob ID code is registered in "Memory 5"	On
OIL PRESS SW	Ignition switch OFF or ACC     Engine running	Off
	Ignition switch ON	On
OUT SIDE TEMP NOTE: Diesel engine models	Ignition switch ON	Approximately the same as outside air temperature

## < ECU DIAGNOSIS >

## [WITHOUT I-KEY & SUPER LOCK]

Monitor Item	Condition	Value/Status
DACCING CW	Other than lighting switch PASS	Off
PASSING SW	Lighting switch PASS	On
DEVEDOE OW CAN	Except selector lever R position	Off
REVERSE SW CAN	Selector lever R position	On
DUCH CW	Return to ignition switch to LOCK position	Off
PUSH SW	Press ignition switch	On
DEAD DEE CW	Rear window defogger switch OFF	Off
REAR DEF SW	Rear window defogger switch ON	On
DD 500 0W	Rear fog lamp switch OFF	Off
RR FOG SW	Rear fog lamp switch ON	On
DD MACHED CM	Rear washer switch OFF	Off
RR WASHER SW	Rear washer switch ON	On
DD WIDED INT	Rear wiper switch OFF	Off
RR WIPER INT	Rear wiper switch INT	On
DD WIDED ON	Rear wiper switch OFF	Off
RR WIPER ON	Rear wiper switch ON	On
DD WIDED CTOD	Rear wiper stop position	Off
RR WIPER STOP	Other than rear wiper stop position	On
	Ignition switch ON	NOMAL
SHOCK SENSOR	After the reception of air bag deployment signal from air bag diagnosis sensor unit	Off
	During the reception of air bag deployment signal from air bag diagnosis sensor unit	witch to LOCK position  Oh  Oh  Oh  Oger switch OFF  Off  Oger switch ON  Oh  Oh  Oh  Oh  Oh  Oh  Oh  Oh  Oh
TAIL LAND OW	Lighting switch OFF	Off
TAIL LAMP SW	Lighting switch 1ST	On
TONIK ODNID OW	When back door opener switch is not pressed	Off
TRNK OPNR SW	When back door opener switch is pressed	On
TURN CIONAL I	Turn signal switch OFF	Off
TURN SIGNAL L	Turn signal switch LH	On
TUDNI CIONAL D	Turn signal switch OFF	Off
TURN SIGNAL R	Turn signal switch RH	On
	Other than the following	Off
UNLOCK SHOCK	During the unlock operation interlocked with air bag	On
VEHICLE SPEED	While driving	Equivalent to speedometer reading

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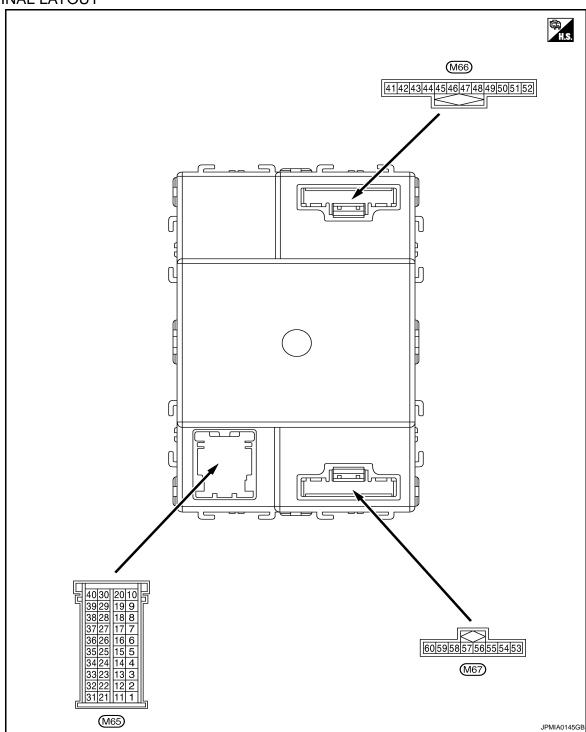
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#### **TERMINAL LAYOUT**



#### PHYSICAL VALUES

#### **CAUTION:**

- Check combination switch system terminal waveform under the loaded condition with lighting switch, turn signal switch and wiper switch OFF is not to be fluctuated by being overloaded.
- Turn wiper intermittent dial position to 4 except when checking waveform or voltage of wiper intermittent dial position. Wiper intermittent dial position can be confirmed on CONSULT-III. Refer to BCS-27, "COMB SW: CONSULT-III Function (BCM COMB SW)".
- BCM reads the status of the combination switch at 10 ms internal normally. Refer to <u>BCS-10, "System Description"</u>.

## [WITHOUT I-KEY & SUPER LOCK]

	nal No.	Description				Value
(Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)
1 (P)	Ground	Combination switch OUTPUT 1	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)  Front wiper switch HI (Wiper intermittent dial 4)  Rear wiper switch INT (Wiper intermittent dial 4)  Any of the condition below with all switch OFF  Wiper intermittent dial 1  Wiper intermittent dial 2  Wiper intermittent dial 3  Wiper intermittent dial 6  Wiper intermittent dial 7	0 V  (V) 15 10 5 0  JPMIA0160GB 9.1 V
2 (Y)	Ground	Combination switch OUTPUT 4	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF Lighting switch 2ND Lighting switch PASS Front fog lamp switch ON  Turn signal switch LH	0 V  (V) 15 10 → 2ms  JPMIA0163GB
3 (LG)	Ground	Combination switch OUTPUT 3	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF Lighting switch AUTO Rear fog lamp switch OFF Front wiper switch MIST Front wiper switch INT  Front wiper switch LO	9.3 V  0 V  (V) 15 10 5 0  JPMIA0162GB
4 (R)	Ground	Combination switch OUTPUT 2	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)  Front washer switch ON (Wiper intermittent dial 4)  Rear wiper switch ON (Wiper intermittent dial 4)  Rear washer switch ON (Wiper intermittent dial 4)  Any of the condition below with all switch OFF  Wiper intermittent dial 1  Wiper intermittent dial 5  Wiper intermittent dial 6	0 V  (V) 15 10 5 0  → 2ms  JPMIA0161GB  9.1 V

(\\/ira aal	No.	Description				Value
(Wire col	olor) –	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF	0 V
					Lighting switch 1ST	
				Combination	Lighting switch 2ND	(V) 15
5 (W) G	Ground	Combination switch OUTPUT 5	Output	switch (Wiper intermit-	Lighting switch HI	10 5
		tent dial 4)	Turn signal switch RH	→ +2ms		
7 (P) G	Ground	Door lock/unlock switch (Lock)	Input	Door lock/un- lock switch	Not pressed	(V) 15 10 5 0 → ←10ms JPMIA0154GB
					Pressed to the lock side	0 V
8 (LG) G	Ground	Hazard switch	Input	Hazard switch	Not pressed	(V) 15 10 5 0 10ms JPMIA0154GB
					Pressed	0 V
9 (BR) G	Ground	Door lock/unlock switch (Unlock)	Input	Door lock/un- lock switch	Not pressed	(V) 15 10 5 0 → ←10ms JPMIA0154GB
					Pressed to the unlock side	0 V
12 (P) G	Ground	Back door opener switch	Input	Back door opener switch	Not pressed	(V) 15 10 5 0 10ms JPMIA0154GB
					Pressed	0 V

	nal No.	Description			• "	Value
+ (vvire	color)	Signal name	Input/ Output		Condition	(Approx.)
13 (R)	Ground	Shock detect sensor	Input	Ignition switch OFF or ACC  Ignition switch ON		(V) 15 10 5 0
14					Not pressed	6.0 V  Battery voltage
(L/R)	Ground	A/C switch	Input	A/C switch	Pressed	0 V
15 (LG/B)	Ground	Fan switch	Input	Fan switch	Not pressed Pressed	Battery voltage 0 V
16 (GR)	Ground	Alarm link	Output		_	_
				Ignition switch OFF or ACC		Battery voltage
17 (BR)		Light & rain sensor serial link	Input/ Output	Ignition switch ON		(V) 15 10 5 0 10ms JPMIA0156GB
					ON	8.7 V 0 V
18 (SB)	Ground	Security indicator	Output	Security indicator	Blinking	(V) 15 10 5 0
					OFF	10.3 V  Battery voltage
19 (L)	_	CAN-H	Input/ Output		_	_
20 (P)	_	CAN-L	Input/ Output		_	_
21 (SB)	Ground	Rear window defog- ger switch	Input	Rear window defogger switch	Not pressed	(V) 15 10 5 0 10ms JPMIA0154GB
					While pressing	0 V

	nal No.	Description				Value	
(Wire	color)	Signal name	Input/ Output		Condition	(Approx.)	
24	Cravinal	Door lock status indi-	Output	Door lock status	ON	Battery voltage	
(GR)	Ground	cator	Output	indicator	OFF	0 V	
25 (GR)	Ground	Rear door switch LH	Input	Rear door switch LH	OFF (When rear door LH closed)	(V) 15 10 5 0 10 ms 10 ms PKID0924E	
					ON (When rear door LH opened)	0 V	
26 (R)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closed)	(V) 15 10 5 0 10 ms PKID0924E	
					ON (When driver door opened)	11.2 V 0 V	
27 (BR)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closed)	(V) 15 10 5 0 10 ms PKID0924E 11.2 V	
					ON (When passenger door opened)	0 V	
28	Ground	Back door switch	Input	Back door	OFF (When back door closed)	Battery voltage	
(G)	Cround	Duon door switch	mpat	switch	ON (When back door opened)	0 V	
29 (LG)	Ground	Rear door switch RH	Input	Rear door switch RH	OFF (When rear door RH closed)	(V) 15 10 5 0 10 ms 10 ms PKID0924E	
					ON (When rear door RH opened)	0 V	
30 (SB)	Ground	Audio link	Input/ Output	_	_	_	

## < ECU DIAGNOSIS >

## [WITHOUT I-KEY & SUPER LOCK]

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Terminal						Value	
(Wire co	- -	Signal name	Input/ Output		Condition	(Approx.)	F
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0  JPMIA0165GB 1.3 V	
					Front fog lamp switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 JPMIA0167GB 1.3 V	E
31 (BR)	Ground	Combination switch INPUT 5	Input	Combination switch	Rear fog lamp switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 JPMIA0168GB 1.3 V	F
					Rear wiper switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 JPMIA0169GB 1.3 V	DI
					Any of the condition below with all switch OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 2  • Wiper intermittent dial 6  • Wiper intermittent dial 7	(V) 15 10 5 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	N

	nal No.	Description				Value
+ (vvire	color)	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF	(V) 15 10 5 0 JPMIA0165GB 1.4 V
					Lighting switch PASS	(V) 15 10 5 0 JPMIA0167GB
32 (G)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermit- tent dial 4)	Lighting switch 2ND	(V) 15 10 5 0 1ms JPMIA0166GB 1.3 V
					Front wiper switch INT	(V) 15 10 5 0 JPMIA0168GB 1.3 V
					Front wiper switch HI	(V) 15 10 10 10 10 10 10 10 10 10 10 10 10 10

## < ECU DIAGNOSIS >

## [WITHOUT I-KEY & SUPER LOCK]

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	nal No. color)	Description			O and distingu	Value	А
+	- COIOT)	Signal name	Input/ Output		Condition	(Approx.)	
					All switch OFF	(V) 15 10 5 0 JPMIA0165GB 1.4 V	С
					Turn signal switch LH	(V) 15 10 5 0 JPMIA0167GB	E
33 (V)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermit- tent dial 4)	Turn signal switch RH	(V) 15 10 5 0 JPMIA0166GB 1.3 V	G H
					Front wiper switch LO	(V) 15 10 5 0 JPMIA0168GB 1.3 V	J DLK
					Front washer switch ON	(V) 15 10 5 0 JPMIA0196GB	M
						1.3 V	

	nal No.	Description	l			Value
+ (Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 JPMIA0165GB 1.4 V
					Lighting switch AUTO (Wiper intermittent dial 4)	(V) 15 10 5 0 JPMIA0167GB
34 (GR)	Ground	Combination switch INPUT 4	Input	Combination switch	Lighting switch 1ST (Wiper intermittent dial 4)	(V) 15 10 5 0 JPMIA0166GB 1.3 V
					Rear wiper INT (Wiper intermittent dial 4)	(V) 15 10 5 0 JPMIA0167GB 1.3 V
					Any of the condition below with all switch OFF  Wiper intermittent dial 1  Wiper intermittent dial 6	(V) 15 10 5 0

## < ECU DIAGNOSIS >

## [WITHOUT I-KEY & SUPER LOCK]

	nal No.	Description				Value	
+	color)	Signal name	Input/ Output		Condition	(Approx.)	
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 1ms JPMIA0165GB	
					Lighting switch HI (Wiper intermittent dial 4)	(V) 15 10 5 0 1.3 V	
Ground Combination switch INPUT 3		Combination switch	Lighting switch 2ND (Wiper intermittent dial 4)	(V) 15 10 5 0 → 1ms JPMIA0167GB 1.3 V			
			Rear wiper switch ON	(V) 15 10 5 0 → -1ms JPMIA0169GB 1.3 V			
					Any of the condition below with all switch OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 2  • Wiper intermittent dial 3	(V) 15 10 5 0 → +1ms JPMIA0196GB 1.3 V	
36 (V)	Ground	Key switch	Input	der  Remove mechar	al key into ignition key cylin- nical key from ignition key	Battery voltage	
37 (R)	Ground	ACC power supply	Input	cylinder Ignition switch O Ignition switch A		0 V  Battery voltage	
38 (W)	Ground	Ignition power sup-	Input	Ignition switch O	FF or ACC	0 V  Battery voltage	

## [WITHOUT I-KEY & SUPER LOCK]

	nal No.	Description				Value
+ (Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
39 (P)	Ground	NATS antenna amp.	Input/ Output	Insert mechanica der	al key into ignition key cylin-	Just after Insert mechanical key into ignition key cylinder. Pointer of tester should move
40 (LG)	Ground	NATS antenna amp.	Input/ Output	Insert mechanical key into ignition key cylinder		Just after Insert mechanical key into ignition key cylinder. Pointer of tester should move
41 (V)	Ground	Battery power sup- ply	Input	Ignition switch O	FF	Battery voltage
42	Ground	Interior room lamp	Output	After passing the saver operation t	interior room lamp battery ime	0 V
(V)	Ground	power supply	Output	Any other time af lamp battery sav	ter passing the interior room er operation time	Battery voltage
43	Ground	Rear wiper motor	Output	Rear wiper switch	h OFF	0 V
(L)	Ground	Real wiper motor	Output	Rear wiper switch	h ON	Battery voltage
					Rear wiper stop position	0 V
44 (L/W)	Ground	Rear wiper auto stop	Input	Ignition switch ON	Any position other than rear wiper stop position	(V) 15 10 5 0 10 10 10 10 10 10 10 10 10 10 10 10 1
45	Ground	Back door lock actu-	Output	Back door	Pressed	Battery voltage (300ms)
(GR)	Ground	ator	Output	opener switch	Not pressed	0 V
					Turn signal switch OFF	0 V
47 (G/Y)	Ground	Turn signal LH	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s PKID0926E
					Turn signal switch OFF	0 V
48 (G/B)	Ground	Turn signal RH	Output	Ignition switch ON	Turn signal switch RH	(V) 15 10 5 0 1 s PKID0926E 6.5 V
40				Lighting switch	Rear fog lamp switch OFF	0 V
49 (Y)	Ground	Rear fog lamp	Output	1ST and front fog lamp switch ON	Rear fog lamp switch ON	Battery voltage
51	_	_	_	Depress the brak	ke pedal	Battery voltage
(R/W)*1 (R)*2	Ground	Stop lamp switch	Input	Release the brak	ke pedal	0 V

### < ECU DIAGNOSIS >

## [WITHOUT I-KEY & SUPER LOCK]

	nal No.	Description				Value	
(Wire	color)	Signal name	Input/ Output	Condition		Value (Approx.)	
52	0	Room lamp timer	Outrot	Interior room	OFF	Battery voltage	_
(R)	Ground	control	Output	lamp	ON	0 V	
53	Ground	Power window pow-	Output	t Ignition switch	OFF or ACC	0 V	
(L)	Giodila	er supply	Output	ignition switch	ON	Battery voltage	
54	Ground	Door unlock (All)	Output	Door lock/un-	Pressed to the unlock side	Battery voltage	
(O)	Giodila	Door arriock (Air)	Output	lock switch	Pressed to the lock side	0 V	
55 (B)	Ground	Ground	_	Ignition switch ON		0 V	
56				Door lock/un-	Pressed to the unlock side	0 V	
(Y) <sup>*1</sup> (SB) <sup>*2</sup>	Ground	Door lock (All)	Output	lock switch	Pressed to the lock side	Battery voltage	
57 (Y)	Ground	Battery power sup- ply	Input	Ignition switch O	FF	Battery voltage	
58 (P)	Ground	Power window pow- er supply	Output	Ignition switch O	FF	Battery voltage	
59	Cravad	Cuparlask	Outenist	When lock buttor is not pressed	of key fob or Intelligent Key	0 V	
(BR)	SR) Ground Super lock	Output	When lock buttor is pressed	of key fob or Intelligent Key	Battery voltage		
60	Ground	Driver door unlock	Output	Door lock/un-	Pressed to the unlock side	Battery voltage	
(GR)	Giouila	Driver door drilock	Output	lock switch	Pressed to the lock side	0 V	-

<sup>\*1:</sup> With Intelligent Key system

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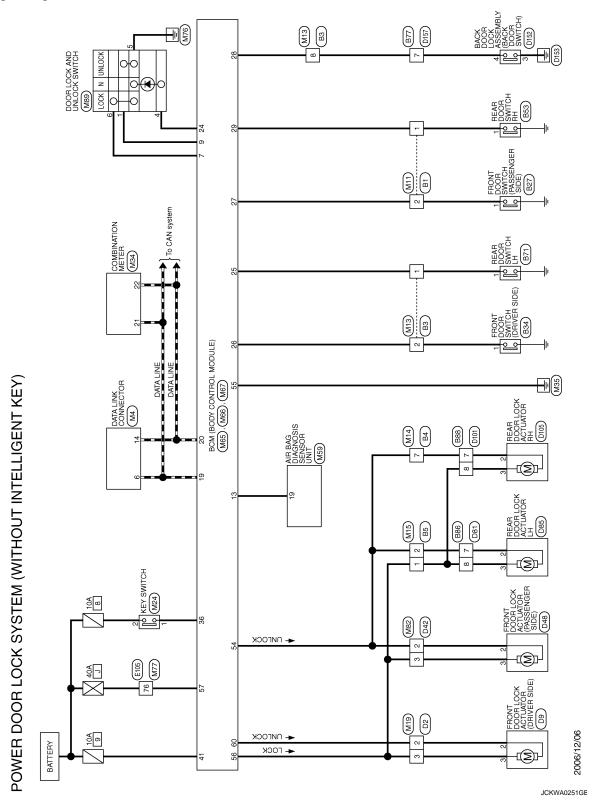
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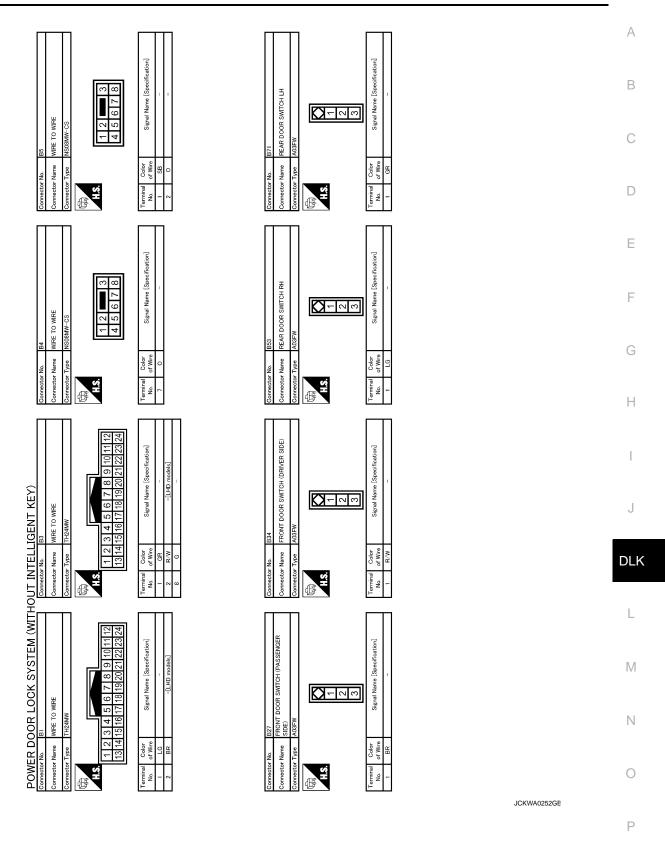
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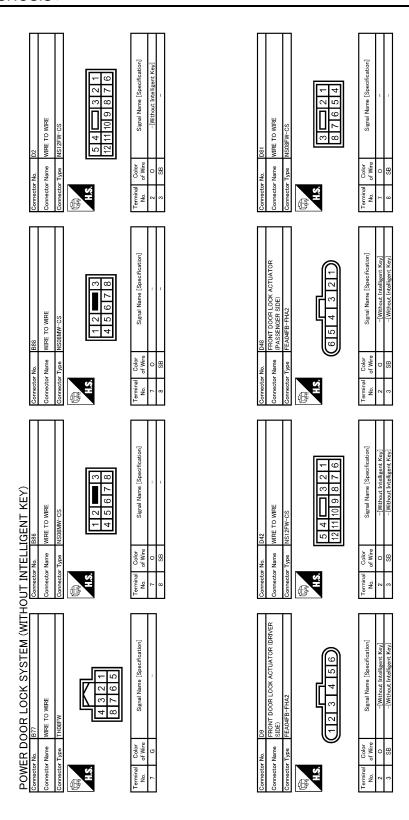
<sup>\*2:</sup> Without Intelligent Key system

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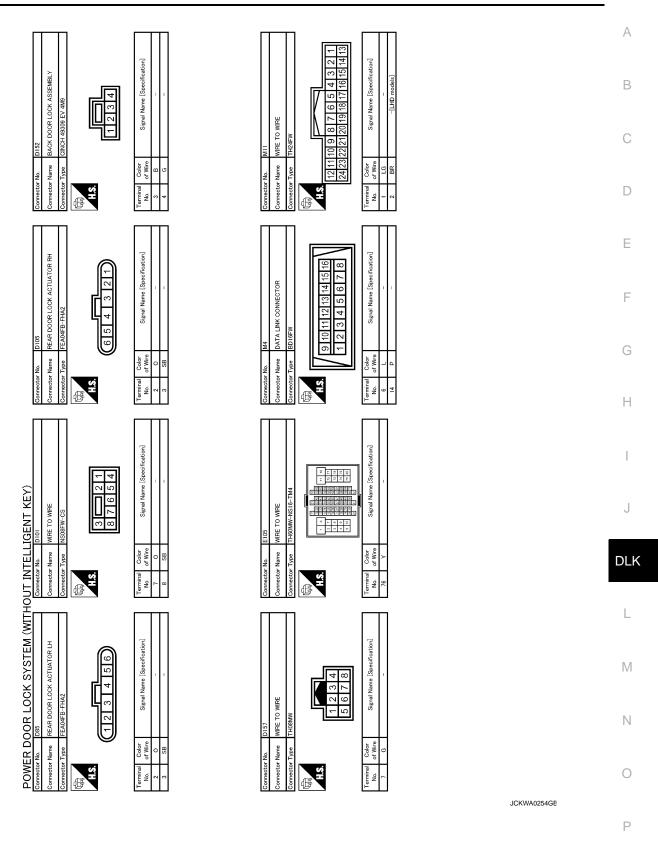
Wiring Diagram - POWER DOOR LOCK CONTROL SYSTEM -

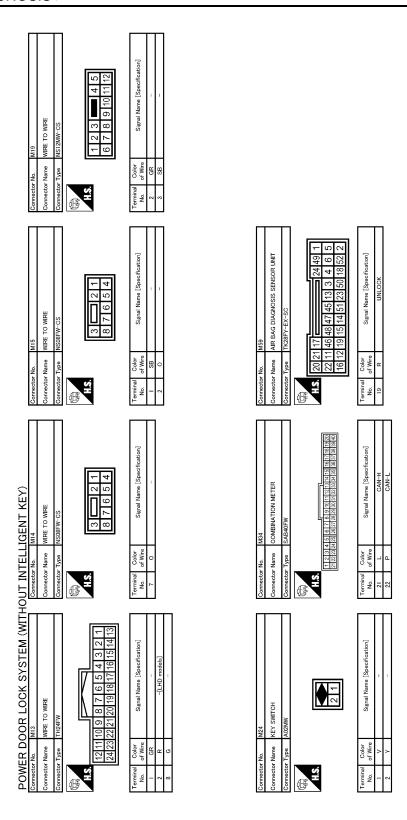




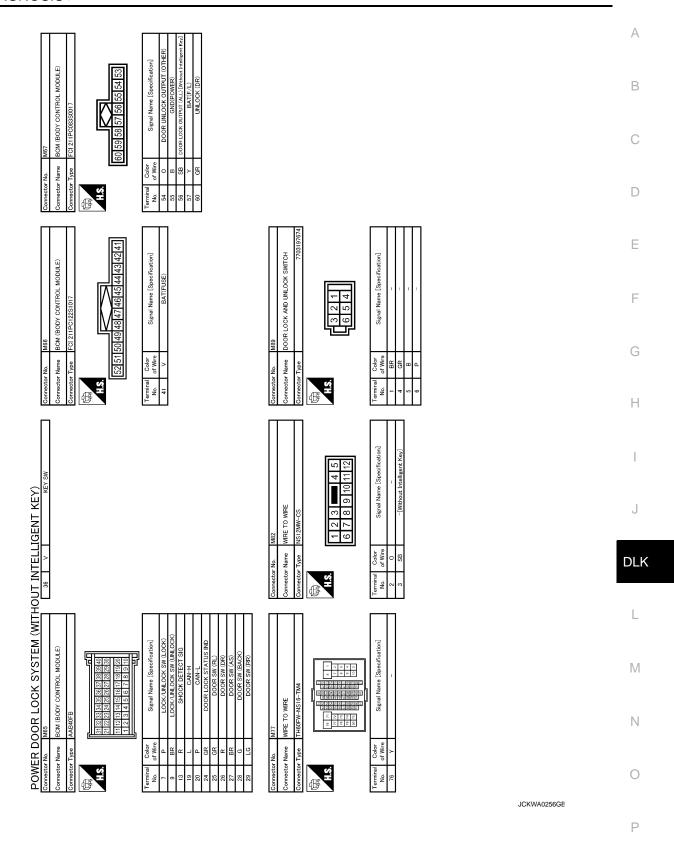


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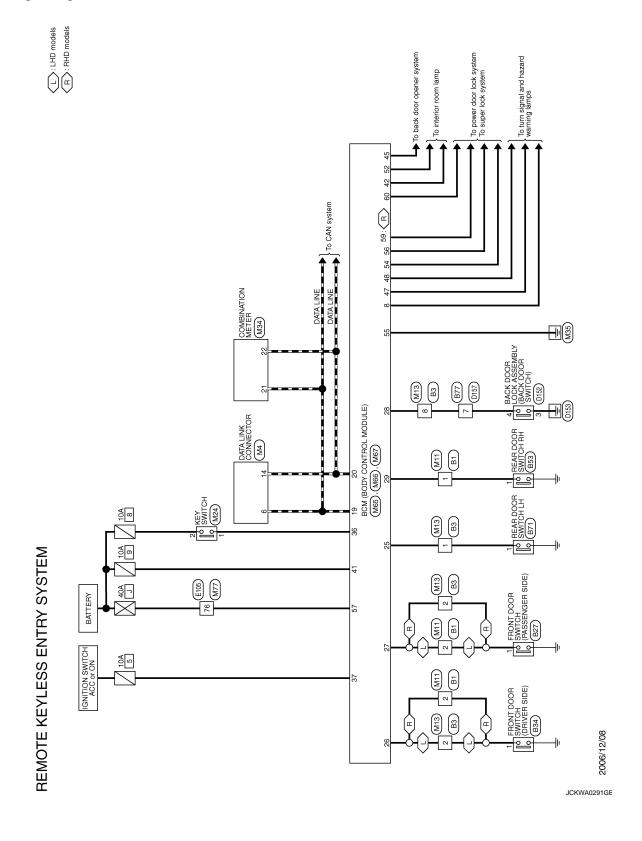


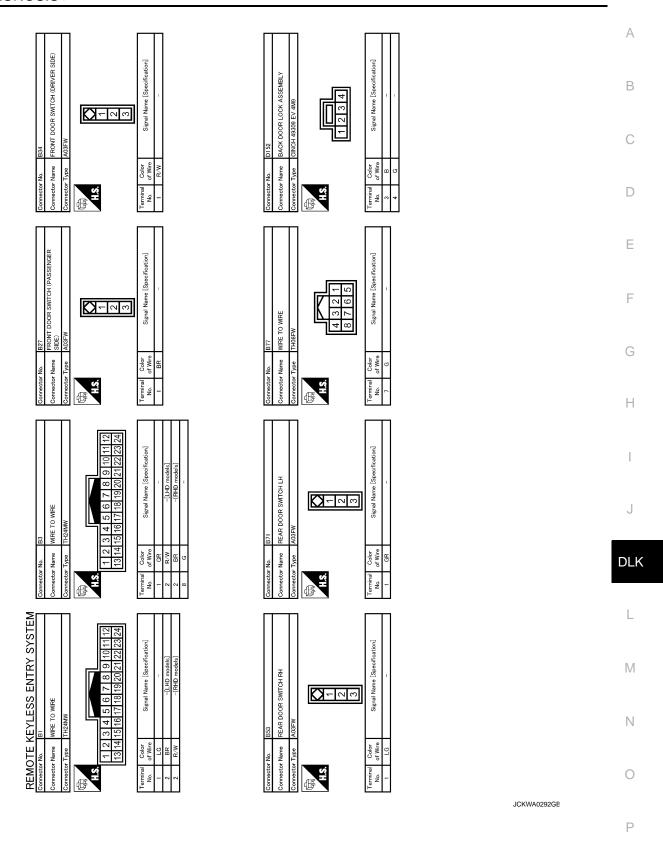
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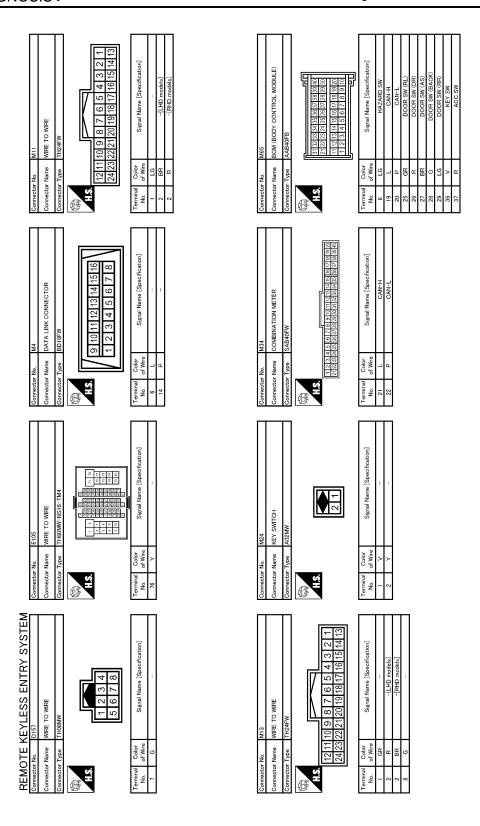


Wiring Diagram - REMOTE KEYLESS ENTRY CONTROL SYSTEM -

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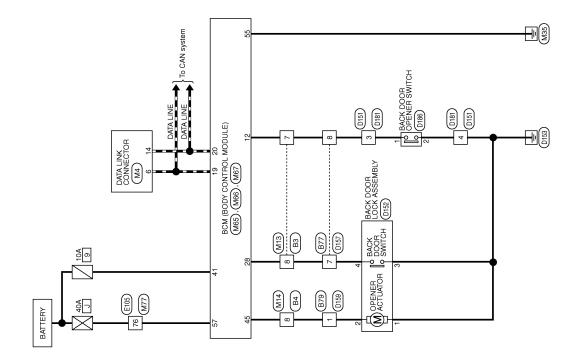
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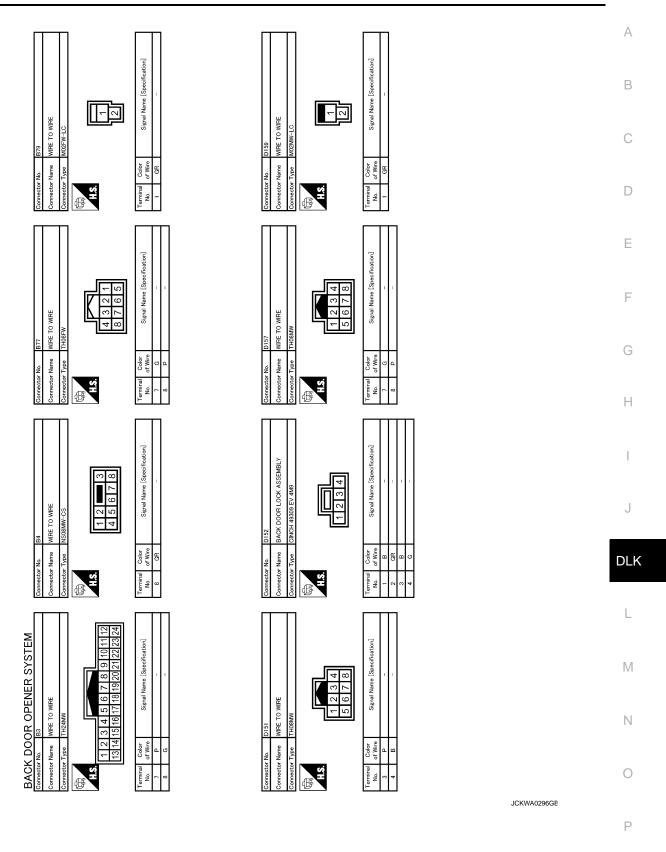
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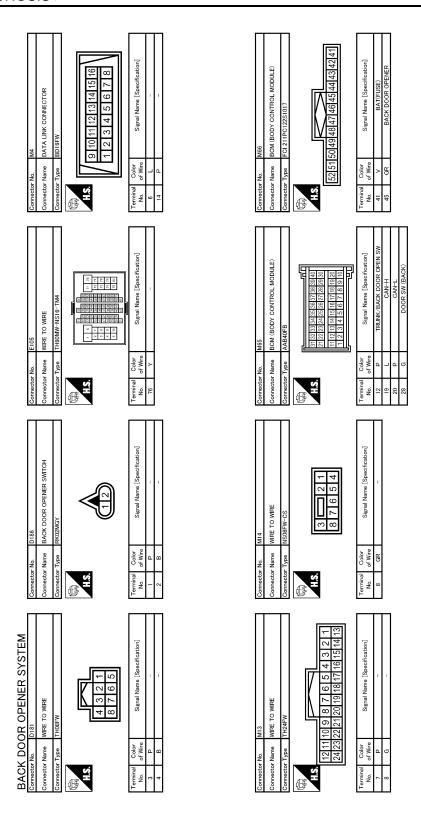
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		D
[logistics]		Е
WIRE TO WIRE THEOFW-NS16-TNA THEOFW-NS16-TNA Signal Name (Specification)		F
ector No.  Color Inal of Wire or V Y		G
Conner Co		Н
(BODY CONTROL MODULE)  IIPO08330017  Signal Name [Specification]  Signal Name [Specification]  BODOR UNLOCK CUTPUT (OTHER)  BATTER LOCK SET OUTPUT  SUPER LOCK SET OUTPUT  UNLOCK (DR)		I
BOM (BODY CONTROL MODULE)   FCI Z11 PC02833001 7		J
Connector No.   M67		DLK
		L
REMOTE KEYLESS ENTRY SYSTEM   Connector Name   BCM (BODY CONTROL MODULE)   Connector Type   FCI 211PC) [22S1017   Connector Type   FCI 211PC) [22PC] [22PC		M
New		Ν
Connector Name   Connector Name   Connector Name   Connector Type   Connector Type   Connector Type   Color Name   Color		0
	JCKWA0294GE	



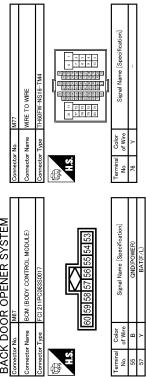
BACK DOOR OPENER SYSTEM

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BACK DOOR OPENER SYSTEM

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#### Fail-safe index

Fail Safe

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

#### [WITHOUT I-KEY & SUPER LOCK]

Display contents of CONSULT	Fail-safe	Cancellation
B2190: NATS ANTENNA AMP	<ul> <li>Inhibits engine cranking</li> <li>Inhibits steering lock unlocking (Intelligent Key unit)</li> <li>Fuel cut (ECM)</li> </ul>	Erase DTC
B2191: DIFFERENCE OF KEY	Inhibits engine cranking     Inhibits steering lock unlocking (Intelligent Key unit)     Fuel cut (ECM)	Erase DTC
B2192: ID DISCORD BCM-ECM	Fuel cut (ECM)	Erase DTC
B2193: CHAIN OF BCM-ECM	Fuel cut (ECM)	Erase DTC
B2194: DISCORD BCM-I-KEY	Inhibits engine cranking     Inhibits steering lock unlocking (Intelligent Key unit)     Fuel cut (ECM)	Erase DTC
B2195: ANTI SCANNING	Inhibits engine cranking     Inhibits steering lock unlocking (Intelligent Key unit)     Fuel cut (ECM)	Erase DTC
B2196: DONGLE NG	<ul> <li>Inhibits engine cranking</li> <li>Inhibits steering lock unlocking (Intelligent Key unit)</li> <li>Fuel cut (ECM)</li> </ul>	Erase DTC

#### REAR WIPER CONTROL

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

When a rear wiper auto stop signal is in the condition listed below, BCM stops power supply to rear wiper after rear wiper is activated for five seconds.

Ignition switch	Rear wiper switch	Rear wiper auto stop signal
ON	OFF	The rear wiper auto stop signal (stop position) cannot be input for 5 seconds.
ON	ON	The rear wiper auto stop signal does not change for 5 seconds.

#### NOTE:

The above operation is repeated when operating the rear wiper switch one minute after the stop of the rear wiper caused by Fail-safe.

#### TURN SIGNAL LAMP CONTROL

BCM detects the turn signal lamp circuit status from the terminal voltage.

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

#### NOTE:

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

#### LIGHT & RAIN SENSOR MALFUNCTION DETECTION FUNCTION

BCM controls the following items when LIGHT & RAIN sensor has a malfunction.

Auto Light Control

Headlamp is turned ON.

Front Wiper Control

The condition just before the activation of Fail-safe is maintained until the front wiper switch is turned OFF.

#### [WITHOUT I-KEY & SUPER LOCK]

## DTC Inspection Priority Chart

INFOID:0000000001559425

Priority	DTC	
1	U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)	В
2	B2190: NATS ANTENNA AMP     B2191: DIFFERNCE OF KEY     B2192: ID DISCORD BCM-ECM     B2193: CHAIN OF BCM-ECM	С
	<ul><li>B2194: DISCORD BCM-I-KEY</li><li>B2195: ANTI SCANNING</li><li>B2196: DONGLE NG</li></ul>	D

DTC Index INFOID:0000000001559426

#### 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  $\rightarrow$  ON again.
- PAST: Displays when there is a malfunction that is detected in the past and stored.
- 1 39: Displayed if any previous malfunction is present when current condition is normal. It increases like 1  $\rightarrow$  2  $\rightarrow$  3...38  $\rightarrow$  39 after returning to the normal condition whenever ignition switch OFF  $\rightarrow$  ON. The counter remains at 39 even if the number of cycles exceeds it. It is counted from 1 again when turning ignition switch  $OFF \rightarrow ON$  after returning to the normal condition if the malfunction is detected again.

CONSULT display	TIT	ME	Fail-safe	Refer to	
No DTC is detected. further testing may be required.	_	_	_	_	_
U1000: CAN COMM CIRCUIT	0	1 - 39	_	BCS-33	
U1010: CONTROL UNIT (CAN)	0	1 - 39	_	BCS-34	_
B2190: NATS ANTENNA AMP	CRNT	PAST	×	With Intelligent Key system <u>SEC-45</u> Without Intelligent Key system <u>SEC-194</u>	
B2191: DIFFERENCE OF KEY	CRNT	PAST	×	With Intelligent Key system <u>SEC-47</u> Without Intelligent Key system <u>SEC-196</u>	
B2192: ID DISCORD BCM-ECM	CRNT	PAST	×	With Intelligent Key system <u>SEC-48</u> Without Intelligent Key system <u>SEC-197</u>	_
B2193: CHAIN OF BCM-ECM	CRNT	PAST	×	With Intelligent Key system <u>SEC-50</u> Without Intelligent Key system <u>SEC-199</u>	
B2194: DISCORD BCM-I-KEY	CRNT	PAST	×	SEC-51	_
B2195: ANTI SCANNING	CRNT	PAST	×	With Intelligent Key system <u>SEC-52</u> Without Intelligent Key system <u>SEC-200</u>	
B2196: DONGLE NG	CRNT	PAST	×	With Intelligent Key system <u>SEC-53</u> Without Intelligent Key system <u>SEC-201</u>	_

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## SYMPTOM DIAGNOSIS

< SYMPTOM DIAGNOSIS >

# DOOR LOCK FUNCTION SYMPTOMS DOOR LOCK AND UNLOCK SWITCH

## DOOR LOCK AND UNLOCK SWITCH: Symptom Table

INFOID:0000000001184273

[WITHOUT I-KEY & SUPER LOCK]

## DOOR LOCK AND UNLOCK SWITCH OPERATION MALFUNCTION

#### NOTE:

- Before performing the diagnosis in the following table, check "Work Flow". Refer to <u>DLK-549</u>, "Work Flow".
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

- · Except driver side, doors are closed.
- · Doors are not locked by keyfob.

#### Symptom Table

Symptom	Diagnosis/service procedure		Reference page	
		Check BCM power supply and ground circuit.		DLK-581
Door lock and unlock function does not operate with door lock and unlock switch.	2.	Check door lock and unlock switch.		DLK-582
	3.	Check intermittent incident.		<u>GI-39</u>
	1.	Check door lock and unlock switch	ch	DLK-582
			Passenger side	DLK-587
Door lock function does not operate with door lock and unlock switch.	2.	Check door switch.	Rear LH	DLK-589
	2.		Rear RH	DLK-590
			Back door	DLK-592
	3. Check intermittent incident.			<u>GI-39</u>
	1.	. Check door lock actuator.	Driver side	DLK-596
			Passenger side	DLK-597
Specific door lock actuator does not operate.			Rear LH	DLK-599
			Rear RH	DLK-600
	2.	Check intermittent incident.		<u>GI-39</u>
Door lock and unlock switch indicator does not	1.	Check door lock and unlock switch indicator.		DLK-584
20	2.	Check Intermittent Incident.		<u>GI-39</u>

#### **KEYFOB**

**KEYFOB**: Symptom Table

INFOID:0000000001184274

#### **KEYFOB OPERATION MALFUNCTION**

#### NOTE:

- Before performing the diagnosis in the following table, check "WORK FLOW". Refer to <u>DLK-549</u>, "Work <u>Flow"</u>.
- Check that vehicle is under the condition shown in "Conditions of Vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column
  in this order.

#### Conditions of Vehicle (Operating Conditions)

- Mechanical key is removed from ignition key cylinder.
- Door lock and unlock operation is normal.

#### DOOR LOCK FUNCTION SYMPTOMS

#### < SYMPTOM DIAGNOSIS >

[WITHOUT I-KEY & SUPER LOCK]

Symptom Table

Symptom	Diagnosis/service procedure	Reference page
	Check keyfob battery inspection.	DLK-609
All of the keyfob operations do not operate.	Check key switch	DLK-594
	Check intermittent incident.	<u>GI-39</u>
Anti-hijack operation does not operate.	Check "SECURITY DOOR LOCK SET" setting in "WORK SUPPORT".	DLK-575
	Check intermittent incident.	<u>GI-39</u>

## **AUTO DOOR LOCK**

**AUTO DOOR LOCK: Symptom Table** 

INFOID:0000000001184275

## AUTO DOOR LOCK OPERATION MALFUNCTION

#### NOTE:

- Before performing the diagnosis in the following table, check "Work Flow". Refer to <u>DLK-549</u>, "Work Flow".
- To understand the operation when it does work, refer to <u>DLK-559</u>, "AUTO <u>DOOR LOCK</u>: <u>System Description"</u>.
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

- "AUTO LOCK SET" is ON when setting on CONSULT-III.
- Door lock and unlock function is normal.

Symptom Table

Symptom	Diagnosis/service procedur	Reference page	
	1. Check "AUTO LOCK SET" setting in "W	ORK SUPPORT".	DLK-577
		Driver side	DLK-586
Auto door lock operation does not operate.		Passenger side	DLK-587
	2. Check door switch.	Rear LH	DLK-589
		Rear RH	DLK-590
		Back door	DLK-592
	3. Check key switch.		DLK-594
	Check intermittent incident.		<u>GI-39</u>

#### VEHICLE SPEED SENSING AUTO DOOR LOCK

#### VEHICLE SPEED SENSING AUTO DOOR LOCK: Symptom Table

INFOID:0000000001184276

## VEHICLE SPEED SENSING AUTO DOOR LOCK OPERATION MALFUNCTION NOTE:

- Before performing the diagnosis in the following table, check "Work Flow". Refer to <u>DLK-549, "Work Flow".</u>
- To understand the operation when it does work, refer to <u>DLK-561</u>, "VEHICLE SPEED SENSING AUTO <u>DOOR LOCK</u>: System <u>Description</u>".
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

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## DOOR LOCK FUNCTION SYMPTOMS

### < SYMPTOM DIAGNOSIS >

[WITHOUT I-KEY & SUPER LOCK]

• Door lock and unlock switch operation is normal.

### Symptom Table

Symptom	Diagnosis/service procedure	Reference page
Vehicle speed sensing auto door lock operation does not operate.	Check vehicle speed signal.	DLK-608
	Check intermittent incident.	<u>GI-39</u>

#### **BACK DOOR OPEN FUNCTION SYMPTOMS**

< SYMPTOM DIAGNOSIS >

[WITHOUT I-KEY & SUPER LOCK]

## BACK DOOR OPEN FUNCTION SYMPTOMS BACK DOOR OPENER SWITCH

BACK DOOR OPENER SWITCH: Symptom Table

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### BACK DOOR OPENER FUNCTION MALFUNCTION

#### NOTE:

- Before performing the diagnosis in the following table, check "Work Flow". Refer to DLK-549, "Work Flow".
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

#### Conditions of Vehicle (Operating Conditions)

- Door lock function is normal.
- Vehicle speed is less than 5 km/h (3 MPH).
- All doors are unlocked.

#### Symptom Table

Symptom	Diagnosis/service procedure Reference p		
Back door opener function does not operate by back door opener switch.	Check back door opener switch.	DLK-604	
	2. Check vehicle speed signal.	DLK-608	
	Check back door opener actuator.	DLK-602	
	4. Check intermittent incident.	<u>GI-39</u>	

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#### WARNING FUNCTION SYMPTOMS

< SYMPTOM DIAGNOSIS >

[WITHOUT I-KEY & SUPER LOCK]

## WARNING FUNCTION SYMPTOMS BACK DOOR

BACK DOOR: Symptom Table

INFOID:0000000001184278

## BACK DOOR OPEN WARNING OPERATION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check "Work Flow". Refer to <u>DLK-549</u>, "Work Flow".
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

• Door lock function and back door opener function are normal.

Symptom		Diagnosis/service procedure	Reference page
Back door open warning does not operate properly.	1.	Check back door opener switch.	DLK-604
		Check intermittent incident.	<u>GI-39</u>

#### HAZARD REMINDER FUNCTION

< SYMPTOM DIAGNOSIS >

[WITHOUT I-KEY & SUPER LOCK]

# HAZARD REMINDER FUNCTION HAZARD WARNING LAMP

HAZARD WARNING LAMP: Symptom Table

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## HAZARD REMINDER OPERATION MALFUNCTION NOTE:

- Before performing the diagnosis in the following table, check "Work Flow". Refer to DLK-549, "Work Flow".
- Check that vehicle is under the condition shown in "Conditions of Vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

- Door lock function is normal.
- "HAZARD LAMP SET" is active when setting on CONSULT-III.

#### Symptom Table

Symptom	Diagnosis/service procedure	Reference page
Hazard reminder operation does not operate properly.	Check setting of "HAZARD LAMP SET" with CONSULT-     III.	DLK-577
	2. Check intermittent incident.	<u>GI-39</u>

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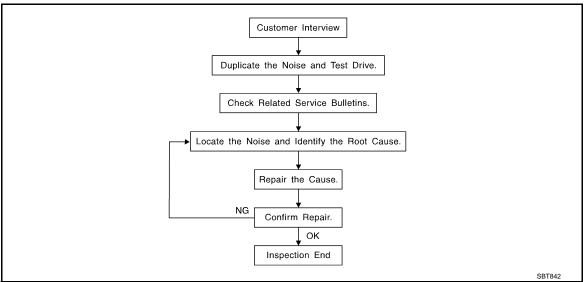
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## SQUEAK AND RATTLE TROUBLE DIAGNOSES

Work Flow



#### **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 of the customer's comments; refer to <a href="DLK-215">DLK-215</a>, "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 a test drive 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 [WITHOUT I-KEY & SUPER LOCK] < 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: Α 1) Close a door. 2) Tap or push/pull around the area where the noise appears to be coming from. 3) Rev the engine. В 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. LOCATE THE NOISE AND IDENTIFY THE ROOT CAUSE D 1. Narrow down the noise to a general area. To help pinpoint the source of the noise, use a listening tool (Engine Ear or mechanics stethoscope). Е 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 fastener 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 placing a piece of paper between components that you suspect are causing the noise. Н looking for loose components and contact marks. Refer to <u>DLK-213</u>, "Inspection Procedure". 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 are available through your authorized Nissan Parts Department. **CAUTION:** Do not use excessive force as many components are constructed of plastic and may be damaged. NOTE: URETHANE PADS Insulates connectors, harness, etc. INSULATOR (Foam blocks) Insulates components from contact. Can be used to fill space behind a panel. INSULATOR (Light foam block) FELT CLOTHTAPE Used to insulate where movement does not occur. Ideal for instrument panel applications. The following materials, not available through NISSAN Parts Department, can also be used to repair

squeaks and rattles.

UHMW(TEFLON) TAPE

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

SILICONE GREASE

Used in place 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.

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## SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

[WITHOUT I-KEY & SUPER LOCK]

## Inspection Procedure

INFOID:0000000001184281

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

#### INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

- 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 silicon 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
- 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:

- Finisher and inner panel making a slapping noise
- 2. Inside handle escutcheon to door finisher
- 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 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 dumpers out of adjustment
- Trunk lid striker out of adjustment
- 3. Trunk lid torsion bars knocking together
- A loose license plate or bracket

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. Sunvisor shaft shaking in the holder
- Front or rear windshield touching headlining 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.

## SQUEAK AND RATTLE TROUBLE DIAGNOSES

#### < SYMPTOM DIAGNOSIS >

[WITHOUT I-KEY & SUPER LOCK]

#### SEATS

When isolating seat noise it is 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:

- Headrest rods and holder
- A squeak between the seat pad cushion and frame
- 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
- 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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Diagnostic Worksheet

INFOID:0000000001184282



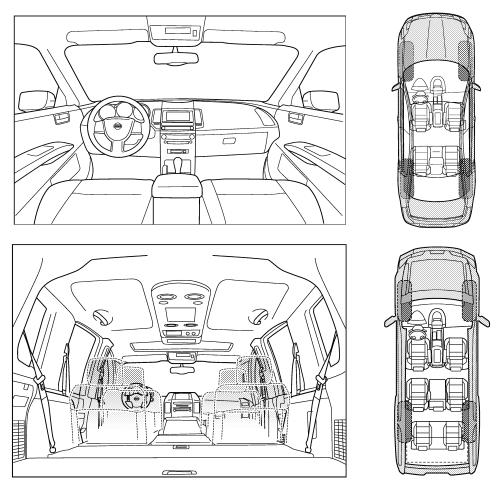
# SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

#### Dear Nissan Customer:

We are concerned about your satisfaction with your Nissan vehicle. Repairing a squeak or rattle sometimes can be very difficult. To help us fix your Nissan 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.

## 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.

PIIB8740E

# **SQUEAK AND RATTLE TROUBLE DIAGNOSES**

< SYMPTOM DIAGNOSIS >

[WITHOUT I-KEY & SUPER LOCK]

VHEN DOES IT OCCUR? (please ch	neck the box	es that ap	ply)	
anytime	☐ after	sitting ou	t in the ra	in
1st time in the morning only when it is cold outside only when it is hot outside		n it is rain or dusty co r:	_	
WHEN DRIVING:	IV. WHA	AT TYPE	OF NOIS	Ē
through driveways over rough roads over speed bumps	☐ crea		lking on a	es on a clean floor) n old wooden floor) by rattle)
only about mph on acceleration	☐ tick	ck (like a k (like a clo	ck second	hand)
coming to a stop on turns: left, right or either (circle) with passengers or cargo		np (heavy z (like a bı		knock noise) e)
other: miles or m	inutes			
BE COMPLETED BY DEALERSHIR	PERSON	NEL		
		YES	NO	Initials of person performing
nicle test driven with customer loise verified on test drive loise source located and repaired				
ollow up test drive performed to confi	rm repair			
		tomor Nar	ma.	
l: ).#		: ———		

# **PRECAUTION**

## **PRECAUTIONS**

Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TEN-SIONER"

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

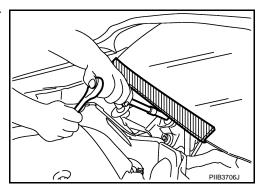
## **WARNING:**

- 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 SRS 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.

# Procedure without Cowl Top Cover

INFOID:0000000001184284

When performing the procedure after removing cowl top cover, cover the lower end of windshield with urethane, etc.



# Steering Wheel Rotation after Battery Disconnect

INFOID:0000000001184285

#### NOTE:

- Before removing and installing any control units, first turn the push-button ignition switch to the LOCK position, then disconnect both battery cables.
- After finishing work, confirm that all control unit connectors are connected properly, then re-connect both battery cables.
- Always use CONSULT-III to perform self-diagnosis as a part of each function inspection after finishing work.
   If a DTC is detected, perform trouble diagnosis according to self-diagnosis results.

This vehicle is equipped with a push-button ignition switch and a steering lock unit.

If the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.

If turning the steering wheel is required with the battery disconnected or discharged, follow the procedure below before starting the repair operation.

#### **OPERATION PROCEDURE**

Connect both battery cables.

#### NOTE:

Supply power using jumper cables if battery is discharged.

2. Carry the Intelligent Key or insert it to the key slot and turn the push-button ignition switch to ACC position. (At this time, the steering lock will be released.)

### **PRECAUTIONS**

#### < PRECAUTION >

### [WITHOUT I-KEY & SUPER LOCK]

- 3. Disconnect both battery cables. The steering lock will remain released with both battery cables disconnected and the steering wheel can be turned.
- 4. Perform the necessary repair operation.
- 5. When the repair work is completed, re-connect both battery cables. With the brake pedal released, turn the push-button ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the push-button ignition switch is turned to LOCK position.)
- 6. Perform self-diagnosis check of all control units using CONSULT-III.

Work

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

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# **PREPARATION**

# **PREPARATION**

# **Commercial Service Tools**

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Tool name		Description
Engine ear	SIIA0995E	Locating the noise
Remover tool	PIIB7923J	Remove the clips, pawls, and metal clips
Power tool	PIIB1407E	

# PRE-INSPECTION FOR DIAGNOSTIC

< ON-VEHICLE MAINTENANCE >

[WITHOUT I-KEY & SUPER LOCK]

ON-VEHICLE MAINTENANCE
PRE-INSPECTION FOR DIAGNOSTIC
Basic Inspection
BASIC INSPECTION
1. CHECK DOOR LOCK AND UNLOCK SWITCH OPERATION
Check door lock and unlock operation by operating door lock and unlock switch.
Is the inspection result normal? YES >> GO TO 2.
NO >> Refer to <u>DLK-642, "DOOR LOCK AND UNLOCK SWITCH: Symptom Table".</u> 2.CHECK KEYFOB OPERATION
Check door lock and unlock operation by operationg lock and unlock button of keyfob.
Is the inspection result normal?
YES >> GO TO 3. NO >> Refer to DLK-642, "KEYFOB: Symptom Table".
3. CHECK AUTO DOOR LOCK OPERATION
Check auto door lock operation. Refer to <u>DLK-559</u> , "AUTO DOOR LOCK: System Description".
Is the inspection result normal?  YES >> GO TO 4.
NO >> Refer to <u>DLK-643, "AUTO DOOR LOCK : Symptom Table"</u> .
4. CHECK VEHICLE SPEED SENSING AUTO DOOR LOCK OPERATION
Check vehicle speed sensing auto door lock. Refer to <a href="DLK-561">DLK-561</a> , "VEHICLE SPEED SENSING AUTO DOOR LOCK: System Description"
Is the inspection result normal? YES >> GO TO 5.
NO >> Refer to DLK-643, "VEHICLE SPEED SENSING AUTO DOOR LOCK: Symptom Table".
5. CHECK BACK DOOR OPENER SWITCH OPERATION
Check back door opener operation by operating back door opener switch.  Is the inspection result normal?
YES >> GO TO 6.
NO >> Refer to <u>DLK-645. "BACK DOOR OPENER SWITCH: Symptom Table".</u> 6.CHECK HAZARD REMINDER FUNCTION
Check hazard reminder function by operating the following switches.
Lock and unlock button of keyfob.
Is the inspection result normal?  YES >> GO TO 7.
NO >> Refer to <u>DLK-647, "HAZARD WARNING LAMP : Symptom Table"</u> .  7.CHECK WARNING FUNCTION
Check that warning function operate properly. Refer to <u>DLK-569</u> , "System Description".
Is the inspection result normal?
YES >> GO TO 8. NO >> Refer to <u>DLK-646, "BACK DOOR: Symptom Table".</u>
8. CHECK OUT
CHECK OUT.

INFOID:0000000001538494

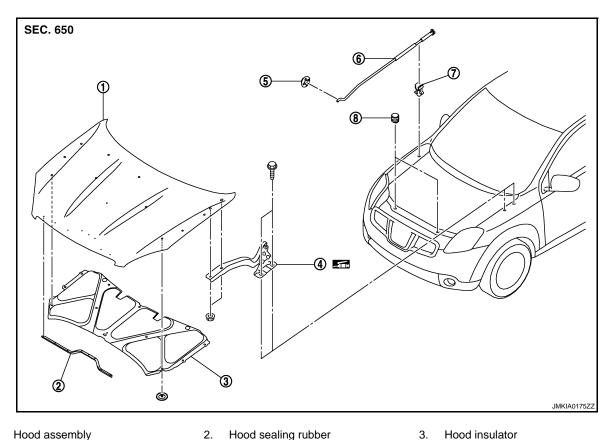
# **ON-VEHICLE REPAIR**

**HOOD** 

**HOOD ASSEMBLY** 

**HOOD ASSEMBLY: Exploded View** 

## **REMOVAL**



- Hood assembly
- Hood hinge
- 7. Clamp

- Hood sealing rubber
- 5. Grommet
- 8. Hood bumper rubber
- Hood support rod

Refer to GI-4, "Components" for symbols in the figure.

## **ADJUSTMENT**

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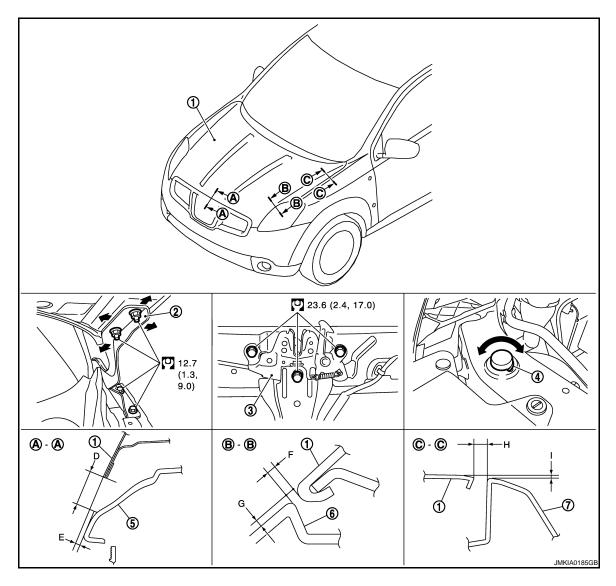
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1. Hood assembly

Hood bumper rubber

- Hood hinge
- 5. Front grille

- 3. Hood lock assembly
- 6. Front combination lamp

7. Front fender

4.

Refer to GI-4, "Components" for symbols in the figure.

## **HOOD ASSEMBLY: Removal and Installation**

REMOVAL

1. Support the hood lock assembly with the proper material to prevent it from falling.

#### **WARNING:**

Bodily injury may occur if no supporting rod is holding the hood open when removing the hood stay.

Remove the hood hinge mounting nuts on the hood to remove the hood assembly. CAUTION:

Perform work with 2 workers, because of its heavy weight.

- 3. Remove the following parts after removing the hood assembly.
  - Hood insulator
  - Hood sealing rubber

## INSTALLATION

Install in the reverse order of removal.

**CAUTION:** 

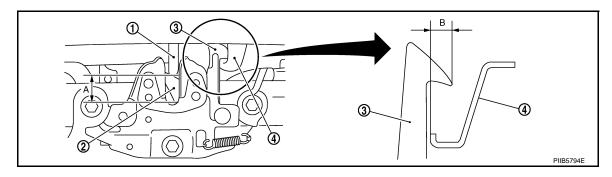
- · Perform work with 2 workers, because of its heavy weight.
- Before installing the hood hinge, apply anticorrosive agent onto the mounting surface of the vehicle body.
- After installing, perform hood fitting adjustment. Refer to <u>DLK-827</u>, "HOOD ASSEMBLY: Adjustment".

**HOOD ASSEMBLY: Adjustment** 

INFOID:0000000001538496

Portion			Standard	Right/left Clearance (MAX)	
Hood – Front bumper	A – A	D	Clearance	5.2 – 9.2 mm (0.205 – 0.362 in)	2.0 mm (0.079 in)
		E	Surface height	- 0.2 – 3.8 mm (- 0.008 – 0.150 in)	2.0 mm (0.079 in)
Hood – Front combination lamp	B-B G	F	Clearance	3.7 – 7.7 mm (0.140 – 0.303 in)	2.0 mm (0.079 in)
		G	Surface height	- 2.3 – 2.3 mm (- 0.091 – 0.091 in)	2.3 mm (0.091 in)
Hood – Front fender	C - C   H	н	Clearance	3.9 – 5.9 mm (0.154 – 0.232 in)	1.5 mm (0.059 in)
		ı	Surface height	- 1.0 – 1.0 mm (- 0.039 – 0.039 in)	1.5 mm (0.059 in)

- 1. Check the clearance and the surface height between the hood and each part by visualy and touching. (Fitting standard dimension in the table below should be satisfied.)
- 2. In case any parts are out of specification, adjust them according to the procedures shown below.
- 3. Remove the hood lock and adjust the height by rotating the bumper rubber until the hood becomes 1 to 1.5 mm (0.039 to 0.059 in) lower than the fender.
- 4. Temporarily tighten the hood lock, and position by engaging it with the hood striker. Check the lock and striker for looseness and adjust the clearance and evenness with the striker to satisfy the specification.
- 5. Adjust A and B shown in the figure to the following value with hood's own weight by dropping it from approximately. 200 mm (7.874 in) height or by pressing the hood lightly [approximately. 29 N (3 kg)].



1. Hood striker

2. Primary latch

Secondary striker

4. Secondary latch

A : 20.0 mm (0.787 in) B : 6.8 mm (0.268 in)

6. After adjustment tighten lock bolts to the specified torque.

**HOOD HINGE** 

**HOOD HINGE: Exploded View** 

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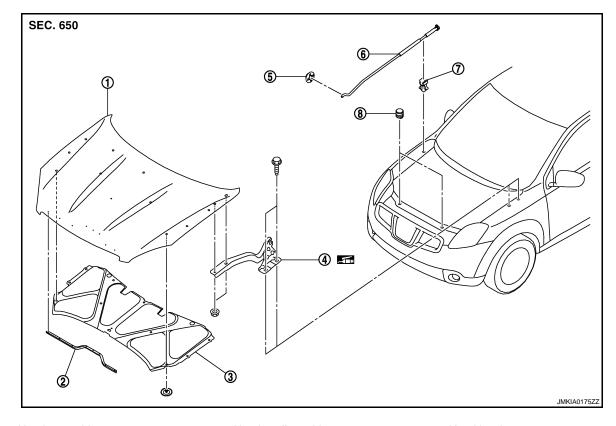
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- 1. Hood assembly
- 4. Hood hinge
- 7. Clamp

- Hood sealing rubber
- 5. Grommet
- Hood bumper rubber
- 3. Hood insulator
- 6. Hood support rod

Refer to GI-4. "Components" for symbols in the figure.

# **HOOD HINGE: Removal and Installation**

INFOID:0000000001538498

#### **REMOVAL**

- Remove the hood assembly. Refer to <u>DLK-826</u>, "HOOD ASSEMBLY: Removal and Installation".
- 2. Remove the front fender. Refer to DLK-835, "Removal and Installation".
- 3. Remove the hood hinge mounting bolts, and then remove the hood hinge.

## **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

- After installation, apply touch-up paint (the body color) onto the head of the hinge mounting bolts and nuts.
- Before installation of hood hinge, apply anticorrosive agent onto the mounting surface of the vehicle body.
- After installation, perform hood fitting adjustment. Refer to <u>DLK-827, "HOOD ASSEMBLY: Adjust-ment"</u>.

## HOOD SUPPORT ROD

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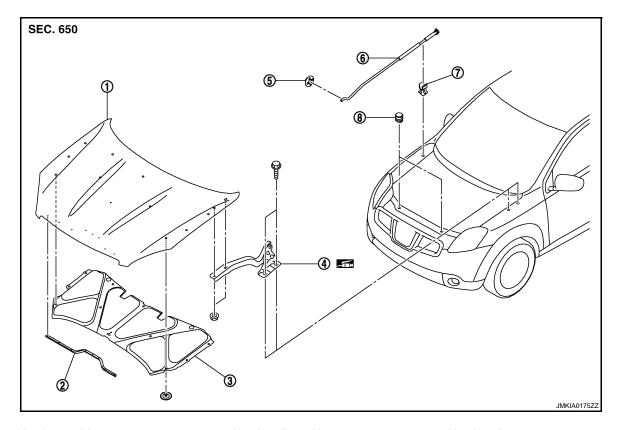
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# **HOOD SUPPORT ROD: Exploded View**

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- 1. Hood assembly
- 4. Hood hinge
- 7. Clamp

- 2. Hood sealing rubber
- 5. Grommet
- 8. Hood bumper rubber
- 3. Hood insulator
- Hood support rod

Refer to GI-4, "Components" for symbols in the figure.

## **HOOD SUPPORT ROD:** Removal and Installation

INFOID:0000000001538500

## **REMOVAL**

1. Support the hood lock assembly with the proper material to prevent it from falling.

#### **WARNING:**

Bodily injury may occur if no supporting rod is holding the hood open when removing the hood stay.

2. Remove the hood support rod from the grommet.

#### **INSTALLATION**

Install in the reverse order of removal.

## HOOD LOCK CONTROL

**HOOD LOCK CONTROL: Exploded View** 



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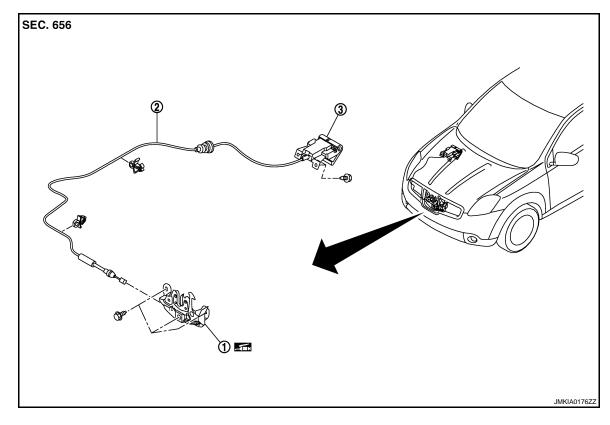
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Hood lock assembly

2. Hood lock control cable

3. Hood lock opener

Refer to GI-4, "Components" for symbols in the figure.

## HOOD LOCK CONTROL: Removal and Installation

INFOID:0000000001538502

## **REMOVAL**

- 1. Remove the hood lock opener mounting bolts, and then remove the hood lock opener.
- 2. Remove the front bumper fascia. Refer to EXT-11, "Removal and Installation".
- 3. Remove the hood lock mounting bolts, and then remove the hood lock.
- 4. Remove the fender protector. Refer to EXT-22, "Removal and Installation".
- 5. Disconnect the hood lock cable from hood lock, and clip it from the hoodledge.
- Remove the grommet on the dash lower panel, and pull the hood lock control cable toward the passenger compartment.

#### **CAUTION:**

While pulling, do not to damage (peeling) the outside of the hood lock control cable.

#### INSTALLATION

Install in the reverse order of removal.

#### **CAUTION:**

• Do not to bend the cable too much, keeping the radius 100 mm (3.937 in) or more.

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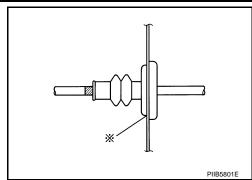
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Check that the cable is not offset from the positioning grommet, and apply the sealant to the grommet (at \*mark) properly.



- Check that the hood lock control cable is properly engaged with the hood lock.
- After installation, perform hood fitting adjustment. Refer to <u>DLK-827, "HOOD ASSEMBLY: Adjust-ment"</u>.
- After installation, perform the hood lock control inspection. Refer to <u>DLK-831, "HOOD LOCK CON-TROL</u>: Inspection".

# HOOD LOCK CONTROL: Inspection

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#### NOTE:

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

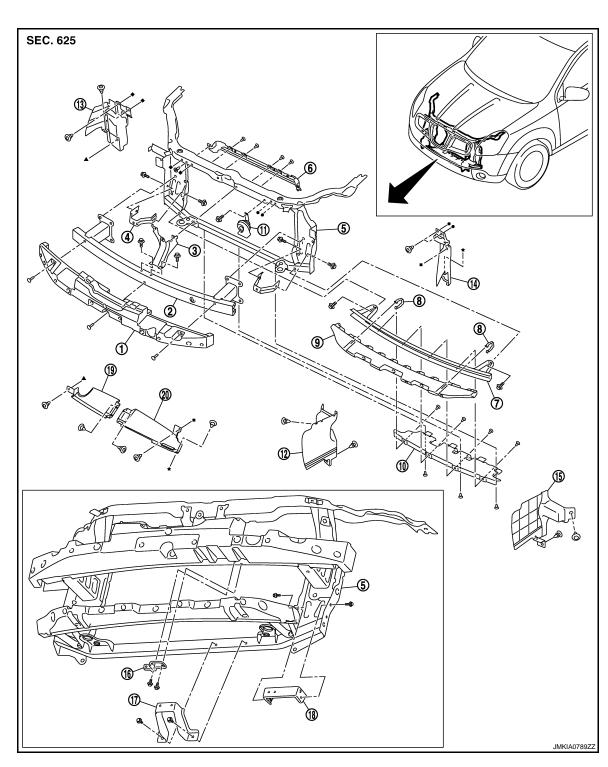
- Check that the secondary latch is properly engaged with the secondary striker [6.8 mm (0.268 in) shown in the figure] by hood weight.
- 2. While operating the hood opener, carefully check that the front end of the hood is raised by approximately 20.0 mm (0.787 in). Also check that the hood opener returns to the original position.
- 3. Check that the hood opener operating is condition 49 N (5.0 kg) or below.
- Install so that static closing face of hood is 94 − 490 N·m (9.6 − 50.0 kg-m).

#### NOTE:

- Exert vertical force on right side and left side of hood lock.
- Do not press simultaneously both sides.
- 5. Check the hood lock lubrication condition. If necessary, apply body grease to the hood lock.

# RADIATOR CORE SUPPORT

Exploded View



- 1. Energy absorber
- 4. Intercooler bracket (with K9K engine models)
- 7. Apron bracket assembly
- 10. Front air guide lower
- 13. Front air guide side RH
- 2. Bumper reinforcement
- 5. Radiator core support assembly
- 8. Fastener
- 11. Horn assembly
- 14. Front air guide side LH
- 3. Hood lock support stay
- 6. Upper air dam
- 9. Energy absorber lower
- 12. Front air guide side lower RH
- 15. Front air guide side lower LH

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## RADIATOR CORE SUPPORT

### < ON-VEHICLE REPAIR >

### [WITHOUT I-KEY & SUPER LOCK]

16. Oil cooler bracket upper

17. Oil cooler bracket lower

18. Oil cooler bracket side

19. Front air guide RH

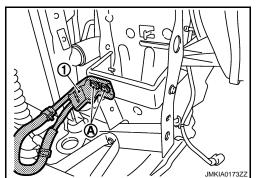
20. Front air guide LH

#### Removal and Installation

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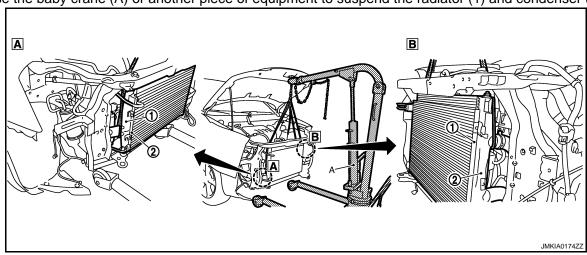
#### **REMOVAL**

- Remove the front fillet molding. Refer to <u>EXT-23</u>, "<u>Removal and Installation</u>".
- Remove the front grille. Refer to <u>EXT-17</u>, "Removal and Installation".
- Remove the front bumper fascia and the energy absorber. Refer to EXT-11, "Removal and Installation".
- 4. Remove the energy absorber (upper and lower). Refer to <a>EXT-11</a>, "Removal and Installation"</a>.
- Remove the air cleaner duct. Refer to <u>EM-28, "Removal and Installation"</u>.
- 6. Remove the all air guides mounting clips, and then remove the all air guides.
- Remove the front combination lamp (LH/RH). Refer to <u>EXL-175, "Removal and Installation"</u>.
- 8. Disconnect the hood lock control cable clamp, and then remove the hood lock assembly. Refer to <u>DLK-830</u>, "HOOD LOCK CONTROL: Removal and Installation".
- 9. Remove the hood lock stay mounting bolts, and then remove the hood lock stay.
- 10. Remove the bumper reinforcement. Refer to EXT-11, "Removal and Installation".
- 11. Remove the hood switch (with theft warning systems). Refer to SEC-<u>SEC-166, "Removal and Installation".</u>
- 12. Remove the crush zone sensor. Refer to SR-14, "Removal and Installation".
- 13. Remove the horn. Refer to HRN-5, "Removal and Installation".
- 14. Remove the ambient sensor. Refer to <a href="VTL-23">VTL-23</a>, "Removal and Installation".
- 15. Remove the radiator mounting bracket (LH/RH). Refer to <a href="CO-13">CO-13</a>, "Removal and Installation".
- 16. Remove the Intelligent Key warning buzzer (with Intelligent Key systems). Refer to <u>DLK-275, "Removal and Installation"</u>.
- 17. Remove the charge air cooler assembly (with K9K and M9R engine models). Refer to <a href="EM-267">EM-267</a>, "Removal and Installation".
- Remove the A/T fluid cooler assembly and the A/T fluid cooler bracket (with A/T models only). Refer to <u>TM-563</u>, "FLUID COOLER: Removal and Installation".
- Remove the A/T fluid cooler pipe bracket (1) mounting bolts (A) (with A/T models only).



20. Remove the washer tank. Refer to WW-99, "Removal and Installation".

21. Use the baby crane (A) or another piece of equipment to suspend the radiator (1) and condenser (2).



- 22. Remove the radiator core support assembly mounting bolts, and draw out the radiator core support assembly to the front of the vehicle.
- 23. Remove the radiator core support assembly.
- 24. Remove the following parts after removing the radiator core support assembly.
  - Inlet tube bracket (with K9K and M9R engine models)
  - Intercooler bracket (with K9K and M9R engine models)
  - Apron reinforcement bracket

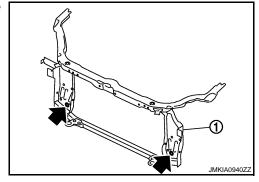
#### INSTALLATION

Install in the reverse order of removal.

#### **CAUTION:**

After installation, refill the following parts.

 Radiator core support (1) must be aligned to engine side member vartically. Use round pin to locate through both holes.



- A/T fluid. Refer to <u>TM-530, "Changing"</u>.
- Engine coolant. Refer to <u>CO-9</u>, "<u>Refilling</u>".

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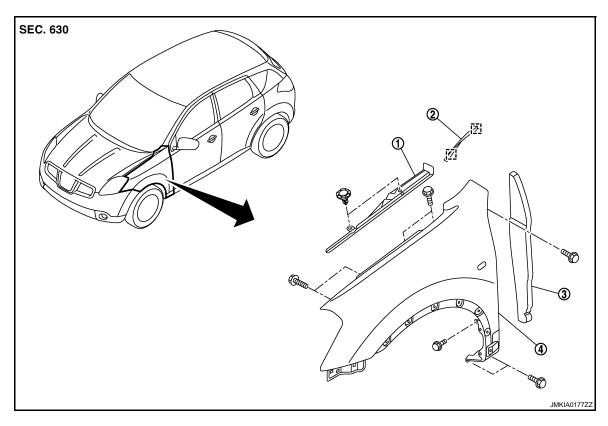
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# FRONT FENDER

Exploded View



- 1. Hood seal assembly (side)
- 2. Front fender finisher
- 3. Front fender seal

Front fender

· - ; : Metal clip

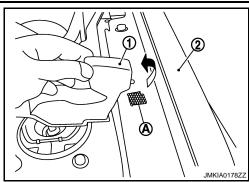
## Removal and Installation

INFOID:0000000001538507

## **REMOVAL**

- Remove the outer fender protector. Refer to <u>EXT-22</u>, "<u>Removal and Installation</u>".
- 2. Remove the inner fender protector. Refer to EXT-22, "Removal and Installation".
- 3. Remove the side turn signal lamp. Refer to EXL-181, "Removal and Installation".
- 4. Remove the front bumper fascia. Refer to <u>EXT-11</u>, "Removal and Installation".
- Remove the front combination lamp.
  - XENON TYPE: EXL-175, "Removal and Installation".
  - HALOGEN TYPE: EXL-329, "Removal and Installation".
- 6. Remove the mounting clips and remove hoodledge cover.
- 7. Remove the center mudguard. Refer to EXT-28, "Removal and Installation".

8. Peel away the double-faced adhesive tape (A) of the front fender seal (1) from the front fender (2).



9. Remove the mounting bolts and remove the front fender.

#### **CAUTION:**

Use a shop cloth to protect the body from being damaged during removal.

- 10. Remove the following parts after removing the front fender.
  - Front fender seal.
  - Bumper side bracket. Refer to EXT-11, "Exploded View".

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

- Replace the double-faced adhesive tape on the back of the cowl top cover seal with new tape.
- Do not wash the vehicle within 24 hours after installation so as to keep adhesive.
- After installation, apply the touch-up paint (the body color) onto the head of the front fender mounting bolts.
- After installation, check the front fender adjustment. Refer to <u>DLK-827</u>, "HOOD ASSEMBLY: Adjustment" and <u>DLK-839</u>, "DOOR ASSEMBLY: Adjustment".

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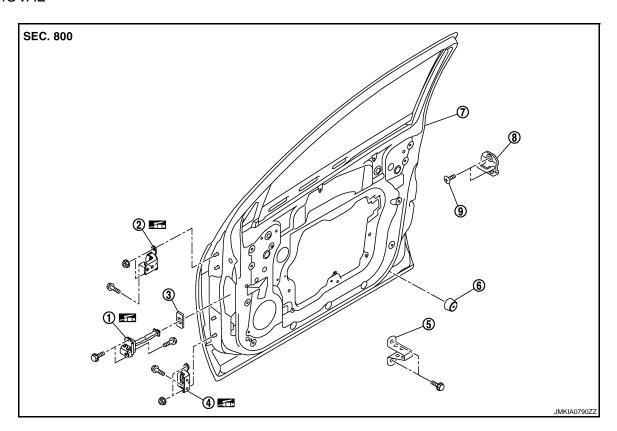
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# **FRONT DOOR** DOOR ASSEMBLY

DOOR ASSEMBLY: Exploded View

INFOID:0000000001538508

## **REMOVAL**



- 1. Door check link
- Door hinge (lower)

Refer to GI-4, "Components" for symbols in the figure.

- Front door panel
- Door hinge (upper)
- 5. **Bracket**
- 8. Door striker

Bumper rubber

Door check link cover

TORX bolt

## **ADJUSTMENT**

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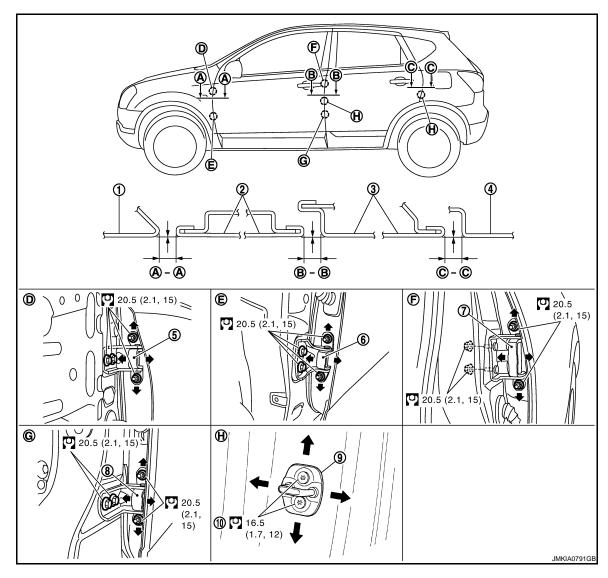
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- 1. Front fender
- 4. Rear fender
- 7. Rear door hinge (upper)
- 10. TORX bolt
- Refer to GI-4, "Components" for symbols in the figure.
- 2. Front door outer
- 5. Front door hinge (upper)
- 8. Rear door hinge (lower)
- 3. Rear door outer
- 6. Front door hinge (lower)
- 9. Door striker

## DOOR ASSEMBLY: Removal and Installation

#### **REMOVAL**

- Remove the mounting bolt of the door check link on the vehicle.
- 2. Remove the front door harness grommet, and then pull out the harness from the vehicle.
- 3. Disconnect the front door harness connector.
- 4. Remove the door hinge mounting nuts (door side), and then remove the door assembly. **CAUTION:** 
  - When removing and installing the front door assembly, support the door with a jack and cloth to protect the door and body.
  - Perform work with 2 workers, because of its heavy weight.

#### **INSTALLATION**

Install in the reverse order of removal.

**CAUTION:** 

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**DLK-671** 

- When removing and installing the front door assembly, perform the fitting adjustment. Refer to <u>DLK-839</u>, "DOOR ASSEMBLY: Adjustment".
- After installation, apply touch-up paint (the body color) onto the head of the door hinge mounting nuts.
- Check the door hinge rotating part for poor lubrication. If necessary, apply body grease.
- Check the front door open/close operation after installation.

DOOR ASSEMBLY : Adjustment

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#### CLEARANCE, SURFACE HEIGHT AND SURFACE MISMATCH ADJUSTMENT

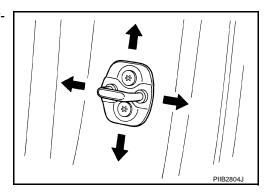
Portion		Clearance	Surface height
Front fender – Front door	<b>A</b> – <b>A</b>	3.5 – 5.5 mm (0.138 – 0.217 in)	- 1.0 – 1.0 mm (- 0.039 – 0.039 in)
Front door – Rear door	B – B	3.5 – 5.5 mm (0.138 – 0.217 in)	- 1.0 – 1.0 mm (- 0.039 – 0.039 in)

- 1. Check the clearance and surface height and surface mismatch between the front door and each part visually and by touching. (Fitting standard dimension in the table below shall be satisfied.)
- 2. In case any parts are out of specification, adjust them according to the procedures shown below.
- 3. Remove the front fender. Refer to refer to DLK-835, "Removal and Installation".
- 4. Loosen the door hinge mounting nuts on door side.
- 5. Adjust the surface height and surface mismatch of the front door according to the fitting standard dimension.
- 6. Temporarily tighten the hinge mounting nuts on door side.
- 7. Loosen the door hinge mounting bolts on body side.
- 8. Raise the front door at rear end to adjust clearance of the front door according to the fitting standard dimension.
- 9. After adjustment tighten bolts and nuts to the specified torque.
- Install the front fender. Refer to refer to <u>DLK-835, "Removal and Installation"</u>.

After installation, check the front fender adjustment. Refer to <u>DLK-827, "HOOD ASSEMBLY : Adjustment"</u>.

#### DOOR STRIKER ADJUSTMENT

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



DOOR STRIKER

# **DOOR STRIKER: Exploded View**

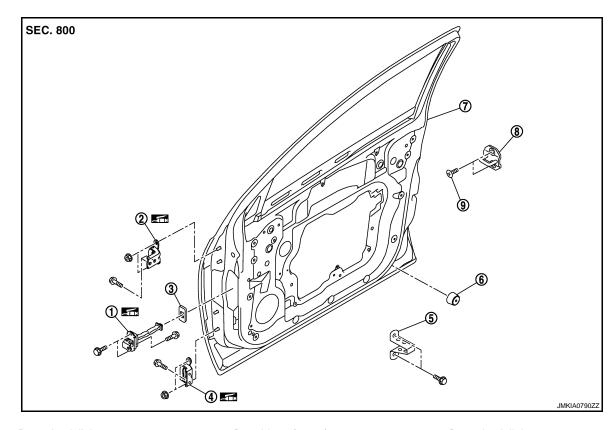
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- 1. Door check link
- 4. Door hinge (lower)
- 7. Front door panel
- 2. Door hinge (upper)
- 5. Bracket
- 8. Door striker

- 3. Door check link cover
- 6. Bumper rubber
- 9. TORX bolt

Refer to GI-4, "Components" for symbols in the figure.

# DOOR STRIKER: Removal and Installation

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#### **REMOVAL**

Remove the TORX bolts, and then remove the door striker.

## **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

- Check the front door open/close operation after installation.
- When removing and installing the door striker, be sure to perform the fitting adjustment. Refer to <u>DLK-839, "DOOR ASSEMBLY: Adjustment"</u>.

# **DOOR HINGE**

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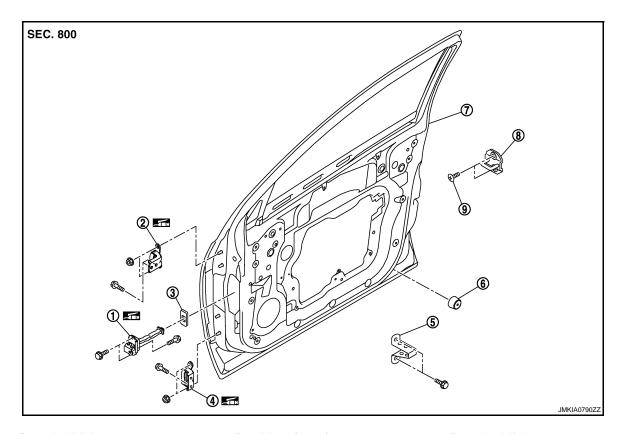
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**DOOR HINGE: Exploded View** 

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- 1. Door check link
- 4. Door hinge (lower)
- 7. Front door panel
- Door hinge (upper)
- 5. **Bracket**
- 8. Door striker
- Refer to GI-4, "Components" for symbols in the figure.

- Door check link cover
- Bumper rubber
- TORX bolt

DOOR HINGE: Removal and Installation

#### **REMOVAL**

- Remove the front door assembly. Refer to <u>DLK-838</u>, "<u>DOOR ASSEMBLY</u>: <u>Removal and Installation</u>".
- Remove the door hinge mounting bolts, and then remove the front door hinge.

#### INSTALLATION

Install in the reverse order of removal.

#### **CAUTION:**

- When removing and installing the front door assembly, perform the fitting adjustment. Refer to DLK-839, "DOOR ASSEMBLY: Adjustment".
- · After installation, apply touch-up paint (the body color) onto the head of the door hinge mounting nuts.
- Check the door hinge rotating part for poor lubrication. If necessary, apply body grease.
- Check the front door open/close operation after installation.

## DOOR CHECK LINK

DOOR CHECK LINK: Exploded View

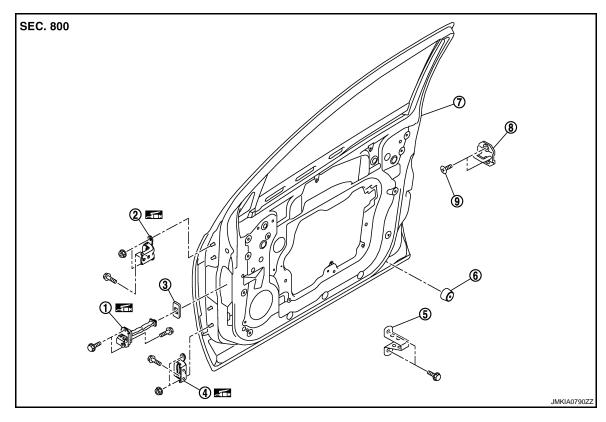
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- 1. Door check link
- 4. Door hinge (lower)
- 7. Front door panel
- 2. Door hinge (upper)
- Bracket
- 8. Door striker

- 3. Door check link cover
- 6. Bumper rubber
- 9. TORX bolt

Refer to GI-4, "Components" for symbols in the figure.

# DOOR CHECK LINK: Removal and Installation

INFOID:0000000001538518

#### **REMOVAL**

- 1. Remove the front door finisher. Refer to INT-10, "FRONT DOOR FINISHER: Removal and Installation".
- 2. Remove the front door speaker. Refer to AV-36, "Removal and Installation".
- 3. Remove the mounting bolt of the door check link on the vehicle.
- 4. Remove the door check link cover, and then remove the door check link mounting bolts.
- 5. Remove the door check link.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

Check the front door open/close operation after installation.

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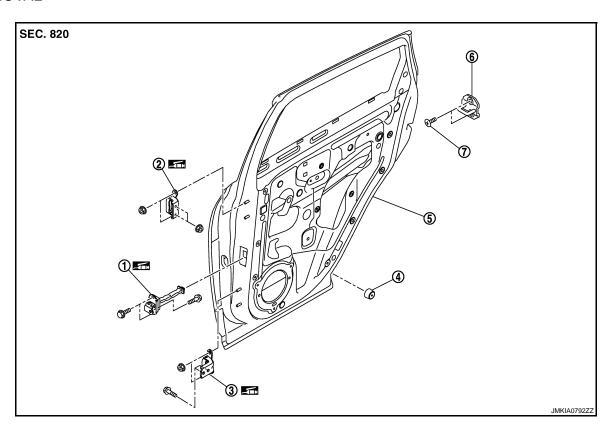
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# **REAR DOOR** DOOR ASSEMBLY

DOOR ASSEMBLY: Exploded View

INFOID:0000000001538519

## **REMOVAL**

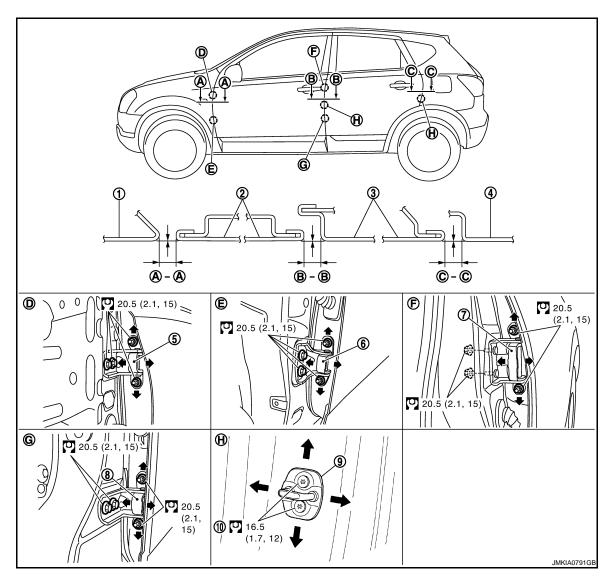


- 1. Door check link
- Bumper rubber
- 7. TORX bolt

- Door hinge (upper)
- Rear door panel
- Door hinge (lower) Door striker

Refer to GI-4, "Components" for symbols in the figure.

## **ADJUSTMENT**



- Front fender 1.
- 4. Rear fender
- Rear door hinge (upper) 7.
- 10. TORX bolt

Refer to GI-4, "Components" for symbols in the figure.

- 2. Front door outer
- 5. Front door hinge (upper)
- 8. Rear door hinge (lower)
- 3. Rear door outer
- 6. Front door hinge (lower)
- 9. Striker

## DOOR ASSEMBLY: Removal and Installation

**REMOVAL** 

- Remove the mounting bolt of the door check link on the vehicle.
- 2. Remove the rear door harness grommet, and then pull out the door harness from the vehicle.
- 3. Disconnect the rear door harness connector.
- Remove the door hinge mounting nuts (door side), and then remove the rear door assembly. **CAUTION:** 
  - . When removing and installing the front door assembly, support the door with a jack and cloth to protect the door and body.
  - · Perform work with 2 workers, because of it's heavy weight.

#### **INSTALLATION**

Install in the reverse order of removal.

**CAUTION:** 

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- When removing and installing the rear door assembly, perform the fitting adjustment. Refer to <u>DLK-845</u>, "DOOR ASSEMBLY: Adjustment".
- After installation, apply touch-up paint (the body color) onto the head of the door hinge mounting nuts.
- Check the door hinge rotating part for poor lubrication. If necessary, apply body grease.
- Check the rear door open/close operation after installation.
- Check the rear door lock/unlock operation after installation.

DOOR ASSEMBLY: Adjustment

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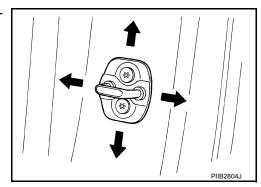
#### CLEARANCE, SURFACE HEIGHT AND SURFACE MISMATCH ADJUSTMENT

Portion		Clearance	Surface height
Front door – Rear door	B – B	3.5 – 5.5 mm (0.138 – 0.217 in)	- 1.0 – 1.0 mm (- 0.039 – 0.039 in)
Rear door – Rear fender	C – C	3.5 – 5.5 mm (0.138 – 0.217 in)	- 1.0 – 1.0 mm (- 0.039 – 0.039 in)

- 1. Check the clearance and surface height and surface mismatch between the rear door and each part visually and by touching. (Fitting standard dimension in the table below shall be satisfied.)
- 2. In case any parts are out of specification, adjust them according to the procedures shown below.
- 3. Remove the center pillar upper garnish and center pillar lower garnish. Refer to <a href="INT-14">INT-14</a>, "Removal and Installation".
- 4. Loosen the door hinge mounting nuts on door side.
- Adjust the surface height and surface mismatch of the rear door according to the fitting standard dimension.
- 6. Temporarily tighten the hinge mounting nuts on door side.
- 7. Loosen the door hinge mounting nuts and bolts on body side.
- Raise the rear door at rear end to adjust clearance of the rear door according to the fitting standard dimension.
- 9. After adjustment tighten bolts and nuts to the specified torque.
- 10. Install the center pillar upper garnish and center pillar lower garnish. Refer to <a href="INT-14">INT-14</a>, "Removal and Installation".

#### DOOR STRIKER ADJUSTMENT

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



DOOR STRIKER

# DOOR STRIKER: Exploded View

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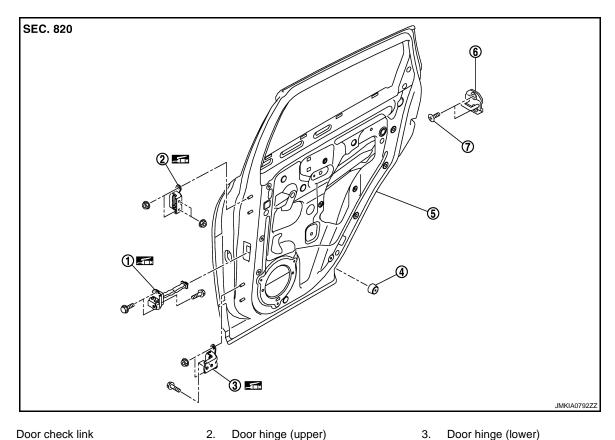
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- Door check link Bumper rubber
- Door hinge (upper)

Rear door panel

Door striker

7. TORX bolt

Refer to GI-4, "Components" for symbols in the figure.

# DOOR STRIKER: Removal and Installation

INFOID:0000000001538523

**REMOVAL** 

4.

Remove the TORX bolts, and then remove the door striker.

**INSTALLATION** 

Install in the reverse order of removal.

**CAUTION:** 

- Check the rear door open/close operation after installation.
- When removing and installing the door striker, be sure to perform the fitting adjustment. Refer to DLK-845, "DOOR ASSEMBLY: Adjustment".

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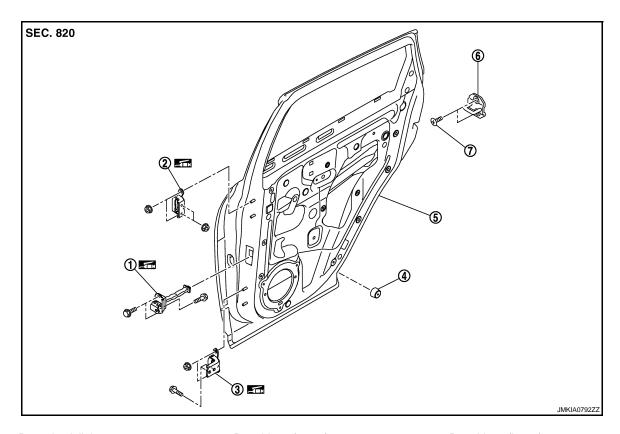
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**DLK-679** 

**DOOR HINGE: Exploded View** 

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- 1. Door check link
- 4. Bumper rubber
- 7. TORX bolt

- Door hinge (upper)
- 5. Rear door panel
- 3. Door hinge (lower)
- Door striker

Refer to GI-4, "Components" for symbols in the figure.

# DOOR HINGE: Removal and Installation

INFOID:0000000001538526

#### **REMOVAL**

- 1. Remove the center pillar lower garnish and the center pillar upper garnish. Refer to <a href="INT-14">INT-14</a>, "Removal and Installation".
- 2. Remove the rear door assembly. Refer to DLK-844, "DOOR ASSEMBLY: Removal and Installation".
- 3. Remove the rear door hinge mounting bolts and nuts (body side), and then remove the door hinge.

#### INSTALLATION

Install in the reverse order of removal.

#### **CAUTION:**

- When removing and installing the rear door assembly, perform the fitting adjustment. Refer to <u>DLK-845</u>, "<u>DOOR ASSEMBLY</u>: <u>Adjustment</u>".
- Check the door hinge rotating part for poor lubrication. If necessary, apply body grease.
- After installing, apply the touch-up paint (the body color) onto the head of the hinge mounting nuts.
- Check the rear door open/close operation after installation.

## DOOR CHECK LINK

# DOOR CHECK LINK: Exploded View

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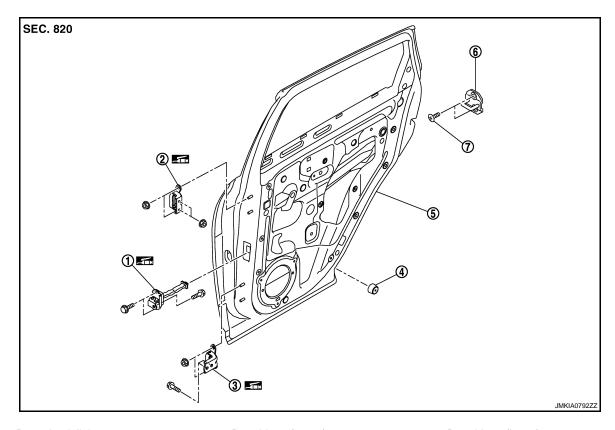
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- 1. Door check link
- 4. Bumper rubber
- 7. TORX bolt

- 2. Door hinge (upper)
  - 5. Rear door panel

- 3. Door hinge (lower)
- 6. Door striker

Refer to  $\underline{\mbox{GI-4. "Components"}}$  for symbols in the figure.

# DOOR CHECK LINK: Removal and Installation

INFOID:0000000001538529

#### **REMOVAL**

- 1. Remove the rear door finisher. Refer to INT-10, "FRONT DOOR FINISHER: Removal and Installation".
- 2. Remove the rear door sealing screen.
- 3. Remove the mounting bolt of the check link on the vehicle.
- 4. Remove the door check link cover, and then remove the door check link mounting bolts.
- 5. Remove the door check link.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

Check front door open/close operation after installation.

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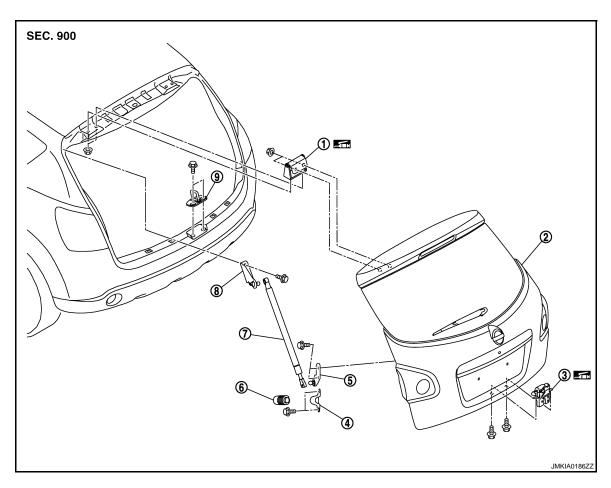
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# BACK DOOR BACK DOOR ASSEMBLY

BACK DOOR ASSEMBLY: Exploded View

INFOID:0000000001538530

## **REMOVAL**



- 1. Back door hinge
- 4. Bumper rubber bracket

Refer to GI-4, "Components" for symbols in the figure.

7. Back door stay

- 2. Back door assembly
- 5. Back door stay bracket (lower)
- 8. Back door stay bracket (upper)
- 3. Back door lock assembly
- 6. Bumper rubber
- 9. Back door striker

### **ADJUSTMENT**

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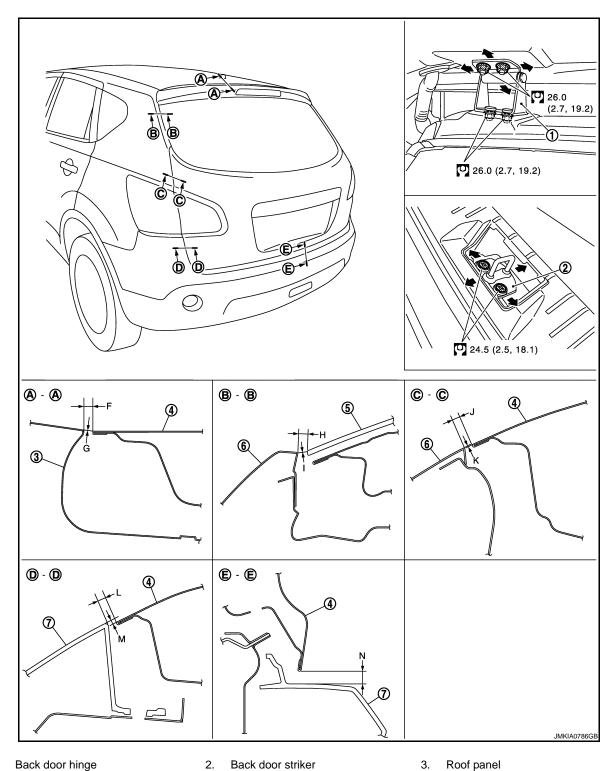
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- Back door hinge
- Back door outer 4.
- Back door glass
- 3. Roof panel Body side outer

Rear bumper fascia

Refer to GI-4, "Components" for symbols in the figure.

## BACK DOOR ASSEMBLY: Removal and Installation

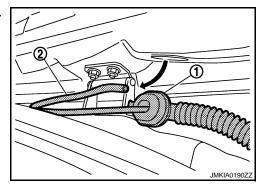
## **REMOVAL**

- 1. Remove the back door finisher inner. Refer to INT-26, "Removal and Installation".
- 2. Remove the back door window glass. Refer to GW-17, "Removal and Installation". NOTE:

## **DLK-683**

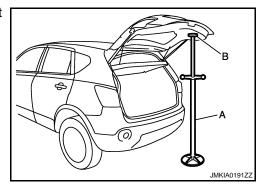
It is necessary to remove back door window glass in order to remove harness, because harness connector interferes with back door window glass pin.

- 3. Disconnect the connectors in the back door, and then remove the grommet, and pull out hte harness.
- 4. Remove the parcel shelf. Refer to <a href="INT-24">INT-24</a>, "Removal and Installation".
- 5. Remove the high-mounted stop lamp. Refer to EXL-186, "Removal and Installation".
- 6. Remove the grommet (1), and then pull out the washer tube (2).

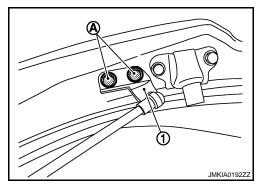


- 7. Pull the harness out of the back door.
- 8. Support the back door lock with the proper material to prevent it from falling.

A : Jack
B : Shop cloth



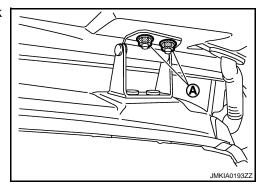
Remove the back door stay bracket (1) mounting bolts (A) on the back door.



10. Remove the back door hinge mounting nuts (A) on the back door and remove the back door assembly.

#### **CAUTION:**

Perform work with 2 workers, because of its heavy weight.



#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

· Perform work with 2 workers, because of its heavy weight.

- After installation, perform fitting adjustment. Refer to <u>DLK-852</u>, "<u>BACK DOOR ASSEMBLY</u>: <u>Adjust-ment</u>".
- Check the back door open/close operation after installation.
- Check the back door lock/unlock operation after installation.

BACK DOOR ASSEMBLY : Adjustment

Portion				Standard	Difference(RH/LH)
Back door panel – Roof panel	<b>A</b> – <b>A</b>	F	Clearance	5.0 – 7.0 mm (0.197 – 0.276 in)	_
		G	Surface height	0.0 – 2.0 mm (0.000 – 0.079 in)	_
Back door glass – Body side outer	B – B	Н	Clearance	3.9 – 8.1 mm (0.154 – 0.319 in)	2.1 mm (0.083 in)
		I	Surface height	- 1.0 – 3.1 mm (- 0.039 – 0.122 in)	2.0 mm (0.079 in)
Back door panel – Body side outer	C – C	J	Clearance	3.5 – 6.5 mm (0.138 – 0.256 in)	2.0 mm (0.079 in)
		K	Surface height	- 1.0 – 1.0 mm (- 0.039 – 0.039 in)	_
Back door panel – Rear bumper fascia	D – D	L	Clearance	4.0 – 8.0 mm (0.157 – 0.315 in)	2.0 mm (0.079 in)
		M	Surface height	0.1 – 4.1 mm (0.004 – 0.161 in)	2.1 mm (0.083 in)
Back door panel – Rear bumper fascia	E-E	N	Clearance	5.8 – 10.2 mm (0.228 – 0.402 in)	_

#### FITTING ADJUSTMENT

- 1. Check the clearance and the evenness between the back door and each part visually and by touching. (Fitting standard dimension in the table below shall be satisfied.)
- 2. In case any parts are out of specification, adjust them according to the procedures shown below.
- Loosen the bumper rubber.
- 4. Loosen the back door striker mounting bolts.
- 5. Lift up the back door approximately 100 150 mm (3.937 5.906 in) height then close it lightly and check that it is engaged firmly with the back door closed.
- Check the clearance and evenness.
- 7. Finally tighten the back door striker.

#### BACK DOOR STRIKER

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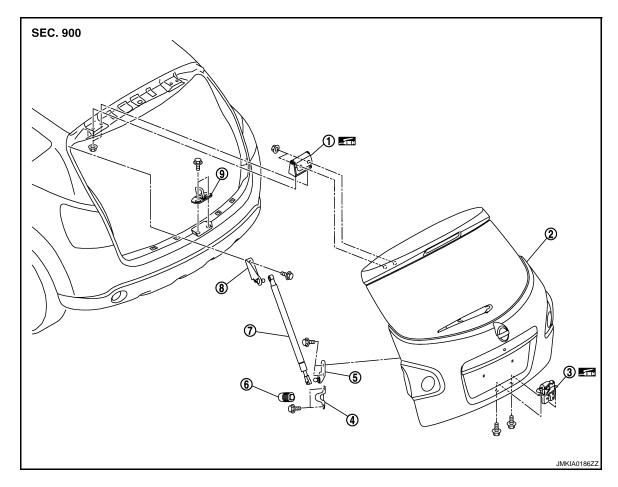
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# BACK DOOR STRIKER: Exploded View

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- 1. Back door hinge
- 4. Bumper rubber bracket
- 7. Back door stay

- 2. Back door assembly
- 5. Back door stay bracket (lower)
- 8. Back door stay bracket (upper)
- Refer to GI-4, "Components" for symbols in the figure.

- 3. Back door lock assembly
- 6. Bumper rubber
- 9. Back door striker

#### BACK DOOR STRIKER: Removal and Installation

INFOID:0000000001538534

#### **REMOVAL**

- 1. Remove the luggage rear plate cap. Refer to <a href="INT-24">INT-24</a>, "Removal and Installation".
- 2. Remove the mounting bolts, and then remove the back door striker.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

- When removing and installing the back door striker, be sure to perform the fitting adjustment. Refer to <u>DLK-852</u>, "<u>BACK DOOR ASSEMBLY</u>: <u>Adjustment</u>".
- Check the back door open/close operation after installation.

#### **BACK DOOR HINGE**

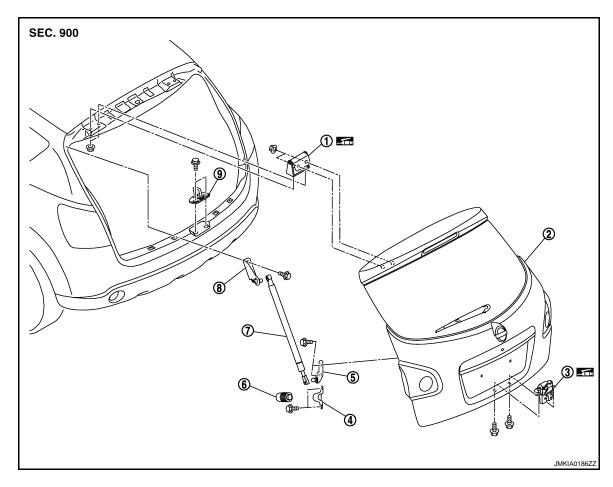
**BACK DOOR HINGE: Exploded View** 

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- 1. Back door hinge
- 4. Bumper rubber bracket
- 7. Back door stay

- 2. Back door assembly
- 5. Back door stay bracket (lower)
- 8. Back door stay bracket (upper)
- 3. Back door lock assembly
- Bumper rubber
- 9. Back door striker

#### BACK DOOR HINGE: Removal and Installation

Refer to GI-4, "Components" for symbols in the figure.

**REMOVAL** 

- 1. Remove the back door assembly. Refer to <u>DLK-850, "BACK DOOR ASSEMBLY: Removal and Installation".</u>
- 2. Remove upper side of the back door weatherstrip. Refer to <u>DLK-856, "BACK DOOR WEATHER-STRIP: Removal and Installation".</u>
- 3. Remove rear seat belt cover. Refer to <a href="INT-21">INT-21</a>, "Removal and Installation".</a>
- 4. Using remover tool, remove the headlining clip at the rear side of the headlining. Refer to <a href="INT-20">INT-20</a>, "Exploded View".
- 5. Remove the rear side of the headlining.
- 6. Remove the back door hinge mounting nuts (body side), and then remove the back door hinge.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

- When removing and installing the back door assembly, perform the fitting adjustment. Refer to <u>DLK-852</u>, "BACK DOOR ASSEMBLY: Adjustment".
- After installation, apply touch-up paint (the body color) onto the head of the hinge mounting nuts.
- Check the hinge rotating part for poor lubrication. If necessary, apply body grease.

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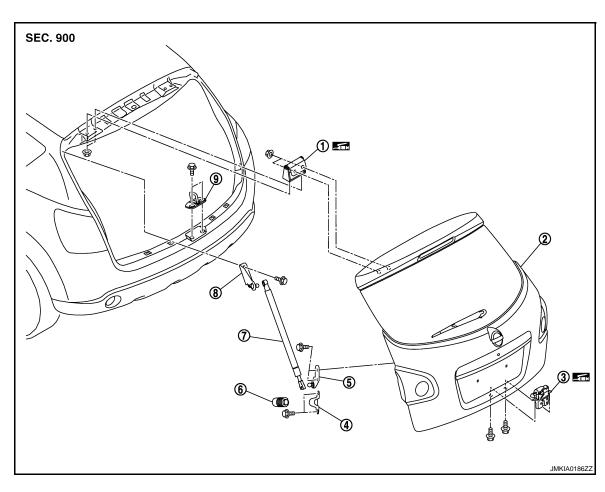
DLK-687

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• Check the back door open/close operation after installation.

**BACK DOOR STAY** 

BACK DOOR STAY: Exploded View



- 1. Back door hinge
- 4. Bumper rubber bracket
- 7. Back door stay

- 2. Back door assembly
- 5. Back door stay bracket (lower)
- 8. Back door stay bracket (upper)
- 3. Back door lock assembly
- 6. Bumper rubber
- 9. Back door striker

Refer to  $\underline{\mbox{GI-4, "Components"}}$  for symbols in the figure.

#### BACK DOOR STAY: Removal and Installation

#### **REMOVAL**

- 1. Remove the mounting bolts, and then remove the back door stay bracket on body side.
- 2. Remove the stud ball, and then remove the back door stay on back door side.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

Check the back door open/close operation after installation.

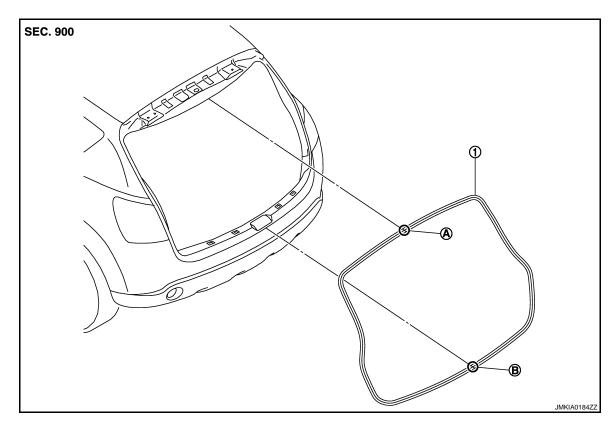
BACK DOOR WEATHER-STRIP

BACK DOOR WEATHER-STRIP: Exploded View

**REMOVAL** 

INFOID:0000000001538541

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- 1. Back door weatherstrip
- A. Mark (upper)
- B. Mark (lower)

#### BACK DOOR WEATHER-STRIP: Removal and Installation

INFOID:0000000001538542

#### REMOVAL

Pull up and remove engagement with body from the weatherstrip joint.

#### **CAUTION:**

After removal, do not pull strongly on the weather-strip.

### INSTALLATION

- 1. Working from the upper section, align the weatherstrip mark with vehicle center position mark and install the weatherstrip onto the vehicle.
- 2. For the lower section, align the weatherstrip seam with center of the back door striker.
- 3. After installation, pull the weatherstrip gently to ensure that there is no loose section. **NOTE:**

Make sure that the weatherstrip is fit tlightly at each corner and the luggage rear plate.

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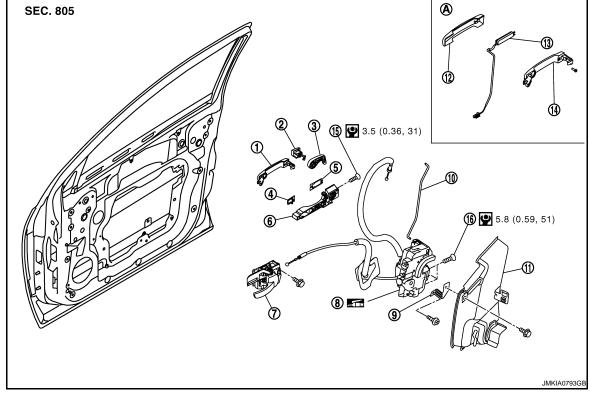
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# FRONT DOOR LOCK DOOR LOCK

DOOR LOCK: Exploded View

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- Outside handle assembly
- Front gasket 4.
- Inside handle
- 10. Key rod protector(SUPER LOCK model only)
- 13. Antenna
- 16. TORX bolt
- A: Intelligent Key only

- 2. Door key cylinder
- Rear gasket Door lock assembly
- 11. Key rod protector assembly (SUPER 12. Outside handle cover LOCK and RH handle model only)
- 14. Outside handle base

- 3. Key cylinder lever
- Outside handle bracket 6.
- Key cylinder rod
- 15. TORX bolt

DOOR LOCK: Removal and Installation

Refer to GI-4, "Components" for symbols in the figure.

#### **REMOVAL**

- Remove the front door finisher. Refer to INT-10, "FRONT DOOR FINISHER: Removal and Installation".
- Remove the inside handle mounting bolt, and then disconnect the inside handle cable.
- 3. Remove the front door glass. Refer to GW-19, "Removal and Installation".

5.

- Remove the front door module assembly. Refer to <u>GW-22, "Removal and Installation"</u>.
- 5. Disconnect the door antenna and the door request switch connector and remove the harness clamp (models with Intelligent Key system).

#### FRONT DOOR LOCK

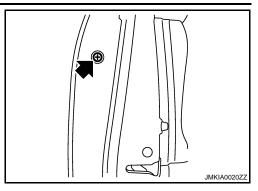
#### < ON-VEHICLE REPAIR >

#### [WITHOUT I-KEY & SUPER LOCK]

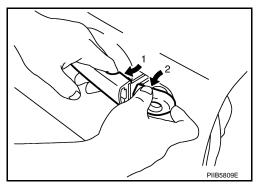
6. Remove the door side grommet, and loosen TORX bolt from grommet hole.

#### **CAUTION:**

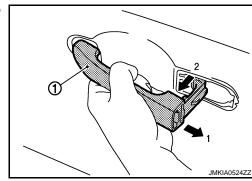
Do not forcibly remove the bolts.



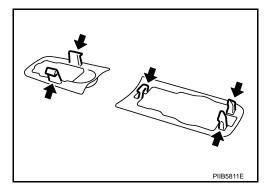
- 7. Reach in to separate the key cylinder rod connection (on the handle).
- 8. Disconnect the door key cylinder switch harness connector.
- 9. Remove the key cylinder lever from the door key cylinder.
- 10. While pulling the outside handle, remove door key cylinder assembly.



- 11. Disconnect front door request switch harness connector (models with Intelligent Key system).
- 12. While pulling outside handle (1), slide toward rear of vehicle to remove outside handle.



13. Remove the front gasket and the rear gasket.



- 14. Remove the door lock assembly TORX bolts.
- 15. Disconnect the door lock actuator connector, and then remove the door lock assembly.

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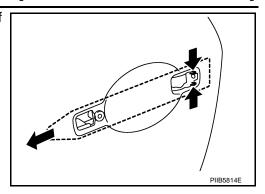
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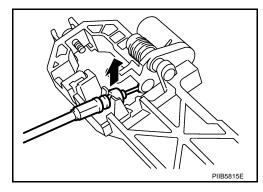
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[WITHOUT I-KEY & SUPER LOCK]

16. While pulling the outside handle bracket, slide toward rear of vehicle to remove the outside handle bracket.



17. Reach in to separate the outside handle cable connection.



#### **INSTALLATION**

Install in the reverse order of removal.

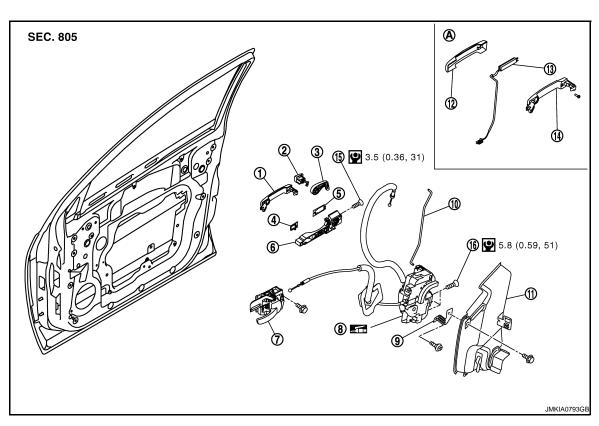
#### **CAUTION:**

- To install each rod, rotate the rod holder until a click is felt.
- Check the door lock/unlock operation after installation.
- Check the door open/close operation after installation.

#### **INSIDE HANDLE**

INSIDE HANDLE: Exploded View

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#### FRONT DOOR LOCK

#### < ON-VEHICLE REPAIR >

#### [WITHOUT I-KEY & SUPER LOCK]

- 1. Outside handle assembly
- 4. Front gasket
- 7. Inside handle
- Key rod protector(SUPER LOCK model only)
- 13. Antenna
- 16. TORX bolt
- A: Intelligent Key only

- Door key cylinder
   Rear gasket
  - 8. Door lock assembly
  - Key rod protector assembly (SUPER 12. LOCK and RH handle model only)
  - 14. Outside handle base

- 3. Key cylinder lever
- 6. Outside handle bracket
- 9. Key cylinder rod
- 12. Outside handle cover
- 15. TORX bolt

# INSIDE HANDLE: Removal and Installation

Refer to GI-4, "Components" for symbols in the figure.

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#### **REMOVAL**

- 1. Remove the front door finisher. Refer to INT-10, "FRONT DOOR FINISHER: Removal and Installation".
- 2. Remove the inside handle mounting bolt.
- 3. Disconnect the inside handle cable, and then remove the inside handle.

#### INSTALLATION

Install in the reverse order of removal.

#### **CAUTION:**

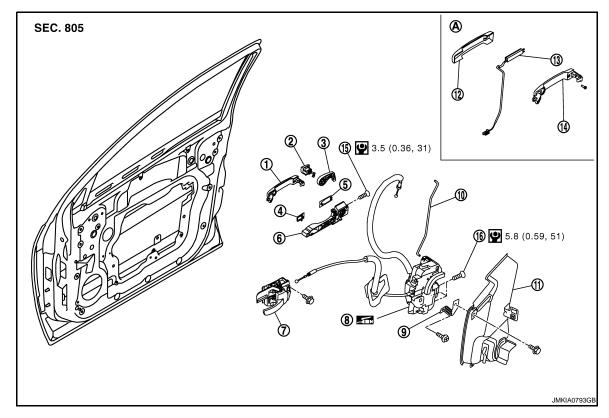
- Check the door lock/unlock operation after installation.
- Check the door open/close operation after installation.

#### **OUTSIDE HANDLE**

**OUTSIDE HANDLE: Exploded View** 

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- Outside handle assembly
- 4. Front gasket
- 7. Inside handle

- 2. Door key cylinder
- 5. Rear gasket
- 8. Door lock assembly
- 3. Key cylinder lever
- 6. Outside handle bracket
- 9. Key cylinder rod

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#### < ON-VEHICLE REPAIR >

- Key rod protector(SUPER LOCK model only)
- Key rod protector assembly (SUPER 12. Outside handle cover LOCK and RH handle model only)
- 13. Antenna
- 14. Outside handle base 15. TORX bolt

- 16. TORX bolt
- A: Intelligent Key only

Refer to GI-4, "Components" for symbols in the figure.

#### **OUTSIDE HANDLE: Removal and Installation**

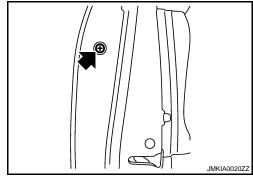
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#### REMOVAL

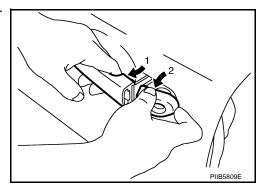
- Remove the front door finisher. Refer to <u>INT-10</u>, "<u>FRONT DOOR FINISHER</u>: <u>Removal and Installation</u>".
- 2. Remove the inside handle mounting bolt, and disconnect the inside handle knob cable and the lock knob cable.
- 3. Remove the front door glass. Refer to GW-19. "Removal and Installation".
- 4. Remove the front door module assembly. Refer to GW-22, "Removal and Installation".
- 5. Disconnect the door antenna and the door request switch connector and remove the harness clamp (models with Intelligent Key system).
- Remove the door side grommet, and loosen TORX bolt from the grommet hole.

#### **CAUTION:**

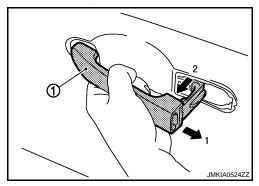
Do not forcibly remove the bolts .



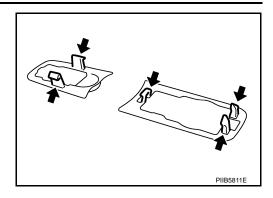
- 7. Reach in to separate the key cylinder rod connection (on the handle).
- 8. Disconnect the door key cylinder switch harness connector.
- 9. Remove the key cylinder lever from the door key cylinder.
- While pulling the outside handle, remove the door key cylinder assembly.



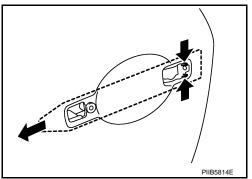
- 11. Disconnect the front door request switch harness connector (models with Intelligent Key system).
- 12. While pulling the outside handle (1), slide toward rear of vehicle to remove the outside handle.



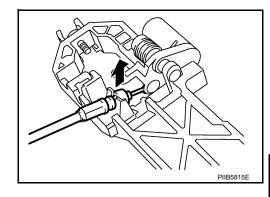
13. Remove the front gasket and rear gasket.



14. While pulling the outside handle bracket, slide toward rear of vehicle to remove the outside handle bracket.



15. Reach in to separate the outside handle cable connection.



#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

- To install each rod, rotate the rod holder until a click is felt.
- Check the door lock/unlock operation after installation.
- Check the door open/close operation after installation.

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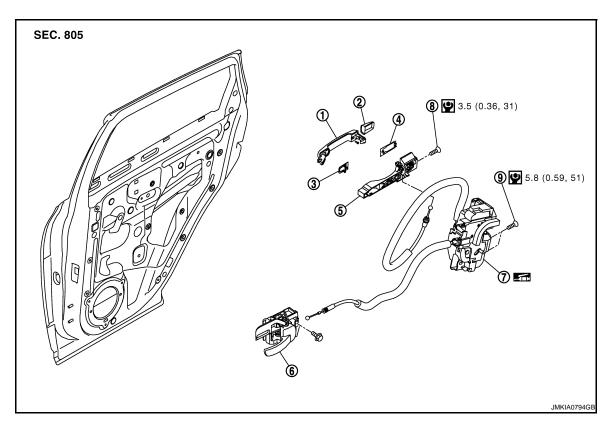
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# REAR DOOR LOCK DOOR LOCK

DOOR LOCK: Exploded View

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- 1. Outside handle
- 4. Rear gasket
- 7. Door lock assembly
- 2. Outside handle escutcheon
- 5. Outside handle bracket
- 8. TORX bolt

- 3. Front gasket
- 6. Inside handle
- 9. TORX bolt

Refer to  $\underline{\text{GI-4, "Components"}}$  for symbols in the figure.

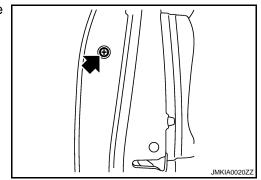
### DOOR LOCK: Removal and Installation

#### **REMOVAL**

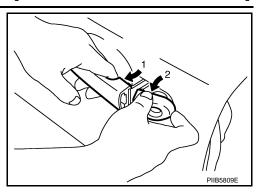
- 1. Remove the rear door finisher. Refer to INT-13, "REAR DOOR FINISHER: Removal and Installation".
- 2. Fully close the front door window.
- 3. Remove the door sealing screen.
- 4. Remove the inside handle mounting bolt, and then disconnect the inside handle cable.
- 5. Remove the door side grommet, and loosen TORX bolt from the grommet hole.

#### **CAUTION:**

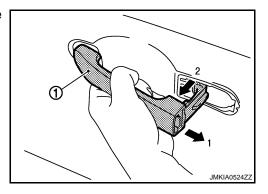
Do not forcibly remove the bolts.



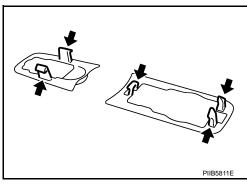
While pulling the outside handle, remove the door key cylinder assembly.



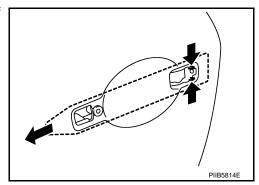
7. While pulling the outside handle (1), slide toward rear of vehicle to remove the outside handle.



8. Remove the front gasket and the rear gasket.



- 9. Remove the door lock assembly TORX bolts.
- 10. Disconnect the door lock actuator connector, and then remove the door lock assembly.
- 11. While pulling the outside handle bracket, slide toward rear of vehicle to remove the outside handle bracket.



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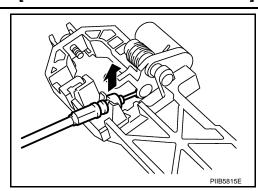
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12. Reach in to separate the outside handle cable connection.



#### **INSTALLATION**

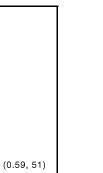
Install in the reverse order of removal.

#### **CAUTION:**

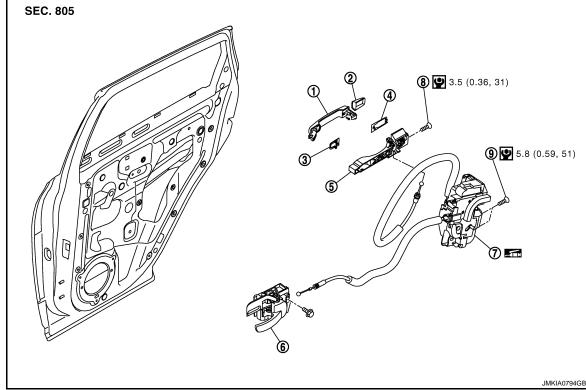
- To install each rod, rotate the rod holder until a click is felt.
- Check the door lock/unlock operation after installation.
- Check the door open/close operation after installation.

#### INSIDE HANDLE

**INSIDE HANDLE: Exploded View** 



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- Outside handle
- Rear gasket
- Door lock assembly
- Outside handle escutcheon
- Outside handle bracket
- TORX bolt

- Front gasket
- Inside handle
- TORX bolt

Refer to GI-4, "Components" for symbols in the figure.

#### INSIDE HANDLE: Removal and Installation

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#### **REMOVAL**

- Remove the rear door finisher. Refer to INT-13, "REAR DOOR FINISHER: Removal and Installation".
- Remove the door sealing screen.

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- Remove the inside handle mounting bolt, and then disconnect the inside handle cable.
- Remove the inside handle.

#### **INSTALLATION**

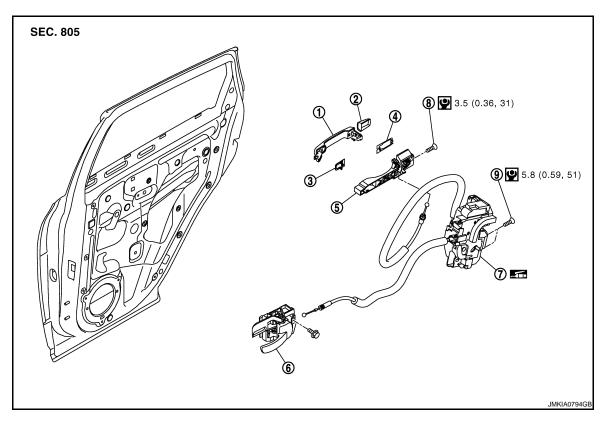
Install in the reverse order of removal.

#### **CAUTION:**

- Check the door lock/unlock operation after installation.
- Check the door open/close operation after installation.

#### **OUTSIDE HANDLE**

**OUTSIDE HANDLE: Exploded View** 



- Outside handle
- Rear gasket
- 7. Door lock assembly
- Outside handle escutcheon
- 5. Outside handle bracket

- TORX bolt 8.

- Front gasket
- Inside handle 6.
- TORX bolt 9.

Refer to GI-4, "Components" for symbols in the figure.

#### OUTSIDE HANDLE: Removal and Installation

#### REMOVAL

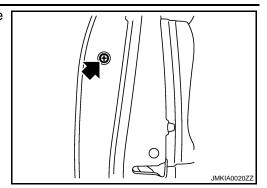
- 1. Remove the rear door finisher. Refer to <a href="INT-13">INT-13</a>, "REAR DOOR FINISHER: Removal and Installation".
- 2. Fully close the front door window.
- 3. Remove the door sealing screen.
- 4. Remove the inside handle mounting bolt, disconnect the inside handle cable.

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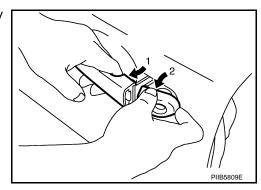
5. Remove the door side grommet, and loosen TORX bolt from the grommet hole.

#### **CAUTION:**

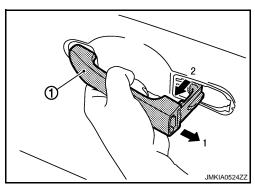
Do not forcibly remove the bolts.



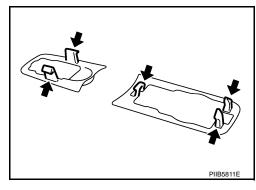
6. While pulling the outside handle, and then remove the door key cylinder assembly.



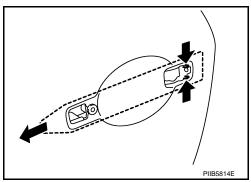
7. While pulling the outside handle (1), slide toward rear of vehicle to remove the outside handle.



8. Remove the front gasket and the rear gasket.



9. While pulling the outside handle bracket, slide toward rear of vehicle to remove the outside handle bracket.

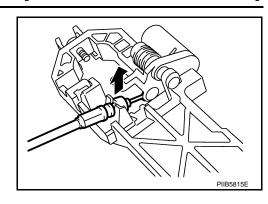


### **REAR DOOR LOCK**

# < ON-VEHICLE REPAIR >

#### [WITHOUT I-KEY & SUPER LOCK]

10. Reach in to separate the outside handle cable connection.



#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

- Check the door lock/unlock operation after installation.
  Check the door open/close operation after installation.

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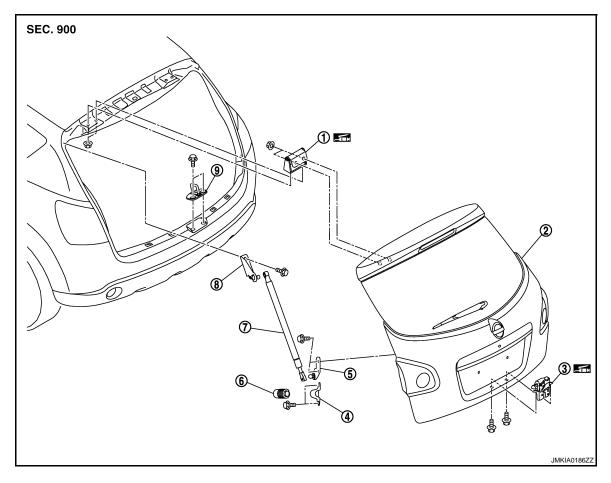
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# BACK DOOR LOCK DOOR LOCK

DOOR LOCK: Exploded View

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- 1. Back door hinge
- 4. Bumper rubber bracket
- 7. Back door stay

- 2. Back door assembly
- 5. Back door stay bracket (lower)
- 8. Back door stay bracket (upper)
- 3. Back door lock assembly
- 6. Bumper rubber
- 9. Back door striker

Refer to GI-4, "Components" for symbols in the figure.

DOOR LOCK: Removal and Installation

#### **REMOVAL**

- 1. Remove the back door trim finisher lower. Refer to <a href="INT-26">INT-26</a>, "Removal and Installation".
- 2. Disconnect the back door lock assembly and back door opener switch connectors.
- 3. Remove the back door lock mounting bolts, and then remove the back door lock and actuator.

#### **INSTALLTION**

Install in the reverse order of removal.

#### **CAUTION:**

Check the back door lock/unlock operation after installation.

# FUEL FILLER LID OPENER

**FUEL FILLER LID** 

FUEL FILLER LID: Exploded View

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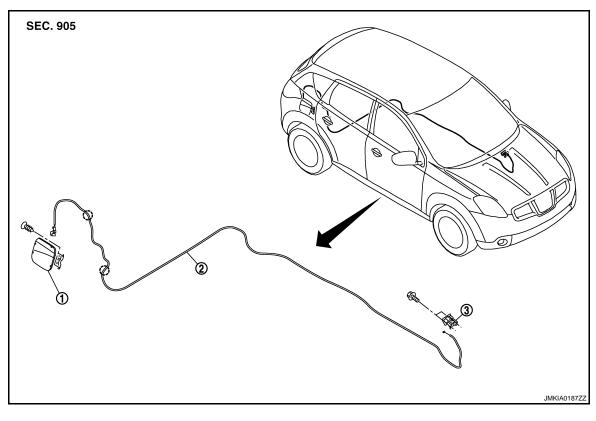
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1. Fuel filler lid assembly

2. Fuel filler opener cable

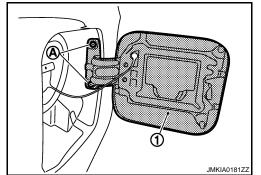
3. Fuel opener lever

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### FUEL FILLER LID: Removal and Installation

**REMOVAL** 

- 1. Fully open the fuel filler lid.
- 2. Remove the filler cap.
- 3. Remove the mounting screws (A), and then remove the fuel filler lid (1).



**INSTALLATION** 

Install in the reverse order of removal.

**CAUTION:** 

After installation, apply the touch-up paint (the body color) onto the head of the mounting screws. FUEL FILLER OPENER CABLE

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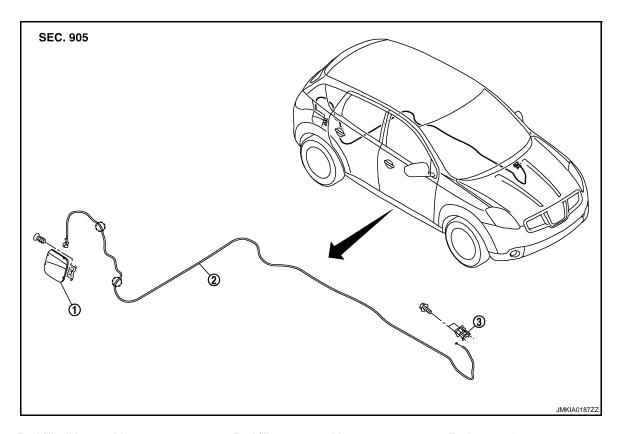
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# FUEL FILLER OPENER CABLE: Exploded View

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- 1. Fuel filler lid assembly
- 2. Fuel filler opener cable
- 3. Fuel opener lever

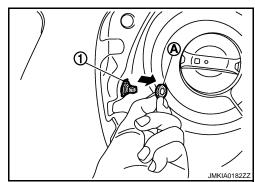
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# FUEL FILLER OPENER CABLE: Removal and Installation

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#### **REMOVAL**

- Remove the rear seat cushion, rear seatback, seatback lower support, and seatback mounting outer bracket. Refer to <u>SE-21, "Removal and Installation"</u>.
- 2. Remove the dash side finisher, front kicking plate inner, rear kicking plate inner, center pillar lower garnish, and luggage side lower finisher (front). Refer to <a href="INT-14">INT-14</a>, "Removal and Installation".
- 3. Remove the parcel shelf, luggage floor carpet, luggage floor spacer, luggage rear plate, luggage side lower finisher, and rear pillar finisher. Refer to <a href="INT-24">INT-24</a>, "Removal and Installation".
- 4. Remove the fuel filler lock seal (A) from fuel filler opener cable (1).

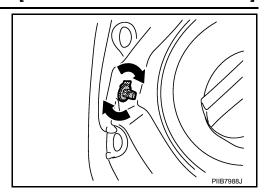


### **FUEL FILLER LID OPENER**

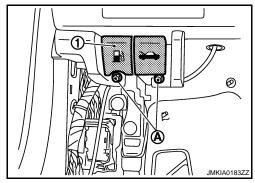
### < ON-VEHICLE REPAIR >

### [WITHOUT I-KEY & SUPER LOCK]

5. Rotate the fuel filler lock, and then remove the fuel filler lock.



- 6. Remove the fuel filler opener cable mounting clips and the clamps.
- 7. Remove the mounting bolts (A), and then remove the fuel filler lid opener lever (1).



8. Remove the fuel filler opener cable.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

Check the fuel filler lid open/close operation after installation.

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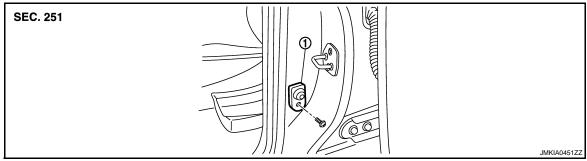
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# **DOOR SWITCH**

# **Exploded View**

INFOID:0000000001184350



1. Door switch (driver side)

Refer to DLK-873, "Removal and Installation".

#### Removal and Installation

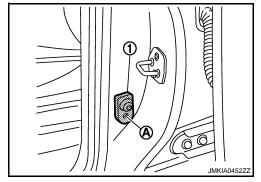
INFOID:0000000001184351

#### **REMOVAL**

1. Remove the door switch mounting bolt (A), and then remove door switch (1).

#### NOTE:

The same procedure is also performed for door switch (passenger side, rear LH and rear RH).



#### **INSTALLATION**

Install in the reverse order of removal.

SEC. 251-900

# **BACK DOOR OPENER SWITCH**

**Exploded View** 

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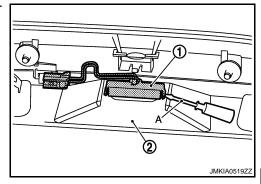
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- . Back door opener switch
- 2. Back door finisher

Refer to DLK-707, "Removal and Installation".

# Removal and Installation

- REMOVAL
- Remove the back door finisher.
   Refer to <u>EXT-31</u>, "<u>Exploded View</u>" and <u>EXT-31</u>, "<u>Removal and Installation</u>".
- Remove the back door opener switch (1) from back door finisher
   using flat-bladed screw driver (A) etc.



#### **INSTALLATION**

Install in the reverse order of removal.

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#### **KEYFOB**

Exploded View

Refer to DLK-708, "Removal and Installation".

#### Removal and Installation

#### INFOID:0000000001184355

#### **REMOVAL**

- 1. Remove installation screw (7) on the rear of keyfob.
- Place the key with the lower case (6) facing up. Set a screw-driver (A) wrapped with tape into illustration of the lower case (6) and separate the lower case (6) from the upper case (1).
   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.
- 3. When replacing the circuit board assembly, remove circuit board assembly from the upper case (1).

[Circuit board assembly: Switch rubber (3) + Board surface (4)] **CAUTION:** 

Do not touch the printed circuits directly.

4. Remove the battery (5) from the lower case (6) and replace it.

Battery replacement : Coin-type lithium battery (CR2032)

#### **CAUTION:**

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

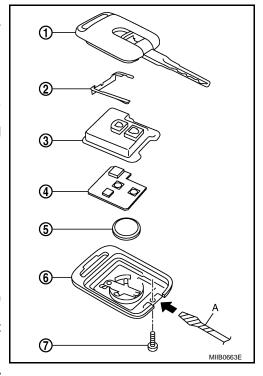
 After replacement, fit the lower and upper cases together, part (2), (3) and tighten with the screw.
 CAUTION:

After replacing the battery, Be sure to check that door locking operates normally using the keyfob.

Refer to DLK-609, "Component Function Check".

#### **INSTALLATION**

Install in the reverse order of removal.



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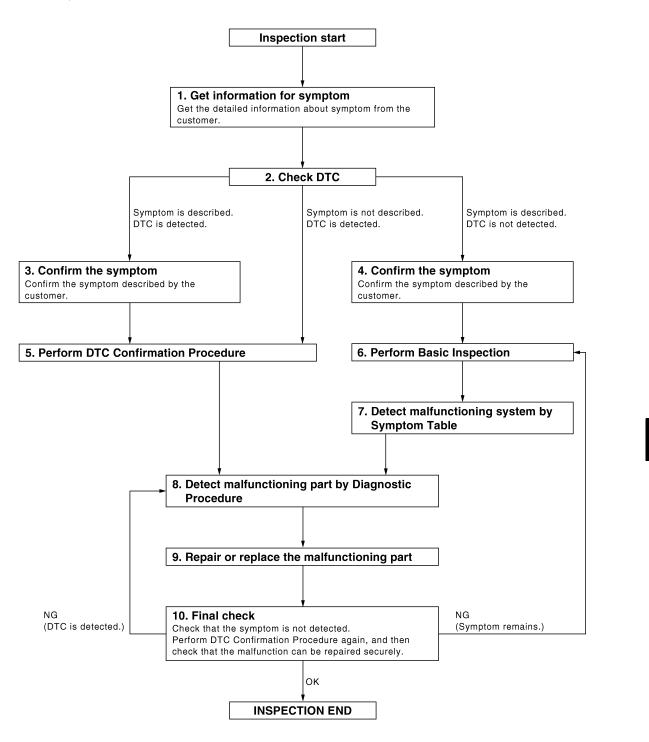
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# **BASIC INSPECTION**

# DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

**OVERALL SEQUENCE** 



JMKIA0101GB

### **DIAGNOSIS AND REPAIR WORKFLOW**

[WITHOUT I-KEY, WITH SUPER LOCK]

#### < 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 for BCM.
- 2. Perform the following procedure if DTC is displayed.
- 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. If two or more DTCs are detected, refer to <a href="DLK-808">DLK-808</a>, "DTC Inspection Priority Chart" and determine trouble diagnosis order.

#### Is DTC detected?

YES >> GO TO 8.

NO >> Refer to GI-39, "Intermittent Incident".

#### PERFORM BASIC INSPECTION

Perform Basic Inspection, refer to DLK-824, "Basic Inspection".

Inspection End>>GO TO 7.

# 7.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM TABLE

Detect malfunctioning system according to Symptom Table based on the confirmed symptom in step 4.

>> GO TO 8.

# 8. DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

#### NOTE:

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

>> GO TO 9.

### **DIAGNOSIS AND REPAIR WORKFLOW**

< BASIC INSPECTION >

[WITHOUT I-KEY, WITH SUPER LOCK]

# $9.\mathsf{REPAIR}$ OR REPLACE THE MALFUNCTIONING PART

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

>> GO TO 10.

# 10. 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.

#### Does the symptom reappear?

YES (DTC is detected)>>GO TO 8.

YES (Symptom remains)>>GO TO 6.

NO >> INSPECTION END

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## **INSPECTION AND ADJUSTMENT**

< BASIC INSPECTION >

[WITHOUT I-KEY, WITH SUPER LOCK]

# INSPECTION AND ADJUSTMENT ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Description

INFOID:0000000001184357

Perform the system initialization when replacing or registering Keyfob and ignition key.

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement

Refer to the CONSULT-III Operation Manual-NATS.

# **FUNCTION DIAGNOSIS**

# DOOR LOCK FUNCTION

DOOR LOCK AND UNLOCK SWITCH

DOOR LOCK AND UNLOCK SWITCH: System Diagram

INFOID:0000000001184359

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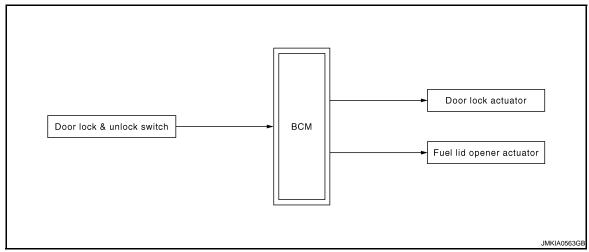
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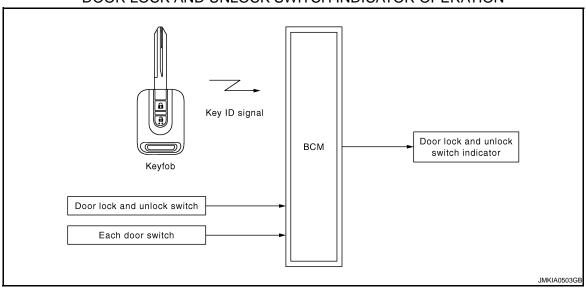
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#### DOOR LOCK AND UNLOCK SWITCH OPERATION



#### DOOR LOCK AND UNLOCK SWITCH INDICATOR OPERATION



DOOR LOCK AND UNLOCK SWITCH: System Description

INFOID:0000000001184360

#### DOOR LOCK AND UNLOCK SWITCH OPERATION

Functions are available by operating the door lock and unlock switch on center console. Interlocked with the lock/unlock operation of door lock and unlock switch, door lock actuators of all doors are locked/unlocked.

#### **Operation Condition**

If the following conditions are satisfied, door lock/unlock operation can be performed when the door lock and unlock switch is operated.

Door lock and unlock switch	Operation condition
Lock operation	All the following conditions are satisfied.  • Except driver side, doors are closed.  • Doors are not locked with keyfob.
Unlock operation	All the following all conditions are satisfied.  • Doors are not locked with keyfob.

#### NOTE:

When the door lock is locked with keyfob, door lock and unlock switch operation will be invalid until either of the following conditions is satisfied.

- Turn ignition switch ON.
- Unlock operation by keyfob.

#### DOOR LOCK AND UNLOCK SWITCH INDICATOR OPERATION

Door lock and unlock switch indicator indicates door lock status. The indicator turn ON while ignition switch is ON and door lock is locked. If any door is opened, the indicator will turn OFF.

#### 1 Minute Timer

A timer must be running to turn OFF the indicator. The timer will run for 1 minute after locking with keyfob or auto door lock.

#### 30 Minutes Timer

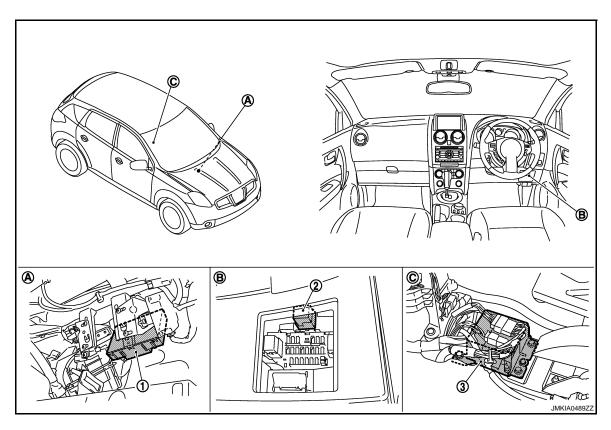
A timer must be running to turn OFF the indicator. The timer will run for 30 minutes after locking with door lock and unlock switch.

#### NOTE:

1 minute timer condition is satisfied while 30 minutes timer is active, however 30 minutes timer does not change when 1 minutes timer is active.

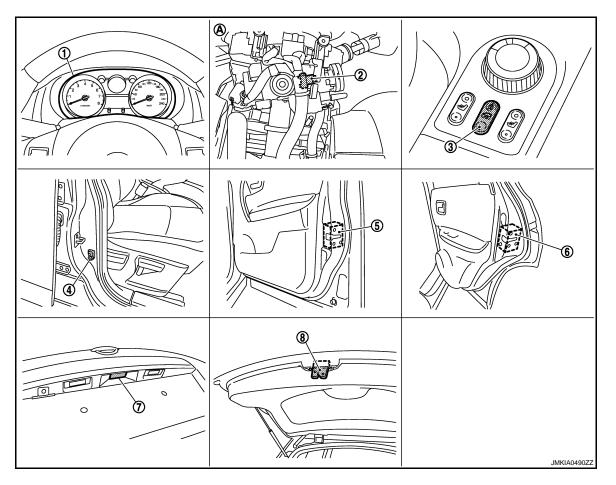
### DOOR LOCK AND UNLOCK SWITCH: Component Parts Location

INFOID:0000000001184361



- BCM M65, M66, M67
- A. Over the glove box

- Passenger side anti-hijack relay M90
- B. View with fuse box lid removed
- Air bag diagnosis sensor unit M59
- C. View with center console removed



- Combination meter M34
- Front door switch (driver side)
   B34
- 7. Back door opener switch D186
- A. View with steering column cover removed
- Key switch M24
- 5. Front door lock actuator (driver side) D29
- 8. Back door lock assembly D152
- 3. Door lock and unlock awitch M89
- 6. Rear door lock actuator RH D95

# DOOR LOCK AND UNLOCK SWITCH: Component Description

INFOID:0000000001184362

Item	Function
BCM	Controls the door lock and unlock function.
Door switch	Detects door state (open or closed).
Door lock and unlock switch	Transmits door lock and unlock signal to BCM. Door lock and unlock switch indicator is built in door lock and unlock switch.
Door lock actuator	Receives door lock and unlock signal from BCM and locks and unlocks each door.

**KEYFOB** 

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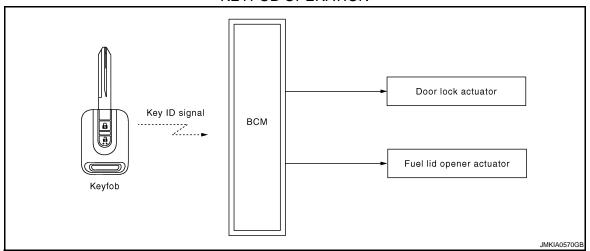
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# **KEYFOB**: System Diagram

INFOID:0000000001184363

#### **KEYFOB OPERATION**



### **KEYFOB**: System Description

INFOID:0000000001184364

#### **KEYFOB OPERATION**

The the multi remote control system can be locked and unlocked pressing door lock and unlock button of keyfob.

#### OPERATION CONDITION

Remote controller operation	Operation condition
Lock/unlock	Key switch is OFF (key is removed from ignition key cylinder).

#### **OPERATION AREA**

To ensure that the keyfob works effectively, use within 5m range of the vehicle, however the operable range may differ according to surroundings.

#### DOOR LOCK AND UNLOCK CONTROL

When door lock and unlock button of keyfob is pressed, door lock and unlock signal transmits from keyfob to BCM. When BCM receives the door lock and unlock signal, it operates door lock actuator.

#### SUPER LOCK CONTROL WITH ANTI-HIJACK MODE

- Super lock provides a higher anti-theft performance than a conventional power door lock system. The super lock system is controlled by BCM.
- When door lock is unlocked, pressing LOCK button on keyfob once will lock and super lock set all doors.
   When super lock is set, pressing UNLOCK button on keyfob once will unlock (and super lock release) driver side door and super lock release all other doors. Pressing UNLOCK button on keyfob within 5 seconds from the first time will unlock all doors and back door can be opened with back door opener switch.

#### NOTE:

Anti-hijack mode can be set to ON or OFF\* with CONSULT-III. For the setting information, refer to <u>DLK-735</u>, <u>"DOOR LOCK: CONSULT-III Function (BCM - DOOR LOCK)"</u>.

#### SUPER LOCK CONTROL WITHOUT ANTI-HIJACK MODE

When door lock is unlocked, pressing LOCK button on keyfob once will lock and super lock set all doors. When all doors are set to super lock, pressing UNLOCK button on keyfob will unlock all doors and super lock release all doors and back door can be opened with back door opener switch.

#### NOTE

Anti-hijack mode can be set to ON or OFF\* with CONSULT-III. For the setting information, refer to <u>DLK-735</u>, "DOOR LOCK: CONSULT-III Function (BCM - DOOR LOCK)".

<sup>\*:</sup> The factory setting

<sup>\*:</sup> The factory setting

# **KEYFOB**: Component Parts Location

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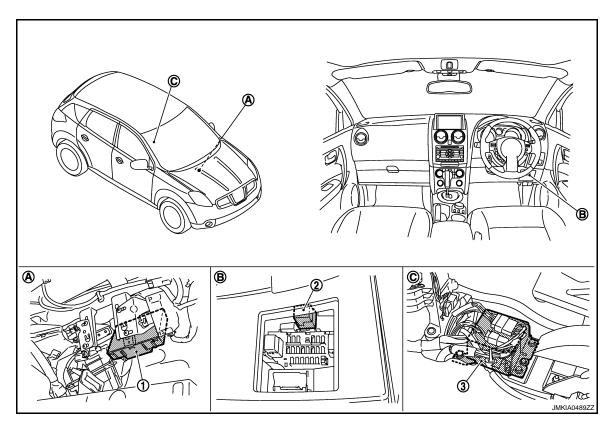
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- 1. BCM M65, M66, M67
- A. Over the glove box

- 2. Passenger side anti-hijack relay M90
- B. View with fuse box lid removed
- 3. Air bag diagnosis sensor unit M59
- C. View with center console removed

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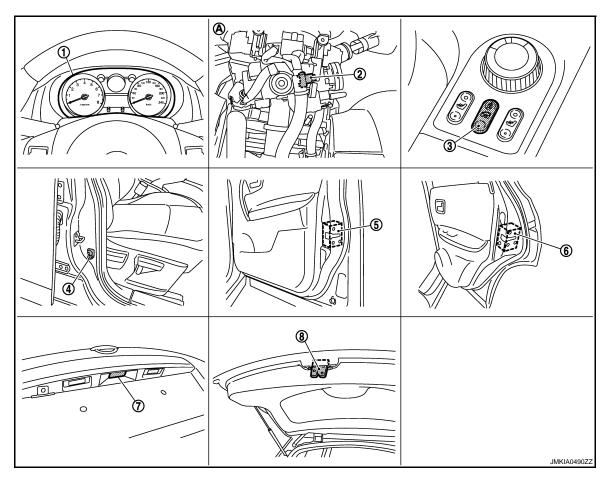
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- Combination meter
   M34
- 4. Front door switch (driver side) B34
- 7. Back door opener switch D186
- View with steering column cover removed.
- Key switch M24
- 5. Front door lock actuator (driver side) D29
- 8. Back door lock assembly D152
- 3. Door lock and unlock awitch M89
- Rear door lock actuator RH D95

INFOID:0000000001184366

# **KEYFOB**: Component Description

Item	Function
BCM	Controls the door lock function.
Key switch	Detect that ignition key is inserted into ignition key cylinder.
Door lock actuator	Receives lock and unlock signal from BCM and locks and unlocks each door.

# **AUTO DOOR LOCK**

# AUTO DOOR LOCK: System Diagram

INFOID:0000000001184367

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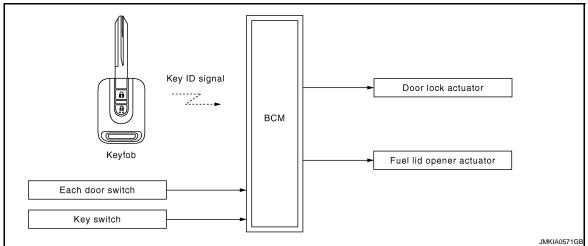
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#### **AUTO RELOCK OPERATION**



# AUTO DOOR LOCK: System Description

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#### **AUTO RELOCK OPERATION**

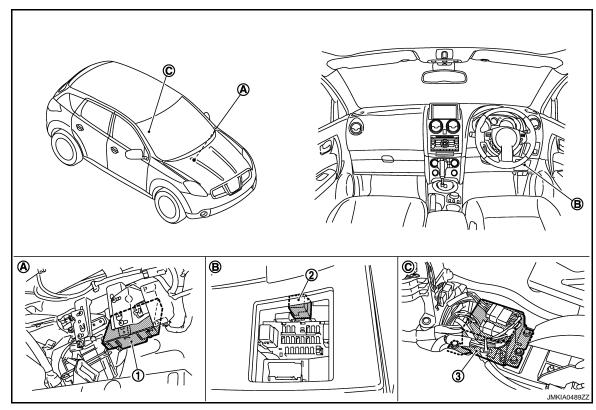
When all doors are locked and then doors are unlocked with keyfob, if BCM does not receive the following signal within 2 minutes\*1, all doors are automatically locked.

- Any door is opened.
- Ignition key is inserted into ignition key cylinder.
- Door is locked with keyfob.
- Door is locked/unlocked with door lock and unlock switch.

\*1: The time can be changed with CONSULT-III. Refer to <u>DLK-737</u>, "MULTIREMOTE ENT : CONSULT-III <u>Function (BCM - MULTIREMOTE ENT)"</u>.

# AUTO DOOR LOCK: Component Parts Location

INFOID:0000000001184369



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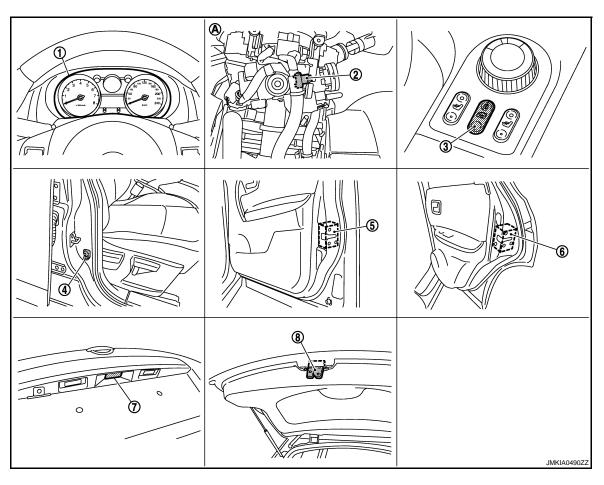
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#### < FUNCTION DIAGNOSIS >

- 1. BCM M65, M66, M67
- A. Over the glove box

- Passenger side anti-hijack relay M90
- B. View with fuse box lid removed
- Air bag diagnosis sensor unit M50
- C. View with center console removed



- Combination meter
   M34
- 4. Front door switch (driver side) B34
- 7. Back door opener switch D186
- View with steering column cover removed.
- 2. Key switch M24
- 5. Front door lock actuator (driver side) D29
- 8. Back door lock assembly D152
- Door lock and unlock awitch M89
- 6. Rear door lock actuator RH D95

INFOID:0000000001184370

# AUTO DOOR LOCK: Component Description

Item	Function  Controls the door lock function.	
BCM		
Door switch	Detects door state (open or closed).	
Key switch	Detects that ignition key is inserted into ignition key cylinder.	
Door lock/unlock switch	Transmits door lock/unlock signal to BCM.	
Keyfob	Transmits key ID to BCM when lock and unlock button is pressed.	
Door lock actuator	Receives lock/unlock signal from BCM and locks/unlocks each door.	

# VEHICLE SPEED SENSING AUTO DOOR LOCK

## VEHICLE SPEED SENSING AUTO DOOR LOCK: System Diagram

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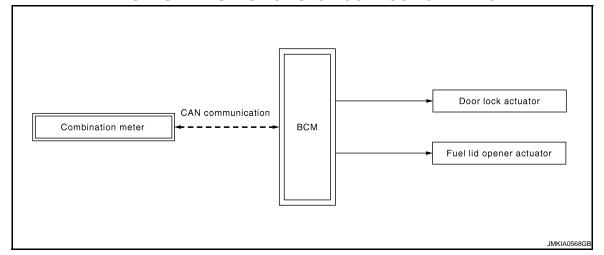
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#### VEHICLE SPEED SENSING AUTO DOOR LOCK OPERATION



## VEHICLE SPEED SENSING AUTO DOOR LOCK: System Description

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#### VEHICLE SPEED SENSING AUTO DOOR LOCK OPERATION

When the vehicle speed exceeds more than 25 km/h (16 MPH), all doors are automatically locked. The vehicle speed signal is received from combination meter via CAN communication.

#### CHANGE SETTING PROCEDURE

Vehicle speed sensing auto door lock function can be enabled/disabled with door lock and unlock switch.

- 1. Turn ignition switch ON.
- Press and hold door lock/unlock switch (LOCK) for 5 seconds within 2 seconds after turn ignition switch ON.
- 3. Buzzer sounds for 1 second.

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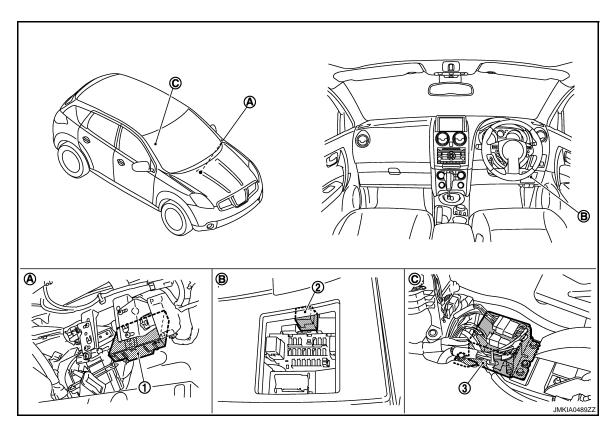
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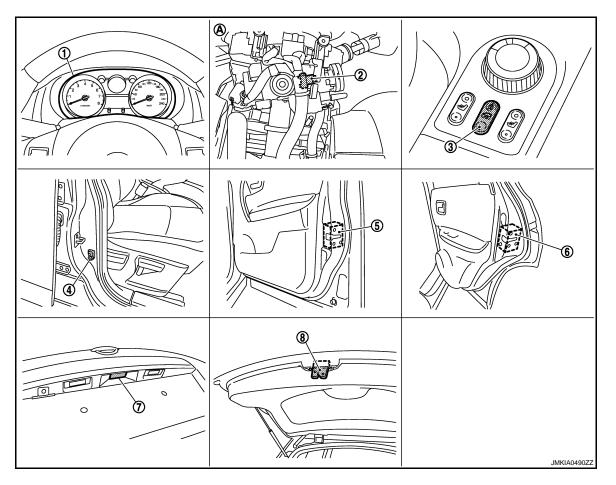
# VEHICLE SPEED SENSING AUTO DOOR LOCK : Component Parts Location

INFOID:0000000001184373



- 1. BCM M65, M66, M67
- A. Over the glove box

- 2. Passenger side anti-hijack relay M90
- B. View with fuse box lid removed
- 3. Air bag diagnosis sensor unit M59
- C. View with center console removed



- Combination meter M34
- 4. Front door switch (driver side) B34
- 7. Back door opener switch D186
- View with steering column cover removed
- Key switch M24
- 5. Front door lock actuator (driver side) D29
- 8. Back door lock assembly D152
- 3. Door lock and unlock awitch M89
- 6. Rear door lock actuator RH D95

# VEHICLE SPEED SENSING AUTO DOOR LOCK: Component Description

INFOID:0000000001184374

Item	Function
BCM	Controls the door lock function.
Combination meter	Transmits vehicle speed signal to BCM via CAN communication.
Door lock actuator	Receives door lock and unlock signal from BCM and locks and unlocks each door.

## AIR BAG INTERLOCK UNLOCK

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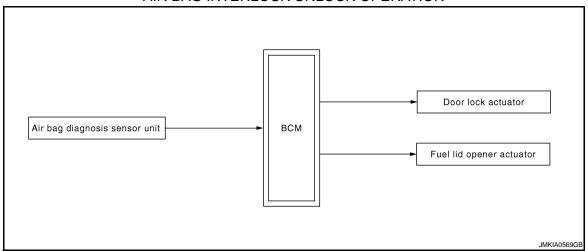
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## AIR BAG INTERLOCK UNLOCK: System Diagram

INFOID:0000000001184375

#### AIR BAG INTERLOCK UNLOCK OPERATION



## AIR BAG INTERLOCK UNLOCK: System Description

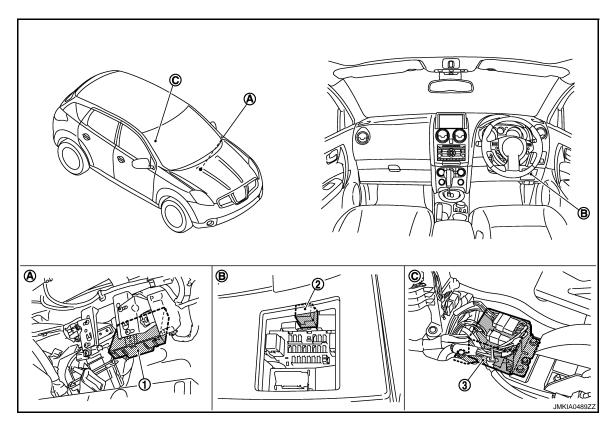
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#### AIR BAG INTERLOCK UNLOCK OPERATION

When ignition switch is ON and BCM receive air bag deployment signal, it operates automatically to unlock all doors. Air bag diagnosis sensor unit sends the air bag deployment signal to BCM.

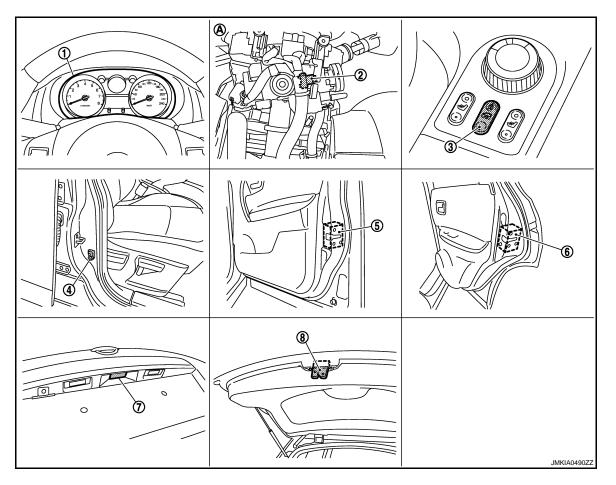
## AIR BAG INTERLOCK UNLOCK: Component Parts Location

INFOID:0000000001184377



- 1. BCM M65, M66, M67
- A. Over the glove box

- Passenger side anti-hijack relay M90
- B. View with fuse box lid removed
- Air bag diagnosis sensor unit M59
- C. View with center console removed



- Combination meter M34
- 4. Front door switch (driver side) B34
- 7. Back door opener switch D186
- View with steering column cover removed
- Key switch M24
- 5. Front door lock actuator (driver side) D29
- 8. Back door lock assembly D152
- 3. Door lock and unlock awitch M89
- 6. Rear door lock actuator RH D95

# AIR BAG INTERLOCK UNLOCK : Component Description

 Item
 Function

 BCM
 Controls the door lock function.

 Air bag diagnosis sensor unit
 Transmits air bag deployment signal to BCM.

 Door lock actuator
 Receives door lock and unlock signal from BCM and lock and unlock each door.

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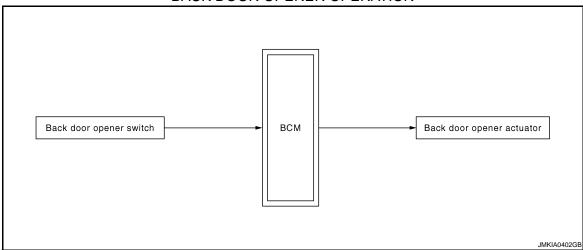
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# BACK DOOR OPENER FUNCTION BACK DOOR OPENER SWITCH

BACK DOOR OPENER SWITCH: System Diagram

INFOID:0000000001184379

#### **BACK DOOR OPENER OPERATION**



## BACK DOOR OPENER SWITCH: System Description

INFOID:0000000001184380

#### **BACK DOOR OPENER OPERATION**

When back door opener switch is pressed, BCM opens back door opener actuator.

#### NOTE:

Back door opener actuator is not for locking the back door. The function is only to open the back door.

#### **OPERATION CONDITION**

If the following conditions are satisfied, back door opener operation can be performed.

Back door opener switch operation	Operation condition
Back door open	<ul><li>Vehicle speed is less than 5 km/h (3 MPH).</li><li>All doors are unlocked.</li></ul>

# BACK DOOR OPENER SWITCH : Component Parts Location

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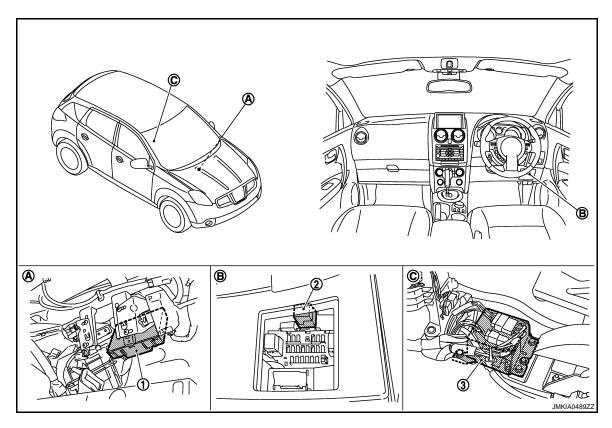
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- 1. BCM M65, M66, M67
- A. Over the glove box

- Passenger side anti-hijack relay M90
- B. View with fuse box lid removed
- 3. Air bag diagnosis sensor unit M59
- C. View with center console removed

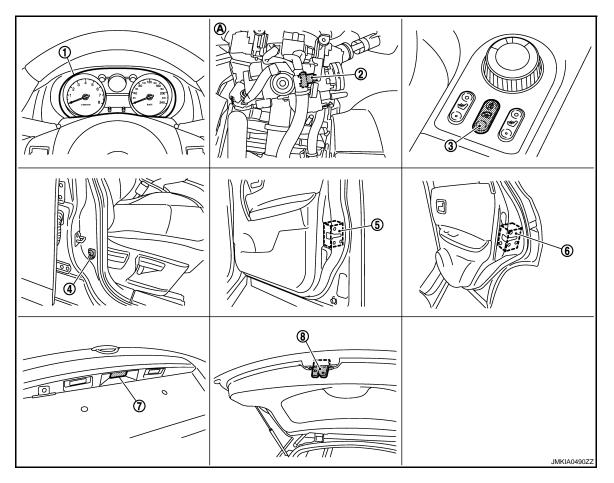
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- Combination meter
   M34
- 4. Front door switch (driver side) B34
- 7. Back door opener switch D186
- View with steering column cover removed
- Key switch M24
- 5. Front door lock actuator (driver side) D29
- 8. Back door lock assembly D152
- 3. Door lock and unlock awitch M89
- 6. Rear door lock actuator RH D95

# BACK DOOR OPENER SWITCH: Component Description

INFOID:0000000001184382

Item	Function
BCM	Controls the back door opener function.
Back door opener switch	Transmits back door opener switch operation signal to BCM.
Back door opener actuator	Opens the back door with the back door open signal from BCM.
Combination meter	Transmits vehicle speed signal to BCM via CAN communication.

## WARNING FUNCTION

System Diagram

# BACK DOOR OPEN WARNING CAN communication Back door opener switch Combination meter

System Description

#### BACK DOOR OPEN WARNING OPERATION

Back door opener switch is operated, when door lock is locked with door lock and unlock switch, by speed sensing lock or when only the driver side is unlocked by the anti-hijack function, the buzzer (built in combination meter) will sound.

#### **KEY REMINDER OPERATION**

- The buzzer (combination meter) will sound and the doors will not lock if the door lock and unlock switch is pressed while the driver door is open and mechanical key is inserted ignition key cylinder.
- The buzzer (combination meter) will sound and the doors will not lock if the door lock and unlock switch is pressed while any door other than the driver door is open.

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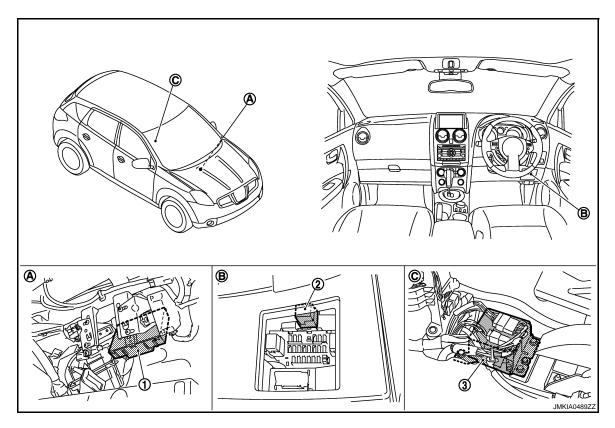
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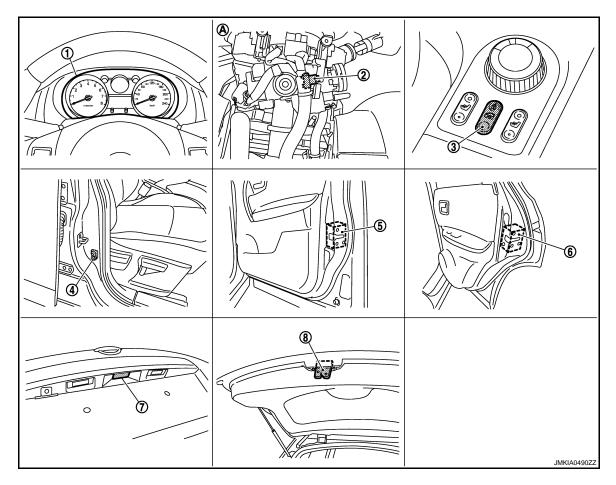
# Component Parts Location

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- BCM M65, M66, M67
- A. Over the glove box

- Passenger side anti-hijack relay M90
- B. View with fuse box lid removed
- 3. Air bag diagnosis sensor unit M59
- C. View with center console removed



- Combination meter M34
- Front door switch (driver side)
   B34
- 7. Back door opener switch D186
- View with steering column cover removed
- Key switch M24
- 5. Front door lock actuator (driver side) D29
- 8. Back door lock assembly D152
- 3. Door lock and unlock awitch M89
- 6. Rear door lock actuator RH D95

# Component Description

INFOID:0000000001184386

Item	Function
BCM	Controls the warning function.
Combination meter	Sounds the buzzer by the request signal from BCM via CAN communication.
Back door opener switch	Transmit back door open signal to BCM

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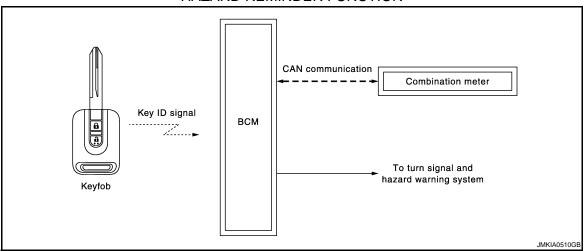
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## HAZARD REMINDER FUNCTION

System Diagram

#### HAZARD REMINDER FUNCTION



## System Description

INFOID:0000000001184388

## HAZARD REMINDER OPERATION

When door is locked or unlocked by keyfob, then BCM flashes hazard warning lamp as a reminder. **NOTE:** 

Hazard reminder mode can be changed with CONSULT-III. Refer to <u>DLK-737, "MULTIREMOTE ENT : CONSULT-III Function (BCM - MULTIREMOTE ENT)"</u>.

Hazard reminder setting (With CONSULT-III)		Door lock operation (with keyfob)	Hazard warning lamp flash
	MODE 1	_	_
	MODE 2	Lock	Once
HAZARD LAMP SET	WIODE 2	Unlock	_
	MODE 3	Lock	_
		Unlock	Twice
	MODE 4	Lock	Once
		Unlock	Twice

# Component Parts Location

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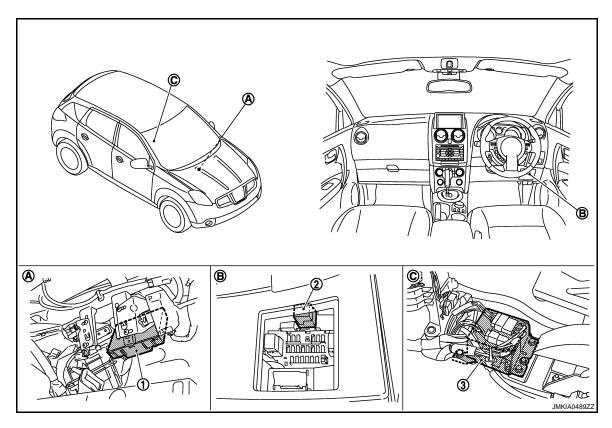
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- 1. BCM M65, M66, M67
- A. Over the glove box

- Passenger side anti-hijack relay M90
- B. View with fuse box lid removed
- 3. Air bag diagnosis sensor unit M59
- C. View with center console removed

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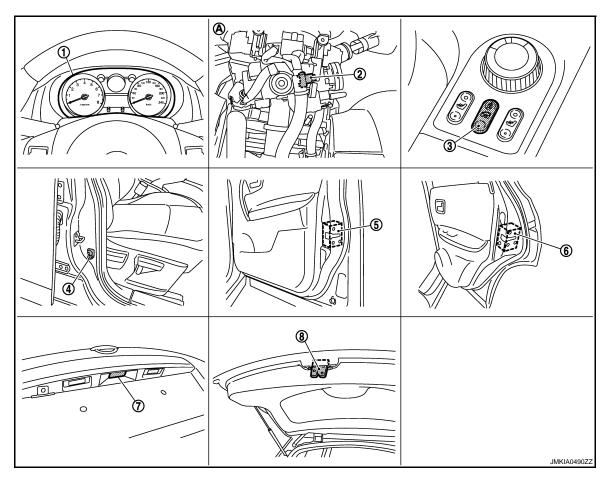
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- Combination meter M34
- 4. Front door switch (driver side) B34
- 7. Back door opener switch D186
- View with steering column cover removed
- Key switch M24
- 5. Front door lock actuator (driver side) D29
- 8. Back door lock assembly D152
- 3. Door lock and unlock awitch M89
- 6. Rear door lock actuator RH D95

# Component Description

INFOID:0000000001184390

Item	Function
BCM	Controls the hazard reminder system.
Combination meter	Turns ON the turn signal indicator (built in combination meter) by the request from BCM via CAN communication.
Keyfob	Transmits key ID to BCM when lock and unlock button is pressed.

# DIAGNOSIS SYSTEM (BCM)

**COMMON ITEM** 

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

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#### APPLICATION ITEM

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

Diagnosis mode	Function Description
Work Support	Changes the setting for each system function.
Self Diagnostic Result	Displays the diagnosis results judged by BCM. Refer to BCS-62, "DTC Index".
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM.
Data Monitor	The BCM input/output signals are displayed.
Active Test	The signals used to activate each device are forcibly supplied from BCM.
Ecu Identification	The BCM part number is displayed.
Configuration	<ul> <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.

×: Applicable item

Occada as	Sub system selection item	Diagnosis mode		
System		WORK SUPPORT	DATA MONITOR	ACTIVE TEST
_	BCM	×		
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER	×	×	×
Warning chime	BUZZER		×	×
Interior room lamp	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		×	
Intelligent Key system	INTELLIGENT KEY		×	
Combination switch	COMB SW		×	
Immobilizer	IMMU		×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door open	TRUNK		×	×
Vehicle security system	THEFT ALM	×	×	×
Signal buffer system	SIGNAL BUFFER		×	×
PTC heater system	PTC HEATER		×	×

**DOOR LOCK** 

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

INFOID:0000000001559429

**DATA MONITOR** 

Monitor Item	Condition
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.
ACC ON SW	Indicates [ON/OFF] condition of ignition switch in ACC position.
PUSH SW <sup>*1</sup>	Indicates [ON/OFF] condition of ignition knob switch.
KEY ON SW	Indicates [ON/OFF] condition of key switch.
CDL LOCK SW	Indicates [ON/OFF] condition of door lock and unlock switch.
CDL UNLOCK SW	Indicates [ON/OFF] condition of door lock and unlock switch.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch (driver side).
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch (passenger side).
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.
BACK DOOR SW	Indicates [ON/OFF] condition of back door switch.
KEYLESS LOCK*2	Indicates [ON/OFF] condition of lock signal from key fob.
KEYLESS UNLOCK*2	Indicates [ON/OFF] condition of unlock signal from key fob.
I-KEY LOCK*1	Indicates [ON/OFF] condition of lock signal from Intelligent Key.
I-KEY UNLOCK*1	Indicates [ON/OFF] condition of unlock signal from Intelligent Key.
UNLOCK SHOCK	<ul> <li>Indicates [ON/OFF] condition of signal from air bag diagnosis unit.</li> <li>ON: During the unlock operation interlock with air bag.</li> <li>OFF: Other than above.</li> </ul>
SHOCK SENSOR	<ul> <li>Indicates [NOMAL/ON/OFF] condition of circuit between BCM and air bag diagnosis sensor unit.</li> <li>NORMAL: Ignition switch ON. (BCM is receiving normal condition signal from air bag diagnosis sensor unit.)</li> <li>ON: During the receiving of air bag deployment signal from air bag diagnosis sensor unit.</li> <li>OFF: After the receiving of air bag deployment signal from air bag diagnosis sensor unit.</li> </ul>
VEHICLE SPEED	Displays the vehicle speed signal received from combination meter by numerical value [km/h].

<sup>\*1:</sup> For the Intelligent key equipped vehicle.

## **ACTIVE TEST**

Test item	Description	
SUPER LOCK*1	This test is able to check super lock operation [LOCK (SET)/UNLOCK (RELEASE)].	
DOOR LOCK IND	This test is able to check door lock indicator (built in door lock and unlock switch on center console) operation [ON/OFF].	
DOOR LOCK	This test is able to check door lock operation [ALL LOCK/ALL UNLOCK/DR UNLOCK/OTHER UNLOCK].	

<sup>:\*1</sup> For the super lock equipped vehicle.

## **WORK SUPPORT**

Test item	Description
SECURITY DOOR LOCK SET	<ul> <li>Anti hijack function mode can be changed in this mode.</li> <li>ON: Anti hijack mode is active.</li> <li>OFF: Anti hijack mode is inactive.</li> </ul>

## **MULTIREMOTE ENT**

<sup>\*2:</sup> For the multi remote control system equipped vehicle.

# **DIAGNOSIS SYSTEM (BCM)**

< FUNCTION DIAGNOSIS >

[WITHOUT I-KEY, WITH SUPER LOCK]

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

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#### **BCM CONSULT-III FUNCTION**

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

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

#### **DATA MONITOR**

Monitor Item	Condition		
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.		
ACC ON SW	Indicates [ON/OFF] condition of ignition switch in ACC position.		
KEY ON SW	Indicates [ON/OFF] condition of key switch.		
KEYKESS LOCK	Indicates [ON/OFF] condition of lock signal from key fob.		
KEYLESS UNLOCK	Indicates [ON/OFF] condition of unlock signal from key fob.		
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch (driver side).		
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch (passenger side).		
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.		
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.		
BACK DOOR SW	Indicates [ON/OFF] condition of back door switch.		
CDL LOCK SW	Indicates [ON/OFF] condition of door lock and unlock switch.		
CDL UNLOCK SW	Indicates [ON/OFF] condition of door lock and unlock switch.		
KEYLESS PANIC	This item is indicated, but not monitored.		
MEMORY 1			
MEMORY 2			
MEMORY 3	Indicates [ON/OFF] condition of key fob ID code registration.		
MEMORY 4			
MEMORY 5			

#### **ACTIVE TEST**

Test item	Description
DOOR LOCK	This test is able to check warning chime in combination meter operation. [ALL LOCK/ALL UNLOCK/DR UNLOCK/OTHER UNLOCK]
INT LAMP	This test is able to check interior lamp operation [ON/OFF].
FLASHER	This test is able to check flasher operation [LH/RH/OFF].

## **WORK SUPPORT**

Test item	Description	
HAZARD LAMP SET	Answer back function (hazard) mode can be changed in this mode. For the detail of the setting, refer to <a href="DLK-732">DLK-732</a> , "System Description".	
AUTO LOCK SET	Auto door lock time can be changed in this mode.  • MODE 1: 1 minute  • MODE 2: 2 minutes  • MODE 3: 3 minutes  • MODE 4: 4 minutes  • MODE 5: 5 minutes	

## **DIAGNOSIS SYSTEM (BCM)**

# TRUNK

TRUNK: CONSULT-III Function (BCM - TRUNK)

INFOID:0000000001559431

## **DATA MONITOR**

Monitor Item	Condition		
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.		
KEY ON SW	Indicates [ON/OFF] condition of key switch.		
PUSH SW <sup>*1</sup>	Indicates [ON/OFF] condition of ignition knob switch.		
TRNK OPNR SW	Indicates [ON/OFF] condition of back door opener switch.		
VEHICLE SPEED	Displays the vehicle speed signal received from combination meter by numerical value [km/h].		

<sup>\*1:</sup> For the Intelligent key equipped vehicle.

## **ACTIVE TEST**

Test item	Description	
TRUNK/GLASS HATCH	This test is able to check back door opener operation [ON/OFF].	

<sup>\*2:</sup> For the remote keyless entry system equipped vehicle.

# **COMPONENT DIAGNOSIS**

## U1000 CAN COMM CIRCUIT

Description INFOID:000000001607760

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

DTC Logic

#### DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC Detection Condition	Possible cause	F
U1000	CAN COMM CIRCUIT	When BCM cannot communicate CAN communication signal continuously for 2 seconds or more.	Any item (or items) of the following listed below is malfunctioning in CAN communication system.  Transmission Receiving (ECM) Receiving (METER/M&A) Receiving (TCM) Receiving (MULTI AV) Receiving (IPDM E/R)	G

## Diagnosis Procedure

INFOID:0000000001607762

# 1. PERFORM SELF DIAGNOSTIC

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

#### Is "CAN COMM CIRCUIT" displayed?

YES >> Refer to LAN-13, "Trouble Diagnosis Flow Chart".

NO >> Refer to GI-39, "Intermittent Incident".

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## **U1010 CONTROL UNIT (CAN)**

< COMPONENT DIAGNOSIS >

[WITHOUT I-KEY, WITH SUPER LOCK]

# U1010 CONTROL UNIT (CAN)

DTC Logic

#### DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC Detection Condition	Possible cause
U1010	CONTROL UNIT (CAN)	When detecting error during the initial diagnosis of CAN controller of BCM.	ВСМ

## Diagnosis Procedure

INFOID:0000000001607764

## 1.REPLACE BCM

When "DTC:U1010" is detected, replace BCM.

>> Replace BCM. Refer to BCS-65, "Exploded View".

## Special Repair Requirement

INFOID:0000000001607765

1. ADDITIONAL SERVICE WHEN REPLACING BCM

>> Refer to BCS-3, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description".

## POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[WITHOUT I-KEY, WITH SUPER LOCK]

# POWER SUPPLY AND GROUND CIRCUIT

**BCM** 

INFOID:0000000001184401

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BCM : Diagnosis Procedure

1. CHECK FUSE AND FUSIBLE LINK

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

Terminal No.	Signal name	Fuse and fusible link No.
41	Battery power supply	9 (10A)
57	Battery power suppry	J (40A)

#### Is the fuse fusing?

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

NO >> GO TO 2.

# 2.CHECK POWER SUPPLY CIRCUIT

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

Terminals				
	(+)	(-)	Voltage (Approx.)	
BCM			(Approx.)	
Connector	Terminal	Ground		
M66	41	Ground	Pottory voltage	
M67	57		Battery voltage	

#### Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

## 3. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

ВСМ			Continuity	
Connector Terminal		Ground	Continuity	
M67 55			Existed	

#### Does continuity exist?

YES >> BCM power supply and ground circuit are OK.

NO >> Repair harness or connector.

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## DOOR LOCK AND UNLOCK SWITCH

Description INFOID:000000001184402

Transmits door lock/unlock operation to BCM.

## Component Function Check

INFOID:0000000001184403

## 1. CHECK FUNCTION

#### (P)With CONSULT-III

Check "CDL LOCK SW "and "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	
CDL UNLOCK SW	UNLOCK	: ON	

#### Is the inspection result normal?

YES >> Door lock and unlock switch is OK.

NO >> Refer to <u>DLK-742</u>, "<u>Diagnosis Procedure</u>".

## Diagnosis Procedure

INFOID:0000000001184404

# 1. CHECK DOOR LOCK AND UNLOCK INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect door lock and unlock switch connector.
- 3. Check signal between door lock and unlock harness connector switch and ground with oscilloscope.

Terminal				
(+)			Signal	
Door lock and unlock switch connector	Terminal	(–)	(Reference value)	
	1			
M89	6	Ground	(V) 15 10 5 0 → ←10ms JPMIA0154GB	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

# 2.check door lock and unlock switch circuit

- Turn ignition switch OFF.
- 2. Disconnect BCM connector.
- Check continuity between BCM harness connector and door lock and unlock switch harness connector.

BCM connector	Terminal	Door lock and unlock switch connector	Terminal	Continuity
M65	7	M89	6	Exists
	9	IVIOS	1	LAISIS

4. Check continuity between BCM harness connector and ground.

## DOOR LOCK AND UNLOCK SWITCH

#### < COMPONENT DIAGNOSIS >

## [WITHOUT I-KEY, WITH SUPER LOCK]

BCM connector	Terminal		Continuity
M65	7	Ground	Does not exist
IWIOS	9		Does not exist

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

# 3.check door lock and unlock switch ground

Check continuity between door lock and unlock switch harness connector and ground.

Door lock and unlock switch connector	Terminal	Ground	Continuity
M89	5	Ground	Exists

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

## 4. CHECK BCM OUTPUT SIGNAL

- Connect BCM connector.
- Check signal between BCM harness connector and ground with oscilloscope.

	Terminal			
(+)	(+)		Signal (Reference value)	
BCM connector	Terminal	(-)	(1.10.0.0.000	
	7			
M65	9	Ground	(V) 15 10 5 0 → ←10ms JPMIA0154GB	

#### Is the inspection result normal?

>> Check intermittent incident. Refer to GI-39, "Intermittent Incident". YES

NO >> Replace BCM. Refer to BCS-65, "Exploded View".

## $oldsymbol{5}.$ CHECK DOOR LOCK AND UNLOCK SWITCH

Check door lock and unlock switch

Refer to DLK-74, "Component Inspection".

#### Is the inspection result normal?

>> Check intermittent incident. Refer to GI-39, "Intermittent Incident". YES

>> Replace door lock and unlock switch. Refer to <u>DLK-278</u>, "Exploded View".

## Component Inspection

## 1. CHECK DOOR LOCK AND UNLOCK SWITCH

Check door lock and unlock switch.

Door lock and unlock switch	Terminal		Condition	Continuity
M89	6	F	LOCK	Exists
IVIOS	1	3	UNLOCK	EXISIS

#### Is the inspection result normal?

YES >> Door lock and unlock switch is OK.

NO >> Replace door lock and unlock switch. Refer to <u>DLK-278</u>, "Exploded View". DLK

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INFOID:0000000001184405

## DOOR LOCK AND UNLOCK SWITCH INDICATOR

< COMPONENT DIAGNOSIS >

[WITHOUT I-KEY, WITH SUPER LOCK]

## DOOR LOCK AND UNLOCK SWITCH INDICATOR

Description INFOID:000000001184406

The door lock and unlock switch indicates door lock status. The indicator will illuminate when a lock operation is accomplished, and during this status, if any door is opened, the indicator will turn OFF.

## Component Function Check

INFOID:0000000001184407

## 1. CHECK FUNCTION

#### (P)With CONSULT-III

Check "DOOR LOCK IND" in "Active Test" mode with CONSULT-III.

Test item		Condition
DOOR LOCK IND	:ON	Illuminated
BOOK EOOK IND	:OFF	Not illuminated

#### Is the inspection result normal?

YES >> Door lock and unlock switch is OK.

NO >> Refer to <u>DLK-744</u>, "<u>Diagnosis Procedure</u>".

## Diagnosis Procedure

INFOID:0000000001184408

## 1. CHECK DOOR LOCK AND UNLOCK SWITCH INDICATOR INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Check voltage between door lock and unlock switch harness connector and ground.

Terminal					
(+)	(+)		Condition	Voltage	
Door lock and unlock switch connector	Terminal	(-)		(Approx.)	
M89	4	Ground	Door lock operation is accomplished	Battery voltage	
			Any door is OPEN	0	

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

# 2.check door lock and unlock switch circuit

- Turn ignition switch OFF.
- Disconnect BCM connector and door lock and unlock switch connector.
- Check continuity between BCM harness connector and door lock and unlock switch harness connector.

BCM connector	Terminal	Door lock and unlock switch connector	Terminal	Continuity
M65	24	M89	4	Exists

4. Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M65	24	Gloulia	Does not exist

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK DOOR LOCK AND UNLOCK SWITCH GROUND

## DOOR LOCK AND UNLOCK SWITCH INDICATOR

#### < COMPONENT DIAGNOSIS >

#### [WITHOUT I-KEY, WITH SUPER LOCK]

Check continuity between door lock and unlock switch harness connector and ground.

Door lock and unlock switch connector	Terminal	Ground	Continuity
M89	5		Exists

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

## 4. CHECK BCM OUTPUT SIGNAL

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

Terminal				\/alta ===	
(+)		(-)	Condition	Voltage (Approx.)	
BCM connector	Terminal	(-)		(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
M65	24	Ground	Door lock operation is accomplished	Battery voltage	
			Any door is OPEN	0	

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace BCM. Refer to BCS-65, "Exploded View".

## 5. CHECK DOOR LOCK AND UNLOCK SWITCH INDICATOR

Check door lock and unlock switch

Refer to DLK-745, "Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace door lock and unlock switch. Refer to DLK-278, "Exploded View".

## Component Inspection

INFOID:0000000001184409

## 1. CHECK DOOR LOCK AND UNLOCK SWITCH INDICATOR

Check continuity door lock and unlock switch.

Door lock and unlock switch	Terr	minal	Continuity
Door lock and unlock switch	(+)	(-)	Continuity
M89	5	4	Exists
MOA	4	5	Does not exist

## Is the inspection result normal?

YES >> Door lock and unlock switch is OK.

NO >> Replace door lock and unlock switch. Refer to DLK-278, "Exploded View".

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## DOOR SWITCH

**DRIVER SIDE** 

**DRIVER SIDE**: Description

INFOID:0000000001184410

Detects door open/closed condition.

DRIVER SIDE: Component Function Check

INFOID:0000000001184411

## 1. CHECK FUNCTION

## (II) With CONSULT-III

Check door switches "DOOR SW-DR" in "Data Monitor" mode with CONSULT-III.

Monitor item	Condition		
DOOR SW-DR	OPEN	:ON	
DOOK SW-DK	CLOSE	:OFF	

## Is the inspection result normal?

YES >> Door switch is OK.

NO >> Refer to <u>DLK-746</u>, "<u>DRIVER SIDE</u>: <u>Diagnosis Procedure</u>".

## **DRIVER SIDE**: Diagnosis Procedure

INFOID:0000000001184412

## 1. CHECK DOOR SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Check signal between BCM harness connector and ground with oscilloscope.

	Terminals (+)				
(-			Door condition	Voltage (V) (Approx.)	
BCM connector	Terminal	(–)	Door containon	(Approx.)	
			OPEN	0	
M65	26	Ground	CLOSE	(V) 15 10 5 0 10 ms JPMIA0011GB	

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to <a href="GI-39">GI-39</a>, "Intermittent Incident".

NO >> GO TO 2.

## 2. CHECK DOOR SWITCH CIRCUIT

- 1. Disconnect BCM connector.
- 2. Check continuity between BCM harness connector and door switch harness connector.

BCM connector	Terminal	Door switch connector	Terminal	Continuity
M65	26	B34	1	Exists

3. Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M65	26	Giodila	Does not exist

## **DOOR SWITCH**

#### < COMPONENT DIAGNOSIS >

#### [WITHOUT I-KEY, WITH SUPER LOCK]

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between BCM and door switch.

## 3.CHECK DOOR SWITCH

Check door switch.

Refer to <u>DLK-747</u>, "DRIVER SIDE: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace malfunctioning door switch. Refer to <a href="DLK-270">DLK-270</a>, "Exploded View".

## **DRIVER SIDE: Component Inspection**

## 1. CHECK DOOR SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect door switch connector.
- Check door switch.

Terminal Door switch		Door switch condition	Continuity	
		Door Switch Condition		
1	4 Cround part of door quiteb	Pressed	Exists	
I	Ground part of door switch	Released	Does not exist	

#### Is the inspection result normal?

YES >> Door switch is OK.

NO >> Replace malfunctioning door switch. Refer to <u>DLK-270, "Exploded View"</u>.

#### PASSENGER SIDE

## PASSENGER SIDE: Description

Detects door open/closed condition.

## PASSENGER SIDE: Component Function Check

## .

## 1. CHECK FUNCTION

## (III) With CONSULT-III

Check door switches "DOOR SW-AS" in "Data Monitor" mode with CONSULT-III.

Monitor item	Condition		
DOOR SW-AS	OPEN	: ON	
DOOK SW-AS	CLOSE	: OFF	

## Is the inspection result normal?

YES >> Door switch is OK.

NO >> Refer to <u>DLK-747</u>, "PASSENGER SIDE : <u>Diagnosis Procedure</u>".

## PASSENGER SIDE: Diagnosis Procedure

## 1. CHECK DOOR SWITCH INPUT SIGNAL

- Turn ignition switch OFF.
- 2. Check signal between BCM harness connector and ground with oscilloscope.

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Terminals				
(+	(+)		Door condition	Voltage (V) (Approx.)
BCM connector	Terminal	(–)	Door condition	(Approx.)
			OPEN	0
M65	27	Ground	CLOSE	(V) 15 10 5 0 JPMIA0011GB

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2.

# 2.CHECK DOOR SWITCH CIRCUIT

- Disconnect BCM connector. 1.
- Check continuity between BCM harness connector and door switch harness connector.

BCM connector	Terminal	Door switch connector	Terminal	Continuity
M65	27	B27	1	Exists

Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M65	27	Giouna	Does not exist

## Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between BCM and door switch.

# 3. CHECK DOOR SWITCH

Check door switch.

Refer to DLK-748, "PASSENGER SIDE: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

>> Replace malfunctioning door switch. Refer to <u>DLK-270, "Exploded View"</u>.

## PASSENGER SIDE: Component Inspection

# INFOID:0000000001184417

## 1. CHECK DOOR SWITCH

- Turn ignition switch OFF.
- Disconnect door switch connector.
- 3. Check door switch.

Terminal  Door switch		Door switch condition	Continuity	
		Door Switch Condition		
1	1 Ground part of door switch		Exists	
	Ground part of door switch	Released	Does not exist	

#### Is the inspection result normal?

YES >> Door switch is OK.

NO >> Replace malfunctioning door switch. Refer to <u>DLK-270, "Exploded View"</u>. **REAR LH** 

**REAR LH**: Description

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Detects door open/closed condition.

REAR LH: Component Function Check

INFOID:0000000001184419

INFOID:0000000001184420

## 1. CHECK FUNCTION

With CONSULT-III

Check door switches "DOOR SW-RL" in "Data Monitor" mode with CONSULT-III.

Monitor item	Condition		
DOOR SW-RL	OPEN	:ON	
DOOR SW-RE	CLOSE	:OFF	

#### Is the inspection result normal?

YES >> Door switch is OK.

NO >> Refer to <u>DLK-749</u>, "REAR LH: <u>Diagnosis Procedure"</u>.

## **REAR LH: Diagnosis Procedure**

# 1. CHECK DOOR SWITCH INPUT SIGNAL

Turn ignition switch OFF.

2. Check signal between BCM harness connector and ground with oscilloscope.

Terminals (+)				
			Door condition	Voltage (V) (Approx.)
BCM connector	Terminal	(–)	Door condition	(Approx.)
			OPEN	0
M65	25	Ground	CLOSE	(V) 15 10 5 0 10 ms  JPMIA0011GB

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2.

## 2.CHECK DOOR SWITCH CIRCUIT

Disconnect BCM connector.

2. Check continuity between BCM harness connector and door switch harness connector.

BCM connector	Terminal	Door switch connector	Terminal	Continuity
M65	25	B71	1	Exists

3. Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M65	25	Oround	Does not exist

Is the inspection result normal?

## **DOOR SWITCH**

#### < COMPONENT DIAGNOSIS >

[WITHOUT I-KEY, WITH SUPER LOCK]

YES >> GO TO 3.

NO >> Repair or replace harness between BCM and door switch.

## 3.check door switch

Check door switch.

Refer to DLK-750, "REAR LH: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace malfunctioning door switch. Refer to <u>DLK-270</u>, "Exploded View".

## **REAR LH: Component Inspection**

INFOID:0000000001184421

## 1. CHECK DOOR SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect door switch connector.
- 3. Check door switch.

Terminal  Door switch		Door switch condition	Continuity	
		Door Switch Condition		
1	Ground part of door switch	Pressed	Exists	
	Ground part of door switch	Released	Does not exist	

#### Is the inspection result normal?

YES >> Door switch is OK.

NO >> Replace malfunctioning door switch. Refer to <a href="DLK-270">DLK-270</a>, "Exploded View".

REAR RH

**REAR RH: Description** 

INFOID:0000000001184422

Detects door open/close condition.

REAR RH: Component Function Check

INFOID:0000000001184423

## 1. CHECK FUNCTION

## (III) With CONSULT-III

Check door switches "DOOR SW-RR" in "Data Monitor" mode with CONSULT-III.

Monitor item	Condition		
DOOR SW-RR	OPEN	:ON	
	CLOSE	:OFF	

#### Is the inspection result normal?

YES >> Door switch is OK.

NO >> Refer to <u>DLK-750</u>, "<u>REAR RH</u>: <u>Diagnosis Procedure</u>".

## **REAR RH: Diagnosis Procedure**

INFOID:0000000001184424

## 1. CHECK DOOR SWITCH INPUT SIGNAL

- Turn ignition switch OFF.
- 2. Check signal between BCM harness connector and ground with oscilloscope.

	Terminals				
(+	(+)		Door condition	Voltage (V) (Approx.)	
BCM connector	Terminal	(–)		(Арргох.)	
			OPEN	0	
M65	29	Ground	CLOSE	(V) 15 10 5 0 10 ms	

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2.

# 2. CHECK DOOR SWITCH CIRCUIT

1. Disconnect BCM connector.

2. Check continuity between BCM harness connector and door switch harness connector.

BCM connector	Terminal	Door switch connector	Terminal	Continuity
M65	29	B53	1	Exists

3. Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M65	29	- Ground	Does not exist

## Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between BCM and door switch.

# 3. CHECK DOOR SWITCH

Check door switch.

Refer to DLK-751, "REAR RH: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace malfunctioning door switch. Refer to <u>DLK-873</u>, "Exploded View".

## REAR RH: Component Inspection

## 1. CHECK DOOR SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect door switch connector.
- 3. Check door switch.

Terminal		Door switch condition	Continuity	
D	oor switch	Door Switch Condition	Continuity	
1	Ground part of door switch	Pressed	Exists	
ı	Ground part of door switch	Released	Does not exist	

#### Is the inspection result normal?

YES >> Door switch is OK.

NO >> Replace malfunctioning door switch. Refer to <u>DLK-270</u>, "Exploded View".

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INFOID:0000000001184425

#### [WITHOUT I-KEY, WITH SUPER LOCK]

#### < COMPONENT DIAGNOSIS >

**BACK DOOR** 

BACK DOOR : Description

INFOID:0000000001184426

Detects back door open/close condition.

BACK DOOR: Component Function Check

INFOID:0000000001184427

## 1. CHECK FUNCTION

## (II) With CONSULT-III

Check "DOOR BK SW" in "Data Monitor" mode with CONSULT-III.

Monitor item	Condition		
DOOR BK SW	OPEN	: ON	
	CLOSE	: OFF	

#### Is the inspection result normal?

YES >> Back door lock assembly (door switch) is OK.

NO >> Refer to <u>DLK-752</u>, "BACK DOOR : <u>Diagnosis Procedure</u>".

## **BACK DOOR: Diagnosis Procedure**

INFOID:0000000001184428

## 1. CHECK BACK DOOR LOCK ASSEMBLY (DOOR SWITCH) INPUT SIGNAL

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

Terminals			5		
(-	(+)		Back door condition	Voltage (V) (Approx.)	
BCM connector	Terminal	(-)		(11 - 7	
M65	28	Ground	OPEN	0	
WOS	20	Ground	CLOSE	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

## 2.CHECK BACK DOOR LOCK ASSEMBLY (DOOR SWITCH) CIRCUIT

- Disconnect BCM connector.
- Check continuity between BCM harness connector and back door lock assembly (door switch) harness connector.

BCM connector	Terminal	Back door lock assembly (door switch) connector	Terminal	Continuity
M65	28	D152	4	Exists

3. Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M65	28	Glound	Does not exist

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between BCM and back door lock assembly (door switch).

## 3.CHECK BACK DOOR LOCK ASSEMBLY GROUND CIRCUIT

Check continuity between back door lock assembly harness connector and ground.

#### [WITHOUT I-KEY, WITH SUPER LOCK]

Back door lock assembly (door switch) connector	Terminal	Ground	Continuity
D152	3		Exists

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace back door lock assembly ground circuit.

## 4. CHECK BCM OUTPUT SIGNAL

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

Terminals				
(+)		(-)	Voltage (V) (Approx.)	
BCM connector	Terminal	()	(11 - 7	
M65	28	Ground	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace BCM. Refer to BCS-65, "Exploded View".

## 5. CHECK BACK DOOR LOCK ASSEMBLY (DOOR SWITCH)

Check back door lock assembly (door switch).

Refer to <u>DLK-753</u>, "BACK DOOR: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace back door lock assembly (door switch). Refer to <u>DLK-266, "DOOR LOCK : Removal and Installation".</u>

## **BACK DOOR: Component Inspection**

INFOID:0000000001184429

## 1. CHECK BACK DOOR LOCK ASSEMBLY (DOOR SWITCH)

- 1. Turn ignition switch OFF.
- 2. Disconnect back door lock assembly (door switch) connector.
- 3. Check back door lock assembly (door switch).

Term	ninal	Trunk condition	Continuity	
Back door lock asse	embly (door switch)	TUIN CONDITION		
4	2	OPEN	Exists	
4	3	CLOSE	Does not exist	

#### Is the inspection result normal?

YES >> Back door lock assembly (door switch) is OK.

NO >> Replace back door lock assembly (door switch). Refer to <a href="DLK-869">DLK-869</a>, "DOOR LOCK: Removal and Installation".

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## **KEY SWITCH**

Description INFOID:000000001184430

Key switch detects that ignition key is inserted into the key cylinder, and then transmits the signal to BCM.

## Component Function Check

#### INFOID:0000000001184431

## 1. CHECK KEY SWITCH INPUT SIGNAL

Check key switch ("KEY ON SW") in "Data Monitor" mode with CONSULT-III.

Monitor item	Condition		
KEY ON SW	Insert mechanical key into key cylinder	: ON	
	Remove mechanical key from key cylinder	: OFF	

#### Is the inspection result normal?

YES >> Key switch is OK.

NO >> Refer to <u>DLK-754</u>, "<u>Diagnosis Procedure</u>".

## Diagnosis Procedure

INFOID:0000000001184432

## 1. CHECK KEY SWITCH INPUT SIGNAL

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

	Terminals			V-16 0.0	
(+)		(_)	Condition	Voltage (V) (Approx.)	
BCM connector	Terminal	(-)		(* (ÞÞ. 674)	
M65	36	Ground	Insert ignition key into key cyl- inder	Battery voltage	
10103	30	Ground	Remove ignition key from key cylinder	0	

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2.

# 2.CHECK KEY SWITCH POWER SUPPLY CIRCUIT

- Remove ignition key from key cylinder.
- 2. Disconnect key switch connector.
- 3. Check voltage between key switch harness connector and ground.

	V 16 0.0			
(+)		(-)	Voltage (V) (Approx.)	
Key switch connector	Terminal	_ (-)	( 'FF'')	
M25	2	Ground	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3.check key switch signal circuit

1. Check continuity between BCM harness connector and key switch harness connector.

## **KEY SWITCH**

## < COMPONENT DIAGNOSIS >

## [WITHOUT I-KEY, WITH SUPER LOCK]

BCM connector	Terminal	Key switch connector	Terminal	Continuity
M65	36	M25	1	Existed

2. Check continuity between key switch harness connector and ground.

Key switch connector	Terminal	Ground	Continuity
M25	1	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4. CHECK KEY SWITCH

Check key switch.

Refer to <u>DLK-755</u>, "Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace key switch.

Component Inspection

INFOID:0000000001184433

COMPONENT INSPECTION

1. CHECK KEY SWITCH

Check continuity between key switch terminals.

Terminal		Condition	Continuity	
key switch	connector	Condition	Continuity	
1	2	Insert ignition key into key cylinder	Existed	
	2	Remove ignition key from key cylinder	Not existed	

Is the inspection result normal?

YES >> Key switch is OK.

NO >> Replace key switch.

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#### [WITHOUT I-KEY, WITH SUPER LOCK]

#### < COMPONENT DIAGNOSIS >

**DRIVER SIDE** 

**DRIVER SIDE: Description** 

DOOR LOCK ACTUATOR

INFOID:0000000001184434

Locks/unlocks the door with the signal from BCM.

DRIVER SIDE: Component Function Check

INFOID:0000000001184435

## 1. CHECK FUNCTION

### (P)With CONSULT-III

Check "DOOR LOCK" in "Active Test" mode with CONSULT-III.

Test item		Condition
	ALL LOCK	The all door lock actuator are locked.
DOOR LOCK	ALL UNLOCK	The all door lock actuator are unlocked.
_	DR UNLOCK	The door lock actuator (driver side) is unlocked.

#### Is the inspection result normal?

YES >> Door lock actuator is OK.

NO >> Refer to <u>DLK-756</u>, "<u>DRIVER SIDE</u>: <u>Diagnosis Procedure</u>".

## DRIVER SIDE: Diagnosis Procedure

INFOID:0000000001184436

## 1. CHECK BCM OUTPUT SIGNAL

Check voltage between BCM harness connector and ground.

Terminals				
(+)		( )	Condition of door lock and unlock switch	Voltage (V) (Approx.)
BCM connector	Terminal	(-)		(11 - /
M67	56	Ground	Lock	$0 \rightarrow Battery \ voltage \rightarrow 0$
IVIO /	60	Giouna	Unlock	$0 \rightarrow \text{Battery voltage} \rightarrow 0$

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

# 2. CHECK DOOR LOCK ACTUATOR CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM and front door lock actuator (driver side) connector.
- Check continuity between BCM harness connector and front door lock actuator (driver side) harness connector.

BCM connector	Terminal	Door lock actuator connector	Terminal	Continuity
M67	56	D9	3	Exists
M67	60	D9	2	LAISIS

4. Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M67	56		Does not exist
	60		

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

### DOOR LOCK ACTUATOR

#### < COMPONENT DIAGNOSIS >

#### [WITHOUT I-KEY, WITH SUPER LOCK]

NO >> Repair or replace harness.

## 3.CHECK DOOR LOCK ACTUATOR

Check door lock actuator.

Refer to DLK-757, "DRIVER SIDE: Component Inspection".

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace door lock actuator. Refer to <u>DLK-254</u>, "<u>DOOR LOCK</u>: Removal and Installation".

### DRIVER SIDE : Component Inspection

#### INFOID:0000000001184437

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## 1. CHECK FRONT DOOR LOCK ACTUATOR (DRIVER SIDE)

Check the actuator operation by connecting the battery voltage to front door lock actuator (driver side).

Front door lock actuator (driver side)	Terminal		Door lock actuator condition
Tronk door lock actuator (unver side)	(+)	(-)	Door lock actuator container
	3	2	LOCK
Da	2	3	UNLOCK

#### Is the inspection result normal?

YES >> Front door lock actuator (driver side) is OK.

NO >> Replace front door lock actuator (driver side). Refer to <u>DLK-254, "DOOR LOCK : Removal and Installation"</u>.

## DRIVER SIDE: Special Repair Requirement

INFOID:0000000001184438

Refer to PWC-4, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement".

#### PASSENGER SIDE

PASSENGER SIDE : Description

INFOID:0000000001184439

Locks/unlocks the door with the signal from BCM.

#### PASSENGER SIDE: Component Function Check

INFOID:0000000001184440

INFOID:0000000001184441

## 1. CHECK FUNCTION

#### (P)With CONSULT-III

Check "DOOR LOCK" in "Active Test" mode with CONSULT-III.

Te	est item	Condition
	:ALL LOCK	The all door lock actuator are locked
DOOR LOCK	:ALL UNLOCK	The all door lock actuator are unlocked
	:OTHER UNLOCK	The door lock actuator (front passenger side, rear LH and rear RH) are unlocked

#### Is the inspection result normal?

YES >> Door lock actuator is OK.

NO >> Refer to <u>DLK-757</u>, "PASSENGER SIDE : <u>Diagnosis Procedure"</u>.

### PASSENGER SIDE : Diagnosis Procedure

## 1. CHECK BCM OUTPUT SIGNAL

Check voltage between BCM harness connector and ground.

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#### < COMPONENT DIAGNOSIS >

Terminals				
(+)		(-)	Condition of door lock and unlock switch	Voltage (V) (Approx.)
BCM connector	Terminal	(-)		(11 - 7
M67	56	Ground	Lock	$0 \rightarrow Battery \ voltage \rightarrow 0$
IVIO7	54	Ground	Unlock	$0 \rightarrow Battery\ voltage \rightarrow 0$

#### Is the inspection result normal?

YES >> GO TO 3. NO >> GO TO 2.

# 2.CHECK DOOR LOCK ACTUATOR CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM and front door lock actuator (passenger side) connector.
- Check continuity between BCM harness connector and front door lock actuator (passenger side) harness connector.

BCM connector	Terminal	Door lock actuator connector	Terminal	Continuity
M67	56	D48	3	Exists
WO	54		2	EXISIS

4. Check continuity between BCM harness connector and ground.

BCM connector	Terminal		Continuity
M67	56	Ground	Does not exist
	54		Does not exist

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace harness.

## 3. CHECK DOOR LOCK ACTUATOR

Check door lock actuator.

Refer to DLK-758, "PASSENGER SIDE: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace door lock actuator. Refer to <u>DLK-254, "DOOR LOCK : Removal and Installation"</u>.

## PASSENGER SIDE : Component Inspection

INFOID:0000000001184442

## 1. CHECK FRONT DOOR LOCK ACTUATOR (PASSENGER SIDE)

Check the actuator operation by connecting the battery voltage directly to front door lock actuator (passenger side).

Front door lock actuator	Terminal		Door lock actuator condition
(passenger side) connector	(+)	(-)	Door lock actuator condition
D48	3	2	LOCK
D46	2	3	UNLOCK

#### Is the inspection result normal?

YES >> Front door lock actuator (passenger side) is OK.

NO >> Replace front door lock actuator (passenger side). Refer to <u>DLK-758, "PASSENGER SIDE : Component Inspection"</u>.

REAR LH

#### DOOR LOCK ACTUATOR

< COMPONENT DIAGNOSIS >

### [WITHOUT I-KEY, WITH SUPER LOCK]

REAR LH : Description

INFOID:0000000001184443

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Locks/unlocks the door with the signal from BCM.

REAR LH: Component Function Check

INFOID:0000000001184444

## 1. CHECK FUNCTION

#### (P)With CONSULT-III

Check "DOOR LOCK" in "Active Test" mode with CONSULT-III.

Te	est item	Condition
	:ALL LOCK	The all door lock actuator are locked
DOOR LOCK	:ALL UNLOCK	The all door lock actuator are unlocked
	:OTHER UNLOCK	The door lock actuator (front passenger side, rear LH and rear RH) are unlocked

#### Is the inspection result normal?

YES >> Door lock actuator is OK.

NO >> Refer to <u>DLK-759</u>, "REAR LH: <u>Diagnosis Procedure"</u>.

## **REAR LH: Diagnosis Procedure**

#### INFOID:0000000001184445

### 1. CHECK BCM OUTPUT SIGNAL

Check voltage between BCM harness connector and ground.

Terminals				
(+)	(+)		Condition of door lock and unlock switch	Voltage (V) (Approx.)
BCM connector	Terminal	(-)		( + )
M67	56	Ground	Lock	0  o Battery voltage  o 0
IVIO /	54	Ground	Unlock	0  o Battery voltage  o 0

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

## 2.CHECK DOOR LOCK ACTUATOR CIRCUIT

Turn ignition switch OFF.

Disconnect BCM and rear door lock actuator (LH) connector.

3. Check continuity between BCM harness connector and rear door lock actuator (LH) harness connector.

BCM connector	Terminal	Door lock actuator connector	Terminal	Continuity
M67	56	D85	3	Exists
IVIO7	54	D03	2	LAISIS

Check continuity between BCM harness connector and ground.

BCM connector	Terminal		Continuity
M67	56	Ground	Does not exist
	54		Does not exist

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace harness.

## 3.CHECK DOOR LOCK ACTUATOR

Check door lock actuator.

Refer to <u>DLK-760</u>, "REAR LH: Component Inspection".

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**DLK-759** 

#### < COMPONENT DIAGNOSIS >

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace door lock actuator. Refer to <u>DLK-863</u>, "<u>DOOR LOCK</u>: Removal and Installation".

## **REAR LH: Component Inspection**

INFOID:0000000001184446

## 1. CHECK REAR DOOR LOCK ACTUATOR (LH)

Check the actuator operation by connecting the battery voltage directly to rear door lock actuator (LH).

Rear door lock actuator (LH)	Terminal		Door lock actuator condition
Real door lock actuator (Err)	(+)	(-)	Door lock actuator condition
	3	2	LOCK
D63	2	3	UNLOCK

#### Is the inspection result normal?

YES >> Rear door lock actuator (LH) is OK.

NO >> Replace rear door lock actuator (LH). Refer to <u>DLK-260, "DOOR LOCK: Removal and Installation".</u>

### **REAR RH**

**REAR RH: Description** 

INFOID:0000000001184447

INFOID:0000000001184448

Locks/unlocks the door with the signal from BCM.

REAR RH: Component Function Check

## 1. CHECK FUNCTION

### (E) With CONSULT-III

Check "DOOR LOCK" in "Active Test" mode with CONSULT-III.

Te	est item	Condition
	:ALL LOCK	The all door lock actuator are locked
DOOR LOCK	:ALL UNLOCK	The all door lock actuator are unlocked
	:OTHER UNLOCK	The door lock actuator (front passenger side, rear LH and rear RH) are unlocked

#### Is the inspection result normal?

YES >> Door lock actuator is OK.

NO >> Refer to <u>DLK-760</u>, "<u>REAR RH</u>: <u>Diagnosis Procedure</u>".

### REAR RH: Diagnosis Procedure

INFOID:0000000001184449

## 1. CHECK BCM OUTPUT SIGNAL

Check voltage between BCM harness connector and ground.

Terminals			0 11:		
(+)		(-)	Condition of door lock and unlock switch	Voltage (V) (Approx.)	
BCM connector	Terminal	(-)		, , ,	
M67	56	Ground	Lock	$0 \to \text{Battery voltage} \to 0$	
IVIO7	54	Giodila	Unlock	0  o Battery voltage  o 0	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

## 2.CHECK DOOR LOCK ACTUATOR CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect BCM and rear door lock actuator (RH) connector.

### DOOR LOCK ACTUATOR

#### < COMPONENT DIAGNOSIS >

### [WITHOUT I-KEY, WITH SUPER LOCK]

3. Check continuity between BCM harness connector and rear door lock actuator (RH) harness connector.

BCM connector	Terminal	Door lock actuator connector	Terminal	Continuity
M67	56	D105	3	Exists
IVIO7	54	D 103	2	LAISIS

4. Check continuity between BCM harness connector and ground.

BCM connector	Terminal		Continuity	
M67	56	Ground	Does not exist	
IVIO /	54		Does not exist	

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace harness.

# 3. CHECK DOOR LOCK ACTUATOR

Check door lock actuator.

Refer to DLK-761, "REAR RH: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace door lock actuator. Refer to <u>DLK-254, "DOOR LOCK : Removal and Installation"</u>.

## **REAR RH: Component Inspection**

## 1. CHECK REAR DOOR LOCK ACTUATOR (RH)

Check the actuator operation by connecting the battery voltage directly to rear door lock actuator (RH).

Rear door lock actuator (RH)	Tern	ninal	Door lock actuator condition	
iteal door lock actuator (KTI)	(+)	(-)		
D105	3	2	LOCK	
D103	2	3	UNLOCK	

#### Is the inspection result normal?

YES >> Rear door lock actuator (RH) is OK.

NO >> Replace rear door lock actuator (RH). Refer to <u>DLK-254, "DOOR LOCK: Removal and Installation".</u>

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#### [WITHOUT I-KEY, WITH SUPER LOCK]

#### < COMPONENT DIAGNOSIS >

SUPER LOCK ACTUATOR

**DRIVER SIDE** 

DRIVER SIDE : Description

INFOID:0000000001184451

The super lock system is controlled by BCM.

DRIVER SIDE: Component Function Check

INFOID:0000000001184452

## 1. CHECK FUNCTION

#### (F) With CONSULT-III

Check "SUPER LOCK" in Active test mode with CONSULT-III.

Test item		Condition
SUPER LOCK	:LOCK (SET)	The super lock actuator is locked (SET)
JUFER LOUR	:UNLOCK (RELEASE)	The super lock actuator is unlocked (RELEASE)

#### Is the inspection result normal?

YES >> Door lock actuator (super lock actuator) is OK.

NO >> Refer to <u>DLK-365</u>, "<u>DRIVER SIDE</u>: <u>Diagnosis Procedure</u>".

## DRIVER SIDE : Diagnosis Procedure

INFOID:0000000001184453

### CHECK BCM OUTPUT SIGNAL

Check voltage between BCM harness connector and ground.

Terminals				V Iv
(+)		( )	Condition	Voltage (V) (Approx.)
BCM connector	Terminal	(-)		(
M67	60	Ground	UNLOCK (RELEASE)	0 → Battery voltage → 0
IVIO7	59	Giodila	LOCK (SET)	0 → Dattery Voltage → 0

#### Is the inspection result normal?

YES >> GO TO 3. NO >> GO TO 2.

## 2.CHECK SUPER LOCK ACTUATOR CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM and front door lock actuator (driver side) connector.
- Check continuity between BCM harness connector and front door lock actuator (driver side) harness connector.

BCM connector	Terminal	Door lock actuator connector	Terminal	Continuity	
M67	59	D29	1	Exists	
IVIO7	60	D29	2	EXISIS	

4. Check continuity between BCM harness connector and ground.

BCM connector	Terminal		Continuity	
M67	59	Ground	Does not exist	
IVIO /	60		Does not exist	

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace harness.

#### < COMPONENT DIAGNOSIS >

[WITHOUT I-KEY, WITH SUPER LOCK]

# 3.CHECK SUPER LOCK ACTUATOR

Check super lock actuator.

Refer to DLK-366, "DRIVER SIDE: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace door lock actuator. Refer to <u>DLK-254, "DOOR LOCK: Removal and Installation"</u>.

## **DRIVER SIDE: Component Inspection**

## 1. CHECK SUPER LOCK ACTUATOR

Check the actuator operation by connecting the battery voltage to super lock actuator.

Door lock actuator	Terr	minal	Actuator condition	
(super lock actuator) connector	(+)	(-)		
D29	1	2	LOCK (SET)	
D29	2	1	UNLOCK (RELEASE)	

#### Is the inspection result normal?

YES >> Door lock actuator (super lock actuator) is OK.

NO >> Replace door lock actuator (super lock actuator). Refer to <u>DLK-254, "DOOR LOCK: Removal and</u> Installation".

### DRIVER SIDE: Special Repair Requirement

Perform initialization procedure. Refer to <u>PWC-4</u>, "<u>ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL</u>: <u>Special Repair Requirement"</u>.

PASSENGER SIDE

PASSENGER SIDE: Description

The super lock system is controlled by BCM.

PASSENGER SIDE: Component Function Check

#### INFOID:0000000001184457

INFOID:0000000001184458

INFOID:0000000001184456

INFOID:0000000001184455

## 1. CHECK FUNCTION

#### (P)With CONSULT-III

Check "SUPER LOCK" in Active test mode with CONSULT-III.

Test in	tem	Condition	
SUPER LOCK	:LOCK (SET)	The super lock actuator is locked (SET)	
301 ER EOOR	:UNLOCK (RELEASE)	The super lock actuator is unlocked (RELEASE)	

#### Is the inspection result normal?

YES >> Door lock actuator (super lock actuator) is OK.

NO >> Refer to DLK-763, "PASSENGER SIDE : Diagnosis Procedure".

## PASSENGER SIDE: Diagnosis Procedure

#### 1. CHECK BCM OUTPUT SIGNAL

Check voltage between BCM harness connector and ground.

Terminals					
(+)		( )	Condition	Voltage (V) (Approx.)	
BCM connector	Terminal	(–)		( )	
M67	54	Ground	UNLOCK (RELEASE)	0 → Battery voltage → 0	
WO7	59		LOCK (SET)	0 → Battery Voltage → 0	

**DLK-763** 

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INFOID:0000000001184454

#### [WITHOUT I-KEY, WITH SUPER LOCK]

### < COMPONENT DIAGNOSIS > Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

# 2.check super lock actuator circuit

- Turn ignition switch OFF.
- 2. Disconnect BCM and front door lock actuator (passenger side) connector.
- Check continuity between BCM harness connector and front door lock actuator (passenger side) harness connector.

BCM connector	Terminal	Door lock actuator connector	Terminal	Continuity
M67	59	D68	1	Exists
IVIO7	54	D00	2	LAISIS

4. Check continuity between BCM harness connector and ground.

BCM connector	Terminal		Continuity
M67	59	Ground	Does not exist
IVIO7	54		

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39. "Intermittent Incident".

NO >> GO TO 3.

# 3.CHECK SUPER LOCK ACTUATOR

Check super lock actuator.

Refer to <u>DLK-764</u>, "PASSENGER SIDE: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace door lock actuator. Refer to <u>DLK-254, "DOOR LOCK: Removal and Installation"</u>.

## PASSENGER SIDE : Component Inspection

# 1. CHECK SUPER LOCK ACTUATOR

Check the actuator operation by connecting the battery voltage to super lock actuator.

Door lock actuator (super lock actuator) connector	Terr	minal	Actuator condition
bool lock actuator (super lock actuator) confidence	(+)	(-)	Actuator condition
D68	1	2	LOCK (SET)
200	2	1	UNLOCK (RELEASE)

#### Is the inspection result normal?

YES >> Door lock actuator (super lock actuator) is OK.

NO >> Replace door lock actuator (super lock actuator). Refer to <u>DLK-254, "DOOR LOCK: Removal and Installation"</u>.

#### REAR LH

**REAR LH: Description** 

INFOID:0000000001184460

INFOID:0000000001184461

INFOID:0000000001184459

The super lock system is controlled by BCM.

#### REAR LH: Component Function Check

## 1. CHECK FUNCTION

#### (P)With CONSULT-III

Check "SUPER LOCK" in Active test mode with CONSULT-III.

#### < COMPONENT DIAGNOSIS >

#### [WITHOUT I-KEY, WITH SUPER LOCK]

Test it	em	Condition
SUPER LOCK	:LOCK (SET)	The super lock actuator is locked (SET)
301 ER LOOK	:UNLOCK (RELEASE)	The super lock actuator is unlocked (RELEASE)

#### Is the inspection result normal?

YES >> Door lock actuator (super lock actuator) is OK.

NO >> Refer to <u>DLK-765</u>, "REAR LH: <u>Diagnosis Procedure"</u>.

### REAR LH: Diagnosis Procedure

#### INFOID:0000000001184462

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### 1. CHECK BCM OUTPUT SIGNAL

Check voltage between BCM harness connector and ground.

_	Terminals				
_	(+)		( )	Condition	Voltage (V) (Approx.)
_	BCM connector	Terminal	(-)		(11.509)
_	M67	54	Ground	UNLOCK (RELEASE)	0 → Battery voltage → 0
	IVIO 7	59	Giodila	LOCK (SET)	0 → Battery Voltage → 0

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

## 2.CHECK SUPER LOCK ACTUATOR CIRCUIT

Turn ignition switch OFF.

- 2. Disconnect BCM and rear door lock actuator (LH) connector.
- Check continuity between BCM harness connector and rear door lock actuator (LH) harness connector.

BCM connector	Terminal	Door lock actuator connector	Terminal	Continuity
M67	59	D115	1	Exists
WO	54	D113	2	LAISIS

4. Check continuity between BCM harness connector and ground.

BCM connector	Terminal		Continuity	
M67	59	Ground	Does not exist	
	54		Does not exist	

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 3.

#### 3.CHECK SUPER LOCK ACTUATOR

Check super lock actuator.

Refer to DLK-765, "REAR LH: Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace door lock actuator. Refer to <u>DLK-254, "DOOR LOCK: Removal and Installation"</u>.

## **REAR LH: Component Inspection**

## 1. CHECK SUPER LOCK ACTUATOR

Check the actuator operation by connecting the battery voltage to super lock actuator.

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INFOID:0000000001184463

#### < COMPONENT DIAGNOSIS >

Door lock actuator (super lock actuator) connector	Terr	minal	Actuator condition
Door lock actuator (super lock actuator) connector	(+)	(-)	Actuator condition
D115	1	2	LOCK (SET)
טווט	2	1	UNLOCK (RELEASE)

#### Is the inspection result normal?

YES >> Door lock actuator (super lock actuator) is OK.

NO >> Replace door lock actuator (super lock actuator). Refer to <a href="DLK-254">DLK-254</a>, "DOOR LOCK: Removal and Installation".

#### REAR RH

**REAR RH**: Description

INFOID:0000000001184464

The super lock system is controlled by BCM.

REAR RH: Component Function Check

INFOID:0000000001184465

### 1. CHECK FUNCTION

#### (II) With CONSULT-III

Check "SUPER LOCK" in Active test mode with CONSULT-III.

Test item		Condition	
SUPER LOCK	:LOCK (SET)	The super lock actuator is locked (SET)	
30FER EOCK	:UNLOCK (RELEASE)	The super lock actuator is unlocked (RELEASE)	

#### Is the inspection result normal?

YES >> Door lock actuator (super lock actuator) is OK.

NO >> Refer to <u>DLK-766</u>, "REAR RH: <u>Diagnosis Procedure"</u>.

## REAR RH: Diagnosis Procedure

INFOID:0000000001184466

### 1. CHECK BCM OUTPUT SIGNAL

Check voltage between BCM harness connector and ground.

	Terminals			
(+)		(-)	Condition	Voltage (V) (Approx.)
BCM connector	Terminal	(-)		(11 - /
M67	54	Ground	UNLOCK (RELEASE)	$0 \rightarrow Battery \ voltage \rightarrow 0$
IVIO7	59	Giouna	LOCK (SET)	0 → battery voltage → 0

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

## 2.CHECK SUPER LOCK ACTUATOR CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect BCM and rear door lock actuator (RH) connector.
- 3. Check continuity between BCM harness connector and rear door lock actuator (RH) harness connector.

BCM connector	Terminal	Door lock actuator connector	Terminal	Continuity
M67	M67		1	Exists
IVIO7	54	D95	2	LAISIS

4. Check continuity between BCM harness connector and ground.

#### < COMPONENT DIAGNOSIS >

#### [WITHOUT I-KEY, WITH SUPER LOCK]

BCM connector	Terminal		Continuity
M67	59	Ground	Does not exist
	54		Does not exist

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Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 3.

3. CHECK SUPER LOCK ACTUATOR

Check super lock actuator.

Refer to DLK-767, "REAR RH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace door lock actuator. Refer to <u>DLK-254, "DOOR LOCK: Removal and Installation"</u>.

**REAR RH: Component Inspection** 

INFOID:0000000001184467

1. CHECK SUPER LOCK ACTUATOR

Check the actuator operate by connecting the battery voltage to super lock actuator.

#### Is the inspection result normal?

NO

YES >> Door lock actuator (super lock actuator) is OK.

>> Replace door lock actuator (super lock actuator). Refer to <u>DLK-254, "DOOR LOCK: Removal and Installation".</u>

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### **BACK DOOR OPENER ACTUATOR**

< COMPONENT DIAGNOSIS >

[WITHOUT I-KEY, WITH SUPER LOCK]

### **BACK DOOR OPENER ACTUATOR**

Description INFOID:000000001184468

Opens the back door with the signal from BCM.

## Component Function Check

INFOID:0000000001184469

## 1. CHECK FUNCTION

#### (P)With CONSULT-III

Check "TRUNK/GLASS HATCH" in "Active Test" mode with CONSULT-III.

Test item		Condition	
TRUNK/GLASS HATCH	:OPEN	Back door lock opener actuator operation	

#### Is the inspection result normal?

YES >> Door lock actuator is OK.

NO >> Refer to <u>DLK-768</u>, "<u>Diagnosis Procedure</u>".

## Diagnosis Procedure

INFOID:0000000001184470

## 1. CHECK BCM OUTPUT SIGNAL

Check voltage between BCM harness connector and ground.

Terminals			0 100	M. Itaari, (A.A.	
(+)	(+)		Condition of back door opener switch	Voltage (V) (Approx.)	
BCM connector	Terminal	(-)	,	, , ,	
M66	45	Ground	Pressed	$0 \rightarrow \text{Battery voltage} \rightarrow 0$	

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 2.

# 2.CHECK BACK DOOR LOCK ASSEMBLY CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect BCM and back door lock assembly connector.
- 3. Check continuity between BCM harness connector and back door lock assembly harness connector.

BCM connector	Terminal	Back door lock assembly connector	Terminal	Continuity
M66	45	D152	2	Exists

4. Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M66	45	Ground	Does not exist

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

## 3.CHECK BACK DOOR LOCK ASSEMBLY GROUND CIRCUIT

Check continuity between back door lock assembly harness connector and ground.

Back door lock assembly connector	Terminal	Ground	Continuity
D152	1		Exists

#### Is the inspection result normal?

### **BACK DOOR OPENER ACTUATOR**

#### < COMPONENT DIAGNOSIS >

[WITHOUT I-KEY, WITH SUPER LOCK]

YES >> GO TO 4.

NO >> Repair or replace harness.

## 4. CHECK BACK DOOR LOCK ASSEMBLY

Check the actuator operation by connecting battery voltage to back door lock assembly. Refer to <a href="https://doi.org/lock.org/least-100/back-10

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace back door lock assembly. Refer to <u>DLK-266, "DOOR LOCK: Removal and Installation"</u>.

## Component Inspection

INFOID:0000000001184471

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# 1. CHECK BACK DOOR LOCK ASSEMBLY

Check the actuator operation by connecting battery voltage to back door lock assembly.

Back door lock assembly connector	Terr	Back door actuator condition	
D152	(+)	(-)	OPEN
	2	1	OI LIV

#### Is the inspection result normal?

YES >> Back door lock assembly (back door lock actuator) is OK.

NO >> Replace back door lock assembly (back door lock actuator). Refer to <u>DLK-266, "DOOR LOCK : Removal and Installation"</u>.

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### **BACK DOOR OPENER SWITCH**

[WITHOUT I-KEY, WITH SUPER LOCK]

### < COMPONENT DIAGNOSIS >

## **BACK DOOR OPENER SWITCH**

Description INFOID:000000001184472

Sends the back door opening signal to BCM.

## Component Function Check

INFOID:0000000001184473

## 1. CHECK FUNCTION

#### (P)With CONSULT-III

Check "TRNK OPNR SW" in "Data Monitor" mode with CONSULT-III.

Monitor item	Condition		
TRNK OPNR SW	Back door opener switch is pressed	:ON	
	Back door opener switch is released	:OFF	

#### Is the inspection result normal?

YES >> Back door opener switch is OK.

NO >> Refer to <u>DLK-770</u>, "<u>Diagnosis Procedure</u>".

## Diagnosis Procedure

INFOID:0000000001184474

### 1. CHECK BCM INPUT SIGNAL

Check voltage between BCM harness connector and ground.

Terminals			O a different land	M. II	
(+)		Condition of back d		Voltage (V) (Approx.)	
BCM connector	Terminal	(-)	·	, ,	
M65	12 Ground	Pressed	0		
COIVI	12	12 Ground	Released	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 2.

## 2.CHECK BACK DOOR OPENER SWITCH CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM connector and back door opener switch connector.
- 3. Check continuity between BCM harness connector and back door opener switch harness connector.

BCM connector	Terminal	Back door opener switch connector	Terminal	Continuity
M65	12	D186	1	Exists

Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M65	12	Oround	Does not exist

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

### 3.CHECK BCM OUTPUT SIGNAL

Check voltage between BCM harness connector and ground.

### **BACK DOOR OPENER SWITCH**

#### < COMPONENT DIAGNOSIS >

#### [WITHOUT I-KEY, WITH SUPER LOCK]

	Terminals		
(+)		( )	Voltage (V) (Approx.)
BCM connector	Terminal	(-)	( 'FF'')
M65	12	Ground	Battery voltage

YES >> GO TO 4.

>> Replace BCM. Refer to BCS-65, "Exploded View". NO

4. CHECK BACK DOOR OPENER SWITCH GROUND CIRCUIT

Check continuity between back door opener switch harness connector and ground.

Back door opener switch connector	· lerminal		Continuity
D186	2		Exists

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

5. CHECK BACK DOOR OPENER SWITCH

Check back door opener switch.

Refer to <u>DLK-771</u>, "Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Replace back door opener switch. Refer to <u>DLK-277, "Exploded View"</u>.

Component Inspection

1. CHECK BACK DOOR OPENER SWITCH

Check back door opener switch.

Back door opener switch connector	Terminal		Back door opener switch condition	Continuity
D186	1	2	Pressed	Exists
D100	1 2	Released	Does not exist	

#### Is the inspection result normal?

YES >> Back door opener switch is OK.

>> Replace back door opener switch. Refer to <u>DLK-277, "Exploded View"</u>. NO

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INFOID:0000000001184475

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## **BUZZER (COMBINATION METER)**

### < COMPONENT DIAGNOSIS >

[WITHOUT I-KEY, WITH SUPER LOCK]

## **BUZZER (COMBINATION METER)**

Description INFOID:000000001184476

Performs operation method guide and warning with buzzer.

## Component Function Check

INFOID:0000000001184477

## 1. CHECK FUNCTION

#### (P)With CONSULT-III

- 1. Check the operation with "BUZZER" in Active Test with CONSULT-III.
- 2. Touch "KEY REMINDER WARN" on screen.

#### Is the inspection result normal?

YES >> Warning buzzer into combination meter is OK.

NO >> Refer to <u>DLK-772</u>, "<u>Diagnosis Procedure</u>".

## Diagnosis Procedure

INFOID:0000000001184478

## 1. CHECK METER BUZZER CIRCUIT

Refer to WCS-21, "Component Function Check".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace meter buzzer circuit.

### **HAZARD WARNING LAMPS**

< COMPONENT DIAGNOSIS >

HAZARD WARNING LAMPS		۸
Description	INFOID:0000000001184479	А
Perform answer-back for each operation with number of blinks.		В
Component Function Check	INFOID:0000000001184480	
1.check function		С
With CONSULT-III Check hazard warning lamp "FLASHER" in "Active Test" with CONSULT-III.      Is the inspection result normal?  YES >> Hazard warning lamp circuit is OK.  NO >> Refer to DLK-773, "Diagnosis Procedure".		D
Diagnosis Procedure	INFOID:0000000001184481	Е
1. CHECK HAZARD SWITCH CIRCUIT	ob.socoocco	F
Check hazard switch circuit.  Refer to EXL-75, "Component Function Check".  Is the inspection result normal?  YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".		G
NO >> Repair or replace hazard warning switch circuit.		Н
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### **VEHICLE SPEED SIGNAL CIRCUIT**

< COMPONENT DIAGNOSIS >

[WITHOUT I-KEY, WITH SUPER LOCK]

### VEHICLE SPEED SIGNAL CIRCUIT

Description INFOID:000000001184482

Display the vehicle speed signal received from combination meter by numerical value (km/h).

## Component Function Check

INFOID:0000000001184483

## 1. CHECK FUNCTION

Check the vehicle speed more than 25km/h (16MPH), all doors are automatically locked.

#### Is the inspection result normal?

YES >> Vehicle speed signal circuit is OK.

NO >> Refer to <u>DLK-775, "Diagnosis Procedure"</u>.

## Diagnosis Procedure

INFOID:0000000001184484

## 1. CHECK VEHICLE SPEED SIGNAL CIRCUIT

Check vehicle speed signal "VEHICLE SPEED" in "Data Monitor" with CONSULT-III. Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace hazard warning switch circuit.

### **KEYFOB BATTERY**

#### < COMPONENT DIAGNOSIS >

#### [WITHOUT I-KEY, WITH SUPER LOCK]

## **KEYFOB BATTERY**

Description INFOID:000000001184485

Remote door lock and unlock control entry function available when operating on button.

• Door lock and unlock

## Component Function Check

# 1. CHECK KEYFOB FUNCTION

Does door lock and unlock operate with operating keyfob switch?

Is the inspection result normal?

YES >> Keyfob is OK.

NO >> Refer to <u>DLK-775</u>, "<u>Diagnosis Procedure</u>".

## Diagnosis Procedure

## 1. CHECK KEYFOB BATTERY

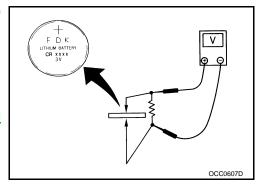
Check by connecting a resistance (approximately 300  $\Omega$ ) so that the current value becomes about 10 mA.

### Standard: Approx. 2.5 - 3.0 V

Is the measurement value within the specification?

YES >> Replace keyfob.

NO >> Replace keyfob battery. Refer to <u>DLK-875, "Exploded View"</u>.



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# **ECU DIAGNOSIS**

# BCM (BODY CONTROL MODULE)

Reference Value

### VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
ACC ON SW	Ignition switch OFF	Off
ACC CIV SVV	Ignition switch ACC or ON	On
AIR COND SW	A/C switch OFF	Off
AIR COND 5W	A/C switch ON	On
AUT LIGHT SYS	Outside of the room is bright	Off
AUT LIGHT 313	Outside of the room is dark	On
AUTO LIGHT SW	Lighting switch OFF	Off
AUTO LIGITI SW	Lighting switch AUTO	On
AUTO RELOCK	Auto lock function does not operate	Off
AUTO RELOCK	Auto lock function is operating	On
BACK DOOR SW	Back door closed	Off
BACK DOOK SW	Back door opened	On
BATTERY VOLT NOTE: Diesel engine models only	Ignition switch ON	Approximately the same as power supply voltage
BRAKE SW	Brake pedal is not depressed	Off
DIVARL OW	Brake pedal is depressed	On
CDL LOCK SW	Door lock/unlock switch does not operate	Off
CDL LOCK SW	Press door lock/unlock switch to the LOCK side	On
CDL UNLOCK SW	Door lock/unlock switch does not operate	Off
ODE UNLOCK SW	Press door lock/unlock switch to the UNLOCK side	On
DOOR SW-AS	Passenger door closed	Off
DOOK SW-AS	Passenger door opened	On
DOOR SW-DR	Driver door closed	Off
DOOK OW-DIK	Driver door opened	On
DOOR SW-RL	Rear LH door closed	Off
DOOK SW-INL	Rear LH door opened	On
DOOR SW-RR	Rear RH door closed	Off
DOOK OW THIN	Rear RH door opened	On

## < ECU DIAGNOSIS >

Monitor Item		Condition	Value/Status
		Fan switch ON (when engine coolant is cool)  NOTE: Depending on the ambient temperature, battery voltage, etc.	Off
ELEC PWR CUT NOTE:	Engine running	The current status maintained with the signal from ECM received.	FREEZ
Diesel engine models only	Linginic running	Fan switch OFF     Fan switch ON after engine warming UP     NOTE:     Depending on the engine coolant temperature, ambient temperature, battery voltage, etc.	INHBT
ENG COOLNT T  NOTE: Diesel engine models only	Engine running		Approximately the same as water temperature gauge reading
ENGINE RPM NOTE: Diesel engine models only	Engine running		Approximately the same as tachometer reading
ENGINE RUN	Engine stopped		Off
ENGINE RON	Engine running		On
ENGINE STATUS	Engine stopped		STOP
NOTE: Diesel engine models only	While the engine stalls		STALL
	Engine running		RUN
Offig	At engine cranking		CRA
FAN ON SIG	Fan switch OFF		Off
17414 014 010	Fan switch ON		On
FR FOG SW	Front fog lamp switch (	OFF	Off
1 K 1 00 0W	Front fog lamp switch (	NC	On
FR WASHER SW	Front washer switch Ol	FF	Off
THE WHOLLENGTH	Front washer switch Ol	N	On
FR WIPER LOW	Front wiper switch OFF	=	Off
	Front wiper switch LO		On
FR WIPER HI	Front wiper switch OFF	=	Off
	Front wiper switch HI		On
FR WIPER INT	Front wiper switch OFF		Off
	Front wiper switch INT		On
FR WIPER STOP		front wiper stop position	Off
	Front wiper stop position		On
GLS BREAK SEN	The vehicle without gla		On
	The vehicle with glass		Off
HAZARD SW	When hazard switch is	Off	
	When hazard switch is	pressed	On
HD LIGHT TIME		_	Displays a setting time of the follow me home function set by the work support

## < ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
HEAD LAMP SW 1	Lighting switch OFF	Off
TILAD LAWI OW I	Lighting switch 2ND	On
HEAD LAMP SW 2	Lighting switch OFF	Off
HEAD LAWF SW 2	Lighting switch 2ND	On
LI DEAM CVV	Lighting switch OFF	Off
HI BEAM SW	Lighting switch HI	On
HOOD SW	Close the hood NOTE: Vehicles without theft warning system are OFF-fixed	Off
	Open the hood	On
H/L WASH SW	NOTE: The item is indicated, but not monitored	Off
IGN ON SW	Ignition switch OFF or ACC	Off
IGN ON SW	Ignition switch ON	On
IONI CIM CAN	Ignition switch OFF or ACC	Off
IGN SW CAN	Ignition switch ON	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7
LKEVLOOK	LOCK button of Intelligent Key is not pressed	Off
I-KEY LOCK	LOCK button of Intelligent Key is pressed	On
1.14574.1811.0014	UNLOCK button of Intelligent Key is not pressed	Off
I-KEY UNLOCK	UNLOCK button of Intelligent Key is pressed	On
14574 014 0144	Mechanical key is removed from key cylinder	Off
KEY ON SW	Mechanical key is inserted to key cylinder	On
	LOCK button of key fob is not pressed	Off
KEYLESS LOCK	LOCK button of key fob is pressed	On
KEY LESS PANIC	NOTE: The item is indicated, but not monitored	Off
NEAL ESS TIMI OCK	UNLOCK button of key fob is not pressed	Off
KEYLESS UNLOCK	UNLOCK button of key fob is pressed	On
LIT OFN FAIL	Light & rain sensor is in normal condition	ОК
LIT-SEN FAIL	Light & rain sensor is with internal error	NOT OK
MEMORY	Key fob ID code is not registered in "Memory 1"	Off
MEMORY 1	Key fob ID code is registered in "Memory 1"	On
MEMORY	Key fob ID code is not registered in "Memory 2"	Off
MEMORY 2	Key fob ID code is registered in "Memory 2"	On
MEMORY	Key fob ID code is not registered in "Memory 3"	Off
MEMORY 3	Key fob ID code is registered in "Memory 3"	On
MEMORY 4	Key fob ID code is not registered in "Memory 4"	Off
MEMORY 4	Key fob ID code is registered in "Memory 4"	On
MEMORY 5	Key fob ID code is not registered in "Memory 5"	Off
MEMORY 5	Key fob ID code is registered in "Memory 5"	On
OIL PRESS SW	Ignition switch OFF or ACC     Engine running	Off
	Ignition switch ON	On
OUT SIDE TEMP NOTE: Diesel engine models	Ignition switch ON	Approximately the same as outside air temperature

## < ECU DIAGNOSIS >

## [WITHOUT I-KEY, WITH SUPER LOCK]

Monitor Item	Condition	Value/Status
DACCING CW	Other than lighting switch PASS	Off
PASSING SW	Lighting switch PASS	On
DEVEDOE OW CAN	Except selector lever R position	Off
REVERSE SW CAN	Selector lever R position	On
DUCULOW.	Return to ignition switch to LOCK position	Off
PUSH SW	Press ignition switch	On
DEAD DEE OW	Rear window defogger switch OFF	Off
REAR DEF SW	Rear window defogger switch ON	On
DD FOC CW	Rear fog lamp switch OFF	Off
RR FOG SW	Rear fog lamp switch ON	On
DD WACHED OW	Rear washer switch OFF	Off
RR WASHER SW	Rear washer switch ON	On
DD WIDED INT	Rear wiper switch OFF	Off
RR WIPER INT	Rear wiper switch INT	On
DD WIDED ON	Rear wiper switch OFF	Off
RR WIPER ON	Rear wiper switch ON	On
RR WIPER STOP	Rear wiper stop position	Off
RK WIPER STOP	Other than rear wiper stop position	On
	Ignition switch ON	NOMAL
SHOCK SENSOR	After the reception of air bag deployment signal from air bag diagnosis sensor unit	Off
	During the reception of air bag deployment signal from air bag diagnosis sensor unit	On
TAIL LAND CVA	Lighting switch OFF	Off
TAIL LAMP SW	Lighting switch 1ST	On
TONIC ODNID OW	When back door opener switch is not pressed	Off
TRNK OPNR SW	When back door opener switch is pressed	On
TUDNI CIONALI	Turn signal switch OFF	Off
TURN SIGNAL L	Turn signal switch LH	On
TUDNI SIONAL D	Turn signal switch OFF	Off
TURN SIGNAL R	Turn signal switch RH	On
LINII OOK CHOOK	Other than the following	Off
UNLOCK SHOCK	During the unlock operation interlocked with air bag	On
VEHICLE SPEED	While driving	Equivalent to speedometer reading

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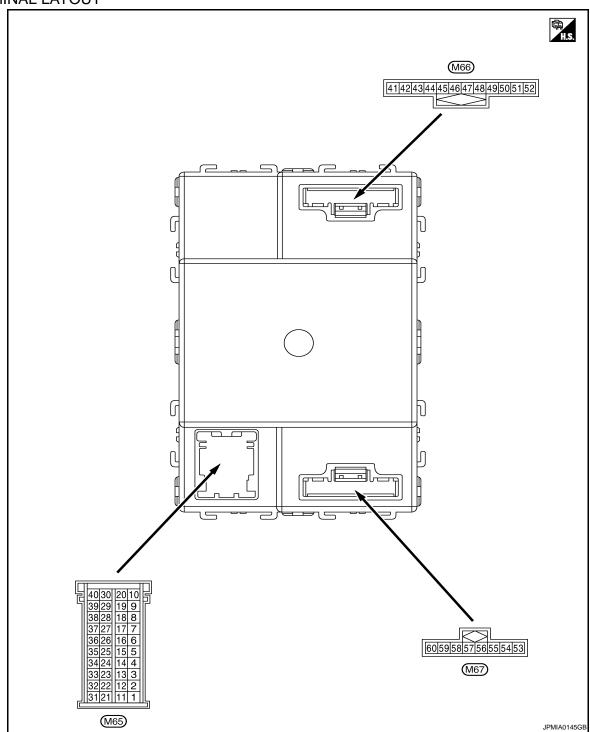
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**TERMINAL LAYOUT** 



#### PHYSICAL VALUES

#### **CAUTION:**

- Check combination switch system terminal waveform under the loaded condition with lighting switch, turn signal switch and wiper switch OFF is not to be fluctuated by being overloaded.
- Turn wiper intermittent dial position to 4 except when checking waveform or voltage of wiper intermittent dial position. Wiper intermittent dial position can be confirmed on CONSULT-III. Refer to BCS-27, "COMB SW: CONSULT-III Function (BCM COMB SW)".
- BCM reads the status of the combination switch at 10 ms internal normally. Refer to <a href="BCS-10">BCS-10</a>, "System Description".

	inal No.	Description				Value
+ (vvire	e color)	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF (Wiper intermittent dial 4)	0 V
					Front wiper switch HI (Wiper intermittent dial 4)	
1	Ground	Combination switch	Output	Combination	Rear wiper switch INT (Wiper intermittent dial 4)	(V) 15 10
(P) Ground OUTPUT	OUTPUT 1	Output	switch	Any of the condition below with all switch OFF	5 0	
				<ul><li>Wiper intermittent dial 1</li><li>Wiper intermittent dial 2</li><li>Wiper intermittent dial 3</li></ul>	JPMIA0160GB	
					<ul><li>Wiper intermittent dial 3</li><li>Wiper intermittent dial 6</li><li>Wiper intermittent dial 7</li></ul>	9.1 V
					All switch OFF	0 V
					Lighting switch 2ND	
				Combination	Lighting switch PASS	(V) 15
2	Ground	Combination switch	Output	switch	Front fog lamp switch ON	10
(Y)	Cibana	OUTPUT 4	Julput	(Wiper intermit- tent dial 4)		0
			,	Turn signal switch LH	→ ←2ms	
					JPMIA0163GB	
					All switch OFF	9.3 V
					Lighting switch AUTO	UV
					Rear fog lamp switch OFF	(V) (V)
3		Combination switch	_	Combination switch	Front wiper switch MIST	15
(LG)	Ground	OUTPUT 3	Output	(Wiper intermit-	Front wiper switch INT	5 0
				tent dial 4)		→—←2ms
					Front wiper switch LO	JPMIA0162GB
						9.3 V
					All switch OFF (Wiper intermittent dial 4)	0 V
					Front washer switch ON	
					(Wiper intermittent dial 4)	
					Rear wiper switch ON (Wiper intermittent dial 4)	(V)
4 (R)	Ground	Combination switch OUTPUT 2	Output	Combination switch	Rear washer switch ON	10 10 10 10 10 10 10 10 10 10 10 10 10 1
(R) C	GUIFUI Z		SWILCIT	(Wiper intermittent dial 4)	0	
				Any of the condition below	→	
					<ul><li>with all switch OFF</li><li>Wiper intermittent dial 1</li></ul>	JPMIA0161GB
					Wiper intermittent dial 5	9.1 V
					Wiper intermittent dial 6	

(Mire color)	Value
(Wire color)  +	Value (Approx.)
All switch OFF	F 0 V
5 Ground Combination switch OUTPUT 5 Combination switch (Wiper intermit-	ch 2ND (V)
tent dial 4)  Turn signal sw	witch RH  JPMIA0164GB  9.1 V
7 (P) Ground Door lock/unlock switch (Lock) Input Door lock/unlock switch	(V) 15 10 5 0 JPMIA0154GB
Pressed to the	1.2 V ne lock side 0 V
8 (LG) Ground Hazard switch Input Hazard switch Not pressed	(V) 15 10 5 0 10ms 1.3 V
Pressed	0 V
9 (BR) Ground Door lock/unlock switch (Unlock) Input Door lock/unlock switch	(V) 15 10 5 0 → 10ms JPMIA0154GB 1.2 V
Pressed to the	e unlock side 0 V
12 (P) Ground Back door opener switch Input Back door opener switch	(V) 15 10 5 0 10ms JPMIA0154GB
Pressed	0 V

< ECU DIAGNOSIS >

olor)	т	Description		Condition			
olor) –	Signal name	Input/ Output	Condition		Condition (Approx.)		
			Ignition switch O	FF or ACC	0 V		
Ground	Shock detect sensor	Input	Ignition switch O	N	(V) 15 10 5 0  JPMIA0155GB		
				Not propod	6.0 V		
Ground	A/C switch	Input	A/C switch		Battery voltage  0 V		
				Not pressed	Battery voltage		
Ground	⊦an switch	Input	Fan switch	Pressed	0 V		
Ground	Alarm link	Output		_	_		
			Ignition switch O	FF or ACC	Battery voltage		
Ground	Light & rain sensor serial link	Input/ Output	Ignition switch O	N	(V) 15 10 5 0		
				ON	8.7 V JPMIA0156GB		
Ground	Security indicator	Output	Security indicator	Blinking	(V) 15 10 5 0 1 s JPMIA0014GB		
				OFF	Battery voltage		
_	CAN-H	Input/ Output		_	_		
_	CAN-L	Input/ Output		_	_		
Ground	Rear window defog- ger switch	Input	Rear window defogger switch	Not pressed	(V) 15 10 5 0 10ms JPMIA0154GB		
					1.1 V		
	Ground Ground Ground Ground	Ground Shock detect sensor  Ground A/C switch  Ground Fan switch  Ground Alarm link  Ground Light & rain sensor serial link  Ground Security indicator  — CAN-H — CAN-L  Rear window defog-	Signal name Output  Ground Shock detect sensor Input  Ground A/C switch Input  Ground Fan switch Input  Ground Alarm link Output  Ground Serial link Output  CAN-H Input/ Output  CAN-L Input/ Output	Signal name Output   Ignition switch O	Signal name Output Ignition switch OFF or ACC  Ground Shock detect sensor Input Ignition switch ON  Ground A/C switch Input A/C switch Pressed Pressed  Ground Fan switch Input Ignition switch ON  Ground Alarm link Output —  Ignition switch OFF or ACC  Ignition switch OFF or ACC  Ground Light & rain sensor serial link Input Ignition switch ON  Ground Security indicator Output Ignition switch ON  Ground Security indicator Output Ignition switch ON  Ground Rear window defog- Ignut Rear window Not pressed  Rear window defog- Ignut Rear window Not pressed		

	nal No.	Description				Velue
(Wire	color)	Signal name	Input/ Output		Condition	Value (Approx.)
24	_	Door lock status indi-		Door lock status	ON	Battery voltage
(GR)	Ground	cator	Output	indicator	OFF	0 V
25 (GR)	Ground	Rear door switch LH	Input	Rear door switch LH	OFF (When rear door LH closed)  ON (When rear door LH	(V) 15 10 5 0
					opened)	0 V
26 (R)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closed)	(V) 15 10 5 0 PKID0924E 11.2 V
					ON (When driver door opened)	0 V
27 (BR)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closed)	(V) 15 10 5 0
					ON (When passenger door opened)	0 V
28	Ground	Back door switch	Input	Back door	OFF (When back door closed)	Battery voltage
(G)	C.Julia	Zack doc. ownor	put	switch	ON (When back door opened)	0 V
29 (LG)	Ground	Rear door switch RH	Input	Rear door switch RH	OFF (When rear door RH closed)	(V) 15 10 5 0 10 ms PKID0924E
					ON (When rear door RH opened)	0 V
30 (SB)	Ground	Audio link	Input/ Output	_	_	_

## < ECU DIAGNOSIS >

## [WITHOUT I-KEY, WITH SUPER LOCK]

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Signal name Output Output  All switch OFF (Wiper intermittent dial 4)  Front fog lamp switch ON (Wiper intermittent dial 4)  1.3 V  Combination switch Input Switch ON (Wiper intermittent dial 4)  1.3 V  Rear fog lamp switch ON (Wiper intermittent dial 4)  1.3 V  1.3 V		Value	O a diffici			Description	nal No.		
All switch OFF (Wiper intermittent dial 4)  Front fog lamp switch ON (Wiper intermittent dial 4)  1.3 V  The second of the secon		(Approx.)	Condition		Input/ Output	Signal name	1		
Front fog lamp switch ON (Wiper intermittent dial 4)  1.3 V  Combination switch INPUT 5  Ground (RR)  Ground Combination switch INPUT 5  Input Combination switch (Wiper intermittent dial 4)  1.3 V  1.3 V  (V)  (V)  (V)  (V)  (V)  (V)  (V)  (	JPMIA0165GB	15 10 5 0 1 ms 1 JPMIA0165GB							
31 (BR) Ground Combination switch INPUT 5 Input Combination switch (Wiper intermittent dial 4)  Rear fog lamp switch ON (Wiper intermittent dial 4)  1.3 V	JPMIA0167GB	15 10 5 0 1ms JPMIA0167GB							
	JPMIA0168GB	15 10 5 0 JPMIA0168GB	Rear fog lamp switch ON (Wiper intermittent dial 4	ALIT	Combination Rear fog lamp switch (Wiper intermi	Input	Inniit		
(Wiper intermittent dial 4)  1.3 V	JPMIA0169GB	15 10 5 0 1ms JPMIA0169GB	Rear wiper switch ON (Wiper intermittent dial 4						
Any of the condition below with all switch OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 2  • Wiper intermittent dial 6  • Wiper intermittent dial 7	JPMIA0196GB	10 5 0 → 1 ms JPMIA0196GB	with all switch OFF  • Wiper intermittent dial  • Wiper intermittent dial  • Wiper intermittent dial						

	nal No.	Description				Value
+	color)	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF	(V) 15 10 5 0 1ms JPMIA0165GB 1.4 V
					Lighting switch PASS	(V) 15 10 5 0 JPMIA0167GB 1.3 V
32 (G)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermit- tent dial 4)	Lighting switch 2ND	(V) 15 10 5 0 JPMIA0166GB 1.3 V
					Front wiper switch INT	(V) 15 10 5 0 JPMIA0168GB 1.3 V
					Front wiper switch HI	(V) 15 10 5 0 → ←1 ms 1 JPMIA0196GB 1.3 V

## < ECU DIAGNOSIS >

## [WITHOUT I-KEY, WITH SUPER LOCK]

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	nal No. color)	Description			O and distingu	Value	А
+	- COIOT)	Signal name	Input/ Output		Condition	(Approx.)	
					All switch OFF	(V) 15 10 5 0 JPMIA0165GB 1.4 V	С
					Turn signal switch LH	(V) 15 10 5 0 JPMIA0167GB	E
33 (V)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermit- tent dial 4)	Turn signal switch RH	(V) 15 10 5 0 JPMIA0166GB 1.3 V	G H
					Front wiper switch LO	(V) 15 10 5 0 JPMIA0168GB 1.3 V	J DLK
					Front washer switch ON	(V) 15 10 5 0 JPMIA0196GB	M
						1.3 V	

Terminal No. (Wire color)		Description				Value		
+	-	Signal name	Input/ Output		Condition	(Approx.)		
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 JPMIA0165GB		
					Lighting switch AUTO (Wiper intermittent dial 4)	(V) 15 10 5 0 JPMIA0167GB		
34 (GR)	Ground	Combination switch INPUT 4	Input	Combination switch	Lighting switch 1ST (Wiper intermittent dial 4)	(V) 15 10 5 0 JPMIA0166GB 1.3 V		
					Rear wiper INT (Wiper intermittent dial 4)	(V) 15 10 5 0 JPMIA0167GB 1.3 V		
					Any of the condition below with all switch OFF  Wiper intermittent dial 1  Wiper intermittent dial 6	(V) 15 10 5 0 → ←1 ms 1 JPMIA0196GB 1.3 V		

## < ECU DIAGNOSIS >

Terminal No. (Wire color)		Description				Value	
+ (vvire	- COIOF)	Signal name	Input/ Output		Condition	(Approx.)	
35 (L)	Ground	Combination switch INPUT 3	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 JPMIA0165GB 1.4 V	
					Lighting switch HI (Wiper intermittent dial 4)	(V) 15 10 5 0 1ms JPMIA0166GB 1.3 V	
					Lighting switch 2ND (Wiper intermittent dial 4)	(V) 15 10 5 0 1ms JPMIA0167GB 1.3 V	
					Rear wiper switch ON	(V) 15 10 5 0 1ms JPMIA0169GB 1.3 V	
					Any of the condition below with all switch OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 2  • Wiper intermittent dial 3	(V) 15 10 5 0 → 1ms 1 JPMIA0196GB 1.3 V	
36 (V)	Ground	Key switch	Input	Insert mechanical key into ignition key cylinder  Remove mechanical key from ignition key		Battery voltage	
37	Ground	ACC power supply	Input	cylinder Ignition switch OFF		0 V	
(R) 38	Ground	Ignition power sup-	Input	Ignition switch ACC or ON Ignition switch OFF or ACC		Battery voltage 0 V	
(W)		ply		Ignition switch ON		Battery voltage	

Terminal No. Description (Wire color)					Value	
+ (Wire	color)	Signal name	Input/ Output	Condition		(Approx.)
39 (P)	Ground	NATS antenna amp.	Input/ Output	Insert mechanical key into ignition key cylinder		Just after Insert mechanical key into ignition key cylinder. Pointer of tester should move
40 (LG)	Ground	NATS antenna amp.	Input/ Output	Insert mechanical key into ignition key cylinder		Just after Insert mechanical key into ignition key cylinder. Pointer of tester should move
41 (V)	Ground	Battery power sup- ply	Input	Ignition switch OFF		Battery voltage
42 (V) Ground	Ground	Interior room lamp power supply	Output	After passing the interior room lamp battery saver operation time		0 V
	Ground			Any other time after passing the interior room lamp battery saver operation time		Battery voltage
43	Craund		Output	Rear wiper switch	h OFF	0 V
(L)	Ground	Rear wiper motor	Output	Rear wiper switch ON		Battery voltage
					Rear wiper stop position	0 V
44 (L/W)	Ground	Rear wiper auto stop	Input	Ignition switch ON	Any position other than rear wiper stop position	(V) 15 10 5 0 → 410ms JPMIA0197GE
45	Ground	Back door lock actu-	Output	Back door	Pressed	Battery voltage (300ms)
(GR)	Ground	ator	Output	opener switch	Not pressed	0 V
					Turn signal switch OFF	0 V
47 (G/Y)	Ground	Turn signal LH	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s PKID0926E 6.5 V
				Ignition switch ON	Turn signal switch OFF	0 V
48 (G/B)	Ground	Turn signal RH	Output		Turn signal switch RH	(V) 15 10 5 0 1 s PKID0926E
				Lighting switch	Rear fog lamp switch OFF	0 V
49 (Y)	Ground	Rear fog lamp	Output	1ST and front fog lamp switch ON	Rear fog lamp switch ON	Battery voltage
51	_		1	Depress the brake pedal		Battery voltage
(R/W)*1 (R)*2	Ground	Stop lamp switch	Input	Release the brake pedal		0 V

### < ECU DIAGNOSIS >

## [WITHOUT I-KEY, WITH SUPER LOCK]

Terminal No.		Description				Value	_
(Wire	color)	Signal name	Input/ Output		Condition	(Approx.)	
52	Ground	Room lamp timer	Interior room	OFF	Battery voltage	_	
(R) Glound	control	Output	lamp	ON	0 V	_	
53 (L) Ground	Power window pow-	Outrout	lanition switch	OFF or ACC	0 V	_	
	Giodila	er supply	Output	Ignition switch	ON	Battery voltage	_
54 Ground	Door unlock (All)	Output	Door lock/un-	Pressed to the unlock side	Battery voltage	_	
(O)	Giodila	Door drilock (All)	Output	lock switch	Pressed to the lock side	0 V	_
55 (B)	Ground	Ground	_	Ignition switch ON		0 V	_
56				Door lock/un- lock switch	Pressed to the unlock side	0 V	_
(Y) <sup>*1</sup> (SB) <sup>*2</sup>	Ground	Door lock (All)	Output		Output	Pressed to the lock side	Battery voltage
57 (Y)	Ground	Battery power sup- ply	Input	Ignition switch OFF		Battery voltage	_
58 (P)	Ground	Power window pow- er supply	Output	Ignition switch OFF		Battery voltage	_
59 (BR)		Super lock Out	0.1.1	When lock button of key fob or Intelligent Key is not pressed		0 V	_
	Ground		Output	When lock button of key fob or Intelligent Key is pressed		Battery voltage	_
60 (GR)	0	round Driver door unlock	Output	Door lock/un- lock switch	Pressed to the unlock side	Battery voltage	_
	Giouna		Output		Pressed to the lock side	0 V	_

<sup>\*1:</sup> With Intelligent Key system

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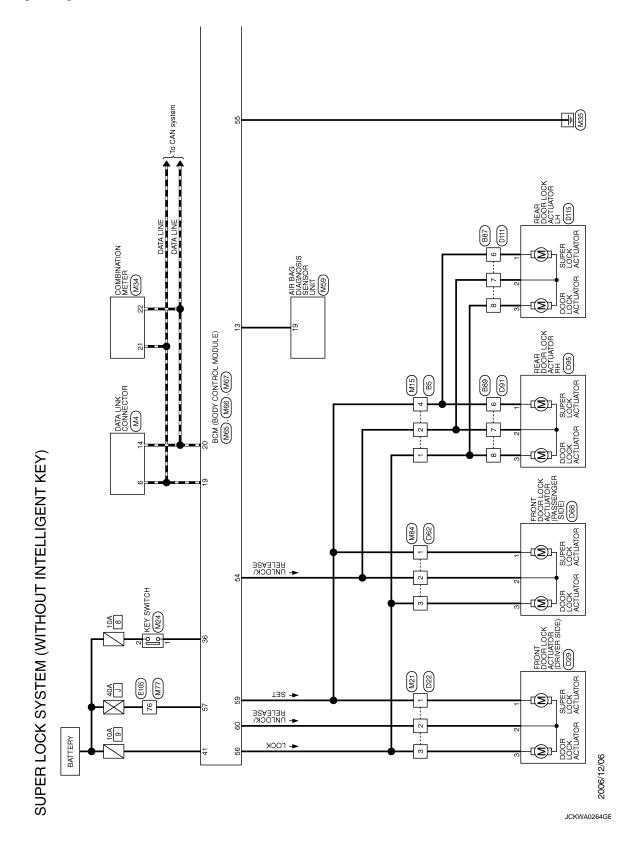
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<sup>\*2:</sup> Without Intelligent Key system



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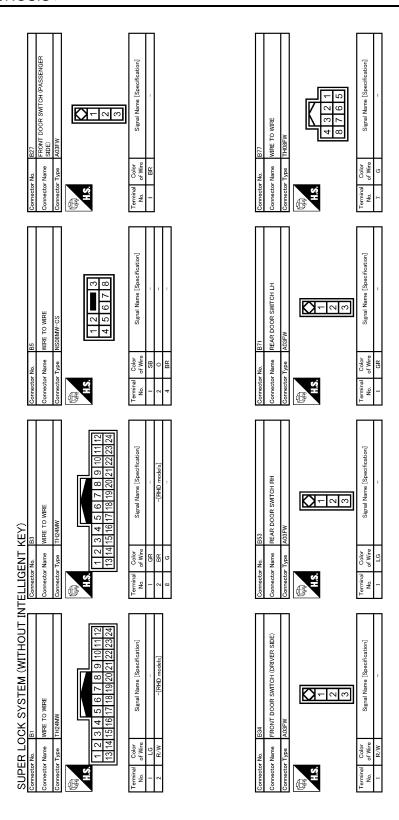
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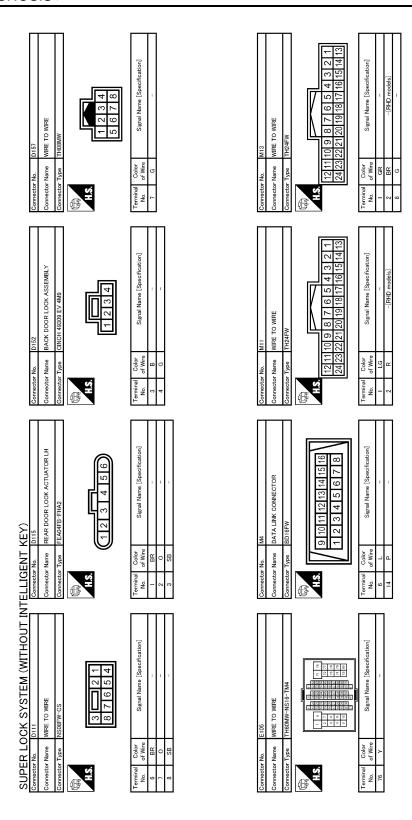
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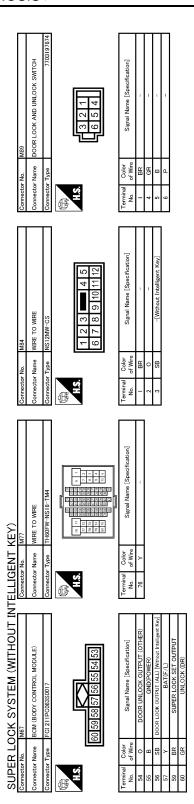
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Connector No. 129 Connector Name SIDE) Connector Type FEAUTH-FHAZ H.S.	Terminal   Color   Signal Name [Specification]	Connector No.   D95	E C	3
Connector No. D22  Connector Name WIRE TO WRE  Connector Type NSI2EW-CS  H.S. F 4  3 2 1 12 11 10 9 8 7 6	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]	Connector No.   D91	E F	F
Cornector No.   B89   Cornector No.   B89   Cornector Name   WIRE TO WIRE   Cornector Type   NISOBMW-CS	Terminal   Color   Signal Name   Specification   Color   Col	Cornector No.   D88   FRONT DOOR LOCK ACTUATOR     Connector Name   FRONT DOOR LOCK ACTUATOR     Connector Type   FEAGRE-FRAZ	DI	J LK
SUPER LOCK SYSTEM (WITHOUT INTELLIGENT KEY)           Connector No.         B87           Connector Name         WIRE TO WIRE           Connector Name         WIRE TO WIRE           Connector Type         MISOBAW           TO T	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]	Connector No.   D62	JCKWA0267GE	V

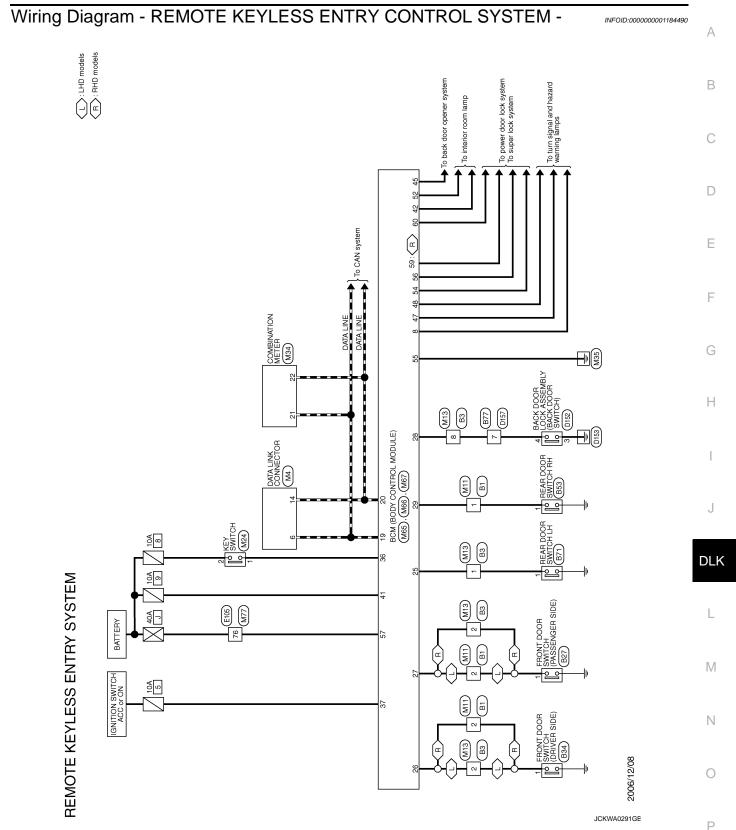


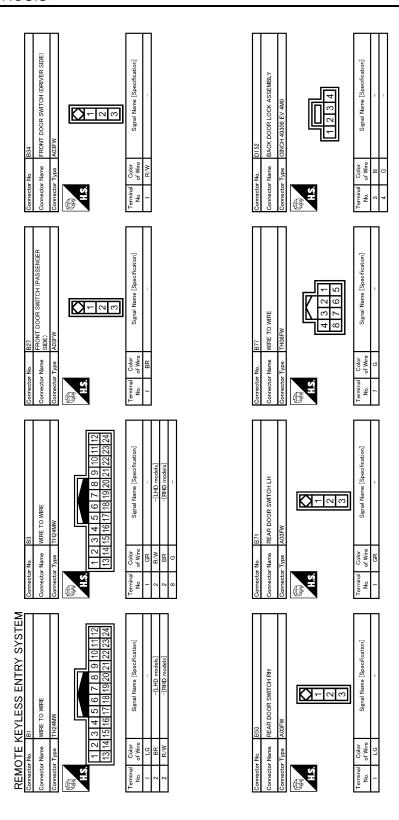
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Connector No.   M34	Color   Signal Name [Specification]   Color   Signal Name [Specification]   Color   Color	Connector No.   M66   Connector Name   BCM (BODY CONTROL MODULE)	A B C
Connector No. M24 Connector Name KEY SWITCH Connector Type A02MW	Color   Color   Signal Name [Specification]   1	WEY SW	E F G
INTELLIGENT KEY)   Connector No.   MZ    Connector Name   WIRE TO WIRE   Connector Type   NS12MW-CS	Terminal No of Wire No.         Signal Name [Specification]           1         BR           2         GR           3         SB	Connector No.   M65	J
SUPER LOCK SYSTEM (WITHOUT INT Connector Name WITE TO WITE Connector Type INSUBPW-CS  ALS  3	Terminal   Color   Signal Name [Specification]   No. of Wive   Signal Name [Specification]	Connector No.   M59	M N O
		JCKWA0269GE	Р



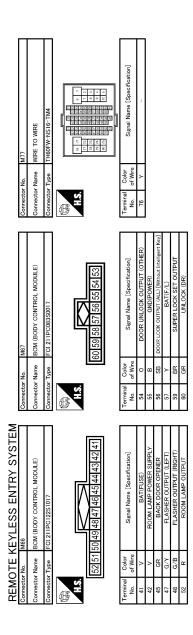
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Connector No.   M11	Connector No.   Mi65	A B C
Connector No.   M4   Connector Name   DaTA LINK CONNECTOR   Connector Name   DaTA LINK CONNECTOR   Connector Type   BD16FW   Connector Type   BD16FW   Connector Type   BD16FW   Connector Type   BD16FW   Connector Type   Conne	Connector No.   M34   Connector Name   COMBINATION METER   Connector Type   SAB40FW   Connector Type	E F G
Connector No.  Connector Name WIRE TO WIRE  Connector Type THIOMWHS16-TM4  II.	Connector Name KEY SWITCH Connector Name KEY SWITCH Connector Type A02MW  A13.  Terminal Color No. of Wire Signal Name [Specification]  1 v 2 v	J DLK
Connector Name   Connector Type   THOBMW   Connector Type   THOBMW   THOB	Cornector No.   M13	M N O
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Wiring Diagram - BACK DOOR OPENER CONTROL SYSTEM -

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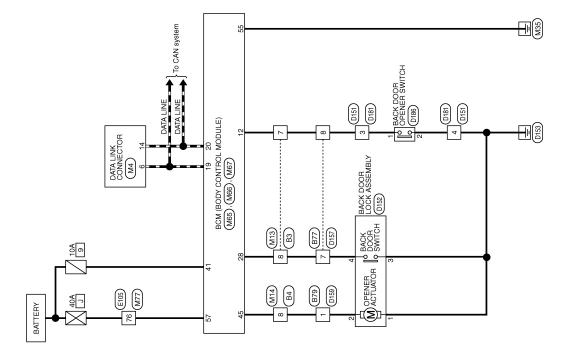
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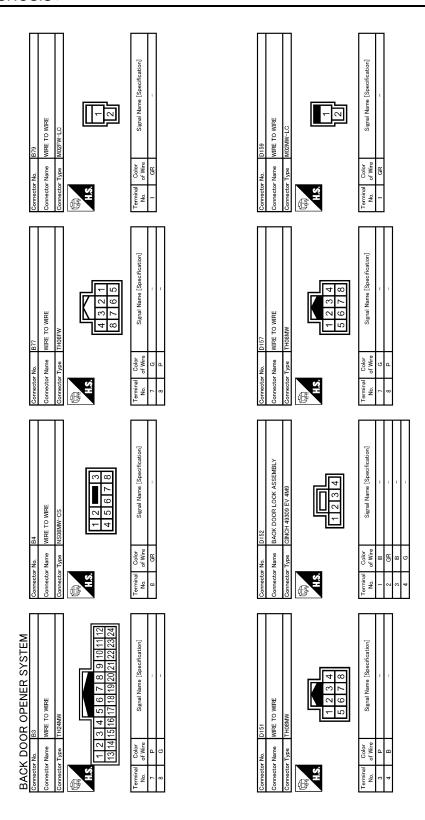
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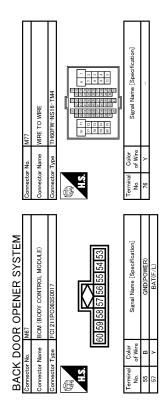
JCKWA0295GE

BACK DOOR OPENER SYSTEM



JCKWA0296GE

IK CONNECTOR  1 12 13 14 15 16  3 4 5 6 7 8  Signal Name [Specification]	New Grow Control Module		АВ
Connector No.   M4	Connector No.   M66		C
THIGOMM-NSIG-TMA THIGOMM-NSIG-TMA  THIGOMM-NSIG-TMA  Signal Name (Specification)	M86  BOM (BODY CONTROL MODULE)  AAB40FB  TO 33 SE 53 SE 53 SE 54 S		E F
Connector No. E105 Cornector Name WIRE TO WIRE Commentor Type 11160MW-NS16  1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Connector No.   M65		G H
BACK DOOR OPENER SWITCH RKGZMGY  Signal Name [Specification]	WIRE TO WIRE NS08FW-CS  3		J
Connector No.   D186	Connector No. M14 Connector Name WIFE Connector Type NS08 H.S. H.S. Terminal Color No. of Wire 8 GR		DLK L
WIRE  WIRE  1 3 2 1  1 7 6 5  Signal Name [Specification]	WIRE    1		M
BACK DOOR OPENER SYSTEM   Connector Name   D181   Connector Name   WIRE TO WIRE   Connector Type   TH08FW	Connector No. M13 Connector Name WIRE TO WIRE Connector Type TH2AFW  12 111 10 9 8 7  12 12 12 12 11  No. of Wire  No. of Wire  8 6		N O
		JCKWA0297GE	Р



JCKWA0298GE

Fail Safe

Fail-safe index

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

# **BCM (BODY CONTROL MODULE)**

< ECU DIAGNOSIS >

### [WITHOUT I-KEY, WITH SUPER LOCK]

Display contents of CONSULT	Fail-safe	Cancellation
B2190: NATS ANTENNA AMP	<ul> <li>Inhibits engine cranking</li> <li>Inhibits steering lock unlocking (Intelligent Key unit)</li> <li>Fuel cut (ECM)</li> </ul>	Erase DTC
B2191: DIFFERENCE OF KEY	Inhibits engine cranking     Inhibits steering lock unlocking (Intelligent Key unit)     Fuel cut (ECM)	Erase DTC
B2192: ID DISCORD BCM-ECM	Fuel cut (ECM)	Erase DTC
B2193: CHAIN OF BCM-ECM	Fuel cut (ECM)	Erase DTC
B2194: DISCORD BCM-I-KEY	Inhibits engine cranking     Inhibits steering lock unlocking (Intelligent Key unit)     Fuel cut (ECM)	Erase DTC
B2195: ANTI SCANNING	Inhibits engine cranking     Inhibits steering lock unlocking (Intelligent Key unit)     Fuel cut (ECM)	Erase DTC
B2196: DONGLE NG	Inhibits engine cranking     Inhibits steering lock unlocking (Intelligent Key unit)     Fuel cut (ECM)	Erase DTC

#### REAR WIPER CONTROL

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

When a rear wiper auto stop signal is in the condition listed below, BCM stops power supply to rear wiper after rear wiper is activated for five seconds.

Ignition switch	Rear wiper switch	Rear wiper auto stop signal
ON	OFF	The rear wiper auto stop signal (stop position) cannot be input for 5 seconds.
ON	ON	The rear wiper auto stop signal does not change for 5 seconds.

#### NOTE:

The above operation is repeated when operating the rear wiper switch one minute after the stop of the rear wiper caused by Fail-safe.

# TURN SIGNAL LAMP CONTROL

BCM detects the turn signal lamp circuit status from the terminal voltage.

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

#### NOTE:

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

### LIGHT & RAIN SENSOR MALFUNCTION DETECTION FUNCTION

BCM controls the following items when LIGHT & RAIN sensor has a malfunction.

#### Auto Light Control

Headlamp is turned ON.

#### Front Wiper Control

The condition just before the activation of Fail-safe is maintained until the front wiper switch is turned OFF.

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# DTC Inspection Priority Chart

INFOID:0000000001559436

Priority	DTC
1	U1000: CAN COMM CIRCUIT     U1010: CONTROL UNIT (CAN)
2	<ul> <li>B2190: NATS ANTENNA AMP</li> <li>B2191: DIFFERNCE OF KEY</li> <li>B2192: ID DISCORD BCM-ECM</li> <li>B2193: CHAIN OF BCM-ECM</li> <li>B2194: DISCORD BCM-I-KEY</li> <li>B2195: ANTI SCANNING</li> <li>B2196: DONGLE NG</li> </ul>

DTC Index

#### 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.
- PAST: Displays when there is a malfunction that is detected in the past and stored.
- 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	TIME		Fail-safe	Refer to
No DTC is detected. further testing may be required.	_	_	_	_
U1000: CAN COMM CIRCUIT	0	1 - 39	_	BCS-33
U1010: CONTROL UNIT (CAN)	0	1 - 39	_	BCS-34
B2190: NATS ANTENNA AMP	CRNT	PAST	×	With Intelligent Key system <u>SEC-45</u> Without Intelligent Key system <u>SEC-194</u>
B2191: DIFFERENCE OF KEY	CRNT	PAST	×	With Intelligent Key system <u>SEC-47</u> Without Intelligent Key system <u>SEC-196</u>
B2192: ID DISCORD BCM-ECM	CRNT	PAST	×	With Intelligent Key system <u>SEC-48</u> Without Intelligent Key system <u>SEC-197</u>
B2193: CHAIN OF BCM-ECM	CRNT	PAST	×	With Intelligent Key system <u>SEC-50</u> Without Intelligent Key system <u>SEC-199</u>
B2194: DISCORD BCM-I-KEY	CRNT	PAST	×	<u>SEC-51</u>
B2195: ANTI SCANNING	CRNT	PAST	×	With Intelligent Key system <u>SEC-52</u> Without Intelligent Key system <u>SEC-200</u>
B2196: DONGLE NG	CRNT	PAST	×	With Intelligent Key system <u>SEC-53</u> Without Intelligent Key system <u>SEC-201</u>

# DOOR LOCK FUNCTION SYMPTOMS

< SYMPTOM DIAGNOSIS >

[WITHOUT I-KEY, WITH SUPER LOCK]

# SYMPTOM DIAGNOSIS

# DOOR LOCK FUNCTION SYMPTOMS DOOR LOCK AND UNLOCK SWITCH

# DOOR LOCK AND UNLOCK SWITCH: Symptom Table

INFOID:0000000001184495

# DOOR LOCK AND UNLOCK SWITCH OPERATION MALFUNCTION

#### NOTE:

- Before performing the diagnosis in the following table, check "Work Flow". Refer to DLK-709, "Work Flow".
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

- · Except driver side, doors are closed.
- · Doors are not locked by keyfob.

#### Symptom Table

Symptom	Diagnosis/service procedure		Reference page	
		Check BCM power supply and gr	DLK-741	
Door lock and unlock function does not operate with door lock and unlock switch.	2.	Check door lock and unlock switch.		DLK-742
ate with door look and unlock switch.		Check intermittent incident.		<u>GI-39</u>
	1.	Check door lock and unlock swite	ch.	DLK-742
		Check door switch.	Passenger side	DLK-747
Door lock function does not operate with door	2.		Rear LH	DLK-749
lock and unlock switch.	2.		Rear RH	DLK-750
			Back door	DLK-752
		Check intermittent incident.		<u>GI-39</u>
			Driver side	DLK-756
	1.	Check door lock actuator.	Passenger side	DLK-757
Specific door lock actuator does not operate.	١.		Rear LH	DLK-759
			Rear RH	DLK-760
	2.	Check intermittent incident.		<u>GI-39</u>
Door lock and unlock switch indicator does not illuminate.		Check door lock and unlock switch indicator.		DLK-744
		Check Intermittent Incident.		<u>GI-39</u>

#### **KEYFOB**

INFOID:0000000001184496

KEYFOB : Symptom Table

#### KEYFOB OPERATION MALFUNCTION

#### NOTE:

- Before performing the diagnosis in the following table, check "Work Flow". Refer to DLK-709, "Work Flow".
- Check that vehicle is under the condition shown in "Conditions of Vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

- · Mechanical key is removed from ignition key cylinder.
- Door lock and unlock operation is normal.

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Symptom Table

Symptom	Diagnosis/service procedure	Reference page
All of the keyfob operations do not operate.	Check keyfob battery inspection.	DLK-775
All of the keylob operations do not operate.	Check intermittent incident.	<u>GI-39</u>
Anti-hijack operation does not operate.	Check "SECURITY DOOR LOCK SET" setting in "WORK SUPPORT".	DLK-735
	Check Intermittent Incident.	<u>GI-39</u>

### AUTO DOOR LOCK

# AUTO DOOR LOCK: Symptom Table

INFOID:0000000001184497

# AUTO DOOR LOCK OPERATION MALFUNCTION

#### NOTE:

- Before performing the diagnosis in the following table, check "Work Flow". Refer to <u>DLK-709</u>, "Work Flow".
- Understand the operation when does it work, refer to <u>DLK-719</u>, "AUTO <u>DOOR LOCK</u>: <u>System Description"</u>.
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column
  in this order.

Conditions of Vehicle (Operating Conditions)

- "SECURITY DOOR LOCK SET" is ON when setting on CONSULT-III.
- Door lock and unlock function is normal.

#### Symptom Table

Symptom		Diagnosis/service procedure	Reference page	
	1.	Check "SECURITY DOOR LOCK SET" setting in "WORK SUPPORT".		DLK-735
	2.		Driver side	DLK-746
		Check door switch.	Passenger side	DLK-747
Auto door lock operation does not operate.			Rear LH	DLK-749
			Rear RH	DLK-750
			Back door	DLK-752
	3.	3. Check key switch.		DLK-754
	4.	Check Intermittent Incident.		<u>GI-39</u>

### VEHICLE SPEED SENSING AUTO DOOR LOCK

# VEHICLE SPEED SENSING AUTO DOOR LOCK: Symptom Table

INFOID:0000000001184498

# VEHICLE SPEED SENSING AUTO DOOR LOCK OPERATION MALFUNCTION NOTE:

- Before performing the diagnosis in the following table, check "Work Flow". Refer to <u>DLK-709</u>. "Work Flow".
- Understand the operation when does it work, refer to <u>DLK-721</u>, "VEHICLE SPEED SENSING AUTO DOOR LOCK: System Description".
- Check that vehicle is under the condition shown in "Conditions of Vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

Door lock and unlock switch operation is normal.

# DOOR LOCK FUNCTION SYMPTOMS

# < SYMPTOM DIAGNOSIS >

# [WITHOUT I-KEY, WITH SUPER LOCK]

Symptom Table

Symptom	Diagnosis/service procedure	Reference page
Vehicle speed sensing auto door lock operation does not operate.	Check vehicle speed signal.	DLK-774
	Check Intermittent Incident.	<u>GI-39</u>

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### **BACK DOOR OPEN FUNCTION SYMPTOMS**

< SYMPTOM DIAGNOSIS >

[WITHOUT I-KEY, WITH SUPER LOCK]

# BACK DOOR OPEN FUNCTION SYMPTOMS BACK DOOR OPENER SWITCH

BACK DOOR OPENER SWITCH: Symptom Table

INFOID:0000000001184499

# BACK DOOR OPENER FUNCTION MALFUNCTION

#### NOTE:

- Before performing the diagnosis in the following table, check "Work Flow". Refer to <u>DLK-709, "Work Flow"</u>.
  Check that vehicle is under the condition shown in "Conditions of Vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

#### Conditions of Vehicle (Operating Conditions)

- Door lock function is normal.
- Vehicle speed is less than 5 km/h (3MPH).
- All doors are unlocked.

#### Symptom Table

Symptom	Diagnosis/service procedure	Reference page
Back door opener function does not operate by back door opener switch.	Check back door opener switch.	DLK-752
	2. Check vehicle speed signal.	DLK-774
	Check back door opener actuator.	DLK-768
	Check Intermittent Incident.	<u>GI-39</u>

# WARNING FUNCTION SYMPTOMS

< SYMPTOM DIAGNOSIS >

[WITHOUT I-KEY, WITH SUPER LOCK]

# WARNING FUNCTION SYMPTOMS BACK DOOR

**BACK DOOR: Symptom Table** 

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# BACK DOOR OPEN WARNING OPERATION MALFUNCTION

#### NOTE:

- Before performing the diagnosis in the following table, check "Work Flow". Refer to DLK-709, "Work Flow".
- Check that vehicle is under the condition shown in "Conditions of Vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

• Door lock function and back door opener function is normal.

#### Symptom Table

Symptom		Diagnosis/service procedure	Reference page
Back door open warning does not operate properly.	1.	Check back door opener switch.	DLK-770
back door open warning does not operate property.		Check intermittent incident.	<u>GI-39</u>

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### HAZARD REMINDER FUNCTION

< SYMPTOM DIAGNOSIS >

[WITHOUT I-KEY, WITH SUPER LOCK]

# HAZARD REMINDER FUNCTION HAZARD WARNING LAMP

HAZARD WARNING LAMP: Symptom Table

INFOID:0000000001184501

# HAZARD REMINDER OPERATION MALFUNCTION

#### NOTE:

- Before performing the diagnosis in the following table, check "Work Flow". Refer to <u>DLK-709, "Work Flow"</u>.
  Check that vehicle is under the condition shown in "Conditions of Vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

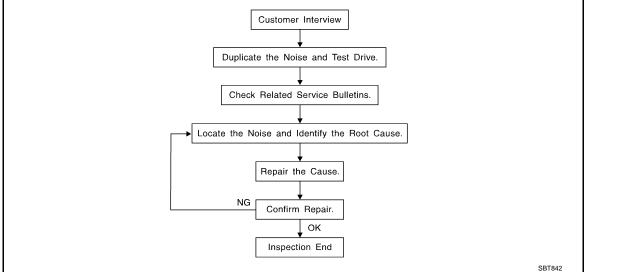
#### Conditions of Vehicle (Operating Conditions)

- "HAZARD LAMP SET" is ON when setting on CONSULT-III.
- Door lock function is normal.

#### Symptom Table

Symptom		Diagnosis/service procedure	Reference page
Buzzer reminder operation dose not operate properly.	1.	Check setting of "HAZARD LAMP SET" with CONSULT-III.	DLK-737
	2.	Check intermittent incident.	<u>GI-39</u>

Work Flow INFOID:0000000001184502 Customer Interview



#### **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 of the customer's comments; refer to DLK-215, "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 a test drive 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 depen-
- dent 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
- 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

clip or fastener/incorrect clearance.

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.

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#### < SYMPTOM DIAGNOSIS >

[WITHOUT I-KEY, WITH SUPER LOCK]

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.

#### 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 (Engine Ear or mechanics 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 fastener 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-213, "Inspection Procedure".

#### 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 are available through your authorized Nissan Parts Department.

#### **CAUTION:**

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

• URETHANE PADS

Insulates connectors, harness, etc.

• INSULATOR (Foam blocks)

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

- INSULATOR (Light foam block)
- FELT CLOTHTAPE

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

The following materials, not available through NISSAN Parts Department, can also be used to repair squeaks and rattles.

UHMW(TEFLON) TAPE

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

SILICONE GREASE

Used in place 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.

# < SYMPTOM DIAGNOSIS >

[WITHOUT I-KEY, WITH SUPER LOCK]

Inspection Procedure	Λ
Refer to Table of Contents for specific component removal and installation information.	Α
INSTRUMENT PANEL  Most incidents are caused by contact and movement between:	В
3. Instrument panel to front pillar garnish	С
6. Wiring harnesses behind the combination meter	D
pressing on the components while driving to stop the noise. Most of these incidents can be repaired by applying felt cloth tape or silicon spray (in hard to reach areas). Urethane pads can be used to insulate wiring har-	Ε
ness. CAUTION:	F
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	G
2. A/C control unit and cluster lid C	Н
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:	
	J
Inside handle escutcheon to door finisher	
2. Wiring bornesses tenning	
<ol> <li>Writing flamesses tapping</li> <li>Door striker out of alignment causing a popping noise on starts and stops</li> </ol>	L
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 to repair the noise.	L
TRUNK	
In addition look for:	M
1. Trunk lid dumpers out of adjustment	
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3. Trunk lid torsion bars knocking together	
4. A loose license plate or bracket  Most of those incidents can be required by adjusting securing or inculating the item(s) or component(s) caus.	0
ing the noise.	
SUNROOF/HEADLINING	Р
Noises in the sunroot/headiining area can often be traced to one of the following:	
<ol> <li>Sunroof lid, rail, linkage or seals making a rattle or light knocking noise</li> <li>Sunvisor shaft shaking in the holder</li> </ol>	

Again, pressing on the components to stop the noise while duplicating the conditions can isolate most of these

3. Front or rear windshield touching headlining and squeaking

incidents. Repairs usually consist of insulating with felt cloth tape.

#### < SYMPTOM DIAGNOSIS >

[WITHOUT I-KEY, WITH SUPER LOCK]

#### SFATS

When isolating seat noise it is 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
- 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
- Engine wall mounts and connectors
- Loose radiator mounting pins
- 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.

< SYMPTOM DIAGNOSIS >

[WITHOUT I-KEY, WITH SUPER LOCK]

# **Diagnostic Worksheet**

INFOID:0000000001184504

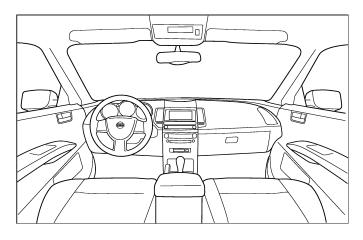


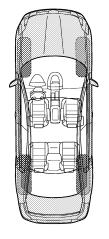
# SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

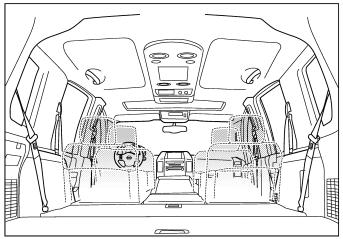
#### Dear Nissan Customer:

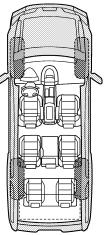
We are concerned about your satisfaction with your Nissan vehicle. Repairing a squeak or rattle sometimes can be very difficult. To help us fix your Nissan right the first time, please take a moment to note the area of the vehicle where the squeak or rattle occurs and under what conditions. You may be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

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.

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Briefly describe the location where the noi	ise occurs	:			
II. WHEN DOES IT OCCUR? (please che	ck the bo	ces that ap	oly)		
<ul><li>□ anytime</li><li>□ 1st time in the morning</li><li>□ only when it is cold outside</li><li>□ only when it is hot outside</li></ul>	☐ whe	r sitting ou en it is raini or dusty co er:	ng or we		
III. WHEN DRIVING:	IV. WH	AT TYPE	OF NOIS	E	
□ 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 min	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 Test Drive Notes:	PERSON	NEL			
		YES	NO	Initials of person performing	
Vehicle test driven with customer - Noise verified on test drive - Noise source located and repaired - Follow up test drive performed to confirm	n repair				
VIN:		tomer Nan e: ———			

**DLK-820** 

# **PRECAUTION**

# **PRECAUTIONS**

< PRECAUTION >

Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TEN-SIONER"

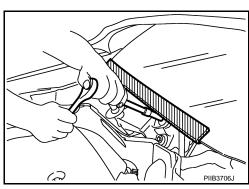
The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air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

# Procedure without Cowl Top Cover

When performing the procedure after removing cowl top cover, cover the lower end of windshield with urethane, etc.



# Steering Wheel Rotation after Battery Disconnect

#### NOTE:

- Before removing and installing any control units, first turn the push-button ignition switch to the LOCK position, then disconnect both battery cables.
- After finishing work, confirm that all control unit connectors are connected properly, then re-connect both battery cables.
- Always use CONSULT-III to perform self-diagnosis as a part of each function inspection after finishing work. If a DTC is detected, perform trouble diagnosis according to self-diagnosis results.

This vehicle is equipped with a push-button ignition switch and a steering lock unit.

If the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.

If turning the steering wheel is required with the battery disconnected or discharged, follow the procedure below before starting the repair operation.

#### **OPERATION PROCEDURE**

Connect both battery cables.

#### NOTE:

- Supply power using jumper cables if battery is discharged.
- 2. Carry the Intelligent Key or insert it to the key slot and turn the push-button ignition switch to ACC position. (At this time, the steering lock will be released.)

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### **PRECAUTIONS**

#### < PRECAUTION >

[WITHOUT I-KEY, WITH SUPER LOCK]

- 3. Disconnect both battery cables. The steering lock will remain released with both battery cables disconnected and the steering wheel can be turned.
- 4. Perform the necessary repair operation.
- 5. When the repair work is completed, re-connect both battery cables. With the brake pedal released, turn the push-button ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the push-button ignition switch is turned to LOCK position.)
- 6. Perform self-diagnosis check of all control units using CONSULT-III.

Work

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

# [WITHOUT I-KEY, WITH SUPER LOCK]

# **PREPARATION**

# **PREPARATION**

# **Commercial Service Tools**

Tool name		Description	
Engine ear	SIIA0995E	Locating the noise	
Remover tool	PIB7923J	Remove the clips, pawls, and metal clips	
	F11101 92.33		
Power tool			
	PIIB1407E		

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[WITHOUT I-KEY, WITH SUPER LOCK]

# ON-VEHICLE MAINTENANCE

< ON-VEHICLE MAINTENANCE >

# PRE-INSPECTION FOR DIAGNOSTIC

**Basic Inspection** INFOID:0000000001184510

#### BASIC INSPECTION

# ${f 1}$ .CHECK DOOR LOCK AND UNLOCK SWITCH OPERATION

Check door lock and unlock operation by operating door lock and unlock switch.

#### Is the inspection result normal?

YES >> GO TO 2.

>> Refer to DLK-809. "DOOR LOCK AND UNLOCK SWITCH: Symptom Table". NO

# 2.CHECK KEYFOB OPERATION

Check door lock and unlock operation by operationg lock and unlock button of keyfob.

#### Is the inspection result normal?

YES >> GO TO 3.

>> Refer to DLK-809, "KEYFOB: Symptom Table". NO

# 3.CHECK AUTO DOOR LOCK OPERATION

Check auto door lock operation. Refer to DLK-719, "AUTO DOOR LOCK: System Description".

#### Is the inspection result normal?

YES >> GO TO 4.

>> Refer to DLK-810, "AUTO DOOR LOCK: Symptom Table". NO

# f 4.CHECK VEHICLE SPEED SENSING AUTO DOOR LOCK OPERATION

Check vehicle speed sensing auto door lock. Refer to DLK-721, "VEHICLE SPEED SENSING AUTO DOOR LOCK: System Description"

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Refer to DLK-810, "VEHICLE SPEED SENSING AUTO DOOR LOCK: Symptom Table".

### ${f 5.}$ CHECK BACK DOOR OPENER SWITCH OPERATION

Check back door opener operation by operating back door opener switch.

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> Refer to DLK-812, "BACK DOOR OPENER SWITCH: Symptom Table".

### 6.CHECK HAZARD REMINDER FUNCTION

Check hazard reminder function by operating the following switches.

Lock and unlock button of keyfob.

#### Is the inspection result normal?

YES >> GO TO 7.

NO >> Refer to DLK-814, "HAZARD WARNING LAMP: Symptom Table".

### **1.**CHECK WARNING FUNCTION

Check that warning function operate properly. Refer to <a href="DLK-729">DLK-729</a>, "System Description".

#### Is the inspection result normal?

YES >> GO TO 8.

NO >> Refer to DLK-814. "HAZARD WARNING LAMP: Symptom Table".

### 8.check out

CHECK OUT.

>> INSPECTION END

# **ON-VEHICLE REPAIR**

**HOOD** 

**HOOD ASSEMBLY** 

**HOOD ASSEMBLY: Exploded View** 

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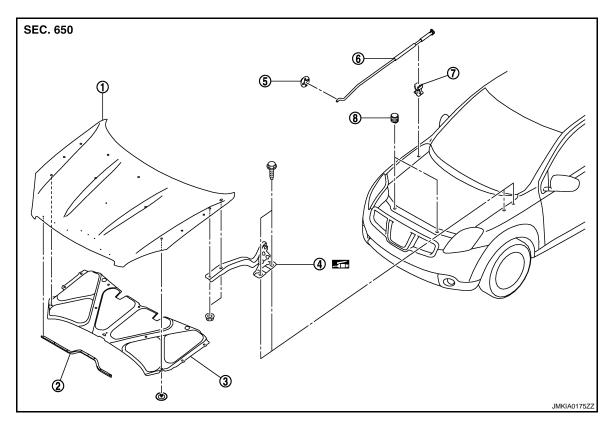
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#### **REMOVAL**



- 1. Hood assembly
- 4. Hood hinge
- 7. Clamp

- 2. Hood sealing rubber
- 5. Grommet
- 8. Hood bumper rubber

Refer to GI-4, "Components" for symbols in the figure.

- Hood insulator
- 6. Hood support rod

# **ADJUSTMENT**

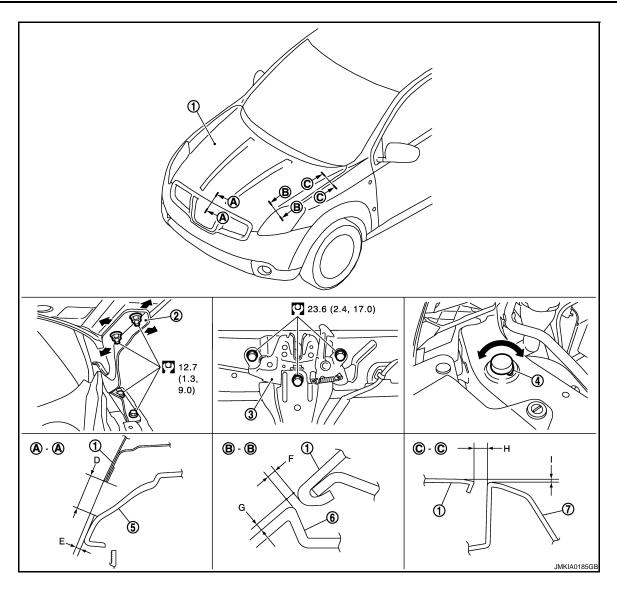
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Hood assembly

- Hood hinge 2.
- Hood bumper rubber Front fender
- 5. Front grille

- Hood lock assembly 3.
- 6. Front combination lamp

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# Refer to GI-4, "Components" for symbols in the figure.

# **HOOD ASSEMBLY: Removal and Installation**

#### **REMOVAL**

Support the hood lock assembly with the proper material to prevent it from falling.

#### **WARNING:**

Bodily injury may occur if no supporting rod is holding the hood open when removing the hood

2. Remove the hood hinge mounting nuts on the hood to remove the hood assembly. **CAUTION:** 

### Perform work with 2 workers, because of its heavy weight.

- 3. Remove the following parts after removing the hood assembly.
  - Hood insulator
  - Hood sealing rubber

#### **INSTALLATION**

Install in the reverse order of removal.

**CAUTION:** 

- · Perform work with 2 workers, because of its heavy weight.
- Before installing the hood hinge, apply anticorrosive agent onto the mounting surface of the vehicle body.
- After installing, perform hood fitting adjustment. Refer to <u>DLK-827</u>, "HOOD ASSEMBLY: Adjust-ment".

**HOOD ASSEMBLY: Adjustment** 

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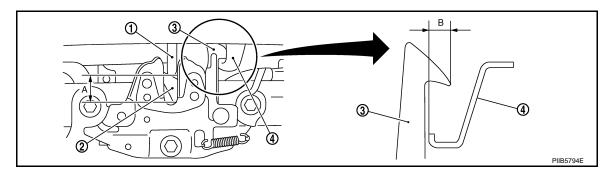
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F	ortion			Standard	Right/left Clearance (MAX)		
Hood – Front bumper	<b>A</b> – <b>A</b>	D	Clearance	5.2 – 9.2 mm (0.205 – 0.362 in)	2.0 mm (0.079 in)		
		Е	Surface height	- 0.2 – 3.8 mm (- 0.008 – 0.150 in)	2.0 mm (0.079 in)		
Hood – Front combination lamp	B – B –	F	Clearance	3.7 – 7.7 mm (0.140 – 0.303 in)	2.0 mm (0.079 in)		
			<b>5</b> -5	J-U		G	Surface height
Hood – Front fender	C – C	Н	Clearance	3.9 – 5.9 mm (0.154 – 0.232 in)	1.5 mm (0.059 in)		
		0-0	ı	Surface height	- 1.0 – 1.0 mm (- 0.039 – 0.039 in)	1.5 mm (0.059 in)	

- 1. Check the clearance and the surface height between the hood and each part by visualy and touching. (Fitting standard dimension in the table below should be satisfied.)
- In case any parts are out of specification, adjust them according to the procedures shown below.
- 3. Remove the hood lock and adjust the height by rotating the bumper rubber until the hood becomes 1 to 1.5 mm (0.039 to 0.059 in) lower than the fender.
- 4. Temporarily tighten the hood lock, and position by engaging it with the hood striker. Check the lock and striker for looseness and adjust the clearance and evenness with the striker to satisfy the specification.
- 5. Adjust A and B shown in the figure to the following value with hood's own weight by dropping it from approximately. 200 mm (7.874 in) height or by pressing the hood lightly [approximately. 29 N (3 kg)].



Hood striker

- 2. Primary latch
- 3. Secondary striker

Secondary latch

A : 20.0 mm (0.787 in) B : 6.8 mm (0.268 in)

6. After adjustment tighten lock bolts to the specified torque.

HOOD HINGE

**DLK-827** 

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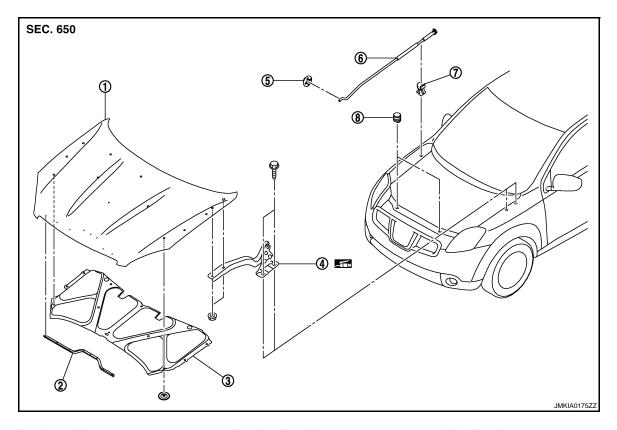
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**HOOD HINGE: Exploded View** 

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- 1. Hood assembly
- 4. Hood hinge
- 7. Clamp

- 2. Hood sealing rubber
- 5. Grommet
- 8. Hood bumper rubber
- 3. Hood insulator
- 6. Hood support rod

Refer to GI-4, "Components" for symbols in the figure.

# **HOOD HINGE: Removal and Installation**

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# REMOVAL

- Remove the hood assembly. Refer to <u>DLK-826</u>, "HOOD ASSEMBLY: Removal and Installation".
- Remove the front fender. Refer to <u>DLK-835, "Removal and Installation"</u>.
- 3. Remove the hood hinge mounting bolts, and then remove the hood hinge.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

- After installation, apply touch-up paint (the body color) onto the head of the hinge mounting bolts and nuts.
- Before installation of hood hinge, apply anticorrosive agent onto the mounting surface of the vehicle body.
- After installation, perform hood fitting adjustment. Refer to <u>DLK-827, "HOOD ASSEMBLY : Adjustment"</u>

### HOOD SUPPORT ROD

**HOOD SUPPORT ROD: Exploded View** 

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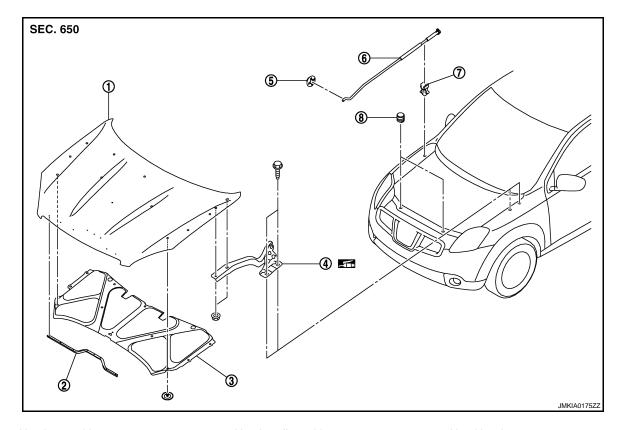
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- Hood assembly
- Hood hinge 4.
- Clamp 7.

- Hood sealing rubber
- 5. Grommet
- 8. Hood bumper rubber
- 3. Hood insulator
- Hood support rod

Refer to GI-4, "Components" for symbols in the figure.

#### HOOD SUPPORT ROD: Removal and Installation

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#### **REMOVAL**

Support the hood lock assembly with the proper material to prevent it from falling.

Bodily injury may occur if no supporting rod is holding the hood open when removing the hood

2. Remove the hood support rod from the grommet.

#### **INSTALLATION**

Install in the reverse order of removal.

#### HOOD LOCK CONTROL

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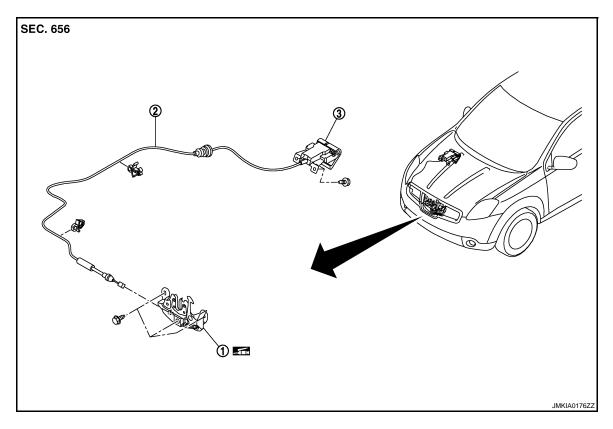
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**HOOD LOCK CONTROL: Exploded View** 

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- Hood lock assembly
- 2. Hood lock control cable
- Hood lock opener

Refer to GI-4, "Components" for symbols in the figure.

#### **HOOD LOCK CONTROL**: Removal and Installation

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#### **REMOVAL**

- 1. Remove the hood lock opener mounting bolts, and then remove the hood lock opener.
- 2. Remove the front bumper fascia. Refer to EXT-11, "Removal and Installation".
- 3. Remove the hood lock mounting bolts, and then remove the hood lock.
- 4. Remove the fender protector. Refer to EXT-22, "Removal and Installation".
- 5. Disconnect the hood lock cable from hood lock, and clip it from the hoodledge.
- Remove the grommet on the dash lower panel, and pull the hood lock control cable toward the passenger compartment.

#### **CAUTION:**

While pulling, do not to damage (peeling) the outside of the hood lock control cable.

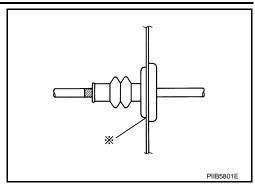
#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

• Do not to bend the cable too much, keeping the radius 100 mm (3.937 in) or more.

Check that the cable is not offset from the positioning grommet, and apply the sealant to the grommet (at \*mark) properly.



- Check that the hood lock control cable is properly engaged with the hood lock.
- After installation, perform hood fitting adjustment. Refer to <a href="DLK-827">DLK-827</a>, "HOOD ASSEMBLY: Adjustment".
- After installation, perform the hood lock control inspection. Refer to <u>DLK-831, "HOOD LOCK CONTROL</u>: Inspection".

### **HOOD LOCK CONTROL**: Inspection

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#### NOTE:

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

- 1. Check that the secondary latch is properly engaged with the secondary striker [6.8 mm (0.268 in) shown in the figure] by hood weight.
- 2. While operating the hood opener, carefully check that the front end of the hood is raised by approximately 20.0 mm (0.787 in). Also check that the hood opener returns to the original position.
- 3. Check that the hood opener operating is condition 49 N (5.0 kg) or below.
- Install so that static closing face of hood is 94 − 490 N·m (9.6 − 50.0 kg-m).
   NOTE:
  - Exert vertical force on right side and left side of hood lock.
  - Do not press simultaneously both sides.
- 5. Check the hood lock lubrication condition. If necessary, apply body grease to the hood lock.

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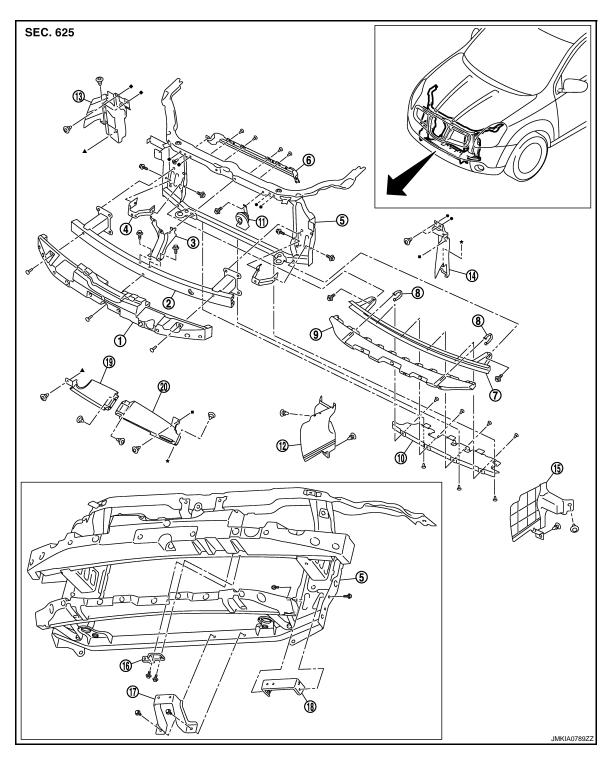
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## RADIATOR CORE SUPPORT

Exploded View



- 1. Energy absorber
- 4. Intercooler bracket (with K9K engine models)
- 7. Apron bracket assembly
- 10. Front air guide lower
- 13. Front air guide side RH
- 2. Bumper reinforcement
- 5. Radiator core support assembly
- 8. Fastener
- 11. Horn assembly
- 14. Front air guide side LH
- 3. Hood lock support stay
- 6. Upper air dam
- 9. Energy absorber lower
- 12. Front air guide side lower RH
- 15. Front air guide side lower LH

### RADIATOR CORE SUPPORT

#### < ON-VEHICLE REPAIR >

### [WITHOUT I-KEY, WITH SUPER LOCK]

- 16. Oil cooler bracket upper
- 17. Oil cooler bracket lower
- 18. Oil cooler bracket side

- 19. Front air guide RH
- 20. Front air guide LH

#### Removal and Installation

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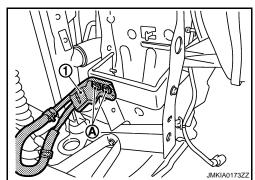
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#### **REMOVAL**

- Remove the front fillet molding. Refer to <u>EXT-23, "Removal and Installation"</u>.
- 2. Remove the front grille. Refer to EXT-17, "Removal and Installation".
- Remove the front bumper fascia and the energy absorber. Refer to EXT-11, "Removal and Installation".
- 4. Remove the energy absorber (upper and lower). Refer to EXT-11, "Removal and Installation".
- Remove the air cleaner duct. Refer to EM-28, "Removal and Installation".
- 6. Remove the all air guides mounting clips, and then remove the all air guides.
- 7. Remove the front combination lamp (LH/RH). Refer to EXL-175, "Removal and Installation".
- 8. Disconnect the hood lock control cable clamp, and then remove the hood lock assembly. Refer to <u>DLK-830, "HOOD LOCK CONTROL: Removal and Installation"</u>.
- 9. Remove the hood lock stay mounting bolts, and then remove the hood lock stay.
- 10. Remove the bumper reinforcement. Refer to EXT-11, "Removal and Installation".
- 11. Remove the hood switch (with theft warning systems). Refer to SEC-<u>SEC-166. "Removal and Installation"</u>.
- 12. Remove the crush zone sensor. Refer to <a href="SR-14">SR-14</a>, "Removal and Installation".
- 13. Remove the horn. Refer to HRN-5, "Removal and Installation".
- 14. Remove the ambient sensor. Refer to VTL-23, "Removal and Installation".
- 15. Remove the radiator mounting bracket (LH/RH). Refer to CO-13, "Removal and Installation".
- 16. Remove the Intelligent Key warning buzzer (with Intelligent Key systems). Refer to <a href="DLK-275">DLK-275</a>, "Removal and Installation".
- 17. Remove the charge air cooler assembly (with K9K and M9R engine models). Refer to <a href="EM-267">EM-267</a>, "Removal and Installation".
- 18. Remove the A/T fluid cooler assembly and the A/T fluid cooler bracket (with A/T models only). Refer to TM-563, "FLUID COOLER: Removal and Installation".
- Remove the A/T fluid cooler pipe bracket (1) mounting bolts (A) (with A/T models only).



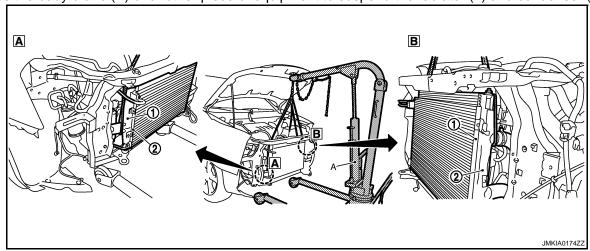
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21. Use the baby crane (A) or another piece of equipment to suspend the radiator (1) and condenser (2).



- 22. Remove the radiator core support assembly mounting bolts, and draw out the radiator core support assembly to the front of the vehicle.
- 23. Remove the radiator core support assembly.
- 24. Remove the following parts after removing the radiator core support assembly.
  - Inlet tube bracket (with K9K and M9R engine models)
  - Intercooler bracket (with K9K and M9R engine models)
  - Apron reinforcement bracket

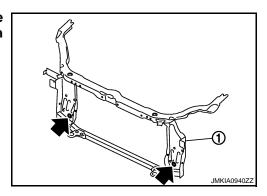
#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

After installation, refill the following parts.

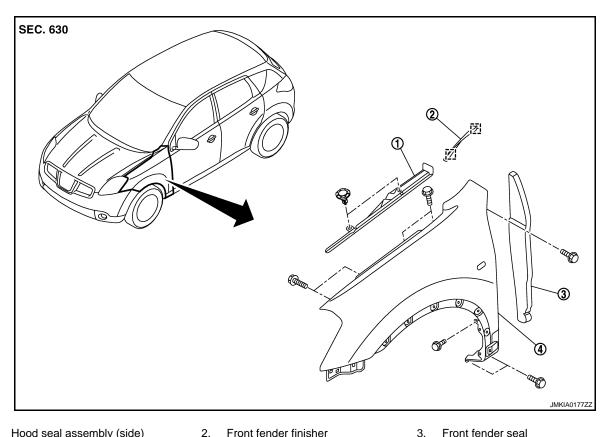
 Radiator core support (1) must be aligned to engine side member vartically. Use round pin to locate through both holes.



- A/T fluid. Refer to TM-530, "Changing".
- Engine coolant. Refer to <u>CO-9</u>, "<u>Refilling</u>".

### FRONT FENDER

**Exploded View** INFOID:0000000001538578



- Hood seal assembly (side)
  - Front fender
- : Metal clip

#### Removal and Installation

**REMOVAL** 

- Remove the outer fender protector. Refer to EXT-22, "Removal and Installation".
- Remove the inner fender protector. Refer to <u>EXT-22</u>, "Removal and Installation".
- 3. Remove the side turn signal lamp. Refer to EXL-181, "Removal and Installation".
- Remove the front bumper fascia. Refer to <u>EXT-11</u>, "Removal and Installation".
- Remove the front combination lamp.
  - XENON TYPE: EXL-175, "Removal and Installation".
  - HALOGEN TYPE: EXL-329, "Removal and Installation".
- 6. Remove the mounting clips and remove hoodledge cover.
- 7. Remove the center mudguard. Refer to EXT-28, "Removal and Installation".

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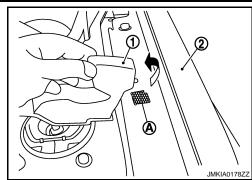
#### **FRONT FENDER**

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< ON-VEHICLE REPAIR >

[WITHOUT I-KEY, WITH SUPER LOCK]

8. Peel away the double-faced adhesive tape (A) of the front fender seal (1) from the front fender (2).



9. Remove the mounting bolts and remove the front fender.

#### **CAUTION:**

Use a shop cloth to protect the body from being damaged during removal.

- 10. Remove the following parts after removing the front fender.
  - Front fender seal.
  - Bumper side bracket. Refer to EXT-11, "Exploded View".

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

- Replace the double-faced adhesive tape on the back of the cowl top cover seal with new tape.
- Do not wash the vehicle within 24 hours after installation so as to keep adhesive.
- After installation, apply the touch-up paint (the body color) onto the head of the front fender mounting bolts.
- After installation, check the front fender adjustment. Refer to <u>DLK-827</u>, "HOOD ASSEMBLY : Adjustment" and <u>DLK-839</u>, "DOOR ASSEMBLY : Adjustment".

### [WITHOUT I-KEY, WITH SUPER LOCK]

# FRONT DOOR DOOR ASSEMBLY

DOOR ASSEMBLY : Exploded View

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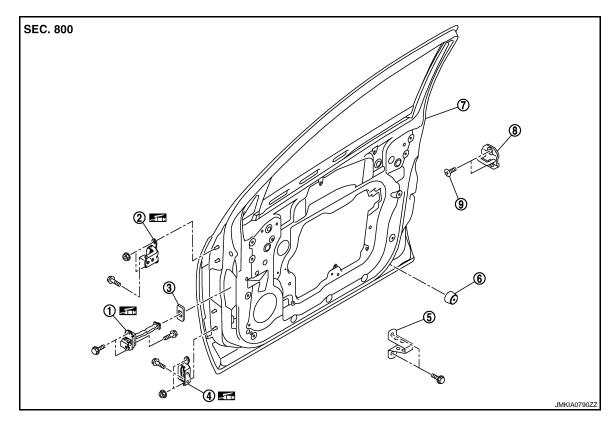
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#### **REMOVAL**



- 1. Door check link
- 4. Door hinge (lower)
- 7. Front door panel

- 2. Door hinge (upper)
- 5. Bracket
- 8. Door striker

Refer to GI-4, "Components" for symbols in the figure.

- B. Door check link cover
- 6. Bumper rubber
- 9. TORX bolt

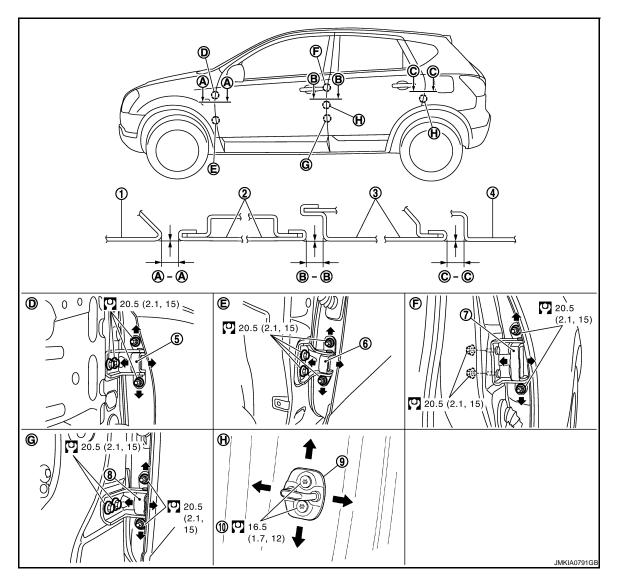
### **ADJUSTMENT**

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- 1. Front fender
- 4. Rear fender
- 7. Rear door hinge (upper)
- 10. TORX bolt

- 2. Front door outer
- 5. Front door hinge (upper)
- 8. Rear door hinge (lower)
- 3. Rear door outer
- 6. Front door hinge (lower)

INFOID:0000000001538581

9. Door striker

Refer to GI-4, "Components" for symbols in the figure.

#### DOOR ASSEMBLY: Removal and Installation

#### **REMOVAL**

- 1. Remove the mounting bolt of the door check link on the vehicle.
- 2. Remove the front door harness grommet, and then pull out the harness from the vehicle.
- 3. Disconnect the front door harness connector.
- Remove the door hinge mounting nuts (door side), and then remove the door assembly. CAUTION:
  - When removing and installing the front door assembly, support the door with a jack and cloth to protect the door and body.
  - Perform work with 2 workers, because of its heavy weight.

#### INSTALLATION

Install in the reverse order of removal.

**CAUTION:** 

- When removing and installing the front door assembly, perform the fitting adjustment. Refer to <u>DLK-839</u>, "DOOR ASSEMBLY: Adjustment".
- After installation, apply touch-up paint (the body color) onto the head of the door hinge mounting nuts.
- Check the door hinge rotating part for poor lubrication. If necessary, apply body grease.
- Check the front door open/close operation after installation.

DOOR ASSEMBLY: Adjustment

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#### CLEARANCE, SURFACE HEIGHT AND SURFACE MISMATCH ADJUSTMENT

Portion		Clearance	Surface height
Front fender – Front door	<b>A</b> – <b>A</b>	3.5 – 5.5 mm (0.138 – 0.217 in)	- 1.0 – 1.0 mm (- 0.039 – 0.039 in)
Front door – Rear door	B – B	3.5 – 5.5 mm (0.138 – 0.217 in)	- 1.0 – 1.0 mm (- 0.039 – 0.039 in)

- 1. Check the clearance and surface height and surface mismatch between the front door and each part visually and by touching. (Fitting standard dimension in the table below shall be satisfied.)
- 2. In case any parts are out of specification, adjust them according to the procedures shown below.
- Remove the front fender. Refer to refer to <u>DLK-835</u>, "Removal and Installation".
- 4. Loosen the door hinge mounting nuts on door side.
- 5. Adjust the surface height and surface mismatch of the front door according to the fitting standard dimension.
- 6. Temporarily tighten the hinge mounting nuts on door side.
- 7. Loosen the door hinge mounting bolts on body side.
- 8. Raise the front door at rear end to adjust clearance of the front door according to the fitting standard dimension.
- 9. After adjustment tighten bolts and nuts to the specified torque.
- Install the front fender. Refer to refer to <u>DLK-835</u>. "Removal and Installation".
   CAUTION:

After installation, check the front fender adjustment. Refer to <a href="DLK-827">DLK-827</a>, "HOOD ASSEMBLY : <a href="Adjustment"</a>.

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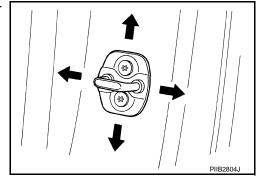
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#### DOOR STRIKER ADJUSTMENT

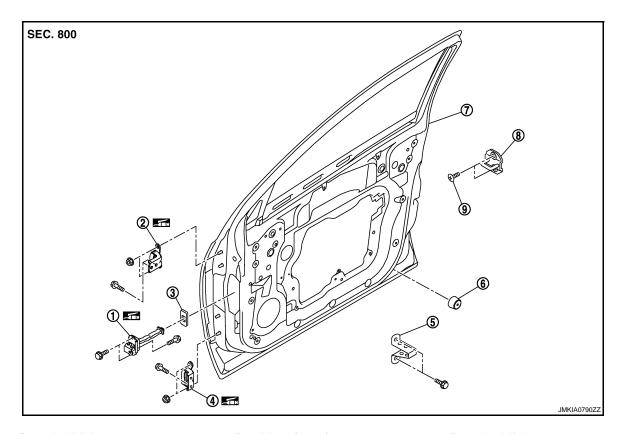
Adjust the door striker so that it becomes parallel with the lock insertion direction.



DOOR STRIKER

### **DOOR STRIKER: Exploded View**

INFOID:0000000001538583



- 1. Door check link
- 4. Door hinge (lower)
- 7. Front door panel
- Door hinge (upper)
- Bracket 5.
- 8. Door striker
- Refer to GI-4, "Components" for symbols in the figure.

- Door check link cover
- Bumper rubber
- 9. TORX bolt

### DOOR STRIKER: Removal and Installation

INFOID:0000000001538584

#### **REMOVAL**

Remove the TORX bolts, and then remove the door striker.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

- Check the front door open/close operation after installation.
- When removing and installing the door striker, be sure to perform the fitting adjustment. Refer to DLK-839, "DOOR ASSEMBLY: Adjustment".

### **DOOR HINGE**

**DOOR HINGE: Exploded View** 

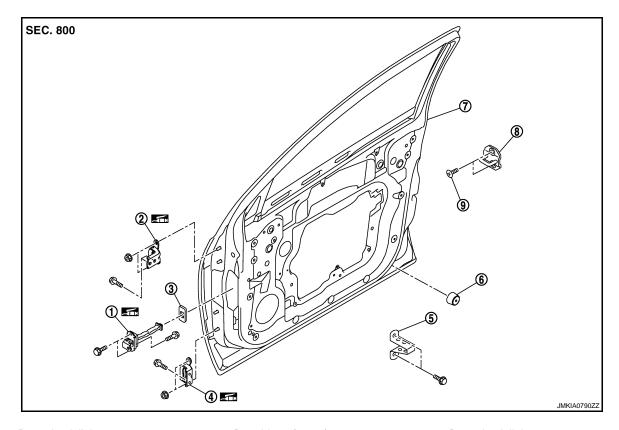
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- Door check link
- 4. Door hinge (lower)
- 7. Front door panel
- 2. Door hinge (upper)
- 5. Bracket
- 8. Door striker

- 3. Door check link cover
- Bumper rubber
- 9. TORX bolt

Refer to GI-4, "Components" for symbols in the figure.

### DOOR HINGE: Removal and Installation

INFOID:0000000001538587

#### **REMOVAL**

- 1. Remove the front door assembly. Refer to <a href="DLK-838">DLK-838</a>, "DOOR ASSEMBLY: Removal and Installation".
- Remove the door hinge mounting bolts, and then remove the front door hinge.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

- When removing and installing the front door assembly, perform the fitting adjustment. Refer to <u>DLK-839</u>, "DOOR ASSEMBLY: Adjustment".
- After installation, apply touch-up paint (the body color) onto the head of the door hinge mounting nuts.
- Check the door hinge rotating part for poor lubrication. If necessary, apply body grease.
- Check the front door open/close operation after installation.

#### DOOR CHECK LINK

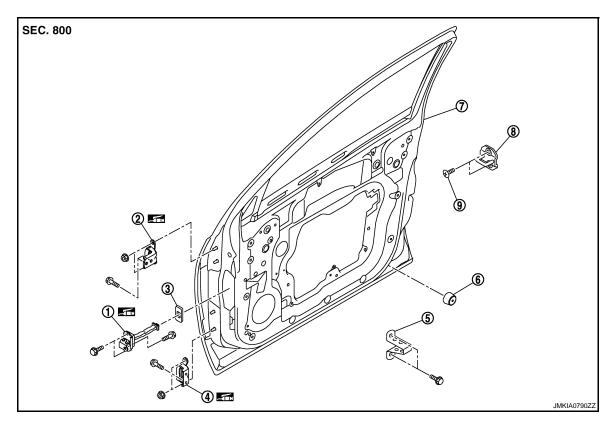
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### DOOR CHECK LINK: Exploded View

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- 1. Door check link
- 4. Door hinge (lower)
- 7. Front door panel
- 2. Door hinge (upper)
- 5. Bracket
- 8. Door striker
- Refer to GI-4, "Components" for symbols in the figure.

- 3. Door check link cover
- 6. Bumper rubber
- 9. TORX bolt

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### DOOR CHECK LINK: Removal and Installation

INFOID:0000000001538590

### REMOVAL

- 1. Remove the front door finisher. Refer to INT-10, "FRONT DOOR FINISHER: Removal and Installation".
- 2. Remove the front door speaker. Refer to AV-36, "Removal and Installation".
- 3. Remove the mounting bolt of the door check link on the vehicle.
- 4. Remove the door check link cover, and then remove the door check link mounting bolts.
- 5. Remove the door check link.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

Check the front door open/close operation after installation.

### [WITHOUT I-KEY, WITH SUPER LOCK]

### **REAR DOOR DOOR ASSEMBLY**

DOOR ASSEMBLY : Exploded View

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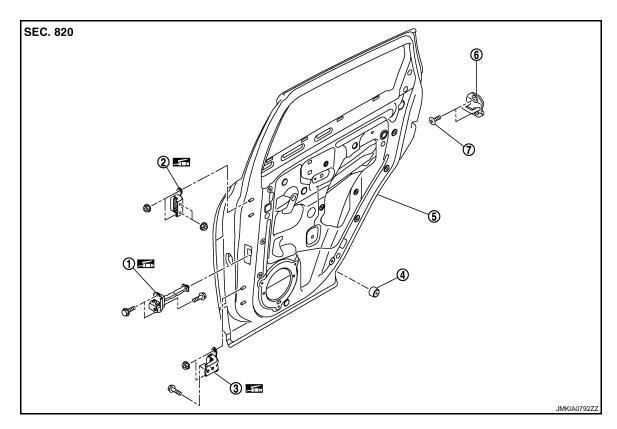
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#### **REMOVAL**



- Door check link
- Bumper rubber

Refer to GI-4. "Components" for symbols in the figure.

7. TORX bolt

- Door hinge (upper)
- Rear door panel
- Door hinge (lower) 3.
- Door striker

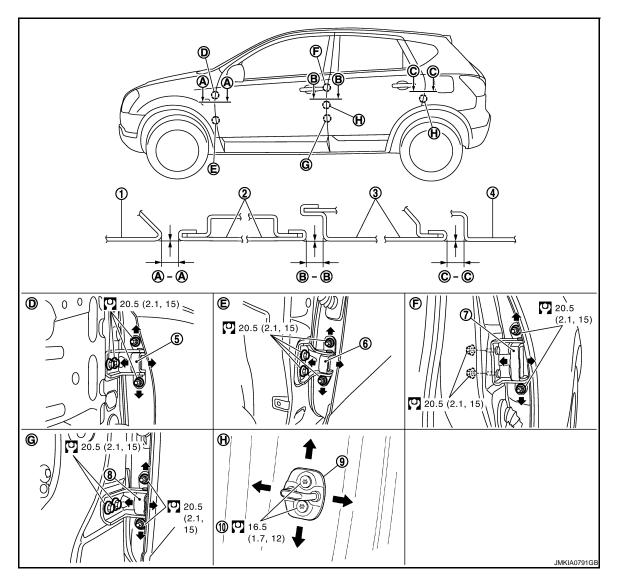
#### **ADJUSTMENT**

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- 1. Front fender
- 4. Rear fender
- 7. Rear door hinge (upper)
- 10. TORX bolt
- Refer to GI-4, "Components" for symbols in the figure.
- 2. Front door outer
- 5. Front door hinge (upper)
- 8. Rear door hinge (lower)
- 3. Rear door outer
- 6. Front door hinge (lower)

INFOID:0000000001538592

9. Striker

#### DOOR ASSEMBLY: Removal and Installation

**REMOVAL** 

- 1. Remove the mounting bolt of the door check link on the vehicle.
- 2. Remove the rear door harness grommet, and then pull out the door harness from the vehicle.
- 3. Disconnect the rear door harness connector.
- 4. Remove the door hinge mounting nuts (door side), and then remove the rear door assembly. **CAUTION:** 
  - When removing and installing the front door assembly, support the door with a jack and cloth to protect the door and body.
  - Perform work with 2 workers, because of it's heavy weight.

#### INSTALLATION

Install in the reverse order of removal.

**CAUTION:** 

- When removing and installing the rear door assembly, perform the fitting adjustment. Refer to <u>DLK-845</u>, "DOOR ASSEMBLY: Adjustment".
- After installation, apply touch-up paint (the body color) onto the head of the door hinge mounting nuts.
- Check the door hinge rotating part for poor lubrication. If necessary, apply body grease.
- Check the rear door open/close operation after installation.
- Check the rear door lock/unlock operation after installation.

DOOR ASSEMBLY: Adjustment

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#### CLEARANCE, SURFACE HEIGHT AND SURFACE MISMATCH ADJUSTMENT

Portion		Clearance	Surface height
Front door – Rear door	B – B	3.5 – 5.5 mm (0.138 – 0.217 in)	- 1.0 – 1.0 mm (- 0.039 – 0.039 in)
Rear door – Rear fender	C – C	3.5 – 5.5 mm (0.138 – 0.217 in)	- 1.0 – 1.0 mm (- 0.039 – 0.039 in)

- 1. Check the clearance and surface height and surface mismatch between the rear door and each part visually and by touching. (Fitting standard dimension in the table below shall be satisfied.)
- 2. In case any parts are out of specification, adjust them according to the procedures shown below.
- 3. Remove the center pillar upper garnish and center pillar lower garnish. Refer to <a href="INT-14">INT-14</a>, "Removal and <a href="Installation"</a>.
- 4. Loosen the door hinge mounting nuts on door side.
- Adjust the surface height and surface mismatch of the rear door according to the fitting standard dimension.
- 6. Temporarily tighten the hinge mounting nuts on door side.
- 7. Loosen the door hinge mounting nuts and bolts on body side.
- Raise the rear door at rear end to adjust clearance of the rear door according to the fitting standard dimension.
- 9. After adjustment tighten bolts and nuts to the specified torque.
- 10. Install the center pillar upper garnish and center pillar lower garnish. Refer to <a href="INT-14">INT-14</a>, "Removal and Installation".

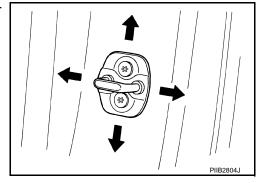
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#### DOOR STRIKER ADJUSTMENT

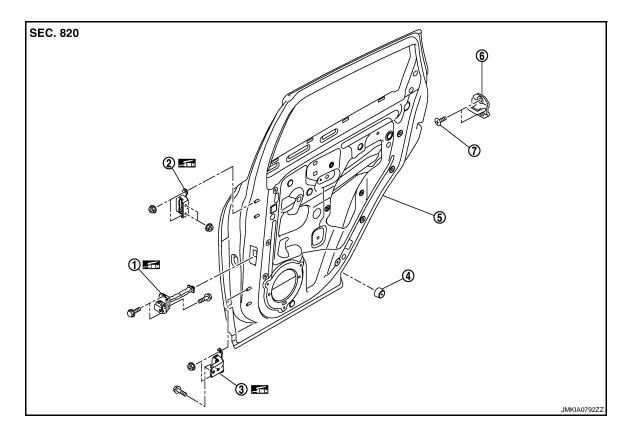
Adjust the door striker so that it becomes parallel with the lock insertion direction.



DOOR STRIKER

### DOOR STRIKER: Exploded View

INFOID:0000000001538594



- 1. Door check link
- 4. Bumper rubber
- 7. TORX bolt

- 2. Door hinge (upper)
- 5. Rear door panel
- 3. Door hinge (lower)
- 6. Door striker

Refer to GI-4, "Components" for symbols in the figure.

#### DOOR STRIKER: Removal and Installation

INFOID:0000000001538595

#### **REMOVAL**

Remove the TORX bolts, and then remove the door striker.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

- Check the rear door open/close operation after installation.
- When removing and installing the door striker, be sure to perform the fitting adjustment. Refer to <u>DLK-845, "DOOR ASSEMBLY: Adjustment"</u>.

#### DOOR HINGE

DOOR HINGE: Exploded View

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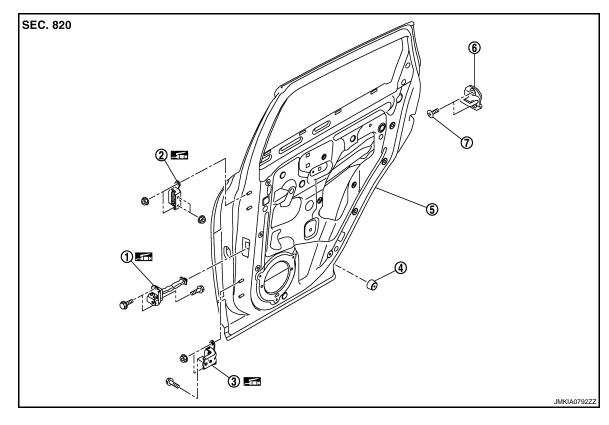
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- Door check link
- 4. Bumper rubber
- 7. TORX bolt

- Door hinge (upper)
  - 5. Rear door panel

- Door hinge (lower)
- Door striker

Refer to GI-4, "Components" for symbols in the figure.

### DOOR HINGE: Removal and Installation

INFOID:0000000001538598

### REMOVAL

- Remove the center pillar lower garnish and the center pillar upper garnish. Refer to <u>INT-14, "Removal and</u> Installation".
- Remove the rear door assembly. Refer to <u>DLK-844, "DOOR ASSEMBLY: Removal and Installation"</u>.
- 3. Remove the rear door hinge mounting bolts and nuts (body side), and then remove the door hinge.

#### INSTALLATION

Install in the reverse order of removal.

#### **CAUTION:**

- When removing and installing the rear door assembly, perform the fitting adjustment. Refer to <u>DLK-845</u>, "<u>DOOR ASSEMBLY</u>: <u>Adjustment</u>".
- Check the door hinge rotating part for poor lubrication. If necessary, apply body grease.
- After installing, apply the touch-up paint (the body color) onto the head of the hinge mounting nuts.
- Check the rear door open/close operation after installation.

#### DOOR CHECK LINK

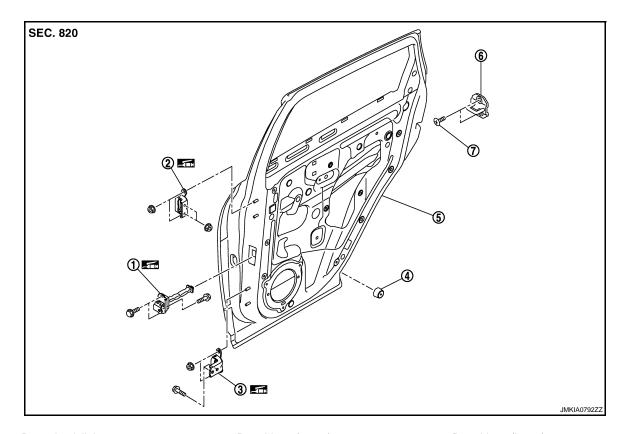
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### DOOR CHECK LINK: Exploded View

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- 1. Door check link
- Bumper rubber
- 7. TORX bolt

- 2. Door hinge (upper)
- 5. Rear door panel
- 3. Door hinge (lower)
- 6. Door striker

Refer to GI-4, "Components" for symbols in the figure.

### DOOR CHECK LINK: Removal and Installation

INFOID:0000000001538601

#### **REMOVAL**

- 1. Remove the rear door finisher. Refer to <a href="INT-10">INT-10</a>, "FRONT DOOR FINISHER: Removal and Installation".
- 2. Remove the rear door sealing screen.
- 3. Remove the mounting bolt of the check link on the vehicle.
- 4. Remove the door check link cover, and then remove the door check link mounting bolts.
- 5. Remove the door check link.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

Check front door open/close operation after installation.

### **BACK DOOR**

**BACK DOOR ASSEMBLY** 

BACK DOOR ASSEMBLY: Exploded View

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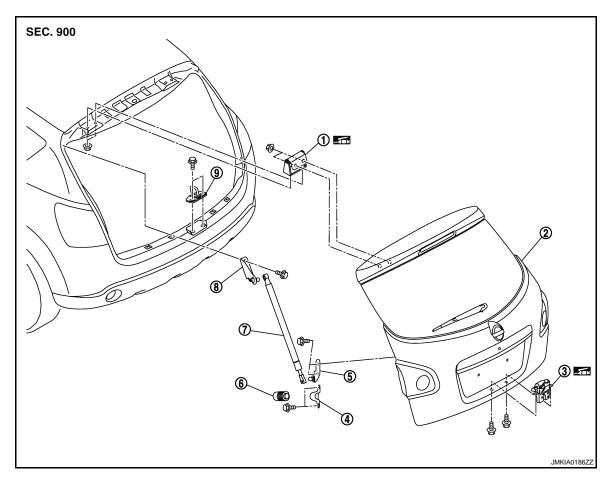
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#### **REMOVAL**



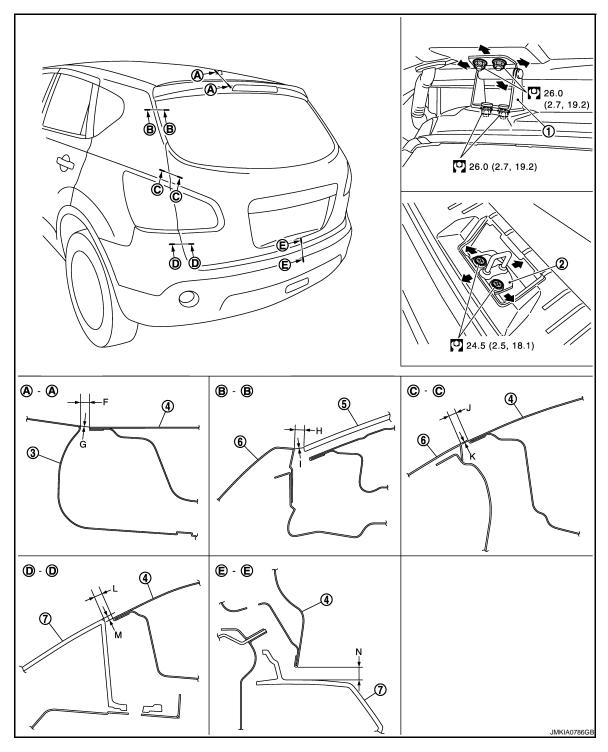
- 1. Back door hinge
- 4. Bumper rubber bracket
- 7. Back door stay

- 2. Back door assembly
- 5. Back door stay bracket (lower)
- 8. Back door stay bracket (upper)
- Refer to GI-4, "Components" for symbols in the figure.

- 3. Back door lock assembly
- 6. Bumper rubber
- Back door striker

### **ADJUSTMENT**

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- 1. Back door hinge
- 4. Back door outer
- 7. Rear bumper fascia
- 2. Back door striker
- Back door glass
- 3. Roof panel
- Body side outer

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#### BACK DOOR ASSEMBLY: Removal and Installation

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Refer to GI-4, "Components" for symbols in the figure.

#### **REMOVAL**

- 1. Remove the back door finisher inner. Refer to <a href="INT-26">INT-26</a>, "Removal and Installation".
- Remove the back door window glass. Refer to <u>GW-17, "Removal and Installation"</u>.
   NOTE:

#### **DLK-850**

#### [WITHOUT I-KEY, WITH SUPER LOCK]

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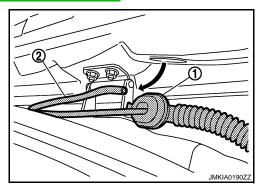
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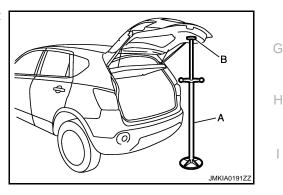
It is necessary to remove back door window glass in order to remove harness, because harness connector interferes with back door window glass pin.

- 3. Disconnect the connectors in the back door, and then remove the grommet, and pull out hte harness.
- Remove the parcel shelf. Refer to INT-24, "Removal and Installation".
- 5. Remove the high-mounted stop lamp. Refer to EXL-186, "Removal and Installation".
- Remove the grommet (1), and then pull out the washer tube (2).

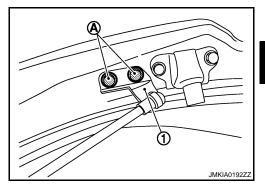


- Pull the harness out of the back door.
- Support the back door lock with the proper material to prevent it from falling.

: Jack B : Shop cloth

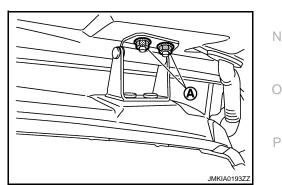


Remove the back door stay bracket (1) mounting bolts (A) on the back door.



10. Remove the back door hinge mounting nuts (A) on the back door and remove the back door assembly. **CAUTION:** 

Perform work with 2 workers, because of its heavy weight.



#### INSTALLATION

Install in the reverse order of removal.

#### **CAUTION:**

Perform work with 2 workers, because of its heavy weight.

**DLK-851** 

#### < ON-VEHICLE REPAIR >

- After installation, perform fitting adjustment. Refer to <u>DLK-852</u>, "<u>BACK DOOR ASSEMBLY</u>: <u>Adjust-ment"</u>.
- Check the back door open/close operation after installation.
- Check the back door lock/unlock operation after installation.

BACK DOOR ASSEMBLY : Adjustment

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	Portio	n		Standard	Difference(RH/LH)
Back door panel – Roof panel	A – A	F	Clearance	5.0 – 7.0 mm (0.197 – 0.276 in)	_
		G	Surface height	0.0 – 2.0 mm (0.000 – 0.079 in)	_
Back door glass – Body side outer	B – B	Н	Clearance	3.9 – 8.1 mm (0.154 – 0.319 in)	2.1 mm (0.083 in)
		1	Surface height	- 1.0 – 3.1 mm (- 0.039 – 0.122 in)	2.0 mm (0.079 in)
Back door panel – Body side outer	C – C	J	Clearance	3.5 – 6.5 mm (0.138 – 0.256 in)	2.0 mm (0.079 in)
		K	Surface height	- 1.0 – 1.0 mm (- 0.039 – 0.039 in)	_
Back door panel – Rear bumper fascia	D – D M	L	Clearance	4.0 – 8.0 mm (0.157 – 0.315 in)	2.0 mm (0.079 in)
		M	Surface height	0.1 – 4.1 mm (0.004 – 0.161 in)	2.1 mm (0.083 in)
Back door panel – Rear bumper fascia	E-E	N	Clearance	5.8 – 10.2 mm (0.228 – 0.402 in)	_

#### FITTING ADJUSTMENT

- 1. Check the clearance and the evenness between the back door and each part visually and by touching. (Fitting standard dimension in the table below shall be satisfied.)
- 2. In case any parts are out of specification, adjust them according to the procedures shown below.
- 3. Loosen the bumper rubber.
- Loosen the back door striker mounting bolts.
- 5. Lift up the back door approximately 100 150 mm (3.937 5.906 in) height then close it lightly and check that it is engaged firmly with the back door closed.
- 6. Check the clearance and evenness.
- 7. Finally tighten the back door striker.

#### **BACK DOOR STRIKER**

### BACK DOOR STRIKER: Exploded View

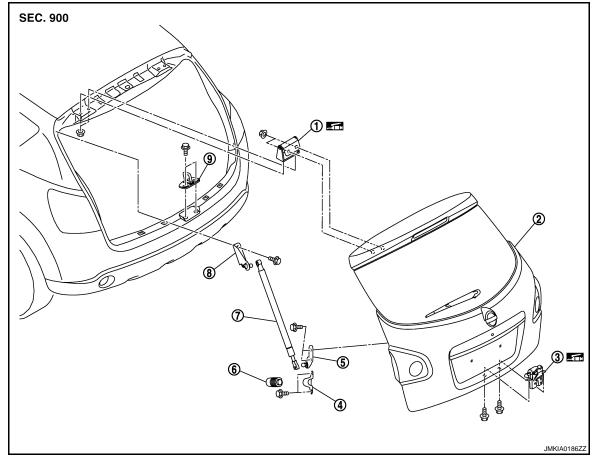


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- 1. Back door hinge
- 4. Bumper rubber bracket
- Back door stay

- 2. Back door assembly
- 5. Back door stay bracket (lower)
- 8. Back door stay bracket (upper)
- 3. Back door lock assembly
- 6. Bumper rubber
- Back door striker

BACK DOOR STRIKER: Removal and Installation

Refer to GI-4, "Components" for symbols in the figure.

#### **REMOVAL**

- 1. Remove the luggage rear plate cap. Refer to <a href="INT-24">INT-24</a>, "Removal and Installation".
- Remove the mounting bolts, and then remove the back door striker.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

- When removing and installing the back door striker, be sure to perform the fitting adjustment. Refer to <u>DLK-852</u>, "<u>BACK DOOR ASSEMBLY</u>: <u>Adjustment</u>".
- Check the back door open/close operation after installation.

#### **BACK DOOR HINGE**

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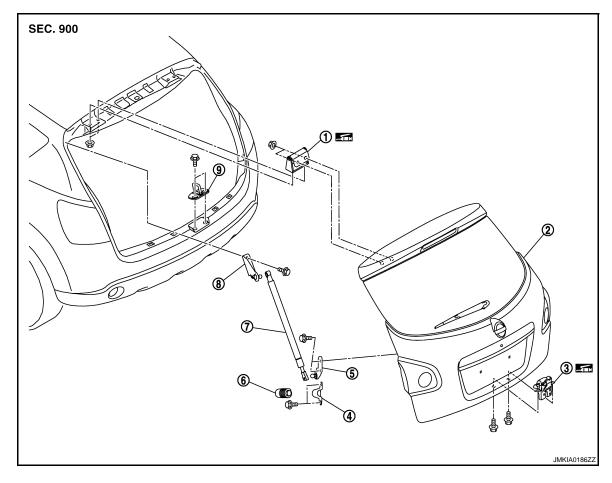
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**DLK-853** 

### **BACK DOOR HINGE: Exploded View**

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- 1. Back door hinge
- 4. Bumper rubber bracket
- 7. Back door stay

- 2. Back door assembly
- 5. Back door stay bracket (lower)
- 8. Back door stay bracket (upper)
- 3. Back door lock assembly
- 6. Bumper rubber
- 9. Back door striker

#### BACK DOOR HINGE: Removal and Installation

Refer to GI-4, "Components" for symbols in the figure.

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#### **REMOVAL**

- Remove the back door assembly. Refer to <u>DLK-850, "BACK DOOR ASSEMBLY: Removal and Installation"</u>.
- 2. Remove upper side of the back door weatherstrip. Refer to <u>DLK-856</u>, "BACK DOOR WEATHER-STRIP: <u>Removal and Installation"</u>.
- 3. Remove rear seat belt cover. Refer to <a href="INT-21">INT-21</a>, "Removal and Installation".
- Using remover tool, remove the headlining clip at the rear side of the headlining. Refer to <u>INT-20</u>, "<u>Exploded View</u>".
- 5. Remove the rear side of the headlining.
- Remove the back door hinge mounting nuts (body side), and then remove the back door hinge.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

- When removing and installing the back door assembly, perform the fitting adjustment. Refer to <u>DLK-852</u>, "BACK DOOR ASSEMBLY: Adjustment".
- After installation, apply touch-up paint (the body color) onto the head of the hinge mounting nuts.
- Check the hinge rotating part for poor lubrication. If necessary, apply body grease.

• Check the back door open/close operation after installation.

**BACK DOOR STAY** 

**BACK DOOR STAY: Exploded View** 

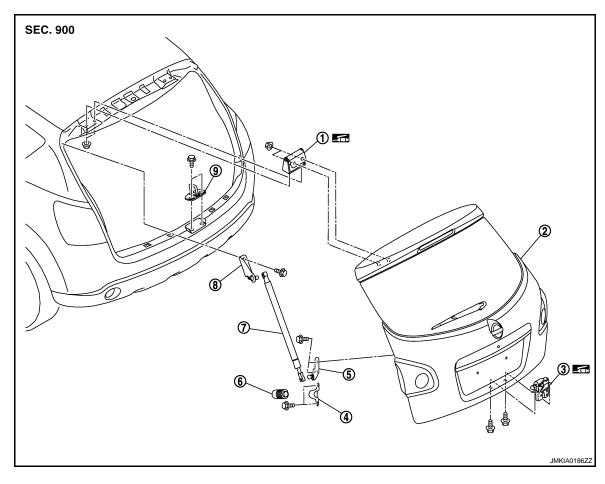


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- 1. Back door hinge
- Bumper rubber bracket
- 7. Back door stay

- 2. Back door assembly
- Back door stay bracket (lower)
- Back door stay bracket (upper)
- Back door lock assembly
- Bumper rubber
- Back door striker

BACK DOOR STAY: Removal and Installation

Refer to GI-4, "Components" for symbols in the figure.

### REMOVAL

- Remove the mounting bolts, and then remove the back door stay bracket on body side.
- Remove the stud ball, and then remove the back door stay on back door side.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

Check the back door open/close operation after installation.

BACK DOOR WEATHER-STRIP

BACK DOOR WEATHER-STRIP: Exploded View

**REMOVAL** 

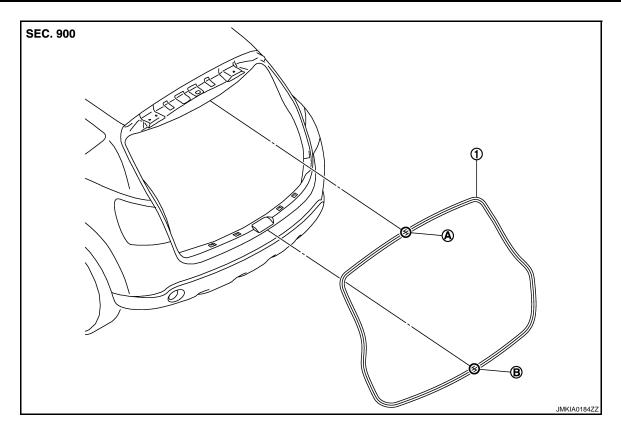
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- Back door weatherstrip
- A. Mark (upper)
- B. Mark (lower)

#### BACK DOOR WEATHER-STRIP: Removal and Installation

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#### **REMOVAL**

Pull up and remove engagement with body from the weatherstrip joint.

#### **CAUTION:**

After removal, do not pull strongly on the weather-strip.

#### **INSTALLATION**

- 1. Working from the upper section, align the weatherstrip mark with vehicle center position mark and install the weatherstrip onto the vehicle.
- 2. For the lower section, align the weatherstrip seam with center of the back door striker.
- 3. After installation, pull the weatherstrip gently to ensure that there is no loose section. **NOTE:**

Make sure that the weatherstrip is fit tlightly at each corner and the luggage rear plate.

### FRONT DOOR LOCK DOOR LOCK

DOOR LOCK: Exploded View

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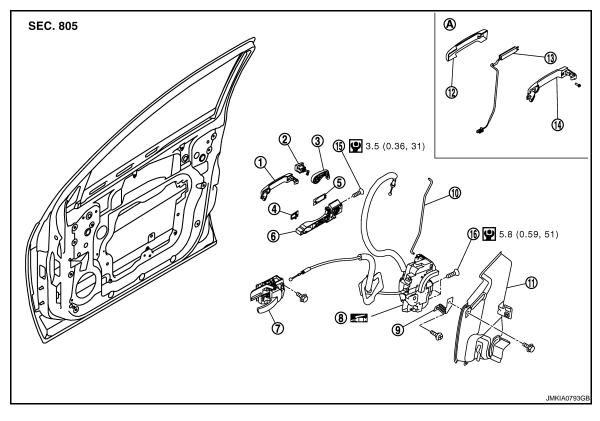
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- 1. Outside handle assembly
- Front gasket 4.
- 7. Inside handle
- Key rod protector(SUPER LOCK model only)
- 13. Antenna
- 16. TORX bolt
- Intelligent Key only

- 2. Door key cylinder
- Rear gasket 5.
- 8. Door lock assembly
- Key rod protector assembly (SUPER 12. Outside handle cover LOCK and RH handle model only)
- 14. Outside handle base

- 3. Key cylinder lever
- 6. Outside handle bracket
- Key cylinder rod
- 15. TORX bolt

#### DOOR LOCK: Removal and Installation

Refer to GI-4, "Components" for symbols in the figure.

**REMOVAL** 

- Remove the front door finisher. Refer to INT-10, "FRONT DOOR FINISHER: Removal and Installation". 1.
- Remove the inside handle mounting bolt, and then disconnect the inside handle cable. 2.
- 3. Remove the front door glass. Refer to GW-19, "Removal and Installation".
- 4. Remove the front door module assembly. Refer to <u>GW-22, "Removal and Installation"</u>.
- Disconnect the door antenna and the door request switch connector and remove the harness clamp 5. (models with Intelligent Key system).

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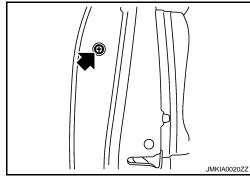
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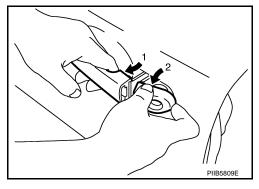
6. Remove the door side grommet, and loosen TORX bolt from grommet hole.

#### **CAUTION:**

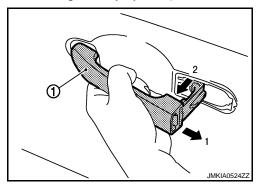
Do not forcibly remove the bolts.



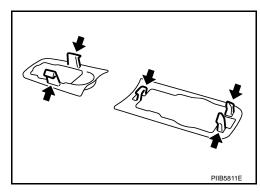
- 7. Reach in to separate the key cylinder rod connection (on the handle).
- 8. Disconnect the door key cylinder switch harness connector.
- 9. Remove the key cylinder lever from the door key cylinder.
- While pulling the outside handle, remove door key cylinder assembly.



- 11. Disconnect front door request switch harness connector (models with Intelligent Key system).
- 12. While pulling outside handle (1), slide toward rear of vehicle to remove outside handle.

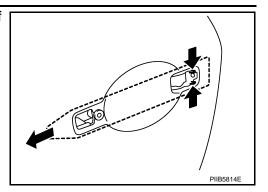


13. Remove the front gasket and the rear gasket.

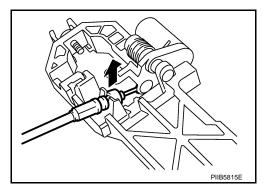


- 14. Remove the door lock assembly TORX bolts.
- 15. Disconnect the door lock actuator connector, and then remove the door lock assembly.

16. While pulling the outside handle bracket, slide toward rear of vehicle to remove the outside handle bracket.



17. Reach in to separate the outside handle cable connection.



#### **INSTALLATION**

Install in the reverse order of removal.

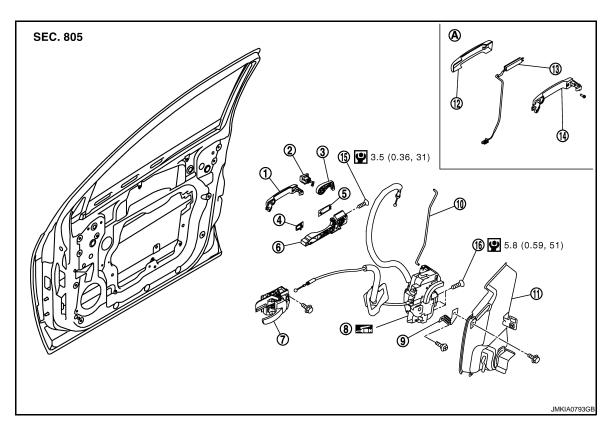
#### **CAUTION:**

- To install each rod, rotate the rod holder until a click is felt.
- Check the door lock/unlock operation after installation.
- Check the door open/close operation after installation.

#### **INSIDE HANDLE**

**INSIDE HANDLE: Exploded View** 

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#### < ON-VEHICLE REPAIR >

- 1. Outside handle assembly
- 4. Front gasket
- 7. Inside handle
- 10. Key rod protector(SUPER LOCK model only)
- 13. Antenna
- 16. TORX bolt
- A: Intelligent Key only
- 5. Rear gasket

Door key cylinder

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- Door lock assembly
- 11. Key rod protector assembly (SUPER 12. Outside handle cover LOCK and RH handle model only)
- 14. Outside handle base

- 3. Key cylinder lever
- 6. Outside handle bracket
- Key cylinder rod
- 15. TORX bolt

### INSIDE HANDLE: Removal and Installation

Refer to GI-4, "Components" for symbols in the figure.

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#### **REMOVAL**

- Remove the front door finisher. Refer to INT-10, "FRONT DOOR FINISHER: Removal and Installation".
- Remove the inside handle mounting bolt.
- Disconnect the inside handle cable, and then remove the inside handle.

#### **INSTALLATION**

Install in the reverse order of removal.

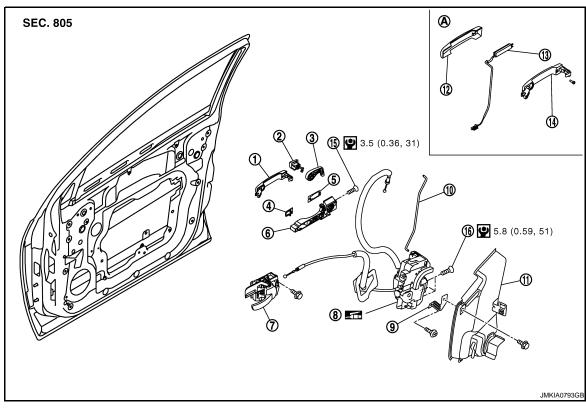
#### **CAUTION:**

- Check the door lock/unlock operation after installation.
- Check the door open/close operation after installation.

#### **OUTSIDE HANDLE**

### **OUTSIDE HANDLE: Exploded View**

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- Outside handle assembly
- Front gasket
- Inside handle

- Door key cylinder
- 5. Rear gasket
- Door lock assembly
- Key cylinder lever
- Outside handle bracket
- Key cylinder rod

#### FRONT DOOR LOCK

#### < ON-VEHICLE REPAIR >

#### [WITHOUT I-KEY, WITH SUPER LOCK]

- 10. Key rod protector(SUPER LOCK model only)
- Key rod protector assembly (SUPER 12. Outside handle cover LOCK and RH handle model only)

13. Antenna

- 14. Outside handle base
- 15. TORX bolt

- 16. TORX bolt
- A: Intelligent Key only

Refer to GI-4, "Components" for symbols in the figure.

#### OUTSIDE HANDLE: Removal and Installation

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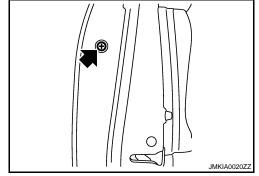
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#### REMOVAL

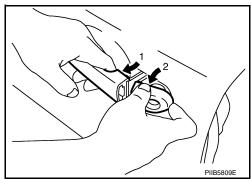
- Remove the front door finisher. Refer to INT-10, "FRONT DOOR FINISHER: Removal and Installation".
- 2. Remove the inside handle mounting bolt, and disconnect the inside handle knob cable and the lock knob cable.
- 3. Remove the front door glass. Refer to GW-19, "Removal and Installation".
- Remove the front door module assembly. Refer to GW-22, "Removal and Installation".
- 5. Disconnect the door antenna and the door request switch connector and remove the harness clamp (models with Intelligent Key system).
- 6. Remove the door side grommet, and loosen TORX bolt from the grommet hole.

#### **CAUTION:**

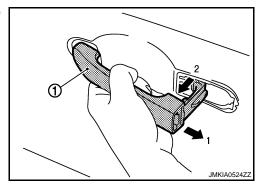
Do not forcibly remove the bolts .



- 7. Reach in to separate the key cylinder rod connection (on the handle).
- 8. Disconnect the door key cylinder switch harness connector.
- 9. Remove the key cylinder lever from the door key cylinder.
- 10. While pulling the outside handle, remove the door key cylinder assembly.



- 11. Disconnect the front door request switch harness connector (models with Intelligent Key system).
- 12. While pulling the outside handle (1), slide toward rear of vehicle to remove the outside handle.



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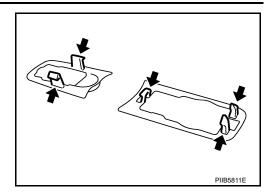
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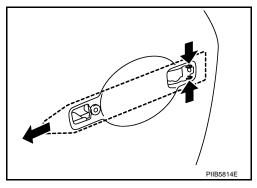
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**DLK-861** 

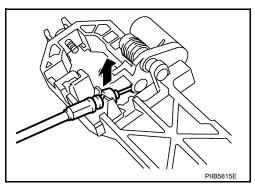
13. Remove the front gasket and rear gasket.



14. While pulling the outside handle bracket, slide toward rear of vehicle to remove the outside handle bracket.



15. Reach in to separate the outside handle cable connection.



#### **INSTALLATION**

Install in the reverse order of removal.

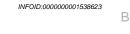
#### **CAUTION:**

- To install each rod, rotate the rod holder until a click is felt.
- Check the door lock/unlock operation after installation.
- Check the door open/close operation after installation.

# REAR DOOR LOCK

**DOOR LOCK** 

DOOR LOCK: Exploded View



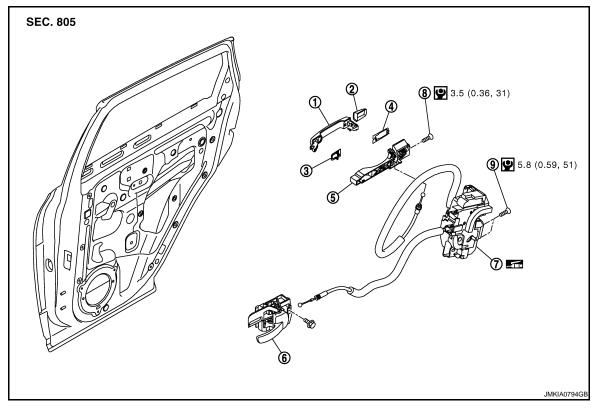
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- 1. Outside handle
- 4. Rear gasket
- 7. Door lock assembly
- 2. Outside handle escutcheon
- 5. Outside handle bracket
- 8. TORX bolt

- 3. Front gasket
- 6. Inside handle
- 9. TORX bolt

Refer to  $\underline{\mbox{GI-4, "Components"}}$  for symbols in the figure.

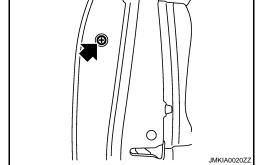
### DOOR LOCK: Removal and Installation

#### **REMOVAL**

- 1. Remove the rear door finisher. Refer to INT-13, "REAR DOOR FINISHER: Removal and Installation".
- 2. Fully close the front door window.
- 3. Remove the door sealing screen.
- 4. Remove the inside handle mounting bolt, and then disconnect the inside handle cable.
- 5. Remove the door side grommet, and loosen TORX bolt from the grommet hole.

#### **CAUTION:**

Do not forcibly remove the bolts.



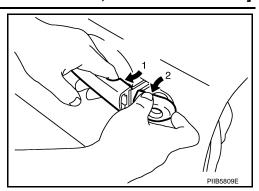
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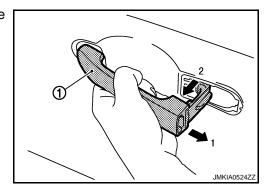
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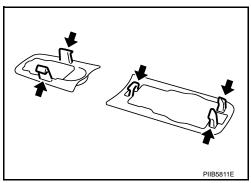
6. While pulling the outside handle, remove the door key cylinder assembly.



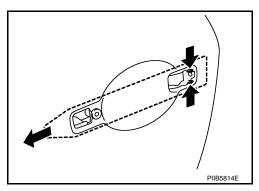
7. While pulling the outside handle (1), slide toward rear of vehicle to remove the outside handle.



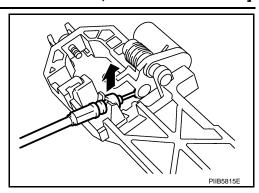
8. Remove the front gasket and the rear gasket.



- 9. Remove the door lock assembly TORX bolts.
- 10. Disconnect the door lock actuator connector, and then remove the door lock assembly.
- 11. While pulling the outside handle bracket, slide toward rear of vehicle to remove the outside handle bracket.



12. Reach in to separate the outside handle cable connection.



#### **INSTALLATION**

Install in the reverse order of removal.

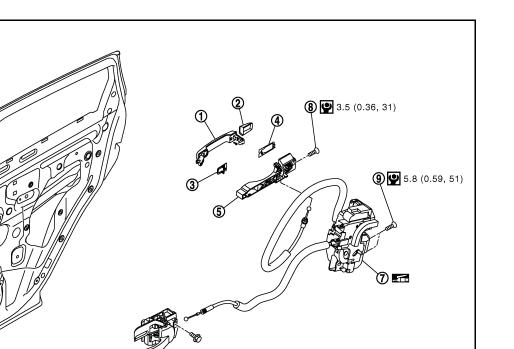
#### **CAUTION:**

- To install each rod, rotate the rod holder until a click is felt.
- Check the door lock/unlock operation after installation.
- Check the door open/close operation after installation.

#### **INSIDE HANDLE**

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**INSIDE HANDLE: Exploded View** 



- 1. Outside handle
- 4. Rear gasket
- 7. Door lock assembly
- 2. Outside handle escutcheon
- 5. Outside handle bracket
- 8. TORX bolt

- Front gasket
- 6. Inside handle
- TORX bolt

Refer to GI-4, "Components" for symbols in the figure.

#### INSIDE HANDLE: Removal and Installation

# REMOVAL

- Remove the rear door finisher. Refer to <u>INT-13, "REAR DOOR FINISHER: Removal and Installation"</u>.
- 2. Remove the door sealing screen.

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- Remove the inside handle mounting bolt, and then disconnect the inside handle cable.
- 4. Remove the inside handle.

#### **INSTALLATION**

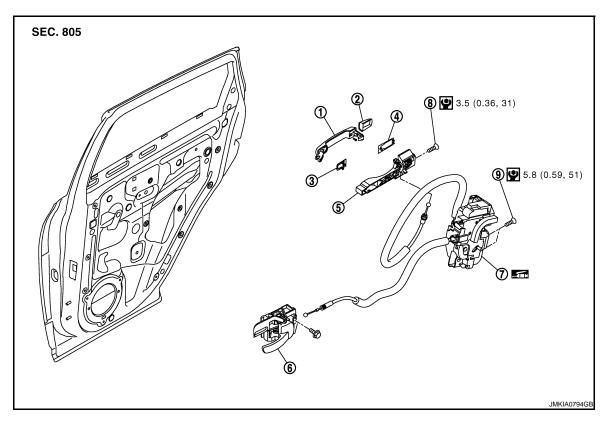
Install in the reverse order of removal.

#### **CAUTION:**

- Check the door lock/unlock operation after installation.
- Check the door open/close operation after installation.

#### **OUTSIDE HANDLE**

**OUTSIDE HANDLE: Exploded View** 



- Outside handle
- Rear gasket
- Door lock assembly
- Outside handle escutcheon
- 5. Outside handle bracket
- TORX bolt 8.
- Front gasket
  - Inside handle
  - TORX bolt

Refer to GI-4, "Components" for symbols in the figure.

#### OUTSIDE HANDLE: Removal and Installation

#### REMOVAL

- 1. Remove the rear door finisher. Refer to <a href="INT-13">INT-13</a>, "REAR DOOR FINISHER: Removal and Installation".
- 2. Fully close the front door window.
- 3. Remove the door sealing screen.
- 4. Remove the inside handle mounting bolt, disconnect the inside handle cable.

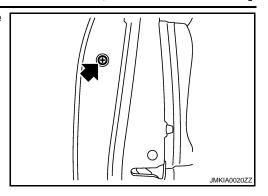
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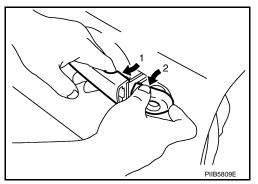
5. Remove the door side grommet, and loosen TORX bolt from the grommet hole.

#### **CAUTION:**

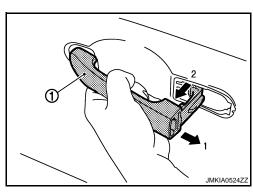
Do not forcibly remove the bolts.



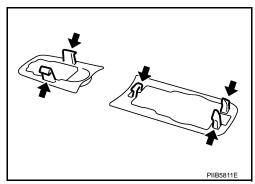
6. While pulling the outside handle, and then remove the door key cylinder assembly.



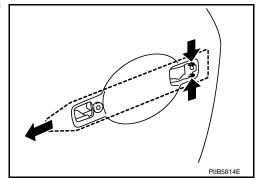
7. While pulling the outside handle (1), slide toward rear of vehicle to remove the outside handle.



8. Remove the front gasket and the rear gasket.



9. While pulling the outside handle bracket, slide toward rear of vehicle to remove the outside handle bracket.



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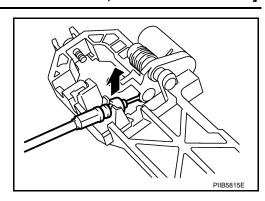
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### **REAR DOOR LOCK**

### [WITHOUT I-KEY, WITH SUPER LOCK]

10. Reach in to separate the outside handle cable connection.



#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

- Check the door lock/unlock operation after installation.
  Check the door open/close operation after installation.

# BACK DOOR LOCK

**DOOR LOCK** 

DOOR LOCK: Exploded View

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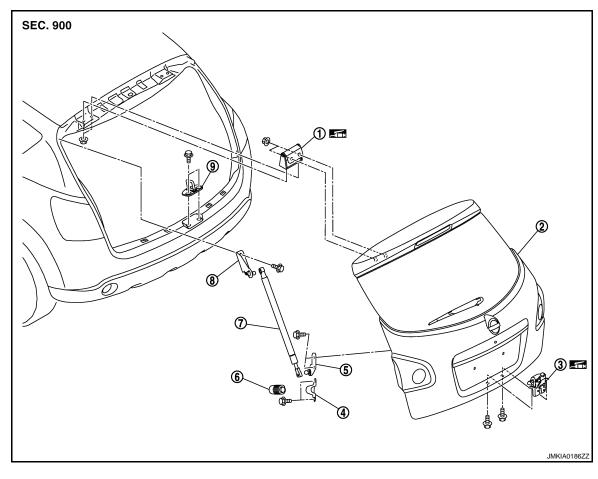
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- 1. Back door hinge
- 4. Bumper rubber bracket
- Back door stay

- 2. Back door assembly
- 5. Back door stay bracket (lower)
- 8. Back door stay bracket (upper)
- 3. Back door lock assembly
- 6. Bumper rubber
- 9. Back door striker

#### DOOR LOCK: Removal and Installation

Refer to GI-4, "Components" for symbols in the figure.

#### **REMOVAL**

- Remove the back door trim finisher lower. Refer to <u>INT-26, "Removal and Installation"</u>.
- 2. Disconnect the back door lock assembly and back door opener switch connectors.
- 3. Remove the back door lock mounting bolts, and then remove the back door lock and actuator.

#### INSTALLTION

Install in the reverse order of removal.

#### **CAUTION:**

Check the back door lock/unlock operation after installation.

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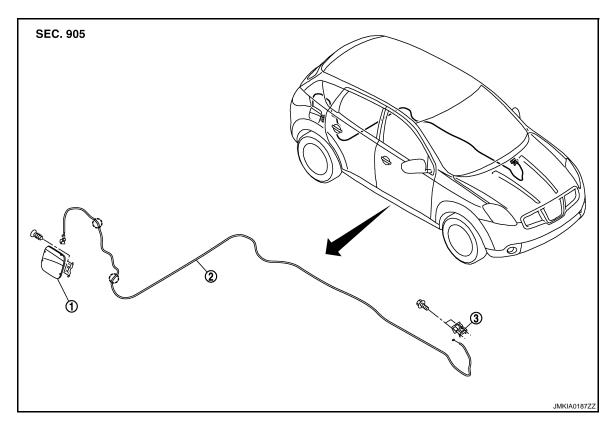
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# FUEL FILLER LID OPENER

**FUEL FILLER LID** 

FUEL FILLER LID: Exploded View

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- 1. Fuel filler lid assembly
- 2. Fuel filler opener cable
- 3. Fuel opener lever

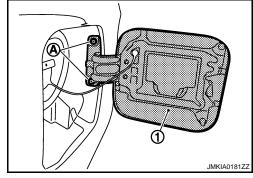
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### FUEL FILLER LID: Removal and Installation

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### **REMOVAL**

- 1. Fully open the fuel filler lid.
- 2. Remove the filler cap.
- 3. Remove the mounting screws (A), and then remove the fuel filler lid (1).



#### **INSTALLATION**

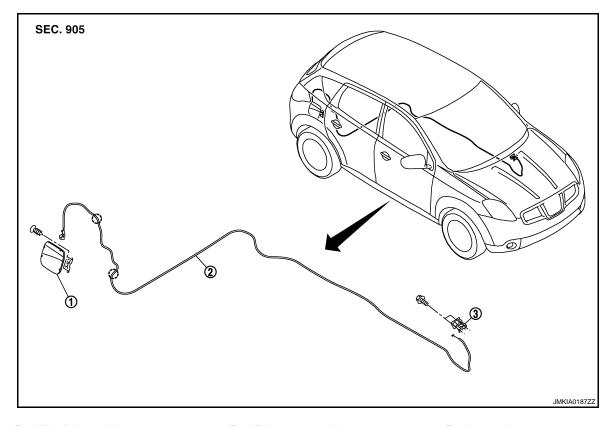
Install in the reverse order of removal.

#### **CAUTION:**

After installation, apply the touch-up paint (the body color) onto the head of the mounting screws. FUEL FILLER OPENER CABLE

### FUEL FILLER OPENER CABLE: Exploded View

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Fuel filler lid assembly

Fuel filler opener cable

Fuel opener lever

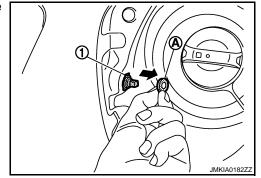
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### FUEL FILLER OPENER CABLE: Removal and Installation

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#### **REMOVAL**

- Remove the rear seat cushion, rear seatback, seatback lower support, and seatback mounting outer bracket. Refer to SE-21, "Removal and Installation".
- Remove the dash side finisher, front kicking plate inner, rear kicking plate inner, center pillar lower garnish, and luggage side lower finisher (front). Refer to INT-14, "Removal and Installation".
- Remove the parcel shelf, luggage floor carpet, luggage floor spacer, luggage rear plate, luggage side lower finisher, and rear pillar finisher. Refer to INT-24, "Removal and Installation".
- Remove the fuel filler lock seal (A) from fuel filler opener cable (1).



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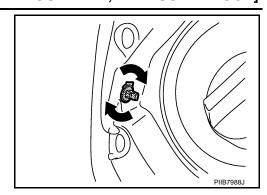
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### **FUEL FILLER LID OPENER**

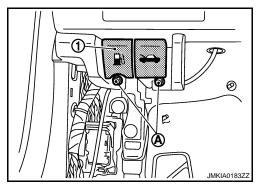
#### < ON-VEHICLE REPAIR >

### [WITHOUT I-KEY, WITH SUPER LOCK]

5. Rotate the fuel filler lock, and then remove the fuel filler lock.



- 6. Remove the fuel filler opener cable mounting clips and the clamps.
- 7. Remove the mounting bolts (A), and then remove the fuel filler lid opener lever (1).



8. Remove the fuel filler opener cable.

#### **INSTALLATION**

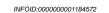
Install in the reverse order of removal.

#### **CAUTION:**

Check the fuel filler lid open/close operation after installation.

### **DOOR SWITCH**

**Exploded View** 



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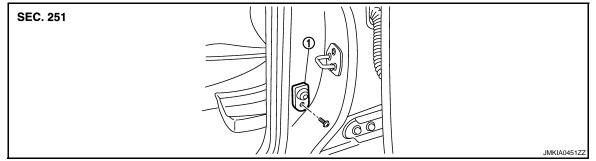
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1. Door switch (driver side)

Refer to DLK-873, "Removal and Installation".

#### Removal and Installation

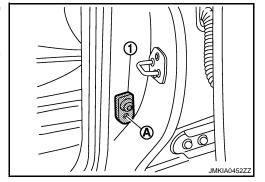
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#### **REMOVAL**

1. Remove the door switch mounting bolt (A), and then remove door switch (1).

#### NOTE:

The same procedure is also performed for door switch (passenger side, rear LH and rear RH).



#### **INSTALLATION**

Install in the reverse order of removal.

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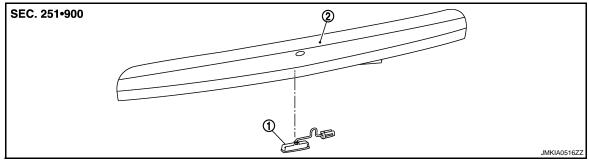
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### **BACK DOOR OPENER SWITCH**

### **Exploded View**

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- 1. Back door opener switch
- 2. Back door finisher

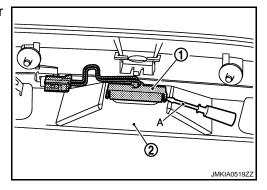
Refer to DLK-874, "Removal and Installation".

### Removal and Installation

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#### **REMOVAL**

- Remove the back door finisher.
   Refer to <u>EXT-31</u>, "<u>Exploded View</u>" and <u>EXT-31</u>, "<u>Removal and Installation</u>".
- 2. Remove the back door opener switch (1) from back door finisher (2) using flat-bladed screw driver (A) etc.



#### **INSTALLATION**

Install in the reverse order of removal.

### **KEYFOB BATTERY**

Exploded View

Refer to DLK-875, "Removal and Installation".

Removal and Installation

### REMOVAL

- 1. Remove installation screw (7) on the rear of keyfob.
- Place the key with the lower case (6) facing up. Set a screw-driver (A) wrapped with tape into illustration of the lower case (6) and separate the lower case (6) from the upper case (1).
   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.
- 3. When replacing the circuit board assembly, remove circuit board assembly from the upper case (1).

[Circuit board assembly: Switch rubber (3) + Board surface (4)] **CAUTION:** 

Do not touch the printed circuits directly.

4. Remove the battery (5) from the lower case (6) and replace it.

Battery replacement : Coin-type lithium battery (CR2032)

#### **CAUTION:**

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

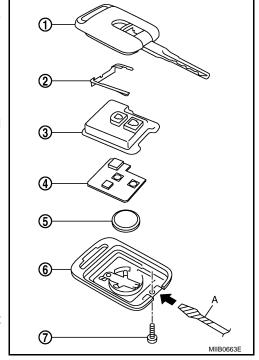
 After replacement, fit the lower and upper cases together, part (2), (3) and tighten with the screw.
 CAUTION:

After replacing the battery, Be sure to check that door locking operates normally using the keyfob.

Refer to DLK-609, "Component Function Check".

#### **INSTALLATION**

Install in the reverse order of removal.



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